

# In Situ Stabilization Pre-Design Investigation

Arkema Inc. Facility Portland, Oregon

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## In Situ Stabilization Pre-Design Investigation

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#### ACRONYMS AND ABBREVIATIONS

	Description
μg/kg	micrograms per kilogram
ACM	asbestos-containing material
Arkema	Arkema Inc.
ASTM	ASTM International
bgs	below ground surface
cm/s	centimeters per second
COC	contaminant of concern
CRBG	Columbia River Basalt Group
CSM	Conceptual Site Model
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
DNAPL	dense nonaqueous-phase liquid
DRO	diesel-range organic
ERM	Environmental Resources Management, Inc.
FS	Feasibility Study
GWBW	groundwater barrier wall
GWET	Groundwater Extraction and Treatment
I1TA	IRAM 1 Treatment Area
IRAM	Interim Remedial Action Measure
ISCO	in situ chemical oxidation
ISS	in situ stabilization/solidification
LEA	Loureiro Engineering Associates, Inc.
LEAF	Leaching Environmental Assessment Framework
LSS	Legacy Site Services LLC
mg/kg	milligrams per kilogram
MORO	motor oil-range organic
MPR	Manufacturing Process Residue



Acronym	Description
NAPL	nonaqueous-phase liquid
NAVD88	North American Vertical Datum of 1988
ODEQ	Oregon Department of Environmental Quality
РСВ	polychlorinated biphenyl
PDI	Pre-Design Investigation
PFAS	per- and polyfluoroalkyl substances
PFDR	Pre-Final Design Report
pg/g	picograms per gram
PID	photoionization detector
QA/QC	quality assurance/quality control
RAO	remedial action objective
RI	Remedial Investigation
ROD	record of decision
SCM	Source Control Measure
sVOC	semivolatile organic compound
UCS	unconfined compressive strength
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound
WP	Work Plan



#### PROFESSIONAL ENGINEER'S CERTIFICATION

I, Brendan Robinson, Licensed Professional Engineer in the State of Oregon, hereby certify to the best of my knowledge and belief that this document is true and correct and has been prepared in accordance with general industry standards and applicable federal, state, and local requirements, and hereunto set out hand and affix my seal this 9 December 2024.

Brendan Robinson, PE

Partner in Charge



#### PROFESSIONAL GEOLOGIST'S CERTIFICATION

I, Avery Soplata, Licensed Professional Geologist in the State of Oregon, hereby certify to the best of my knowledge and belief that this document is true and correct and has been prepared in accordance with general industry standards and applicable federal, state, and local requirements, and hereunto set out hand and affix my seal this 9 December 2024.

Exp: 10/1/2025

Avery Soplata, RG

Geologist



#### 1. INTRODUCTION

On behalf of Legacy Site Services LLC (LSS), agent for Arkema Inc. (Arkema), Environmental Resources Management, Inc. (ERM) has prepared this *In Situ Stabilization Pre Design Investigation* (Report) for the former Arkema facility (the "Site") located at 6400 NW Front Avenue in Portland, Oregon. The Site location is shown on Figure 1. ERM has prepared this report presenting the results of Phase 1 of the investigation and sampling activities completed to inform the pre-design of Interim Remedial Action Measure (IRAM) 1. Phase 1 of the investigation began on 8 July 2024 and field activities were completed on 30 August 2024. The goal of IRAM 1 is to address the monochlorobenzene (chlorobenzene) source area that originated in the former Acid Plant Area of the facility (referred to as IRAM 1 Treatment Area, or I1TA) using a combination of excavation, in situ stabilization/solidification (ISS) and/or in situ chemical oxidation (ISCO) technologies. The I1TA focuses on chlorobenzene dense nonaqueous-phase liquid (DNAPL) present in unsaturated and saturated soil.

The I1TA was investigated in accordance with the *In Situ Stabilization Pre-Design Investigation* (PDI) Work Plan (PDI WP; ERM 2024). Implementation of the PDI WP is in accordance with the Oregon Department of Environmental Quality (ODEQ) 19 January 2024 letter (ODEQ 2024) proposing an alternative to the September 2023 *Draft Feasibility Study* (FS; ERM 2023), and as discussed at a meeting with ODEQ, LSS, and ERM on 4 March 2024. Based on the results of the monochlorobenzene DNAPL source area investigation, this Report presents an update to the I1TA Conceptual Site Model (CSM) as well as a conceptual design of the remedial technology.

As described in the PDI WP, the investigation consists of multiple field phases to characterize and delineate the DNAPL within the I1TA. The objectives of Phase 1 of the PDI was to:

- Define the vertical extent of DNAPL within the I1TA
- Confirm that the general lateral extent identified in the 2006 DNAPL Investigation was still representative of the current lateral extent, and that the distribution of DNAPL had not materially changed since 2006
- To gather sufficient and usable data to evaluate the feasibility of the proposed remediation technology to address DNAPL in I1TA and obtain necessary data for the design

The goal of Phase 2 is to refine the lateral extent of DNAPL and thereby the extents of I1TA. The results of Phase 2 will be presented in the Pre-Final Design Report (PFDR). If additional delineation beyond Phase 2 is required, a Phase 3 investigation may need to be conducted in 2025.

Soil was also collected during this investigation for the purposes of the bench-scale treatability studies, which was classified as "Contaminated", "Some Contamination", or "No evidence of Contamination" based on the following criteria:

- Soil with visible DNAPL or a combination of staining and a positive oil soluble dye test result
  was categorized as "Contaminated."
- Soil with no visible DNAPL, but a positive oil soluble dye test or sheen/staining, was categorized as "Some DNAPL Contamination."



 Soil with no visual indications of DNAPL, a negative oil soluble dye test, and no staining was categorized as "No Evidence of DNAPL Contamination."

For the purposes of this document, soil within I1TA that will be addressed by IRAM 1 is referred to as DNAPL, meaning that soil was identified in the field as being "Contaminated", or having "Some Contamination."

#### 1.1 SITE LOCATION AND SETTING

The Site is described in detail in the *Upland Remedial Investigation Report* (RI Report; ERM 2005), the *GWET Wellfield Enhancement – Preliminary Design Investigation* (PDI Report; ERM 2021a), and the FS (ERM 2023). This section summarizes the information contained in these reports.

The Site is located at 6400 NW Front Avenue in the northwest industrial area of Portland, Oregon. The Site is located at approximately river-mile 7.5 of the river in the Guild's Lake Industrial Sanctuary (formerly the Northwest Portland Industrial Sanctuary), zoned and designated "IH" for heavy industrial use. The Site is bordered on the east by the Willamette River, on the south by CertainTeed Roofing Products Company, and on the north and west by Front Avenue. The Site is divided into Lots 1 through 4 and Tract A along the river. Historically, the facility was a chlor-alkali plant until the plant shut down in 2001, and decommissioned and dismantled in 2004. A Site Layout Map is included as Figure 2. Figures 3 and 4 show the historical layout of the Site prior to being decommissioned.

The Site is generally flat with surface elevations ranging from approximately 25 to 38 feet North American Vertical Datum of 1988 (NAVD88). Most of the Site is surrounded by security fencing. The northern portion of the Site includes Lots 1 and 2 and is relatively undeveloped. No manufacturing has occurred on Lots 1 and 2 (ERM 2005). The southern portion of the Site includes Lots 3 and 4, which comprise approximately two-thirds of the Site (39 acres). The Site historically conducted manufacturing in the southern portion of the Site, and developed Lots 3 and 4 with buildings, paved roads, rail spurs, and associated tanks and piping to support manufacturing processes. Tract A is a narrow strip of property between the top of the bank and the mean high-water line along the entire riverbank of the Site.

The Site ceased operations in 2001, and all manufacturing buildings and above ground equipment were demolished between 2002 and 2004. The remaining former Site features consist of the former administration building, and former building foundations and paved areas, left as temporary capping. Source Control Measures (SCM) implemented since 2006 have altered the Site features, including abandoning in-place subsurface stormwater conveyance lines, construction of stormwater channels, detention basin and sand filter basin, and installation of a soil bentonite groundwater barrier wall (GWBW) and groundwater extraction and treatment (GWET) system. Details of the SCMs have been provided in previous submittals (e.g., FS [ERM, 2023]).

#### 1.1.1 GEOLOGY AND STRATIGRAPHY

The surficial geology in the Site area is characterized by fill and alluvial deposits of the Willamette River. Alluvial deposits are underlain by bedrock of the Columbia River Basalt Group (CRBG). The stratigraphic units of the Site are described in further detail in the RI Report (ERM 2005), the PDI



Report (ERM 2021a), and the FS (ERM 2023). Stratigraphic units underlying the I1TA are described below.

The subsurface of the I1TA is characterized by six informal stratigraphic units based on historical subsurface investigations (ERM 2005, 2021a), listed below in stratigraphic order:

- Artificial fill material
- Sandy silt
- Fine-to-medium sand with silt and clay
- Interbedded sand and silt
- Fine sand with clay
- Silt with clay
- CRBG

Each of the alluvial units are generally poorly sorted, with the exception of the fine sand with clay unit which exhibits a higher degree of grain size sorting than the other units. Each of the alluvial units are present throughout the I1TA with the exception of the sandy silt. The sandy silt has been historically delineated in the southwestern end of the I1TA, under the Manufacturing Process Residue pond (MPR Pond) and extending southwest. The sandy silt is not present northwest of the MPR Pond toward the riverbank in the I1TA.

The surface of the CRBG has been delineated in the northeastern portion of the I1TA, near the riverbank of the Willamette River, at a depth between 49 and 53 feet below ground surface (bgs). The surface of the CRBG is deeper in the southern portion of the I1TA, near the former dichlorodiphenyltrichloroethane (DDT) manufacturing area, observed at 88.3 feet bgs. These stratigraphic units generally correspond with distinct hydrostratigraphic units (with the exception of the Vadose Zone) at the Site and are described in detail below. Figures 5 through 9 present elevation contours of the top of each of the stratigraphic units. Figure 10 presents a cross section depicting the stratigraphic and hydrostratigraphic units in the subsurface of the I1TA.

#### 1.1.2 HYDROSTRATIGRAPHY

As previously detailed in the RI Report, PDI Report, and FS, the hydrogeological zones beneath the Site have been designated as the Vadose Zone, Shallow Zone, Shallow-Intermediate Silt Zone, Intermediate Zone, Deep Zone, and Basalt Zone (ERM 2005, 2021, 2023)<sup>1</sup>. Each of these hydrogeological zones occur in the I1TA. The hydrogeological zones and their correlation with stratigraphy are described in further detail below.

#### 1.1.2.1 VADOSE ZONE

The Vadose Zone is the unsaturated soil above the uppermost groundwater-bearing zone (i.e., the Shallow Zone). It extends from the ground surface to the top of the Shallow Zone. In the I1TA, the Vadose Zone consists of the artificial fill material, sandy silt, and fine-to-medium sand with silt

<sup>&</sup>lt;sup>1</sup> In other reports, the Basalt Zone is referred to as the Gravel and Basalt Zone. However, the Gravel does not appear in I1TA.



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and clay. The Vadose Zone can produce confining conditions in the Shallow Zone in the southwestern end of the I1TA where the sandy silt has been delineated.

#### 1.1.2.2 SHALLOW ZONE

The Shallow Zone is the uppermost water-bearing zone. In the I1TA, the Shallow Zone consists of the artificial fill material and fine-to-medium sand with silt and clay. The Shallow Zone may be confined in the southwestern end of the I1TA where overlain by the sandy silt.

While the regional groundwater flow in the Shallow Zone is from southwest to northeast to the Willamette River, groundwater flow in the I1TA is more complex where impacted locally by the historical river channel, the GWBW, and extraction trench system. The vertical gradient in the Shallow Zone is generally downward, although occasionally upward near the river depending on the river stage.

#### 1.1.2.3 SHALLOW-INTERMEDIATE SILT ZONE

The Shallow-Intermediate Silt Zone is an aquitard consisting of interbedded silt and sand. It is generally continuous in the I1TA and ranges in thickness from approximately 0.5 to 5.0 feet. The Shallow-Intermediate Silt Zone generally acts as an aquitard between the overlying Shallow Zone and underlying Intermediate Zone.

#### 1.1.2.4 INTERMEDIATE ZONE

The Intermediate Zone is a semi-confined water-bearing zone comprised of fine sand with clay. It is generally overlain by the Shallow-Intermediate Silt Zone aquitard, where present, and underlain by the Deep Zone. The Intermediate Zone can be confined depending on the thickness of the overlying Shallow-Intermediate Silt Zone. The Intermediate Zone is continuous and extends laterally through the I1TA.

While the regional groundwater flow in the Intermediate Zone is toward the northeast where it discharges to the river, groundwater flow in the I1TA is more complex where impacted locally by the historical river channel, the GWBW, and extraction trench system. The vertical gradient in the Intermediate

Zone is generally downward, although occasionally upward near the river when the river stage is high.

#### 1.1.2.5 DEEP ZONE

The Deep Zone is an aquitard consisting of silt with clay, and it lies below the Intermediate Zone and above the Basalt Zone. The Deep Zone generally thins to the northeast, toward the river where the underlying CRBG rises. In the I1TA, groundwater flow in the Deep Zone is generally northeast toward the river, but the groundwater source control operations influence gradients and flow locally. The vertical gradient in the Deep Zone is generally downward; however, it is occasionally upward near the river depending on the river stage.



#### 1.1.2.6 BASALT ZONE

The Basalt Zone in the I1TA consists of the upper portion of the CRBG. It generally slopes upwards to the northeast from the upland towards the river.

#### 1.2 SITE HISTORY AND DESCRIPTION

Starting in 1941, various chemicals were produced at the facility including: sodium chlorate, potassium chlorate, chlorine, sodium hydroxide, DDT, sodium orthosilicate, magnesium chloride hexahydrate, ammonia, ammonium perchlorate, sodium perchlorate, and hydrochloric acid. Most recently, the facility was a chlor-alkali plant until the plant shut down in 2001 and the plant was decommissioned and dismantled in 2004. The RI Report (ERM 2005) described historical Site operation and manufacturing processes.

Currently, most of the Site is paved, gravel-covered/capped, or covered with building foundations. The only structures currently present are the building constructed to house the GWET system, three small motor-control buildings, a temporary trailer used as the Site office, and the original plant administration building. The only current activities at the Site are general maintenance and those associated with the ongoing SCMs.

#### 1.3 NATURE AND EXTENT OF I1TA

The extent of I1TA is defined by the area and depth in which DNAPL was observed during the Phase 1 PDI, and includes the former MPR Pond, and a small portion of the Overflow Trench (i.e., DDT Trench). These are the two areas where disposal of spent chlorobenzene (i.e., DNAPL) occurred historically. Section 4.1 presents the DNAPL CSM. Historical operation areas are depicted on Figures 3 and 4.

#### 1.4 INTERIM REMEDIAL ACTION MEASURE - REGULATORY BASIS

The ODEQ-approved *Final Modification Revised Upland Feasibility Study Work Plan* (ERM 2022) lists the Site-specific remedial action objectives (RAO), as follows.

- RAO 1 Reduce upland human health risks to acceptable risk-based levels from incidental ingestion, inhalation, and direct contact with soil under trespasser, outdoor worker, outdoor worker after redevelopment, and construction worker scenarios.
- RAO 2 Reduce riverbank terrestrial ecological risks to acceptable risk-based levels from ingestion and direct contact with soil.
- RAO 3 Prevent or reduce the potential for migration of contaminants of concern (COC) in surface soil and riverbank soil to accumulate in river sediment above acceptable risk-based levels.
- RAO 4 Treat or remove soil hot spots to the extent feasible based on remedy selection factors.
- RAO 5 Prevent or reduce the migration of groundwater COCs to the river above acceptable risk-based levels for surface water receptors.
- RAO 6 Treat or remove groundwater hot spots to the extent feasible based on remedy selection balancing factors.



- RAO 7 Reduce the potential for DNAPL to act as a continuing source of COCs in groundwater.
- RAO 8 Treat or remove DNAPL hot spots to the extent feasible based on remedy selection balancing factors.
- RAO 9 Reduce the migration of COCs in stormwater to the river that are at or above acceptable risk-based concentrations for surface water receptors.
- RAO 10 Reduce the migration of COCs in stormwater to the river to prevent accumulation of COCs in river sediment above risk-based levels.

The ODEQ prepared a memorandum (ODEQ 2024) that summarizes its findings on the FS (ERM 2023) for LSS. In the memorandum, ODEQ proposed an alternative path forward focused on IRAMs to achieve the following objectives:

- 1. Expedite the necessary remediation to address high-risk and/or well-defined contamination.
- 2. Decrease potential uncertainty in the FS by resolving data gaps and conducting additional performance monitoring.

ODEQ proposed the implementation of IRAM 1 (detailed in Section 1) as an alternative path forward for the following advantages:

- To accelerate cleanup of highest risks (i.e., DNAPL)
- Reduce pesticide co-solvency with chlorobenzene and potentially improve GWET influent characteristics
- Improve near-term source control status in the stranded wedge outside of the GWBW
- Reduce the likelihood of a post-record of decision (ROD) administrative change (i.e., Explanation of Significant Differences or ROD Amendment)
- Reduce the scope/magnitude/uncertainty of post-ROD cleanup actions
- Provide a clearer path to Site closure

#### 1.5 HISTORICAL DNAPL INVESTIGATION

In 2006, ERM conducted a DNAPL investigation on behalf of LSS (ERM 2006). This study consisted of advancing direct-push borings throughout the Acid Plant Area of the Site between the suspected source of DNAPL contamination (i.e., the MPR Pond and Overflow Trench) and the top of bank. Boring locations drilled included GP-01 through GP-65. The results of this investigation were used to delineate DNAPL in the *Revised Hot Spot Evaluation* (ERM 2021b) and design the scope of the current investigation.



## 2. SUMMARY OF PRELIMINARY DESIGN INVESTIGATION ACTIVITIES

Field activities discussed in this report were conducted between 8 July and 30 August 2024 and are described in detail below. Activities included subsurface clearance, advancement of soil borings using sonic drilling technology, and soil sampling. The boring locations are shown on Figure 11.

#### 2.1 SUBSURFACE CLEARANCE

Prior to any subsurface investigative activities, ERM implemented subsurface clearance procedures. ERM reviewed subsurface utility records, as-built drawings, and historical information to select boring locations sufficiently far from known existing surface and subsurface utilities. A public utility mark-out was performed to identify subsurface utilities (Oregon Ticket No. 24167748) and then a private utility locating firm was subcontracted to clear areas where subsurface work was performed. Boring locations were cleared if known active utilities were present within approximately 10 feet of the drilling location (e.g., active pumping infrastructure) using an air-knife and vacuum truck operated by Cascade Drilling®, per ERM subsurface clearance procedures, before powered drilling equipment was used. At boring locations PDI-11, PDI-12, PDI-27, PDI-33, and PDI-34, air-knife and vacuum truck were employed to a depth of 8 feet bgs, refusal, or to a depth of 2 feet greater than the depth of known utilities within 10 feet of the proposed drilling location. All remaining boring locations were completed without physical preclearance.

#### 2.2 SOIL SAMPLING

Between 8 July and 30 August 2024, ERM personnel oversaw the advancement of 34 soil boring locations (PDI-01 through PDI-34) using a sonic drilling rig operated by Cascade Drilling®. The soil borings were advanced until refusal or until the CRBG was encountered. All borings were sealed through the interfaces of the Shallow Intermediate Silt Zone and Intermediate Zone, and the Intermediate Zone and the Deep Zone to reduce the potential for contaminant migration. The seals were completed using 8- and 6-inch diameter stepdown casing to place a bentonite seal, and the seal was then drilled through to continue or complete the boring, as described in the PDI WP (ERM 2024). Upon completion, boreholes were grouted from the bottom up.

Continuous soil cores were recovered from each boring using standard sonic drilling methods. Soils were logged and photo-documented by a qualified ERM staff geologist and reviewed by an Oregon-Registered Geologist. Soil lithology was logged and classified according to the Unified Soil Classification System. Boring logs are provided as Appendix A. Boring lithology was incorporated into the CSM, described below in Section 4, and reviewed to focus drilling locations for Phase 2. Each soil core was visually inspected for indications of DNAPL with the assistance of an oil-soluble dye (Oil-in-Soil<sup>TM</sup>) field screening test kit. Oil-in-Soil<sup>TM</sup> field screening test kits are used by adding soil from the boring where oil (i.e., DNAPL) is suspected, adding water, and then shaking to release colorimetric indicators. If color changes are observed, then DNAPL and/or petroleum hydrocarbons are suspected to be present. Additionally, soil cores were screened for evidence of volatile organic compounds (VOC) using a photoionization detector (PID).



#### 2.2.1 DELINEATION SOIL SAMPLES

During Phase 1, ERM collected a total of 134 soil samples from 34 boring locations within the study area. Soil samples were collected from depth intervals determined in the field based on visual or olfactory indications of DNAPL presence (odor, sheen, visual observations of DNAPL); field measurements from the PID; and oil-soluble dye test results. Soil samples were collected using Terra Core® samplers to determine VOC concentrations and correlate concentrations with field observations. Soil samples were submitted to Eurofins Laboratory (Eurofins) for analysis by United States Environmental Protection Agency (USEPA) Method 5035/8260D for high concentration VOCs in soil. Soil samples and VOC results are presented in Table 1 and select results are shown on the cross sections in Figures 12 through 21.

During Phase 1, unknown substances were identified in soil cores from boring locations PDI-15, PDI-20, PDI-21, and PDI-24. ERM collected soil samples for laboratory analyses from these cores to characterize the substances. The samples were submitted to Eurofins and the following analyses were run:

- VOCs by USEPA Method 8260D
- Semivolatile organic compounds (sVOC) by USEPA Method 8270E
- Total petroleum hydrocarbons and diesel-range organics (DRO)
- Organochlorine pesticides by USEPA Method 8081
- Polychlorinated biphenyls (PCB) by USEPA Method 8082A
- Chlorinated herbicides by USEPA Method 8151
- Dioxins/furans by USEPA Method 1613B
- Per- and polyfluoroalkyl substances (PFAS) by USEPA Method 1633

Soil samples submitted for VOCs analysis were collected using the same methodology described above for the delineation soil samples. Soil samples submitted for sVOCs, DRO, organochlorine pesticides, PCBs, chlorinate herbicides, and dioxins/furans analyses were collected in lab-provided glass jars. Soil samples submitted for PFAS analysis were collected in lab-provided polypropylene jars. The results of the laboratory analyses of soil collected from boring locations PDI-15, PDI-20, PDI-21, and PDI-24 are presented in Table 2. Observations of similar contamination were also made at PDI-32 and PDI-33, but samples were not collected.

#### 2.2.2 TREATABILITY STUDY SOIL SAMPLES

Soil samples for the treatability study were collected from select boring locations and depth intervals corresponding to soil that had been field screened as "Contaminated," "Some DNAPL Contamination," and "No Evidence of DNAPL Contamination" as discussed above. These samples were segregated by contamination category and by stratigraphic category. Samples were stored in 2-gallon buckets lined with solvent-resistant polypropylene bags and labeled with location, depth interval, visual contamination category, and stratigraphic zone. The headspace of the bags was eliminated to the greatest extent practical then the bag was double zip-tied. The buckets were sealed with a gasketed lid and placed in cold storage (preserved at 0 degrees Celsius or less, with a target of -12 degrees Celsius) for preservation following the sealing procedure. Soil for treatability testing was shipped under chain of custody and preserved with blue ice during transit



to the treatability lab, Loureiro Engineering Associates, Inc (LEA). One sample of "No Evidence of Contamination" soil was composited prior to being shipped. Any soil remaining after samples were shipped for treatability testing was retained in onsite freezers until it is determined that the treatability labs have adequate volume for all testing. Details regarding the volume of soil collected, soil sample selection for the treatability studies, and treatability study design is described below in Section 6.1.

#### 2.2.3 GEOTECHNICAL SOIL SAMPLES

Soil samples were collected for geotechnical analyses to inform this preliminary design. Soil samples were collected by advancing Shelby tubes in the Shallow and Deep Hydrogeological Zones. Attempts to collect Shelby tube samples from the Intermediate Zone soils were unsuccessful due to non-cohesive soils that would not stay in the Shelby tube after the sample was collected. The soil samples were picked up from the Site and tested by Northwest Geotech, Inc., for the following methods:

- ASTM International (ASTM) D2850 unconsolidated-undrained triaxial compression
- ASTM D2166 compressive strength of cohesive soil
- ASTM D5084-Method C flexible wall permeability
- ASTM D3080 direct shear test of soils under consolidated drained conditions

Results of the geotechnical analyses are described in further detail below in Sections 3.3, 5.5, and 6.1.

#### 2.2.4 DYELIF™ SAMPLES

Soil samples were collected for a DyeLIF™ compatibility evaluation. ERM collected soil samples representative of the range of potential field conditions, including naturally occurring organic material, "Contaminated," "Some DNAPL Contamination," and "No Evidence of DNAPL Contamination" categories, as encountered in the field. These samples were shipped under chain of custody to Dakota Technologies, Inc., and utilized to evaluate compatibility with the DyeLIF™ system and establish a response curve with respect to concentration. Through the course of Phase 1, it was determined that the DyeLIF™ system was not appropriate for the Phase 2 investigation because there were samples that DyeLIF™ might log as not contaminated even through sufficient chlorobenzene may be present to require remediation.

#### 2.3 QUALITY ASSURANCE/QUALITY CONTROL AND DATA VALIDATION

#### 2.3.1 FIELD SAMPLE QUALITY ASSURANCE/QUALITY CONTROL

Field quality assurance/quality control (QA/QC) samples were collected in accordance with the PDI WP (ERM 2024) and associated addenda as described in Section 2.6. Trip blanks were included in each cooler containing VOC samples. For every 20 samples collected and submitted for analysis, the following QA/QC samples were collected:

- One field duplicate sample
- One equipment rinsate sample to verify efficacy of decontamination of equipment, collected for every 20 samples



#### One matrix spike/matrix spike duplicate

Field notes taken during sampling activities were recorded in the field logbook. Samples were immediately labeled following collection, with the required data. Sample data were entered into the Chain-of-Custody record to ensure proper tracking and control. Analytical samples were shipped to the laboratory in sealed containers and accompanied by the Chain-of-Custody record. QA/QC samples were collected, controlled, and shipped in the same manner as normal field samples.

#### 2.3.2 DATA VALIDATION

ERM completed data validation after receiving the laboratory analytical reports. Appendix B includes laboratory analytical reports and Appendix C includes the data validation memo. QA/QC sample results were reviewed during data validation and additional details are included in the data validation memos (Appendix C). Based on the results of the data validation, qualifiers were assigned to the data, and select analytes were rejected. The following select VOC results were rejected due to holding time exceedances:

- 1,2-dichloropropane, bromomethane, and dichlorodifluoromethane in all samples from PDI-04 and the corresponding trip blank
- All non-detect results for all VOCs in all samples from PDI-07.

Additionally, the following select pesticides, PCBs, and sVOCs were rejected due to very low matrix spike/matrix spike duplicate recoveries:

- Pesticides endosulfan I and methoxychlor in sample PDI-20-SO-9-20240807
- PCB-1016 and PCB-1260 in sample PDI-20-SO-9-20240807
- sVOCs 3,3'-dichlorobenzidine, 4-nitroaniline, and butyl benzyl phthalate in sample PDI-24-SO-23.1-20240809

No chlorobenzene concentration data were rejected. As such, it was determined that, excluding rejected data, the qualified data are acceptable for decision making and meet the overall objectives of the investigation.

#### 2.4 INVESTIGATION-DERIVED WASTE

Investigation-derived soil and sampling supplies waste from preclearance and drilling was containerized in lined and covered roll-off bins. Bins were categorized as waste containing soil with evidence of DNAPL or waste containing soil with no evidence of DNAPL. The investigation-derived waste is currently pending waste profiling. Disposal of the investigation-derived waste will be described in further detail in the forthcoming PFDR.

Decontamination water was containerized in totes within secondary containments during fieldwork, and then treated at the Site by the groundwater treatment plant.

#### 3. RESULTS

#### 3.1 FIELD RESULTS

Field observations and measurements including lithology, visual observations of DNAPL or staining, odor, sheen, Oil-in-Soil™ test results, and PID readings were collected from soil cores during Phase 1 and are presented in the boring logs included in Appendix A. For each boring location, descriptions of lithology, visual indications of DNAPL or staining, odor, sheen, and Oil-in-Soil™ test results were integrated into a 3-dimensional geologic model to update the DNAPL CSM and generate cross sections. The results of these CSM updates are described in further detail below in Section 4.1.

Field observations and results were also compared with the soil sample chlorobenzene concentration data to identify the extent to which field observations correlate with DNAPL presence/chlorobenzene concentration. The bar graph, Chart 1, below compares chlorobenzene concentrations with observations of odor and sheen as well as Oil-in-Soil<sup>TM</sup> test results, as recorded in the boring logs. Chart 1 presents positive Oil-in-Soil<sup>TM</sup> test results correlating with a high average chlorobenzene concentration, illustrating that positive Oil-in-Soil<sup>TM</sup> tests generally indicate high chlorobenzene concentration and/or the presence of DNAPL. Odor and sheen correlate with moderate average chlorobenzene concentrations, indicating odor and sheen represent residual DNAPL or dissolved-phase chlorobenzene in groundwater, in the absence of a positive Oil-in-Soil<sup>TM</sup> test or visual indications of DNAPL.

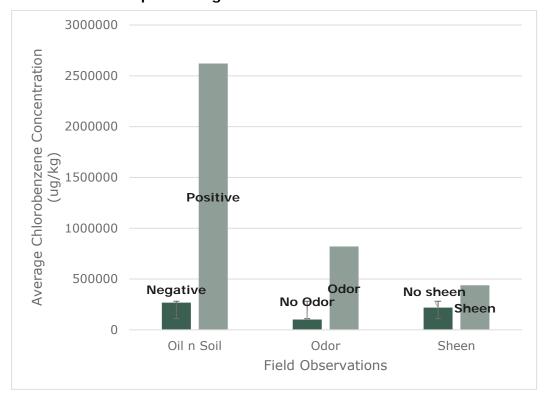


Chart 1: Soil Sample Average Chlorobenzene Concentrations and Field Observations



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Chart 2 below compares chlorobenzene concentrations with PID readings, as recorded in the boring logs. Results indicate there is a weak correlation between high chlorobenzene concentrations and high PID readings, suggesting the PID is of limited use when screening soil for chlorobenzene DNAPL.

45000000 40000000 Chlorobenzene Concentration (ug/Kg) 35000000 30000000 25000000 20000000 15000000 y = 275.48x + 260049 $R^2 = 0.1$ 10000000 5000000 2000 6000 8000  $\cap$ 4000 10000 12000 14000 16000 PID (ppm)

Chart 2: Soil Sample Chlorobenzene Concentrations and PID Results

#### 3.2 ANALYTICAL RESULTS

#### 3.2.1 DELINEATION SOIL SAMPLE VOC RESULTS

The results of the laboratory analyses of soil samples collected from the 34 boring locations are presented in Table 1. Appendix B presents laboratory analytical reports. The highest detected concentration of chlorobenzene in soil samples impacted by visible DNAPL was 41,000,000 J micrograms per kilogram ( $\mu$ g/kg) at location PDI-19 at a depth of 39 feet bgs. PDI-19 is located downgradient from the source area and adjacent to the upland side of the GWBW. A 0.7-foot thick zone of DNAPL was observed at the sample depth in a sand lens in the Shallow-Intermediate Silt Zone. Analytical results indicate the highest concentrations of chlorobenzene were observed in Shallow and Shallow-Intermediate Silt Zone soils.

Chlorobenzene concentrations in samples where no evidence of DNAPL was observed ranged from not detected to 280,000  $\mu$ g/kg at location PDI-06 at a depth of 40.5 feet bgs. Consistent with historical chlorobenzene concentration results (ERM 2006), the chlorobenzene concentrations present in samples where no evidence of DNAPL was observed during the Phase 1 investigation



indicate that areas immediately outside of the DNAPL, laterally and vertically, have comparably low residual mass of chlorobenzene remaining.

#### 3.2.2 UNKNOWN SUBSTANCE RESULTS

During Phase 1, ERM collected soil samples containing unknown substances from four boring locations (PDI–15, PDI-20, PDI-21, PDI-24) within I1TA. Similar material was also observed at PDI-32 and PDI-33, but samples were not collected. The results of the laboratory analyses are presented in Table 2 where they are screened against the Hot Spot Criteria for various pathways. Field observations of the sampled intervals and a brief discussion of results is included below.

#### 3.2.2.1 PDI-15

At boring location PDI-15, from 37.7 to 38 feet bgs, dark brown staining, a dark brown liquid, and sheen were observed. An Oil-in-Soil<sup>TM</sup> test was conducted on soil from the interval and the test result was inconclusive due to a film observed on top of the water in the test tube. A soil sample was collected from a depth of 38 feet bgs. Analytical results detected dioxins/furans, DRO and motor oil-range organics (MORO), organochlorine pesticides, chlorinated herbicides, and sVOCs. The highest detected concentrations are as follows:

- Dioxins/furans: 35,000 picograms per gram (pg/g) of 1,2,3,4,7,8-Hexachlorodibenzofuran
- DRO and MORO: 970 J milligrams per kilogram (mg/kg) of DRO and MORO
- Organochlorine pesticides: 180 mg/kg of 4,4'-DDT
- Chlorinated herbicides: 15,000 μg/kg of 2-(4-chloro-2-methylphenoxy) propanoic acid
- sVOCs: 5,800,000 μg/kg of hexachloroethane

Due to the observed concentrations of dioxins/furans, pesticides, herbicides, and sVOCs, the contamination at PDI-15 is referred to in this report as the "PDI-15 Unknown Substance."

#### 3.2.2.2 PDI-20 AND PDI-21

At boring PDI-20, rounded masses of tar-like material with tar-like odor were observed from 9.0 to 16 feet bgs. An Oil-in-Soil™ test conducted on soil from the interval was negative. A soil sample was collected from a depth of 9.0 feet bgs. Analytical results detected dioxins/furans, PFAS, DRO and MORO, and sVOCs. The highest detected concentrations are as follows:

- Dioxins/furans: 840 pg/g of 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-Dioxin
- PFAS: 0.39 µg/kg of N-ethyl perfluorooctanesulfonamidoacetic acid (NEtPFOSAA)
- DRO and MORO: 51,000 J mg/kg of MORO
- sVOCs: 8,100 μg/kg of chrysene

At boring location PDI-21, from 19.6 to 28.2 feet bgs, a sheen and tar-like odor were observed. Oil-in-Soil™ tests on soil from the interval were positive. A soil sample was collected from a depth of 20.2 feet bgs. Analytical results detected dioxins/furans, DRO and MORO, organochlorine pesticides, and sVOCs. The highest detected concentrations are as follows:

- Dioxins/furans: 130 pg/g of 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-Dioxin
- DRO and MORO: 11,000 J mg/kg of MORO



- Organochlorine pesticides: 0.95 J mg/kg of 4,4'-DDT
- sVOCs: 950 j μg/kg of pyrene

At location PDI-21, as well as locations PDI-20, PDI-32, and PDI-33, similar observations of sheen and tar-like odor as well as positive Oil-in-Soil<sup>TM</sup> test results were noted. Low concentrations of chlorobenzene, ranging from 1,700 μg/kg (PDI-33) to 8,100 μg/kg (PDI-32) were detected in soil samples from these intervals. These low chlorobenzene concentrations at PDI-32 and PDI-33, and the DRO and MORO concentrations at PDI-21, indicate the positive Oil-in-Soil<sup>TM</sup> tests in this area of the Site likely come from a petroleum hydrocarbon source. The cross sections depicted on Figures 17, 18, 19, and 21 have been updated to illustrate this additional plume and these findings are discussed further below in Section 7. Collectively, the materials observed at these locations are different in nature from DNAPL, and are referred to in this report as "Petroleum-based nonaqueous-phase liquid (NAPL)" based on the observed concentrations of MORO.

Additionally, at boring location PDI-21, at 36.3 feet bgs, soil containing a yellow powder-like material was observed. It was sampled and submitted for organochlorine pesticide analyses by USEPA Method 8081. An Oil-in-Soil<sup>TM</sup> test on soil from the interval was negative. Analytical results detected low concentrations of organochlorine pesticides ranging from 0.0011 J- mg/kg of 4,4'-dichlorodiphenyldichloroethylene (DDE) to 0.052 J mg/kg of 4,4'-DDT.

#### 3.2.2.3 PDI-24

At boring location PDI-24, at a depth of 23.1 feet bgs, dusky red staining was observed. An Oil-in-Soil<sup>™</sup> test was conducted on soil from the interval and the test result was negative. A film was observed on top of the water in the test tube. Analytical results indicate detected concentrations of dioxins/furans, DRO and MORO, organochlorine pesticides, and sVOCs. Detected concentrations are as follows:

- Dioxins/furans: 330 pg/g of 1,2,3,4,7,8-Hexachlorodibenzofuran
- DRO and MORO: 10,000 J mg/kg of MORO
- Organochlorine pesticides: 19,000 J mg/kg of 4,4'-DDT
- sVOCs: 80 μg/kg of 1,4-dichlorobenzene

Based on the concentrations of 4,4'-DDT and MORO, the contamination at PDI-24 is referred to in this report as the "Pesticide- and Petroleum-related Contamination."

#### 3.3 GEOTECHNICAL RESULTS

Shelby tube samples of the Shallow Zone and Deep Zone were collected from two boring locations during Phase 1. These samples were collected from PDI-23 at depths of 31 to 34 and 47 to 50 feet bgs and PDI-31 at depths of 32 to 35 and 42 to 45 feet bgs. Shelby tube samples were analyzed by Northwest Geotech, Inc., in Wilsonville, Oregon, for hydraulic conductivity by ASTM Method D5084C, unconfined compressive strength (UCS) of soil by ASTM Method D2166, triaxial undrained-unconsolidated compression by ASTM Method D2850, and direct shear by ASTM Method D3080. Results of these analyses are presented in Table 3. Results indicate that soils from the Shallow and Deep Zones are generally non-cohesive. Three of the four samples submitted for unconsolidated-undrained triaxial compression testing were unable to be analyzed as the



specimens were too fragile. Shallow Zone (SP and SM) and Deep Zone (SM and ML) geotechnical results are typical of their representative soils. Hydraulic conductivity results for Shallow and Intermediate Zone samples are lower than estimates derived from grain size analysis in the 2021 PDI (ERM 2021a).

Geotechnical samples were unable to be collected from the Intermediate Zone during Phase 1. Additional geotechnical samples will be attempted from the Intermediate Zone during Phase 2.



#### 4. DISCUSSION OF PRE-DESIGN INVESTIGATION RESULTS

#### 4.1 DNAPL CONCEPTUAL SITE MODEL

Data generated during Phase 1, including lithology, chlorobenzene concentrations, field screening results, visual indications of DNAPL, staining, odor, sheen, and Oil-in-Soil™ test results were integrated into the geological model. These data were used to update the geological and DNAPL CSMs. A plan view map of the boring locations, cross-section transects, and DNAPL is presented on Figure 11. The cross sections are displayed on Figures 12 through 21.

The results of Phase 1 of the investigation indicate that:

- The DNAPL is oriented generally northeast-southwest and is approximately 350 feet long and 170 feet wide.
- The DNAPL was observed predominantly in the bottom of the Shallow Zone and within the Shallow-Intermediate Silt Zone. DNAPL was only observed in the Deep Zone in a single location and reached less than 1 foot into the Deep Zone (see fifth bullet in this list). There is no evidence of DNAPL moving into, through, or beyond the Deep Zone (i.e., no evidence of DNAPL in the Basalt Zone).
  - Chlorobenzene observed in the Deep Zone and Basalt Zone soil is believed to be dissolved-phase contamination, and dissolved phase contamination that has sorbed to organic carbon in soil.
- Within the Shallow-Intermediate Silt Zone, DNAPL is often observed in sand lenses between silt beds.
- DNAPL was observed in the top of the Intermediate Zone in four boring locations, PDI-05, PDI-07, PDI-19, and PDI-34, and was not observed in the Intermediate Zone otherwise.
   DNAPL in the Intermediate Zone is presented on Figures 12 through 20.
- A positive Oil-N-Soil result was observed in a sand lens within the top of the Deep Zone at one boring location, PDI-05, at a depth of 44 feet bgs. The concentration of chlorobenzene at this location was 9,700 μg/kg, which is lower than what is typically associated with DNAPL (e.g., greater than 500,000 μg/kg). No evidence of DNAPL was observed below 44 feet bgs at PDI-05. PDI-05 is presented on Figures 12 and 17.
- The DNAPL is discontinuous. Observations of discontinuities include the following:
  - In the southwest portion of the DNAPL, in the vicinity of PDI-01 and PDI-13, DNAPL occurs within and above the Sandy Silt unit from 6.0 to 20 feet bgs (i.e., in the Vadose zone) (Figures 12 and 14). This shallow DNAPL does not connect with the main DNAPL plume based on existing Site data.
  - The overflow trench was excavated to a minimum depth of approximately 8 feet in 2000 (ERM 2001). Borings placed in the overflow trench area during Phase 1 (PDI-10 through PDI-12) had no indications of DNAPL except at PDI-10 from 20 to 25 feet bgs (Figure 13). Some staining was observed under the excavated area near PDI-12. The DNAPL at PDI-10 is separate and discrete from the deeper DNAPL that originated from the MPR Pond (e.g., PDI-02). These results suggest that the previous excavation successfully removed most of the DNAPL that entered the subsurface through the overflow trench.



- Additionally, these results suggest that the mass of DNAPL that entered the subsurface through the overflow trench is small compared to the mass of DNAPL that entered the subsurface through the MPR Pond.
- The primary mechanism of DNAPL entering the subsurface is believed to have been infiltration through the bottom of the MPR Pond, resulting in the primary mass of DNAPL being located between PDI-02 and PDI-14.

#### 4.2 UNKNOWN SUBSTANCES CONCEPTUAL SITE MODEL

As described above in Sections 2.2.1 and 3.2.2, additional contaminants were observed southeast of the DNAPL during the Phase 1 investigation. Following review of field observations and soil sample analytical results, the contaminants were described in Section 3.2.2, as follows:

- PDI-15 Unknown Substance
- Petroleum-based NAPL (PDI-20, PDI-21, PDI-32, and PDI-33)
- Pesticide- and Petroleum-related Contamination (PDI-24)

The PDI-15 Unknown Substance and the Pesticide- and Petroleum-related Contamination (PDI-24) were only observed in their respective borings, which are depicted on Figure 11. The PDI-15 Unknown Substance was observed at the bottom of the Shallow Zone and the Pesticide- and Petroleum-related Contamination was observed at the bottom of the Fill. The Petroleum-based NAPL is depicted on Figure 11, as well as cross sections on Figures 17, 18, 19, and 21. It was observed in the Fill and Shallow Zone soils.

The PDI-15 Unknown Substance and the Petroleum-based NAPL were identified in the area near the GWBW which historically received miscellaneous fill from various sources for many years, as described in the RI Report (ERM 2005). Sources of this fill material included, but are not limited to, the City of Portland, private excavation contractors, and Elf Atochem. Fill materials included, but are not limited to, clean soil, asphalt, concrete, metal piping, and miscellaneous materials from spent chlorine cells. Additional possible fill material included DDT-impacted soils from construction activities in the Acid Plant Area, which may have been excavated and incorporated in fill materials (ERM 2005). The sources of the PDI-15 Unknown Substance and the Petroleum-based NAPL are not clear, but the contamination likely was emplaced with the miscellaneous fill.

The Pesticide- and Petroleum-related Contamination (PDI-24) was observed directly north of the prior Warehouse No. 3 and loading dock of the historical Acid Plant Area (Figures 3 and 11). This area also received fill to expand the property riverward. The source of the pesticide-related impacts is not clear, but the contamination may have been emplaced with the miscellaneous fill discussed above.



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#### INTERIM REMEDIAL ACTION MEASURE #1 CONCEPTUAL DESIGN

#### 5.1 IN SITU STABILIZATION TECHNOLOGY

ISS generally refers to mixing soil in place with amendments like Portland cement to reduce their hydraulic conductivity. This is most frequently accomplished using deep soil mixing, where a machine-powered auger is rotated in the subsurface while the amendments are injected. Mixing the soil breaks up native stratigraphy decreasing permeability, brings the soil into direct contact with amendments (e.g., Portland cement and/or ISCO), and reduces the concentration and potential mobility of contamination in the most contaminated soil. Portland cement is combined with water and other amendments in a batch plant that produces a consistent slurry that contains the target concentration of Portland cement and other amendments. The finished slurry is pumped from the batch plant to the head of the auger where it is injected through the auger into the soil as it is being mixed. Over a period of approximately 30 days, the Portland cement mixed with water and contaminated soil (and possible other amendments) will cure into a low strength concrete that has much lower permeability than the native soil. The strength of this solidified monolith is typically stronger than native soil, but can still be dug using heavy machinery like an excavator.

As the soil is mixed with the amendment, the resulting soil-amendment mix will swell due to the expansion of soil by mixing, and the volume of the added amendment. This swell volume of soil-amendment mix will be contained within the excavation area.

#### 5.2 PRELIMINARY DESIGN CONSIDERATIONS

As discussed in Section 1, the goal of IRAM 1 is to address the chlorobenzene source area using a combination of ISS, and/or ISCO technologies. The I1TA focuses on DNAPL present in soil in the saturated and unsaturated zone as described above. Design criteria to be considered at the 30 percent design include:

- 1. The vertical and lateral extent of DNAPL contamination requiring remediation
- 2. Identifying feasible ISS amendments and conceptual mix design ratios capable of achieving target post-remedy hydraulic conductivity performance (i.e., less than 10<sup>-6</sup> centimeters per second [cm/s]) objectives
  - a. A treatability study is ongoing to evaluate the specific amendments and concentrations that will be used in the design. The conceptual design presented here proposes a 10 percent weight per weight concentration of Portland cement as the amendment design.
    - i. Amendments being considered in the treatability study include Portland cement at 5 to 15 percent weight per weight concentrations, a mixture of Portland cement and slag, activated carbon, and different concentrations of sodium persulfate.
- 3. IRAM 1 will reduce the mobility of DNAPL present within I1TA primarily by reducing the hydraulic conductivity of the soil matrix that the DNAPL is present in. In addition, if shown to be effective in the treatability study, ISCO will also oxidize monochlorobenzene DNAPL, reducing the DNAPL mass. The geotechnical samples collected during Phase 1 indicate



permeability values of  $10^{-4}$  cm/s in the Shallow and Shallow Intermediate Silt Zones and  $10^{-6}$  cm/s in the Deep Zone. The design target of the stabilized matrix is less than or equal to  $10^{-6}$  cm/s in contaminated hydrogeological zones.

- 4. Addressing subsurface debris potentially present within I1TA that may impede implementation of IRAM 1.
- 5. The design depth, side slope, and extent of the excavation.
- 6. Management of excavated material.
- 7. Identifying existing monitoring wells and other existing infrastructure within I1TA that needs to be abandoned and/or replaced after IRAM 1.
- 8. Re-location of active GWET utilities within I1TA.
- 9. Permitting requirements and schedule.

#### 5.3 I1TA TREATMENT AREA AND VOLUME

The general scope of IRAM 1 is to address the DNAPL, and will also include the Unknown Substance at PDI-15, Petroleum-based NAPL, and Pesticide- and Petroleum-related Contamination (PDI-24) in I1TA identified during the PDI by in situ mixing, using the amendment mix identified as part of the treatability study. DNAPL identified in I1TA during the PDI is targeted for treatment with the possible exception of a small amount near the riverbank that may not be safe to treat by auger mixing due to slope stability. DNAPL potentially left in place will be addressed during subsequent remediation work conducted by LSS to address the uplands, riverbank and/or sediment at the Site. A conceptual layout of the borings that will be implemented in IRAM 1 is shown in Appendix E, Sheet 7.

The conceptual design of IRAM 1 is for shallow unsaturated contamination mixed insitu, and for saturated contamination to be mixed to a minimum of 5.0 feet below the deepest observed DNAPL or "other" contamination. As described in Section 4, there are three principal areas of DNAPL impacts:

- Shallow vadose zone DNAPL between PDI-01 and PDI-13 observed between elevation 24 to 30 feet NAVD88:
  - Clean soil from 0 10 feet bgs will be excavated and stockpiled. DNAPL will be mixed via ISS from approximately 24 to 30 feet NAVD88.
    - Alternative means of managing this soil are being evaluated and will be discussed in greater detail in the Pre-Final Design Report. Possible management options include:
      - Leaving vadose zone DNAPL in place and mixing it via Lang tool or similar (e.g. dual axis blender/ LTC-200) insitu
      - Mixing the soil ex situ with cement and backfilling the excavation
- The main chlorobenzene DNAPL plume extending from PDI-2 to PDI-14, observed approximately between elevation 12 and -4.0 feet NAVD88:
  - This DNAPL will be mixed in situ to a depth that is at least 5.0 feet into the Deep Zone, to an elevation approximately between -5.0 and -15 feet.
- Shallow DNAPL near PDI-20 observed from approximately between 14 and 25 feet NAVD88:



- Clean soil from 0 10 feet bgs will be excavated and stockpiled. DNAPL will be mixed in situ via ISS from approximately 14 to 25 NAVD88.
  - Alternative means of managing this soil are being evaluated and will be discussed in greater detail in the Pre-Final Design Report. Possible management options include:
    - Leaving vadose zone DNAPL in place and mixing it via Lang tool or similar(e.g. dual axis blender/ LTC-200)insitu
    - Mixing the soil ex situ with cement and backfilling the excavation

A profile of the conceptual mixing strategy is shown in Appendix E, Sheet 8.

#### 5.4 EXCAVATION OF OVERBURDEN SOIL

An excavation will be conducted between a depth of approximately 5.0 to 15 feet bgs. The goals of the excavation are to:

- Remove the overburden, concrete foundations, and debris that could impede the deep soil mixing auger
- Remove subsurface obstructions and utilities
- Provide a work platform for the deep soil mixing auger equipment
- Provide space to contain the resulting soil swell volume

Preliminary geotechnical analysis results from the PDI, discussed in Section 6, indicate that soils throughout Site is non-cohesive and excavations will require a shallow layback slope. Occupational Safety and Health Administration standards (29 Code of Federal Regulations 1926(P)(B)(4)) require a maximum slope of 1.5:1 for granular soils including sand. A 2:1 slope is considered in this preliminary design to provide an additional safety factor. The preliminary grade assumed for haul roads into and out of the excavation will be no greater than 8 percent.

Excavated soil will be hauled to onsite management areas for staging and/or subsequent characterization. Visibly clean or non-impacted soils will be segregated. Other soil that is excavated and has signs of contamination will be segregated from the clean soil for characterization in accordance with the forth coming Contaminated Materials Management Plan. Soil will be covered to prevent generating dust and contact with stormwater. Initial staging locations include the area on Lot 4 used for the Trench Excavation Project, and a second area on Lot 2, as shown in Appendix E, Sheet 1. It is anticipated that non-contaminated soil will be reused as backfill. Contaminated soil will be characterized and managed in accordance with the Contaminated Materials Management Plan and applicable regulations.

#### 5.5 PERMITTING CONSIDERATIONS

As shown in Appendix E, Sheet 1, the excavation will disturb an area of approximately 2 acres in the Acid Plant Area of the Site. A stormwater construction permit (1200C) will be required.

A Greenway Review may be required for any development that occurs within the Greenway Setback (25 feet landward from top of bank) and/or up to 50 feet landward of the Greenway Setback (i.e., up to 75 feet from top of bank). It is anticipated that a Remedial Action Exempt



Review will be requested to confirm that this scope of work is exempt from the Greenway requirements.

A grading permit and a general excavation permit will also likely be required.

#### 5.6 SCHEDULE

The preliminary results of the treatability study will be available in early 2025, and final results will be ready in May 2025. The final amendment mix design will be based on these results and is expected to be completed in early June 2025.

The preliminary (30 percent) design is expected to be finalized in mid-December 2024, with a PFDR and Final Design Report following in February and June 2025, respectively.

Treatment implementation is expected to begin in July 2025 and is expected to take 6 to 9 months to complete. Site preparation work including abandoning existing monitoring wells, relocating utilities, and establishing laydown areas and stormwater controls may occur between April and June 2025.

## 5.7 SITE PREPARATION AND CONTINUED OPERATION OF GROUNDWATER SOURCE CONTROL MEASURE

The current groundwater SCM has many active utilities in the I1TA, including:

- Active piezometers (e.g., MWA-2, MWA-8i, PA-19d, RW-8, and RW-9i).
- The adjacent groundwater extraction Trench 3.
- The GWBW
- A utility corridor, containing 480-volt power for extraction well pumps, 120-volt power for totalizers, 24-volt power for transducers and communications, and a fiber optic cable. This utility corridor also contains two groundwater conveyance lines and associated cleanouts.
- A motor control center with associated controls equipment.

As part of the implementation of this remedy, the following components will need to be abandoned or temporarily capped and removed to not hinder excavation or mixing.

- The motor control center is planned to be moved outside of I1TA
- The high-voltage, low-voltage, power, communications, and fiber optic lines are planned to be re-routed along existing utility poles
- The shallow and intermediate conveyance lines are planned to be connected to an overland pipe and routed around the treatment area or relocated around I1TA

The I1TA has a number of surface obstructions ranging from concrete pads to railroad tracks to asphalt and underground utilities that will all be abandoned during site preparation work. Removal of this type of material is a driving factor behind a minimum excavation depth of 5.0 feet bgs throughout I1TA.

The existing groundwater SCM is planned to remain in operation throughout IRAM 1 implementation. Temporary shutdowns may be required to re-route utilities and for worker safety throughout implementation of IRAM 1.



#### TREATABILITY STUDY

The following section is a summary of the treatability study being conducted. Details of the treatability study plan were included in the PDI WP (ERM 2024)

#### 6.1 SAMPLE SELECTION

Representative soil samples were selected from soil cuttings obtained during Phase 1 based on observations of DNAPL presence, chlorobenzene analytical data, and stratigraphy. The objective was to obtain three categories of contaminated soil for testing as discussed above:

- "Contaminated Soil' representing DNAPL-impacted soil within the portion of the Site most heavily impacted by DNAPL. Soil samples in this group were selected to represent the highest concentrations likely to be encountered, and also to represent the range of soil types that DNAPL was observed in.
- "Some Contamination Soil" to include soil that met the criteria of "Some Contamination" discussed above, as well as the range of soil types where this type of contamination was observed.
- "No Evidence of Contamination" to include soil that had no evidence of DNAPL, but which is from saturated soil adjacent to the DNAPL plume. This category also was selected to represent soil with dissolved-phase chlorobenzene impacts contamination resulting from groundwater that was in contact with the DNAPL.

The selected samples were shipped to LEA under chain of custody and preserved with blue ice during transit. For ISS/ISCO testing, five 2-gallon "Contaminated" and four 2-gallon "Some Contamination" samples were submitted. For ISCO-only testing, one 1-liter "Contaminated", two 1-liter "Some Contamination", and one 1-liter "No Evidence of Contamination" samples were submitted (Table 4). After receipt, LEA stored the samples under refrigeration. The ISS/ISCO samples were homogenized by contamination category, i.e., the five "Contaminated" samples were mixed, the four "Some Contamination" samples were mixed, and the one "No Evidence of Contamination" ISCO sample for Total Oxidant Demand testing was mixed. The soils were mixed by LEA in a laboratory mechanical mixer until the soil was fully homogenized. The remaining ISCO samples were not homogenized as it is not necessary for Total Oxidant Demand testing.

The treatability testing program includes comparing the UCS and permeability of the untreated soil to the values after being mixed with amendments (e.g., Portland cement, or Portland cement and sodium persulfate). Additionally, the testing program takes the homogenized soils, creates individual 'monoliths' of soil, and then simulates natural leaching processes to evaluate the concentration of COCs in leachate, simulating the effect of stabilizing the DNAPL and allowing groundwater to flow around it.

#### 6.2 BASELINE SAMPLES

Baseline soil samples for ISS/ISCO and ISCO-only testing were collected by LEA from the bulk soil samples provided by ERM and were submitted to Eurofins under standard chain of custody for the following analyses:

• USEPA Method 8260D, VOCs in soil



- USEPA Method 8081, 4,4'-DDT, -DDD, -DDE in soil
- Total Organic Carbon in soil
- Soil pH
- Soil percent moisture

Field samples were collected by ERM and analyzed for Dissolved Organic Carbon, using a modified version of United States Geological Survey Method 31. These results will be reported along with the baseline sample results when available. The purpose of baseline sampling is to have values for the constituents above that can be compared to samples mixed with amendments. At the time of the writing of this report, baseline results have not yet been received and/or processed.

#### 6.3 GOALS OF AMENDMENT MIX DESIGN

The ideal mix design will meet the treatment objectives by having a minimum UCS of 50 pounds per square inch; having a permeability of less than  $10^{-6}$  cm/s; and reducing the leachability of contaminants to the greatest extent practicable.

The UCS goal will primarily be met by the Portland cement, i.e., a higher cement ratio will result in a higher UCS.

The permeability goal will primarily be met by the Portland cement and may be enhanced by the addition of ground blast furnace slag or sodium persulfate. If it is not feasible to achieve a permeability of  $10^{-6}$  cm/s, a goal of a two orders of magnitude reduction compared to baseline will be used.

The leachability goal will primarily be met by immobilizing the contaminants in the Portland cement matrix and may be enhanced by sorption using activated carbon or destruction using sodium persulfate.

#### 6.4 TREATABILITY STUDY PHASE 1 SAMPLE PREPARATION

The treatability study Phase 1² samples were prepared by mixing homogenized soil, Portland cement, activated carbon, and sodium persulfate as shown in Table 4. Water was added at a 1:1 weight ratio with Portland cement. Cylinders for treatability testing were cast in high-density polyethylene molds then cured for 28 days. These Phase 1 cylinders were tested for UCS, permeability, and contaminant leachability via Synthetic Precipitate Leaching Procedure and an LEA internal method that simulates a time abbreviated version of the USEPA Leaching Environmental Assessment Framework (LEAF) method referred to as the "Tank Method." Separate samples were cast in Tedlar® bags to determine the extent of chlorobenzene volatilization during exothermic cement curing. Treatability study Phase 1 results are expected in early December 2024, and will be reported in January 2025.

The ISCO-only/Total Oxidant Demand treatability study Phase 1 samples were prepared by mixing soil, sodium persulfate, alkaline activator (sodium hydroxide), and water. The liquid phase and soil phase will be monitored at regular intervals to determine oxidant demand and degradation rate.

<sup>&</sup>lt;sup>2</sup> This is Phase 1 of the treatability study, distinct from Phase 1 of the PDI, which was a subsurface drilling investigation completed in August 2024



-

These data will be used to estimate the quantity of sodium persulfate that would be required to degrade chlorobenzene in groundwater that surrounds the I1TA. These data will be used to evaluate alternatives for subsequent interim remedial actions that may be required after IRAM 1 is complete to achieve the RAOs.

#### 6.5 TREATABILITY STUDY PHASE 2 SAMPLE PREPARATION

After the treatability study Phase 1 results have been received and analyzed, the mix design will be refined for treatability study Phase 2. The treatability study Phase 2 cylinders will be prepared as described above. The amendment mix parameters will be adjusted based on the Phase 1 results. After curing, the cylinders will be tested for compressive strength, hydraulic conductivity, and contaminant leachability via the USEPA LEAF method.

#### 6.6 FINAL MIX DESIGN

The results of the various permutations of amendments analyzed in Phase 1 of the treatability study will be evaluated to identify several final candidates that will be submitted for USEPA LEAF testing. The Final Mix Design will identify a combination of amendments that meet the human health or environmental risk target criteria, and will consider the cost of each alternative.



#### CONCLUSIONS

Based on the results of the PDI Phase 1 investigation, the DNAPL CSM has been updated and the vertical extent of DNAPL has been delineated and analyzed using a 3-dimensional geological model. The horizontal extent of DNAPL is well constrained, and DNAPL does not extend into Willamette River sediments. The vertical extent of DNAPL is also well constrained; DNAPL is generally not present in the Deep Zone, and there is no evidence that DNAPL has migrated to the Basalt Zone.

Updates to the DNAPL CSM have been used to further inform the pre-design of IRAM 1, including excavation, ISS, and/or ISCO technologies. Treatability study samples were collected during PDI Phase 1, and the treatability study is currently in progress to evaluate the feasibility and amendment criteria of ISS and/or ISCO for IRAM 1. Phase 2 PDI was conducted in October 2024 to further refine the horizontal extent of the DNAPL. The results of this work will be reported in the forthcoming PFDR.

As a result of the PDI Phase 1, a petroleum hydrocarbon source has been identified Southeast of the DNAPL in the vicinity of the GWBW. Additional compounds have been detected in soil samples collected during PDI Phase 1 in this area around the riverbank, including dioxins/furans, PFAS, DRO and MORO, organochlorine pesticides, chlorinated herbicides, and sVOCs. The riverbank area received miscellaneous fill from various sources for many years, as described in the RI Report (ERM 2005). The presumptive remedy for this material is that it will also be stabilized during IRAM 1 using the same means and methods as the DNAPL area. The possibility of encountering debris is greater in this part of the Site compared to the DNAPL area.

The PFDR is anticipated to be completed in February 2025. The following are expected to be addressed in the PFDR:

- PDI Phase 2 included additional soil borings to refine the lateral extent of DNAPL. This work
  was completed on 31 October 2024, and data will be reported in the PFDR
- Treatability Study Phase 1 results, as well as updates to the remedial design, will be reported in the PFDR.
- Based on the results of Phase 2 of the investigation, a Phase 3 soil investigation may be implemented in 2025 to further refine the extent of the DNAPL to treat as much of the DNAPL as possible, and to treat as little uncontaminated soil as possible. The determination of the need for, and the scope of, a potential Phase 3, will be included in the PFDR.



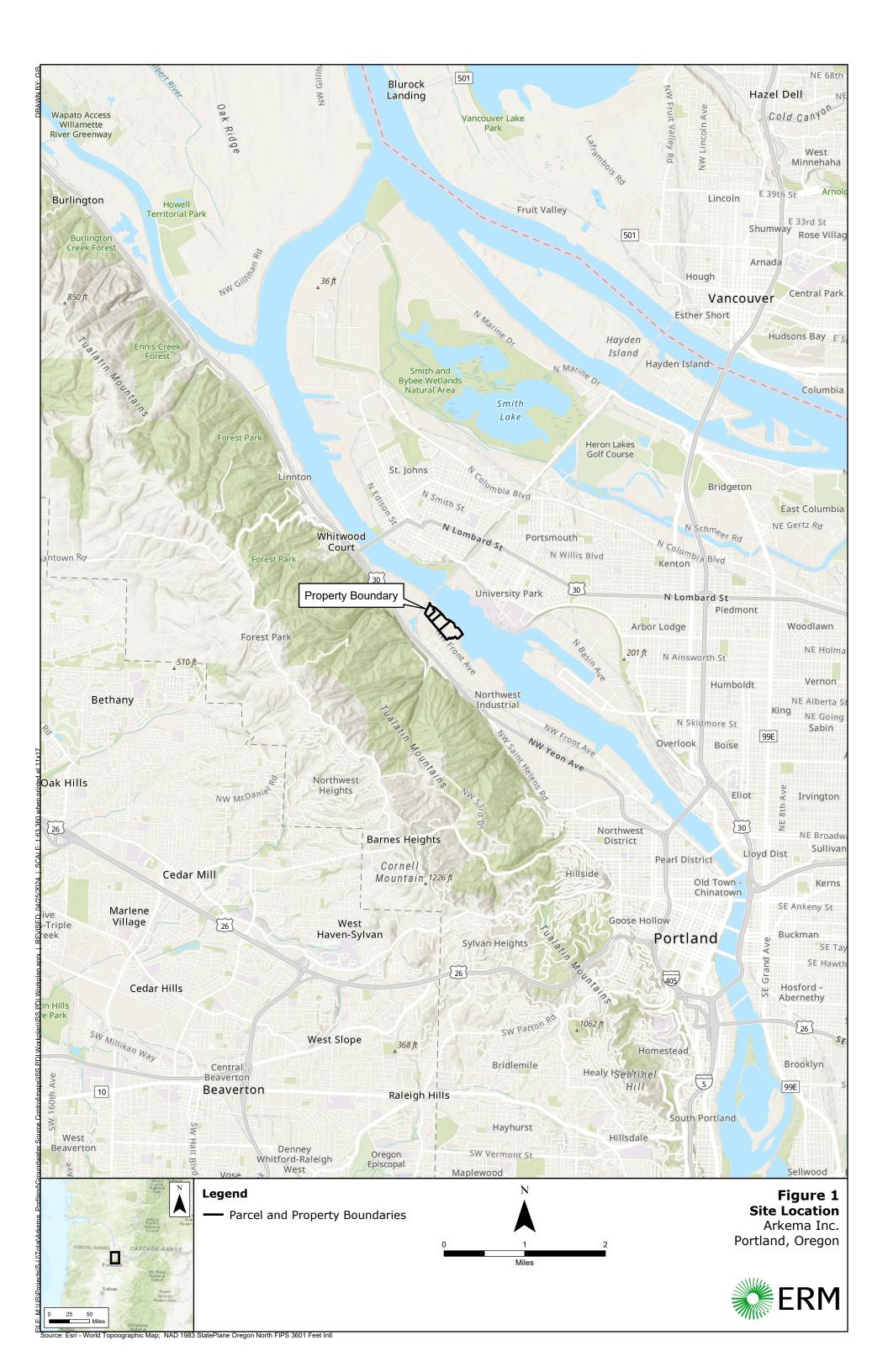
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- ERM. 2024. In Situ Stabilization Pre-Design Investigation Work Plan, Arkema Inc. Facility, Portland, Oregon. 2 July
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### **FIGURES**





### Legend

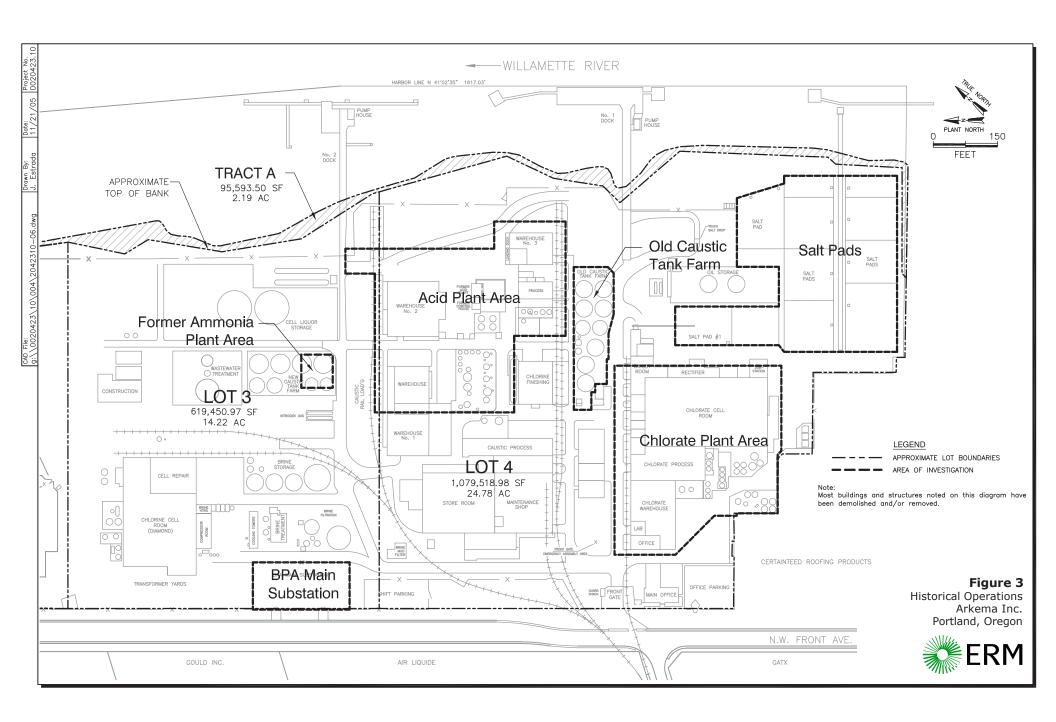
—— Parcel and Property Boundaries

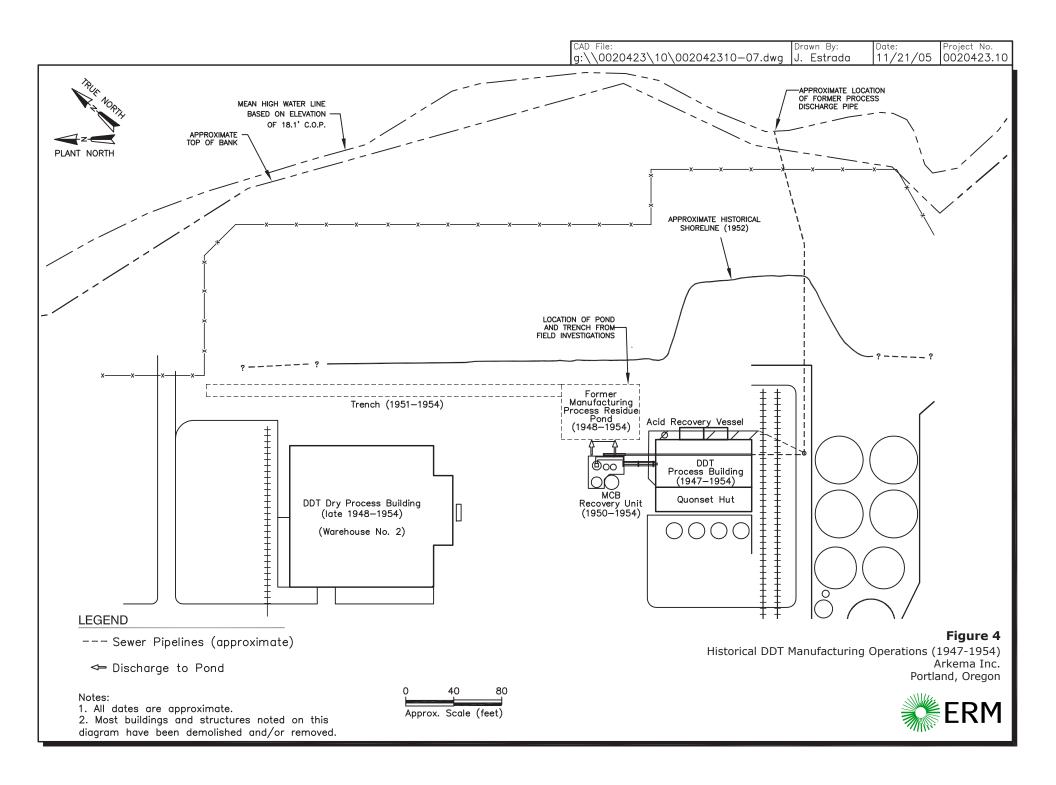
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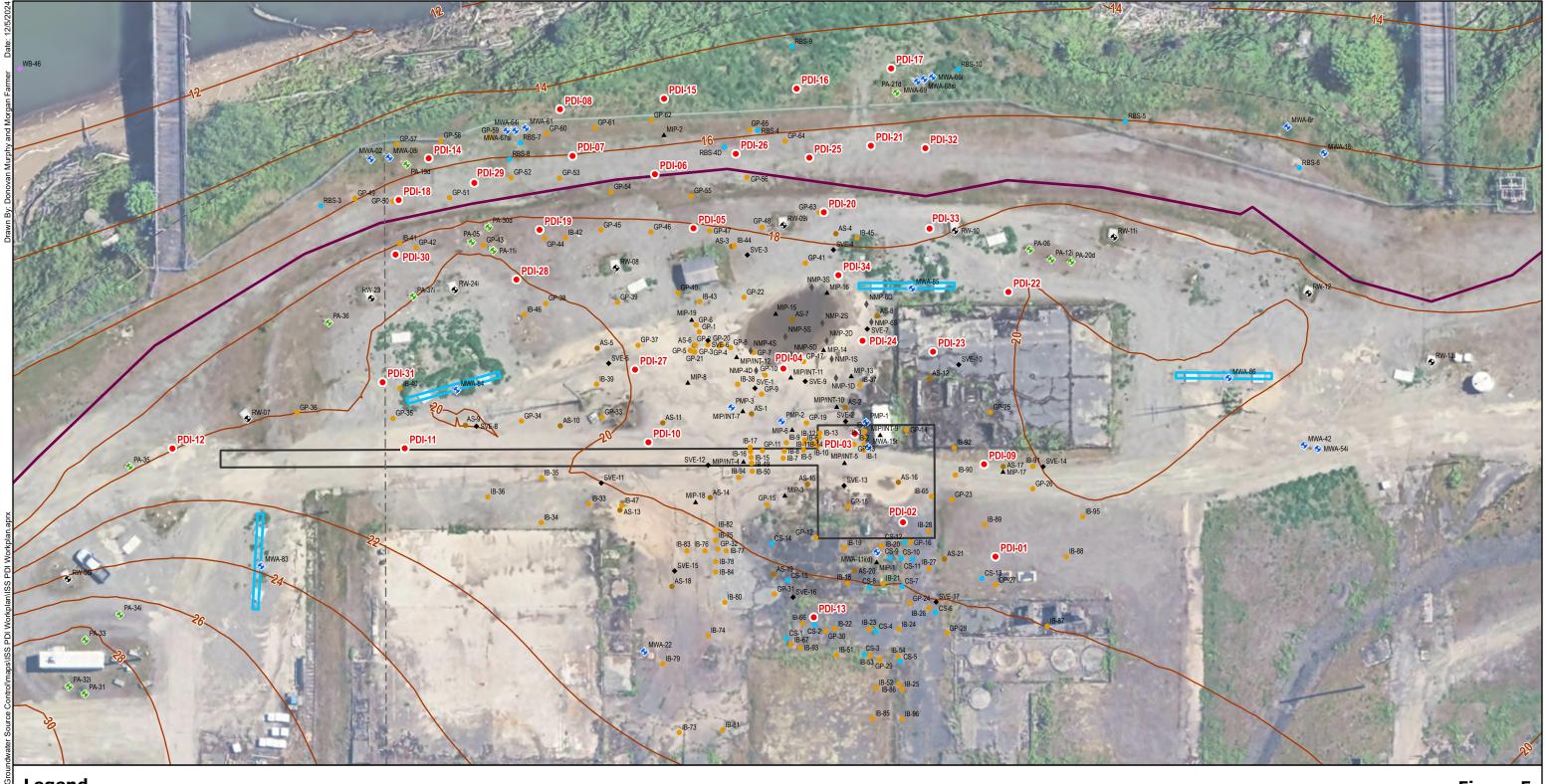
Tract A

Figure 2 Historical Site Boundaries Arkema Inc. Portland, Oregon









### Legend

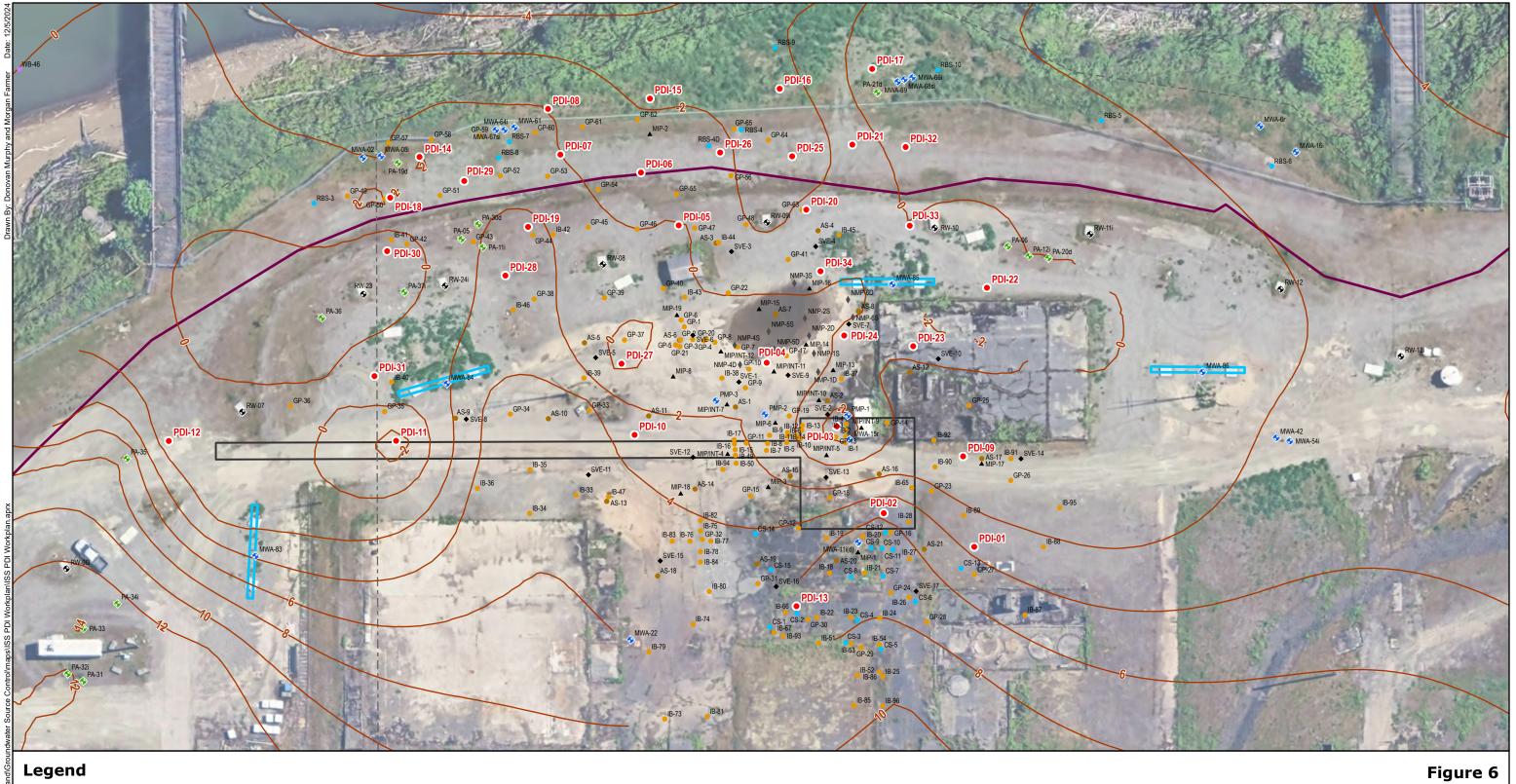
- Phase 1 PDI Boring Location (2024)
- Air Sparge Well (2003-2004)
- GeoProbe (2000-2002, 2006)
- Injection Well (2001)
- ▲ MIP (2002)
- Monitoring Well (1996-2022)
- Piezometer (2012-2019)
- Recovery Well (2012-2013)
- Sediment Core (2002-2003, 2009)
- Soil Boring (2003, 2022)
- Soil Vapor Extract (2004)
- Top of Shallow Zone (2 ft Contours)
- Parcel and Property Boundaries
- Barrier Wall Alignment
- Extraction Trench
- Former MPR Pond and Overflow Trench

# Figure 5

Shallow Zone Contact Elevation Map ISS PDI Report Former Arkema Inc. Facility Portland, Oregon

Feet

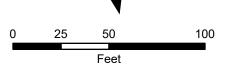




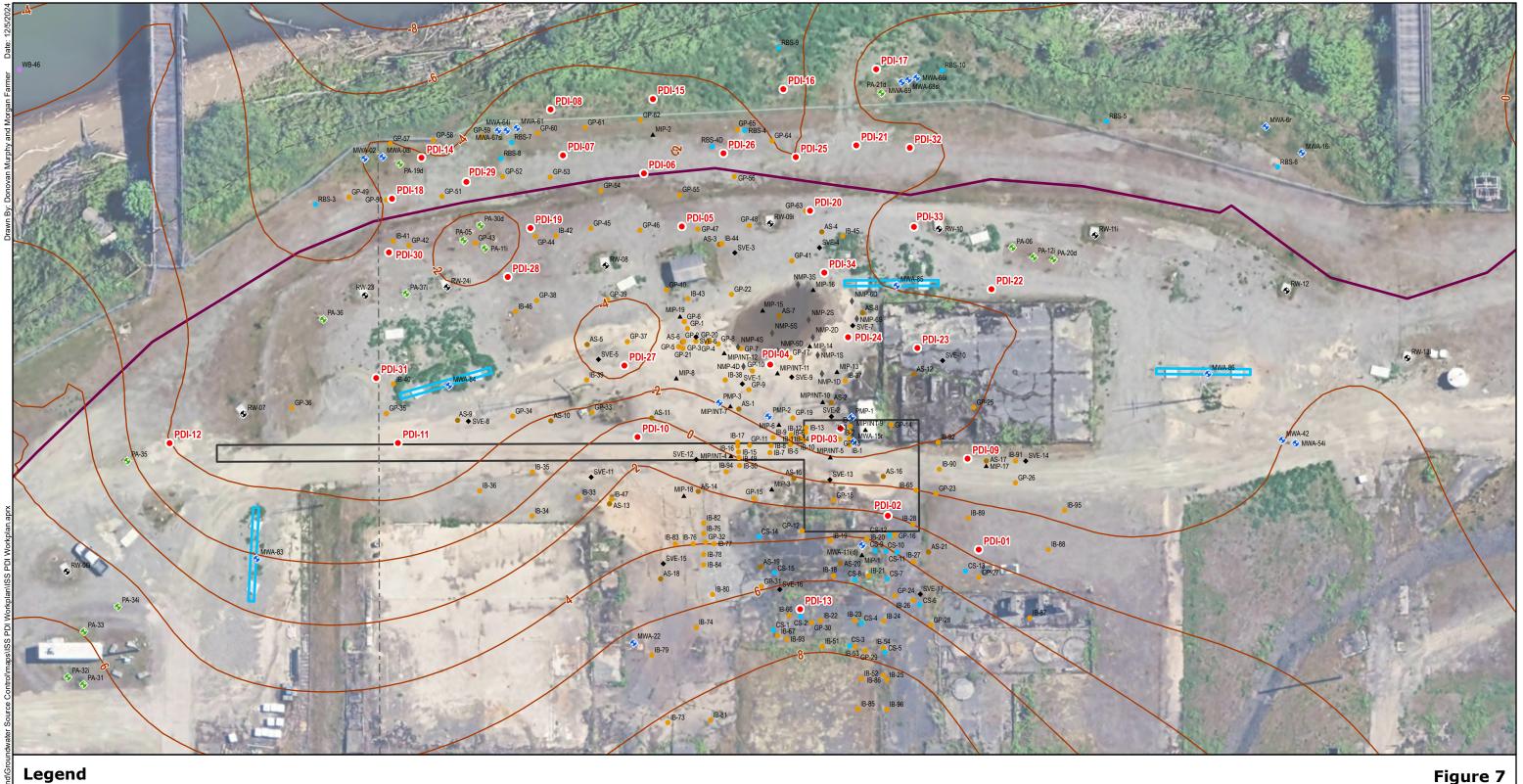
- Phase 1 PDI Boring Location (2024)
- Air Sparge Well (2003-2004)
- GeoProbe (2000-2002, 2006)
- Injection Well (2001)
- ▲ MIP (2002)
- Monitoring Well (1996-2022)
- Piezometer (2012-2019)
- Recovery Well (2012-2013)
- Sediment Core (2002-2003, 2009)
- Soil Boring (2003, 2022)
- Soil Vapor Extract (2004)
- \_\_\_\_ Top of Shallow-Intermediate Zone (2 ft Contours)
- Parcel and PropertyBoundaries
- Barrier Wall Alignment
- Extraction Trench
- Former MPR Pond and Overflow Trench

# Shallow-Intermediate Zone Contact Elevation Map

ISS PDI Report Former Arkema Inc. Facility Portland, Oregon





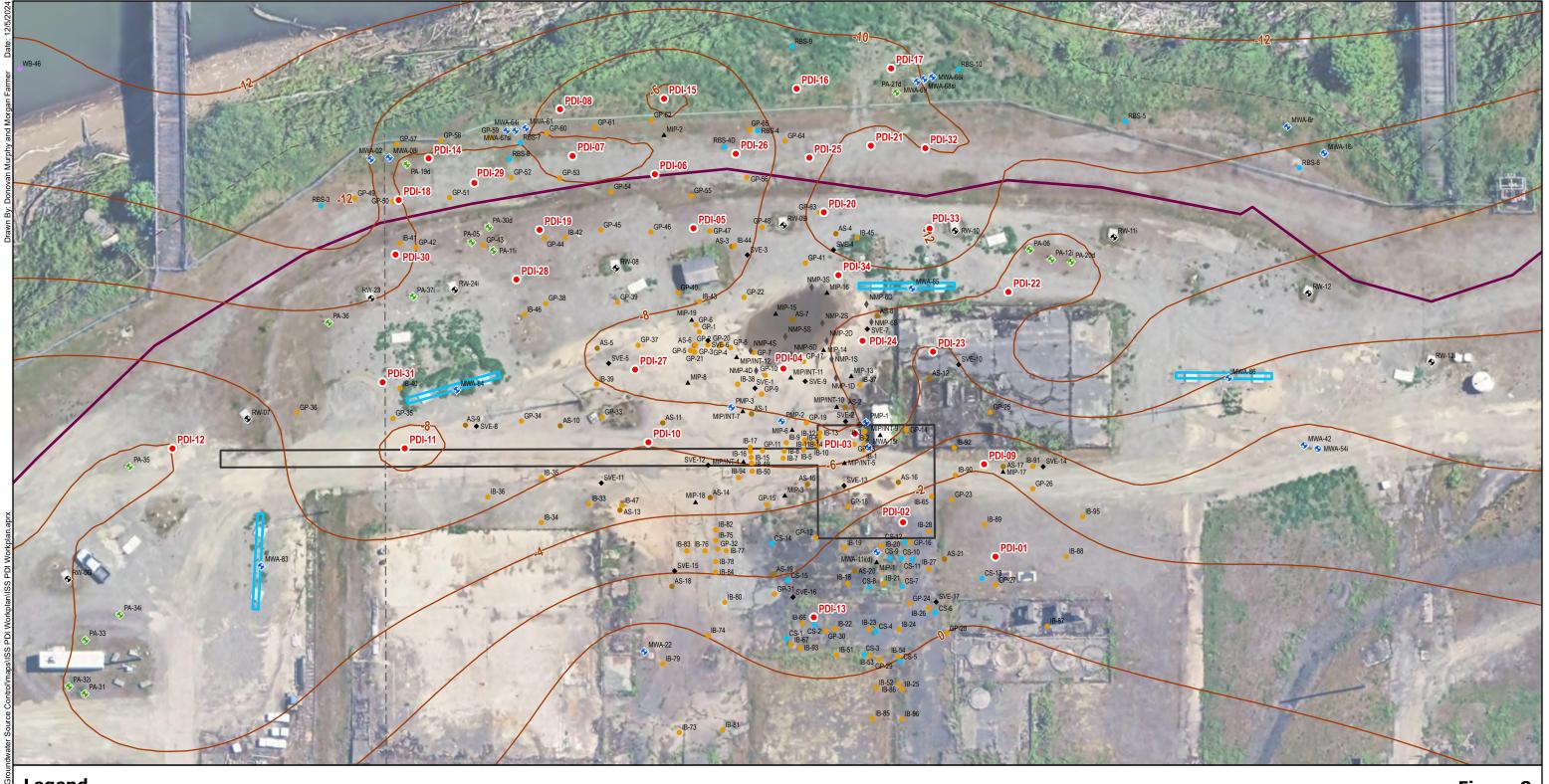


- Phase 1 PDI Boring Location (2024)
- Air Sparge Well (2003-2004)
- GeoProbe (2000-2002, 2006)
- Injection Well (2001)
- ▲ MIP (2002)
- Monitoring Well (1996-2022)
- Piezometer (2012-2019)
- Recovery Well (2012-2013)
- Sediment Core (2002-2003, 2009)
- Soil Boring (2003, 2022)
- Soil Vapor Extract (2004)
- Top of Intermediate Zone (2 ft Contours)
- Parcel and Property Boundaries
- Barrier Wall Alignment
- Extraction Trench
- Former MPR Pond and Overflow Trench

Intermediate Zone Contact Elevation Map ISS PDI Report Former Arkema Inc. Facility Portland, Oregon

Feet





## Legend

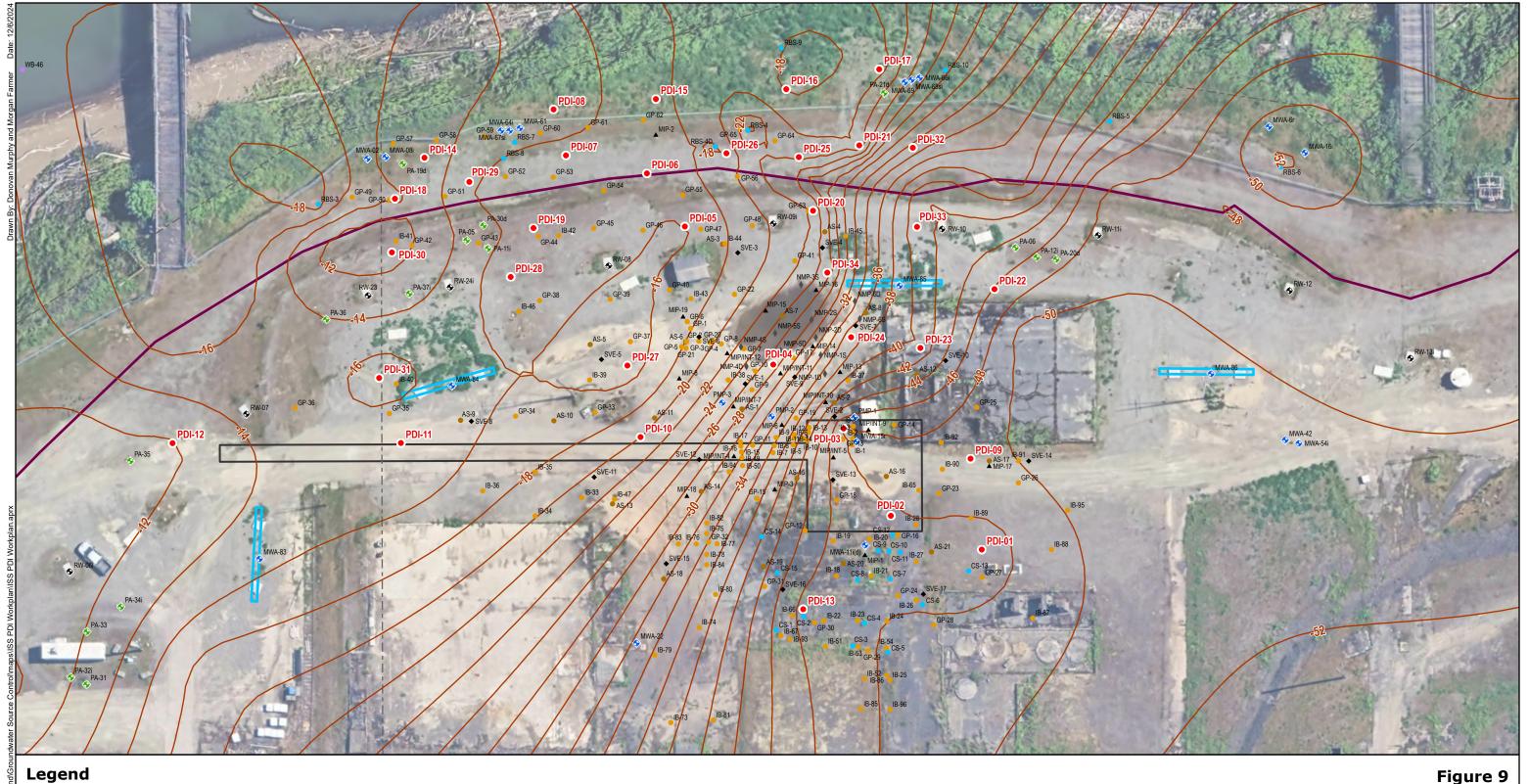
- Phase 1 PDI Boring Location (2024)
- Air Sparge Well (2003-2004)
- GeoProbe (2000-2002, 2006)
- Injection Well (2001)
- ▲ MIP (2002)
- Monitoring Well (1996-2022)
- Piezometer (2012-2019)
- Recovery Well (2012-2013)
- Sediment Core (2002-2003, 2009)
- Soil Boring (2003, 2022)
- Soil Vapor Extract (2004)
- Top of Deep Zone (2 ft Contours)
- Parcel and Property Boundaries
- Barrier Wall Alignment
- Extraction Trench
- Former MPR Pond and Overflow Trench

Feet

## Figure 8

Deep Zone Contact Elevation Map ISS PDI Report Former Arkema Inc. Facility Portland, Oregon



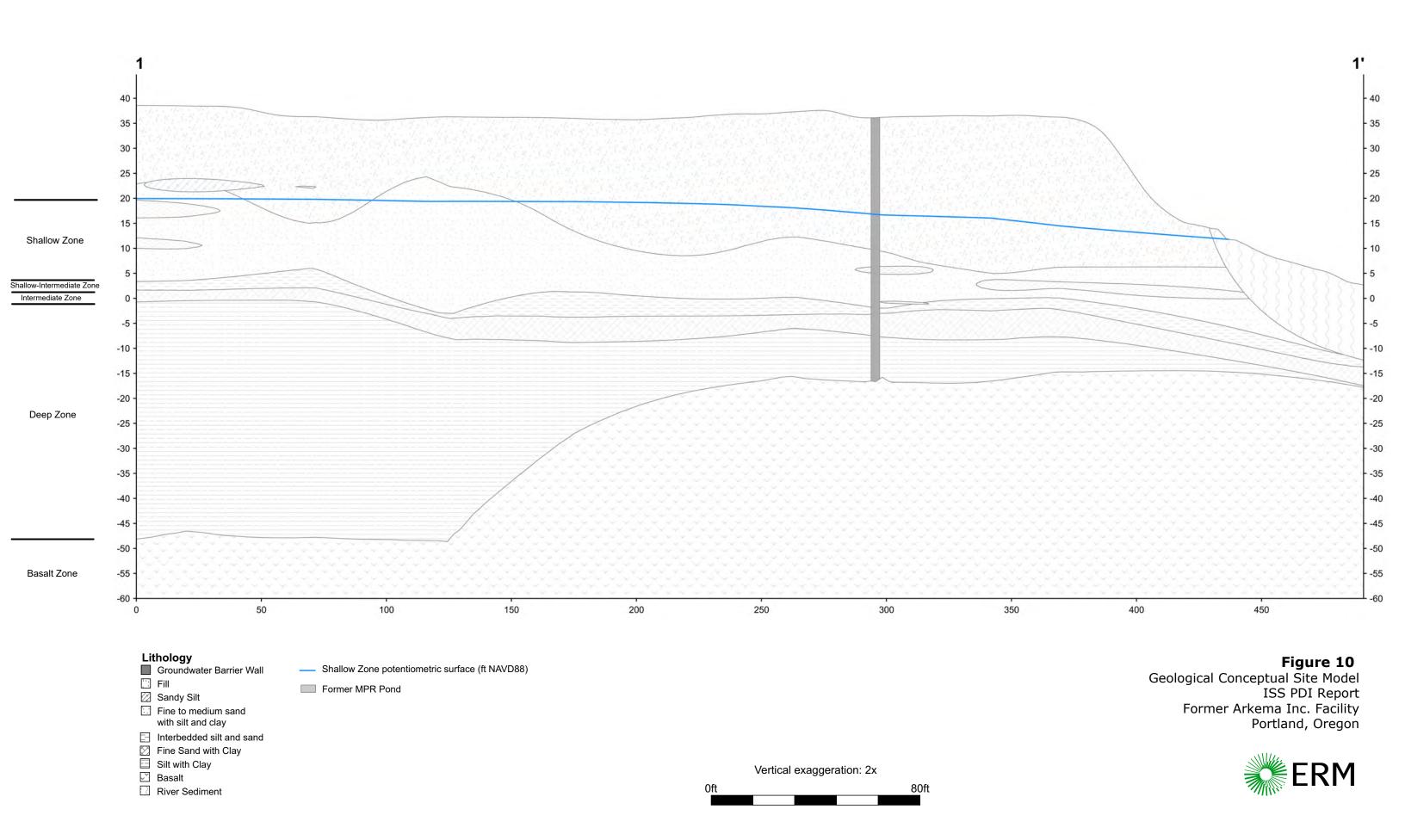


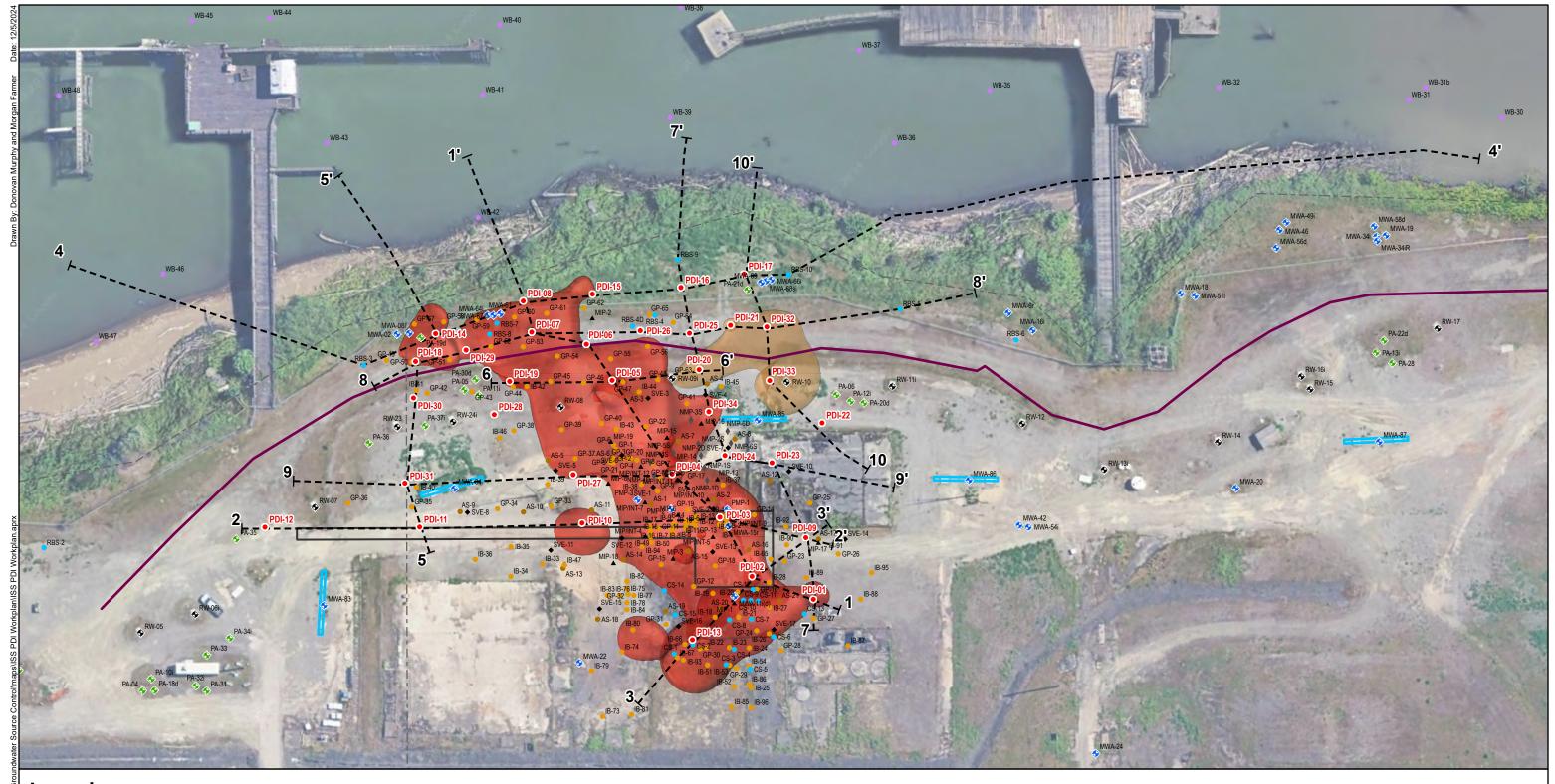
- Phase 1 PDI Boring Location (2024)
- Air Sparge Well (2003-2004)
- GeoProbe (2000-2002, 2006)
- Injection Well (2001)
- ▲ MIP (2002)
- Monitoring Well (1996-2022)
- Piezometer (2012-2019)
- Recovery Well (2012-2013)
- Sediment Core (2002-2003, 2009)
- Soil Boring (2003, 2022)
- Soil Vapor Extract (2004)
- Top of Basalt Zone (2 ft Contours)
- Parcel and Property Boundaries
- Barrier Wall Alignment
- Extraction Trench
- Former MPR Pond and Overflow Trench

Feet

Basalt Zone Contact Elevation Map ISS PDI Report Former Arkema Inc. Facility Portland, Oregon







### Legend

- Phase 1 PDI Boring Location (2024)
- Air Sparge Well (2003-2004)
- GeoProbe (2000-2002, 2006)
- Injection Well (2001)

- MIP (2002)
- Monitoring Well (1996-2022)
- Piezometer (2012-2019)
- Recovery Well (2012-2013)
- Sediment Core (2002-2003, 2009)
- Soil Boring (2003, 2022)
- Soil Vapor Extract (2004)
- ⊢ I Cross Section
- Parcel and Property
- Boundaries
- Barrier Wall Alignment
- Extraction Trench
- Former MPR Pond and Overflow Trench
  - DNAPL Plume
  - Positive Oil n Soil Plume

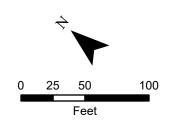
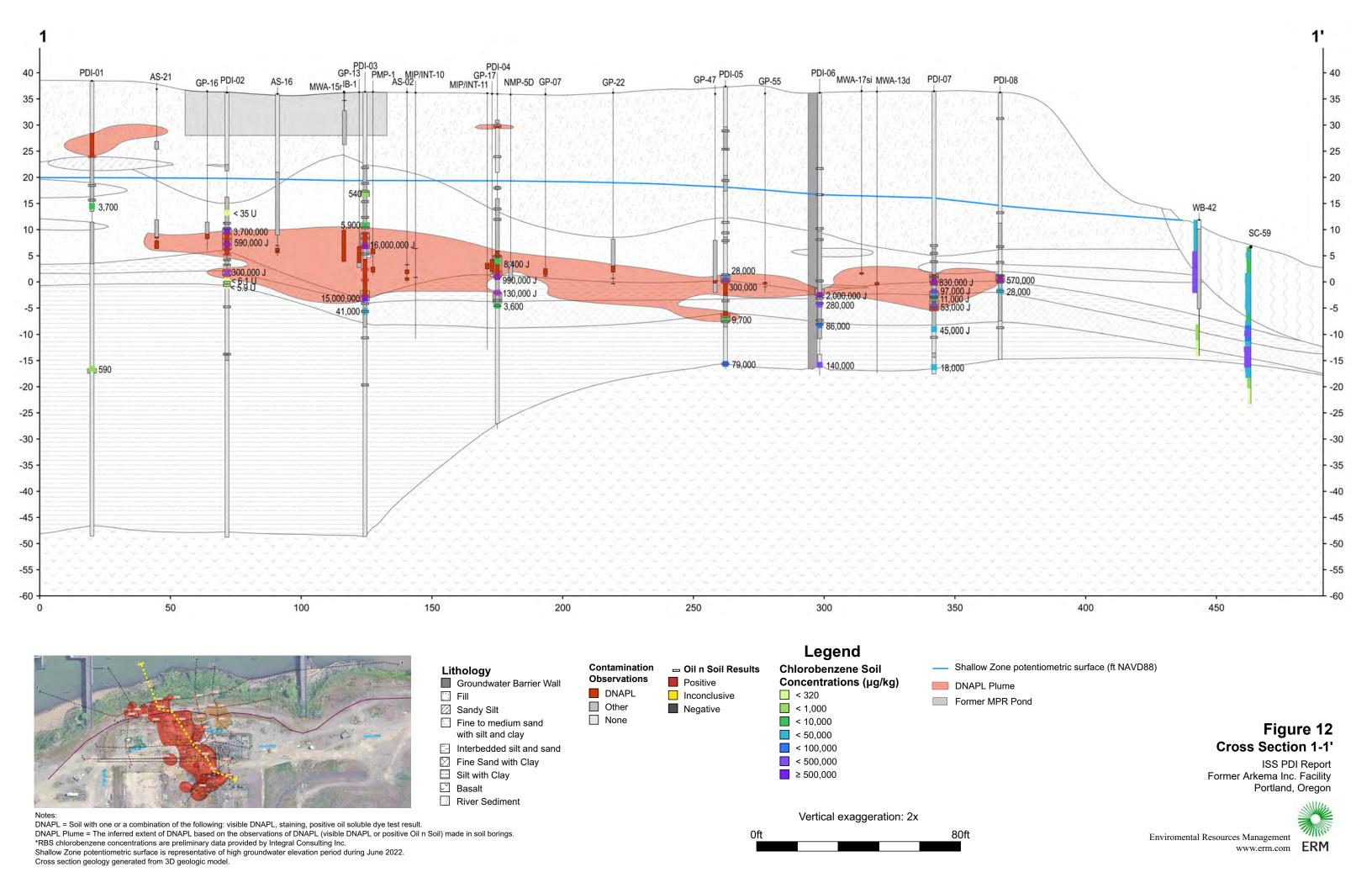
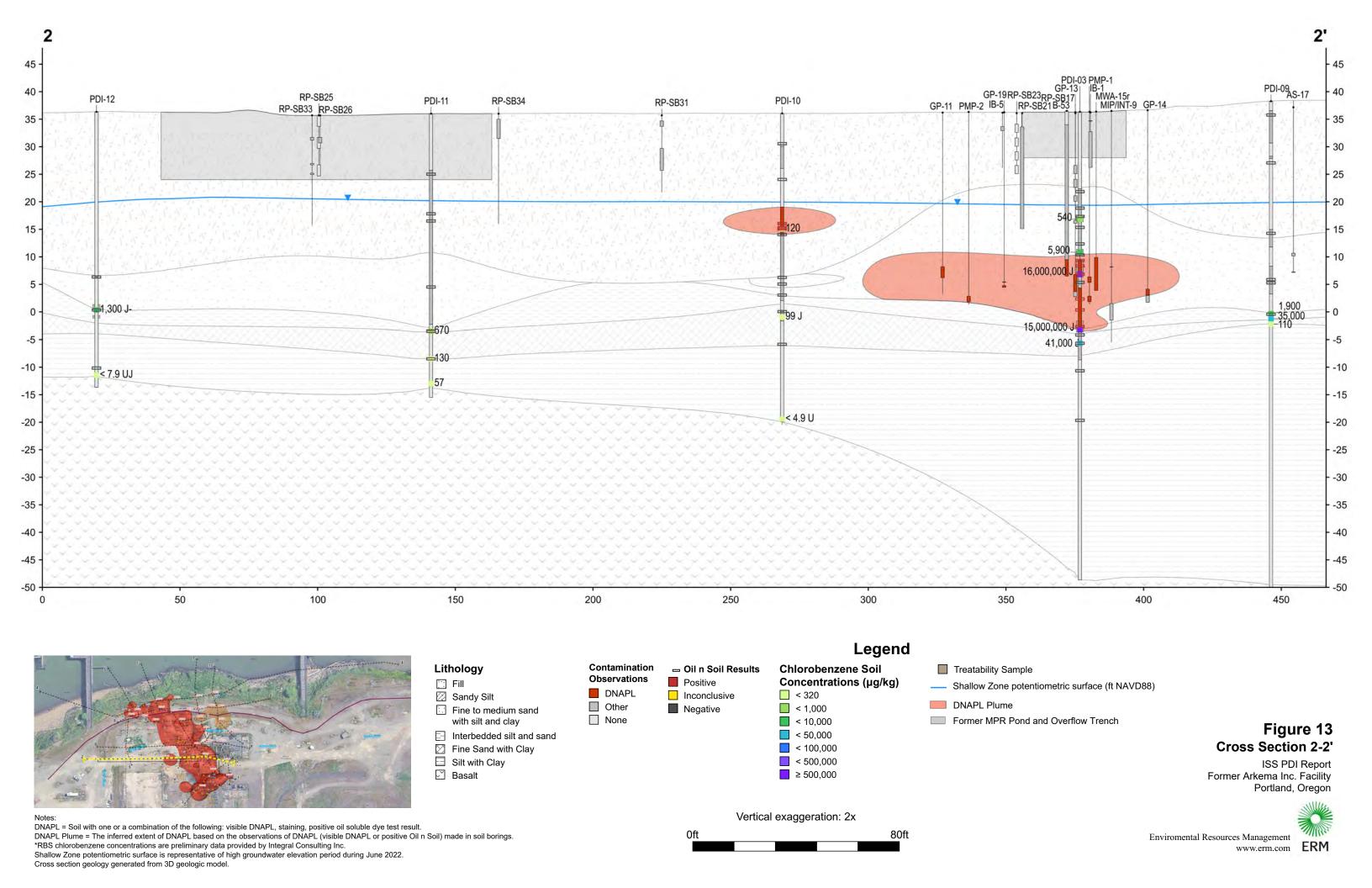
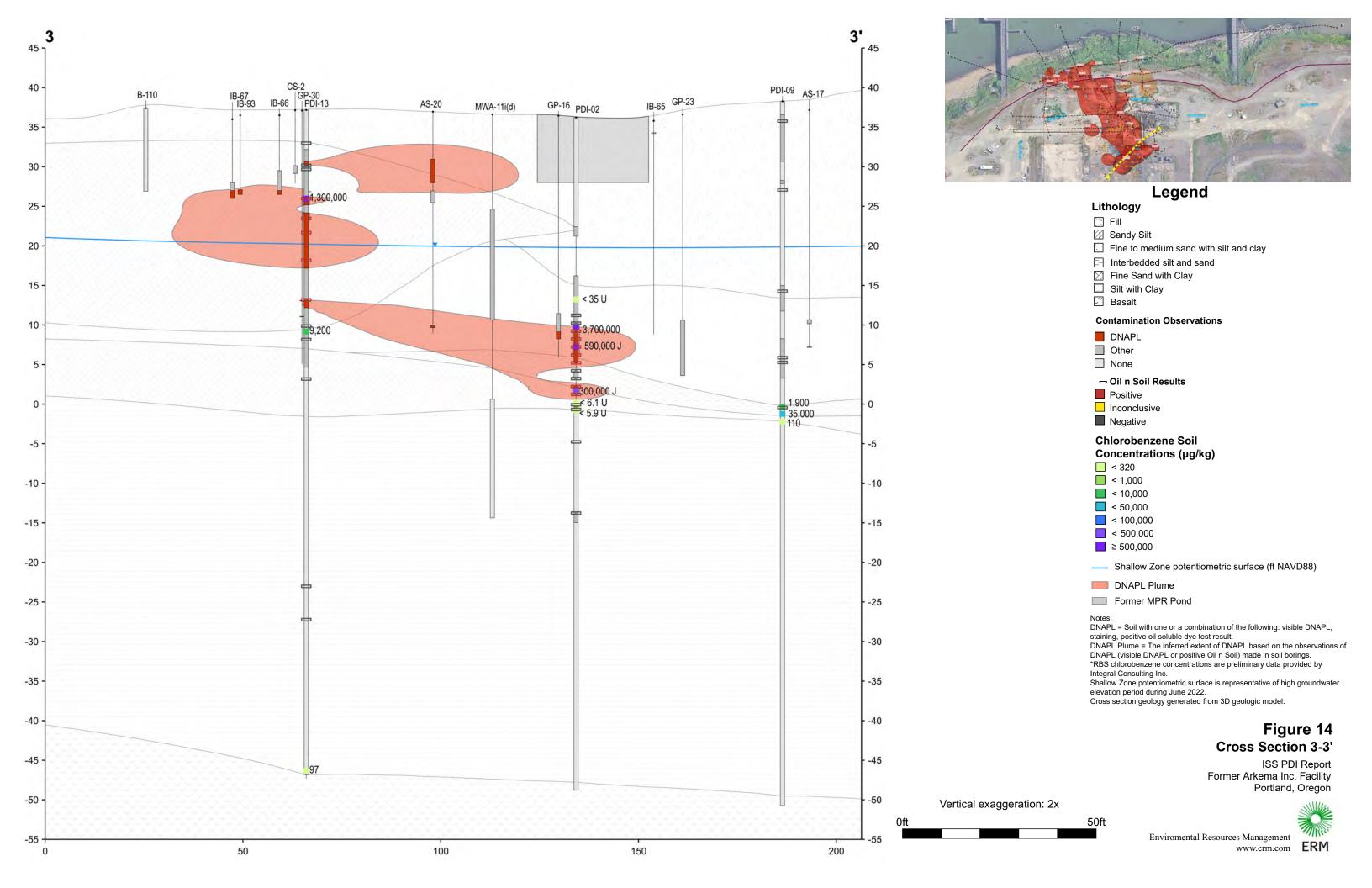


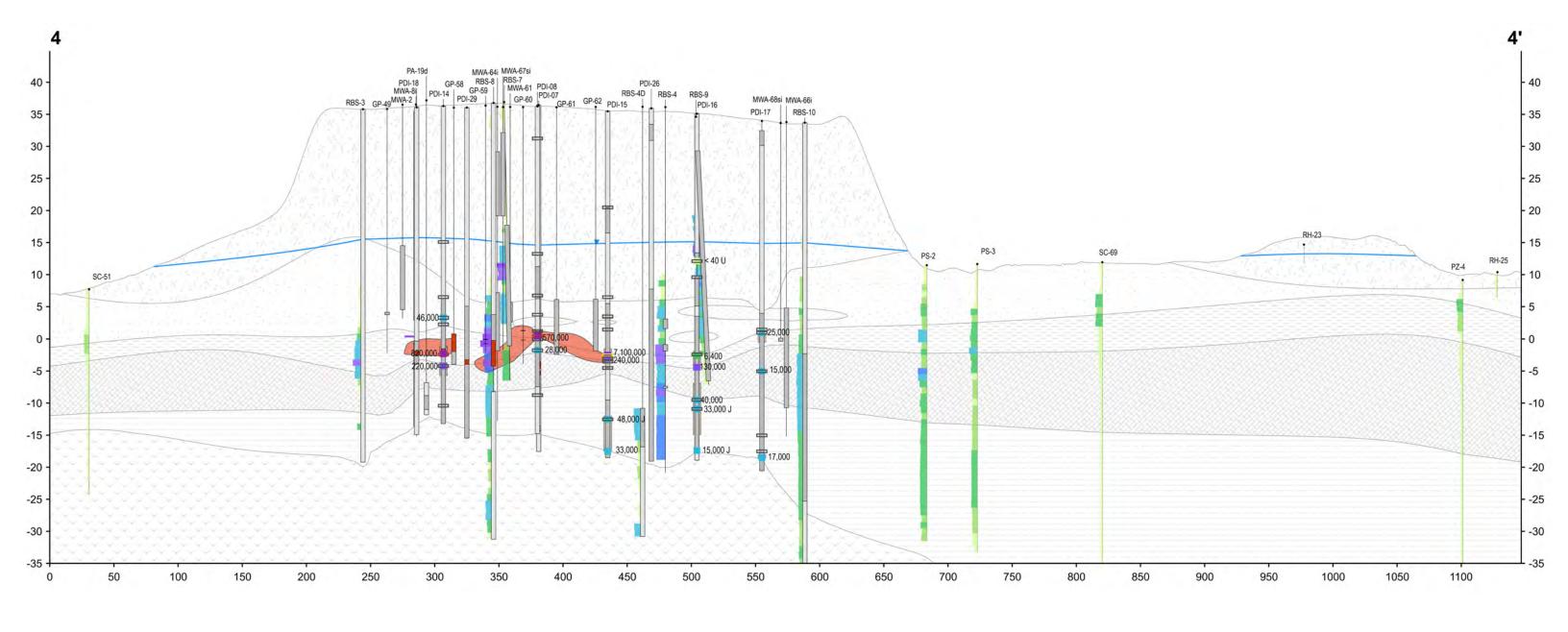
Figure 11
Boring and Transect Locations
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200ft

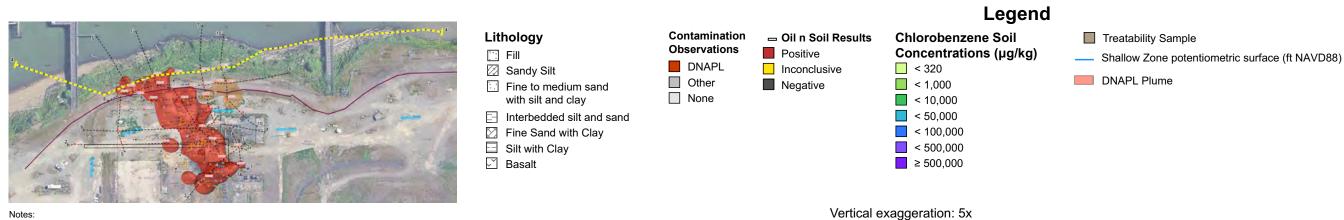


Figure 15 Cross Section 4-4'

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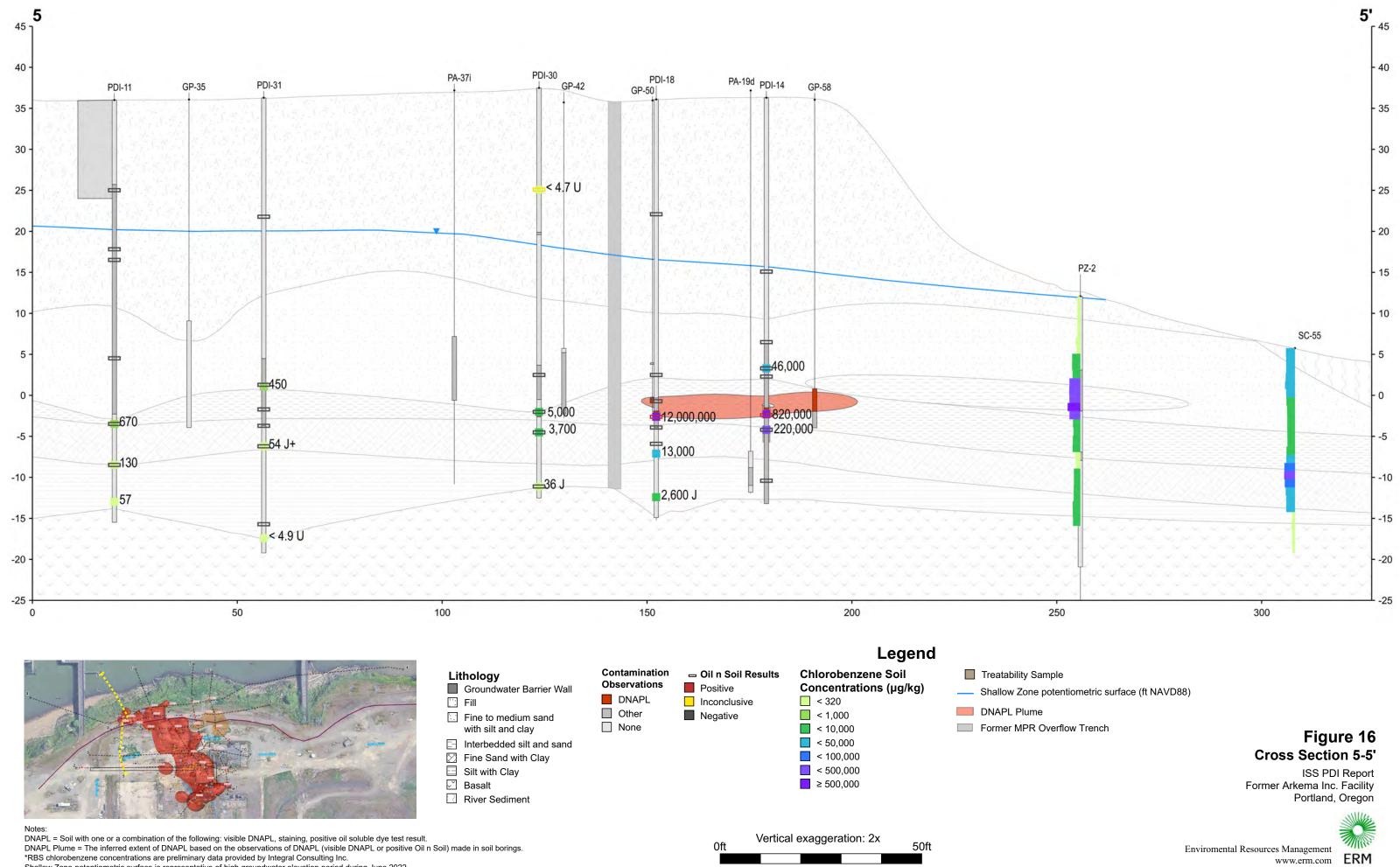
DNAPL = Soil with one or a combination of the following: visible DNAPL, staining, positive oil soluble dye test result.

DNAPL Plume = The inferred extent of DNAPL based on the observations of DNAPL (visible DNAPL or positive Oil n Soil) made in soil borings.

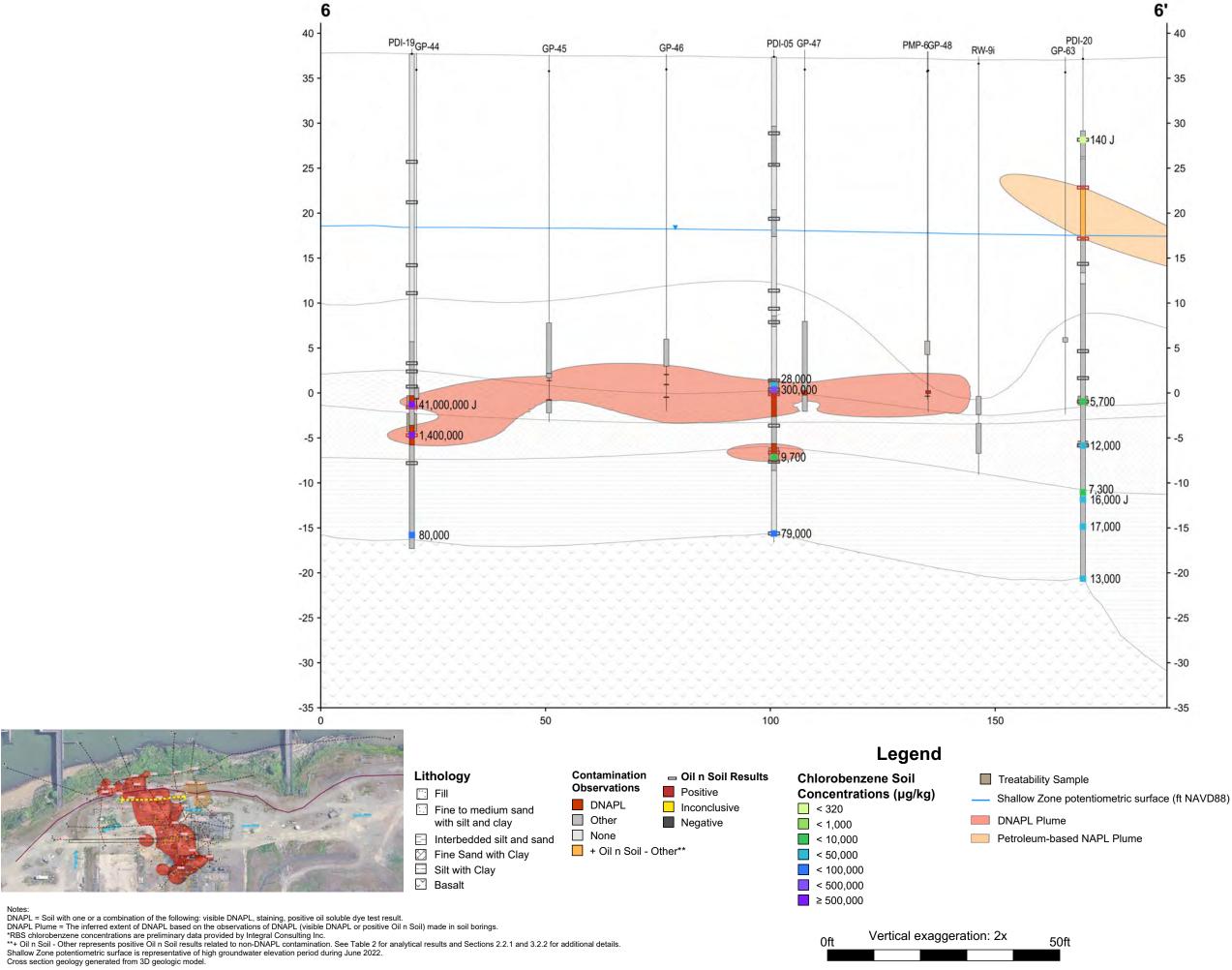
\*RBS chlorobenzene concentrations are preliminary data provided by Integral Consulting Inc.

Shallow Zone potentiometric surface is representative of high groundwater elevation period during June 2022.

Cross section geology generated from 3D geologic model.



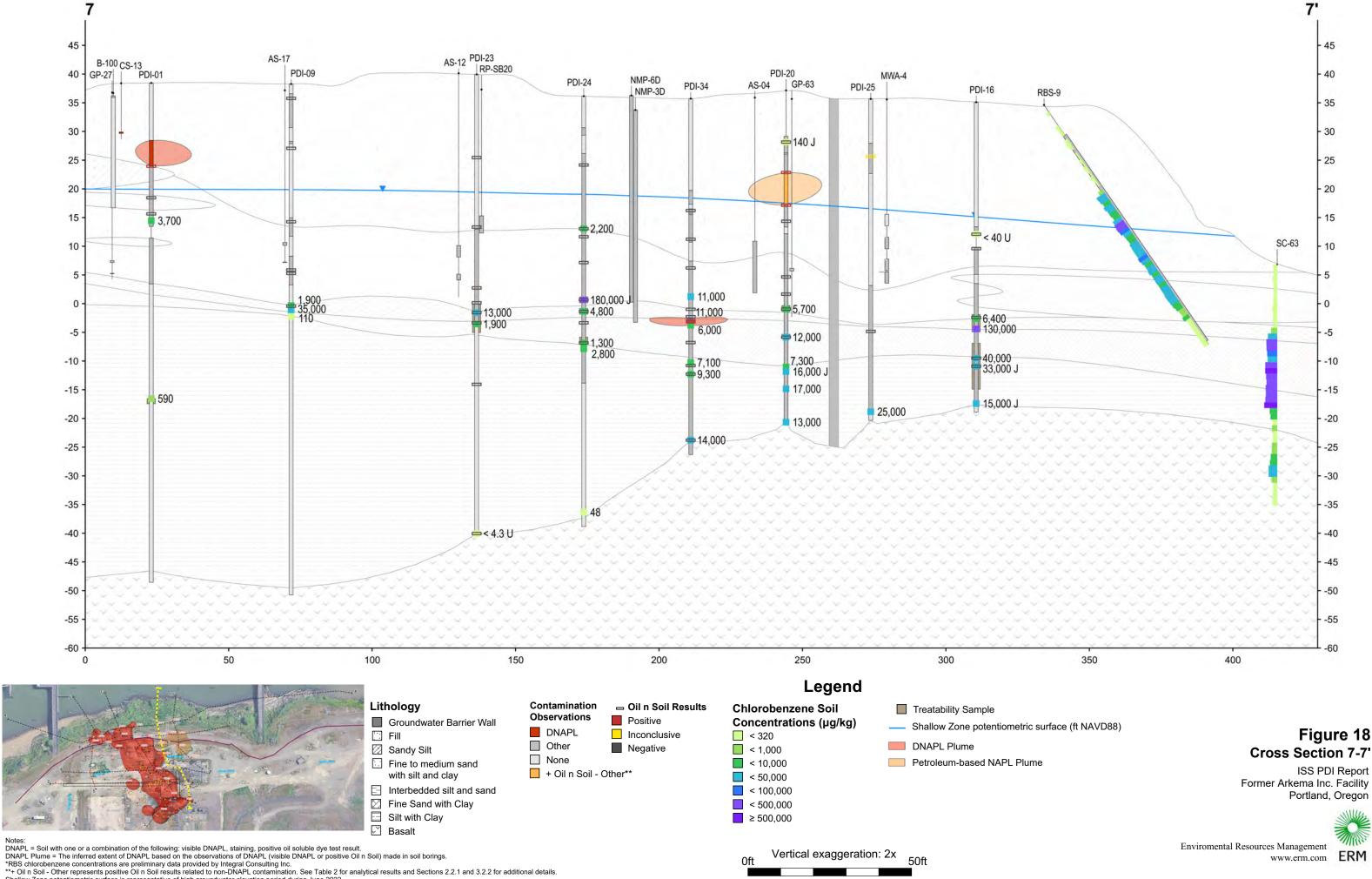
DNAPL Plume = The inferred extent of DNAPL based on the observations of DNAPL (visible DNAPL or positive Oil n Soil) made in soil borings.
\*RBS chlorobenzene concentrations are preliminary data provided by Integral Consulting Inc. Shallow Zone potentiometric surface is representative of high groundwater elevation period during June 2022. Cross section geology generated from 3D geologic model.



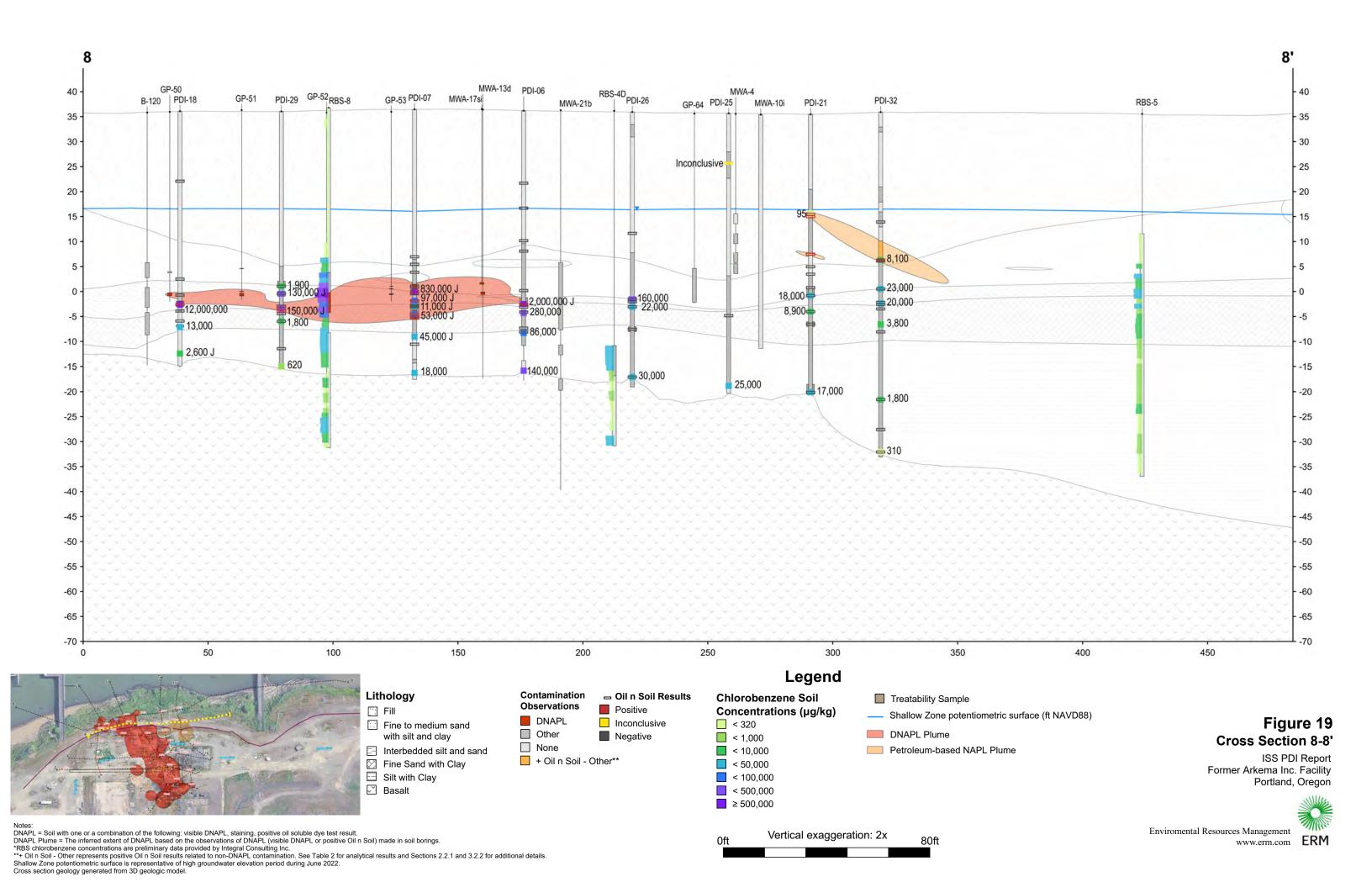
# Figure 17 **Cross Section 6-6'**

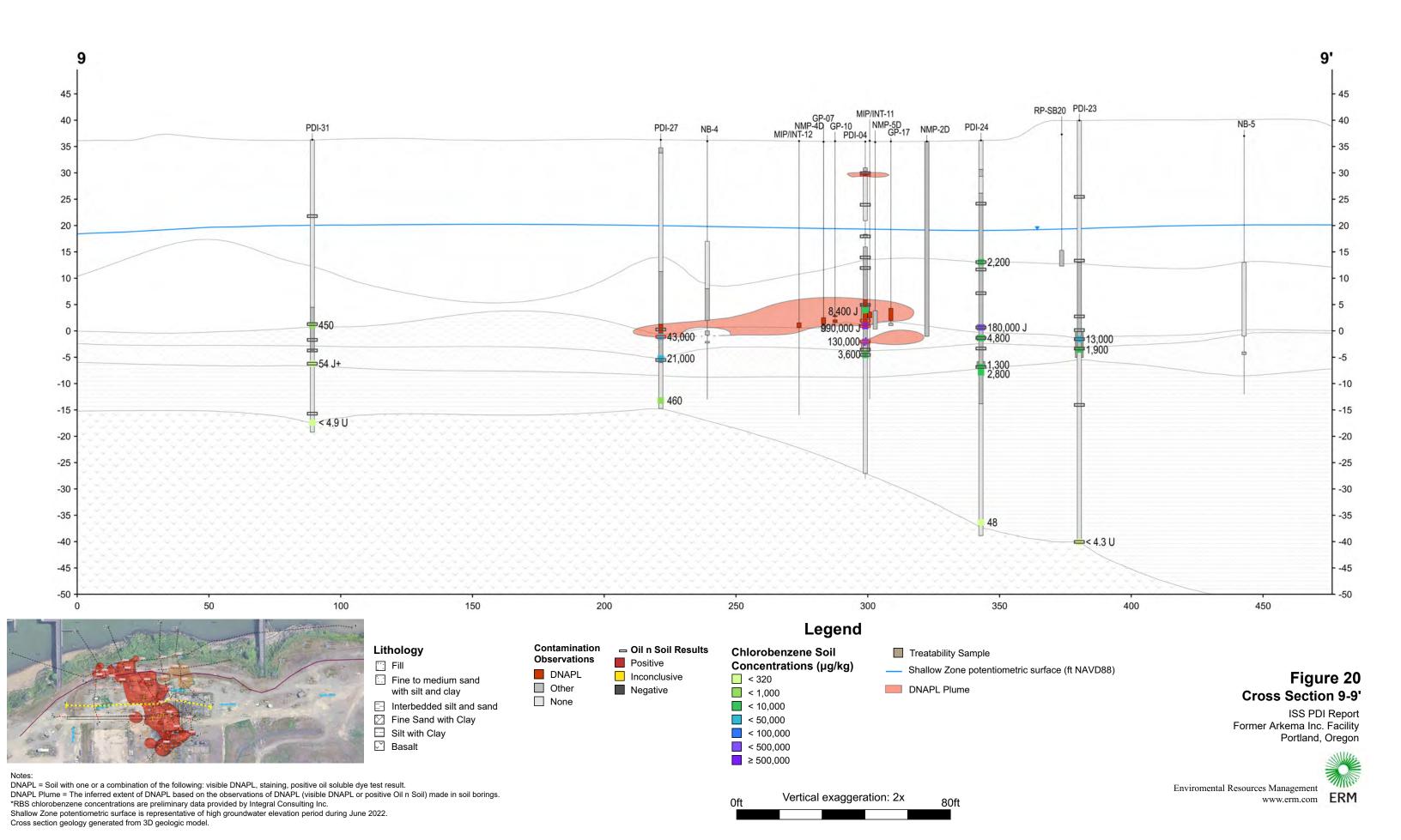
ISS PDI Report Former Arkema Inc. Facility Portland, Oregon

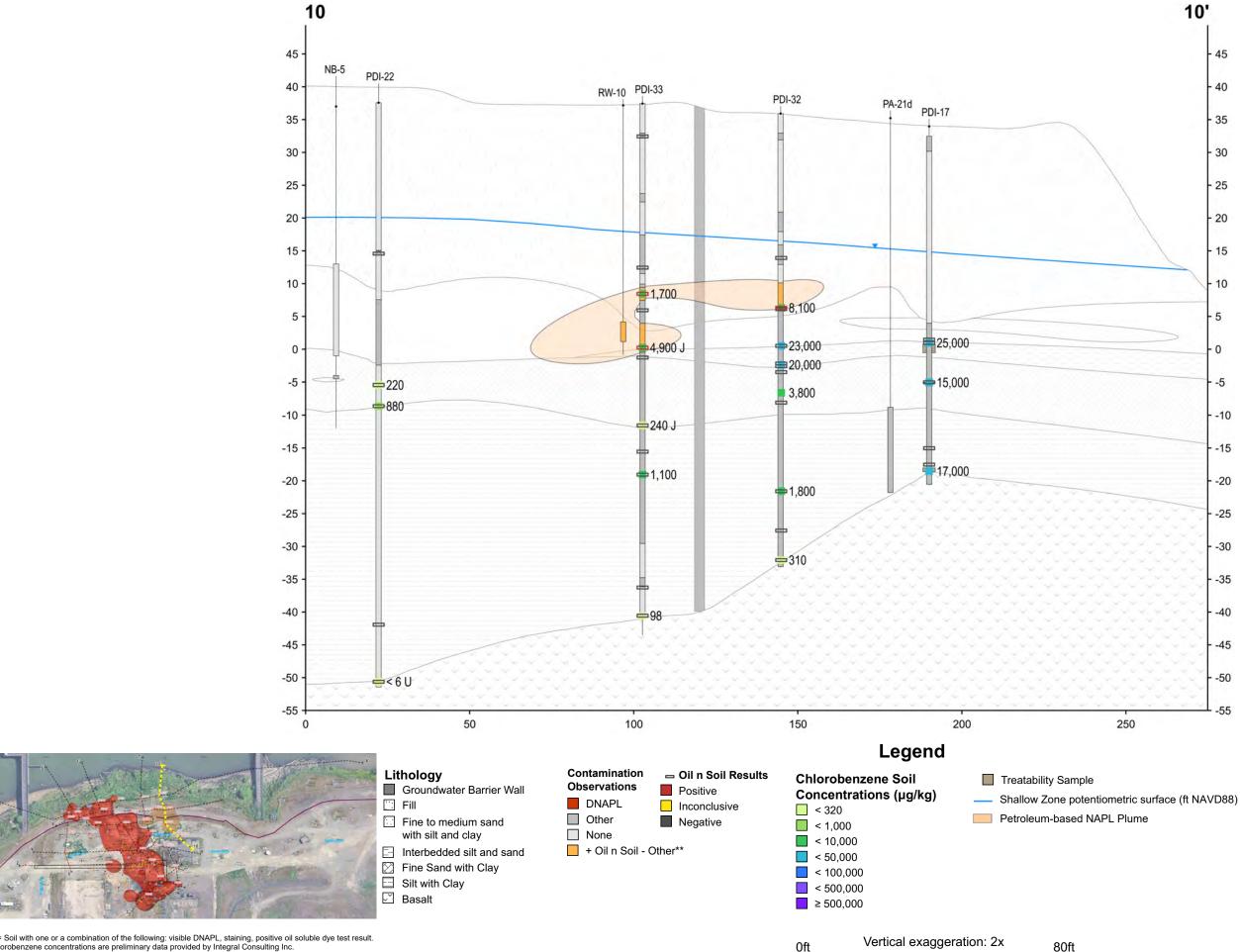




Shallow Zone potentiometric surface is representative of high groundwater elevation period during June 2022. Cross section geology generated from 3D geologic model.







# Figure 21 Cross Section 10-10'

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Notes:
DNAPL = Soil with one or a combination of the following: visible DNAPL, staining, positive oil soluble dye test result.
\*RBS chlorobenzene concentrations are preliminary data provided by Integral Consulting Inc.
\*\*+ (Oil n Soil - Other represents positive Oil n Soil results related to non-DNAPL contamination. See Table 2 for analytical results and Sections 2.2.1 and 3.2.2 for additional details.
Shallow Zone potentiometric surface is representative of high groundwater elevation period during June 2022. Cross section geology generated from 3D geologic model.



TABLES

Phase 1 Volatile Organic Compound Analytical Results In Situ Stabilization Preliminary Design Investigation Report Former Arkema, Inc. Facility Portland, Oregon

	Location Locati	PDI-01	PDI-01	PDI-02	PDI-02	PDI-02	PDI-02	PDI-02	PDI-02	PDI-03	PDI-03	PDI-03	PDI-03	PDI-03
	Sample Date Sample	07/08/2024	07/09/2024	07/10/2024	07/10/2024	07/10/2024	07/10/2024	07/11/2024	07/11/2024	07/12/2024	07/12/2024	07/12/2024	07/12/2024	07/12/2024
	Sample Type Sampl Depth Below Ground Surface Depth	N 24 ft	55 ft	23 ft	26.5 ft	29 ft	34.5 ft	36 ft	37 ft	19.5 ft	25.5 ft	29.5 ft	39.5 ft	42 ft
alyte	Unit	24 11	5511	2311	20.5 11	29 11	34.5 11	3611	3/11	19.5 11	25.5 11	29.5 11	39.511	42 11
Cs SW8260D	Offit											<u> </u>		
.,1,2-Tetrachloroethane	ug/kg	< 5 U	< 5 U	< 4.4 U	< 5.7 U	< 4.5 UJ	< 4.4 UJ	< 6.4 U	< 6.2 U	< 10 U	< 6.1 U	< 6.8 U	< 7.4 U	< 5.6 UJ
l,1-Trichloroethane	ug/kg	< 4.6 U	< 4.6 U	< 4 U	26 j	15 J	6.8 J	< 5.9 U	< 5.7 U	14 j	10 j	570	150	< 5.1 UJ
.,2,2-Tetrachloroethane	ug/kg	< 7.6 U	< 7.5 U	< 6.7 U	< 8.7 U	< 6.8 UJ	< 6.7 UJ	< 9.7 U	< 9.4 U	< 16 U	< 9.2 U	< 10 U	< 11 U	< 8.5 UJ
.,2-Trichloroethane	ug/kg	< 7.4 U	< 7.3 U	< 6.5 U	< 8.5 U	< 6.6 UJ	< 6.5 UJ	< 9.5 U	< 9.1 U	< 15 U	< 9 U	< 10 U	< 11 U	< 8.3 UJ
1-Dichloroethane	ug/kg	< 9.2 U	< 9.1 U	< 8.1 U	< 11 U	< 8.3 UJ	< 8.1 UJ	< 12 U	< 11 U	< 19 U	< 11 U	< 12 U	< 14 U	< 10 UJ
1-Dichloroethene	ug/kg	< 12 U	< 12 U	< 11 U	< 14 U	< 11 UJ	< 11 UJ	< 16 U	< 15 U	< 26 U	< 15 U	< 17 U	< 18 U	< 14 UJ
1-Dichloropropene	ug/kg	< 5.3 U	< 5.3 U	< 4.7 U	< 6.1 U	< 4.8 UJ	< 4.7 UJ	< 6.8 U	< 6.5 U	< 11 U	< 6.4 U	9.8 j	< 7.8 U	< 5.9 UJ
2,3-Trichlorobenzene	ug/kg	< 40 U	< 39 U	< 35 U	< 45 U	< 36 UJ	< 35 UJ	< 51 U	< 49 U	< 82 UJ	< 48 UJ	< 54 UJ	< 59 UJ	< 44 UJ
2,3-Trichloropropane	ug/kg	< 12 U	< 11 U	< 10 U	< 13 U	< 10 UJ	< 10 UJ	< 15 U	< 14 U	< 24 U	< 14 U	52 j	94	53 J
2,4-Trichlorobenzene	ug/kg	< 43 U	< 42 U	< 37 U	87 j	< 38 UJ	< 38 UJ	< 55 U	< 53 U	< 88 U	< 52 U	120	98 j	< 47 UJ
2,4-Trimethylbenzene	ug/kg	< 14 U	< 13 U	< 12 U	51	< 12 UJ	< 12 UJ	< 17 U	< 17 U	< 28 U	< 16 U	43 j	43 j	< 15 UJ
2-Dibromo-3-chloropropane	ug/kg	< 15 U	< 15 U	< 13 U	< 17 U	< 14 UJ	< 13 UJ	< 19 U	< 19 U	< 32 U	< 18 U	< 21 U	< 22 U	< 17 UJ
2-Dichlorobenzene	ug/kg	< 8.7 U	< 8.6 U	< 7.7 U	4,500	470 J	250 J	< 11 U	< 11 U	< 18 U	17 j	5,300	5,600	54 J
2-Dichloroethane	ug/kg	< 5.5 U	< 5.5 U	< 4.8 U	< 6.3 U	< 4.9 UJ	< 4.9 UJ	< 7 U	< 6.8 U	< 11 U	< 6.7 U	< 7.5 U	< 8.1 U	< 6.1 UJ
2-Dichloropropane	ug/kg	< 6.6 U	< 6.6 U	< 5.8 U	< 7.6 U	< 5.9 UJ	< 5.8 UJ	< 8.4 U	< 8.1 U	< 14 U	< 8 U	< 9 U	< 9.8 U	< 7.4 UJ
3,5-Trimethylbenzene	ug/kg	< 7.6 U	< 7.5 U	< 6.7 U	16 j	9.5 J	< 6.7 UJ	< 9.7 U	< 9.4 U	< 16 U	< 9.2 U	26 j	29 j	< 8.5 UJ
3-Dichlorobenzene	ug/kg	< 13 U	< 13 U	< 12 U	390	46 J	24 J	< 17 U	< 16 U	< 28 U	< 16 U	780	710	< 15 UJ
3-Dichloropropane	ug/kg	< 5.6 U	< 5.6 U	< 4.9 U	< 6.4 U	< 5 UJ	< 4.9 UJ	< 7.2 U	< 6.9 U	< 12 U	< 6.8 U	< 7.6 U	< 8.3 U	< 6.2 UJ
,4-Dichlorobenzene	ug/kg	22 j	< 11 U	< 9.5 U	19,000	2,000 J	1,000 J	< 14 U	< 13 U	< 22 U	54 j	28,000	30,000	200 J
,2-Dichloropropane	ug/kg	< 12 U	< 12 U	< 11 U	< 14 U	< 11 UJ	< 11 UJ	< 15 U	< 15 U	< 25 U	< 15 U	< 16 U	< 18 U	< 13 UJ
-Chlorotoluene	ug/kg	< 9.8 U	< 9.7 U	< 8.6 U	42 j	< 8.8 UJ	< 8.7 UJ	< 13 U	< 12 U	< 20 U	< 12 U	64	78	< 11 UJ
-Isopropyltoluene	ug/kg	< 10 U	< 10 U	< 9 U	130	27 J	19 J	< 13 U	< 13 U	< 21 U	< 12 U	100	53 j	< 11 UJ
enzene	ug/kg	< 3.8 U	< 3.8 U	< 3.3 U	8.3 j	3.7 J	6.4 J	< 4.9 U	< 4.7 U	< 41 U	< 24 U	< 5.2 U	51 J+	< 22 U
romobenzene	ug/kg	< 4.2 U	< 4.2 U	< 3.7 U	110	17 J	10 J	< 5.4 U	< 5.2 U	< 8.7 U	< 5.1 U	320	420	< 4.7 UJ
romodichloromethane	ug/kg	< 5.5 U	< 5.5 U	< 4.8 U	< 6.3 U	< 4.9 UJ	< 4.9 UJ	< 7 U	< 6.8 U	< 11 U	< 6.7 U	< 7.5 U	< 8.1 U	< 6.1 UJ
romoform	ug/kg	< 4.5 U	< 4.5 U	< 4 U	< 5.1 U	< 4 UJ	< 4 UJ	< 5.8 U	< 5.6 U	< 9.3 U	< 5.4 U	< 6.1 U	< 6.7 U	< 5 UJ
romomethane	ug/kg	< 38 U	< 38 U	< 33 U	< 43 U	< 34 UJ	< 33 UJ	< 48 U	< 47 U	< 78 U	< 46 U	< 51 U	< 56 U	< 42 UJ
arbon tetrachloride	ug/kg	< 4.4 U	< 4.4 U	< 3.9 U	11 j	< 3.9 UJ	< 3.9 UJ	< 5.6 U	< 5.4 U	< 9.1 U	< 5.3 U	24 j	300	< 4.9 UJ
hlorobenzene	ug/kg	3,700	590	< 35 U	3,700,000	590,000 J	300,000 J	< 6.1 U	< 5.9 U	540	5,900	16,000,000 J	15,000,000 J	41,000 J
hlorobromomethane	ug/kg	< 6.2 U	< 6.2 U	< 5.5 U	< 7.1 U	< 5.6 UJ	< 5.5 UJ	< 7.9 U	< 7.7 U	< 13 U	< 7.5 U	< 8.4 U	< 9.2 U	< 6.9 UJ
hloroethane	ug/kg	< 21 U	< 21 U	< 18 U	< 24 U	< 19 UJ	23 J	< 27 U	< 26 U	< 43 UJ	100 J-	< 300 UJ	< 330 UJ	< 250 UJ
hloroform	ug/kg	< 4.2 U	< 4.2 U	< 3.7 U	57	37 J	67 J	< 5.4 U	< 5.2 U	33 j	47	100	1,700	9.1 J
hloromethane	ug/kg	< 10 U	< 10 U	< 8.9 U	< 12 U	< 9.1 UJ	< 8.9 UJ	< 13 U	< 12 U	< 21 U	< 12 U	< 14 U	< 15 U	< 11 UJ
s-1,2-Dichloroethene	ug/kg	< 13 U	< 13 U	< 11 U	< 14 U	< 11 UJ	< 11 UJ	< 16 U	< 16 U	< 26 U	< 15 U	< 17 U	< 19 U	< 14 UJ
s-1,3-Dichloropropene	ug/kg	< 4 U	< 4 U	< 3.5 U	< 4.6 U	< 3.6 UJ	< 3.5 UJ	< 5.1 U	< 4.9 U	< 8.3 U	< 4.8 U	< 5.4 U	< 5.9 U	< 4.5 UJ
ibromochloromethane	ug/kg	< 4.9 U	< 4.9 U	< 4.3 U	< 5.6 U	< 4.4 UJ	< 4.3 UJ	< 6.3 U	< 6 U	< 10 U	< 5.9 U	< 6.7 U	< 7.2 U	< 5.5 UJ
ibromomethane	ug/kg	< 7.4 U	< 7.3 U	< 6.5 U	< 8.5 U	< 6.6 UJ	< 6.5 UJ	< 9.5 U	< 9.1 U	< 15 U	< 9 U	< 10 U	< 11 U	< 8.3 UJ
ichlorodifluoromethane (Freon 12)	ug/kg	< 46 U	< 46 U	< 40 U	< 53 U	< 41 UJ	< 41 UJ	< 59 U	< 57 U	< 95 U	< 56 U	< 62 U	< 68 U	< 51 UJ
thylbenzene	ug/kg	< 40 U	< 40 U	< 35 U	< 490 U	< 88 UJ	< 86 UJ	< 51 U	< 49 U	42 J+	29 J+	< 12 U	< 13 U	23 J
thylene dibromide	ug/kg	< 3.8 U	< 3.8 U	< 3.3 U	< 4.3 U	< 3.4 UJ	< 3.4 UJ	< 4.9 U	< 4.7 U	< 7.9 U	< 4.6 U	< 5.2 U	< 5.6 U	< 4.2 UJ
exachlorobutadiene	ug/kg	< 24 U	< 24 U	< 21 U	35 j	< 21 UJ	< 21 UJ	< 31 U	< 29 U	< 50 U	< 29 U	81 j	37 j	< 27 UJ
opropylbenzene (Cumene)	ug/kg	< 8.6 U	< 8.5 U	< 7.6 U	< 9.8 U	< 7.7 UJ	< 7.6 UJ	< 11 U	< 11 U	< 18 U	< 10 U	< 12 U	400 J+	< 9.6 UJ
ı,p-Xylenes	ug/kg	160 J+	< 120 U	120 J+	< 8.1 U	< 6.4 UJ	< 67 UJ	170 J+	190 J+	280 J+	160 J+	< 9.6 U	< 10 U	140 J
ethyl tert-butyl ether	ug/kg	< 6 U	< 6 U	< 5.3 U	< 6.9 U	< 5.4 UJ	< 5.3 UJ	< 7.7 U	< 7.4 U	< 12 U	< 7.3 U	< 8.1 U	< 8.9 U	< 6.7 UJ
ethylene chloride	ug/kg	< 26 U	< 26 U	< 23 U	< 320 U	< 250 UJ	< 250 UJ	< 33 U	< 32 U	< 520 U	< 300 U	< 380 U	< 410 U	< 310 UJ
aphthalene	ug/kg	< 39 U	< 39 U	< 34 U	280	66 J	43 J	< 50 U	< 48 U	< 81 U	< 47 U	< 53 U	< 58 U	< 44 UJ
-Butylbenzene	ug/kg	< 19 U	< 18 U	< 16 U	< 21 U	< 17 UJ	< 16 UJ	< 24 U	< 23 U	< 38 U	< 22 U	< 25 U	< 27 U	< 21 UJ
-Propylbenzene	ug/kg	< 15 U	< 15 U	< 13 U	< 17 U	< 13 UJ	< 13 UJ	< 19 U	< 19 U	< 31 U	< 18 U	< 20 U	< 22 U	< 17 UJ
Chlorotoluene (2-chlorotoluene)	ug/kg	< 8.8 U	< 8.7 U	< 7.7 U	53	< 7.9 UJ	< 7.8 UJ	< 11 U	< 11 U	< 18 U	< 11 U	66	88	< 9.8 UJ
Xylene	ug/kg	< 40 U	< 40 U	< 35 U	< 490 U	< 48 UJ	< 47 UJ	< 51 U	< 49 U	< 83 U	< 48 U	< 580 UJ	< 79 U	< 45 UJ
c-Butylbenzene	ug/kg	< 8.6 U	< 8.5 U	< 7.6 U	< 9.8 U	< 7.7 UJ	< 7.6 UJ	< 11 U	< 11 U	< 18 U	< 10 U	< 12 U	< 13 U	< 9.6 UJ
yrene	ug/kg	< 13 U	< 13 U	< 11 U	< 15 U	< 11 UJ	< 11 UJ	< 16 U	< 16 U	< 26 U	< 15 U	< 17 U	< 200 U	< 14 UJ
rt-Butylbenzene	ug/kg	< 7.7 U	< 7.6 U	< 6.8 U	9 j	< 6.9 UJ	< 6.8 UJ	< 9.9 U	< 9.5 U	< 16 U	< 9.3 U	17 j	22 j	< 8.6 UJ
trachloroethene	ug/kg	16 j	5.8 j	< 35 U	2,300	< 390 U	< 380 U	< 51 U	< 49 U	310	66	10,000 J+	12,000	23 J
luene	ug/kg	< 14 U	< 13 U	< 12 U	260 J+	27 J	29 J	< 17 U	< 17 U	< 28 U	< 16 U	6,300 J+	< 2,100 U	< 15 UJ
ans-1,2-Dichloroethene	ug/kg	< 15 U	< 14 U	< 13 U	< 17 U	< 13 UJ	< 13 UJ	< 19 U	< 18 U	< 30 U	< 18 U	< 20 U	< 22 U	< 16 UJ
ans-1,3-Dichloropropene	ug/kg	< 7 U	< 7 U	< 6.2 U	< 8 U	< 6.3 UJ	< 6.2 UJ	< 9 U	< 8.6 U	< 15 U	< 8.5 U	< 9.5 U	< 10 U	< 7.8 UJ
ichloroethene	ug/kg	< 10 U	< 10 U	< 9.1 U	27 j	12 J	11 J	< 13 U	< 13 U	< 21 U	< 12 U	48 j	25 j	< 11 UJ
			< 26 U	< 23 U	< 30 U	< 23 UJ	< 23 UJ	< 33 U	< 32 U	< 54 U	< 31 U	< 35 U	< 38 U	< 29 UJ
ichlorofluoromethane (Freon 11)	ug/kg	< 26 U	\ 20 U	\ 23 0	\ 30 0	\ 2J UJ	\ 25 05	\ 33.0	\ JZ U	\ JT U	\ 31 0	\ 33.0	\ 30 0	, 2, 0,

< = Compound not detected. Method Detection Limit shown.</p>  $VOCs = \dot{Volatile}$  organic compounds

FD = Field Duplicate Sample

N = Normal Environmental Sample

ug/kg = micrograms per kilogram
SW8260D analyses performed by Eurofins - Seattle, WA.

Validation Level = EPA-STAGE2AValidated Qualifier Definition(s):

J- = The result is an estimated quantity, but the result may be biased low.

j = The result is an estimated quantity. The associated numerical value is the

approximate concentration of the analyte in the sample.

J+ = The result is an estimated quantity, but the result may be biased high. R = The data are unusable. The sample results are rejected due to serious deficiencies

in meeting QC criteria. The analyte may or may not be present in the sample.

UJ = The analyte was analyzed for, but was not detected. The reported limit is approximate and may be inaccurate or imprecise.

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Phase 1 Volatile Organic Compound Analytical Results In Situ Stabilization Preliminary Design Investigation Report Former Arkema, Inc. Facility Portland, Oregon

Sample	ntion Locati Date Sampl	PDI-04 07/16/2024	PDI-04 07/16/2024	PDI-04 07/16/2024	PDI-04 07/16/2024	PDI-05 07/17/2024	PDI-05 07/17/2024	PDI-05 07/17/2024	PDI-05 07/17/2024	PDI-05 07/17/2024	PDI-05 07/17/2024	PDI-06 07/18/2024	PDI-06 07/18/2024	PDI-06 07/18/2024
	Type Sampl	N	N	N	N	N	N	N	FD	N	N	N	N	N
Depth Below Ground Su		32 ft	35 ft	38 ft	40.5 ft	36.5 ft	37 ft	40.5 ft	40.5 ft	44.5 ft	53 ft	38.7 ft	40.5 ft	44.5 ft
nalyte	Unit													
OCs SW8260D 1,1,2-Tetrachloroethane	ug/kg	< 10 000 H	< 710 U	< 60 II	< 5.8 U	< 59 U	< 630 U	< 57 U	< 71 U	< 5.2 U	< 660 U	< 950 UJ	< 650 U	< 620 II
,1,1-Trichloroethane	ug/kg	< 10,000 U	< 650 U	< 60 U < 55 U	< 5.6 U	< 54 U	< 580 U	< 53 U	< 65 U	< 4.8 U	< 610 U	< 880 UJ	< 600 U	< 630 U < 580 U
,1,2,2-Tetrachloroethane	ug/kg	< 9,600 U < 16,000 U	< 1,100 U	< 91 U	< 8.9 U	< 34 U	< 950 U	< 87 U	< 110 U	< 4.8 U	< 1,000 U	< 1,400 UJ	< 990 U	< 960 U
,1,2-Trichloroethane	ug/kg	< 15,000 U	< 1,000 U	< 88 U	< 8.7 U	< 87 U	< 930 U	< 85 U	< 100 U	< 7.8 U	< 980 U	< 1,400 UJ	< 960 U	< 930 U
,1-Dichloroethane	ug/kg	< 19,000 U	< 1,300 U	< 110 U	< 11 U	< 110 U	< 1,200 U	< 110 U	< 130 U	< 9.7 U	< 1,200 U	< 1,400 UJ	< 1,200 U	< 1,200 U
,1-Dichloroethene	ug/kg ug/kg	< 26,000 U	< 1,700 U	< 150 U	< 14 U	< 140 U	< 1,500 U	< 140 U	< 170 U	< 13 U	< 1,600 U	< 2,300 UJ	< 1,600 U	< 1,500 U
,1-Dichloropropene		< 11,000 U	< 750 U	< 63 U	< 6.2 U	< 62 U	< 660 U	< 61 U	< 75 U	< 5.6 U	< 700 U	< 1,000 UJ	< 690 U	< 670 U
,2,3-Trichlorobenzene	ug/kg ug/kg	< 83,000 U	< 5,600 U	< 470 U	< 46 U	< 470 U	< 5,000 U	< 450 U	< 560 U	< 42 U	< 5,300 U	< 7,600 UJ	< 5,100 U	< 5,000 U
,2,3-Trichloropropane	ug/kg	< 24,000 U	< 1,600 U	< 140 U	< 13 U	< 140 U	< 1,400 U	< 130 U	< 160 U	< 12 U	< 1,500 U	< 2,200 UJ	< 1,500 U	< 1,400 U
,2,4-Trichlorobenzene	ug/kg	< 89,000 U	< 6,000 U	< 510 U	< 50 U	< 500 U	< 5,300 U	< 490 U	< 600 U	< 45 U	< 5,700 U	< 8,100 UJ	< 5,500 U	< 5,400 U
,2,4-Trimethylbenzene	ug/kg	< 28,000 U	< 1,900 U	< 160 U	< 16 U	< 160 U	< 1,700 U	< 150 U	< 190 U	< 14 U	< 1,800 U	< 2,600 UJ	< 1,800 U	< 1,700 U
,2-Dibromo-3-chloropropane	ug/kg	< 32,000 U	< 2,100 U	< 180 U	< 18 U	< 180 U	< 1,900 U	< 170 U	< 210 U	< 16 U	< 2,000 U	< 2,900 UJ	< 2,000 U	< 1,900 U
,2-Dichlorobenzene	ug/kg	< 18,000 U	4,900 j	3,800	< 10 U	610	7,900	< 100 U	< 120 U	150	< 1,200 U	16,000 J	< 1,100 U	< 1,100 U
,2-Dichloroethane	ug/kg	< 11,000 U	< 780 U	< 66 U	< 6.4 U	< 65 U	< 690 U	< 63 U	< 78 U	< 5.8 U	< 730 U	< 1,000 UJ	< 710 U	< 690 U
,2-Dichloropropane	ug/kg	< 140 R	< 1,900 R	< 160 R	< 7.7 R	< 77 U	< 830 U	< 76 U	< 93 U	< 74 U	< 880 U	< 2,500 UJ	< 860 U	< 830 U
,3,5-Trimethylbenzene	ug/kg	< 16,000 U	< 1,100 U	< 91 U	< 8.9 U	< 89 U	< 950 U	< 87 U	< 110 U	< 8 U	< 1,000 U	< 1,400 UJ	< 990 U	< 960 U
.,3-Dichlorobenzene	ug/kg	< 28,000 U	< 1,900 U	260 j	< 16 U	< 160 U	< 1,700 U	< 150 U	< 190 U	19 j	< 1,800 U	< 2,500 UJ	< 1,700 U	< 1,700 U
L,3-Dichloropropane	ug/kg	< 12,000 U	< 790 U	< 67 U	< 6.5 U	< 66 U	< 700 U	< 64 U	< 79 U	< 5.9 U	< 740 U	< 1,100 UJ	< 730 U	< 710 U
L,4-Dichlorobenzene	ug/kg	< 22,000 U	< 1,500 U	9,100	< 13 U	< 130 U	< 1,400 U	< 120 U	210 j	< 11 U	< 1,400 U	< 2,100 UJ	< 1,400 U	< 1,400 U
2,2-Dichloropropane	ug/kg	< 25,000 U	< 1,700 U	< 140 U	< 14 U	< 140 U	< 1,500 U	< 140 U	< 170 U	< 13 U	< 1,600 U	< 2,300 UJ	< 1,600 U	< 1,500 U
1-Chlorotoluene	ug/kg	< 20,000 U	< 1,400 U	< 120 U	< 11 U	< 120 U	< 1,200 U	< 110 U	< 140 U	< 10 U	< 1,300 U	< 1,900 UJ	< 1,300 U	< 1,200 U
4-Isopropyltoluene	ug/kg	< 21,000 U	< 1,400 U	< 120 U	23 j	< 120 U	< 1,300 U	< 120 U	< 140 U	< 120 U	2,700 j	< 1,900 UJ	< 1,300 U	< 1,300 U
Benzene	ug/kg	< 420 U	< 540 U	< 45 U	< 4.4 U	< 45 U	< 480 U	< 43 U	< 54 U	< 4 U	< 510 U	< 720 UJ	< 490 U	< 480 U
Bromobenzene	ug/kg	< 8,700 U	< 590 U	71 j	< 4.9 U	< 49 U	< 530 U	< 48 U	< 59 U	< 4.4 U	< 560 U	1,300 J	< 540 U	< 530 U
Bromodichloromethane	ug/kg	< 11,000 U	< 780 U	< 66 U	< 6.4 U	< 65 U	< 690 U	< 63 U	< 78 U	< 5.8 U	< 730 U	< 1,000 UJ	< 710 U	< 690 U
Bromoform	ug/kg	< 9,400 U	< 640 U	< 54 U	< 5.3 U	< 53 U	< 560 U	< 52 U	< 64 U	< 4.7 U	< 600 U	< 860 UJ	< 580 U	< 570 U
Bromomethane	ug/kg	< 790 R	< 11,000 R	< 900 R	< 44 R	< 440 U	< 4,700 U	< 430 U	< 530 U	< 430 U	< 5,000 U	< 14,000 UJ	< 4,900 U	< 4,800 U
Carbon tetrachloride	ug/kg	< 9,100 U	< 620 U	< 52 U	< 5.1 U	< 52 U	< 550 U	< 50 U	< 62 U	< 4.6 U	< 580 U	< 840 UJ	< 570 U	< 550 U
Chlorobenzene	ug/kg	8,400 J	990,000 J	130,000 J	3,600	28,000	300,000	26,000	18,000	9,700	79,000	2,000,000 J	280,000	86,000
Chlorobromomethane	ug/kg	< 13,000 U	< 880 U	< 74 U	< 7.3 U	< 73 U	< 780 U	< 71 U	< 88 U	< 6.5 U	< 820 U	< 1,200 UJ	< 800 U	< 780 U
Chloroethane	ug/kg	< 43,000 U	< 3,000 U	< 250 U	< 24 U	< 250 U	< 2,600 U	< 240 U	< 300 U	< 240 U	< 2,800 U	< 4,000 UJ	< 2,700 U	< 2,600 U
Chloroform	ug/kg	< 8,700 U	1,700 j	220 j	< 4.9 U	54 j	< 530 U	< 48 U	< 59 U	30	< 560 U	1,900 J	< 540 U	< 530 U
Chloromethane	ug/kg	< 21,000 U	< 1,400 U	< 120 U	< 12 U	< 120 U	< 1,300 U	< 120 U	< 140 U	< 110 U	< 1,300 U	< 3,900 UJ	< 1,300 U	< 1,300 U
cis-1,2-Dichloroethene	ug/kg	< 26,000 U	< 1,800 U	< 150 U	< 15 U	< 150 U	< 1,600 U	< 140 U	< 180 U	< 13 U	< 1,700 U	< 2,400 UJ	< 1,600 U	< 1,600 U
cis-1,3-Dichloropropene	ug/kg	< 8,300 U	< 570 U	< 48 U	< 4.7 U	< 47 U	< 500 U	< 46 U	< 56 U	< 45 UJ	< 530 U	< 760 UJ	< 520 U	< 500 U
Dibromochloromethane	ug/kg	< 10 000 H	4 COO II	< 58 U	< 5.7 U	< 58 U	< 610 U	< 56 U	< 69 U	< 5.1 U	< 650 U	< 930 UJ		< 620 U
		< 10,000 U	< 690 U	\ J0 U	1 317 0	\ 30 U		1 30 0				, 550 05	< 640 U	
Dibromomethane	ug/kg		< 1,000 U	< 88 U	< 8.7 U	< 87 U	< 930 U	< 85 U	< 100 U	< 7.8 U	< 980 U	< 1,400 UJ	< 640 U < 960 U	< 930 U
	ug/kg ug/kg	< 15,000 U < 15,000 U < 950 R							< 100 U < 650 U	< 7.8 U < 520 U				< 930 U < 5,800 U
Dibromomethane Dichlorodifluoromethane (Freon 12) Ethylbenzene	ug/kg	< 15,000 U	< 1,000 U	< 88 U	< 8.7 U	< 87 U	< 930 U	< 85 U			< 980 U	< 1,400 UJ	< 960 U	
Dichlorodifluoromethane (Freon 12)	ug/kg ug/kg	< 15,000 U < 950 R	< 1,000 U < 13,000 R	< 88 U < 1,100 R	< 8.7 U < 54 R	< 87 U < 540 U	< 930 U < 5,700 U	< 85 U < 530 U	< 650 U	< 520 U	< 980 U < 6,100 U	< 1,400 UJ < 18,000 UJ	< 960 U < 6,000 U	< 5,800 U
Dichlorodifluoromethane (Freon 12) Ethylbenzene	ug/kg ug/kg ug/kg	< 15,000 U < 950 R < 19,000 U	< 1,000 U < 13,000 R < 1,300 U	< 88 U < 1,100 R < 110 U	< 8.7 U < 54 R < 47 U	< 87 U < 540 U < 110 U	< 930 U < 5,700 U < 1,100 U < 480 U < 3,000 U	< 85 U < 530 U < 100 U < 43 U < 270 U	< 650 U < 130 U < 54 U < 340 U	< 520 U < 42 U	< 980 U < 6,100 U < 1,200 U < 510 U < 3,200 U	< 1,400 UJ < 18,000 UJ < 1,700 UJ	< 960 U < 6,000 U < 1,200 U	< 5,800 U < 1,100 U < 480 U < 3,000 U
Dichlorodifluoromethane (Freon 12) Ethylbenzene Ethylene dibromide	ug/kg ug/kg ug/kg ug/kg ug/kg	< 15,000 U < 950 R < 19,000 U < 7,900 U < 50,000 U < 18,000 U	< 1,000 U < 13,000 R < 1,300 U < 540 U	< 88 U < 1,100 R < 110 U < 45 U	< 8.7 U < 54 R < 47 U < 4.4 U	< 87 U < 540 U < 110 U < 45 U < 280 U < 100 U	< 930 U < 5,700 U < 1,100 U < 480 U < 3,000 U < 1,100 U	< 85 U < 530 U < 100 U < 43 U < 270 U < 98 U	< 650 U < 130 U < 54 U < 340 U < 120 U	< 520 U < 42 U < 4 U	< 980 U < 6,100 U < 1,200 U < 510 U < 3,200 U < 1,100 U	< 1,400 UJ < 18,000 UJ < 1,700 UJ < 720 UJ	< 960 U < 6,000 U < 1,200 U < 490 U < 3,100 U < 1,100 U	< 5,800 U < 1,100 U < 480 U < 3,000 U < 1,100 U
Dichlorodifluoromethane (Freon 12) Ethylbenzene Ethylene dibromide Hexachlorobutadiene Isopropylbenzene (Cumene)	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	< 15,000 U < 950 R < 19,000 U < 7,900 U < 50,000 U < 18,000 U < 830 UJ	< 1,000 U < 13,000 R < 1,300 U < 540 U < 3,400 U < 1,200 U < 1,000 U	< 88 U < 1,100 R < 110 U < 45 U < 280 U	< 8.7 U < 54 R < 47 U < 4.4 U < 28 U	< 87 U < 540 U < 110 U < 45 U < 280 U < 100 U < 470 U	< 930 U < 5,700 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U	< 85 U < 530 U < 100 U < 43 U < 270 U < 98 U < 460 U	< 650 U < 130 U < 54 U < 340 U < 120 U < 560 U	< 520 U < 42 U < 4 U < 25 U < 9 U 180 J+	< 980 U < 6,100 U < 1,200 U < 510 U < 3,200 U < 1,100 U < 940 U	< 1,400 UJ < 18,000 UJ < 1,700 UJ < 720 UJ < 4,600 UJ < 1,600 UJ < 1,400 UJ	< 960 U < 6,000 U < 1,200 U < 490 U < 3,100 U < 1,100 U < 920 U	< 5,800 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U
Dichlorodifluoromethane (Freon 12) Ethylbenzene Ethylene dibromide Hexachlorobutadiene Isopropylbenzene (Cumene) m,p-Xylenes Methyl tert-butyl ether	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	< 15,000 U < 950 R < 19,000 U < 7,900 U < 50,000 U < 18,000 U < 830 UJ	< 1,000 U < 13,000 R < 1,300 U < 540 U < 3,400 U < 1,200 U < 1,000 U < 850 U	< 88 U < 1,100 R < 110 U < 45 U < 280 U < 100 U < 480 U < 71 U	< 8.7 U < 54 R < 47 U < 4.4 U < 28 U < 10 U  160 J+ < 7 U	< 87 U < 540 U < 110 U < 45 U < 280 U < 100 U < 470 U < 70 U	< 930 U < 5,700 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 750 U	< 85 U < 530 U < 100 U < 43 U < 270 U < 98 U < 460 U < 69 U	< 650 U < 130 U < 54 U < 340 U < 120 U < 560 U < 85 U	< 520 U < 42 U < 4 U < 25 U < 9 U 180 J+ < 6.3 U	< 980 U < 6,100 U < 1,200 U < 510 U < 3,200 U < 1,100 U < 940 U < 800 U	< 1,400 UJ < 18,000 UJ < 1,700 UJ < 720 UJ < 4,600 UJ < 1,600 UJ < 1,400 UJ < 1,100 UJ	< 960 U < 6,000 U < 1,200 U < 490 U < 3,100 U < 1,100 U < 920 U < 780 U	< 5,800 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 760 U
Dichlorodifluoromethane (Freon 12) Ethylbenzene Ethylene dibromide Hexachlorobutadiene Isopropylbenzene (Cumene) m,p-Xylenes Methyl tert-butyl ether Methylene chloride	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg	< 15,000 U < 950 R < 19,000 U < 7,900 U < 50,000 U < 18,000 U < 830 UJ 140 J < 520,000 U	< 1,000 U < 13,000 R < 1,300 U < 540 U < 3,400 U < 1,200 U < 1,000 U < 850 U < 35,000 U	< 88 U < 1,100 R < 110 U < 45 U < 280 U < 100 U < 480 U < 71 U < 3,000 U	< 8.7 U < 54 R < 47 U < 4.4 U < 28 U < 10 U  160 J+ < 7 U < 290 U	< 87 U < 540 U < 110 U < 45 U < 280 U < 100 U < 470 U < 70 U < 2,900 U	< 930 U < 5,700 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 750 U < 31,000 U	< 85 U < 530 U < 100 U < 43 U < 270 U < 98 U < 460 U < 69 U < 2,900 U	< 650 U < 130 U < 54 U < 340 U < 120 U < 560 U < 85 U < 3,500 U	< 520 U < 42 U < 4 U < 25 U < 9 U 180 J+ < 6.3 U < 290 U	< 980 U < 6,100 U < 1,200 U < 510 U < 3,200 U < 1,100 U < 940 U < 800 U < 33,000 U	< 1,400 UJ < 18,000 UJ < 1,700 UJ < 720 UJ < 4,600 UJ < 1,600 UJ < 1,400 UJ < 1,100 UJ < 48,000 UJ	< 960 U < 6,000 U < 1,200 U < 490 U < 3,100 U < 1,100 U < 920 U < 780 U < 32,000 U	< 5,800 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 760 U < 31,000 U
Dichlorodifluoromethane (Freon 12) Ethylbenzene Ethylene dibromide Hexachlorobutadiene Isopropylbenzene (Cumene) m,p-Xylenes Methyl tert-butyl ether Methylene chloride Naphthalene	ug/kg	< 15,000 U < 950 R < 19,000 U < 7,900 U < 50,000 U < 18,000 U < 830 UJ 140 J < 520,000 U	< 1,000 U < 13,000 R < 1,300 U < 540 U < 3,400 U < 1,200 U < 1,000 U < 850 U < 35,000 U < 5,500 U	< 88 U < 1,100 R < 110 U < 45 U < 280 U < 100 U < 480 U < 71 U < 3,000 U	< 8.7 U < 54 R < 47 U < 4.4 U < 28 U < 10 U  160 J+ < 7 U < 290 U < 46 U	< 87 U < 540 U < 110 U < 45 U < 280 U < 100 U < 470 U < 70 U < 460 U	< 930 U < 5,700 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 750 U < 31,000 U < 4,900 U	< 85 U < 530 U < 100 U < 43 U < 270 U < 98 U < 460 U < 69 U < 2,900 U < 450 U	< 650 U < 130 U < 54 U < 340 U < 120 U < 560 U < 85 U < 3,500 U < 550 U	< 520 U < 42 U < 4 U < 25 U < 9 U  180 J+ < 6.3 U < 290 U < 41 U	< 980 U < 6,100 U < 1,200 U < 510 U < 3,200 U < 1,100 U < 940 U < 800 U < 33,000 U < 5,200 U	< 1,400 UJ < 18,000 UJ < 1,700 UJ < 720 UJ < 4,600 UJ < 1,600 UJ < 1,400 UJ < 1,100 UJ < 48,000 UJ < 7,500 UJ	< 960 U < 6,000 U < 1,200 U < 490 U < 3,100 U < 1,100 U < 920 U < 780 U < 32,000 U < 5,100 U	< 5,800 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 760 U < 31,000 U < 4,900 U
Dichlorodifluoromethane (Freon 12) Ethylbenzene Ethylene dibromide Hexachlorobutadiene sopropylbenzene (Cumene) m,p-Xylenes Methyl tert-butyl ether Methylene chloride Naphthalene n-Butylbenzene	ug/kg	< 15,000 U < 950 R < 19,000 U < 7,900 U < 50,000 U < 18,000 U < 830 UJ 140 J < 520,000 U 1,900 J < 38,000 U	< 1,000 U < 13,000 R < 1,300 U < 540 U < 3,400 U < 1,200 U < 1,000 U < 850 U < 35,000 U < 5,500 U < 2,600 U	< 88 U < 1,100 R < 110 U < 45 U < 280 U < 100 U < 480 U < 71 U < 3,000 U  670 j < 220 U	< 8.7 U < 54 R < 47 U < 4.4 U < 28 U < 10 U  160 J+ < 7 U < 290 U < 46 U < 22 U	< 87 U < 540 U < 110 U < 45 U < 280 U < 100 U < 470 U < 70 U < 2,900 U < 460 U < 220 U	< 930 U < 5,700 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 750 U < 31,000 U < 4,900 U < 2,300 U	< 85 U < 530 U < 100 U < 43 U < 270 U < 98 U < 460 U < 69 U < 2,900 U < 450 U < 210 U	< 650 U < 130 U < 54 U < 340 U < 120 U < 560 U < 85 U < 3,500 U < 550 U < 260 U	< 520 U < 42 U < 4 U < 25 U < 9 U  180 J+ < 6.3 U < 290 U < 41 U 24 j	< 980 U < 6,100 U < 1,200 U < 510 U < 3,200 U < 1,100 U < 940 U < 800 U < 33,000 U < 5,200 U < 2,500 U	< 1,400 UJ < 18,000 UJ < 1,700 UJ < 720 UJ < 4,600 UJ < 1,600 UJ < 1,400 UJ < 1,100 UJ < 48,000 UJ < 7,500 UJ < 3,500 UJ	< 960 U < 6,000 U < 1,200 U < 490 U < 3,100 U < 1,100 U < 920 U < 780 U < 32,000 U < 5,100 U < 2,400 U	< 5,800 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 760 U < 31,000 U < 4,900 U < 2,300 U
Dichlorodifluoromethane (Freon 12) Ethylbenzene Ethylene dibromide Hexachlorobutadiene Sopropylbenzene (Cumene) In,p-Xylenes Hethyl tert-butyl ether Hethylene chloride Haphthalene Haphthalene Haphthalene Haphthalene Haphtplenzene	ug/kg	< 15,000 U < 950 R < 19,000 U < 7,900 U < 50,000 U < 18,000 U < 830 UJ  140 J < 520,000 U  1,900 J < 38,000 U < 31,000 U	< 1,000 U < 13,000 R < 1,300 U < 540 U < 3,400 U < 1,200 U < 1,000 U < 850 U < 35,000 U < 5,500 U < 2,600 U < 2,100 U	< 88 U < 1,100 R < 110 U < 45 U < 280 U < 100 U < 480 U < 71 U < 3,000 U  670 j < 220 U < 180 U	< 8.7 U < 54 R < 47 U < 4.4 U < 28 U < 10 U  160 J+ < 7 U < 290 U < 46 U < 22 U < 18 U	< 87 U < 540 U < 110 U < 45 U < 280 U < 100 U < 470 U < 70 U < 2,900 U < 460 U < 180 U	< 930 U < 5,700 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 750 U < 31,000 U < 4,900 U < 2,300 U < 1,900 U	< 85 U < 530 U < 100 U < 43 U < 270 U < 98 U < 460 U < 69 U < 2,900 U < 450 U < 210 U < 170 U	< 650 U < 130 U < 54 U < 340 U < 120 U < 560 U < 85 U < 3,500 U < 260 U < 210 U	< 520 U < 42 U < 4 U < 25 U < 9 U  180 J+ < 6.3 U < 290 U < 41 U  24 j < 16 U	< 980 U < 6,100 U < 1,200 U < 510 U < 3,200 U < 1,100 U < 940 U < 800 U < 33,000 U < 5,200 U < 2,500 U < 2,000 U	< 1,400 UJ < 18,000 UJ < 1,700 UJ < 720 UJ < 4,600 UJ < 1,600 UJ < 1,400 UJ < 1,100 UJ < 48,000 UJ < 7,500 UJ < 3,500 UJ < 2,900 UJ	< 960 U < 6,000 U < 1,200 U < 490 U < 3,100 U < 1,100 U < 920 U < 780 U < 32,000 U < 5,100 U < 1,900 U	< 5,800 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 760 U < 31,000 U < 4,900 U < 2,300 U < 1,900 U
thylbenzene thylene dibromide lexachlorobutadiene sopropylbenzene (Cumene) n,p-Xylenes lethyl tert-butyl ether lethylene chloride laphthalene -Butylbenzene -Propylbenzene (2-chlorotoluene)	ug/kg	< 15,000 U < 950 R < 19,000 U < 7,900 U < 50,000 U < 18,000 U < 830 UJ  140 J < 520,000 U  1,900 J < 38,000 U < 31,000 U < 18,000 U	< 1,000 U < 13,000 R < 1,300 U < 540 U < 3,400 U < 1,200 U < 1,000 U < 850 U < 35,000 U < 5,500 U < 2,600 U < 1,200 U < 1,200 U	< 88 U < 1,100 R < 110 U < 45 U < 280 U < 100 U < 480 U < 71 U < 3,000 U  670 j < 220 U < 180 U < 100 U	< 8.7 U < 54 R < 47 U < 4.4 U < 28 U < 10 U  160 J+ < 7 U < 290 U < 46 U < 22 U < 18 U < 10 U	< 87 U < 540 U < 110 U < 45 U < 280 U < 100 U < 470 U < 70 U < 2,900 U < 460 U < 220 U < 180 U < 100 U	< 930 U < 5,700 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 750 U < 31,000 U < 4,900 U < 2,300 U < 1,900 U < 1,100 U	< 85 U < 530 U < 100 U < 43 U < 270 U < 98 U < 460 U < 69 U < 2,900 U < 450 U < 170 U < 100 U	< 650 U < 130 U < 54 U < 340 U < 120 U < 560 U < 85 U < 3,500 U < 550 U < 260 U < 210 U < 120 U	< 520 U < 42 U < 4 U < 25 U < 9 U  180 J+ < 6.3 U < 290 U < 41 U  24 j < 16 U < 9.2 U	< 980 U < 6,100 U < 1,200 U < 510 U < 3,200 U < 1,100 U < 940 U < 800 U < 33,000 U < 5,200 U < 2,500 U < 2,000 U < 1,200 U	< 1,400 UJ < 18,000 UJ < 1,700 UJ < 720 UJ < 4,600 UJ < 1,600 UJ < 1,400 UJ < 1,100 UJ < 48,000 UJ < 7,500 UJ < 3,500 UJ < 2,900 UJ < 1,700 UJ	< 960 U < 6,000 U < 1,200 U < 490 U < 3,100 U < 1,100 U < 920 U < 780 U < 32,000 U < 5,100 U < 1,900 U < 1,100 U	< 5,800 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 760 U < 31,000 U < 4,900 U < 2,300 U < 1,100 U
thylbenzene thylene dibromide exachlorobutadiene sopropylbenzene (Cumene) n,p-Xylenes lethyl tert-butyl ether lethylene chloride aphthalene -Butylbenzene -Propylbenzene -Chlorotoluene (2-chlorotoluene) -Xylene	ug/kg	< 15,000 U < 950 R < 19,000 U < 7,900 U < 50,000 U < 18,000 U < 830 UJ  140 J < 520,000 U  1,900 J < 38,000 U < 31,000 U < 830 UJ	< 1,000 U < 13,000 R < 1,300 U < 540 U < 3,400 U < 1,200 U < 1,000 U < 850 U < 35,000 U < 5,500 U < 2,600 U < 1,200 U < 1,200 U < 710 U	< 88 U < 1,100 R < 110 U < 45 U < 280 U < 100 U < 480 U < 71 U < 3,000 U  670 j < 220 U < 180 U < 100 U < 60 U	< 8.7 U < 54 R < 47 U < 4.4 U < 28 U < 10 U  160 J+ < 7 U < 290 U < 46 U < 22 U < 18 U < 10 U < 47 U	< 87 U < 540 U < 110 U < 45 U < 280 U < 100 U < 470 U < 70 U < 2,900 U < 460 U < 220 U < 180 U < 59 U	< 930 U < 5,700 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 750 U < 31,000 U < 4,900 U < 2,300 U < 1,900 U < 1,100 U < 630 U	< 85 U < 530 U < 100 U < 43 U < 270 U < 98 U < 460 U < 69 U < 2,900 U < 450 U < 170 U < 100 U < 57 U	< 650 U < 130 U < 54 U < 340 U < 120 U < 560 U < 85 U < 3,500 U < 550 U < 260 U < 120 U < 71 U	< 520 U < 42 U < 4 U < 25 U < 9 U  180 J+ < 6.3 U < 290 U < 41 U  24 j < 16 U < 9.2 U < 42 U	< 980 U < 6,100 U < 1,200 U < 510 U < 3,200 U < 1,100 U < 940 U < 800 U < 33,000 U < 5,200 U < 2,500 U < 1,200 U < 660 U	< 1,400 UJ < 18,000 UJ < 1,700 UJ < 720 UJ < 4,600 UJ < 1,600 UJ < 1,400 UJ < 1,100 UJ < 48,000 UJ < 7,500 UJ < 3,500 UJ < 2,900 UJ < 950 UJ	< 960 U < 6,000 U < 1,200 U < 490 U < 3,100 U < 1,100 U < 920 U < 780 U < 32,000 U < 5,100 U < 1,900 U < 1,100 U < 650 U	< 5,800 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 760 U < 31,000 U < 4,900 U < 2,300 U < 1,900 U < 1,100 U < 630 U
thylbenzene thylene dibromide lexachlorobutadiene sopropylbenzene (Cumene) n,p-Xylenes lethyl tert-butyl ether lethylene chloride laphthalene -Butylbenzene -Propylbenzene -Chlorotoluene (2-chlorotoluene) -Xylene ec-Butylbenzene	ug/kg	< 15,000 U < 950 R < 19,000 U < 7,900 U < 50,000 U < 18,000 U < 830 UJ  140 J < 520,000 U  1,900 J < 38,000 U < 31,000 U < 830 UJ < 18,000 U < 18,000 U	< 1,000 U < 13,000 R < 1,300 U < 540 U < 3,400 U < 1,200 U < 1,000 U < 850 U < 35,000 U < 5,500 U < 2,600 U < 1,200 U < 1,200 U < 1,200 U	< 88 U < 1,100 R < 110 U < 45 U < 280 U < 100 U < 480 U < 71 U < 3,000 U  670 j < 220 U < 180 U < 100 U < 60 U < 100 U	< 8.7 U < 54 R < 47 U < 4.4 U < 28 U < 10 U  160 J+ < 7 U < 290 U < 46 U < 22 U < 18 U < 10 U < 47 U < 10 U	< 87 U < 540 U < 110 U < 45 U < 280 U < 100 U < 470 U < 70 U < 2,900 U < 460 U < 180 U < 100 U < 159 U < 100 U	< 930 U < 5,700 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 750 U < 31,000 U < 4,900 U < 2,300 U < 1,100 U < 630 U < 630 U < 1,100 U	< 85 U < 530 U < 100 U < 43 U < 270 U < 98 U < 460 U < 69 U < 2,900 U < 450 U < 170 U < 100 U < 98 U	< 650 U < 130 U < 54 U < 340 U < 120 U < 560 U < 85 U < 3,500 U < 550 U < 260 U < 210 U < 120 U < 120 U	< 520 U < 42 U < 4 U < 25 U < 9 U  180 J+ < 6.3 U < 290 U < 41 U  24 j < 16 U < 9.2 U < 42 U < 9 U	< 980 U < 6,100 U < 1,200 U < 510 U < 3,200 U < 1,100 U < 940 U < 800 U < 33,000 U < 5,200 U < 2,500 U < 2,000 U < 660 U < 1,100 U	< 1,400 UJ < 18,000 UJ < 1,700 UJ < 720 UJ < 4,600 UJ < 1,600 UJ < 1,400 UJ < 1,100 UJ < 48,000 UJ < 7,500 UJ < 3,500 UJ < 2,900 UJ < 950 UJ < 1,600 UJ	< 960 U < 6,000 U < 1,200 U < 490 U < 3,100 U < 1,100 U < 920 U < 780 U < 32,000 U < 5,100 U < 2,400 U < 1,900 U < 1,100 U < 1,100 U < 1,100 U	< 5,800 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 760 U < 31,000 U < 4,900 U < 2,300 U < 1,100 U < 630 U < 1,100 U
Dichlorodifluoromethane (Freon 12) Ethylbenzene Ethylene dibromide Elexachlorobutadiene Sopropylbenzene (Cumene) In,p-Xylenes Ifethyl tert-butyl ether Ifethylene chloride Itaphthalene In-Butylbenzene In-Propylbenzene In-Chlorotoluene (2-chlorotoluene) In-Xylene In-X	ug/kg	< 15,000 U < 950 R < 19,000 U < 7,900 U < 50,000 U < 18,000 U < 830 UJ  140 J < 520,000 U  1,900 J < 38,000 U < 31,000 U < 18,000 U < 18,000 U < 26,000 U	< 1,000 U < 13,000 R < 1,300 U < 540 U < 3,400 U < 1,200 U < 1,000 U < 850 U < 35,000 U < 5,500 U < 2,600 U < 2,100 U < 1,200 U < 1,200 U < 1,200 U	< 88 U < 1,100 R < 110 U < 45 U < 280 U < 100 U < 480 U < 71 U < 3,000 U  670 j < 220 U < 180 U < 100 U < 480 U < 100 U < 480 U	< 8.7 U < 54 R < 47 U < 4.4 U < 28 U < 10 U  160 J+ < 7 U < 290 U < 46 U < 22 U < 18 U < 10 U < 47 U < 47 U < 47 U	< 87 U < 540 U < 110 U < 45 U < 280 U < 100 U < 470 U < 70 U < 2,900 U < 460 U < 220 U < 180 U < 100 U < 59 U < 100 U < 150 U	< 930 U < 5,700 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 750 U < 31,000 U < 4,900 U < 2,300 U < 1,100 U < 630 U < 1,100 U < 1,100 U < 1,600 U	< 85 U < 530 U < 100 U < 43 U < 270 U < 98 U < 460 U < 69 U < 2,900 U < 450 U < 170 U < 100 U < 57 U < 98 U	< 650 U < 130 U < 54 U < 340 U < 120 U < 560 U < 85 U < 3,500 U < 260 U < 260 U < 120 U < 120 U < 120 U < 120 U	< 520 U < 42 U < 4 U < 25 U < 9 U  180 J+ < 6.3 U < 290 U < 41 U  24 j < 16 U < 9.2 U < 42 U < 9 U < 42 U	< 980 U < 6,100 U < 1,200 U < 510 U < 3,200 U < 1,100 U < 940 U < 800 U < 33,000 U < 5,200 U < 2,500 U < 2,500 U < 1,200 U < 660 U < 1,100 U < 1,700 U	< 1,400 UJ < 18,000 UJ < 1,700 UJ < 720 UJ < 4,600 UJ < 1,600 UJ < 1,400 UJ < 1,100 UJ < 48,000 UJ < 7,500 UJ < 3,500 UJ < 2,900 UJ < 1,700 UJ < 950 UJ < 2,400 UJ	< 960 U < 6,000 U < 1,200 U < 490 U < 3,100 U < 1,100 U < 920 U < 780 U < 32,000 U < 5,100 U < 2,400 U < 1,900 U < 1,100 U < 1,100 U < 1,100 U < 1,100 U < 1,600 U	< 5,800 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 760 U < 31,000 U < 4,900 U < 2,300 U < 1,900 U < 1,100 U < 630 U < 1,100 U < 1,600 U
thylbenzene thylene dibromide lexachlorobutadiene sopropylbenzene (Cumene) n,p-Xylenes lethyl tert-butyl ether lethylene chloride laphthalene -Butylbenzene -Propylbenzene -Chlorotoluene (2-chlorotoluene) -Xylene ec-Butylbenzene ert-Butylbenzene	ug/kg	< 15,000 U < 950 R < 19,000 U < 7,900 U < 50,000 U < 18,000 U < 830 UJ  140 J < 520,000 U  1,900 J < 38,000 U < 31,000 U < 830 UJ < 18,000 U < 18,000 U < 16,000 U	< 1,000 U < 13,000 R < 1,300 U < 540 U < 3,400 U < 1,200 U < 1,000 U < 850 U < 35,000 U < 5,500 U < 2,600 U < 1,200 U < 1,100 U	< 88 U < 1,100 R < 110 U < 45 U < 280 U < 100 U < 480 U < 71 U < 3,000 U  670 j < 220 U < 180 U < 100 U < 480 U < 100 U < 60 U < 480 U	< 8.7 U < 54 R < 47 U < 4.4 U < 28 U < 10 U  160 J+ < 7 U < 290 U < 46 U < 22 U < 18 U < 10 U < 47 U < 47 U < 9 U	< 87 U < 540 U < 110 U < 45 U < 280 U < 100 U < 470 U < 70 U < 2,900 U < 460 U < 220 U < 180 U < 100 U < 59 U < 150 U < 90 U	< 930 U < 5,700 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 750 U < 31,000 U < 4,900 U < 2,300 U < 1,900 U < 1,100 U < 630 U < 1,100 U < 630 U < 1,600 U < 960 U	< 85 U < 530 U < 100 U < 43 U < 270 U < 98 U < 460 U < 69 U < 2,900 U < 450 U < 170 U < 100 U < 57 U < 98 U < 88 U	< 650 U < 130 U < 54 U < 340 U < 120 U < 560 U < 85 U < 3,500 U < 550 U < 260 U < 210 U < 120 U < 120 U < 110 U < 121 U	< 520 U < 42 U < 4 U < 25 U < 9 U  180 J+ < 6.3 U < 290 U < 41 U  24 j < 16 U < 9.2 U < 42 U < 9 U < 42 U < 8.1 U	< 980 U < 6,100 U < 1,200 U < 510 U < 3,200 U < 1,100 U < 940 U < 800 U < 33,000 U < 5,200 U < 2,500 U < 2,500 U < 1,200 U < 660 U < 1,100 U < 1,700 U < 1,000 U	< 1,400 UJ < 18,000 UJ < 1,700 UJ < 720 UJ < 4,600 UJ < 1,600 UJ < 1,400 UJ < 1,100 UJ < 48,000 UJ < 7,500 UJ < 3,500 UJ < 2,900 UJ < 1,700 UJ < 950 UJ < 1,600 UJ < 1,500 UJ < 1,500 UJ	< 960 U < 6,000 U < 1,200 U < 490 U < 3,100 U < 1,100 U < 920 U < 780 U < 32,000 U < 5,100 U < 2,400 U < 1,900 U < 1,100 U < 1,600 U < 1,000 U	< 5,800 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 760 U < 31,000 U < 4,900 U < 2,300 U < 1,900 U < 1,100 U < 630 U < 1,100 U < 970 U
Dichlorodifluoromethane (Freon 12) Ethylbenzene Ethylene dibromide Etexachlorobutadiene Sopropylbenzene (Cumene) n,p-Xylenes Methyl tert-butyl ether Methylene chloride Iaphthalene I-Butylbenzene I-Propylbenzene I-Chlorotoluene (2-chlorotoluene) I-Xylene ec-Butylbenzene Etyrene Etrachloroethene	ug/kg	< 15,000 U < 950 R < 19,000 U < 7,900 U < 50,000 U < 18,000 U < 830 UJ  140 J < 520,000 U  1,900 J < 38,000 U < 31,000 U < 18,000 U < 18,000 U < 16,000 U < 16,000 U	< 1,000 U < 13,000 R < 1,300 U < 540 U < 3,400 U < 1,200 U < 1,000 U < 850 U < 35,000 U < 5,500 U < 2,600 U < 2,100 U < 1,200 U < 1,100 U < 1,100 U	< 88 U < 1,100 R < 110 U < 45 U < 280 U < 100 U < 480 U < 71 U < 3,000 U  670 j < 220 U < 180 U < 100 U < 480 U < 92 U 1,100	< 8.7 U < 54 R < 47 U < 4.4 U < 28 U < 10 U  160 J+ < 7 U < 290 U < 46 U < 22 U < 18 U < 10 U < 47 U < 47 U < 9 U < 6.2 U	< 87 U < 540 U < 110 U < 45 U < 280 U < 100 U < 470 U < 70 U < 2,900 U < 460 U < 220 U < 180 U < 100 U < 59 U < 150 U < 90 U	< 930 U < 5,700 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 750 U < 31,000 U < 4,900 U < 2,300 U < 1,900 U < 1,100 U < 1,100 U < 630 U < 1,100 U < 960 U 2,600 j	< 85 U < 530 U < 100 U < 43 U < 270 U < 98 U < 460 U < 69 U < 2,900 U < 450 U < 170 U < 100 U < 57 U < 98 U < 88 U < 88 U < 61 U	< 650 U < 130 U < 54 U < 340 U < 120 U < 560 U < 85 U < 3,500 U < 550 U < 260 U < 210 U < 120 U < 110 U < 150 U < 71 U < 120 U < 150 U < 150 U	< 520 U < 42 U < 4 U < 25 U < 9 U  180 J+ < 6.3 U < 290 U < 41 U  24 j < 16 U < 9.2 U < 42 U < 9 U < 8.1 U  59	< 980 U < 6,100 U < 1,200 U < 510 U < 3,200 U < 1,100 U < 940 U < 800 U < 33,000 U < 5,200 U < 2,500 U < 2,500 U < 1,200 U < 660 U < 1,100 U < 1,700 U < 700 U	< 1,400 UJ < 18,000 UJ < 1,700 UJ < 720 UJ < 4,600 UJ < 1,600 UJ < 1,400 UJ < 1,100 UJ < 48,000 UJ < 7,500 UJ < 3,500 UJ < 2,900 UJ < 1,700 UJ < 950 UJ < 1,600 UJ < 1,500 UJ	< 960 U < 6,000 U < 1,200 U < 490 U < 3,100 U < 1,100 U < 920 U < 780 U < 32,000 U < 5,100 U < 1,900 U < 1,100 U < 1,100 U < 1,000 U < 650 U < 1,000 U < 690 U	< 5,800 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 760 U < 31,000 U < 4,900 U < 2,300 U < 1,900 U < 1,100 U < 630 U < 1,100 U < 1,600 U < 970 U < 670 U
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Dichlorodifluoromethane (Freon 12) Ethylbenzene Ethylene dibromide Elexachlorobutadiene Sopropylbenzene (Cumene) In,p-Xylenes Methyl tert-butyl ether Methylene chloride Iaphthalene Iaphthalene I-Butylbenzene I-Propylbenzene I-Propylbenzene I-Chlorotoluene (2-chlorotoluene) I-Xylene ec-Butylbenzene Etyrene ert-Butylbenzene ietrachloroethene Toluene Toluene Trans-1,2-Dichloroethene Trans-1,3-Dichloropropene	ug/kg	< 15,000 U < 950 R < 19,000 U < 7,900 U < 50,000 U < 18,000 U < 830 UJ  140 J < 520,000 U  1,900 J < 38,000 U < 31,000 U < 18,000 U < 18,000 U < 18,000 U < 18,000 U < 26,000 U < 16,000 U < 150 J < 28,000 U < 30,000 U < 15,000 U	< 1,000 U < 13,000 R < 1,300 U < 540 U < 3,400 U < 1,200 U < 1,000 U < 850 U < 35,000 U < 5,500 U < 2,600 U < 2,100 U < 1,200 U < 1,100 U < 1,100 U < 1,100 U < 1,900 U < 990 U	< 88 U < 1,100 R < 110 U < 45 U < 280 U < 100 U < 480 U < 71 U < 3,000 U  670 j < 220 U < 180 U < 100 U < 480 U < 100 U < 60 U < 100 U < 480 U < 171 U < 83 U < 92 U  1,100 < 160 U < 170 U < 83 U	< 8.7 U < 54 R < 47 U < 4.4 U < 28 U < 10 U  160 J+ < 7 U < 290 U < 46 U < 22 U < 18 U < 10 U < 47 U < 47 U < 10 U < 47 U < 9 U < 6.2 U < 16 U < 8.2 U	< 87 U < 540 U < 110 U < 45 U < 280 U < 100 U < 470 U < 70 U < 2,900 U < 460 U < 220 U < 180 U < 100 U < 59 U < 150 U < 90 U  110 j < 160 U < 82 U	< 930 U < 5,700 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 750 U < 31,000 U < 4,900 U < 2,300 U < 1,900 U < 1,100 U < 630 U < 1,100 U < 630 U < 1,600 U < 960 U 2,600 j < 1,800 U < 880 U	< 85 U < 530 U < 100 U < 43 U < 270 U < 98 U < 460 U < 69 U < 2,900 U < 450 U < 170 U < 170 U < 180 U < 57 U < 98 U < 150 U < 88 U < 61 U < 170 U < 170 U < 80 U	< 650 U < 130 U < 54 U < 340 U < 120 U < 560 U < 85 U < 3,500 U < 550 U < 260 U < 210 U < 120 U < 110 U < 120 U < 120 U < 120 U < 120 U < 190 U < 190 U < 190 U < 99 U	< 520 U < 42 U < 4 U < 25 U < 9 U  180 J+ < 6.3 U < 290 U < 41 U  24 j < 16 U < 9.2 U < 42 U < 9 U < 42 U < 8.1 U  59 < 14 U < 15 U < 7.3 U	< 980 U < 6,100 U < 1,200 U < 510 U < 3,200 U < 1,100 U < 940 U < 800 U < 33,000 U < 5,200 U < 2,500 U < 2,500 U < 2,500 U < 1,200 U < 1660 U < 1,100 U < 1,700 U < 1,800 U < 1,900 U < 930 U	< 1,400 UJ < 18,000 UJ < 1,700 UJ < 720 UJ < 4,600 UJ < 1,600 UJ < 1,400 UJ < 1,100 UJ < 48,000 UJ < 48,000 UJ < 7,500 UJ < 3,500 UJ < 2,900 UJ < 1,700 UJ < 950 UJ < 1,600 UJ < 2,400 UJ < 2,400 UJ < 2,600 UJ < 2,800 UJ < 1,300 UJ	< 960 U < 6,000 U < 1,200 U < 490 U < 3,100 U < 1,100 U < 920 U < 780 U < 32,000 U < 5,100 U < 2,400 U < 1,900 U < 1,100 U < 650 U < 1,100 U < 1,600 U < 1,800 U < 1,900 U < 1,900 U < 910 U	< 5,800 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 760 U < 31,000 U < 4,900 U < 2,300 U < 1,900 U < 1,100 U < 630 U < 1,100 U < 670 U < 1,700 U < 870 U < 880 U
thylbenzene thylene dibromide texachlorobutadiene sopropylbenzene (Cumene) n,p-Xylenes lethyl tert-butyl ether lethylene chloride laphthalene -Butylbenzene -Propylbenzene -Chlorotoluene (2-chlorotoluene) -Xylene ec-Butylbenzene tyrene ert-Butylbenzene ert-Butyl	ug/kg	< 15,000 U < 950 R < 19,000 U < 7,900 U < 50,000 U < 18,000 U < 830 UJ  140 J < 520,000 U  1,900 J < 38,000 U < 31,000 U < 18,000 U < 18,000 U < 18,000 U < 26,000 U < 16,000 U < 150 J < 28,000 U < 30,000 U < 31,000 U < 21,000 U	< 1,000 U < 13,000 R < 1,300 U < 540 U < 3,400 U < 1,200 U < 1,000 U < 850 U < 35,000 U < 5,500 U < 2,600 U < 2,100 U < 1,200 U < 1,100 U < 1,100 U < 1,100 U < 1,500 U < 990 U < 1,500 U	< 88 U < 1,100 R < 110 U < 45 U < 280 U < 100 U < 480 U < 71 U < 3,000 U  670 j < 220 U < 180 U < 100 U < 60 U < 100 U < 480 U < 7100 U < 83 U < 92 U  1,100 < 160 U < 170 U < 83 U < 120 U	< 8.7 U < 54 R < 47 U < 4.4 U < 28 U < 10 U  160 J+ < 7 U < 290 U < 46 U < 22 U < 18 U < 10 U < 47 U < 47 U < 10 U < 41 U < 11 U	< 87 U < 540 U < 110 U < 45 U < 280 U < 100 U < 470 U < 70 U < 2,900 U < 460 U < 220 U < 180 U < 100 U < 59 U < 150 U < 90 U  110 j < 160 U < 82 U < 120 U	< 930 U < 5,700 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 750 U < 31,000 U < 4,900 U < 2,300 U < 1,900 U < 1,100 U < 630 U < 1,100 U < 630 U < 1,600 U < 1,600 U < 960 U 2,600 j < 1,800 U < 880 U < 1,300 U	< 85 U < 530 U < 100 U < 43 U < 270 U < 98 U < 460 U < 69 U < 2,900 U < 450 U < 170 U < 100 U < 57 U < 98 U < 150 U < 88 U < 150 U < 170 U < 88 U < 150 U < 170 U < 120 U	< 650 U < 130 U < 54 U < 340 U < 120 U < 560 U < 85 U < 3,500 U < 550 U < 260 U < 210 U < 120 U < 190 U < 190 U < 190 U < 190 U < 99 U < 150 U	< 520 U < 42 U < 4 U < 25 U < 9 U  180 J+ < 6.3 U < 290 U < 41 U  24 j < 16 U < 9.2 U < 42 U < 9 U < 42 U < 14 U < 9 U < 7.3 U < 15 U < 7.3 U < 11 U	< 980 U < 6,100 U < 1,200 U < 510 U < 3,200 U < 1,100 U < 940 U < 800 U < 800 U < 33,000 U < 5,200 U < 2,500 U < 2,500 U < 1,200 U < 1,200 U < 1660 U < 1,100 U < 1,700 U < 1,000 U < 1,800 U < 930 U < 930 U < 1,400 U	< 1,400 UJ < 18,000 UJ < 1,700 UJ < 720 UJ < 4,600 UJ < 1,600 UJ < 1,400 UJ < 1,100 UJ < 48,000 UJ < 7,500 UJ < 3,500 UJ < 2,900 UJ < 1,700 UJ < 1,600 UJ < 1,500 UJ < 2,400 UJ < 1,500 UJ < 2,800 UJ < 2,000 UJ	< 960 U < 6,000 U < 1,200 U < 490 U < 3,100 U < 1,100 U < 920 U < 780 U < 32,000 U < 5,100 U < 5,100 U < 1,900 U < 1,100 U < 1,100 U < 650 U < 1,100 U < 1,600 U < 1,800 U < 1,900 U < 1,300 U < 1,300 U < 1,300 U < 1,300 U	< 5,800 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 760 U < 31,000 U < 4,900 U < 2,300 U < 1,900 U < 1,100 U < 630 U < 1,100 U < 670 U < 1,600 U < 1,700 U < 880 U < 1,300 U
tichlorodifluoromethane (Freon 12) thylbenzene thylene dibromide exachlorobutadiene sopropylbenzene (Cumene) n,p-Xylenes lethyl tert-butyl ether lethylene chloride aphthalene -Butylbenzene -Propylbenzene -Chlorotoluene (2-chlorotoluene) -Xylene ec-Butylbenzene tyrene ert-Butylbenzene etrachloroethene oluene rans-1,2-Dichloroethene rans-1,3-Dichloropropene	ug/kg	< 15,000 U < 950 R < 19,000 U < 7,900 U < 50,000 U < 18,000 U < 830 UJ  140 J < 520,000 U  1,900 J < 38,000 U < 31,000 U < 18,000 U < 18,000 U < 18,000 U < 18,000 U < 26,000 U < 16,000 U < 150 J < 28,000 U < 30,000 U < 15,000 U	< 1,000 U < 13,000 R < 1,300 U < 540 U < 3,400 U < 1,200 U < 1,000 U < 850 U < 35,000 U < 5,500 U < 2,600 U < 2,100 U < 1,200 U < 1,100 U < 1,100 U < 1,100 U < 1,900 U < 990 U	< 88 U < 1,100 R < 110 U < 45 U < 280 U < 100 U < 480 U < 71 U < 3,000 U  670 j < 220 U < 180 U < 100 U < 480 U < 100 U < 60 U < 100 U < 480 U < 171 U < 83 U < 92 U  1,100 < 160 U < 170 U < 83 U	< 8.7 U < 54 R < 47 U < 4.4 U < 28 U < 10 U  160 J+ < 7 U < 290 U < 46 U < 22 U < 18 U < 10 U < 47 U < 47 U < 10 U < 47 U < 9 U < 6.2 U < 16 U < 8.2 U	< 87 U < 540 U < 110 U < 45 U < 280 U < 100 U < 470 U < 70 U < 2,900 U < 460 U < 220 U < 180 U < 100 U < 59 U < 150 U < 90 U  110 j < 160 U < 82 U	< 930 U < 5,700 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 750 U < 31,000 U < 4,900 U < 2,300 U < 1,900 U < 1,100 U < 630 U < 1,100 U < 630 U < 1,600 U < 960 U 2,600 j < 1,800 U < 880 U	< 85 U < 530 U < 100 U < 43 U < 270 U < 98 U < 460 U < 69 U < 2,900 U < 450 U < 170 U < 170 U < 180 U < 57 U < 98 U < 150 U < 88 U < 61 U < 170 U < 170 U < 80 U	< 650 U < 130 U < 54 U < 340 U < 120 U < 560 U < 85 U < 3,500 U < 550 U < 260 U < 210 U < 120 U < 110 U < 120 U < 120 U < 120 U < 120 U < 190 U < 190 U < 190 U < 99 U	< 520 U < 42 U < 4 U < 25 U < 9 U  180 J+ < 6.3 U < 290 U < 41 U  24 j < 16 U < 9.2 U < 42 U < 9 U < 42 U < 8.1 U  59 < 14 U < 15 U < 7.3 U	< 980 U < 6,100 U < 1,200 U < 510 U < 3,200 U < 1,100 U < 940 U < 800 U < 33,000 U < 5,200 U < 2,500 U < 2,500 U < 2,500 U < 1,200 U < 1660 U < 1,100 U < 1,700 U < 1,800 U < 1,900 U < 930 U	< 1,400 UJ < 18,000 UJ < 1,700 UJ < 720 UJ < 4,600 UJ < 1,600 UJ < 1,400 UJ < 1,100 UJ < 48,000 UJ < 48,000 UJ < 7,500 UJ < 3,500 UJ < 2,900 UJ < 1,700 UJ < 950 UJ < 1,600 UJ < 2,400 UJ < 2,400 UJ < 2,600 UJ < 2,800 UJ < 1,300 UJ	< 960 U < 6,000 U < 1,200 U < 490 U < 3,100 U < 1,100 U < 920 U < 780 U < 32,000 U < 5,100 U < 2,400 U < 1,900 U < 1,100 U < 650 U < 1,100 U < 1,600 U < 1,800 U < 1,900 U < 1,900 U < 910 U	< 5,800 U < 1,100 U < 480 U < 3,000 U < 1,100 U < 890 U < 760 U < 31,000 U < 4,900 U < 2,300 U < 1,900 U < 1,100 U < 630 U < 1,100 U < 670 U < 1,700 U < 1,700 U < 880 U

< = Compound not detected. Method Detection Limit shown.</p>

 $VOCs = \dot{Volatile}$  organic compounds FD = Field Duplicate Sample

N = Normal Environmental Sample

ug/kg = micrograms per kilogram
SW8260D analyses performed by Eurofins - Seattle, WA.

Validation Level = EPA-STAGE2AValidated Qualifier Definition(s):

J- = The result is an estimated quantity, but the result may be biased low.

j = The result is an estimated quantity. The associated numerical value is the

approximate concentration of the analyte in the sample.

J+ = The result is an estimated quantity, but the result may be biased high. R = The data are unusable. The sample results are rejected due to serious deficiencies

in meeting QC criteria. The analyte may or may not be present in the sample.

UJ = The analyte was analyzed for, but was not detected. The reported limit is approximate and may be inaccurate or imprecise.

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Phase 1 Volatile Organic Compound Analytical Results In Situ Stabilization Preliminary Design Investigation Report Former Arkema, Inc. Facility Portland, Oregon

Location Locati Sample Date Sampl	07/19/2024	PDI-07 07/23/2024	PDI-07 07/23/2024	PDI-07 07/23/2024	PDI-07 07/23/2024	PDI-07 07/23/2024	PDI-07 07/24/2024	PDI-08 07/24/2024	PDI-08 07/24/2024	PDI-09 07/19/2024	PDI-09 07/19/2024	PDI-09 07/22/2024	PDI-10 07/30/2024
Sample Type Sampl		N	N	N	N	N	N	N	N	N	N	N	N
Depth Below Ground Surface Depth	52 ft	36.5 ft	38.3 ft	39.5 ft	41 ft	45.5 ft	52.7 ft	35.8 ft	38 ft	38.6 ft	39.5 ft	40.5 ft	21 ft
Analyte Unit													
VOCs SW8260D	4 1 100 11	. F.F.U	4.6.1.11	1.C.C.U	4 5 0 11	47111	1.0.0.11	440:	4 C 4 H	4 5 0 11	4 F 1 H	4.6.2.11	1.0.011
1,1,1,2-Tetrachloroethaneug/kg1,1,1-Trichloroethaneug/kg	< 1,100 U < 970 U	< 5.5 U	< 6.1 U	< 6.6 U	< 5.8 U < 5.3 U	< 7.1 U	< 6.6 U	140 j	< 6.4 U	< 5.8 U < 5.4 U	< 5.1 U < 4.7 U	< 6.3 U < 5.8 U	< 6.8 U
	< 1,600 U	<b>11 j</b> < 8.3 U	< 5.6 U < 9.2 U	< 6.1 U < 10 U	< 5.3 U	< 6.5 U < 11 U	< 6 U < 10 U	< 63 U < 100 U	< 5.9 U < 9.7 U	< 5.4 U	< 4.7 U	< 5.8 U	< 6.3 U < 10 U
	< 1,600 U	< 8.1 U	< 9 U	< 9.8 U	< 8.5 U	< 10 U	< 9.7 U	< 100 U	< 9.5 U	< 8.6 U	< 7.5 U	< 9.3 U	< 10 U
	< 1,900 U	< 10 U	< 11 U	< 12 U	< 11 U	< 13 U	< 12 U	< 130 U	< 12 U	< 11 U	< 9.3 U	< 12 U	< 13 U
1,1-Dichloroethaneug/kg1,1-Dichloroetheneug/kg	< 2,600 U	< 13 U	< 15 U	< 16 U	< 14 U	< 17 U	< 16 U	< 170 U	< 16 U	< 14 U	< 12 U	< 16 U	< 17 U
1,1-Dichloropropene ug/kg	< 1,100 U	< 5.8 U	< 6.4 U	< 7 U	< 6.1 U	< 7.5 U	< 7 U	< 72 U	< 6.8 U	< 6.2 U	< 5.4 U	< 6.7 U	< 7.2 U
1,2,3-Trichlorobenzene ug/kg	< 8,400 U	< 4,700 R	< 5,200 R	< 570 R	< 490 R	< 600 R	< 560 U	< 5,400 U	< 550 U	< 46 U	< 40 U	< 50 U	< 54 U
1,2,3-Trichloropropane ug/kg	< 2,400 U	< 13 U	< 14 U	< 15 U	< 13 U	< 16 U	< 15 U	< 160 U	< 15 U	< 13 U	< 12 U	< 15 U	< 16 U
1,2,4-Trichlorobenzene ug/kg	< 9,000 U	< 5,000 R	< 5,600 R	< 610 R	< 530 R	< 650 R	< 600 U	< 580 U	< 55 U	< 50 U	< 43 U	< 54 U	< 58 U
1,2,4-Trimethylbenzene ug/kg	< 2,800 U	< 15 U	< 16 U	< 18 U	< 16 U	< 19 U	< 18 U	< 180 U	< 17 U	< 16 U	< 14 U	< 17 U	< 18 U
1,2-Dibromo-3-chloropropane ug/kg	< 3,200 U	< 17 U	< 18 U	< 20 U	< 18 U	< 22 U	< 20 U	< 210 U	< 19 U	< 18 U	< 15 U	< 19 U	< 21 U
1,2-Dichlorobenzene ug/kg	< 1,800 U	760	57	16 j	75	23 j	< 11 U	1,100	14 j	< 10 U	< 8.8 U	< 11 U	< 12 U
1,2-Dichloroethane ug/kg	< 1,200 U	< 6 U	< 6.7 U	< 7.3 U	< 6.3 U	< 7.8 U	< 7.2 U	< 75 U	< 7 U	< 6.4 U	< 5.6 U	< 6.9 U	< 7.5 U
1,2-Dichloropropane ug/kg	< 1,400 U	< 7.2 U	< 8 U	< 8.8 U	< 7.6 U	< 9.3 U	< 8.7 U	< 90 U	< 8.4 U	< 7.7 U	< 6.7 U	< 8.3 U	< 9 U
1,3,5-Trimethylbenzene ug/kg	< 1,600 U	< 8.3 U	< 9.2 U	< 10 U	< 8.8 U	< 11 U	< 10 U	< 100 U	< 9.7 U	< 8.8 U	< 7.7 U	< 9.6 U	< 10 U
1,3-Dichlorobenzene ug/kg	< 2,800 U	76	< 16 U	< 18 U	250	< 19 U	< 17 U	< 180 U	< 17 U	< 15 U	< 14 U	< 17 U	< 18 U
1,3-Dichloropropane ug/kg	< 1,200 U	< 6.1 U	< 6.8 U	< 7.4 U	< 6.5 U	< 7.9 U	< 7.4 U	< 76 U	< 7.2 U	< 6.5 U	< 5.7 U	< 7.1 U	< 7.6 U
1,4-Dichlorobenzene ug/kg	< 2,300 U	2,700	130	52 j	240	74 j	< 14 U	2,100	< 14 U	< 13 U	23 j	< 14 U	< 15 U
2,2-Dichloropropane ug/kg	< 2,500 U	< 13 U	< 15 U	< 16 U	< 14 U	< 17 U	< 16 U	< 160 U	< 15 U	< 14 U	< 12 U	< 15 U	< 16 U
4-Chlorotoluene ug/kg	< 2,100 U	< 11 U	< 12 U	< 13 U	< 11 U	< 14 U	< 13 U	< 130 U	< 13 U	< 11 U	< 10 U	< 12 U	< 13 U
4-Isopropyltoluene ug/kg	< 2,100 U	43 j	< 12 U	< 14 U	< 12 U	< 14 U	< 13 U	< 140 U	< 13 U	< 12 U	33 j	< 13 U	< 14 U
Benzene ug/kg	< 800 U	5.9 j	< 4.6 U	< 5 U	< 4.4 U	< 5.4 U	6.2 j	< 52 U	< 4.9 U	< 4.4 U	< 20 U	< 4.8 U	< 5.2 U
Bromobenzene ug/kg	< 880 U	40 j	< 5.1 U	< 5.6 U	< 4.8 U	< 5.9 U	< 5.5 U	< 57 U	< 5.4 U	< 4.9 U	< 4.3 U	< 5.3 U	< 5.7 U
Bromodichloromethane ug/kg	< 1,200 U	< 6 U	< 6.7 U	< 7.3 U	< 6.3 U	< 7.8 U	< 7.2 U	< 75 U	< 7 U	< 6.4 U	< 5.6 U	< 6.9 U	< 7.5 U
Bromoform ug/kg	< 950 U	< 4.9 U	< 5.5 U	< 6 U	< 5.2 U	< 6.4 U	< 5.9 U	< 61 U	< 5.8 U	< 5.2 U	< 4.6 U	< 5.7 U	< 6.1 U
Bromomethane ug/kg	< 8,000 U	< 4,400 R	< 4,900 R	< 540 R	< 470 R	< 570 R	< 530 U	< 5,100 U	< 48 U	< 44 U	< 830 U	< 48 U	< 51 U
Carbon tetrachloride ug/kg	< 930 U	20 j	< 5.3 U	< 5.8 U	< 5.1 U	< 6.2 U	< 5.8 U	8,700	57	< 5.1 U	< 4.5 U	< 5.6 U	< 6 U
Chlorobenzene ug/kg	140,000	830,000 J	97,000 J	11,000 J	53,000 J	45,000 J	18,000	570,000	28,000	1,900	35,000	110	120
Chlorobromomethane ug/kg	< 1,300 U	< 6.8 U	< 7.5 U	< 8.2 U	< 7.2 U	< 8.8 U	< 8.2 U	< 84 U	< 7.9 U	< 7.2 U	< 6.3 U	< 7.8 U	< 8.4 U
Chloroethane ug/kg	< 4,400 U	< 23 U	< 25 U	< 28 U	< 24 U	< 30 U	< 27 U	< 280 U	< 27 U	< 24 U	< 21 U	< 26 U	< 28 U
Chloroform ug/kg	< 880 U	170	48	< 5.6 U	25	8.1 j	< 5.5 U	690	37	< 4.9 U	< 4.3 U	< 5.3 U	30
Chloromethane ug/kg	< 2,100 U	< 11 U	< 12 U	< 13 U	< 12 U	< 14 U	< 13 U	< 140 U	< 13 U	< 12 U	< 10 U	< 13 U	< 14 U
cis-1,2-Dichloroethene ug/kg	< 2,700 U	< 14 U	< 15 U	< 17 U	< 15 U	< 18 U	< 17 U	< 170 U	< 16 U	< 15 U	< 13 U	< 16 U	< 17 U
cis-1,3-Dichloropropene ug/kg	< 840 U	< 4.4 U	< 4.8 U	< 5.3 U	< 4.6 U < 5.7 U	< 5.7 U	< 5.3 U	< 54 U	< 5.1 U	< 4.7 U < 5.7 U	< 4.1 U	< 5 U	< 5.4 U
Dibromochloromethaneug/kgDibromomethaneug/kg	< 1,000 U	< 5.4 U	< 5.9 U < 9 U	< 6.5 U < 9.8 U	< 5.7 U	< 6.9 U < 10 U	< 6.4 U < 9.7 U	< 67 U < 100 U	< 6.3 U < 9.5 U	< 5.7 U	< 5 U < 7.5 U	< 6.2 U < 9.3 U	< 6.7 U
5, 5	< 1,600 U < 9,700 U	< 8.1 U < 50 U	< 56 U	< 9.8 U	< 53 U	< 65 U	< 60 U	< 620 U	< 59 U	< 53 U	< 7.5 U	< 58 U	< 10 U < 62 U
	< 1,900 U	< 1,100 R	26 j	20 j	23 j	26 j	26 j	< 120 U	< 12 U	23 j	24 j	20 j	29 j
Ethylbenzeneug/kgEthylene dibromideug/kg	< 800 U	< 4.2 U	< 4.6 U	< 5 U	< 4.4 U	< 5.4 U	< 5 U	< 52 U	< 4.9 U	< 4.4 U	< 3.9 U	< 4.8 U	< 5.2 U
Hexachlorobutadiene ug/kg	< 5,000 U	< 2,800 R	< 3,100 R	< 340 R	< 300 R	< 360 R	< 340 U	32,000	680	< 28 U	< 24 U	< 30 U	< 33 U
Isopropylbenzene (Cumene) ug/kg	< 1,800 U	< 9.4 U	< 10 U	< 11 U	< 9.9 U	< 12 U	< 11 U	< 120 U	< 11 U	< 10 U	< 8.7 U	< 11 U	< 12 U
m,p-Xylenes ug/kg	< 1,500 U	< 7.8 U	150	140	150	170	160	230 j	< 9.1 U	150	140	160	180
Methyl tert-butyl ether ug/kg	< 1,300 U	< 6.6 U	< 7.3 U	< 8 U	< 6.9 U	< 8.5 U	< 7.9 U	< 82 U	< 7.7 U	< 7 U	< 6.1 U	< 7.6 U	< 8.2 U
Methylene chloride ug/kg	< 53,000 U	< 270 U	< 300 U	< 330 U	< 290 U	< 350 U	< 330 U	< 3,400 U	< 320 U	< 290 U	< 250 U	< 320 U	< 35 U
Naphthalene ug/kg	< 8,200 U	< 4,600 R	< 5,100 R	< 560 R	< 490 R	< 590 R	< 550 U	< 530 U	< 190 U	< 46 U	510	< 49 U	< 53 U
n-Butylbenzene ug/kg	< 3,900 U	< 20 U	< 22 U	< 25 U	< 21 U	< 26 U	< 24 U	< 250 U	< 24 U	< 22 U	< 19 U	< 23 U	< 25 U
n-Propylbenzene ug/kg	< 3,200 U	< 16 U	< 18 U	< 20 U	< 17 U	< 21 U	< 20 U	< 200 U	< 19 U	< 17 U	< 15 U	< 19 U	< 20 U
o-Chlorotoluene (2-chlorotoluene) ug/kg	< 1,900 U	< 9.6 U	< 11 U	< 12 U	< 10 U	< 12 U	< 12 U	< 120 U	< 11 U	< 10 U	< 8.9 U	< 11 U	< 12 U
o-Xylene ug/kg	< 1,100 U	< 590 R	28 j	29 j	32 j	32 j	33 j	< 68 U	< 6.4 U	31 j	30 j	34 j	36 j
sec-Butylbenzene ug/kg	< 1,800 U	< 9.4 U	< 10 U	< 11 U	< 9.9 U	< 12 U	< 11 U	< 120 U	< 11 U	< 10 U	< 8.7 U	< 11 U	< 12 U
Styrene ug/kg	< 2,700 U	< 14 U	< 15 U	< 17 U	< 15 U	< 18 U	< 17 U	< 170 U	< 16 U	< 15 U	< 13 U	< 16 U	< 17 U
tert-Butylbenzene ug/kg	< 1,600 U	< 8.4 U	< 9.3 U	< 10 U	< 8.9 U	< 11 U	< 10 U	1,500	< 9.9 U	< 9 U	< 7.8 U	< 9.7 U	< 10 U
Tetrachloroethene ug/kg	< 1,100 U	< 620 R	32 j	< 7 U	98	13 j	< 7 U	150,000	3,600	< 6.2 U	15 j	< 6.7 U	32 j
Toluene ug/kg	< 2,800 U	19 J+	< 16 U	< 18 U	< 16 U	< 19 U	< 18 U	< 180 U	23 j	< 16 U	< 14 U	< 17 U	< 18 U
trans-1,2-Dichloroethene ug/kg	< 3,100 U	< 16 U	< 18 U	< 19 U	< 17 U	< 21 U	< 19 U	< 200 U	< 19 U	< 17 U	< 15 U	< 18 U	< 20 U
trans-1,3-Dichloropropene ug/kg	< 1,500 U	< 7.7 U	< 8.5 U	< 9.3 U	< 8.1 U	< 9.9 U	< 9.2 U	< 95 U	< 9 U	< 8.1 U	< 7.1 U	< 8.8 U	< 9.5 U
Trichloroethene ug/kg	< 2,200 U	< 11 U	< 12 U	< 14 U	< 12 U	< 15 U	< 14 U	410 j	90	< 12 U	< 10 U	< 13 U	< 14 U
Trichlorofluoromethane (Freon 11) ug/kg	< 5,500 U	< 28 U	< 32 U	< 34 U	< 30 U	< 37 U	< 34 U	< 350 U	< 33 U	< 30 U	< 26 U	< 33 U	< 35 U
Vinyl chloride ug/kg	< 3,900 U	< 20 U	< 23 U	< 25 U	< 22 U	< 26 U	< 25 U	< 250 U	< 24 U	< 22 U	< 19 U	< 24 U	< 25 U

< = Compound not detected. Method Detection Limit shown.</p>  $VOCs = \dot{Volatile}$  organic compounds

FD = Field Duplicate Sample

N = Normal Environmental Sample

ug/kg = micrograms per kilogram
SW8260D analyses performed by Eurofins - Seattle, WA.

Validation Level = EPA-STAGE2AValidated Qualifier Definition(s):

J- = The result is an estimated quantity, but the result may be biased low.

j = The result is an estimated quantity. The associated numerical value is the

approximate concentration of the analyte in the sample.

J+ = The result is an estimated quantity, but the result may be biased high.

R = The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

UJ = The analyte was analyzed for, but was not detected. The reported limit is approximate and may be inaccurate or imprecise.

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Phase 1 Volatile Organic Compound Analytical Results In Situ Stabilization Preliminary Design Investigation Report Former Arkema, Inc. Facility Portland, Oregon

	Location Locati Sample Date Sampl	PDI-10 07/30/2024	PDI-10 07/30/2024	PDI-11 08/05/2024	PDI-11 08/05/2024	PDI-11 08/05/2024	PDI-11 08/05/2024	PDI-12 08/06/2024	PDI-12 08/06/2024	PDI-13 07/31/2024	PDI-13 07/31/2024	PDI-13 07/31/2024	PDI-14 08/02/2024	PDI-14 08/02/2024
	Sample Date Sampl	07/30/2024 NI	07/30/2024	U8/U5/2U24	FD	U8/U5/2U24	08/05/2024 NI	08/06/2024	U8/U6/2U24	0//31/2024 NI	0//31/2024 NI	07/31/2024 NI	U8/U2/2U24	08/02/2024 N
Do	epth Below Ground Surface Depth	37 ft	55.5 ft	39.5 ft	39.5 ft	44.5 ft	49 ft	36 ft	47.8 ft	11.2 ft	28 ft	83.5 ft	33 ft	38.6 ft
alyte	Unit	3710	33.3 11	37.310	37.310	44.510	7710	30 10	47.010	11.210	2011	03.3 10	3310	30.011
Cs SW8260D	, , , , , ,													
,1,2-Tetrachloroethane	ug/kg	< 0.32 UJ	< 5.1 U	< 5.6 U	< 4.9 U	< 5.2 U	< 5.6 U	< 4.8 U	< 8.2 UJ	< 74 U	< 6 U	< 5.9 U	< 6.2 U	2,600
1,1-Trichloroethane	ug/kg	< 0.52 UJ	< 4.7 U	< 5.1 U	< 4.5 U	< 4.8 U	< 5.1 U	< 4.4 U	< 7.6 UJ	< 68 U	< 5.5 U	< 5.4 U	< 5.7 U	< 160 U
1,2,2-Tetrachloroethane	ug/kg	< 0.12 UJ	< 7.7 U	< 8.5 U	< 7.4 U	< 8 U	< 8.5 U	< 7.3 U	< 12 UJ	< 110 U	< 9.1 U	< 9 U	< 9.4 U	2,200
1,2-Trichloroethane	ug/kg	< 0.28 UJ	< 7.5 U	< 8.3 U	< 7.2 U	< 7.8 U	< 8.2 U	< 7.1 U	< 12 UJ	< 110 U	< 8.9 U	< 8.7 U	< 9.1 U	< 250 U
1-Dichloroethane	ug/kg	< 0.5 UJ	< 9.4 U	< 10 U	< 9 U	< 9.7 U	< 10 U	< 8.9 U	< 15 UJ	< 140 U	< 11 U	< 11 U	< 11 U	< 310 U
-Dichloroethene	ug/kg	< 1.1 UJ	< 13 U	< 14 U	< 12 U	< 13 U	< 14 U	< 12 U	< 20 UJ	< 180 U	< 15 U	< 15 U	< 15 U	< 420 U
L-Dichloropropene	ug/kg	< 0.58 UJ	< 5.4 U	< 5.9 UJ	< 5.2 UJ	< 5.6 UJ	< 5.9 UJ	< 5.1 UJ	< 8.7 UJ	< 78 U	< 6.4 U	< 6.3 U	< 6.5 UJ	< 180 UJ
2,3-Trichlorobenzene	ug/kg	< 0.32 UJ	< 40 U	< 44 UJ	< 39 UJ	< 42 UJ	< 44 UJ	< 38 UJ	< 65 UJ	< 580 UJ	< 48 U	< 47 U	< 99 U	< 1,400 UJ
,3-Trichloropropane	ug/kg	< 0.54 UJ	< 12 U	< 13 UJ	< 11 UJ	< 12 UJ	< 13 UJ	< 11 UJ	< 19 UJ	< 170 U	< 14 U	< 14 U	< 14 UJ	< 390 UJ
2,4-Trichlorobenzene	ug/kg	< 0.65 UJ	< 43 U	< 48 UJ	< 42 UJ	< 45 UJ	< 47 UJ	< 41 UJ	< 70 UJ	< 630 UJ	< 51 U	< 50 U	< 53 UJ	< 1,500 UJ
2,4-Trimethylbenzene	ug/kg	< 0.64 UJ	< 14 U	< 15 UJ	< 13 UJ	< 14 UJ	< 15 UJ	< 13 UJ	< 22 UJ	< 200 U	< 16 U	< 16 U	< 17 UJ	< 460 UJ
2-Dibromo-3-chloropropane	ug/kg	< 0.86 UJ	< 15 U	< 17 U	< 15 U	< 16 U	< 17 U	< 15 U	< 25 UJ	< 220 UJ	< 18 U	< 18 U	< 19 U	< 520 U
2-Dichlorobenzene	ug/kg	< 0.7 UJ	< 8.8 U	< 9.7 U	< 8.5 U	< 9.1 U	< 9.7 U	< 8.4 U	< 14 UJ	670	< 10 U	< 10 U	81	28,000
2-Dichloroethane	ug/kg	< 0.33 UJ	< 5.6 U	< 6.2 U	< 5.4 U	< 5.8 U	< 6.1 U	< 5.3 U	< 9 UJ	< 81 U	< 6.6 U	< 6.5 U	< 6.8 U	< 190 U
2-Dichloropropane	ug/kg	< 0.27 UJ	< 6.7 U	< 7.4 UJ	< 6.4 UJ	< 6.9 UJ	< 7.3 UJ	< 6.4 UJ	< 11 UJ	< 97 U	< 7.9 U	< 7.8 U	< 8.1 UJ	< 230 UJ
3,5-Trimethylbenzene	ug/kg	< 0.43 UJ	< 7.7 U	< 8.5 U	< 7.4 U	< 8 U	< 8.5 U	< 7.3 U	< 12 UJ	< 110 U	< 9.1 U	< 9 U	< 9.4 U	< 260 U
3-Dichlorobenzene	ug/kg	< 0.59 UJ	< 14 U	< 15 U	< 13 U	< 14 U	< 15 U	< 13 U	< 22 UJ	< 200 U	< 16 U	< 16 U	< 16 U	3,200
3-Dichloropropane	ug/kg	< 0.12 UJ < 0.52 UJ	< 5.7 U	< 6.3 UJ	< 5.5 UJ	< 5.9 UJ	< 6.2 UJ < 12 U	< 5.4 UJ < 10 U	< 9.2 UJ	< 82 U	< 6.7 U	< 6.6 U	< 6.9 UJ	< 190 UJ
4-Dichlorobenzene	ug/kg	< 0.52 UJ < 0.41 UJ	< 11 U < 12 U	< 12 U	< 11 U < 12 UJ	< 11 U	< 12 U	< 10 U	< 18 UJ < 20 UJ	4,000	15 j	< 13 U < 14 U	310	98,000
2-Dichloropropane	ug/kg			< 14 UJ	< 9.6 UJ	< 13 UJ < 10 UJ		< 9.4 UJ		< 180 U < 140 U	< 15 U	< 14 U	< 15 UJ < 12 UJ	< 410 UJ
-Chlorotoluene	ug/kg	< 0.54 UJ < 0.21 UJ	< 10 U < 10 U	< 11 UJ < 11 U	< 9.6 UJ < 10 U	< 10 UJ	< 11 UJ < 11 U	< 9.4 UJ < 9.8 U	< 16 UJ < 17 UJ	< 140 U	< 12 U < 12 U	< 12 U		370 J-
-Isopropyltoluene enzene	ug/kg	< 0.21 UJ	< 3.9 U	< 4.3 U	< 3.7 U	< 4 U	< 4.2 U	< 3.7 U	< 6.2 UJ	< 56 U	< 4.6 U	< 4.5 U	<b>20 j</b> < 4.7 U	<b>500 j</b> < 130 U
romobenzene	ug/kg	< 0.21 UJ	< 4.3 U	< 4.5 U	< 4.1 U	< 4.4 U	< 4.2 U	< 4 U	< 6.9 UJ	< 62 U	< 5.1 U	< 4.5 U	< 5.2 U	1,500
romodichloromethane	ug/kg	< 0.48 UJ	< 5.6 U	< 6.2 U	< 5.4 U	< 5.8 U	< 6.1 U	< 5.3 U	< 9 UJ	< 81 U	< 6.6 U	< 6.5 U	< 6.8 U	< 190 U
romoform	ug/kg ug/kg	< 0.45 UJ	< 4.6 U	< 5 UJ	< 4.4 UJ	< 4.7 UJ	< 5 UJ	< 4.3 UJ	< 7.4 UJ	< 66 U	< 5.4 U	< 5.3 U	< 5.6 UJ	< 150 UJ
romomethane	ug/kg	< 0.47 UJ	< 38 U	< 42 U	< 37 U	< 40 U	< 42 U	< 36 U	< 62 UJ	< 560 U	< 45 U	< 45 U	< 47 U	< 1,300 U
arbon tetrachloride	ug/kg	< 0.46 UJ	< 4.5 U	< 4.9 UJ	< 4.3 UJ	< 4.6 UJ	< 4.9 UJ	< 4.2 UJ	< 7.2 UJ	< 65 U	< 5.3 U	< 5.2 U	27 J-	49,000 J-
hlorobenzene	ug/kg	99 J	< 4.9 U	670	510	130	57	1,300 J-	< 7.9 UJ	1,300,000	9,200	97	46,000	820,000
nlorobromomethane	ug/kg	< 0.5 UJ	< 6.3 U	< 6.9 U	< 6 U	< 6.5 U	< 6.9 U	< 6 U	< 10 UJ	< 91 U	< 7.5 U	< 7.3 U	< 7.7 U	< 210 U
hloroethane	ug/kg	< 0.4 UJ	< 21 U	< 23 U	< 20 U	< 22 U	< 23 U	< 20 U	< 34 UJ	< 310 U	< 25 U	< 25 U	< 26 U	< 710 U
hloroform	ug/kg	< 0.69 UJ	< 4.3 U	< 4.7 U	< 4.1 U	< 4.4 U	< 4.7 U	< 4 U	< 6.9 UJ	< 62 U	< 5.1 U	< 5 U	190	15,000
hloromethane	ug/kg	< 0.5 UJ	< 10 U	< 11 UJ	< 9.9 UJ	< 11 UJ	< 11 UJ	< 9.7 UJ	< 17 UJ	< 150 UJ	< 12 U	< 12 U	< 12 UJ	< 340 UJ
s-1,2-Dichloroethene	ug/kg	1.6 J	< 13 U	< 14 U	< 12 U	< 13 U	< 14 U	< 12 U	< 21 UJ	< 190 U	< 15 U	< 15 U	18 j	< 430 U
s-1,3-Dichloropropene	ug/kg	< 0.11 UJ	< 4.1 U	< 4.5 UJ	< 3.9 UJ	< 4.2 UJ	< 4.5 UJ	< 3.9 UJ	< 6.6 UJ	< 59 U	< 4.8 U	< 4.7 U	< 4.9 UJ	< 140 UJ
ibromochloromethane	ug/kg	< 0.3 UJ	< 5 U	< 5.5 UJ	< 4.8 UJ	< 5.1 UJ	< 5.5 UJ	< 4.7 UJ	< 8 UJ	< 72 U	< 5.9 U	< 5.8 U	< 6 UJ	< 170 UJ
ibromomethane	ug/kg	< 0.22 UJ	< 7.5 U	< 8.3 U	< 7.2 U	< 7.8 U	< 8.2 U	< 7.1 U	< 12 UJ	< 110 U	< 8.9 U	< 8.7 U	< 9.1 U	< 250 U
richlorodifluoromethane (Freon 12)	ug/kg	< 0.71 UJ	< 47 U	< 51 U	< 45 U	< 48 U	< 51 U	< 44 U	< 75 UJ	< 680 U	< 55 U	< 54 U	< 57 U	< 1,600 U
thylbenzene	ug/kg	< 0.51 UJ	< 9.3 U	< 10 U	< 8.9 U	< 9.6 U	< 10 U	< 8.8 U	< 15 UJ	< 130 U	< 11 U	< 11 U	< 11 U	< 16,000 U
thylene dibromide	ug/kg	< 0.11 UJ	< 3.9 U	< 4.3 U	< 3.7 U	< 4 U	< 4.2 U	< 3.7 U	< 6.2 UJ	< 56 U	< 4.6 U	< 4.5 U	< 4.7 U	< 130 U
exachlorobutadiene	ug/kg	< 0.78 UJ	< 24 U	70 j	< 23 U	< 25 U	< 27 U	< 23 U	< 39 UJ	< 350 UJ	< 29 U	< 28 U	< 30 U	76,000
sopropylbenzene (Cumene)	ug/kg	< 0.57 UJ	< 8.7 U	< 9.6 UJ	< 8.4 UJ	< 9 UJ	< 9.6 UJ	< 8.3 UJ	< 14 UJ	< 130 U	< 10 U	< 10 U	< 11 UJ	< 290 UJ
,p-Xylenes	ug/kg	< 0.63 UJ	140	< 7.9 U	< 6.9 U	< 7.5 U	< 7.9 U	< 6.8 U	< 12 UJ	< 100 U	< 8.5 U	< 8.4 U	< 8.8 U	< 240 U
ethyl tert-butyl ether	ug/kg	< 0.16 UJ	< 6.1 U	< 6.7 U	< 5.9 U	< 6.3 U	< 6.7 U	< 5.8 U	< 9.9 UJ	< 88 U	< 7.2 U	< 7.1 U	< 7.4 U	< 200 U
ethylene chloride	ug/kg	< 5.3 UJ	< 26 U	< 280 U	< 240 U	< 260 U	< 280 U	< 240 U	120 J	1,400 j	< 31 U	< 31 U	< 310 U	< 8,500 U
aphthalene	ug/kg	< 0.96 UJ	< 40 U	< 44 UJ	< 38 UJ	< 41 UJ	< 44 UJ	< 38 UJ	< 64 UJ	< 580 U	< 47 U	< 46 U	97 J-	< 1,300 UJ
Butylbenzene	ug/kg	< 0.34 UJ	< 19 U	< 21 U	< 18 U	< 19 U	< 21 U	< 18 U	< 30 UJ	< 270 U	< 22 U	< 22 U	< 23 U	< 630 U
Propylbenzene	ug/kg	< 0.41 UJ	< 15 U	< 17 UJ	< 15 UJ	< 16 UJ	< 17 UJ	< 14 UJ	< 25 UJ	< 220 U	< 18 U	< 18 U	< 19 UJ	< 510 UJ
Chlorotoluene (2-chlorotoluene)	ug/kg	< 0.5 UJ	< 9 U	< 9.8 U	< 8.6 U	< 9.2 U	< 9.8 U	< 8.5 U	< 14 UJ	< 130 U	< 11 U	< 10 U	< 11 U	< 300 U
Xylene	ug/kg	< 0.49 UJ	30 j	< 5.6 U	< 4.9 U	< 5.2 U	< 5.6 U	< 4.8 U	< 8.2 UJ	< 74 U	< 6 U	< 5.9 U	< 6.2 U	< 8,500 U
c-Butylbenzene	ug/kg	< 0.36 UJ	< 8.7 U	< 9.6 U	< 8.4 U	< 9 U	< 9.6 U	< 8.3 U	< 14 UJ	< 130 U	< 10 U	< 10 U	< 11 U	< 290 U
yrene	ug/kg	< 0.4 UJ	< 13 U	< 14 UJ	< 12 UJ	< 13 UJ	< 14 UJ	< 12 UJ	< 21 UJ	< 190 U	< 15 U	< 15 U	< 16 UJ	< 430 UJ
t-Butylbenzene	ug/kg	< 0.35 UJ	< 7.8 U	< 8.6 UJ	< 7.5 UJ	< 8.1 UJ	< 8.6 UJ	< 7.4 UJ	< 13 UJ	< 110 U	< 9.3 U	< 9.1 U	< 9.5 UJ	< 260 UJ
trachloroethene	ug/kg	0.3 J	< 5.4 U	6.2 j	< 5.2 U	< 5.6 U	< 5.9 U	< 5.1 U	< 8.7 UJ	1,200	< 6.4 U	< 6.3 U	110	1,000,000
luene	ug/kg	< 0.7 UJ	< 14 U	< 15 U	< 13 U	< 14 U	< 15 U	< 13 U	< 22 UJ	< 200 U	< 16 U	< 16 U	< 17 U	4,200 J+
ans-1,2-Dichloroethene	ug/kg	< 0.78 UJ	< 15 U	< 16 U	< 14 U	< 15 U	< 16 U	< 14 U	< 24 UJ	< 220 U	< 18 U	< 17 U	< 18 U	< 500 U
ans-1,3-Dichloropropene	ug/kg	< 0.32 UJ	< 7.1 U	< 7.8 UJ	< 6.8 UJ	< 7.3 UJ	< 7.8 UJ	< 6.7 UJ	< 11 UJ	< 100 U	< 8.4 U	< 8.3 U	< 8.6 UJ	< 240 UJ
ichloroethene	ug/kg	< 0.16 UJ	< 10 U	< 12 UJ	< 10 UJ	< 11 UJ	< 11 UJ	< 9.9 UJ	< 17 UJ	< 150 U	< 12 U	< 12 U	< 13 UJ	2,800 J-
ichlorofluoromethane (Freon 11)	ug/kg	< 2.1 UJ	< 26 U	< 29 U	< 25 U	< 27 U	< 29 U	< 25 U	< 43 UJ	< 380 U	< 31 U	< 31 U	< 690 U	< 44,000 U
nyl chloride	ug/kg	< 0.47 UJ	< 19 U	< 21 UJ	< 18 UJ	< 20 UJ	< 21 UJ	< 18 UJ	< 31 UJ	< 280 U	< 22 U	< 22 U	< 23 UJ	< 640 UJ

< = Compound not detected. Method Detection Limit shown.</p>

 $VOCs = \dot{Volatile}$  organic compounds FD = Field Duplicate Sample

N = Normal Environmental Sample

ug/kg = micrograms per kilogram
SW8260D analyses performed by Eurofins - Seattle, WA.

Validation Level = EPA-STAGE2AValidated Qualifier Definition(s):

J- = The result is an estimated quantity, but the result may be biased low.

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approximate concentration of the analyte in the sample.

J+ = The result is an estimated quantity, but the result may be biased high. R = The data are unusable. The sample results are rejected due to serious deficiencies

in meeting QC criteria. The analyte may or may not be present in the sample.

UJ = The analyte was analyzed for, but was not detected. The reported limit is approximate and may be inaccurate or imprecise.

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Phase 1 Volatile Organic Compound Analytical Results In Situ Stabilization Preliminary Design Investigation Report Former Arkema, Inc. Facility Portland, Oregon

Location Sample Date	Sampl 08/02/2024	PDI-15 07/25/2024	PDI-15 07/25/2024	PDI-15 07/25/2024	PDI-15 07/25/2024	PDI-16 07/26/2024	PDI-17 07/29/2024						
Sample Type		N	N	N	N	N	N	N	N	FD	N	N	N
Depth Below Ground Surface		38 ft	38.5 ft	48 ft	53 ft	23 ft	37.7 ft	39.5 ft	44.6 ft	44.6 ft	46 ft	52.5 ft	33 ft
OCs SW8260D	Unit												
	ug/kg < 5.1 U	140,000	1,400	< 5.9 UJ	< 5.7 U	< 5 U	< 4.9 U	< 5.3 U	< 4.9 U	< 5.3 U	< 5.1 UJ	< 4.6 UJ	< 6.5 U
,1,1-Trichloroethane	ug/kg < 4.7 U	4.5	47 j	< 5.4 UJ	< 5.3 U	< 4.6 U	< 4.5 U	8.6 j	< 4.5 U	< 4.9 U	< 4.7 UJ	< 4.2 UJ	< 6 U
	ug/kg < 7.8 U	12	340	< 9 UJ	< 8.7 U	< 7.6 U	< 7.4 U	< 8.1 U	< 7.5 U	< 8.1 U	< 7.8 UJ	< 7 UJ	< 9.9 U
	ug/kg < 7.6 U	2.5	68	< 8.7 UJ	< 8.5 U	< 7.4 U	< 7.2 U	< 7.9 U	< 7.3 U	< 7.9 U	< 7.6 UJ	< 6.8 UJ	< 9.6 U
	ug/kg < 9.5 U	< 0.14 U	< 12 U	< 11 UJ	< 11 U	< 9.2 U	< 9 U	< 9.8 U	< 9 U	< 9.8 U	< 9.4 UJ	< 8.5 UJ	< 12 U
·	ug/kg < 13 U	< 0.19 U	26 j	< 14 UJ	< 14 U	< 12 U	< 12 U	< 13 U	< 12 U	< 13 U	< 13 UJ	< 11 UJ	< 16 U
,1-Dichloropropene	ug/kg < 5.5 UJ	< 0.082 U	< 7 U	< 6.2 UJ	< 6.1 U	< 5.3 U	< 5.2 U	< 5.6 U	< 5.2 U	< 5.6 U	< 5.4 UJ	< 4.9 UJ	< 6.9 U
	ug/kg < 41 UJ	< 61,000 U	< 5,600 U	< 500 UJ	< 490 U	< 80 U	< 39 U	< 42 U	< 39 U	< 42 U	< 41 UJ	< 37 UJ	< 51 U
	ug/kg < 12 UJ	6.4	< 15 U	< 14 UJ	< 13 U	< 12 U	< 11 U	< 12 U	< 11 U	< 12 U	< 12 UJ	< 11 UJ	< 15 U
	ug/kg < 44 UJ	< 66,000 U	< 56 U	< 50 UJ	< 49 U	< 43 U	< 42 U	< 45 U	< 42 U	< 45 U	< 44 UJ	< 39 UJ	< 55 U
,2,4-Trimethylbenzene	ug/kg < 14 UJ	< 0.21 U	< 18 U	< 16 UJ	< 15 U	< 14 U	< 13 U	< 14 U	< 13 U	< 14 U	< 14 UJ	< 12 UJ	< 18 U
,2-Dibromo-3-chloropropane	ug/kg < 16 U	< 0.23 U	< 20 U	< 18 UJ	< 17 U	< 15 U	< 15 U	< 16 U	< 15 U	< 16 U	< 16 UJ	< 14 UJ	< 20 U
	ug/kg <b>160</b>	6.8	140	18 J	12 j	< 8.7 U	16 j	890	< 8.5 U	9.7 j	25 J	8.5 J	150
	ug/kg < 5.7 U	< 0.085 U	< 7.2 U	< 6.5 UJ	< 6.3 U	< 5.5 U	< 5.4 U	< 5.9 U	< 5.4 U	< 5.9 U	< 5.6 UJ	< 5.1 UJ	< 7.1 U
	ug/kg < 6.8 UJ	0.5	9.4 j	< 7.8 UJ	< 7.5 U	< 6.6 U	< 6.5 U	< 7 U	< 6.5 U	< 7 U	< 6.8 UJ	< 6.1 UJ	< 8.6 U
	ug/kg < 7.8 U	< 0.12 U	13 j	< 9 UJ	< 8.7 U	< 7.6 U	< 7.4 U	< 8.1 U	< 7.5 U	< 8.1 U	< 7.8 UJ	< 7 UJ	< 9.9 U
	ug/kg < 14 U	< 0.2 U	< 17 U	< 16 UJ	< 15 U	< 13 U	< 13 U	14 j	< 13 U	< 14 U	< 14 UJ	< 12 UJ	< 17 U
1,3-Dichloropropane	ug/kg < 5.8 UJ	< 0.086 U	< 7.4 U	< 6.6 UJ	< 6.4 U	< 5.6 U	< 5.5 U	< 6 U	< 5.5 U	< 6 U	< 5.7 UJ	< 5.2 UJ	< 7.3 U
	ug/kg 540	11	230	56 J	< 12 U	< 11 U	48 j	1,400	27 j	28 j	37 J	18 J	370
	ug/kg < 12 UJ ug/kg < 10 UJ	< 0.19 U < 0.15 U	< 16 U < 13 U	< 14 UJ < 12 UJ	< 14 U < 11 U	< 12 U < 9.8 U	< 12 U < 9.6 U	< 13 U < 10 U	< 12 U < 9.6 U	< 13 U < 10 U	< 12 UJ < 10 UJ	< 11 UJ < 9.1 UJ	< 16 U < 13 U
		0.13 j	40 j	< 12 UJ	< 11 U	< 9.6 U	< 9.6 U	48	< 9.6 U	< 10 U	< 10 UJ	< 9.1 UJ	< 13 U
		0.23 j 0.15 j	8.6 j	< 4.5 UJ	< 4.3 U	< 3.8 U	< 20 U	< 21 U	< 20 U	< 4 U	< 21 UJ	< 18 UJ	< 26 U
Bromobenzene	ug/kg < 3.9 U ug/kg < 4.3 U	< 0.065 U	< 5.5 U	< 4.9 UJ	< 4.8 U	< 4.2 U	< 4.1 U	6.4 j	< 4.1 U	< 4.5 U	< 4.3 UJ	< 3.9 UJ	< 5.4 U
	ug/kg < 5.7 U	22	630	< 6.5 UJ	< 6.3 U	< 5.5 U	< 5.4 U	< 5.9 U	< 5.4 U	< 5.9 U	< 5.6 UJ	< 5.1 UJ	< 7.1 U
	ug/kg < 4.6 UJ	2.6	< 5.9 U	< 5.3 UJ	< 5.1 U	< 4.5 U	< 4.4 U	< 4.8 U	< 4.4 U	< 4.8 U	< 4.6 UJ	< 4.2 UJ	< 5.8 U
	ug/kg < 39 U	< 58,000 U	< 50 U	< 45 UJ	< 43 U	< 38 UJ	< 37 UJ	< 40 UJ	< 37 UJ	< 40 UJ	< 39 UJ	< 35 UJ	< 49 UJ
	ug/kg <b>130 J</b> -	13,000,000 J	31,000	< 56 UJ	44	< 20 U	< 4.3 U	< 4.7 U	< 4.3 U	< 4.7 U	< 4.5 UJ	< 18 UJ	13 j
	ug/kg <b>220,000</b>	7,100,000	240,000	48,000 J	33,000	< 40 U	6,400	130,000	40,000	40,000	33,000 J	15,000 J	25,000
Chlorobromomethane	ug/kg < 6.4 U	< 0.095 U	< 8.1 U	< 7.3 UJ	< 7.1 U	< 6.2 U	< 6.1 U	< 6.6 U	< 6.1 U	< 6.6 U	< 6.4 UJ	< 5.7 UJ	< 8 U
Chloroethane	ug/kg < 22 U	< 0.32 U	< 27 U	< 25 UJ	< 24 U	< 21 U	< 20 U	< 240 U	< 220 U	< 240 U	< 230 UJ	< 210 UJ	170
Chloroform	ug/kg <b>160</b>	550,000	43,000	< 53 UJ	41	< 20 U	39 J+	77 J+	< 4.1 U	< 4.5 U	< 21 UJ	< 18 UJ	19 j
Chloromethane	ug/kg < 10 UJ	< 0.16 U	< 13 U	< 12 UJ	< 12 U	< 10 U	< 9.9 U	< 11 U	< 9.9 U	< 11 U	< 10 UJ	< 9.3 UJ	< 13 U
cis-1,2-Dichloroethene	ug/kg < 13 U	< 0.19 U	< 17 U	< 15 UJ	< 14 U	< 13 U	< 12 U	< 13 U	< 12 U	< 13 U	< 13 UJ	< 12 UJ	< 16 U
cis-1,3-Dichloropropene	ug/kg < 4.1 UJ	< 0.062 U	< 5.3 U	< 4.7 UJ	< 4.6 U	< 4 U	< 3.9 U	< 4.3 U	< 3.9 U	< 4.3 U	< 4.1 UJ	< 3.7 UJ	< 5.2 U
Dibromochloromethane	ug/kg < 5 UJ	6.3	86	< 5.8 UJ	< 5.6 U	< 4.9 U	< 4.8 U	< 5.2 U	< 4.8 U	< 5.2 U	< 5 UJ	< 4.5 UJ	< 6.4 U
Dibromomethane (7 12)	ug/kg < 7.6 U	< 0.11 U	< 9.7 U	< 8.7 UJ	< 8.5 U	< 7.4 U	< 7.2 U	< 7.9 U	< 7.3 U	< 7.9 U	< 7.6 UJ	< 6.8 UJ	< 9.6 U
	ug/kg < 47 U	< 0.71 U	< 60 U	< 54 UJ	< 52 U	< 46 U	< 45 U	< 49 U	< 45 U	< 49 U	< 47 UJ	< 42 UJ	< 60 U
Ethylpenzene Ethylpen dibromide	ug/kg < 9.4 U	< 0.14 U	< 12 U	< 11 UJ	22 j	18 j	10 j	21 j	< 8.9 U	< 9.7 U	14 J	13 J	21 j
Ethylene dibromide Hexachlorobutadiene	ug/kg < 3.9 U ug/kg <b>1,100</b>	< 0.059 U	< 5 U	< 4.5 UJ < 28 UJ	< 4.3 U < 27 U	< 3.8 U < 100 U	< 3.7 U < 23 U	< 4 U < 25 U	< 3.7 U < 23 U	< 4 U < 25 U	< 3.9 UJ < 25 UJ	< 3.5 UJ < 22 UJ	< 4.9 U < 31 U
		<b>620,000</b> < 0.13 U	300 < 11 U	< 28 UJ < 10 UJ	< 9.8 U	< 100 U	< 2.3 U	< 25 U	< 8.4 U	< 9.1 U	< 25 UJ	< 7.9 UJ	< 31 U
	ug/kg < 8.9 UJ ug/kg < 7.3 U	< 0.13 U	150	< 8.4 UJ	140	110	68	140	< 7 U	< 7.6 U	92 J	91 J	140
Methyl tert-butyl ether	ug/kg < 6.2 U	< 0.11 U	< 7.9 U	< 7.1 UJ	< 6.9 U	< 6 U	< 5.9 U	< 6.4 U	< 5.9 U	< 6.4 U	< 6.2 UJ	< 5.5 UJ	< 7.8 U
	ug/kg < 260 U	< 3.9 U	< 330 U	< 290 U	< 290 U	< 26 U	< 25 U	< 28 U	< 25 U	< 28 U	< 27 UJ	< 24 UJ	< 34 U
	ug/kg <b>44 J</b> -	< 60,000 U	490	< 46 UJ	< 45 U	41 j	< 38 U	270	< 38 U	< 42 U	87 J	< 36 UJ	< 51 U
n-Butylbenzene	ug/kg < 19 U	< 0.28 U	< 24 U	< 22 UJ	< 21 U	< 19 U	< 18 U	< 20 U	< 18 U	< 20 U	< 19 UJ	< 17 UJ	< 24 U
	ug/kg < 15 UJ	< 0.23 U	< 20 U	< 18 UJ	< 17 U	< 15 U	< 15 U	< 16 U	< 15 U	< 16 U	< 15 UJ	< 14 UJ	< 19 U
	ug/kg < 9.1 U	< 0.14 U	< 12 U	< 10 UJ	< 10 U	< 8.8 U	< 8.6 U	< 9.4 U	< 8.6 U	< 9.4 U	< 9 UJ	< 8.1 UJ	< 11 U
o-Xylene	ug/kg < 5.1 U	0.27 j	33 j	< 5.9 UJ	28 j	25 j	14 j	29 j	< 4.9 U	< 5.3 U	21 J	20 J	32 j
	ug/kg < 8.9 U	< 0.13 U	< 11 U	< 10 UJ	< 9.8 U	< 8.6 U	< 8.4 U	< 9.2 U	< 8.4 U	< 9.1 U	< 8.8 UJ	< 7.9 UJ	< 11 U
Styrene	ug/kg < 13 UJ	< 0.2 U	< 17 U	< 15 UJ	< 15 U	< 13 U	< 12 U	< 14 U	< 12 U	< 14 U	< 13 UJ	< 12 UJ	< 16 U
ert-Butylbenzene	ug/kg < 7.9 UJ	< 0.12 U	1,700	< 9.1 UJ	< 8.8 U	< 7.7 U	< 7.5 U	< 8.2 U	< 7.5 U	< 8.2 U	< 7.9 UJ	< 7.1 UJ	< 10 U
Tetrachloroethene	ug/kg <b>5,800</b>	7,100,000	51,000	< 67 UJ	77	< 5.3 U	< 39 U	79 J+	< 5.2 U	< 5.6 U	< 41 UJ	< 37 UJ	13 j
Toluene	ug/kg < 14 U	4	45 j	< 16 UJ	< 15 U	< 14 U	< 13 U	15 j	< 13 U	< 14 U	< 14 UJ	< 12 UJ	< 18 U
rans-1,2-Dichloroethene	ug/kg < 15 U	< 0.22 U	< 19 U	< 17 UJ	< 17 U	< 15 U	< 14 U	< 16 U	< 14 U	< 16 U	< 15 UJ	< 13 UJ	< 19 U
rans-1,3-Dichloropropene	ug/kg < 7.2 UJ	< 0.11 U	< 9.2 U	< 8.2 UJ	< 8 U	< 7 U	< 6.8 U	< 7.5 U	< 6.9 U	< 7.4 U	< 7.2 UJ	< 6.5 UJ	< 9.1 U
e · 1 1 1 1 1 1 1	ug/kg <b>76 J</b> -	31	1,300	< 12 UJ	< 12 U	< 10 U	< 10 U	< 11 U	< 10 U	< 11 U	< 11 UJ	< 9.5 UJ	16 j
Frichloroethene								20.11	. 25.11	4 20 11	. 27.111	. 24 117	< 34 U
Frichlorofluoromethane (Freon 11)	ug/kg < 580 U ug/kg < 19 UJ	< 0.4 U < 0.29 U	< 34 U < 25 U	< 31 UJ < 22 UJ	< 30 U < 21 U	< 26 U < 19 U	< 25 U < 18 U	< 28 U < 20 U	< 25 U < 18 U	< 28 U < 20 U	< 27 UJ < 19 UJ	< 24 UJ < 17 UJ	< 24 U

< = Compound not detected. Method Detection Limit shown.</p>  $VOCs = \dot{Volatile}$  organic compounds

FD = Field Duplicate Sample

N = Normal Environmental Sample

ug/kg = micrograms per kilogram
SW8260D analyses performed by Eurofins - Seattle, WA.

Validation Level = EPA-STAGE2AValidated Qualifier Definition(s):

J- = The result is an estimated quantity, but the result may be biased low.

j = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

J+ = The result is an estimated quantity, but the result may be biased high.

R = The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

UJ = The analyte was analyzed for, but was not detected. The reported limit is approximate and may be inaccurate or imprecise.

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Phase 1 Volatile Organic Compound Analytical Results In Situ Stabilization Preliminary Design Investigation Report Former Arkema, Inc. Facility Portland, Oregon

Location Loca Sample Date Samp		PDI-17 07/29/2024	PDI-18 08/07/2024	PDI-18 08/07/2024	PDI-18 08/07/2024	PDI-19 08/01/2024	PDI-19 08/01/2024	PDI-19 08/01/2024	PDI-20 08/07/2024	PDI-20 08/08/2024	PDI-20 08/08/2024	PDI-20 08/08/2024	PDI-20 08/08/2024
Sample Type Samp	ol N	N	N	N	N	N	N	N	N	N	N	N	N
Depth Below Ground Surface Dept	h 39 ft	52.5 ft	38.7 ft	43.2 ft	48.5 ft	39 ft	42.4 ft	53.5 ft	9 ft	38.1 ft	43 ft	48.2 ft	49 ft
Analyte Unit													
VOCs SW8260D													
1,1,1,2-Tetrachloroethane ug/kg		< 9 U	< 600 U	< 6.8 U	< 5.8 UJ	< 8,800 U	< 63 U	< 6.5 U	< 7.4 UJ	< 5.9 U	< 6.2 U	< 6.5 U	< 6.7 UJ
1,1,1-Trichloroethane ug/kg	< 4.7 U	< 8.3 U	< 560 U	< 6.3 U	< 5.4 UJ	< 8,100 U	< 58 U	< 6 U	< 6.8 UJ	< 5.4 U	< 5.7 U	< 6 U	< 6.2 UJ
1,1,2,2-Tetrachloroethane ug/kg		< 14 U	< 920 U	< 10 U	< 8.9 UJ	< 13,000 U	< 96 U	< 9.9 U	< 11 UJ	< 8.9 U	< 9.4 U	< 9.9 U	< 10 UJ
1,1,2-Trichloroethane ug/kg		< 13 U	< 890 U	< 10 U	< 8.6 UJ	< 13,000 U	< 94 U	< 9.7 U	< 11 UJ	< 8.7 U	< 9.2 U	< 9.7 U	< 10 UJ
1,1-Dichloroethaneug/kg1,1-Dichloroetheneug/kg		< 17 U < 22 U	< 1,100 U	< 13 U < 17 U	< 11 UJ < 14 UJ	< 16,000 U < 22,000 U	< 120 U < 160 U	< 12 U < 16 U	< 14 UJ < 18 UJ	< 11 U < 14 U	< 11 U < 15 U	< 12 U < 16 U	< 12 UJ < 17 UJ
·		< 9.5 U	< 1,500 U < 640 U	< 7.2 U	< 6.2 UJ	< 22,000 U	< 67 U	< 6.9 U	< 7.9 UJ	< 6.2 U	< 6.6 U	< 6.9 U	< 7.1 UJ
		< 71 U	< 4,800 UJ	< 54 UJ	< 46 UJ	< 70,000 UJ	< 500 UJ	< 52 U	< 59 UJ	< 47 UJ	< 49 UJ	< 52 UJ	< 53 UJ
1,2,3-Trichlorobenzeneug/kg1,2,3-Trichloropropaneug/kg		< 21 U	< 1,400 U	< 16 U	< 13 UJ	< 20,000 U	< 150 U	< 15 U	< 17 UJ	< 14 U	< 14 U	< 15 U	< 15 UJ
1,2,4-Trichlorobenzene ug/kg		< 76 U	< 5,200 UJ	< 58 U	< 50 UJ	< 75,000 UJ	< 540 UJ	< 56 U	< 63 UJ	< 50 U	< 53 U	< 56 U	< 57 UJ
1,2,4-Trimethylbenzene ug/kg		< 24 U	< 1,600 U	< 18 U	< 16 UJ	< 24,000 U	< 170 U	< 18 U	2,800 J	< 16 U	< 17 U	< 18 U	< 18 UJ
1,2-Dibromo-3-chloropropane ug/kg		< 27 U	< 1,800 UJ	< 21 U	< 18 UJ	< 27,000 UJ	< 190 UJ	< 20 U	< 23 UJ	< 18 U	< 19 U	< 20 U	< 20 UJ
1,2-Dichlorobenzene ug/kg		< 16 U	8,000	< 12 U	< 10 UJ	43,000 j	3,300	97	< 13 UJ	< 10 U	< 11 U	< 11 U	< 12 UJ
1,2-Dichloroethane ug/kg		< 9.9 U	< 670 U	< 7.5 U	< 6.4 UJ	< 9,600 U	< 70 U	< 7.2 U	< 8.2 UJ	< 6.5 U	< 6.8 U	< 7.2 U	< 7.4 UJ
1,2-Dichloropropane ug/kg		< 12 U	< 800 U	< 9 U	< 7.7 UJ	< 12,000 U	< 84 U	< 8.6 U	< 9.8 UJ	< 7.8 U	< 8.2 U	< 8.6 U	< 8.9 UJ
1,3,5-Trimethylbenzene ug/kg		< 14 U	< 920 U	< 10 U	< 8.9 UJ	< 13,000 U	< 96 U	< 9.9 U	< 11 UJ	< 8.9 U	< 9.4 U	< 9.9 U	< 10 UJ
1,3-Dichlorobenzene ug/kg		< 24 U	< 1,600 U	< 18 U	< 16 UJ	< 23,000 U	470 j	< 17 U	< 20 UJ	< 16 U	< 16 U	< 17 U	< 18 UJ
1,3-Dichloropropane ug/kg	g < 5.7 U	< 10 U	< 680 U	< 7.6 U	< 6.5 UJ	< 9,800 U	< 71 U	< 7.3 U	< 8.3 UJ	< 6.6 U	< 6.9 U	< 7.3 U	< 7.5 UJ
1,4-Dichlorobenzene ug/kg	9 < 11 U	< 19 U	32,000	31 j	< 13 UJ	170,000	13,000	350	< 16 UJ	43 j	31 j	< 14 U	< 15 UJ
2,2-Dichloropropane ug/kg	g < 12 U	< 22 U	< 1,500 U	< 16 U	< 14 UJ	< 21,000 U	< 150 U	< 16 U	< 18 UJ	< 14 U	< 15 U	< 16 U	< 16 UJ
4-Chlorotoluene ug/kg		< 18 U	< 1,200 U	< 13 U	< 11 UJ	< 17,000 U	< 120 U	< 13 U	< 15 UJ	< 12 U	< 12 U	< 13 U	< 13 UJ
4-Isopropyltoluene ug/kg		< 18 U	< 1,200 U	< 14 U	< 12 UJ	< 18,000 U	250 j	< 13 U	770 J	< 12 U	< 13 U	< 13 U	< 14 UJ
Benzene ug/kg		< 36 U	< 460 U	< 5.2 U	< 4.4 UJ	< 6,700 U	< 48 U	< 5 U	< 5.6 UJ	< 4.5 U	< 4.7 U	< 5 U	< 5.1 UJ
Bromobenzene ug/kg		< 7.5 U	< 510 U	< 5.7 U	< 4.9 UJ	< 7,400 U	240 j	< 5.5 U	< 6.2 UJ	< 4.9 U	< 5.2 U	< 5.5 U	< 5.7 UJ
Bromodichloromethane ug/kg	< 5.6 U	< 9.9 U	< 670 U	< 7.5 U	< 6.4 UJ	< 9,600 U	< 70 U	< 7.2 U	< 8.2 UJ	< 6.5 U	< 6.8 U	< 7.2 U	< 7.4 UJ
Bromoform ug/kg		< 8.1 U	< 540 U	< 6.1 U	< 5.3 UJ	< 7,900 U	< 57 U	< 5.9 U	< 6.7 UJ	< 5.3 U	< 5.6 U	< 5.9 U	< 6.1 UJ
Bromomethane ug/kg	< 39 UJ	< 68 UJ	< 4,600 U	< 51 U	< 44 UJ	< 66,000 U	< 480 U	< 49 U	< 56 UJ	< 44 U	< 47 U	< 49 U	< 51 UJ
Carbon tetrachloride ug/kg	,	130	< 530 U	< 6 U	< 5.1 UJ	< 7,700 U	< 56 U	< 5.8 U	< 6.5 UJ	< 5.2 U <b>5,700</b>	< 5.4 U	< 5.8 U	< 5.9 UJ
Chlorobenzene ug/kg Chlorobromomethane ug/kg		17,000 < 11 U	<b>12,000,000</b> < 750 U	<b>13,000</b> < 8.4 U	<b>2,600 J</b> < 7.2 UJ	<b>41,000,000 J</b> < 11,000 U	<b>1,400,000</b> < 79 U	<b>80,000</b> < 8.1 U	140 J < 9.2 UJ	< 7.3 U	<b>12,000</b> < 7.7 U	<b>7,300</b> < 8.1 U	<b>16,000 J</b> < 8.4 UJ
Chlorobromomethaneug/kgChloroethaneug/kg		< 400 U	< 2,500 U	< 28 U	< 24 UJ	< 37,000 U	< 270 U	< 27 U	< 31 UJ	< 25 U	< 26 U	< 27 U	< 28 UJ
Chloroform ug/kg		59	2,100 j	< 5.7 U	< 4.9 UJ	< 7,400 U	< 53 U	< 5.5 U	< 6.2 UJ	44	< 5.2 U	< 5.5 U	< 5.7 UJ
Chloromethane ug/kg		< 18 U	< 1,200 U	< 14 UJ	< 12 UJ	< 18,000 UJ	< 130 UJ	< 13 U	< 15 UJ	< 12 UJ	< 13 UJ	< 13 UJ	< 14 UJ
cis-1,2-Dichloroethene ug/kg		< 23 U	< 1,500 U	< 17 U	< 15 UJ	< 22,000 U	< 160 U	< 16 U	< 19 UJ	< 15 U	< 16 U	< 16 U	< 17 UJ
cis-1,3-Dichloropropene ug/kg		< 7.2 U	< 480 U	< 5.4 U	< 4.7 UJ	< 7,000 U	< 51 U	< 5.2 U	< 5.9 UJ	< 4.7 U	< 5 U	< 5.2 U	< 5.4 UJ
Dibromochloromethane ug/kg		< 8.8 U	< 590 U	< 6.7 U	< 5.7 UJ	< 8,600 U	< 62 U	< 6.4 U	< 7.3 UJ	< 5.8 U	< 6.1 U	< 6.4 U	< 6.6 UJ
Dibromomethane ug/kg		< 13 U	< 890 U	< 10 U	< 8.6 UJ	< 13,000 U	< 94 U	< 9.7 U	< 11 UJ	< 8.7 U	< 9.2 U	< 9.7 U	< 10 UJ
Dichlorodifluoromethane (Freon 12) ug/kg	< 47 U	< 82 U	< 5,600 U	< 62 UJ	< 54 UJ	< 80,000 U	< 580 U	< 60 U	< 68 UJ	< 54 UJ	< 57 UJ	< 60 UJ	< 62 UJ
Ethylbenzene ug/kg		39 j	< 1,100 U	< 12 U	< 11 UJ	< 16,000 U	< 120 U	< 12 U	73 J	< 11 U	< 11 U	< 12 U	< 12 UJ
Ethylene dibromide ug/kg	g < 3.9 U	< 6.8 U	< 460 U	< 5.2 U	< 4.4 UJ	< 6,700 U	< 48 U	< 5 U	< 5.6 UJ	< 4.5 U	< 4.7 U	< 5 U	< 5.1 UJ
Hexachlorobutadiene ug/kg	g < 24 U	< 43 U	< 2,900 U	< 33 UJ	< 28 UJ	< 42,000 UJ	< 300 UJ	< 31 U	< 35 UJ	< 28 UJ	< 30 UJ	< 31 UJ	< 32 UJ
Isopropylbenzene (Cumene) ug/kg	g < 8.8 U	< 15 U	< 1,000 U	< 12 U	< 10 UJ	< 15,000 U	< 110 U	< 11 U	300 J	< 10 U	< 11 U	< 11 U	< 12 UJ
m,p-Xylenes ug/kg	94	260	< 860 U	< 9.7 U	< 8.3 UJ	< 12,000 U	< 90 U	< 9.3 U	320 J	< 8.4 U	< 8.8 U	< 9.3 U	< 9.6 UJ
Methyl tert-butyl ether ug/kg		< 11 U	< 730 U	< 8.2 U	< 7 UJ	< 11,000 U	< 76 U	< 7.8 U	< 8.9 UJ	< 7.1 U	< 7.4 U	< 7.9 U	< 8.1 UJ
Methylene chloride ug/kg		< 47 U	< 30,000 U	90 j	80 J	< 46,000 U	< 330 U	< 34 U	1,100 J	100 j	84 j	87 j	99 J
Naphthalene ug/kg		< 70 U	< 4,700 UJ	< 53 U	< 46 UJ	< 69,000 U	< 500 U	< 51 U	720 J	< 46 U	< 48 U	< 51 U	< 53 UJ
n-Butylbenzene ug/kg		< 33 U	< 2,200 U	< 25 U	< 22 UJ	< 32,000 U	< 230 U	< 24 U	< 27 UJ	< 22 U	28 j	< 24 U	< 25 UJ
n-Propylbenzene ug/kg	< 15 U	< 27 U	< 1,800 U	< 20 U	< 18 UJ	< 26,000 U	< 190 U	< 20 U	< 240 UJ	< 18 U	< 19 U	< 20 U	< 20 UJ
o-Chlorotoluene (2-chlorotoluene) ug/kg		< 16 U	< 1,100 U < 600 U	< 12 U < 6.8 U	< 10 UJ < 5.8 UJ	< 15,000 U < 8,800 U	< 110 U < 63 U	< 12 U < 6.5 U	< 13 UJ	< 10 U < 5.9 U	< 11 U < 6.2 U	< 12 U < 6.5 U	< 12 UJ < 6.7 UJ
o-Xylene ug/kg sec-Butylbenzene ug/kg	<b>19 j</b> g < 8.8 U	<b>57 j</b> < 15 U	< 1,000 U	< 6.8 U	< 5.8 UJ < 10 UJ	< 8,800 U	< 110 U	< 5.5 U	140 J 850 J	< 5.9 U	< 5.2 U	< 6.5 U	< 6.7 UJ
sec-Butylbenzene ug/kg Styrene ug/kg		< 23 U	< 1,500 U	< 17 U	< 15 UJ	< 22,000 U	< 160 U	< 17 U	< 19 UJ	< 15 U	< 16 U	< 17 U	< 17 UJ
tert-Butylbenzene ug/kg		< 14 U	< 930 U	< 10 U	< 9 UJ	< 13,000 U	< 98 U	< 10 U	< 11 UJ	< 9.1 U	< 9.5 U	< 10 U	< 10 UJ
Tetrachloroethene ug/kg		15 j	31,000	97	< 6.2 UJ	39,000 j	3,700	46 j	< 7.9 UJ	< 6.2 U	< 6.6 U	< 6.9 U	< 7.1 UJ
Toluene ug/kg		< 24 U	< 1,600 U	< 18 U	< 16 UJ	< 24,000 U	< 170 U	< 18 U	82 J	< 16 U	< 17 U	< 18 U	< 18 UJ
trans-1,2-Dichloroethene ug/kg		< 26 U	< 1,800 U	< 20 U	< 17 UJ	< 26,000 U	< 190 U	< 19 U	< 22 UJ	< 17 U	< 18 U	< 19 U	< 20 UJ
trans-1,3-Dichloropropene ug/kg		< 13 U	< 850 U	< 9.5 U	< 8.2 UJ	< 12,000 U	< 89 U	< 9.2 U	< 10 UJ	< 8.2 U	< 8.7 U	< 9.2 U	< 9.4 UJ
Trichloroethene ug/kg		< 18 U	< 1,200 U	18 j	< 12 UJ	< 18,000 U	< 130 U	< 13 U	< 15 UJ	< 12 U	< 13 U	< 13 U	< 14 UJ
Trichlorofluoromethane (Freon 11) ug/kg		< 47 U	< 3,100 U	< 35 U	< 30 UJ	< 46,000 U	< 330 U	< 34 U	< 39 UJ	< 31 U	< 32 U	< 34 U	< 35 UJ
Vinyl chloride ug/kg		< 34 U	< 2,300 U	< 25 U	< 22 UJ	< 33,000 U	< 240 U	< 24 U	< 28 UJ	< 22 U	< 23 U	< 24 U	< 25 UJ
,			_,										

< = Compound not detected. Method Detection Limit shown.</p>

 $VOCs = \dot{Volatile}$  organic compounds FD = Field Duplicate Sample

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ug/kg = micrograms per kilogram
SW8260D analyses performed by Eurofins - Seattle, WA.

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R = The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

UJ = The analyte was analyzed for, but was not detected. The reported limit is approximate and may be inaccurate or imprecise.

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Phase 1 Volatile Organic Compound Analytical Results In Situ Stabilization Preliminary Design Investigation Report Former Arkema, Inc. Facility Portland, Oregon

Location Locati	PDI-20	PDI-20	PDI-21	PDI-21	PDI-21	PDI-21	PDI-21	PDI-22	PDI-22	PDI-22	PDI-23	PDI-23	PDI-23
Sample Date Sampl	08/08/2024	08/08/2024	08/08/2024	08/08/2024	08/08/2024	08/09/2024	08/09/2024	08/15/2024	08/15/2024	08/16/2024	08/19/2024	08/19/2024	08/20/2024
Sample Type Sampl	N	N F7.0.54	N 10.05	N 2(25	N	N FF ( FF	FD FF ( ft	N 42.54	N A/ O.St	N	N 42.55	N	N 44.5.64
Depth Below Ground Surface Depth Analyte Unit	52 ft	57.8 ft	19.8 ft	36.3 ft	39.5 ft	55.6 ft	55.6 ft	43 ft	46.2 ft	88.2 ft	43.5 ft	80 ft	41.5 ft
VOCs SW8260D													
1,1,1,2-Tetrachloroethane ug/kg	< 6.8 U	< 7.6 U	< 6.2 U	< 8.2 U	< 6.6 U	< 5.8 U	< 4.8 U	< 5.8 U	< 5.1 U	< 6.2 U	< 5.2 U	< 4.4 U	< 5.5 U
1,1,1-Trichloroethane ug/kg	< 6.2 U	< 7 U	< 5.7 U	< 7.5 U	< 6 U	< 5.4 U	< 4.4 U	< 5.3 U	< 4.7 U	< 5.7 U	< 4.8 U	< 4.1 U	< 5.1 U
1,1,2,2-Tetrachloroethane ug/kg	< 10 U	< 11 U	< 9.4 U	< 12 U	< 10 U	< 8.9 U	< 7.3 U	< 8.7 U	< 7.7 U	< 9.5 U	< 8 U	< 6.7 U	< 8.4 U
1,1,2-Trichloroethane ug/kg	< 10 U	< 11 U	< 9.2 U	< 12 U	< 9.7 U	< 8.7 U	< 7.1 U	< 8.5 U	< 7.5 U	< 9.2 U	< 7.8 U	< 6.6 U	< 8.2 U
1,1-Dichloroethane ug/kg	< 12 U	< 14 U	< 11 U	< 15 U	< 12 U	< 11 U	< 8.8 U	< 11 U	< 9.3 U	< 11 U	< 9.7 U	< 8.2 U	< 10 U
1,1-Dichloroethene ug/kg	< 17 U	< 19 U	< 15 U	< 20 U	< 16 U	< 14 U	< 12 U	< 14 U	< 12 U	< 15 U	< 13 U	< 11 U	< 14 U
1,1-Dichloropropene ug/kg	< 7.2 U	< 8 U	< 6.6 U	< 8.7 U	< 7 U	< 6.2 U	< 5.1 U	< 6.1 U	< 5.4 U	< 6.6 U	< 5.6 U	< 4.7 U	< 5.9 U
1,2,3-Trichlorobenzeneug/kg1,2,3-Trichloropropaneug/kg	< 54 UJ < 16 U	< 60 UJ < 17 U	< 49 UJ < 14 U	< 65 UJ < 19 U	< 52 UJ < 15 U	<b>140 J</b> < 13 U	< 38 UJ < 11 U	< 46 UJ < 13 U	< 40 UJ < 12 U	< 49 UJ < 14 U	< 42 UJ < 12 U	< 35 UJ < 10 U	< 44 UJ < 13 U
1,2,3-Trichloropropaneug/kg1,2,4-Trichlorobenzeneug/kg	< 58 U	< 64 U	< 53 U	< 70 U	< 56 U	< 50 UJ	< 41 UJ	< 49 UJ	< 43 UJ	< 53 UJ	< 45 UJ	< 38 UJ	< 510 UJ
1,2,4-Trimethylbenzene ug/kg	< 18 U	< 20 U	< 17 U	< 22 U	< 18 U	< 16 U	< 13 U	< 16 U	< 14 U	< 17 U	< 14 U	< 12 U	< 15 U
1,2-Dibromo-3-chloropropane ug/kg	< 21 U	< 23 U	< 19 U	< 25 U	< 20 U	< 18 UJ	< 15 UJ	< 17 UJ	< 15 UJ	< 19 UJ	< 16 UJ	< 13 UJ	< 17 UJ
1,2-Dichlorobenzene ug/kg	< 12 U	< 13 U	< 11 U	51 j	< 11 U	< 10 U	< 8.3 U	< 10 U	< 8.8 U	< 11 UJ	< 9.1 UJ	< 7.7 UJ	< 9.6 UJ
1,2-Dichloroethane ug/kg	< 7.4 U	< 8.3 U	< 6.8 U	9 j	< 7.2 U	< 6.4 U	< 5.3 U	< 6.3 U	< 5.6 U	< 6.8 U	< 5.8 U	< 4.9 U	< 6.1 U
1,2-Dichloropropane ug/kg	< 8.9 U	< 10 U	< 8.2 U	< 11 U	< 8.7 U	< 7.7 U	< 6.3 U	< 7.6 U	< 6.7 U	< 8.2 U	< 6.9 U	< 5.8 U	< 7.3 U
1,3,5-Trimethylbenzene ug/kg	< 10 U	< 11 U	< 9.4 U	< 12 U	< 10 U	< 8.9 U	< 7.3 U	< 8.7 U	< 7.7 U	< 9.5 U	< 8 U	< 6.7 U	< 8.4 U
1,3-Dichlorobenzene ug/kg	< 18 U	< 20 U	< 17 U	< 22 U	< 17 U	< 16 U	< 13 U	< 15 U	< 14 U	< 17 U	< 14 U	< 12 U	< 15 U
1,3-Dichloropropane ug/kg	< 7.6 U	< 8.5 U	< 7 U	< 9.1 U	< 7.4 U	< 6.5 U	< 5.3 U	< 6.4 U	< 5.7 U	< 7 U	< 5.9 U	< 5 U	< 6.2 U
1,4-Dichlorobenzeneug/kg2,2-Dichloropropaneug/kg	< 15 U < 16 U	< 16 U < 18 U	< 13 U < 15 U	<b>200</b> < 20 U	< 14 U < 16 U	< 13 U < 14 U	< 10 U < 12 U	< 12 U < 14 U	< 11 U < 12 U	< 13 UJ < 15 U	< 11 UJ < 13 U	< 9.6 UJ < 11 U	< 130 UJ < 13 U
	< 13 U	< 15 U	< 12 U	< 16 U	< 18 U	< 14 U	< 9.4 U	< 11 U	< 9.9 U	< 13 U	< 10 U	< 8.7 U	< 11 U
4-Chlorotolueneug/kg4-Isopropyltolueneug/kg	< 14 U	< 15 U	< 13 U	< 17 U	< 13 U	< 12 U	< 9.7 U	< 12 U	< 10 U	< 13 UJ	< 11 UJ	< 9 UJ	< 11 UJ
Benzene ug/kg	< 5.1 U	< 5.7 U	< 4.7 U	< 6.2 U	< 5 U	< 4.4 U	< 3.6 U	< 4.4 U	< 3.9 U	< 4.7 U	< 4 U	< 3.4 U	< 4.2 U
Bromobenzene ug/kg	< 5.7 U	< 6.4 U	< 5.2 U	< 6.9 U	< 5.5 U	< 4.9 U	< 4 U	< 4.8 U	< 4.3 U	< 5.2 U	< 4.4 U	< 3.7 U	< 4.6 U
Bromodichloromethane ug/kg	< 7.4 U	< 8.3 U	< 6.8 U	< 9 U	< 7.2 U	< 6.4 U	< 5.3 U	< 6.3 U	< 5.6 U	< 6.8 U	< 5.8 U	< 4.9 U	< 6.1 U
Bromoform ug/kg	< 6.1 U	< 6.8 U	< 5.6 U	< 7.4 U	< 5.9 U	< 5.3 U	< 4.3 U	< 5.2 U	< 4.6 U	< 5.6 U	< 4.7 U	< 4 U	< 5 U
Bromomethane ug/kg	< 51 U	< 57 U	< 47 U	< 62 U	< 50 U	< 44 U	< 36 U	< 43 U	< 38 U	< 47 U	< 40 U	< 34 U	< 42 U
Carbon tetrachloride ug/kg	< 6 U	< 6.7 U	< 5.5 U	< 7.2 U	< 5.8 U	< 5.1 U	< 4.2 U	< 5.1 U	< 4.5 U	< 5.5 U	< 4.6 U	< 3.9 U	< 4.9 U
Chlorobenzene ug/kg	17,000	13,000	95	18,000	8,900	17,000	14,000	220	880	< 6 U	1,900	< 4.3 U	13,000
Chlorobromomethaneug/kgChloroethaneug/kg	< 8.4 U < 28 U	< 9.4 U < 32 U	< 7.7 U < 26 U	< 10 U < 34 U	< 8.1 U < 27 U	< 7.3 U < 24 U	< 5.9 U < 20 U	< 7.1 U < 24 U	< 6.3 U < 21 U	< 7.7 U < 26 U	< 6.5 U < 22 U	< 5.5 U < 19 U	< 6.8 U < 23 U
Chloroethaneug/kgChloroformug/kg	< 5.7 U	< 6.4 U	< 5.2 U	96	< 5.5 U	< 4.9 U	< 4 U	< 4.8 U	8.7 j	< 5.2 U	< 4.4 U	< 3.7 U	< 4.6 U
Chloromethane ug/kg	< 14 UJ	< 15 UJ	< 13 UJ	< 16 UJ	< 13 UJ	< 12 U	< 9.6 U	< 12 U	< 10 U	< 13 UJ	< 11 UJ	< 9 UJ	< 11 UJ
cis-1,2-Dichloroethene ug/kg	< 17 U	< 19 U	< 16 U	< 21 U	< 17 U	< 15 U	< 12 U	< 14 U	< 13 U	< 16 U	< 13 U	< 11 U	< 14 U
cis-1,3-Dichloropropene ug/kg	< 5.4 U	< 6 U	< 5 U	< 6.5 U	< 5.3 U	< 4.7 U	< 3.8 U	< 4.6 U	< 4.1 U	< 5 UJ	< 4.2 UJ	< 3.5 UJ	< 48 UJ
Dibromochloromethane ug/kg	< 6.6 U	< 7.4 U	< 6.1 U	< 8 U	< 6.4 U	< 5.7 U	< 4.7 U	< 5.6 U	< 5 U	< 6.1 U	< 5.1 U	< 4.3 U	< 5.4 U
Dibromomethane ug/kg	< 10 U	< 11 U	< 9.2 U	< 12 U	< 9.7 U	< 8.7 U	< 7.1 U	< 8.5 U	< 7.5 U	< 9.2 U	< 7.8 U	< 6.6 U	< 8.2 U
Dichlorodifluoromethane (Freon 12) ug/kg	< 62 UJ	< 69 UJ	< 57 UJ	< 75 UJ	< 60 UJ	< 54 U	< 44 U	< 53 U	< 47 U	< 57 UJ	< 48 UJ	< 41 UJ	< 51 UJ
Ethylbenzene ug/kg	< 12 U	< 14 U	< 11 U	< 15 U	< 12 U	< 11 U	< 8.7 U	< 10 U	< 9.2 U	< 11 U	< 9.5 U	< 8.1 U	< 10 U
Ethylene dibromide ug/kg Hexachlorobutadiene ug/kg	< 5.1 U < 32 UJ	< 5.7 U	< 4.7 U	< 6.2 U < 39 UJ	< 5 U < 31 UJ	< 4.4 U	< 3.6 U < 23 U	< 4.4 U < 27 U	< 3.9 U < 24 U	< 4.7 U < 30 UJ	< 4 U < 25 UJ	< 3.4 U < 21 UJ	< 4.2 U
Hexachlorobutadieneug/kgIsopropylbenzene (Cumene)ug/kg	< 12 U	< 36 UJ < 13 U	< 30 UJ <b>42 j</b>	< 39 UJ < 14 U	< 31 UJ < 11 U	<b>30 j</b> < 10 U	< 23 U	< 27 U	< 24 U < 8.7 U	< 30 UJ < 11 U	< 25 UJ	< 7.6 U	< 280 UJ < 9.5 U
m,p-Xylenes ug/kg	< 9.6 U	< 11 U	< 8.8 U	< 12 U	< 9.3 U	< 8.3 U	< 6.8 U	< 8.2 U	< 7.2 U	< 8.8 U	< 7.4 U	< 6.3 U	< 7.8 U
Methyl tert-butyl ether ug/kg	< 8.1 U	< 9.1 U	< 7.5 U	< 9.8 U	< 7.9 U	< 7 U	< 5.7 U	< 6.9 U	< 6.1 U	< 7.5 U	< 6.3 U	< 5.3 U	< 6.6 U
Methylene chloride ug/kg	1,000 j	130 j	110 j	140 j	85 j	< 30 U	< 25 U	< 290 U	< 250 U	< 32 UJ	< 27 UJ	< 23 UJ	< 29 UJ
Naphthalene ug/kg	< 53 U	< 59 U	< 49 U	< 64 U	< 51 U	60 J+	< 37 U	< 45 UJ	< 40 UJ	< 49 UJ	< 41 UJ	< 35 UJ	< 43 UJ
n-Butylbenzene ug/kg	< 25 U	< 28 U	68	< 30 U	< 24 U	< 22 U	< 18 U	< 21 U	< 19 U	< 23 UJ	< 19 UJ	< 16 UJ	< 20 UJ
n-Propylbenzene ug/kg	< 20 U	< 23 U	67	< 25 U	< 20 U	< 18 U	< 14 U	< 17 U	< 15 U	< 19 U	< 16 U	< 13 U	< 17 U
o-Chlorotoluene (2-chlorotoluene) ug/kg	< 12 U	< 13 U	< 11 U	< 14 U	< 12 U	< 10 U	< 8.4 U	< 10 U	< 8.9 U	< 11 U	< 9.2 U	< 7.8 U	< 9.7 U
o-Xylene ug/kg sec-Butylbenzene ug/kg	< 6.8 U < 12 U	< 7.6 U < 13 U	< 6.2 U	< 8.2 U < 14 U	< 6.6 U < 11 U	< 5.8 U < 10 U	< 4.8 U < 8.2 U	< 5.8 U < 9.9 U	< 5.1 U < 8.7 U	< 6.2 U < 11 UJ	< 5.2 U < 9 UJ	< 4.4 U < 7.6 UJ	< 5.5 U < 9.5 UJ
sec-Butylbenzeneug/kgStyreneug/kg	< 12 U	< 13 U	< 16 U	< 21 U	< 11 U	< 10 U	< 8.2 U	< 9.9 U	< 8.7 U	< 16 U	< 13 U	< 7.6 UJ < 11 U	< 9.5 UJ < 14 U
tert-Butylbenzene ug/kg	< 10 U	< 12 U	< 9.6 U	< 13 U	< 10 U	< 9 U	< 7.4 U	< 8.9 U	< 7.8 U	< 9.6 U	< 8.1 U	< 6.8 U	< 8.5 U
Tetrachloroethene ug/kg	< 7.2 U	< 8 U	< 6.6 U	64 j	< 7 U	< 6.2 U	< 5.1 U	< 6.1 U	< 5.4 U	< 6.6 U	< 5.6 U	< 4.7 U	26 j
Toluene ug/kg	< 18 U	< 20 U	< 17 U	< 22 U	< 18 U	< 16 U	< 13 U	< 16 U	< 14 U	< 17 U	< 14 U	< 12 U	< 15 U
trans-1,2-Dichloroethene ug/kg	< 20 U	< 22 U	< 18 U	< 24 U	< 19 U	< 17 U	< 14 U	< 17 U	< 15 U	< 18 U	< 15 U	< 13 U	< 16 U
trans-1,3-Dichloropropene ug/kg	< 9.5 U	< 11 U	< 8.7 U	< 11 U	< 9.2 U	< 8.2 U	< 6.7 U	< 8.1 U	< 7.1 U	< 8.7 U	< 7.3 U	< 6.2 U	< 7.7 U
Trichloroethene ug/kg	< 14 U	< 16 U	< 13 U	< 17 U	< 14 U	< 12 U	< 9.8 U	< 12 U	< 10 U	< 13 U	< 11 U	< 9.1 U	< 11 U
Trichlorofluoromethane (Freon 11) ug/kg	< 35 U	< 39 U	< 32 U	< 42 U	< 34 U	< 30 U	< 25 U	< 30 U	< 26 U	< 32 U	< 27 U	< 23 U	< 29 U
Vinyl chloride ug/kg	< 25 U	< 28 U	< 23 U	< 31 U	< 25 U	< 22 U	< 18 U	< 22 U	< 19 U	< 23 UJ	< 20 UJ	< 17 UJ	< 21 UJ

< = Compound not detected. Method Detection Limit shown.</p>  $VOCs = \dot{Volatile}$  organic compounds

FD = Field Duplicate Sample

N = Normal Environmental Sample

ug/kg = micrograms per kilogram
SW8260D analyses performed by Eurofins - Seattle, WA.

Validation Level = EPA-STAGE2AValidated Qualifier Definition(s):

J- = The result is an estimated quantity, but the result may be biased low.

j = The result is an estimated quantity. The associated numerical value is the

approximate concentration of the analyte in the sample.

J+ = The result is an estimated quantity, but the result may be biased high.

R = The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

UJ = The analyte was analyzed for, but was not detected. The reported limit is

approximate and may be inaccurate or imprecise.

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Phase 1 Volatile Organic Compound Analytical Results In Situ Stabilization Preliminary Design Investigation Report Former Arkema, Inc. Facility Portland, Oregon

Location Locati Sample Date Sampl	PDI-24 08/09/2024	PDI-24 08/09/2024	PDI-24 08/09/2024	PDI-24 08/12/2024	PDI-24 08/12/2024	PDI-24 08/12/2024	PDI-25 08/13/2024	PDI-26 08/14/2024	PDI-26 08/14/2024	PDI-26 08/14/2024	PDI-27 08/27/2024	PDI-27 08/27/2024	PDI-27 08/27/2024
Sample Type Sampl	N	N	N	N	N	N	N	N	N	N =	N	N	N
Depth Below Ground Surface Depth	23.1 ft	35.5 ft	37.5 ft	43 ft	44 ft	72.5 ft	54.5 ft	37.5 ft	39 ft	53 ft	37.4 ft	41.5 ft	49.5 ft
Analyte Unit													
VOCs SW8260D 1,1,1,2-Tetrachloroethane ug/kg	< 7 U	< 8.6 UJ	< 6.5 U	< 6.5 U	< 5.9 U	< 5.9 U	< 5.6 U	< 6 U	< 7.2 U	< 5.9 U	< 6 U	< 4.8 U	< 4.4 U
1,1,1-Trichloroethane ug/kg	< 6.5 U	< 7.9 UJ	< 5.9 U	< 6 U	< 5.5 U	< 5.4 U	< 5.2 U	< 5.5 U	< 6.6 U	< 5.4 U	< 5.5 U	< 4.4 U	< 4 U
1,1,2,2-Tetrachloroethane ug/kg	< 11 U	< 13 UJ	< 9.8 U	< 9.9 U	< 9 U	< 8.9 U	< 8.5 U	< 9.2 U	< 11 U	< 8.9 U	< 9.1 U	< 7.3 U	< 6.6 U
1,1,2-Trichloroethane ug/kg	< 10 U	< 13 UJ	< 9.6 U	< 9.7 U	< 8.8 U	< 8.7 U	< 8.3 U	< 8.9 U	< 11 U	< 8.7 U	< 8.8 U	< 7.1 U	< 6.5 U
1,1-Dichloroethane ug/kg	< 13 U	< 16 UJ	< 12 U	< 12 U	< 11 U	< 11 U	< 10 U	< 11 U	< 13 U	< 11 U	< 11 U	< 8.8 U	< 8 U
1,1-Dichloroethene ug/kg	< 17 U	< 21 UJ	< 16 U	< 16 U	< 15 U	< 14 U	< 14 U	< 15 U	< 18 U	< 14 U	< 15 U	< 12 U	< 11 U
1,1-Dichloropropene ug/kg	< 7.5 U	< 9.1 UJ	< 6.8 U	< 6.9 U	< 6.3 U	< 6.2 U	< 6 U	< 6.4 U	< 7.6 U	< 6.2 U	< 6.3 U	< 5.1 U	< 4.6 U
1,2,3-Trichlorobenzene ug/kg	< 56 UJ	< 68 UJ	< 51 UJ	< 52 UJ	< 47 UJ	< 47 UJ	< 45 UJ	< 48 UJ	< 57 UJ	< 47 UJ	< 47 U	< 38 U	< 35 U
1,2,3-Trichloropropane ug/kg	< 16 U	< 20 UJ	< 15 U	< 15 U	< 14 U	< 14 U	< 13 U	< 14 U	< 17 U	< 14 U	< 14 U	< 11 U	< 10 U
1,2,4-Trichlorobenzene ug/kg	< 60 U	< 73 UJ	< 55 UJ	< 56 U	< 51 UJ	< 50 UJ	< 48 UJ	< 51 UJ	< 61 UJ	< 50 UJ	< 51 U	< 41 U	< 37 U
1,2,4-Trimethylbenzene ug/kg	< 19 U	< 23 UJ	< 17 U	< 18 U	< 16 U	< 16 U	< 15 U	< 16 U	< 19 U	< 16 U	< 16 U	< 13 U	< 12 U
1,2-Dibromo-3-chloropropaneug/kg1,2-Dichlorobenzeneug/kg	< 21 U < 12 U	< 26 UJ <b>270 J</b>	< 20 UJ < 11 U	< 20 U < 11 U	< 18 UJ < 10 U	< 18 UJ < 10 U	< 17 UJ < 9.8 U	< 18 UJ <b>390</b>	< 22 UJ	< 18 UJ < 10 U	< 18 U	< 15 U < 8.3 U	< 13 U < 7.6 U
	< 7.7 U	< 9.4 UJ	< 7.1 U	< 7.2 U	< 6.5 U	< 6.5 U	< 6.2 U	< 6.6 U	<b>25 j</b> < 7.9 U	< 6.5 U	<b>32 j</b> < 6.6 U	< 5.3 U	< 4.8 U
1,2-Dichloroethaneug/kg1,2-Dichloropropaneug/kg	< 9.3 U	< 11 UJ	< 8.5 U	< 8.6 U	< 7.8 U	< 7.8 U	< 7.4 U	< 8 U	< 9.5 U	< 7.8 U	< 7.9 U	< 6.3 U	< 5.8 U
1,3,5-Trimethylbenzene ug/kg	< 11 U	< 13 UJ	< 9.8 U	< 9.9 U	< 9 U	< 8.9 U	< 8.5 U	< 9.2 U	< 11 U	< 8.9 U	< 9.1 U	< 7.3 U	< 6.6 U
1,3-Dichlorobenzene ug/kg	< 19 U	< 23 UJ	< 17 U	< 17 U	< 16 U	< 16 U	< 15 U	18 j	110	< 16 U	< 16 U	< 13 U	< 12 U
1,3-Dichloropropane ug/kg	< 7.9 U	< 9.6 UJ	< 7.2 U	< 7.3 U	< 6.6 U	< 6.6 U	< 6.3 U	< 6.8 U	< 8.1 U	< 6.6 U	< 6.7 U	< 5.4 U	< 4.9 U
1,4-Dichlorobenzene ug/kg	15 j	660 J	16 j	< 14 U	< 13 U	< 13 U	17 j	1,200	100	26 j	110	43 j	< 9.4 U
2,2-Dichloropropane ug/kg	< 17 U	< 21 UJ	< 16 U	< 16 U	< 14 U	< 14 U	< 14 U	< 15 U	< 17 U	< 14 U	< 14 U	< 12 U	< 11 U
4-Chlorotoluene ug/kg	< 14 U	< 17 UJ	< 13 U	< 13 U	< 12 U	< 12 U	< 11 U	< 12 U	< 14 U	< 12 U	< 12 U	< 9.4 U	< 8.6 U
4-Isopropyltoluene ug/kg	< 14 U	39 J	< 13 U	< 13 U	< 12 U	< 12 U	< 11 U	< 12 U	< 15 U	< 12 U	< 12 U	< 9.8 U	< 8.9 U
Benzene ug/kg	< 5.4 U	< 6.5 UJ	< 4.9 U	6.8 j	< 4.5 U	< 4.5 U	< 4.3 U	< 4.6 U	< 5.5 U	< 4.5 U	< 4.5 U	< 3.6 U	< 3.3 U
Bromobenzene ug/kg	< 5.9 U < 7.7 U	< 7.2 UJ	< 5.4 U	< 5.5 U	< 5 U	< 4.9 U	< 4.7 U	< 5.1 U	< 6 U	< 4.9 U	< 5 U	< 4 U	< 3.7 U
Bromodichloromethane ug/kg Bromoform ug/kg	< 6.3 U	< 9.4 UJ < 7.7 UJ	< 7.1 U < 5.8 U	< 7.2 U < 5.9 U	< 6.5 U < 5.3 U	< 6.5 U < 5.3 U	< 6.2 U < 5.1 U	< 6.6 U < 5.4 U	< 7.9 U < 6.5 U	< 6.5 U < 5.3 U	< 6.6 U < 5.4 U	< 5.3 U < 4.3 U	< 4.8 U < 3.9 U
Bromoform ug/kg Bromomethane ug/kg	< 53 U	< 65 UJ	< 49 U	< 49 U	< 45 U	< 44 U	< 42 U	< 46 U	< 54 U	< 44 U	< 45 U	< 36 U	< 33 U
Carbon tetrachloride ug/kg	< 6.2 U	< 7.5 UJ	< 5.7 U	< 5.8 U	< 5.2 U	< 5.2 U	< 4.9 U	< 5.3 U	< 6.3 U	< 5.2 U	< 5.3 U	< 4.2 U	< 3.8 U
Chlorobenzene ug/kg	2,200	180,000 J	4,800	1,300	2,800	48	25,000	160,000	22,000	30,000	43,000	21,000	460
Chlorobromomethane ug/kg	< 8.7 U	< 11 UJ	< 8 U	< 8.1 U	< 7.4 U	< 7.3 U	< 7 U	< 7.5 U	< 8.9 U	< 7.3 U	< 7.4 U	< 5.9 U	< 5.4 U
Chloroethane ug/kg	< 29 U	< 36 UJ	< 27 U	< 27 U	< 25 U	< 25 U	< 23 U	< 25 U	< 30 U	< 25 U	< 25 U	< 20 U	< 18 U
Chloroform ug/kg	120	72 J	< 5.4 U	< 5.5 U	< 5 U	< 4.9 U	< 4.7 U	100	< 6 U	< 4.9 U	20 j	< 4 U	< 3.7 U
Chloromethane ug/kg	< 14 U	< 17 UJ	< 13 U	< 13 U	< 12 U	< 12 U	< 11 U	< 12 U	< 15 U	< 12 U	< 12 U	< 9.7 U	< 8.8 U
cis-1,2-Dichloroethene ug/kg	< 18 U	< 22 UJ	< 16 U	< 16 U	< 15 U	< 15 U	< 14 U	< 15 U	< 18 U	< 15 U	< 15 U	< 12 U	< 11 U
cis-1,3-Dichloropropene ug/kg	< 5.6 U	< 6.8 UJ	< 5.2 U	< 5.2 U	< 4.7 U	< 4.7 U	< 4.5 U	< 4.8 U	< 5.8 U	< 4.7 U	< 4.8 U	< 3.8 U	< 3.5 U
Dibromochloromethane ug/kg	< 6.9 U	< 8.4 UJ	< 6.3 U	< 6.4 U	< 5.8 U	< 5.8 U	< 5.5 U	< 5.9 U	< 7 U	< 5.8 U	< 5.9 U	< 4.7 U	< 4.3 U
Dibromomethane ug/kg Dichlorodifluoromethane (Freon 12) ug/kg	< 10 U < 65 U	< 13 UJ < 79 UJ	< 9.6 U < 59 U	< 9.7 U < 60 U	< 8.8 U < 54 U	< 8.7 U < 54 U	< 8.3 U < 52 U	< 8.9 U < 55 U	< 11 U < 66 U	< 8.7 U < 54 U	< 8.8 U < 55 U	< 7.1 U < 44 U	< 6.5 U < 40 U
Dichlorodifluoromethane (Freon 12) ug/kg Ethylbenzene ug/kg	< 13 U	< 16 UJ	< 12 U	< 12 U	< 11 U	< 11 U	< 10 U	< 11 U	< 13 U	< 11 U	< 11 U	< 8.7 U	< 8 U
Ethylene dibromide ug/kg	< 5.4 U	< 6.5 UJ	< 4.9 U	< 5 U	< 4.5 U	< 4.5 U	< 4.3 U	< 4.6 U	< 5.5 U	< 4.5 U	< 4.5 U	< 3.6 U	< 3.3 U
Hexachlorobutadiene ug/kg	71 j	< 41 UJ	< 31 U	< 31 U	< 28 U	< 28 U	< 27 U	< 29 U	< 34 U	< 28 U	< 120 U	< 23 U	< 21 U
Isopropylbenzene (Cumene) ug/kg	< 12 U	< 15 UJ	< 11 U	< 11 U	< 10 U	< 10 U	< 9.7 U	< 10 U	< 12 U	< 10 U	< 10 U	< 8.2 U	< 7.5 U
m,p-Xylenes ug/kg	< 10 U	< 12 UJ	< 9.2 U	< 9.3 U	< 8.4 U	< 8.4 U	< 8 U	< 8.6 U	< 10 U	< 8.4 U	< 8.5 U	< 6.8 U	< 6.2 U
Methyl tert-butyl ether ug/kg	< 8.4 U	< 10 UJ	< 7.7 U	< 7.9 U	< 7.1 U	< 7.1 U	< 6.7 U	< 7.2 U	< 8.6 U	< 7.1 U	< 7.2 U	< 5.7 U	< 5.2 U
Methylene chloride ug/kg	< 37 U	< 44 UJ	< 34 U	< 34 U	< 31 U	< 31 U	< 280 U	< 300 U	< 360 U	< 290 U	< 31 U	< 25 U	< 23 U
Naphthalene ug/kg	< 55 U	82 J	< 50 U	< 51 U	< 46 U	< 46 U	< 44 UJ	< 47 UJ	< 56 UJ	< 46 UJ	< 47 U	< 37 U	< 34 U
n-Butylbenzene ug/kg	< 26 U	< 32 UJ	< 24 U	< 24 U	< 22 U	< 22 U	< 21 U	< 22 U	< 27 U	< 22 U	< 22 U	< 18 U	< 16 U
n-Propylbenzene ug/kg	< 21 U	< 26 UJ	< 19 U	< 20 U	< 18 U < 10 U	< 18 U	< 17 U < 9.9 U	< 18 U	< 22 U	< 18 U	< 18 U	< 14 U	< 13 U
o-Chlorotoluene (2-chlorotoluene) ug/kg o-Xylene ug/kg	< 12 U < 7 U	< 15 UJ < 8.6 UJ	< 11 U < 6.5 U	< 12 U < 6.5 U	< 10 U	< 10 U < 5.9 U	< 9.9 U	< 11 U < 6 U	< 13 U < 7.2 U	< 10 U < 5.9 U	< 11 U < 6 U	< 8.4 U < 4.8 U	< 7.7 U < 4.4 U
o-Xylene	< 12 U	< 8.6 UJ < 15 UJ	< 0.5 U	< 0.5 U	< 5.9 U	< 5.9 U	< 5.6 U < 9.7 U	< 10 U	< 7.2 U	< 5.9 U	< 10 U	< 4.8 U	< 4.4 U
Styrene ug/kg	< 18 U	< 22 UJ	< 16 U	< 17 U	< 15 U	< 15 U	< 14 U	< 15 U	< 18 U	< 15 U	< 15 U	< 12 U	< 11 U
tert-Butylbenzene ug/kg	< 11 U	< 13 UJ	< 9.9 U	< 10 U	< 9.1 U	< 9.1 U	< 8.7 U	< 9.3 U	< 11 U	< 9.1 U	< 9.2 U	< 7.4 U	< 6.7 U
Tetrachloroethene ug/kg	400	300 J	< 6.8 U	< 6.9 U	< 6.3 U	< 6.2 U	< 6 U	250	< 7.6 U	< 6.2 U	33 j	< 5.1 U	< 4.6 U
Toluene ug/kg	< 19 U	< 23 UJ	< 17 U	< 18 U	< 16 U	< 16 U	< 15 U	< 16 U	< 19 U	< 16 U	< 16 U	< 13 U	< 12 U
trans-1,2-Dichloroethene ug/kg	< 21 U	< 25 UJ	< 19 U	< 19 U	< 17 U	< 17 U	< 16 U	< 18 U	< 21 U	< 17 U	< 17 U	< 14 U	< 13 U
trans-1,3-Dichloropropene ug/kg	< 9.9 U	< 12 UJ	< 9 U	< 9.2 U	< 8.3 U	< 8.2 U	< 7.9 U	< 8.4 U	< 10 U	< 8.2 U	< 8.4 U	< 6.7 U	< 6.1 U
Trichloroethene ug/kg	< 15 U	< 18 UJ	< 13 U	< 13 U	< 12 U	< 12 U	< 12 U	< 12 U	< 15 U	< 12 U	< 12 U	< 9.9 U	< 9 U
Trichlorofluoromethane (Freon 11) ug/kg	< 37 U	< 44 UJ	< 34 U	< 34 U	< 31 U	< 31 U	< 29 U	< 31 U	< 37 U	< 31 U	< 31 U	< 25 U	< 23 U
Vinyl chloride ug/kg	< 26 U	< 32 UJ	< 24 U	< 24 U	< 22 U	< 22 U	< 21 U	< 23 U	< 27 U	< 22 U	< 22 U	< 18 U	< 16 U

< = Compound not detected. Method Detection Limit shown.</p>  $VOCs = \dot{Volatile}$  organic compounds

FD = Field Duplicate Sample

N = Normal Environmental Sample

ug/kg = micrograms per kilogram
SW8260D analyses performed by Eurofins - Seattle, WA.

Validation Level = EPA-STAGE2A

Validated Qualifier Definition(s):

J- = The result is an estimated quantity, but the result may be biased low. j = The result is an estimated quantity. The associated numerical value is the

approximate concentration of the analyte in the sample.

J+ = The result is an estimated quantity, but the result may be biased high.

R = The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

UJ = The analyte was analyzed for, but was not detected. The reported limit is approximate and may be inaccurate or imprecise.

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Phase 1 Volatile Organic Compound Analytical Results In Situ Stabilization Preliminary Design Investigation Report Former Arkema, Inc. Facility Portland, Oregon

Location Loca Sample Date Samp		PDI-28 08/26/2024	PDI-29 08/23/2024	PDI-29 08/23/2024	PDI-29 08/23/2024	PDI-29 08/23/2024	PDI-29 08/23/2024	PDI-30 08/21/2024	PDI-30 08/21/2024	PDI-30 08/22/2024	PDI-30 08/22/2024	PDI-31 08/20/2024	PDI-31 08/20/2024
Sample Date   Sample Date   Sample Date   Sample Date   Sample Type   Sample Type   Sample Type   Sample Date   Sa		06/26/2024 N	06/23/2024 N	06/23/2024 N	06/23/2024 N	06/23/2024 N	06/23/2024 N	N	06/21/2024 N	06/22/2024 N	N	N	FD
Depth Below Ground Surface Dept		55.1 ft	35 ft	36.5 ft	39.5 ft	42 ft	51 ft	12.4 ft	39.5 ft	42 ft	48.6 ft	35.2 ft	35.2 ft
Analyte Unit		33.110	0011	30.311	07.5 It	7210	3110	12.710	37.310	72 10	40.011	00.2 It	03.2 It
/OCs SW8260D										'		,	
1,1,1,2-Tetrachloroethane ug/kg	< 5.3 U	< 6 U	< 5.6 U	< 7.1 U	< 670 U	< 5.6 U	< 0.79 U	< 4.9 U	< 6.3 U	< 5.5 U	< 5.9 U	< 5.3 U	< 5 U
1,1,1-Trichloroethane ug/kg		< 5.5 U	< 5.1 U	< 6.5 U	< 620 U	< 5.2 U	< 0.72 U	< 4.5 U	< 5.8 U	< 5 U	< 5.4 U	< 4.9 U	< 4.6 U
1,1,2,2-Tetrachloroethane ug/kg		< 9.1 U	< 8.5 U	< 11 U	< 1,000 U	< 8.6 U	< 1.2 U	< 7.4 U	< 9.6 U	< 8.3 U	< 8.9 U	< 8 U	< 7.6 U
1,1,2-Trichloroethane ug/kg	< 7.8 U	< 8.9 U	< 8.3 U	< 11 U	< 990 U	< 8.4 U	< 1.2 U	< 7.2 U	< 9.4 U	< 8.1 U	< 8.7 U	< 7.8 U	< 7.4 U
1,1-Dichloroethane ug/kg		< 11 U	< 10 U	< 13 U	< 1,200 U	< 10 U	< 1.4 U	< 9 U	< 12 U	< 10 U	< 11 U	< 9.7 U	< 9.2 U
1,1-Dichloroethene ug/kg		< 15 U	< 14 U	< 17 U	< 1,600 U	< 14 U	< 1.9 U	< 12 U	< 16 U	< 14 U	< 14 U	< 13 U	< 12 U
1,1-Dichloropropene ug/kg		< 6.3 U	< 5.9 U	< 7.5 U	< 710 U	< 6 U	< 0.83 U	< 5.2 U	< 6.7 U	< 5.8 U	< 6.2 U	< 5.6 U	< 5.3 U
1,2,3-Trichlorobenzene ug/kg		< 48 U	< 44 U	< 56 U	< 5,300 U	< 45 U	< 6.2 U	< 39 U	< 50 U	< 44 U	< 47 U	< 42 U	< 40 U
1,2,3-Trichloropropane ug/kg	< 12 U	< 14 U	< 13 U	< 16 U	< 1,500 U	< 13 U	< 1.8 U	< 11 U	< 15 U	< 13 U	< 14 U	< 12 U	< 11 U
1,2,4-Trichlorobenzene ug/kg		< 51 U	< 48 U	< 61 U	< 5,700 U	< 48 U < 15 U	< 6.7 U	< 42 U	< 54 U	< 47 U	< 50 U	< 45 U	< 42 U
1,2,4-Trimethylbenzene ug/kg 1,2-Dibromo-3-chloropropane ug/kg	< 14 U < 16 U	< 16 U < 18 U	< 15 U < 17 U	< 19 U < 22 U	< 1,800 U < 2,000 U	< 15 U	< 2.1 U < 2.4 U	< 13 U < 15 UJ	< 17 U < 19 UJ	< 15 U < 17 U	< 16 U < 18 U	< 14 U < 16 UJ	< 13 U < 15 UJ
1,2-Dibromo-3-chloropropaneug/kg1,2-Dichlorobenzeneug/kg		< 10 U	< 9.7 U	99	30,000	< 9.8 U	< 1.4 U	< 8.5 U	< 11 U	< 9.5 U	< 10 U	< 9.2 U	< 8.7 U
1,2-Dichloroethane ug/kg		< 6.6 U	< 6.2 U	< 7.8 U	< 740 U	< 6.2 U	< 0.87 U	< 5.4 U	< 7 U	< 6 U	< 6.5 U	< 5.8 U	< 5.5 U
1,2-Dichloropropane ug/kg		< 7.9 U	< 7.4 U	< 9.4 U	< 880 U	< 7.5 U	< 1 U	< 6.5 U	< 8.4 U	< 7.2 U	< 7.8 U	< 7 U	< 6.6 U
1,3,5-Trimethylbenzene ug/kg		< 9.1 U	< 8.5 U	< 11 U	< 1,000 U	< 8.6 U	< 1.2 U	< 7.4 U	< 9.6 U	< 8.3 U	< 8.9 U	< 8 U	< 7.6 U
1,3-Dichlorobenzene ug/kg		< 16 U	< 15 U	< 19 U	3,500 j	< 15 U	< 2.1 U	< 13 U	< 17 U	< 15 U	< 16 U	< 14 U	< 13 U
1,3-Dichloropropane ug/kg		< 6.7 U	< 6.3 U	< 8 U	< 750 U	< 6.3 U	< 0.88 U	< 5.5 U	< 7.1 U	< 6.1 U	< 6.6 U	< 5.9 U	< 5.6 U
1,4-Dichlorobenzene ug/kg		< 13 U	< 12 U	220	130,000	< 12 U	< 1.7 U	< 11 U	29 j	< 12 U	< 13 U	< 11 U	< 11 U
2,2-Dichloropropane ug/kg		< 14 U	< 14 U	< 17 U	< 1,600 U	< 14 U	< 1.9 U	< 12 U	< 15 U	< 13 U	< 14 U	< 13 U	< 12 U
4-Chlorotoluene ug/kg		< 12 U	< 11 U	< 14 U	< 1,300 U	< 11 U	< 1.5 U	< 9.6 U	< 12 U	< 11 U	< 12 U	< 10 U	< 9.8 U
4-Isopropyltoluene ug/kg		< 12 U	< 11 U	26 j	< 1,400 U	< 12 U	< 1.6 U	< 10 U	< 13 U	< 11 U	< 12 U	< 11 U	< 10 U
Benzene ug/kg	< 4 U	< 4.5 U	< 4.2 U	< 5.4 U	3,100	< 4.3 U	< 0.6 U	< 3.7 U	< 4.8 U	< 4.2 U	< 4.5 U	< 4 U	< 3.8 U
Bromobenzene ug/kg		< 5 U	< 4.7 U	< 6 U	1,900 j	< 4.7 U	< 0.66 U	< 4.1 U	< 5.3 U	< 4.6 U	< 4.9 U	< 4.4 U	< 4.2 U
Bromodichloromethane ug/kg		< 6.6 U	< 6.2 U	< 7.8 U	< 740 U	< 6.2 U	< 0.87 U	< 5.4 U	< 7 U	< 6 U	< 6.5 U	< 5.8 U	< 5.5 U
Bromoform ug/kg		< 5.4 U	< 5 U	< 6.4 U	< 600 U	< 5.1 U	< 0.71 U	< 4.4 U	< 5.7 U	< 4.9 U	< 5.3 U	< 4.8 U	< 4.5 U
Bromomethane ug/kg		< 45 U	< 42 U	< 54 U	< 51,000 U	< 43 U	< 5.9 U	< 37 U	< 48 U	< 41 U	< 44 U	< 40 U	< 38 U
Carbon tetrachloride ug/kg		< 5.3 U	< 4.9 U	< 6.3 U	970 j 150,000 J	< 5 U	< 0.69 U	< 4.3 U < 4.7 U	< 5.6 U	< 4.8 U 3,700	< 5.2 U	< 4.7 U	< 4.4 U
Chlorobenzene ug/kg Chlorobromomethane ug/kg	<b>3,100</b> < 6.5 U	<b>8,100</b> < 7.4 U	<b>1,900</b> < 6.9 U	130,000 J < 8.8 U	< 830 U	1,800 < 7 U	<b>620</b> < 0.98 U	< 6.1 U	<b>5,000</b> < 7.9 U	< 6.8 U	<b>36 j</b> < 7.3 U	<b>450</b> < 6.6 U	610 < 6.2 U
Chlorobromomethaneug/kgChloroethaneug/kg		< 25 U	< 23 U	< 30 U	< 28,000 U	< 24 U	< 3.3 U	< 20 U	< 27 U	< 23 U	< 25 U	< 22 U	< 21 U
Chloroform ug/kg		18 j	17 j	81	20,000	< 4.7 U	< 0.66 U	< 4.1 U	< 5.3 U	< 4.6 U	< 4.9 U	< 4.4 U	< 4.2 U
Chloromethane ug/kg		< 12 U	< 11 U	< 14 U	< 1,400 U	< 11 U	< 1.6 U	< 9.9 U	< 13 U	< 11 U	< 12 U	< 11 U	< 10 U
cis-1,2-Dichloroethene ug/kg		< 15 U	< 14 U	< 18 U	< 1,700 U	< 14 U	< 2 U	< 12 U	< 16 U	< 14 U	< 15 U	< 13 U	< 13 U
cis-1,3-Dichloropropene ug/kg		< 4.8 U	< 4.5 U	< 5.7 U	< 540 U	< 4.5 U	< 0.63 U	< 3.9 U	< 5.1 U	< 4.4 U	< 4.7 U	< 4.2 U	< 4 U
Dibromochloromethane ug/kg	< 5.2 U	< 5.9 U	< 5.5 U	< 7 U	< 660 U	< 5.5 U	< 0.77 U	< 4.8 U	< 6.2 U	< 5.4 U	< 5.8 U	< 5.2 U	< 4.9 U
Dibromomethane ug/kg	< 7.8 U	< 8.9 U	< 8.3 U	< 11 U	< 990 U	< 8.4 U	< 1.2 U	< 7.2 U	< 9.4 U	< 8.1 U	< 8.7 U	< 7.8 U	< 7.4 U
Dichlorodifluoromethane (Freon 12) ug/kg	< 48 U	< 55 U	< 51 U	< 65 U	< 6,200 U	< 52 U	< 7.2 U	< 45 U	< 58 U	< 50 U	< 54 U	< 49 U	< 46 U
Ethylbenzene ug/kg	< 9.6 U	< 11 U	< 10 U	< 13 U	< 1,200 U	< 10 U	< 1.4 U	< 8.9 U	< 12 U	< 10 U	< 11 U	< 9.6 U	< 9.1 U
Ethylene dibromide ug/kg	< 4 U	< 4.5 U	< 4.2 U	< 5.4 U	< 510 U	< 4.3 U	< 0.6 U	< 3.7 U	< 4.8 U	< 4.2 U	< 4.5 U	< 4 U	< 3.8 U
Hexachlorobutadiene ug/kg	< 25 U	< 29 U	< 27 U	< 34 U	< 3,200 UJ	< 27 U	< 3.8 U	< 23 U	< 30 U	< 26 U	< 28 U	< 25 U	< 24 U
Isopropylbenzene (Cumene) ug/kg	< 9.1 U	< 10 U	< 9.6 U	< 12 U	< 1,200 U	< 9.7 U	< 1.4 U	< 8.4 U	< 11 U	< 9.4 U	< 10 U	< 9.1 U	< 8.6 U
m,p-Xylenes ug/kg	< 7.5 U	< 8.5 U	< 7.9 U	< 10 U	< 950 U	< 8 U	< 1.1 U	< 7 U	< 9 U	< 7.8 U	< 8.3 U	< 7.5 U	< 7.1 U
Methyl tert-butyl ether ug/kg		< 7.2 U	< 6.7 U	< 8.5 U < 37 U	< 800 U	< 6.8 U	< 0.94 U	< 5.9 U	< 7.6 U	< 6.6 U	< 7.1 U	< 6.4 U < 28 U	< 6 U
Methylene chloride ug/kg Naphthalene ug/kg	< 27 U < 41 U	< 31 U < 47 U	< 29 U < 44 U	< 37 U 210	< 3,500 U < 5,200 U	< 29 U < 44 U	< 4.1 U < 6.2 U	< 25 U < 38 U	< 33 U < 50 U	< 29 U < 43 U	< 31 U < 46 U	< 28 U < 41 U	< 26 U < 39 U
Naphthalene ug/kg n-Butylbenzene ug/kg	< 20 U	< 22 U	< 44 U	< 26 U	< 3,200 U	< 44 U	< 0.2 U	< 18 U	< 23 U	< 43 U	< 40 U	< 41 U	< 18 U
n-Propylbenzene ug/kg		< 18 U	< 17 U	< 21 U	< 2,000 U	< 17 U	< 2.4 U	< 15 U	< 19 U	< 16 U	< 18 U	< 16 U	< 15 U
o-Chlorotoluene (2-chlorotoluene) ug/kg		< 11 U	< 9.8 U	< 13 U	< 1,200 U	< 9.9 U	< 1.4 U	< 8.6 U	< 11 U	< 9.7 U	< 10 U	< 9.3 U	< 8.8 U
o-Xylene ug/kg		< 6 U	< 5.6 U	< 7.1 U	< 670 U	< 5.6 U	< 0.79 U	< 4.9 U	< 6.3 U	< 5.5 U	< 5.9 U	< 5.3 U	< 5 U
sec-Butylbenzene ug/kg		< 10 U	< 9.6 U	< 12 U	< 1,200 U	< 9.7 U	< 1.4 U	< 8.4 U	< 11 U	< 9.4 U	< 10 U	< 9.1 U	< 8.6 U
Styrene ug/kg		< 15 U	< 14 U	< 18 U	< 1,700 U	< 14 U	< 2 U	< 12 U	< 16 U	< 14 U	< 15 U	< 13 U	< 13 U
tert-Butylbenzene ug/kg		< 9.2 U	< 8.6 U	< 11 U	< 1,000 U	< 8.7 U	< 1.2 U	< 7.5 U	< 9.8 U	< 8.5 U	< 9 U	< 8.1 U	< 7.7 U
Tetrachloroethene ug/kg		< 6.3 U	< 5.9 U	150	31,000 j	< 6 U	< 0.83 U	< 5.2 U	< 6.7 U	< 5.8 U	< 6.2 U	< 5.6 U	< 5.3 U
Toluene ug/kg	< 14 U	< 16 U	< 15 U	< 19 U	3,900 J+	< 15 U	< 2.1 U	< 13 U	< 17 U	< 15 U	< 16 U	< 14 U	< 13 U
trans-1,2-Dichloroethene ug/kg	< 15 U	< 17 U	< 16 U	< 21 U	< 2,000 U	< 16 U	< 2.3 U	< 14 U	< 19 U	< 16 U	< 17 U	< 15 U	< 15 U
trans-1,3-Dichloropropene ug/kg	< 7.4 U	< 8.4 U	< 7.8 U	< 9.9 U	< 940 U	< 7.9 U	< 1.1 U	< 6.9 U	< 8.9 U	< 7.7 U	< 8.2 U	< 7.4 U	< 7 U
Trichloroethene ug/kg	< 11 U	< 12 U	< 12 U	< 15 U	< 1,400 U	< 12 U	< 1.6 U	< 10 U	< 13 U	< 11 U	< 12 U	< 11 U	< 10 U
Trichlorofluoromethane (Freon 11) ug/kg	< 27 U	< 31 U	< 29 U	< 37 U	< 3,500 U	< 29 U	< 4.1 U	< 25 U	< 33 U	< 29 U	< 31 U	< 28 U	< 26 U
Vinyl chloride ug/kg	< 20 U	< 22 U	< 21 U	< 27 U	< 2,500 U	< 21 U	< 2.9 U	< 18 U	< 24 U	< 21 U	< 22 U	< 20 U	< 19 U

< = Compound not detected. Method Detection Limit shown.</p>  $VOCs = \dot{Volatile}$  organic compounds

FD = Field Duplicate Sample

N = Normal Environmental Sample

ug/kg = micrograms per kilogram
SW8260D analyses performed by Eurofins - Seattle, WA.

Validation Level = EPA-STAGE2AValidated Qualifier Definition(s):

J- = The result is an estimated quantity, but the result may be biased low.

j = The result is an estimated quantity. The associated numerical value is the

approximate concentration of the analyte in the sample.

J+ = The result is an estimated quantity, but the result may be biased high.

R = The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

UJ = The analyte was analyzed for, but was not detected. The reported limit is approximate and may be inaccurate or imprecise.

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Phase 1 Volatile Organic Compound Analytical Results
In Situ Stabilization Preliminary Design Investigation Report Former Arkema, Inc. Facility Portland, Oregon

	Location		PDI-31	PDI-31	PDI-32
	Sample Date		08/20/2024	08/21/2024	08/28/2024
	Sample Type		N	N	N
	Depth Below Ground Surface		42.5 ft	53.7 ft	29.6 ft
Analyte		Unit			
VOCs SW8260D		/1	- F O II	. E. a. u	
1,1,1,2-Tetrachloroethane		ug/kg	< 5.8 U	< 5.1 U	< 6.6 U
1,1,1-Trichloroethane		ug/kg	< 5.4 U	< 4.7 U	< 6.1 U
1,1,2,2-Tetrachloroethane		ug/kg	< 8.8 U	< 7.8 U	< 10 U
1,1,2-Trichloroethane		ug/kg	< 8.6 U	< 7.6 U	< 9.8 U
1,1-Dichloroethane		ug/kg	< 11 U	< 9.4 U	< 12 U
1,1-Dichloroethene		ug/kg	< 14 U	< 13 U	< 16 U
1,1-Dichloropropene		ug/kg	< 6.2 U	< 5.4 U	< 7 U
1,2,3-Trichlorobenzene		ug/kg	< 46 U	< 41 U	< 52 U
1,2,3-Trichloropropane		ug/kg	< 13 U	< 12 U	< 15 U
1,2,4-Trichlorobenzene		ug/kg	< 50 U	< 44 U	< 56 U
1,2,4-Trimethylbenzene		ug/kg	< 16 U	< 14 U	< 18 U
1,2-Dibromo-3-chloropropane		ug/kg	< 18 UJ	< 16 UJ	< 20 U
1,2-Dichlorobenzene		ug/kg	< 10 U	< 8.9 U	160
1,2-Dichloroethane		ug/kg	< 6.4 U	< 5.6 U	< 7.3 U
1,2-Dichloropropane		ug/kg	< 7.7 U	< 6.7 U	< 8.7 U
1,3,5-Trimethylbenzene		ug/kg	< 8.8 U	< 7.8 U	< 10 U
1,3-Dichlorobenzene		ug/kg	< 15 U	< 14 U	< 18 U
1,3-Dichloropropane		ug/kg	< 6.5 U	< 5.7 U	< 7.4 U
1,4-Dichlorobenzene		ug/kg	< 13 U	< 11 U	520
2,2-Dichloropropane		ug/kg	< 14 U	< 12 U	< 16 U
4-Chlorotoluene		ug/kg	< 11 U	< 10 U	< 13 U
4-Isopropyltoluene		ug/kg	< 12 U	< 10 U	< 13 U
Benzene		ug/kg	< 4.4 U	< 3.9 U	< 5 U
Bromobenzene		ug/kg	< 4.9 U	< 4.3 U	< 5.5 U
Bromodichloromethane		ug/kg	< 6.4 U	< 5.6 U	< 7.3 U
Bromoform		ug/kg	< 5.2 U	< 4.6 U	< 5.9 U
Bromomethane		ug/kg	< 44 U	< 39 U	< 50 U
Carbon tetrachloride		ug/kg	< 5.1 U	< 4.5 U	< 5.8 U
Chlorobenzene		ug/kg	54 J+	< 4.9 U	8,100
Chlorobromomethane		ug/kg	< 7.2 U	< 6.3 U	< 8.2 U
Chloroethane		ug/kg	< 24 U	< 21 U	< 28 U
Chloroform		ug/kg	< 4.9 U	< 4.3 U	< 5.5 U
Chloromethane		ug/kg	< 12 U	< 10 U	< 13 U
cis-1,2-Dichloroethene		ug/kg	< 15 U	< 13 U	< 17 U
cis-1,3-Dichloropropene		ug/kg	< 4.7 U	< 4.1 U	< 5.3 U
Dibromochloromethane		ug/kg	< 5.7 U	< 5 U	< 6.5 U
Dibromomethane		ug/kg	< 8.6 U	< 7.6 U	< 9.8 U
Dichlorodifluoromethane (Freon 12)		ug/kg	< 53 U	< 47 U	< 61 U
Ethylbenzene		ug/kg	< 11 U	< 9.3 U	< 12 U
Ethylene dibromide		ug/kg ug/kg	< 4.4 U	< 3.9 U	< 5 U
Hexachlorobutadiene		ug/kg	< 28 U	< 24 U	< 130 U
Isopropylbenzene (Cumene)		ug/kg ug/kg	< 10 U	< 8.8 U	< 11 U
m,p-Xylenes		ug/kg ug/kg	< 8.3 U	< 7.3 U	< 9.4 U
Methyl tert-butyl ether		ug/kg ug/kg	< 7 U	< 6.1 U	< 7.9 U
Methyl tert-butyl ether Methylene chloride		ug/kg ug/kg	< 7 U	< 6.1 U	< 7.9 U < 34 U
Naphthalene			< 30 U	< 40 U	< 52 U
n-Butylbenzene		ug/kg	< 45 U	< 40 U	< 52 U < 24 U
		ug/kg			
n-Propylbenzene		ug/kg	< 17 U < 10 U	< 15 U < 9 U	< 20 U < 12 U
o-Chlorotoluene (2-chlorotoluene)		ug/kg			
o-Xylene		ug/kg	< 5.8 U	< 5.1 U	< 6.6 U
sec-Butylbenzene		ug/kg	< 10 U	< 8.8 U	< 11 U
Styrene		ug/kg	< 15 U	< 13 U	< 17 U
ert-Butylbenzene		ug/kg	< 9 U	< 7.9 U	< 10 U
Tetrachloroethene		ug/kg	< 6.2 U	< 5.4 U	< 7 U
Toluene		ug/kg	< 16 U	< 14 U	< 18 U
trans-1,2-Dichloroethene		ug/kg	< 17 U	< 15 U	< 19 U
trans-1,3-Dichloropropene		ug/kg	< 8.1 U	< 7.2 U	< 9.2 U
Trichloroethene		ug/kg	< 12 U	< 11 U	< 14 U
Trichlorofluoromethane (Freon 11)		ug/kg	< 30 U	< 27 U	< 34 U
Vinyl chloride		ug/kg	< 22 U	< 19 U	< 25 U

< = Compound not detected. Method Detection Limit shown.</p> VOCs = Volatile organic compounds

FD = Field Duplicate Sample

N = Normal Environmental Sample

ug/kg = micrograms per kilogram SW8260D analyses performed by Eurofins - Seattle, WA. Validation Level = EPA-STAGE2A

Validated Qualifier Definition(s):

J- = The result is an estimated quantity, but the result may be biased low.

j = The result is an estimated quantity. The associated numerical value is the

approximate concentration of the analyte in the sample.

J+ = The result is an estimated quantity, but the result may be biased high. R = The data are unusable. The sample results are rejected due to serious deficiencies

in meeting QC criteria. The analyte may or may not be present in the sample.

UJ = The analyte was analyzed for, but was not detected. The reported limit is approximate and may be inaccurate or imprecise.

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Phase 1 Volatile Organic Compound Analytical Results In Situ Stabilization Preliminary Design Investigation Report Former Arkema, Inc. Facility Portland, Oregon

Location Loca Sample Date Samp		PDI-32 08/28/2024	PDI-32 08/28/2024	PDI-32 08/28/2024	PDI-32 08/28/2024	PDI-33 08/29/2024	PDI-33 08/29/2024	PDI-33 08/29/2024	PDI-33 08/29/2024	PDI-33 08/29/2024	PDI-33 08/29/2024	PDI-34 08/30/2024	PDI-34 08/30/2024
Sample Date   Sa		N	N	N	N	N	N	FD	N	N	N	N	NI
Depth Below Ground Surface Dept		38.3 ft	42.5 ft	57.5 ft	68 ft	29 ft	37.2 ft	37.2 ft	49 ft	56.5 ft	78 ft	34.5 ft	38.9 ft
Analyte Unit		33.3 11	72.010	37.310	0011	2710	37.210	37.210	4710	30.3 10	7511	04.0 It	56.7 K
VOCs SW8260D												,	
1,1,1,2-Tetrachloroethane ug/kg	< 6.7 U	< 4.3 U	< 4.4 U	< 5.3 U	< 4.7 U	< 5.5 U	< 5.1 U	< 4.6 U	< 4.5 U	< 5.1 U	< 4.1 U	< 6.5 U	< 5.7 U
1,1,1-Trichloroethane ug/kg		< 4 U	< 4 U	< 4.9 U	< 4.3 U	< 5.1 U	< 4.7 U	< 4.2 U	< 4.1 U	< 4.7 U	< 3.7 U	< 6 U	< 5.3 U
1,1,2,2-Tetrachloroethane ug/kg		< 6.5 U	< 6.6 U	< 8 U	< 7.1 U	< 8.4 U	< 7.7 U	< 6.9 U	< 6.8 U	< 7.7 U	< 6.2 U	< 9.9 U	< 8.7 U
1,1,2-Trichloroethane ug/kg	< 9.8 U	< 6.4 U	< 6.5 U	< 7.8 U	< 6.9 U	< 8.1 U	< 7.5 U	< 6.7 U	< 6.6 U	< 7.5 U	< 6 U	< 9.7 U	< 8.5 U
1,1-Dichloroethane ug/kg	< 12 U	< 7.9 U	< 8 U	< 9.7 U	< 8.6 U	< 10 U	< 9.3 U	< 8.4 U	< 8.2 U	< 9.3 U	< 7.5 U	< 12 U	< 11 U
1,1-Dichloroethene ug/kg		< 11 U	< 11 U	< 13 U	< 12 U	< 14 U	< 12 U	< 11 U	< 11 U	< 12 U	< 10 U	< 16 U	< 14 U
1,1-Dichloropropene ug/kg		< 4.6 U	< 4.6 U	< 5.6 U	< 5 U	< 5.8 U	< 5.4 U	< 4.8 U	< 4.7 U	< 5.4 U	< 4.3 U	< 6.9 U	< 6.1 U
1,2,3-Trichlorobenzene ug/kg		< 34 U	< 35 U	< 42 U	< 37 U	< 44 U	< 40 U	< 36 U	< 35 U	< 40 U	< 32 U	< 52 U	< 46 U
1,2,3-Trichloropropane ug/kg	< 15 U	23 j	< 10 U	< 12 U	< 11 U	< 13 U	< 12 U	< 10 U	< 10 U	< 12 U	< 9.3 U	< 15 U	< 13 U
1,2,4-Trichlorobenzene ug/kg		< 37 U	< 37 U	< 45 U	< 40 U	< 47 U < 15 U	< 43 U	< 39 U	< 38 U	< 43 U	< 35 U	< 56 U < 18 U	< 49 U
1,2,4-Trimethylbenzene ug/kg 1,2-Dibromo-3-chloropropane ug/kg	< 18 U < 20 U	< 12 U < 13 U	< 12 U < 13 U	< 14 U < 16 U	< 13 U < 14 U	< 15 U	< 14 U < 15 U	< 12 U < 14 U	< 12 U < 14 U	< 14 U < 15 U	< 11 U < 12 U	< 18 U	< 16 U < 17 U
		50	< 7.6 U	< 9.2 U	< 8.2 U	< 9.6 U	< 8.8 U	< 7.9 U	< 7.7 U	< 8.8 U	< 7.1 U	< 11 U	35 j
1,2-Dichlorobenzeneug/kg1,2-Dichloroethaneug/kg		< 4.7 U	< 4.8 U	< 5.8 U	< 5.2 U	< 6 U	< 5.6 U	< 5 U	< 4.9 U	< 5.6 U	< 4.5 U	< 7.2 U	< 6.3 U
1,2-Dichloropropane ug/kg		< 5.7 U	< 5.8 U	< 7 U	< 6.2 U	< 7.3 U	< 6.7 U	< 6 U	< 5.9 U	< 6.7 U	< 5.4 U	< 8.6 U	< 7.6 U
1,3,5-Trimethylbenzene ug/kg		< 6.5 U	< 6.6 U	< 8 U	< 7.1 U	< 8.4 U	< 7.7 U	< 6.9 U	< 6.8 U	< 7.7 U	< 6.2 U	< 9.9 U	< 8.7 U
1,3-Dichlorobenzene ug/kg		< 11 U	< 12 U	< 14 U	< 12 U	< 15 U	< 13 U	< 12 U	< 12 U	< 14 U	< 11 U	< 17 U	< 15 U
1,3-Dichloropropane ug/kg		< 4.8 U	< 4.9 U	< 5.9 U	< 5.3 U	< 6.2 U	< 5.7 U	< 5.1 U	< 5 U	< 5.7 U	< 4.5 U	< 7.3 U	< 6.4 U
1,4-Dichlorobenzene ug/kg		140	< 9.4 U	< 11 U	< 10 U	24 j	30 j	50 j	< 9.6 U	< 11 U	< 8.8 U	26 j	120
2,2-Dichloropropane ug/kg		< 10 U	< 11 U	< 13 U	< 11 U	< 13 U	< 12 U	< 11 U	< 11 U	< 12 U	< 9.8 U	< 16 U	< 14 U
4-Chlorotoluene ug/kg		< 8.4 U	< 8.6 U	< 10 U	< 9.2 U	< 11 U	< 9.9 U	< 8.9 U	< 8.7 U	< 10 U	< 8 U	< 13 U	< 11 U
4-Isopropyltoluene ug/kg	< 14 U	14 j	< 8.9 U	< 11 U	< 9.6 U	< 11 U	< 10 U	< 9.3 U	< 9.1 U	< 10 U	< 8.3 U	< 13 U	< 12 U
Benzene ug/kg	< 5.1 U	< 3.3 U	< 3.3 U	< 4 U	< 3.6 U	< 4.2 U	< 3.9 U	< 3.5 U	< 3.4 U	< 3.9 U	< 3.1 U	< 5 U	< 4.4 U
Bromobenzene ug/kg		< 3.6 U	< 3.7 U	< 4.4 U	< 3.9 U	< 4.6 U	< 4.3 U	< 3.8 U	< 3.7 U	< 4.3 U	< 3.4 U	< 5.5 U	< 4.8 U
Bromodichloromethane ug/kg		< 4.7 U	< 4.8 U	< 5.8 U	< 5.2 U	< 6 U	< 5.6 U	< 5 U	< 4.9 U	< 5.6 U	< 4.5 U	< 7.2 U	< 6.3 U
Bromoform ug/kg		< 3.9 U	< 3.9 U	< 4.8 U	< 4.2 U	< 4.9 U	< 4.6 U	< 4.1 U	< 4 U	< 4.6 U	< 3.7 U	< 5.9 U	< 5.2 U
Bromomethane ug/kg		< 32 U < 3.8 U	< 33 U < 3.8 U	< 40 U < 4.6 U	< 35 U < 4.1 U	< 42 U < 4.8 U	< 38 U < 4.5 U	< 34 U < 4 U	< 34 U < 3.9 U	< 38 U < 4.5 U	< 31 U < 3.6 U	< 49 U < 5.7 U	< 43 U < 5.1 U
Carbon tetrachloride ug/kg Chlorobenzene ug/kg		20,000	3,800	1,800	310	1,700	4,900 J	9,300 J	240 J	1,100	98	11,000	11,000
Chlorobenzene ug/kg Chlorobromomethane ug/kg		< 5.3 U	< 5.4 U	< 6.5 U	< 5.8 U	< 6.8 U	< 6.3 U	< 5.6 U	< 5.5 U	< 6.3 U	< 5 U	< 8.1 U	< 7.1 U
Chloroethane ug/kg		< 190 U	< 18 U	< 22 U	< 20 U	< 23 U	< 21 U	< 19 U	< 19 U	< 21 U	< 17 U	< 27 U	< 24 U
Chloroform ug/kg		17	< 3.7 U	< 4.4 U	< 3.9 U	< 4.6 U	< 4.3 U	< 3.8 U	< 3.7 U	< 4.3 U	< 3.4 U	19 j	< 4.8 U
Chloromethane ug/kg		< 8.7 U	< 8.8 U	< 11 U	< 9.5 U	< 11 U	< 10 U	< 9.2 U	< 9 U	< 10 U	< 8.2 U	< 13 U	< 12 U
cis-1,2-Dichloroethene ug/kg		< 11 U	< 11 U	< 13 U	< 12 U	< 14 U	< 13 U	< 11 U	< 11 U	< 13 U	< 10 U	< 16 U	< 14 U
cis-1,3-Dichloropropene ug/kg		< 3.4 U	< 3.5 U	< 4.2 U	< 3.8 U	< 4.4 U	< 4.1 U	< 3.6 U	< 3.6 U	< 4.1 U	< 3.2 U	< 5.2 U	< 4.6 U
Dibromochloromethane ug/kg	< 6.5 U	< 4.2 U	< 4.3 U	< 5.2 U	< 4.6 U	< 5.4 U	< 5 U	< 4.5 U	< 4.4 U	< 5 U	< 4 U	< 6.4 U	< 5.6 U
Dibromomethane ug/kg	< 9.8 U	< 6.4 U	< 6.5 U	< 7.8 U	< 6.9 U	< 8.1 U	< 7.5 U	< 6.7 U	< 6.6 U	< 7.5 U	< 6 U	< 9.7 U	< 8.5 U
Dichlorodifluoromethane (Freon 12) ug/kg		< 39 U	< 40 U	< 48 U	< 43 U	< 50 U	< 47 U	< 42 U	< 41 U	< 47 U	< 37 U	< 60 U	< 53 U
Ethylbenzene ug/kg	< 12 U	< 7.8 U	< 7.9 U	< 9.6 U	< 8.5 U	< 10 U	< 9.2 U	< 8.3 U	< 8.1 U	< 9.2 U	< 7.4 U	< 12 U	< 10 U
Ethylene dibromide ug/kg	< 5.1 U	< 3.3 U	< 3.3 U	< 4 U	< 3.6 U	< 4.2 U	< 3.9 U	< 3.5 U	< 3.4 U	< 3.9 U	< 3.1 U	< 5 U	< 4.4 U
Hexachlorobutadiene ug/kg	< 32 U	< 21 U	< 21 U	< 25 U	< 22 U	< 26 U	< 24 U	< 22 U	< 21 U	< 24 U	< 19 U	< 31 U	< 27 U
Isopropylbenzene (Cumene) ug/kg	< 11 U	< 7.4 U	< 7.5 U	< 9.1 U	< 8.1 U	< 9.5 U	< 8.7 U	< 7.8 U	< 7.7 U	< 8.7 U	< 7 U	< 11 U	< 9.9 U
m,p-Xylenes ug/kg	< 9.4 U < 8 U	< 6.1 U < 5.2 U	< 6.2 U < 5.2 U	< 7.5 U < 6.3 U	< 6.7 U < 5.6 U	< 7.8 U < 6.6 U	< 7.2 U < 6.1 U	< 6.5 U < 5.5 U	< 6.3 U < 5.3 U	< 7.2 U < 6.1 U	< 5.8 U < 4.9 U	< 9.3 U < 7.8 U	< 8.2 U < 6.9 U
Methyl tert-butyl ether ug/kg Methylene chloride ug/kg		< 5.2 U	< 5.2 U	< 6.3 U < 27 U	< 5.6 U < 24 U	< 6.6 U	< 6.1 U	< 5.5 U	< 5.3 U	< 6.1 U	< 4.9 U	< 7.8 U	< 30 U
Methylene chlorideug/kgNaphthaleneug/kg		44 j	< 34 U	< 41 U	< 37 U	< 43 U	< 40 U	< 36 U	< 35 U	< 40 U	< 32 U	< 51 U	< 45 U
n-Butylbenzene ug/kg		< 16 U	< 16 U	< 20 U	< 17 U	< 20 U	< 19 U	< 17 U	< 16 U	< 19 U	< 15 U	< 24 U	< 21 U
n-Propylbenzene ug/kg		< 13 U	< 13 U	< 16 U	< 14 U	< 16 U	< 15 U	< 14 U	< 13 U	< 15 U	< 12 U	< 20 U	< 17 U
o-Chlorotoluene (2-chlorotoluene)		< 7.6 U	< 7.7 U	< 9.3 U	< 8.3 U	< 9.7 U	< 8.9 U	< 8 U	< 7.8 U	< 8.9 U	< 7.1 U	< 11 U	< 10 U
o-Xylene ug/kg		< 4.3 U	< 4.4 U	< 5.3 U	< 4.7 U	< 5.5 U	< 5.1 U	< 4.6 U	< 4.5 U	< 5.1 U	< 4.1 U	< 6.5 U	< 5.7 U
sec-Butylbenzene ug/kg		< 7.4 U	< 7.5 U	< 9.1 U	< 8.1 U	< 9.5 U	< 8.7 U	< 7.8 U	< 7.7 U	< 8.7 U	< 7 U	< 11 U	< 9.9 U
Styrene ug/kg	< 17 U	< 11 U	< 11 U	< 13 U	< 12 U	< 14 U	< 13 U	< 12 U	< 11 U	< 13 U	< 10 U	< 17 U	< 15 U
tert-Butylbenzene ug/kg	< 10 U	< 6.6 U	< 6.7 U	< 8.1 U	< 7.2 U	< 8.5 U	< 7.8 U	< 7 U	< 6.9 U	< 7.8 U	< 6.3 U	< 10 U	< 8.8 U
Tetrachloroethene ug/kg	< 7.1 U	79	< 4.6 U	< 5.6 U	< 5 U	< 5.8 U	20 j	42	< 4.7 U	< 5.4 U	< 4.3 U	31 j	34 j
Toluene ug/kg	< 18 U	< 12 U	< 12 U	< 14 U	< 13 U	< 15 U	< 14 U	< 12 U	< 12 U	< 14 U	< 11 U	< 18 U	< 16 U
trans-1,2-Dichloroethene ug/kg	< 19 U	< 13 U	< 13 U	< 15 U	< 14 U	< 16 U	< 15 U	< 13 U	< 13 U	< 15 U	< 12 U	< 19 U	< 17 U
trans-1,3-Dichloropropene ug/kg	< 9.3 U	< 6 U	< 6.1 U	< 7.4 U	< 6.6 U	< 7.7 U	< 7.1 U	< 6.4 U	< 6.2 U	< 7.1 U	< 5.7 U	< 9.1 U	< 8 U
Trichloroethene ug/kg	21 j	< 8.9 U	< 9 U	< 11 U	< 9.7 U	< 11 U	< 10 U	< 9.4 U	< 9.2 U	< 10 U	< 8.4 U	< 13 U	< 12 U
Trichlorofluoromethane (Freon 11) ug/kg Vinyl chloride ug/kg	< 35 U < 25 U	< 22 U < 16 U	< 23 U < 16 U	< 27 U < 20 U	< 24 U < 18 U	< 29 U < 21 U	< 26 U < 19 U	< 24 U < 17 U	< 23 U < 17 U	< 26 U < 19 U	< 21 U < 15 U	< 34 U < 24 U	< 30 U
1/10/1/ CD10/1/06	ı	∠ 16 H	_ / 16 H	- 2011		- 27 11	- 1011		1 / 11	- 10 H	/ 15 11	- 2/111	< 21 U

< = Compound not detected. Method Detection Limit shown.</p>  $VOCs = \dot{Volatile}$  organic compounds

FD = Field Duplicate Sample

N = Normal Environmental Sample

ug/kg = micrograms per kilogram
SW8260D analyses performed by Eurofins - Seattle, WA.

Validation Level = EPA-STAGE2AValidated Qualifier Definition(s):

J- = The result is an estimated quantity, but the result may be biased low.

j = The result is an estimated quantity. The associated numerical value is the

approximate concentration of the analyte in the sample.

J+ = The result is an estimated quantity, but the result may be biased high.

R = The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

UJ = The analyte was analyzed for, but was not detected. The reported limit is approximate and may be inaccurate or imprecise.

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Table 1 Phase 1 Volatile Organic Compound Analytical Results In Situ Stabilization Preliminary Design Investigation Report Former Arkema, Inc. Facility Portland, Oregon

Location Sample Date		PDI-34	PDI-34	PDI-34	PDI-34
Sample Date Sample Type		08/30/2024 N	08/30/2024 N	08/30/2024 N	08/30/2024 N
Depth Below Ground Surface		39.5 ft	46 ft	48 ft	59.5 ft
nalyte	Unit	37.310	4011	4011	37.310
OCs SW8260D			1		
,1,1,2-Tetrachloroethane	ug/kg	< 4.5 U	< 3.6 U	< 4.9 U	< 4.1 U
,1,1-Trichloroethane	ug/kg	< 4.1 U	< 3.3 U	< 4.5 U	< 3.8 U
,1,2,2-Tetrachloroethane	ug/kg	< 6.8 U	< 5.5 U	< 7.5 U	< 6.2 U
,1,2-Trichloroethane	ug/kg	< 6.6 U	< 5.4 U	< 7.3 U	< 6 U
,1-Dichloroethane	ug/kg	< 8.2 U	< 6.7 U	< 9 U	< 7.5 U
,1-Dichloroethene	ug/kg	< 11 U	< 8.9 U	< 12 U	< 10 U
,1-Dichloropropene	ug/kg	< 4.7 U	< 3.8 U	< 5.2 U	< 4.3 U
.,2,3-Trichlorobenzene .,2,3-Trichloropropane	ug/kg ug/kg	< 36 U < 10 U	< 29 U < 8.3 U	< 39 U < 11 U	< 32 U < 9.4 U
,2,4-Trichlorobenzene	ug/kg ug/kg	< 38 U	< 31 U	< 42 U	< 35 U
,2,4-Trimethylbenzene	ug/kg	< 12 U	< 9.8 U	< 13 U	< 11 U
,2-Dibromo-3-chloropropane	ug/kg	< 14 U	< 11 U	< 15 U	< 12 U
,2-Dichlorobenzene	ug/kg	< 7.8 U	< 6.3 U	< 8.5 U	< 7.1 U
,2-Dichloroethane	ug/kg	< 4.9 U	< 4 U	< 5.4 U	< 4.5 U
,2-Dichloropropane	ug/kg	< 5.9 U	< 4.8 U	< 6.5 U	< 5.4 U
,3,5-Trimethylbenzene	ug/kg	< 6.8 U	< 5.5 U	< 7.5 U	< 6.2 U
,3-Dichlorobenzene	ug/kg	< 12 U	< 9.6 U	< 13 U	< 11 U
,3-Dichloropropane	ug/kg	< 5 U	< 4.1 U	< 5.5 U	< 4.6 U
,4-Dichlorobenzene	ug/kg	28 j	< 7.8 U	< 11 U	15 j
,2-Dichloropropane	ug/kg	< 11 U	< 8.8 U	< 12 U	< 9.9 U
-Chlorotoluene	ug/kg	< 8.8 U	< 7.1 U	< 9.6 U	< 8 U
-Isopropyltoluene Benzene	ug/kg	< 9.1 U < 3.4 U	< 7.4 U < 2.8 U	< 10 U < 3.7 U	< 8.3 U < 3.1 U
romobenzene	ug/kg ug/kg	< 3.4 U	< 2.8 U	< 3.7 U	< 3.1 U
romodichloromethane	ug/kg ug/kg	< 4.9 U	< 4 U	< 5.4 U	< 4.5 U
romoform	ug/kg	< 4 U	< 3.3 U	< 4.4 U	< 3.7 U
Fromomethane	ug/kg	< 34 U	< 27 U	< 37 U	< 31 U
Carbon tetrachloride	ug/kg	< 3.9 U	< 3.2 U	< 4.3 U	< 3.6 U
Chlorobenzene	ug/kg	6,000	7,100	9,300	14,000
hlorobromomethane	ug/kg	< 5.6 U	< 4.5 U	< 6.1 U	< 5.1 U
hloroethane	ug/kg	< 19 U	< 15 U	< 21 U	< 17 U
Chloroform	ug/kg	< 3.8 U	< 3 U	< 4.1 U	< 3.4 U
hloromethane	ug/kg	< 9 U	< 7.3 U	< 9.9 U	< 8.3 U
is-1,2-Dichloroethene	ug/kg	< 11 U	< 9.1 U	< 12 U	< 10 U
is-1,3-Dichloropropene	ug/kg	< 3.6 U	< 2.9 U	< 3.9 U	< 3.3 U
Dibromochloromethane	ug/kg	< 4.4 U	< 3.5 U	< 4.8 U	< 4 U
Dibromomethane Dichlorodifluoromethane (Freon 12)	ug/kg	< 6.6 U < 41 U	< 5.4 U < 33 U	< 7.3 U < 45 U	< 6 U < 37 U
thylbenzene	ug/kg ug/kg	< 8.2 U	< 6.6 U	< 8.9 U	< 7.4 U
thylene dibromide	ug/kg ug/kg	< 3.4 U	< 2.8 U	< 3.7 U	< 3.1 U
lexachlorobutadiene	ug/kg	< 21 U	< 17 U	< 23 U	< 20 U
sopropylbenzene (Cumene)	ug/kg	< 7.7 U	< 6.2 U	< 8.4 U	< 7 U
n,p-Xylenes	ug/kg	< 6.4 U	< 5.1 U	< 7 U	< 5.8 U
lethyl tert-butyl ether	ug/kg	< 5.4 U	< 4.3 U	< 5.9 U	< 4.9 U
lethylene chloride	ug/kg	< 23 U	< 19 U	< 26 U	< 21 U
laphthalene	ug/kg	< 35 U	< 28 U	< 38 U	< 32 U
-Butylbenzene	ug/kg	< 17 U	< 13 U	< 18 U	< 15 U
-Propylbenzene	ug/kg	< 13 U	< 11 U	< 15 U	< 12 U
-Chlorotoluene (2-chlorotoluene)	ug/kg	< 7.9 U	< 6.4 U	< 8.6 U	< 7.2 U
-Xylene	ug/kg	< 4.5 U	< 3.6 U	< 4.9 U	< 4.1 U
ec-Butylbenzene	ug/kg	< 7.7 U	< 6.2 U	< 8.4 U	< 7 U
tyrene	ug/kg	< 11 U	< 9.2 U	< 12 U	< 10 U
ert-Butylbenzene etrachloroethene	ug/kg	< 6.9 U	< 5.6 U < 3.8 U	< 7.6 U < 5.2 U	< 6.3 U < 4.3 U
etracnioroetnene oluene	ug/kg	<b>5.7 j</b> < 12 U	< 3.8 U	< 5.2 U	< 4.3 U < 11 U
rans-1,2-Dichloroethene	ug/kg ug/kg	< 12 U	< 9.8 U < 11 U	< 13 U	< 11 U
rans-1,3-Dichloropropene	ug/kg ug/kg	< 6.3 U	< 5.1 U	< 6.9 U	< 5.7 U
richloroethene	ug/kg ug/kg	< 9.2 U	< 7.5 U	< 10 U	< 8.4 U
		< 23 U	< 19 U	< 26 U	< 21 U
richlorofluoromethane (Freon 11)	ug/kg	< 23 U	\ 13 U	\ 2.0.0	

< = Compound not detected. Method Detection Limit shown.</p>

VOCs = Volatile organic compounds FD = Field Duplicate Sample

N = Normal Environmental Sample

ug/kg = micrograms per kilogram
SW8260D analyses performed by Eurofins - Seattle, WA.

Validation Level = EPA-STAGE2A

Validated Qualifier Definition(s):

J- = The result is an estimated quantity, but the result may be biased low. j = The result is an estimated quantity. The associated numerical value is the

approximate concentration of the analyte in the sample.

J+ = The result is an estimated quantity, but the result may be biased high. R = The data are unusable. The sample results are rejected due to serious deficiencies

in meeting QC criteria. The analyte may or may not be present in the sample.

UJ = The analyte was analyzed for, but was not detected. The reported limit is approximate and may be inaccurate or imprecise.

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						·				PDI-21 08/08/2024	
palyte	Unit	Construction	Excavation	Indoor Worker	Outdoor	Depth Leaching to	38 ft	9 ft	20.2 ft	36.3 ft	23.1 f
		Worker HSC	Worker HSC	HSC	Worker HSC	Groundwater HSC					
oxins/Furans E1613B .,3,4,6,7,8,9-Octachlorodibenzofuran	pg/g	NE	NE	NE	NE	NE	9,900	120 J	< 14 U	NA	170
2,3,4,6,7,8,9-Octachlorodibenzo-p-Dioxin	pg/g	NE	NE	NE	NE	NE	93	840	130	NA	150
2,3,4,6,7,8-Heptachlorodibenzofuran	pg/g	NE	NE	NE	NE	NE	10,000	34	18 j	NA	150
2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin 2,3,4,7,8,9-Heptachlorodibenzofuran	pg/g pg/g	NE NE	NE NE	NE NE	NE NE	NE NE	< 0.66 U 3,800	<b>92</b> < 8.8 U	<b>36 j</b> < 11 UJ	NA NA	19 j 49
2,3,4,7,8-Hexachlorodibenzofuran	pg/g	NE	NE	NE	NE	NE	35,000	10 j	< 2.1 U	NA NA	330
2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/g	NE	NE	NE	NE	NE	< 0.71 U	< 3.8 U	< 1.8 U	NA	< 1 U
2,3,6,7,8-Hexachlorodibenzofuran	pg/g	NE	NE	NE	NE	NE	8,000	< 4.3 U	< 1.9 U	NA	89
2,3,6,7,8-Hexachlorodibenzo-p-dioxin 2,3,7,8,9-Hexachlorodibenzofuran	pg/g	NE NE	NE NE	NE NE	NE NE	NE NE	< 0.77 U < 650 U	< 3.8 U < 5.8 U	< 1.6 U < 1.8 U	NA NA	<b>3.2 j</b> < 3.2 l
2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/g pg/g	NE NE	NE NE	NE NE	NE NE	NE NE	< 0.65 U	< 3.6 U	< 1.5 U	NA NA	< 0.96
2,3,7,8-Pentachlorodibenzofuran	pg/g	NE	NE	NE	NE	NE	23,000	< 2.8 U	< 1.8 U	NA	250 j
2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/g	NE	NE	NE	NE	NE	4.8 j	< 2.8 U	< 2.7 U	NA	< 8.7
3,4,6,7,8-Hexachlorodibenzofuran	pg/g	NE	NE	NE NE	NE	NE	1,400	< 4.4 U	< 1.7 U	NA	11 j
3,4,7,8-Pentachlorodibenzofuran 3,7,8-Tetrachlorodibenzofuran	pg/g pg/g	NE NE	NE NE	NE NE	NE NE	NE NE	10,000 23,000 J	< 3.1 U	< 2 U 1.8 j	NA NA	< 7.2 NA
3,7,8-Tetrachiorodibenzo-p-dioxin	pg/g	NE	NE	NE	NE	NE	9.4	< 2.8 U	< 1.8 U	NA NA	< 31 l
AS E1633	, , , ,										
-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11CL-PF3OL			NE	NE	NE	NE	< 0.36 UJ	< 0.3 U	< 0.34 U	NA	< 0.33
,2H,3H,3H-Perfluorooctanoic acid	ug/kg		NE NE	NE NE	NE	NE	< 2.1 UJ	< 1.8 U	< 2 U	NA	< 1.9
S FTCA	ug/kg	NE	NE NE	NE NE	NE NE	NE NE	< 0.36 UJ	< 0.3 U	< 0.34 U	NA	< 0.33
Perfluoroheptyl propanoic acid Perfluoropropyl propanoic acid	ug/kg ug/kg	NE NE	NE NE	NE NE	NE NE	NE NE	< 2.3 UJ < 0.36 UJ	< 1.9 U < 0.3 U	< 2.2 U < 0.34 U	NA NA	< 2.1 < 0.33
B-Dioxa-3H-perfluorononanoic acid (DONA)	ug/kg	NE	NE	NE	NE	NE	< 0.25 UJ	< 0.21 U	< 0.24 U	NA	< 0.23
2 Fluorotelomer sulfonic acid (4:2 FTS)	ug/kg		NE	NE	NE	NE	< 0.25 UJ	< 0.21 U	< 0.24 U	NA	< 0.23
3 FTCA	ug/kg	NE	NE NE	NE NE	NE NE	NE NE	< 2.1 UJ	< 1.8 U	< 2 U	NA	< 1.9
Prince Fluorotelomer sulfonic acid (6:2 FTS)  FTCA	ug/kg ug/kg		NE NE	NE NE	NE NE	NE NE	< 0.25 UJ < 2.3 UJ	< 0.21 U < 1.9 U	< 0.24 U < 2.2 U	NA NA	< 0.23 < 2.1
Fluorotelomer sulfonic acid (8:2FTS)	ug/kg ug/kg	NE NE	NE NE	NE NE	NE NE	NE NE	< 0.25 UJ	< 0.21 U	< 2.2 U	NA NA	< 0.23
Chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9CL-PF3ONS)	ug/kg	NE	NE	NE	NE	NE NE	< 0.3 UJ	< 0.25 U	< 0.28 U	NA	< 0.27
xafluoropropylene oxide dimer acid, GenX (HxFPO-DA)	ug/kg	NE	NE	NE	NE	NE	< 0.27 UJ	< 0.23 U	< 0.26 U	NA	< 0.25
Ethyl perfluorooctane sulfonamide (EtPFOSA)	ug/kg		NE NE	NE NE	NE NE	NE NE	< 0.065 UJ	< 0.054 U	< 0.062 U	NA	< 0.059
Ethyl perfluorooctane sulfonamidoethanol (NEtPFOSE) Ethyl perfluorooctanesulfonamidoacetic acid (NEtPFOSAA)	ug/kg ug/kg		NE NE	NE NE	NE NE	NE NE	< 0.63 UJ < 0.067 UJ	< 0.53 U <b>0.39</b>	< 0.6 U < 0.064 U	NA NA	< 0.58 < 0.062
Methyl perfluorooctane sulfonamide (NMePFOSA)	ug/kg	NE	NE	NE NE	NE	NE	< 0.062 UJ	< 0.052 U	< 0.06 U	NA NA	< 0.057
Methyl perfluorooctane sulfonamide ethanol (NMePFOSE)	ug/kg		NE	NE	NE	NE	< 0.62 UJ	< 0.52 U	< 0.6 U	NA	< 0.57
Methyl perfluorooctanesulfonamidoacetic acid (NMePFOSAA)	ug/kg	NE	NE	NE	NE	NE	< 0.13 UJ	< 0.11 U	< 0.12 U	NA	< 0.12
nafluoro-3,6-dioxaheptanoic acid (NFDHA)	ug/kg	NE	NE	NE	NE	NE	< 0.14 UJ	< 0.12 U	< 0.14 U	NA	< 0.13
fluoro(2-ethoxyethane)sulfonic acid (PFEESA)	ug/kg	NE	NE NE	NE NE	NE NE	NE NE	< 0.14 UJ	< 0.12 U	< 0.13 U	NA NA	< 0.13
fluoro-3-methyoxypropanoic acid (PFMPA) fluoro-4-methoxybutanoic acid (PFMBA)	ug/kg ug/kg		NE NE	NE NE	NE NE	NE NE	< 0.12 UJ < 0.12 UJ	< 0.1 U < 0.1 U	< 0.12 U < 0.12 U	NA NA	< 0.11 < 0.11
fluorobutane sulfonic acid (PFBS)	ug/kg	NE	NE	NE	NE	NE	< 0.062 UJ	< 0.052 U	< 0.06 U	NA	< 0.057
fluorobutanoic acid (PFBA)	ug/kg		NE	NE	NE	NE	< 0.25 UJ	< 0.21 U	< 0.24 U	NA	< 0.23
fluorodecane sulfonic acid (PFDS)	ug/kg		NE	NE	NE	NE	< 0.071 UJ	< 0.06 U	< 0.068 U	NA	< 0.065
fluorodecanoic acid (PFDA)	ug/kg		NE NE	NE NE	NE NE	NE	< 0.068 UJ	< 0.058 U	< 0.066 U	NA	< 0.063
fluorododecanesulfonic acid (PFDoDS) fluorododecanoic acid (PFDoDA)	ug/kg ug/kg	NE NE	NE NE	NE NE	NE NE	NE NE	< 0.073 UJ < 0.062 UJ	< 0.062 U < 0.052 U	< 0.07 U < 0.06 U	NA NA	< 0.067 < 0.057
fluoroheptane sulfonic acid (PFHpS)	ug/kg	NE	NE	NE NE	NE NE	NE NE	< 0.062 UJ	< 0.052 U	< 0.06 U	NA NA	< 0.057
fluoroheptanoic acid (PFHpA)	ug/kg		NE	NE	NE	NE	< 0.062 UJ	< 0.052 U	< 0.06 U	NA	< 0.057
fluorohexane sulfonic acid (PFHxS)	ug/kg	NE	NE	NE	NE	NE	< 22 UJ	< 0.052 U	< 0.06 U	NA	< 0.057
fluorohexanoic acid (PFHxA)	ug/kg		NE	NE	NE	NE	< 0.072 UJ	< 0.061 U	< 0.069 U	NA	< 0.066
fluorononane sulfonic acid (PFNS)	ug/kg	NE NE	NE NE	NE NE	NE NE	NE NE	< 0.078 UJ	< 0.066 U	< 0.075 U	NA NA	< 0.072
fluorononanoic acid (PFNA) fluorooctane sulfonamide (FOSA)	ug/kg ug/kg	NE NE	NE NE	NE NE	NE NE	NE NE	< 0.072 UJ < 0.062 UJ	< 0.061 U < 0.052 U	< 0.069 U < 0.06 U	NA NA	< 0.066 < 0.057
fluorooctane sulfonic acid (PFOS)	ug/kg		NE	NE	NE	NE	< 0.002 03	0.093 j	< 0.074 U	NA	< 0.037
fluorooctanoic acid (PFOA)	ug/kg		NE	NE	NE	NE	< 0.062 UJ	< 0.052 U	< 0.06 U	NA	< 0.057
fluoropentane sulfonic acid (PFPeS)	ug/kg		NE	NE	NE	NE	< 0.081 UJ	< 0.068 U	< 0.078 U	NA	< 0.074
fluoropentanoic acid (PFPeA)	ug/kg		NE NE	NE NE	NE	NE	< 0.12 UJ	< 0.1 U	< 0.12 U	NA	< 0.11
fluorotetradecanoic acid (PFTeDA) fluorotridecanoic acid (PFTrDA)	ug/kg ug/kg		NE NE	NE NE	NE NE	NE NE	< 0.07 UJ < 0.062 UJ	< 0.059 U < 0.052 U	< 0.067 U < 0.06 U	NA NA	< 0.06 <sup>2</sup> < 0.05 <sup>7</sup>
fluoroundecanoic acid (PFUnDA)	ug/kg ug/kg		NE NE	NE NE	NE NE	NE NE	< 0.062 UJ	< 0.052 U	< 0.06 U	NA NA	< 0.057
/TPH-DX	ug/itg	, , , ,				.,	4 01002 03	1 01032 0		147	( 0.007
sel Range Organics (C10-C24) or Oil Range Organics (C24-C36)	mg/kg mg/kg		NE NE	NE NE	NE NE	NE NE	970 J 760 J	21,000 J 51,000 J	3,200 J 11,000 J	NA NA	4,000 10,000
ganochlorine Pesticides SW8081B	mg/kg	INL	INL	INL	INL	INL	780 3	51,000 3	11,000 3	INA	10,000
and 4,4'-DDD, Total	mg/kg	97	NE	NE	310	0.00124	2.94	<	0.83	0.193	510
' and 4,4'-DDE, Total	mg/kg		NE	NE	820	0.00322	1.288	<	0.12	0.0011	288
' and 4,4'-DDT, Total	mg/kg		NE NE	NE NE	850	0.00231	186.7	<	0.95	0.052	22,70
Y-DDD Y-DDE	mg/kg mg/kg		NE NE	NE NE	NE NE	NE NE	0.34 J 0.088 J	< 0.0019 UJ < 0.0013 UJ	<b>0.83 J</b> < 0.0014 U	<b>0.043 J</b> < 0.00074 UJ	100 88 J
'-DDT	mg/kg		NE	NE	NE	NE	6.7 J	< 0.0013 UJ	< 0.0014 U	< 0.0012 UJ	3,700
'-DDD	mg/kg	NE	NE	NE	NE	NE	2.6	< 0.00049 UJ		0.15 J	410
'-DDE	mg/kg		NE	NE	NE	NE	1.2	< 0.00078 UJ	0.12 J	0.0011 J-	200
'-DDT	mg/kg		NE NE	NE NE	NE	NE C 415 05	180	< 0.00078 UJ	0.95 J	0.052 J	19,000
rin ha-BHC/HCH	mg/kg mg/kg		NE NE	NE NE	NE 36	6.41E-05 2.06E-05	< 0.02 U < 0.0086 U	< 0.0008 UJ < 0.00034 UJ	< 0.00086 U < 0.00036 U	< 0.00047 UJ < 0.0002 UJ	0.033
a-BHC/HCH	mg/kg		NE	NE	NE NE	9.17E-05	< 0.0030 U	< 0.00054 UJ		0.0021 J-	< 0.01
orinated camphene/ Toxaphene	mg/kg	NE	NE	NE	NE	NE	< 1.3 U	< 0.053 UJ	< 0.057 U	< 0.031 UJ	< 1.4
Chlordane	mg/kg	NE	NE	NE	NE	NE	< 0.04 U	< 0.0016 UJ	< 0.0017 U	< 0.00093 UJ	< 0.04
Heptachlor epoxide	mg/kg		NE NE	NE NE	NE NE	1.3E-05	< 0.016 U	< 0.00063 UJ			0.083
a-BHC/HCH drin	mg/kg mg/kg		NE NE	NE NE	NE NE	NE 1.03E-06	< 0.015 U < 0.019 U	< 0.00059 UJ < 0.00074 UJ		< 0.00035 UJ < 0.00043 UJ	< 0.01
osulfan I (Alpha)	mg/kg		NE NE	NE NE	NE NE	NE	< 0.019 U	< 0.00074 03 < 0.00072 R	< 0.00079 U		< 0.01
osulfan II (Beta)	mg/kg		NE	NE	NE	NE	< 0.014 U	< 0.00055 UJ			< 0.01
osulfan sulfate	mg/kg	NE	NE	NE	NE	NE	< 0.015 U	< 0.00059 UJ	< 0.00063 U	< 0.00035 UJ	< 0.01
rin	mg/kg		NE	NE	NE	NE	< 0.025 U	< 0.00099 UJ	< 0.0011 U	< 0.00058 UJ	2.2
rin aldehyde	mg/kg		NE NE	NE NE	NE NE	NE NE	< 0.26 U	< 0.01 UJ	< 0.011 U	< 0.0059 UJ	< 0.26
rin ketone nma-BHC/HCH (Lindane)	mg/kg mg/kg		NE NE	NE NE	NE NE	NE 0.00371	< 0.022 U < 0.04 U	< 0.00089 UJ < 0.0016 UJ	< 0.00095 U < 0.0017 U	< 0.00052 UJ < 0.00093 UJ	< 0.02 < 0.04
tachlor	mg/kg		NE	NE NE	NE NE	0.00371	< 0.04 U	< 0.0018 UJ		< 0.00093 UJ	< 0.04
	mg/kg		NE	NE	NE	NE	< 0.02 U	< 0.00078 R		< 0.00046 UJ	< 0.02
	mg/kg		NE	NE	NE	NE	< 0.017 U	< 0.00068 UJ	< 0.00072 U	< 0.0004 UJ	< 0.01
hoxychlor is-Chlordane	1119,119										
hoxychlor ns-Chlordane Bs SW8082A		NIT.	NIT.	NIT.	NIT.	NIE .	- 0 40 117	- 0 0070 -	2 0 000111	NIA .	- 0 1
hoxychlor ns-Chlordane 3s SW8082A clor 1016	mg/kg		NE NE	NE NE	NE NE	NE NE	< 0.16 UJ	< 0.0078 R	< 0.0084 U	NA NA	
hoxychlor ns-Chlordane Bs SW8082A clor 1016 clor 1221	mg/kg mg/kg	NE	NE	NE	NE	NE	< 0.26 UJ	< 0.013 U	< 0.014 U	NA	< 0.4 < 0.65 < 0.27
choxychlor ns-Chlordane 3s SW8082A clor 1016 clor 1221 clor 1232 clor 1242	mg/kg	NE NE									
hoxychlor ns-Chlordane 3s SW8082A clor 1016 clor 1221 clor 1232	mg/kg mg/kg mg/kg	NE NE NE NE	NE NE	NE NE	NE NE	NE NE	< 0.26 UJ < 0.1 UJ	< 0.013 U < 0.0052 U	< 0.014 U < 0.0055 U	NA NA	< 0.65 < 0.27

						Location Sample Date Depth	PDI-15 07/25/2024 38 ft	PDI-20 08/07/2024 9 ft	PDI-21 08/08/2024 20.2 ft	PDI-21 08/08/2024 36.3 ft	PDI-24 08/09/202 23.1 ft
Analyte	Unit	Construction Worker HSC	Excavation Worker HSC	Indoor Worker HSC	Outdoor Worker HSC	Leaching to					
Chlorinated Herbicides SW8151A			'			1100			1		
2,4,5-TP (Silvex)	ug/kg	NE	NE	NE	NE	NE	< 8.3 U	< 790 U	< 450 U	NA	< 180 U
2,4-Dichlorophenoxyacetic acid	ug/kg	NE	NE	NE	NE	NE	< 53 U	< 5,100 U	< 2,900 U	NA	< 1,100 U
2,4-Dichlorophenoxybutyric acid	ug/kg	NE NE	NE NE	NE NE	NE NE	NE	310	< 10,000 U	< 6,000 U	NA NA	< 2,300 U
Dalapon	ug/kg	NE NE	NE NE	NE NE	NE NE	NE NE	< 80 U	< 7,600 U	< 4,400 U	NA NA	< 1,700 U
Dicamba Dinoseb	ug/kg	NE NE	NE NE	NE NE	NE NE	NE NE	< 5.2 U < 65 U	< 500 U < 6,200 U	< 290 U < 3,500 U	NA NA	< 110 U < 1,400 U
Methoxone (MCPA)	ug/kg ug/kg	NE NE	NE NE	NE NE	NE NE	NE NE	< 5,300 U	< 510,000 U	< 290,000 U	NA NA	< 1,400 U
Propanoic acid, 2-(2,4-dichlorophenoxy)	ug/kg	NE NE	NE	NE NE	NE NE	NE	< 54 U	< 5,200 U	< 3,000 U	NA	< 1,100 U
Propanoic acid, 2-(4-chloro-2-methylphenoxy)	ug/kg	NE	NE	NE	NE NE	NE	15,000	< 690,000 U	< 400,000 U	NA	< 150,000 l
Frichlorophenoxyacetic Acid, 2,4,5-	ug/kg	NE	NE	NE NE	NE NE	NE	< 4.1 U	< 390 U	< 220 U	NA	< 86 U
SVOCs SW8270E		.,,_	.,	.,	.,		112 0	1 330 0	1 220 0	10/1	1 00 0
,2,4-Trichlorobenzene	ug/kg	NE	NE	NE	NE	NE	< 120 U	< 580 U	< 140 U	NA	< 6.9 U
,2-Dichlorobenzene	ug/kg	NE	NE	NE	NE	396.6	720 j	< 490 U	< 110 U	NA	12 j
,3-Dichlorobenzene	ug/kg	NE	NE	NE	NE	NE	< 95 U	< 470 U	< 110 U	NA	< 5.5 U
I,4-Dichlorobenzene	ug/kg	NE	NE	NE	NE	245.43	1,400	< 810 U	< 190 U	NA	80
L-Methylnaphthalene	ug/kg	NE	NE	NE	NE	NE	160 j	1,500 j	< 110 U	NA	6.2 j
2,2'-Oxybis(1-chloropropane)	ug/kg	NE	NE	NE	NE	NE	< 120 U	< 590 U	< 140 U	NA	< 7 U
2,4,5-Trichlorophenol	ug/kg	NE	NE	NE	NE	NE	< 160 U	< 790 U	< 190 U	NA	< 9.3 U
2,4,6-Trichlorophenol	ug/kg	NE	NE	NE	NE	NE	< 650 U	< 3,200 U	< 760 U	NA	< 38 U
,4-Dichlorophenol	ug/kg	NE NE	NE NE	NE NE	NE NE	NE	< 550 U	< 2,700 U	< 640 U	NA NA	< 32 U
,4-Dimethylphenol	ug/kg	NE NE	NE NE	NE NE	NE NE	NE	< 1,200 U	< 5,800 U	< 1,400 U	NA NA	< 69 U
,4-Dinitrophenol	ug/kg	NE NE	NE NE	NE NE	NE NE	NE	< 12,000 U	< 57,000 U	< 13,000 U	NA NA	< 670 U
2,4-Dinitrotoluene	ug/kg	NE NE	NE NE	NE NE	NE NE	NE NE	< 850 U	< 4,200 U	< 980 U	NA NA	< 49 U
,6-Dinitrotoluene	ug/kg	NE NE	NE NE	NE NE	NE NE	NE	< 300 U	< 1,500 U	< 340 U	NA NA	< 17 U
2-Chloronaphthalene	ug/kg	NE NE	NE NE	NE NE	NE NF	NE NF	< 99 U	< 490 U < 390 U	< 110 U < 92 U	NA NA	< 5.7 U
2-Chlorophenol	ug/kg	NE NE	NE NE	NE NE	NE NE	NE NE	210 j	< 860 U	< 200 U	NA NA	<b>15 j</b> < 10 U
2-Methylnaphthalene 2-Nitroaniline	ug/kg ug/kg	NE NE	NE NE	NE NE	NE NE	NE NE	<b>280 j</b> < 300 U	< 1,500 U	< 340 U	NA NA	< 10 U
2-Nitrophenol	ug/kg	NE NE	NE	NE NE	NE NE	NE NE	13,000	< 1,800 U	< 430 U	NA NA	< 22 U
3,3'-Dichlorobenzidine	ug/kg	NE NE	NE	NE NE	NE NE	NE	< 5,600 U	< 28,000 U	< 6,500 U	NA	< 330 R
-Nitroaniline	ug/kg	NE	NE	NE	NE NE	NE	< 2,000 U	< 9,700 U	< 2,300 U	NA	< 110 U
-Bromophenyl phenyl ether	ug/kg	NE NE	NE NE	NE NE	NE NE	NE	< 180 U	< 890 U	< 210 U	NA	< 10 U
I-Chloro-3-methylphenol	ug/kg	NE NE	NE	NE	NE NE	NE	< 650 U	< 3,200 U	< 760 U	NA	< 38 U
I-Chlorophenyl phenyl ether	ug/kg	NE	NE NE	NE	NE NE	NE	< 120 U	< 610 U	< 140 U	NA	< 7.2 U
l-Nitrophenol	ug/kg	NE	NE	NE	NE	NE	< 5,000 U	< 25,000 U	< 5,800 U	NA	< 290 U
Acenaphthene	ug/kg	NE	NE	NE	NE	NE	320 j	< 450 U	210 j	NA	< 5.3 U
Acenaphthylene	ug/kg	NE	NE	NE	NE	NE	< 99 U	< 490 U	< 110 U	NA	< 5.7 U
Anthracene	ug/kg	NE	NE	NE	NE	NE	610 j	< 1,600 U	< 370 U	NA	< 18 U
Benzo(a)anthracene	ug/kg	NE	NE	NE	NE	NE	5,700	3,100 j	< 250 U	NA	< 13 U
Benzo(a)pyrene	ug/kg	NE	NE	NE	210,000	NE	< 770 U	< 3,800 U	< 890 U	NA	< 45 U
Benzo(b)fluoranthene	ug/kg	NE	NE	NE	2,100,000	NE	13,000	< 970 U	< 230 U	NA	< 11 U
Benzo(g,h,i)perylene	ug/kg	NE	NE	NE	NE	NE	2,000	< 1,800 U	< 410 U	NA	< 21 U
Benzo(k)fluoranthene	ug/kg	NE	NE	NE	NE	NE	< 280 U	< 1,400 U	< 320 U	NA	< 16 U
Benzoic acid	ug/kg	NE	NE	NE	NE	NE	< 24,000 U	< 120,000 U	< 28,000 U	NA	< 1,400 U
Benzyl alcohol	ug/kg	NE	NE	NE	NE	NE	< 5,100 U	< 25,000 U	< 5,900 U	NA	< 290 U
Benzyl butyl phthalate	ug/kg	NE	NE	NE	NE	NE	< 1,000 U	< 5,000 U	< 1,200 U	NA	< 59 R
Bis(2-chloroethoxy)methane	ug/kg	NE	NE	NE	NE	NE	< 360 U	< 1,800 U	< 410 U	NA	< 21 U
Bis(2-ethylhexyl)phthalate	ug/kg	NE	NE NE	NE	NE	NE	< 1,400 U	< 6,900 U	< 1,600 U	NA	< 82 UJ
Carbazole	ug/kg	NE NE	NE NE	NE NE	NE NE	NE	380 j	< 710 U	< 170 U	NA	< 8.4 U
Chrysene	ug/kg	NE NE	NE NE	NE NE	NE 210,000	NE	10,000	8,100	< 300 U	NA	< 15 UJ
Dibenzo(a,h)anthracene	ug/kg	NE NE	NE NE	NE NE	210,000	NE	< 930 U	< 4,600 U	< 1,100 U	NA NA	< 54 U
Dibenzofuran Dibutyl phthalate	ug/kg	NE NE	NE NE	NE NE	NE NE	NE NE	<b>600 j</b> < 930 U	< 570 U < 4,600 U	< 140 U < 1,100 U	NA NA	< 6.8 U < 54 UJ
Dichloroethyl ether	ug/kg ug/kg	NE NE	NE NE	NE NE	NE NE	NE NE	< 930 U	< 4,600 U	< 1,100 U	NA NA	< 54 UJ < 8.8 U
Diethyl phthalate	ug/kg ug/kg	NE NE	NE NE	NE NE	NE NE	NE NE	< 430 U	< 2,100 U	< 500 U	NA NA	39 j
pietnyi phthalate Dimethyl phthalate	ug/kg ug/kg	NE NE	NE NE	NE NE	NE NE	NE NE	< 430 U	< 2,100 U	< 110 U	NA NA	< 5.7 U
Dinitro-o-cresol	ug/kg	NE NE	NE	NE NE	NE NE	NE	< 2,000 U	< 9,700 U	< 2,300 U	NA	< 110 U
pi-n-octyl phthalate	ug/kg	NE	NE	NE	NE NE	NE	< 1,800 U	< 8,700 U	< 2,000 U	NA	< 100 U
luoranthene	ug/kg	NE	NE	NE	NE NE	NE	26,000	< 1,200 U	< 270 U	NA	< 14 UJ
luorene	ug/kg	NE NE	NE NE	NE NE	NE NE	2,170	910	2,800	730	NA	< 5.7 U
lexachlorobenzene	ug/kg	NE	NE	NE	NE NE	0.0638	8,800	< 1,500 U	< 340 U	NA	< 17 U
lexachlorobutadiene	ug/kg	NE	NE	NE	NE	22	160,000	< 1,500 U	< 340 U	NA	27 j
exachlorocyclopentadiene	ug/kg	NE	NE	NE	NE	NE	340 j	< 750 U	< 180 U	NA	< 8.8 U
exachloroethane	ug/kg	NE	NE	NE	NE	NE	5,800,000	< 420 U	< 98 U	NA	< 4.9 U
ndeno(1,2,3-cd)pyrene	ug/kg	NE	NE	NE	NE	NE	1,700	< 1,200 U	< 270 U	NA	< 14 U
sophorone	ug/kg	NE	NE	NE	NE	NE	< 170 U	< 820 U	< 190 U	NA	< 9.7 U
n,p-cresol	ug/kg	NE	NE	NE	NS	NE	< 300 U	< 1,500 U	< 340 U	NA	< 17 U
aphthalene	ug/kg	NE	NE	NE	NE	1,000	1,200	< 490 U	< 110 U	NA	< 5.7 U
itrobenzene	ug/kg	NE	NE	NE	NE	NE	< 390 U	< 1,900 U	< 460 U	NA	< 23 U
-Nitrosodi-n-propylamine	ug/kg	NE	NE NE	NE NE	NE	NE	< 430 U	< 2,100 U	< 500 U	NA	< 25 U
-Nitrosodiphenylamine	ug/kg	NE NE	NE NE	NE NE	NE	NE	< 160 U	< 780 U	< 180 U	NA	< 9.2 U
-Cresol	ug/kg	NE NE	NE NE	NE NE	NE NE	NE	< 190 U	< 950 U	< 220 U	NA	< 11 U
-Chloroaniline	ug/kg	NE NE	NE NE	NE NE	NE NE	NE	< 2,600 U	< 13,000 U	< 3,100 U	NA NA	< 150 U
entachlorophenol	ug/kg	NE NE	NE NE	NE NE	NE NE	NE	8,500 j	< 26,000 U	< 6,200 U	NA NA	< 310 U
Phenanthrene	ug/kg	NE NE	NE NE	NE NE	NE NE	NE	19,000	2,200 j	< 130 U	NA NA	36 j
Phenol	ug/kg	NE NE	NE NE	NE NE	NE NE	NE NE	< 450 U	< 2,200 U	< 530 U	NA NA	< 26 U
-Nitroaniline	ug/kg	NE NE	NE NE	NE NE	NE NE	NE NE	< 990 U	< 4,900 U	< 1,100 U	NA NA	< 57 R
Pyrene	ug/kg	NE	NE	NE	NE	NE	11,000	6,200	950 j	NA	< 15 UJ

# Notes:

Bolded values indicate concentrations above the Method Detection Limit.

Highlighted values indicate concentrations above HSC. < = Compound not detected. Method Detection Limit shown.</p>

HSC = Revised Hot Spot Evaluation Screening Criteria (ERM 2021b)

NE = Not Established

PFAS = Per- and Polyfluoroalkyl substances

PCBs = Polychlorinated Biphenyls SVOCs = Semivolatile organic compounds

NA = Not Analyzed

mg/kg = milligrams per kilogram pg/g = picogram per gram

ug/kg = micrograms per kilogram

SW8270E, SW8081B, SW8082A, and NWTPH-Dx analyses performed by Eurofins - Seattle, WA.

E1613B and E1633 analyses performed by Eurofins - Sacramento, CA. SW8151A analyses performed by Eurofins - Calscience, CA.

Validation Level = EPA-STAGE2A Validated Qualifier Definition(s):

J- = The result is an estimated quantity, but the result may be biased low.

j = The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.R = The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

U = The analyte was analyzed for, but was not detected above the limit displayed.

UJ = The analyte was analyzed for, but was not detected. The reported limit is approximate and may be inaccurate or imprecise.

Table 3
Phase 1 Geotechnical Results
In Situ Stabilization Preliminary Design Investigation Report
Former Arkema, Inc. Facility
Portland, Oregon

					Peak Strength (psi)	Strength (psi)	Dired	ct Shear	USCS (ERM Field Log)	
			ASTM Method	D5084C	D2850	D2166	D3080			
Location	Sample Date	Depth (feet	Aquifer				500	1500	2500	
PDI-23	8/19/2024	31-34	Shallow	1.84E-04	NR*	>1	516	1437	2033	SP
PDI-23	8/19/2024	47-50	Deep	2.08E-04	101.5	>1	753	1653	2715	SM
PDI-31	8/20/2024	32-35	Shallow	1.14E-04	NR*	>1	626	1370	2203	SM
PDI-31	8/20/2024	42-45	Deep	6.31E-06	NR*	>1	739	1493	2544	ML

### Notes:

\* = Specimen too fragile, unable to complete test due to inability to get specimen into membrane/apparatus
ASTM D2850 test conditions included confining pressure of 4,600 pounds per square foot and strain rate of 0.5 % per minute
K = permeability

NR = No result

cm/sec = centimeter per second

psi = pounds per square inch

psf = peak shear strength

ASTM = American Society for Testing and Materials

ASTM D2166 = Compressive Strength of Cohesive Soil Specimens

ASTM D2850 = Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils

ASTM D5084C = Flexible Wall Permeability

ASTM D3080 = Direct Shear Test of Soils Under Consolidated Drained Conditions

bgs = below ground surface

USCS = Unified Soil Classification System

Table 4
Treatability Study Samples
In Situ Stabilization Preliminary Design Investigation Report
Former Arkema, Inc. Facility
Portland, Oregon

Boring	Hydrogeologic Zone	Contamination Category	Mixed	Purpose		
PDI-02	Shallow	Contaminated	Homogenized	ISS/ISCO		
PDI-03	Shallow					
PDI-03	Shallow-Intermediate					
PDI-15	Shallow-Intermediate					
PDI-19	Shallow-Intermediate					
PDI-07	Shallow	Some Contamination	Homogenized	ISS/ISCO		
PDI-08	Shallow					
PDI-15	Shallow-Intermediate					
PDI-07	Intermediate					
PDI-29	Shallow	No Evidence of Contamination	Homogenized	ISCO-only		
PDI-12	Shallow-Intermediate					
PDI-17	Intermediate					
PDI-15	Deep					
PDI-02	Shallow	Contaminated	Not Homogenized	ISCO-only		
PDI-16	Shallow-Intermediate	Some Contamination				
PDI-24	Shallow	Some Contamination				

# Notes:

ISS = In Situ Stabilization

ISCO = In Situ Chemical Oxidation

Table 5
In Situ Stabilization Test Conditions and Analyses
In Situ Stabilization Preliminary Design Investigation Report
Former Arkema, Inc. Facility
Portland, Oregon

Contamination Status	Sample Type		Mix Rat eight of	ios dry soil)	Sample ID
		PC	С	SP	
					CON Base
					CON Ctrl
		5%			CON 5 PC
		5%	1%		CON 5 PC, 1 C
		5%	4%		CON 5 PC, 4 C
		5%		1.0%	CON 5 PC, 1 SP
		5%		2.5%	CON 5 PC, 2.5 SP
	ISS/ISCO	10%			CON 10 PC
		10%		5.0%	CON 10 PC 5 SP
		15%			CON 15 PC
Contouring to d (CON)		15%	1%		CON 15 PC, 1 C
Contaminated (CON)		15%	4%		CON 15 PC, 4 C
		15%		1.0%	CON 15 PC, 1 SP
		15%		5.0%	CON 15 PC, 5 SP MS/MSD
		15%		5.0%	CON 15 PC, 5 SP
					CON Ctrl AAP
				1.0%	CON 1 AAP
				2.0%	CON 2 AAP
	ISCO-only				PD102 Base
					PD102 Ctrl AAP
				1.0%	PD102 1 AAP
				2.0%	PD102 2 AAP

Table 5
In Situ Stabilization Test Conditions and Analyses
In Situ Stabilization Preliminary Design Investigation Report
Former Arkema, Inc. Facility
Portland, Oregon

Contamination Status	Sample Type		Mix Rat	ios dry soil)	Sample ID
		PC	С	SP	
					SDC Base
					SDC Ctrl
		5%			SDC 5 PC
		5%	1%		SDC 5 PC, 1 C
		5%	4%		SDC 5 PC, 4C
		5%		1.0%	SDC 5 PC, 1 SP
		5%		2.5%	SDC 5 PC, 2.5 SP
	ISS/ISCO	8%			SDC 7.5 PC
		8%		5.0%	SDC 7.5 PC, 5 SP
		10%			SDC 10 PC
		10%	1%		SDC 10 PC, 1C
		10%	4%		SDC 10 PC, 4 C
Some DNAPL		10%		1.0%	SDC 10 PC, 1 SP
Contamination (SDC)		10%		2.5%	SDC 10 PC, 2.5 SP
		10%		5.0%	SDC 10 PC, 5 SP
				0.0%	SDC Ctrl AAP
				1.0%	SDC 1 AAP
				2.0%	SDC 2 AAP
					PDI16 Base
				0.0%	PDI16 Ctrl AAP
	ISCO-only			1.0%	PDI16 1 AAP
				2.0%	PDI16 2 AAP
					PDI24 Base
				0.0%	PDI24 Control
				1.0%	PDI24 1 AAP
				2.0%	PDI24 2 AAP
					NEC Base
No Evidence of DNAPL	1000			0.0%	NEC Ctrl AAP
Contamination (NEC)	ISCO-only			1.0%	NEC 1 AAP
				2.0%	NEC 2 AAP

# Notes:

ISS = In Situ Stabilization

ISCO = In Situ Chemical Oxidation



# APPENDIX A BORING LOGS

Drilling Start Date: 08-Jul-2024
Drilling End Date: 09-Jul-2024
Drilling Contractor: Cascade Drilling

Drilling Contractor: Cascade Drillin

Drilling Method: Sonic

Rig Make/Model: TSI

Driller: Chris Baker

SSC Contractor: GPRS

SSC Method: Private Locate

SSC Diam./Depth: Not Applicable

Northing: 702119.140
Easting: 7627675.936
Surface Elevation: 37.0 ft amsl
Borehole Diameter: 10 in

Borehole Depth: 87.0 ft bgs
Water Encountered: 27.0 ft bgs
Logged By: David Stone
Reviewed By: Avery Soplata, RG

Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

Depth (ft) Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
			GROUND SURFACE				
0-	0		Gravel, angular, geotextile at 0.6, dry, no odor	0.6	GW	00000	A b .
			Dark Greyish Brown (10 YR 4/2) Fine Sand with Gravel/cobble (~20%), angular, moist, no odor	0.9			V V V
			Dark Greyish Brown (10 YR 4/2) Fine Sand with silt (20%), minor gravel (<10%), moist, no odor	0.5			V . V . V . V . V . V . V . V . V . V .
		40					▼ . ▼ ▼ . ▼ ▼ . ▼
							V V V
5-	0		Dark Greyish Brown (10 YR 4/2), Fine Sand, minor gravel (<10%), 0.25"-1", angular, moist, no odor	5.0	SW		\$\ \P\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \
-			angular, moise, no oddi				V V V
							P
		100					V V V
							V V V
							V V V V V V V V V V V V V V V V V V V
10-	3.1		Dark Grey (5Y 4/1), Silt and Clay, medium plasticity, minor fine sand (5%), wet,	10.0			A A A
			strong initial solvent odor	10.7	ML		A
			Dark Greyish Brown (10 YR 4/2), Fine sand, gravel and debris (brick, roots) present, gravel size 0.25-1.5" and angular, moist, solvent odor				
-		100					V V V
-		100			SW		V . V . V . V . V . V . V . V . V . V .
							P
_			Dark Grey (5Y 4/1), Silt and Clay, medium plasticity, wet, mild solvent odor,	14.5 15.0			V V V
15	1.1		Dark Grey (5Y 4/1), Silt and Clay, medium plasticity, <5% fine sand, wet, slight solvent odor		ML		V V V
15-	1.1		Dark Grey (5Y 4/1), Silt and Clay, medium plasticity, <5% fine sand, wet, slight	14.5 15.0	ML		V . V . V . V . V . V . V . V . V . V .



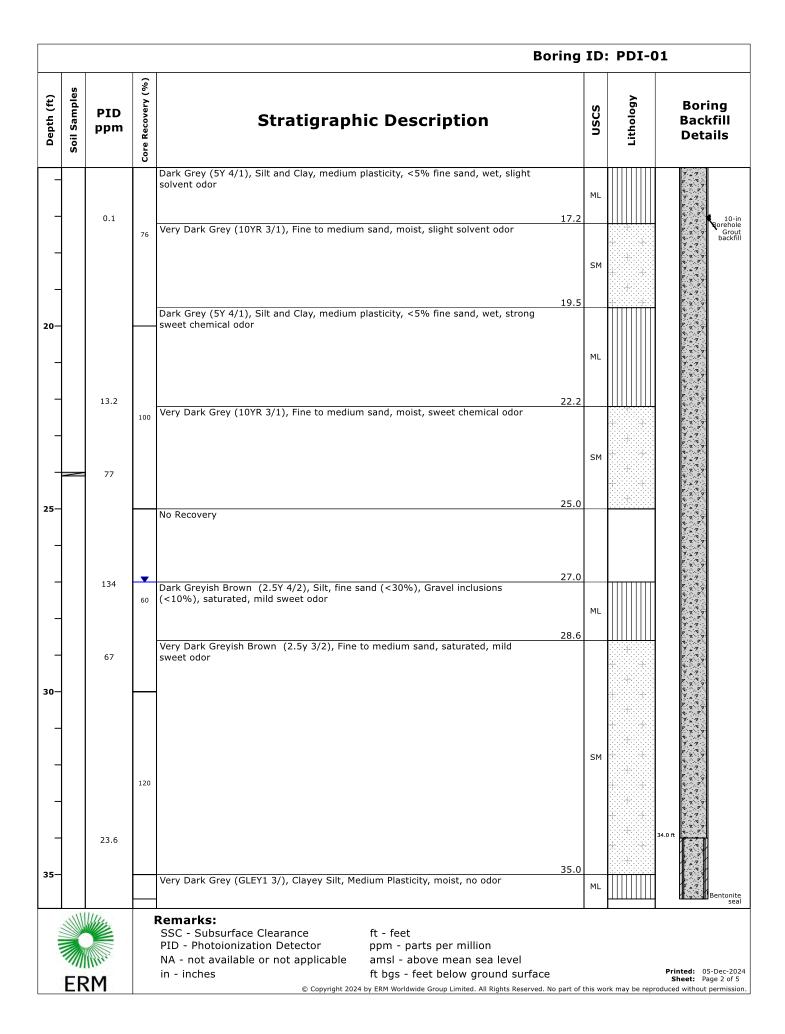
## **Remarks:**

in - inches

SSC - Subsurface Clearance

PID - Photoionization Detector NA - not available or not applicable ft - feet

ppm - parts per million amsl - above mean sea level



					Boring	ID	PDI-0	01
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
_		0.2		Very Dark Grey (GLEY1 3/), Clayey Silt, Medium Plasticity, moist, no odor	27.0	ML		8-in Borehole Grout backfill
_		1.3	100	Black (GLEY1 2.5/), Fine sand, trace silt (<5%), wood chip found at 37', saturated, no odor	37.0	SP		37.0 ft 2
_				Very Dark grey (GLEY1 3/) Clayey Silt, Medium Plasticity, moist, no odor	38.8	ML		P C C C C C C C C C C C C C C C C C C C
40-		25		Dark Olive Grey (5y 3/2) Silty Clay, saturated, no odor	40.0			\$ 100 mm
_								Bentonite seal
_			100					
45-		17						44.0 ft
_								
_			100			CL		* * * * * * * * * * * * * * * * * * *
_								
50-		13						
_								
_			100	Very Dark Greenish Grey (GLEY1 3/IOGY) Clay, some silt, saturated, no odor	53.0			\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
55-		5.5						
								^7 -
				Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million NA - not available or not applicable amsl - above mean sea level				
	ER	M		in - inches ft bgs - feet below ground sur  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Rese		his wo	rk may be rep	Printed: 05-Dec-2024 Sheet: Page 3 of 5 roduced without permission.

				Вог	ring	ID:	PDI-0	)1
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
_			80	Very Dark Greenish Grey (GLEY1 3/IOGY) Clay, some silt, saturated, no odor Dark Olive Grey (5y 3/2) Silty Clay, saturated, no odor	55.9/	CL		
60-		4		Dark Olive Grey (5y 3/2) Clayey Silt, some fine sand (10%), saturated, no odor	60.0			
-			50					6-in Borehole Grout backfill
65— —		0.4						
-			90			ML		
70-		0.3						
_			80					
75-		1.4						
				Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable amsl - above mean sea level				<b>Printed:</b> 05-Dec-2024
	ER	M		in - inches ft bgs - feet below ground surface © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No	part of t	his worl	c may be repr	Sheet: Page 4 of 5

				Во	ring	ID:	PDI-0	01
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		USCS	Lithology	Boring Backfill Details
- 80-		0.8	80	Dark Olive Grey (5y 3/2) Clayey Silt, some fine sand (10%), saturated, no odor  Very Dark Greenish Grey (GLEY 3/10Y) Very Fine sand with silt, saturated, no	80.0			
   -   -			80	odor		ML		
85-			25	Fractured Basalt, rounded, 0.2 - 0.3 in subrounded basalt pebbles, angular basalt gravel  Boring terminated at 87 feet	85.0 87.0		+ + + + + + + + + + + + + + + + + + +	9 7 7 7 87.0 ft 2.7
90-								
95—								
2010	ER	RM	ı	Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable amsl - above mean sea level in - inches ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No	part of t	this wor	'k may be repi	<b>Printed:</b> 05-Dec-2024 <b>Sheet:</b> Page 5 of 5 roduced without permission.

**Drilling Start Date:** 10-Jul-2024 Drilling End Date: 11-Jul-2024 **Drilling Contractor:** Cascade Drilling

**Drilling Method:** Sonic Rig Make/Model: TSI **Driller:** Chris Baker **SSC Contractor:** GPRS **SSC Method:** Private Locate SSC Diam./Depth: Not Applicable Northing: 702167.761 Easting: 7627658.622 **Surface Elevation:** 37.0 ft amsl

Borehole Diameter: 10 in **Borehole Depth:** 85.0 ft bgs Water Encountered: 30.0 ft bgs Logged By: David Stone Reviewed By: Avery Soplata, RG

Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

מפטנוו (וונ)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
<b>)</b>				GROUND SURFACE Asphalt, dry	0.2		000000	\dot \notine
				Grey Gravel, <.25 in to 1 in, 25% pea gravel, silt matrix, moist, no odor	0.2			V V
1								V
╛							0000	A . A
			100					V V
$\downarrow$							00000	Ψ . Ψ . Ψ . Ψ .
								Ψ
$\dashv$								V V V
					5.0			
1		0.2			3.0			V V V
							0000	Δ × Δ · Δ · Δ · Δ · Δ · Δ · Δ · Δ · Δ ·
1								A . A .
				Grey Gravel, <.25 in to 1 in, 25% pea gravel, silt matrix, wet, no odor		GM	ASO O SO O	A. V. A.
			80					. Δ . Δ . Δ . Δ . Δ . Δ . Δ . Δ . Δ . Δ
4								V V
								V V
+							0000	V . V
							00000	A A A
1		19.3						A b
							00000	Δ. Δ. Δ.
1							0000	
								V V V
			110					V V V
1								A 7 A
					13.8		00000	V V
4		0.7		Dark Greyish Brown (2.5Y 4/2) Clayey Silt, moderate plasticity, moist, mild	13.8	ML		\dagger \dagg
				sweet odor Dark Olive Brown (2.5Y 3/3) Fine to Medium Sand, trace silt, moist, mild sweet	14.3	SW		V V
+		2.4		odor	15.0		00000	ν · · · · · · · · · · · · · · · · · · ·
				Grey Gravel, <.25 in to 1 in, 25% pea gravel, silt matrix, moist, no odor	13.0	GM	0000	ore

in - inches

PID - Photoionization Detector NA - not available or not applicable

ppm - parts per million amsl - above mean sea level ft bgs - feet below ground surface

Boring ID: PDI-02								
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
-			56	Grey Gravel, <.25 in to 1 in, 25% pea gravel, silt matrix, moist, no odor	20.0	GM		
_		4.4 8.4		Grey Gravel, <.25 in to 1 in, 25% pea gravel, silt matrix, moist, mild sweet odor  Dark Olive Brown (2.5Y 3/3) Fine to Medium Sand, trace silt, moist, mild sweet	21.5			9 P
-		13	100	odor				P. 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5
25-		7.7 31		Gray (5Y 6/1) Fine to Medium Sand, trace silt, yellow staining/mottling from 25-26.8' and 28.6-29.5', yellow to light red stain from 26.8-26.9', moist, strong sweet odor	25.0	SW		
-		21 50 15000	100					
30-		15000 14.6		Gray (Gley1 5/N) Clayey Silt, moderate plasticity, wet, strong sweet odor	30.0	ML		
		49.2 16.7		Gray (Gley1 5/N) Fine to medium sand, wet, strong sweet odor  Greenish Black (GLEY1 2.5/10Y) Clayey Silt, moderate plasticity, wet, strong sweet odor  Black (5y 2.5/1) Fine to medium sand, saturated, strong sweet odor	31.0	SW ML SW		31.0 ft
		10.3	100	Greenish Black (GLEY1 2.5/10Y) Clayey Silt, moderate plasticity, moist, strong sweet odor	32.0	ML		Bentonite seal 8-in Rorehole
35-		361 2 <del>32</del> 5		Gray (GLEY 1 6/N) Fine to medium sand, saturated, sheen visible throughout, saturated, strong sweet odor, bentonite plug placed from 31-35'  Black (GLEY1 2.5/) Fine Sand with trace silt, saturated, light sheen on surface of	34.0	SW		gorenoie grout backfill
	Ille	1111		boring and within, saturated, strong sweet odor  Remarks:				
111111111111111111111111111111111111111	ER	M	 	SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million NA - not available or not applicable in - inches ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No			wt	<b>Printed:</b> 05-Dec-2024 <b>Sheet:</b> Page 2 of 5

		Boring	ID:	PDI-0	2
	md OI	Stratigraphic Description	nscs	Lithology	Boring Backfill Details
2	8.7	Black (GLEY1 2.5/) Fine Sand with trace silt, saturated, light sheen on surface of boring and within, saturated, strong sweet odor  36.6  Dark Olive Gray (5Y 3/2) Silty Clay, moist, no odor, bentonite plug from 36-38'  37.4  Black (GLEY1 2.5/) Fine Sand, trace silt, saturated, no odor	SM CL SM		36.0 ft
- r	3.6	Dark Olive Gray (5Y 3/2) Silty Clay, moderate plasticity, saturated, no odor, negative soil and oil sample at 41'			38.0 ft [
- - -	90		CL		
45— 8	60				
50-	80	Very Dark Gray (Gley1 3/N) Silty Clay, moderate plasticity, saturated, mild sweet odor  51.2  Dark Olive Grey (5y 3/2) Clayey Silt, trace fine sand (<10%), moderate plasticity, saturated, no odor	ML		
55- 2	2.7				
ERM		Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable amsl - above mean sea level ft bgs - feet below ground surface			<b>Printed:</b> 05-Dec-2024 <b>Sheet:</b> Page 3 of 5

				Boring	ID	PDI-0	)2
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description	nscs	Lithology	Boring Backfill Details
-		5	86	Dark Olive Grey (5y 3/2) Clayey Silt, trace fine sand (<10%), moderate plasticity, saturated, no odor			
  -  -  -			80				6-in Rorehole Grout backfill
65—		2.9	80		ML		
70- - -		1.6	80				
75-		7.8		75.0 Dark olive Grey (5y 3/2), Silty fine sand, low plasticity, saturated, no odor	)		
	ER	2M	I	Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable amsl - above mean sea level in - inches ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No part o			<b>Printed:</b> 05-Dec-2024 <b>Sheet:</b> Page 4 of 5

				Bor	ing	ID:	PDI-	02
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
80-		1.6	70	Dark Olive Gray (5Y 3/2), Silty fine sand, low plasticity, saturated, no odor  Dark Olive Gray (5Y 3/2) Clayey Silt, trace fine sand (<10%), moderate plasticity, saturated, no odor  Very Dark Greenish Gray (GLEY2 3/10G) Fine Sand with silt and trace clay (10%), Clay silt chunks present, saturated, no odor  Basalt/competent layer, rounded/subrounded pieces ranging from, 3.5-0.25 inches, vesicular basalt  Boring terminated at 85 feet	80.0 80.9 84.0 85.0	ML	+ + + + + + + + + + + + + + + + + + + +	85.0 ft
95—								
	ER	RM		Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable amsl - above mean sea level in - inches ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No	part of t	:his wo	rk may be rep	Printed: 05-Dec-2024 Sheet: Page 5 of 5 roduced without permission.

Drilling Start Date: 12-Jul-2024
Drilling End Date: 15-Jul-2024
Drilling Contractor: Cascade Drilling

Drilling Contractor: Cascade Drilling Drilling Method: Sonic TSI Chris Baker SSC Contractor: GPRS SSC Method: Private Locate SSC Diam./Depth: Not Applicable

 Northing:
 702216.850

 Easting:
 7627678.046

 Surface Elevation:
 37.0 ft amsl

 Borehole Diameter:
 10 in

 Borehole Depth:
 85.0 ft bgs

Borehole Depth: 85.0 ft bgs
Water Encountered: 28.0 ft bgs
Logged By: David Stone
Reviewed By: Avery Soplata, RG

Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

	<u> </u>	aiii./ De	P	Not Applicable Coordinates are trait values. Survey renaing.			
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description	nscs	Lithology	Boring Backfill Details
0-				GROUND SURFACE Asphalt			4 P.
				L 0.3 Gravel, <.25 in to 1.5 in, fine sand/silt matrix, subangular gravel and pea gravel,		0000	V . V
-		1.6		moist from 3" to 4', more moist from 4'-5', increase in sand silt matrix at 5'-6', no odor			▼ ▼ ▼ ▼
						00000	A A A
							A
-						0000	A A A
			100			0000	7 . V
-		0.4				0000	V V
5-						0000	4
5		2.2					V V
-				6.0 Gravel, <.25 in to 1.5 in, fine sand/silt matrix, subangular gravel and pea gravel,			V V V
				wet			A . A
_		1.7			GM	00000	A . A .
						8000	V V
							V V V
_			80				A A A
							V V
10-		0.8					A
							A . A .
						0000	. ∀ . ∀
-							∇ ∇ ∇ ∇ ∇ ∇ ∇ ∇ ∇ Ω Ω Ω Ω Ω Ω Ω Ω Ω Ω Ω
							ν ν ν ν ν ν ν ν ν
-							ν ¬ ¬ ¬ ¬ ¬ ¬ ¬ ¬
			100	14.0			
				Pinkish Gray (7.5YR 6/2) Fine to Medium sand, light yellow staining from 15'-17', Light brown staining from 17.5'-18', dark gray/brown staining/mottling			ν
15-		2.4		from 19'-20', mild sweet odor	sw		V V V
		2.5					A . A .
$\vdash$	- 111	71	_				



## **Remarks:**

in - inches

SSC - Subsurface Clearance

PID - Photoionization Detector NA - not available or not applicable ft - feet

ppm - parts per million amsl - above mean sea level ft bgs - feet below ground surface

	Boring ID: PDI-03								
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details	
_		2.5 2.7		Pinkish Gray (7.5YR 6/2) Fine to Medium sand, light yellow staining from 15'-17', Light brown staining from 17.5'-18', dark gray/brown staining/mottling from 19'-20', mild sweet odor				V V V	
-		1	80						
		4.8 2.6						7. v. v. v. 10-in	
		2.0			20.0			▼ ▼ 10-in Forehole Frout Backfill	
20-		4.9 12.2		Pinkish Gray (7.5YR 6/2) Fine to Medium sand, dark gray/brown staining/mottling from 20'-23', mild sweet odor	20.0			F. V.	
_		11.8							
-		12.2	100	Pinkish Gray (7.5YR 6/2) Fine to Medium sand, no staining, silt inclusions, mild sweet odor	23.0				
-		3.1		Pinkish Gray (7.5YR 6/2) Fine to Medium sand, yellow/brown staining that appears in small patches, you can pick patches up as discrete silt inclusion, mild sweet odor	23.5/			▼ ▼	
25-		15.1		Pinkish Gray (7.5YR 6/2) Fine to Medium sand, yellow/brown staining that appears in small patches, you can pick patches up as discrete silt inclusion,	24.5			4	
-		14.7 29.4		strong sweet odor, 1-2" DNAPL globule at 28.5, 2-3" DNAPL globule at 29.7'		SW			
-		246						♥ ∀ ♥  • · · · · · · · · · · · · · · · · · ·	
-		388	100					A . A . A . A . A . A . A . A . A . A .	
_		863						P V P	
30-		15000		Pinkish Gray (7.5YR 6/2) Fine to medium sand with silt, 70% sand, 30% silt, 2-3" dark gray silt inclusions throughout, dark brown-grey staining throughout,	30.0			\$\frac{1}{2} \cdot \frac{1}{2}	
-		316		strong odor				\$\frac{\pi}{\pi}\tag{\pi}\$	
-				Pinkish Gray (7.5YR 6/2) Fine to medium sand, yellow staining from 32.5'-33.2',	32.0			7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	
-			100	trace organics, 1" black inclusion at 34.4', yellow staining at 34.4-35', strong sweet odor, trace DNAPL blebs from 35'-37.5				\$\frac{\pi}{\pi} \pi  \frac{\pi}{\pi}  \frac{\pi}{\pi} \	
-								P	
35-		3022						V V V V V V V V V V V V V V V V V V V	
- 5	Wille	With:		Remarks:					
				SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million NA - not available or not applicable amsl - above mean sea level					
	ER	M		in - inches ft bgs - feet below ground surface © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved.		his wor	rk may be repr	Printed: 05-Dec-2024 Sheet: Page 2 of 5 oduced without permission.	

				Bor	ing	ID:	PDI-0	)3
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
-			100	Pinkish Gray (7.5YR 6/2) Fine to medium sand, yellow staining from 32.5'-33.2', trace organics, 1" black inclusion at 34.4', yellow staining at 34.4-35', strong sweet odor, trace DNAPL blebs from 35'-37.5  Pinkish Gray (7.5YR 6/2) Fine to medium sand, Silt inclusions and organic fragments (wood chips) from 37.5-38', strong sweet odor, Gradational DNAPL 20-100% pore space from 38'-40', bentonite plug from 38-42'	37.5	SW		38.0 ft
40-		5012 163		Dark Olive Gray (5Y 3/2) Clayey Silt, saturated, strong odor	40.0 40.6	ML		Bentonite seal
		10.1 333.2		Light Gray (2.5y 7/1) silty clay, moderate plasticity, saturated, strong sweet	41.8	SW		Grout backfill 8-in Borehole
-		7.1	100	Black (5y 2.5/1) Fine to medium sand, trace silt, saturated, strong sweet odor	42.0	C.W.		
-		85				SW		44.0 ft
45-		15.6		Dark Olive Gray (5Y 3/2) clayey silt with fine sand (10%), low plasticity, saturated, increase in sand from 51.4' to 53.3', no odor	45.0			V V
		2.1	80			ML		Bentonite seal
_		2				ME		
-			100					3
55-		3.4			55.0			\$\frac{\partial}{\partial} \text{P} \\ \frac{\partial}{\partial} \text
				Dark Olive Gray (5Y 3/2) silty fine sand with clay, low plasticity, saturated, no odor		SM	F	
0.00	ER	2M	1	Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable in - inches ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No	anut a C	hia -	with some of the	<b>Printed:</b> 05-Dec-2024 <b>Sheet:</b> Page 3 of 5

				Bor	ing I	(D	PDI-0	3
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
_		62.4	80	Dark Olive Gray (5Y 3/2) silty fine sand with clay, low plasticity, saturated, no odor			+ +	
_		7.6	80			SM	+ + + + + + + + + + + + + + + + + + +	
60-		17.9					+ + + + + +	
_			100	Dark Olive Gray (5Y 3/2) Clayey silt with fine sand (10%), low plasticity, saturated, no odor	63.0			
65-		6.7		Dark Olive Gray (5Y 3/2) Fine sand with silt, minor clay, saturated, no odor	65.0	ML		6-in Borehole Grout backfill
_		3.4	90	Olive Gray (5y 4/2) Clayey silt, with fine sand, low plasticity, saturated, no odor	67.2	SM		
_		4				ML		
70-		11.1		Very Dark Greenish Gray (5GY 3/1) Fine sand with silt and silty clay interbeds, saturated, no odor	71.0			
_			100	Olive Gray (5y 4/2) Fine sand with silt, trace clay, saturated, no odor  Olive Gray (5y 4/2) silty clay, moist, no odor	72.4	SM	+ +	
75-		6.2		Olive Gray (5y 4/2) fine sand with silt, trace clay, saturated, no odor	75.0	CL SM	T	
100				Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable amsl - above mean sea level				
	ER	M		in - inches ft bgs - feet below ground surface © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No	part of thi	is wo	rk may be repro	Printed: 05-Dec-2024 Sheet: Page 4 of 5 oduced without permission.

					Boring	ID	PDI-0	)3
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
_		2.4		Olive Gray (5y 4/2) fine sand with silt, trace clay, saturated, no odor	76.2	SM		
			100	Dark Olive Gray (5Y 3/2) Silty clay with fine sand, low plasticity		CL		7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
		0.4		Very Dark Greenish Gray (10GY 3/1) clayey silt with fine sand, saturated, no odor	78.3			₩ . P - P - Q - Q - Q - Q - Q - Q - Q - Q - Q - Q
80-		4.6				ML		
-			100		02.6			\$ 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
85-		0.4		Very Dark Greenish Gray (10GY 3/1) fine to medium sand with silt, saturated, no odor  Very Dark Greenish Gray (10GY 3/1) clayey silt with fine sand, saturated, no odor, hit refusal at 85'	83.6 84.0 85.0	SM ML		85.0 ft
				Boring terminated at 85 feet	83.0			
90-								
95-								
133			ı	Remarks: SSC - Subsurface Clearance ft - feet				
liv.	ER	RM		PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable in - inches ppm - parts per million  amsl - above mean sea level ft bgs - feet below ground surfa  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserve		this wo	rk may be repi	Printed: 05-Dec-2024 Sheet: Page 5 of 5 roduced without permission.

Drilling Start Date: 16-Jul-2024
Drilling End Date: 16-Jul-2024
Drilling Contractor: Cascade Drilling

Drilling Contractor: Cascade Drillin
Drilling Method: Sonic
Rig Make/Model: TSI
Driller: Chris Baker
SSC Contractor: GPRS
SSC Method: Private Locate
SSC Diam./Depth: Not Applicable

 Northing:
 702267.422

 Easting:
 7627680.035

 Surface Elevation:
 37.0 ft amsl

 Borehole Diameter:
 10 in

Borehole Depth: 64.0 ft bgs
Water Encountered: 27.5 ft bgs
Logged By: David Stone
Reviewed By: Avery Soplata, RG

Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
0-				GROUND SURFACE Asphalt				N. O.
				Gravel, pea gravel, poorly sorted, angular, silty fine sand matrix (30%)	0.2		0000	□ ∇ □ ∇ □ □ □ □ □
4		1.2			1.1	GM		A . A .
				Gravel, pea gravel, poorly sorted, angular, silty fine sand matrix (10%), cobble-gravel size clasts (4"-0.25") present			0000	. v. v v. p
4				Very Dark Grayish Brown (2.5Y 3/2) silty fine sand, poorly sorted, cobble-gravel	2.0		00000	A A A
		1.4		inclusions, carbon debris and asbestos present				7 . V
4			60					V V
							#:::::: <del> </del>	V V
								V V
								Ø.
5_					5.0			▼
				Olive Brown (2.5Y 4/3) Fine to medium sand, poorly sorted, moist, slight sweet odor				V V
				Black (2.5Y 2.5/1) Fine sand to silt size particles, material appears as discrete	5.6			~ ~ ~
٦		3.1		masses/inclusions, moist	c 1			A. A.
				Pinkish White (7.5YR 7/2) Fine to medium sand, poorly sorted, slight sweet odor	6.1		# 1111	V V
٦				Olive Brown (2.5Y 4/3) Fine to medium sand, poorly sorted, silt inclusions	6.4			A A A
			80	(~.25"), wood chips present, moist, no odor				V . V
$\exists$								V V
						SM		V V
$\exists$		2.4						,
								V V
,-								V V
		0.4						V V V
4								7 . V
								A 7 A
$\downarrow$		2.6	75		12.2		Halida Hali	
		2.0		Brown (10YR 4/3) Fine to medium sand, poorly sorted, silt inclusions (~.25"),	14.4			Ø Ø
				moist, no odor				V . V
								Ÿ
								Γ
٦								V V
					15.0			V V
5-				No Recovery	13.0			A A A
- [								P . V .



# **Remarks:**

SSC - Subsurface Clearance

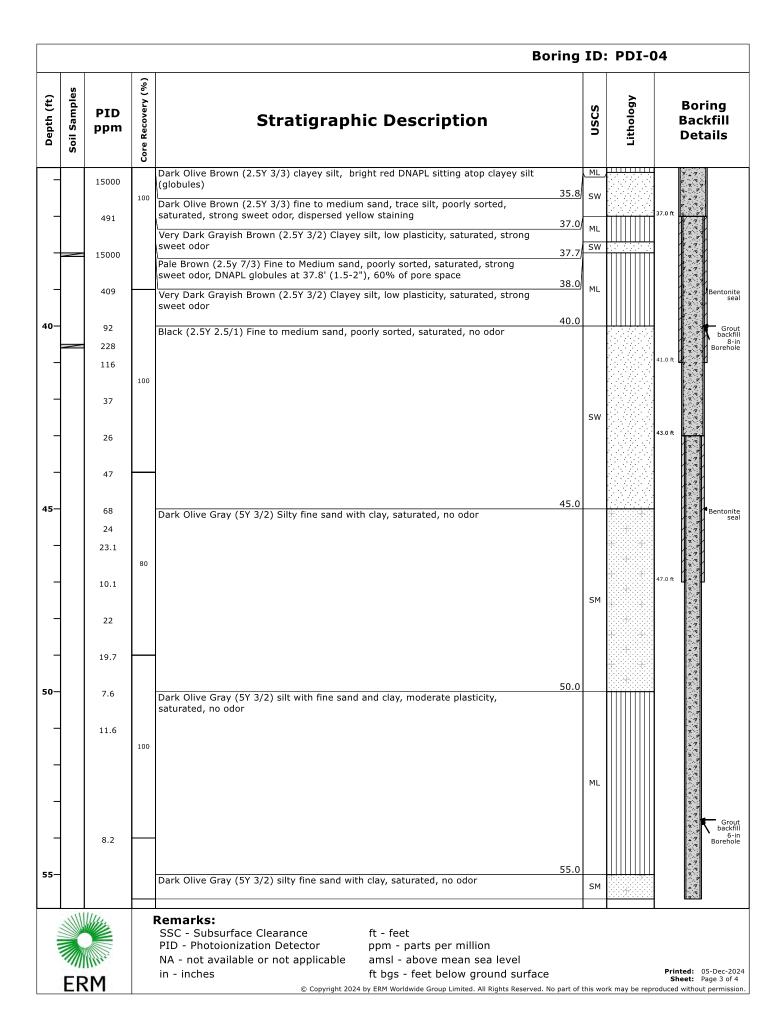
PID - Photoionization Detector NA - not available or not applicable

NA - not available or not applicab in - inches

ft - feet

ppm - parts per million amsl - above mean sea level ft bgs - feet below ground surface

				Во	ring	ID:	PDI-0	4
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
				No Recovery				V V
		0.7 8.2	48	Dark Yellowish Brown (10YR 3/4) Fine to medium sand, poorly sorted, moist, black fine sand to silt inclusions/globules that are wet, mild sweet odor  Brown (10YR 4/3) Fine to medium sand, poorly sorted, silt inclusions ranging from 0.25" - 1.5", moist, no odor  Brown (10YR 4/3) Fine to medium sand, poorly sorted, moist, mild sweet odor	17.6 18.3	SM		10-in Gorehole Grout backfill
_		6.4 6.8 4	100					V V V V V V V V V V V V V V V V V V V
-		12.3 6		Pinkish Gray (7.5YR 6/2) Fine to medium sand, poorly sorted, wet, mild sweet odor, yellow stain from 22.5' to 23.2', dispersed dark brownish to pink silt inclusions and laminations/beds from 23.2-25', Dispersed linear yellow staining from 26.1 - 28.6',	22.5			
25-		28.1 58.6 40.2	100					Y Y Y
_		19.7 11.6 11.6	•			SW		
30-		\$58 2800 15000	100	Pinkish Gray (7.5YR 6/2) Fine to medium sand, poorly sorted, strong sweet odor, black and yellow staining from 30-30.8', dispersed yellow staining from 30.8 - 33.2', DNAPL globules dispersed from 30.8-33.2, globules range in size from 0.5-1.5"	30.0			Y
-		15000 15000		Pale Brown (2.5y 7/3) Fine to medium sand, poorly sorted, saturated, strong sweet odor, dark red DNAPL stringers from 34.7-35	33.3			
35-		15000		Dark Olive Brown (2.5Y 3/3) clayey silt, bright red DNAPL sitting atop clayey silt (globules)	35.0	ML		
				Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable in - inches ft bgs - feet below ground surface				<b>Printed:</b> 05-Dec-2024
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				В	oring 1	ID:	PDI-0	04
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
-		24.7	80	Dark Olive Gray (5Y 3/2) silty fine sand with clay, saturated, no odor		SM	+ + + + + + + + + + + + + + + + + + +	
60-		13.5		Dark Olive Gray (5Y 3/2) clayey silt with trace fine sand, moderate plasticity, saturated, no odor	60.0		+ + + + + + + + + + + + + + + + + + + +	
		40 22	100	Vesicular basalt, vesicles 2-4 mm, brecciated 425" clasts, likely broken up by	63.0	ML	+ + + +	
65-				Core rod  Boring terminated at 64 feet	64.0		+ + + + + + + + + + + + + + + + + + + +	64.0 ft
-								
70-								
-								
75-	.,,11	III.	-					
	ER	RM		Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable amsl - above mean sea level in - inches ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved		iis wo	rk may be repr	<b>Printed:</b> 05-Dec-2024 <b>Sheet:</b> Page 4 of 4 oduced without permission.

Drilling Start Date: 17-Jul-2024
Drilling End Date: 17-Jul-2024
Drilling Contractor: Cascade Drilling

Drilling Contractor: Cascade Drillin
Drilling Method: Sonic
Rig Make/Model: TSI
Driller: Chris Baker
SSC Contractor: GPRS
SSC Method: Private Locate
SSC Diam./Depth: Not Applicable

 Northing:
 702350.672

 Easting:
 7627706.079

 Surface Elevation:
 37.0 ft amsl

 Borehole Diameter:
 10 in

Borehole Depth: 54.0 ft bgs
Water Encountered: 28.0 ft bgs
Logged By: David Stone
Reviewed By: Avery Soplata, RG

Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

		aiii./ De	P	Not Applicable coordinates are draft values. Survey rending.				
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
0-				GROUND SURFACE  Gray (2.5Y 6/1) Gravel (0.25"-1.5"), silty fine sand matrix, subangular, poorly			0000	[ <del>V V ZX</del> ]
				sorted, dry, no odor, 5 layers of geotextile liner at 1'		GM		V . V
$\dashv$				Very Dark Grayish Brown (2.5Y 3/2) Clayey silt, gravel to cobble sized clasts	1.0		200000	V . V
		3.3		present, bricks, carbon, non-fibrous ACM present, moist, no odor	2.0	ML		V V
+				Dark Gray (2.5Y 4/1) pea gravel and gravel, subangular to subrounded, poorly	2.0	GM	000000 0000	
				sorted, moist, no odor	2.6/		0000	A A A
٦		0.5	80	Dark Yellowish Brown (10YR 4/4) silty clay, very low plasticity, moist, no odor				7
						CL		A * A .
								∇ ∇ ∇ ∇ ∇
5-				Gray (2.5Y 6/1) Gravel (0.25"-1.5"), silty fine sand matrix, subangular, poorly	5.0		70000	A A
				sorted, no odor				V V
$\exists$		1.7				GM	0000	∵ ∇ ∇ • · · · · · · · · · · · · · · · · · · ·
					7.0			V V
٦			80	Very Dark Grayish Brown (2.5Y 3/2) clayey silt, rounded gravel size clasts interbedded with chunks of carbon and ACM	7.0	ML		∇ . ∀ . ∇ . ∇ Q ∇
		1	80	Pale Brown (2.5y 8/4) Fine to medium grained 1"-1.5" clast in silty fine grained	7.6/			V V V
		1		sand matrix, poorly sorted, no odor	7.7			
$\dashv$				Dark Yellowish Brown (10YR 4/4) silty fine sand, gravel to cobble sized clasts (0.25"-3"), poorly sorted, ACM present along with bricks, moist, mild sweet odor				Δ Δ Δ Δ Δ Δ
						SM		V V
.0-							+	A A A
								V V
		3.4		Very Dark Gray (10YR 4/3) silt with fine sand, subrounded debris, carbon debris,	11.3			Δ ~ Δ Δ Δ Σ Δ
$\downarrow$				moist, mild sweet odor	12.0			V V V
			100	Brown (10YR 4/3) clayey silt, minor fine sand, medium plasticity, saturated, no odor				A A A
$\dashv$		2.1						ν ν ν ν
						ML		A A
┪								▼
L5-								V V V
-								Δ
								V V



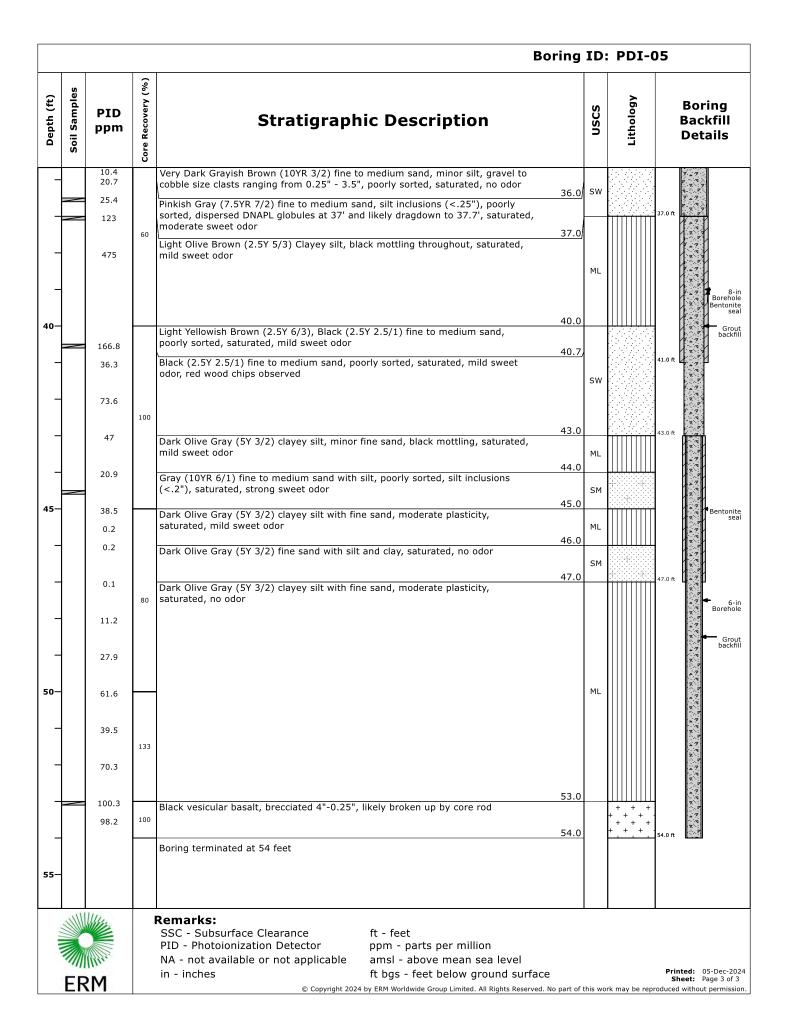
# **Remarks:**

SSC - Subsurface Clearance

PID - Photoionization Detector NA - not available or not applicable in - inches ft - feet

ppm - parts per million amsl - above mean sea level ft bgs - feet below ground surface

				•	Boring	ID:	PDI-0	)5
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
_		2.5		Brown (10YR 4/3) clayey silt, minor fine sand, medium plasticity, saturated, no odor	17.0	ML		▼
-		2.7	100	Dark Yellowish Brown (10YR 4/4) silty fine sand with gravel to cobble size clasts (0.25"-5"), poorly sorted, angular to rounded, moist, mild sweet odor. Metal, carbon debris, ACM, brick debris present.	17.0	SM	+ + + + + + + +	10-in Grout backfiil
20-		9.3		Very Dark Grayish Brown (2.5Y 3/2) clayey silt with subangular gravel, poorly sorted, moist, no odor, brick and concrete inclusions present	20.0			
     			30			ML		
25-		6.4		Very Dark Grayish Brown (2.5Y 3/2) Fine to medium sand, poorly sorted, small clayey silt inclusion (<0.25"), moist, no odor	25.0			A A
_		4.4	100			SW		. V . V . V . V . V . V . V . V . V . V
-		4	100	Dark Yellowish Brown (10YR 3/4) fine to medium sand, silt (30%), poorly sorted, saturated at 28', no odor	27.7	SM	+	
-		7.2		Very Dark Gray (10YR 3/1) silt with fine sand, very low plasticity, moist, no odor Very Dark Gray (10YR 3/1) fine to medium sand with silt, poorly sorted,	28.6 28.8			V V V V V V V V V V V V V V V V V V V
30-		15		saturated, moderate sweet odor  Very Dark Grayish Brown (10YR 3/2) fine to medium sand, minor silt, gravel to	30.0	SM	+	A
_		7.1		cobble size clasts ranging from 0.25" - 3.5", poorly sorted, saturated, no odor				P. v.
_		9.5	40			sw		
_								
35-		10.4						▼
	1111	Wife:	ı	Remarks:				<u> </u>
				SSC - Subsurface Clearance PID - Photoionization Detector NA - not available or not applicable in - inches  ft - feet ppm - parts per million amsl - above mean sea level ft bgs - feet below ground surfa	ace			Printed: 05-Dec-2024
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Drilling Start Date: 18-Jul-2024
Drilling End Date: 19-Jul-2024
Drilling Contractor: Cascade Drilling

Drilling Contractor: Cascade Drillin
Drilling Method: Sonic
Rig Make/Model: TSI
Driller: Chris Baker
SSC Contractor: GPRS
SSC Method: Private Locate
SSC Diam./Depth: Not Applicable

Northing: 702384.306
Easting: 7627714.763
Surface Elevation: 37.0 ft amsl
Borehole Diameter: 10 in

Borehole Depth: 52.5 ft bgs
Water Encountered: 30.0 ft bgs
Logged By: David Stone
Reviewed By: Avery Soplata, RG

Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
0-				GROUND SURFACE			,	[··· ·· · · · · · · ]
		1.8		Light Grey (Gley 1 7/) fine sand with silt, angular gravel, poorly sorted, dry, no odor		SM		V V
		1.6			1.9		+ + + + + + + + + + + + + + + + + + + +	A . A
-			80	Dark Olive Brown (2.5Y 3/3) clayey silt, minor fine sand, subrounded gravel inclusions throughout, geotextile at 1.9', 3.5"-4" cobble at top of interval, slough from upper formation from 5-7.6', moist, no odor				
+		6.5						7
5-								V V V
								V V V
			100		7.6			A A
+		8.2		Dark Olive Brown (2.5Y 3/3) clayey silt, minor fine sand, subrounded gravel inclusions throughout, moist, no odor				A A A
+		11.7				ML		V V V V V V V V V V V V V V V V V V V
ıo-								\(\frac{1}{2}\) \(\frac{1}2\) \(\frac{1}{2}\) \(\frac{1}2\) \(\frac{1}2\) \(\frac{1}2\) \(\frac{1}2\) \(\fraca
+		11.5						A A A A A A A A A A A A A A A A A A A
+			100					A A A A A A A A A A A A A A A A A A A
		11.4		Very Dark Brown (10YR 2/2) clayey silt, gravel to cobble sized clast inclusions, saturated, no odor	13.0			V V V V V V V V V V V V V V V V V V V
+		14.1						4
15-		14.1		Dark Brown (10YR 3/3) clayey silt, gravel to cobble sized clast inclusions, black mottling from 16'-20', saturated, no odor	15.0			V V V



**Remarks:** 

in - inches

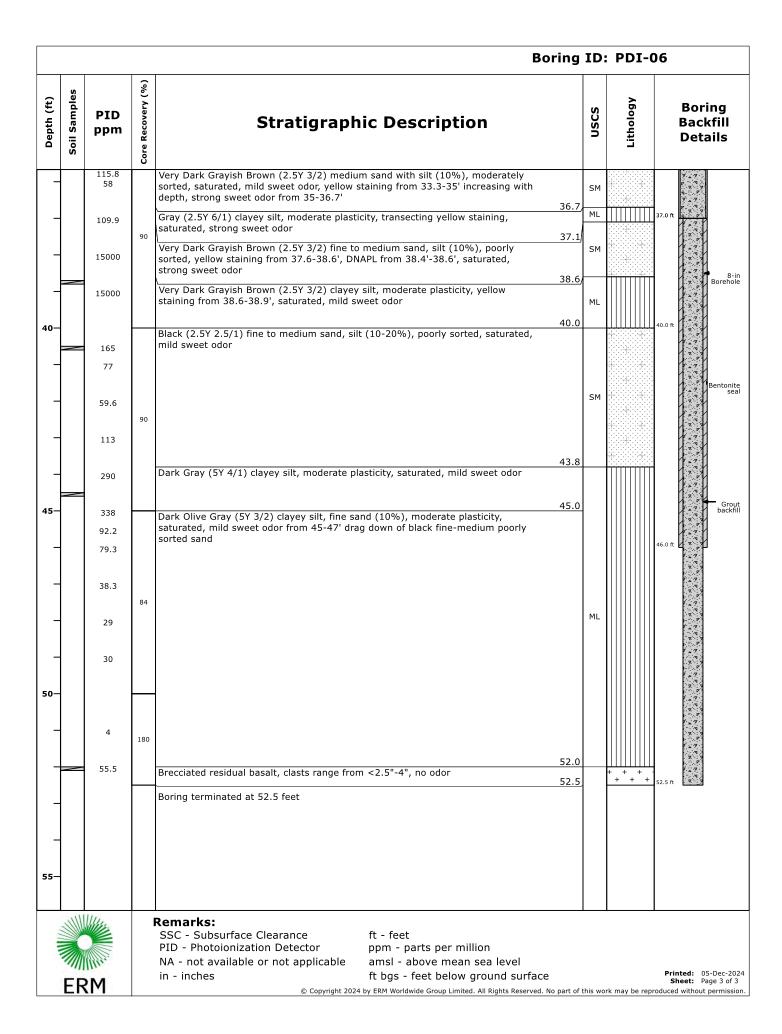
SSC - Subsurface Clearance

PID - Photoionization Detector NA - not available or not applicable ft - feet

ppm - parts per million amsl - above mean sea level

ft bgs - feet below ground surface

				Bor	ing	ID:	PDI-0	)6
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
_		24.3		Dark Brown (10YR 3/3) clayey silt, gravel to cobble sized clast inclusions, black mottling from 16'-20', saturated, no odor				V V V
								4 b. 
			100					V V V V V V V V V V V V V V V V V V V
		12.4						V V 10-in
-		24						10-in Borehole Grout backfill
20-		21						▼ . ▼
_		13.8				ML		7
		14.5						
		14.5	60					¬ · · · · P ·     ¬ · · · · · P · ·     ¬ · · · · · P · ·       ¬ · · · · · · · · · · · · · ·
								A b A b A A A A
-								7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
25-				Dark Brown (10YR 3/3) clayey silt, gravel to cobble size clasts inclusions, ACM,	25.0			
_		23.9 27.4		tiles with fibers, carbon debris, rubber present, glistening fluid with strong sweet odor on carbon piece at 26', saturated, no odor from soil				4 b. b d. b d. d d.
		27.4		Dark Brown (10YR 3/3) fine to medium sand, poorly sorted, wet, yellow-red stain (2-3") at 28.1', wet, no odor	26.5			V V V V V V V V V V V V V V V V V V V
		27.4	80				+ + + + + + + + + + + + + + + + + + + +	
-		22.3						V V V
-		3.2					+ + + + + + + + + + + + + + + + + + +	▼
30-			_	Very Dark Grayish Brown (2.5Y 3/2) fine to medium sand with silt, poorly	30.0	SM	*	▼
		13.3 6.7		sorted, saturated, mild sweet odor			****** ******	V V V
							+ +	4
		21.8	80		32.8		+ +	φ . Ψ
-		101.6		Very Dark Grayish Brown (2.5Y 3/2) silt with fine sand, low plasticity, saturated, mild sweet odor	33.1	ML	# # # # # # # # # # # # # # # # # # #	P
-		77.9		Very Dark Grayish Brown (2.5Y 3/2) medium sand with silt (10%), moderately sorted, saturated, mild sweet odor, yellow staining from 33.3-35' increasing with depth, strong sweet odor from 35-36.7'	1	SM	+ +	V V V V V V V V V V V V V V V V V V V
35-				acpui, strong sweet oddr ffolii 55-50.7		ا⁴اد	+ +	
		115.8						У _ V _ V
10.5				Remarks: SSC - Subsurface Clearance ft - feet				
				PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable amsl - above mean sea level				Buinted, OF Dec 2004
	ER	M		in - inches ft bgs - feet below ground surface © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No	part of t	:his wo	rk may be repr	Printed: 05-Dec-2024 Sheet: Page 2 of 3 oduced without permission.



**Drilling Start Date:** 22-Jul-2024 **Drilling End Date:** 23-Jul-2024 **Drilling Contractor:** Cascade Drilling

**Drilling Method:** Sonic Rig Make/Model: TSI **Driller:** Chris Baker **SSC Contractor:** GPRS SSC Method: Private Locate SSC Diam./Depth: Not Applicable Northing: 702423.451 Easting: 7627694.395 **Surface Elevation:** 37.0 ft amsl Borehole Diameter: 10 in

**Borehole Depth:** 54.0 ft bgs Water Encountered: 28.0 ft bgs Logged By: David Stone Reviewed By: Avery Soplata, RG

Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		USCS	Lithology	Boring Backfill Details
0-		1.6		GROUND SURFACE  Brown (10YR 4/3) silty fine sand, poorly sorted gravel to cobble sized clasts that are angular/subangular, dry, no odor		SM		
_		0.6	120	Dark Brown (10YR 3/3) clayey silt, minor fine sand, characterized by discrete fragmented chunks, dispersed subrounded to subangular gravel to cobble sized clasts from (.75" to 5"), moist, no odor	2.5			
5-		4.1 3.4 1.3		Dark Brown (10YR 3/3) clayey silt, minor fine sand, more massive less fragmented, dispersed subrounded to subangular gravel to cobble sized clasts from (.75" to 5"), moist, no odor, glass shards at 6' and 9', rubble present at 8.5'	5.0			
_		2.8	100			ML		
-0.0		2.2		Dark Brown (10YR 3/3) clayey silt, minor fine sand, more massive less fragmented, dispersed subrounded to subangular gravel to cobble sized clasts from (.75" to 5"), wet, no odor, non-friable ACM present at 18.3'	10.0			V V V V V V V V V V V V V V V V V V V
_		4.8	100					
15-	1111	2.2		Remarks:				\$



## **Remarks:**

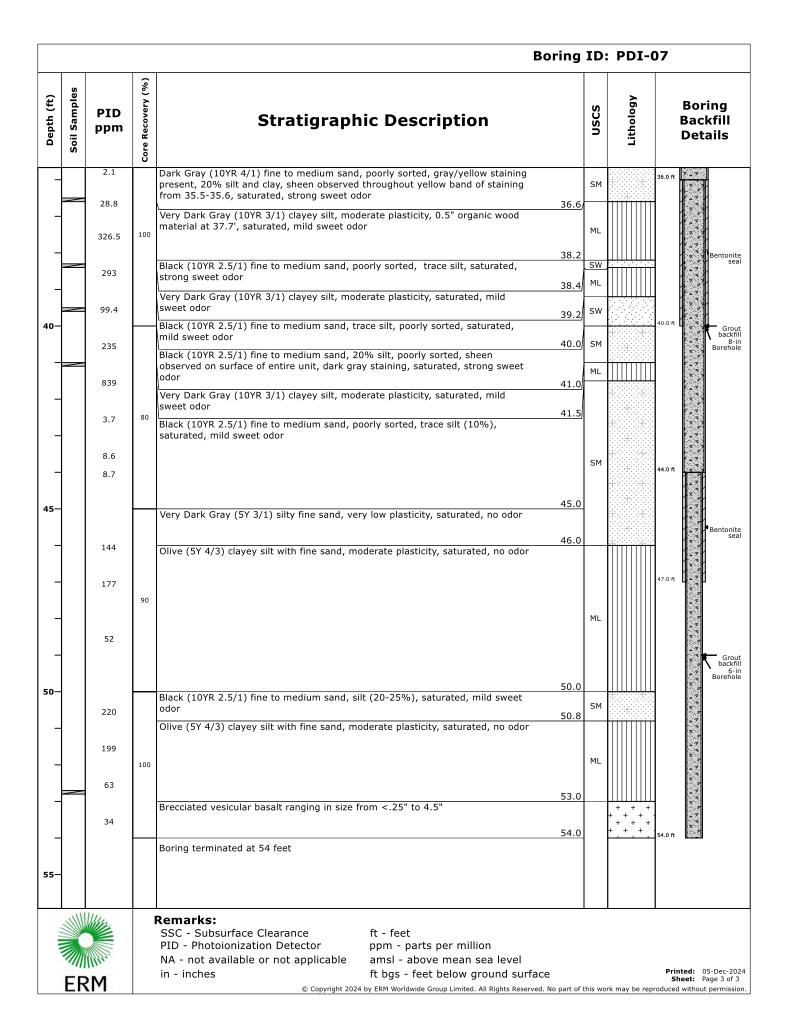
in - inches

SSC - Subsurface Clearance

PID - Photoionization Detector NA - not available or not applicable

ft - feet ppm - parts per million amsl - above mean sea level ft bgs - feet below ground surface

				Во	ring	ID	: PDI-0	)7
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
_		9.2		Dark Brown (10YR 3/3) clayey silt, minor fine sand, more massive less fragmented, dispersed subrounded to subangular gravel to cobble sized clasts from (.75" to 5"), wet, no odor, non-friable ACM present at 18.3'				▼
_		8.9	110					7 7 10-in Francische Grout backfill
20-		4.3		Dark Olive Gray (5y 3/2) clay silt, moderate plasticity, poorly sorted gravel to cobble sized inclusions (<.25 to 6.5"), clasts are subrounded to subangular, moist, no odor  Dark Brown (10YR 3/3) clayey silt, minor fine sand, subrounded to subangular	20.0	ML		
_		1.1		gravel to cobble sized inclusions, brick debris present, wet, no odor				
		1.1	120	Dark Brown (10YR 3/3) medium sand, moderately sorted, clayey silt inclusions ranging from 0.25" to 3" evenly dispersed, wet, no odor	23.0			
_				Tanigning from 0.25 to 3 evenity dispersed, wet, no odoi	25.0	SW		
25-		1.8		Dark Brown (10YR 3/3) clayey silt with fine sand, subrounded to subangular gravel to cobble sized rock inclusion, wet, no odor	23.0			
		1.6				ML		
-		2.2	100	Dark Brown (10YR 3/3), medium sand, moderately sorted, clayey silt inclusions	28.3			
_		1.7		ranging from 0.25"-3" evenly dispersed, dispersed reddish-brown staining at 29.5'-30', no odor, saturated at 28', mild sweet odor at 30'				
30-		1.3				SW		7
_		0.6	100	Very Dark Brown (10YR 2/2) medium sand, moderately sorted, dispersed yellow brown staining throughout, saturated, mild sweet odor	31.6			\( \frac{1}{2} \) \( \frac{1} \) \( \frac{1} \) \( \frac{1}{2} \) \( \frac{1}{2} \
		3		Very Dark Gray (2.5Y 2/1) silt with fine sand, minor clay, very low plasticity, saturated, mild sweet odor		ML		
35-		3.3			35.0	SM		
	111	2.1						√··•γ···•γ•
111111111111111111111111111111111111111				Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million NA - not available or not applicable amsl - above mean sea level				
	ER	M		in - inches ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. N	o part of t	his wo	rk may be repr	Printed: 05-Dec-2024 Sheet: Page 2 of 3 oduced without permission.



Drilling Start Date: 24-Jul-2024
Drilling End Date: 24-Jul-2024
Drilling Contractor: Cascade Drilling

Drilling Contractor: Cascade Drilling Drilling Method: Sonic TSI Chris Baker SSC Contractor: GPRS SSC Method: Private Locate SSC Diam./Depth: Not Applicable

Northing: 702444.212
Easting: 7627708.887
Surface Elevation: 36.0 ft amsl
Borehole Diameter: 10 in

Water Encountered: 51.0 ft bgs
Water Encountered: 28.0 ft bgs
Logged By: David Stone
Reviewed By: Avery Soplata, RG
Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
0-				GROUND SURFACE				
• -				Clayey Silt, gravel to pebble sized clasts ranging from <0,25" to 6", poorly sorted, subangular to subrounded, dry from 0-1', moist from 1-2', no odor				
		1.2		Dark Olivo Brown (2 EV 2/2) alayou silt silt in fragmented with available ashble	2.0			V V V
_			120	Dark Olive Brown (2.5Y 3/3) clayey silt, silt is fragmented with gravel to cobble sized clasts ranging from <.25" to 6", poorly sorted, wet, no odor, brick debris, carbon debris, ACM at 2.5'				7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
		4			4.0			V V
		4		Dark Olive Brown (2.5Y 3.3) clayey silt, moderate plasticity, more competent and less friable than silt from 2-4', minor gravel inclusions, wet, no odor	5.0			A A A
5-		43.5		Dark Olive Brown (2.5Y 3.3) clayey silt, moderate plasticity, dispersed subrounded gravel inclusions, 5" subrounded cobble at 7.5', saturated, no odor				V V V V V V V V V V V V V V V V V V V
		4.6						4 P.
-			12					V V V
$\exists$		6.6				ML		V V
$\exists$								V V V V V V V V V V V V V V V V V V V
0-		7.1		Dark Olive Brown (2.5Y 3.3) clayey silt, moderate plasticity, dispersed subrounded gravel inclusions, 9" subrounded cobble at 11.5', dark brown to	10.0			V V
		9.3		black beds with woody organics at 11' and 14.5' (1-2" thick), saturated, no odor				V V V V V V V V V V V V V V V V V V V
			110					
+		3.8	1110					▼
$\dashv$								
5-		1.4			15.0			V V V
								V . V



## **Remarks:**

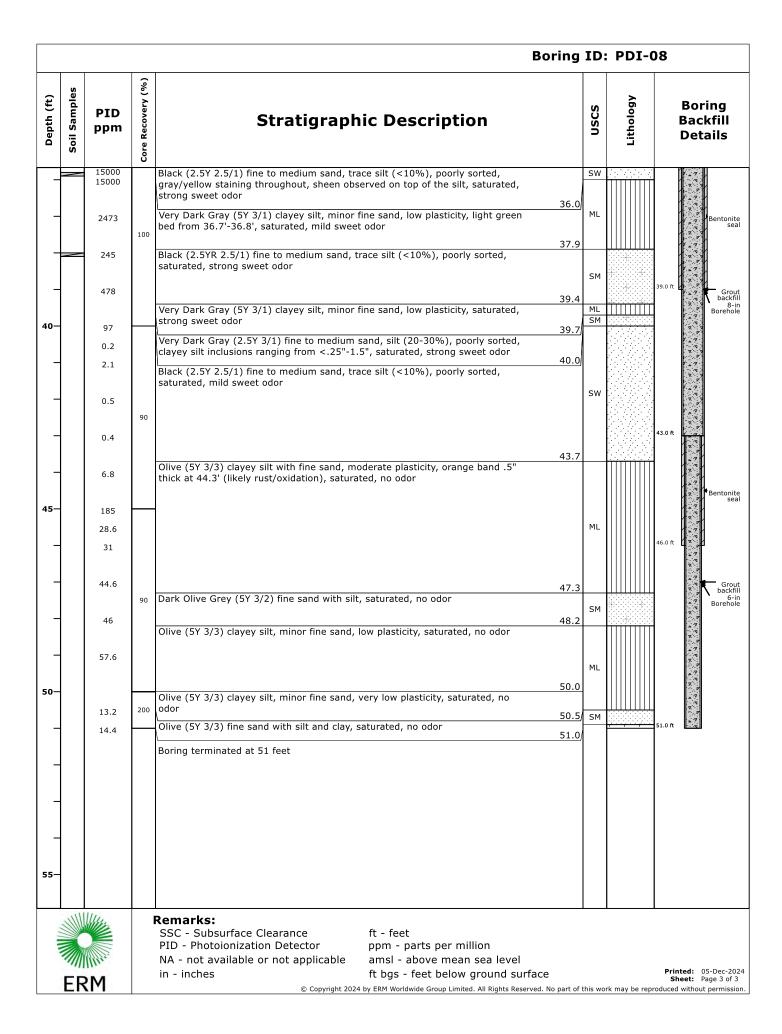
in - inches

SSC - Subsurface Clearance

PID - Photoionization Detector NA - not available or not applicable ft - feet

ppm - parts per million amsl - above mean sea level ft bgs - feet below ground surface

				Во	ring	ID:	PDI-0	8
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
-		1.5	100	Dark Olive Brown (2.5Y 3/3) clayey silt, fragmented, subrounded gravel to cobble sized clasts, poorly sorted, moderate plasticity, moist, no odor, likely slough  Dark Olive Brown (2.5Y 3/3) loose clayey silt, pea gravel to pebble sized clasts, subangular to subrouned, moist, no odor, (likely slough)  Dark Olive Brown (2.5Y 3/3) clayey silt, gravel to cobble sized inclusions, subrounded to subangular, moderate plasticity, moist, no odor	17.0 18.0			y 10-in y Growthole Grout backfill
20-		27.4 22		Dark Olive Brown (2.5Y 3/3) clayey silt, gravel to cobble sized inclusions, subrounded to subangular, moderate plasticity, 6.5" subangular vesicular basalt cobble at 24', dark brown to black 4" organic bed with woody debris from 22.6'-22.9', saturated, no odor	20.0			Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y
_		205	100			ML		
25— —		96 56.5 13.2		Dark Olive Brown (2.5Y 3/3) clayey silt, gravel to cobble sized inclusions, subrounded to subangular, moderate plasticity, saturated, mild sweet odor	25.0			
-		41.9	100		20.0			▼
_		16.8 8.9	•	Black (2.5Y 2.5/1) fine to medium sand, trace silt (<10%), clayey silt inclusions throughout ranging from .25"-4", 6" subrounded cobble at 29', saturated, mild sweet odor	28.0	SW		V V V
30-		12.7		Dark Brown (10YR 3/3) silt with fine to medium sand, very low plasticity, loose, saturated, no odor Dark Brown (10YR 3/3) fine to medium sand, trace silt (<10%), moderately	30.0	ML		
_		7.1 14.2	100	sorted, saturated, no odor  Black (2.5Y 2.5/1) fine to medium sand,trace silt (<10%), clayey silt with minor fine sand inclusions throughout, woody debris at 32.5', saturated, no odor	31.9	SW		
		9.6		Very Dark Gray (5Y 3/1) clayey silt, rhythmic laminations visible throughout,low plasticity, saturated, no odor  Black (2.5Y 2.5/1) fine to medium sand, trace silt (<10%), poorly sorted,	34.2	ML		
35-		22 15000		saturated, no odor	35.0	SW		35.0 ft
				Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million NA - not available or not applicable amsl - above mean sea level				
	ER	M		in - inches ft bgs - feet below ground surface © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. N		this wo	rk may be repre	<b>Printed:</b> 05-Dec-2024 <b>Sheet:</b> Page 2 of 3 oduced without permission.



Drilling Start Date: 19-Jul-2024
Drilling End Date: 22-Jul-2024
Drilling Contractor: Cascade Drilling

Drilling Contractor: Cascade Drillin
Drilling Method: Sonic
Rig Make/Model: TSI
Driller: Chris Baker
SSC Contractor: GPRS
SSC Method: Private Locate
SSC Diam./Depth: Not Applicable

 Northing:
 702154.812

 Easting:
 7627709.165

 Surface Elevation:
 37.0 ft amsl

 Borehole Diameter:
 10 in

Borehole Depth: 89.0 ft bgs
Water Encountered: 25.0 ft bgs
Logged By: David Stone
Reviewed By: Avery Soplata, RG

Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

GROUND SURFACE Gravel, poorly sorted, angular, clasts from .25-1.5", geotech liner at 0.6', dry, no odor .0.6 Gravel, poorly sorted, angular, clasts from .25-1.5", geotech liner at 0.6', dry, no odor .0.6 Light Brownish Gray (2.5Y 6/2) silty fine storm and, moderately sorted, angular gravel inclusions, aspahat pieces from 1.6-1.7', moist, no odor .1.7 Light Brownish Gray (2.5Y 6/2) silty fine sand, poorly sorted, subrounded gravel .15%, red staining at 2.5', moist, mild sweet odor .5.7  Very Dark Grayish Brown (10YR 3/2) fine to medium sand, clayey silt inclusions, poorly sorted, moist, mild to sweet odor .5.7  Very Dark Grayish Brown (10YR 3/2) fine to medium sand, clayey silt inclusions, poorly sorted, moist, mild to sweet odor .5.7  Oilve Brown (2.5R 4/3) clayey silt with fine sand, low plasticity, saturated, mild .5.7  Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, moist, no odor .5.8  Gray (10YR 6/1) clayey silt with fine sand, low plasticity, yellow staining from .5.8  Gray (10YR 6/1) clayey silt with fine sand, low plasticity, yellow staining from .5.8  Gray (10YR 6/1) clayey silt with fine sand, low plasticity, yellow staining from .5.8  Gray (10YR 6/1) clayey silt with fine sand, low plasticity, yellow staining from .5.8  Light Sorted .5.7  Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, clayey .5.8  SW  10-1  11	Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		sosn	Lithology	Boring Backfill Details
Gravel, poorly sorted, angular, clasts from .25-1.5", geotech liner at 0.6', dry, no oder odor odor overy Dark Grayish Brown (10YR 3/2) fine to medium sand, moderately sorted, subrounded gravel									
oravel, poorly sorted, angular, clasts from .25-1.5 , geoteen liner at 0.6, dry, no ocal 20-00 color captured angular gravel inclusions, asphalt pieces from 1.6-1.7 , moist, no odor 1.7 colors angular gravel inclusions, asphalt pieces from 1.6-1.7 , moist, no odor 1.7 colors angular gravel inclusions, asphalt pieces from 1.6-1.7 , moist, no odor 1.7 colors angular gravel inclusions, asphalt pieces from 1.6-1.7 , moist, no odor 1.7 colors angular gravel inclusions and poorly sorted, subrounded gravel 2.5 colors angular discovery colors and captured gravel 2.5 colors angular discovery colors and captured gravel 2.5 colors angular discovery colors and captured gravel 2.5 color	0-				GROUND SURFACE				
Very Dark Grayish Brown (10YR 3/2) fine to medium sand, moderately sorted, angular gravel inclusions, asphalt pieces from 1.6-1.7; moist, no odor							GP		V V
angular gravel inclusions, asphalt pieces from 1.6-1.7', moist, no odor  1.7  1.8  1.9  1.9  1.9  1.9  1.9  1.9  1.9			0.2			0.6		00004	4 · · · · Δ · · · Δ · · · Δ · · · · Δ · ·
Light Brownish Gray (2.5Y 6/2) silty fine sand, poorly sorted, subrounded gravel  1.3  0.1  72  1.5%, red staining at 2.5', moist, mild sweet odor  Very Dark Grayish Brown (10YR 3/2) fine to medium sand, clayey silt inclusions, poorly sorted, moist, mild to sweet odor,  0.1  Olive Brown (2.5R 4/3) clayey silt with fine sand, low plasticity, saturated, mild sweet odor  0  2.1  3.4  1.6  1.1  Gray (10YR 6/1) clayey silt with fine sand, low plasticity, yellow staining from 10.4'-10.8', gravel from 10.8'-11.1', moist, no odor  1.4  2.1  Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, clayey silt inclusions (<.25'') from 15'-15.5', moist, no odor  1.4  2.5  SW  SW  SW  SW  SW  1.5  1.5  SW  SW			0.1			1.7	SW		7 7 V
SM  Very Dark Grayish Brown (10YR 3/2) fine to medium sand, clayey silt inclusions, poorly sorted, moist, mild to sweet odor,  Olive Brown (2.5R 4/3) clayey silt with fine sand, low plasticity, saturated, mild sweet odor  Olive Brown (2.5R 4/3) clayey silt with fine sand, low plasticity, saturated, mild sweet odor  2.1  Olive Brown (10YR 4/4), fine to medium sand, poorly sorted, moist, no odor  SW  Olive Brown (10YR 4/4), fine to medium sand, poorly sorted, moist, no odor  SW  Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, clayey silt inclusions (<.25*) from 15*-15.5', moist, no odor  1.4  Olive Brown (10YR 4/4), fine to medium sand, poorly sorted, clayey silt inclusions (<.25*) from 15*-15.5', moist, no odor  SW  SW  SW  15-15.5			4.2			1.7		#::::#::	ν . ν ν . ν
SM  Very Dark Grayish Brown (10YR 3/2) fine to medium sand, clayey silt inclusions, poorly sorted, moist, mild to sweet odor,  O.1  O.1  Oilve Brown (2.5R 4/3) clayey silt with fine sand, low plasticity, saturated, mild sweet odor and poorly sorted, moist, no odor  Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, moist, no odor  SW  Gray (10YR 6/1) clayey silt with fine sand, low plasticity, yellow staining from 10.4'-10.8', gravel from 10.8'-11.1', moist, no odor  1.6  1.1  Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, clayey silt inclusions (<.25") from 15'-15.5', moist, no odor  SW  SW  SW  SW  SW  SW  SW  11.1					~15%, red staining at 2.5', moist, mild sweet odor				<b>∀</b>
SM  Very Dark Grayish Brown (10YR 3/2) fine to medium sand, clayey silt inclusions, poorly sorted, moist, mild to sweet odor,  Olive Brown (2.5R 4/3) clayey silt with fine sand, low plasticity, saturated, mild sweet odor  Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, moist, no odor  SW  Oracle Structure Structur			0.1	72				++-	A A A
Set of the second secon	-								V . V
Very Dark Grayish Brown (10YR 3/2) fine to medium sand, clayey silt inclusions, poorly sorted, moist, mild to sweet odor,  Oilve Brown (2.5R 4/3) clayey silt with fine sand, low plasticity, saturated, mild sweet odor  Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, moist, no odor  Sw  Gray (10YR 6/1) clayey silt with fine sand, low plasticity, yellow staining from 10.4'-10.8', gravel from 10.8'-11.1', moist, no odor  Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, clayey silt inclusions (<.25") from 15'-15.5', moist, no odor  Sw  11.1  Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, clayey silt inclusions (<.25") from 15'-15.5', moist, no odor  15.5			0.5					*	
Very Dark Grayish Brown (10YR 3/2) fine to medium sand, clayey silt inclusions, poorly sorted, moist, mild to sweet odor,  Olive Brown (2.5R 4/3) clayey silt with fine sand, low plasticity, saturated, mild sweet odor  Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, moist, no odor  1.6 1.1 1.7 1.8 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9							SM	4	p
Very Dark Grayish Brown (10YR 3/2) fine to medium sand, clayey silt inclusions, poorly sorted, moist, mild to sweet odor,  Olive Brown (2.5R 4/3) clayey silt with fine sand, low plasticity, saturated, mild sweet odor  Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, moist, no odor  1.6 1.1  Gray (10YR 6/1) clayey silt with fine sand, low plasticity, yellow staining from 10.4'-10.8', gravel from 10.8'-11.1', moist, no odor  Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, clayey silt inclusions (<.25") from 15'-15.5', moist, no odor  Sw  1.4 80  15- 2.5  15-5								#	
Very Dark Grayish Brown (10YR 3/2) fine to medium sand, clayey silt inclusions, poorly sorted, moist, mild to sweet odor,  Olive Brown (2.5R 4/3) clayey silt with fine sand, low plasticity, saturated, mild sweet odor  Olive Brown (2.5R 4/3) clayey silt with fine sand, low plasticity, saturated, mild sweet odor  Olive Brown (2.5R 4/3) clayey silt with fine sand, low plasticity, saturated, mild sweet odor  Olive Brown (2.5R 4/3) clayey silt with fine sand, low plasticity, saturated, mild sweet odor  Olive Brown (10YR 4/4), fine to medium sand, poorly sorted, moist, no odor  Ind  Olive Brown (2.5R 4/3) clayey silt with fine sand, low plasticity, yellow staining from 10.0  Sw  Olive Brown (2.5R 4/3) clayey silt with fine sand, low plasticity, yellow staining from 10.0  Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, clayey silt inclusions (<.25") from 15'-15.5', moist, no odor  Sw  Olive Brown (2.5R 4/3) clayey silt with fine sand, low plasticity, yellow staining from 10.0  Sw  Ind  Ind  Ind  Ind  Ind  Ind  Ind  In								4	N N V
poorly sorted, moist, mild to sweet odor,  Olive Brown (2.5R 4/3) clayey silt with fine sand, low plasticity, saturated, mild sweet odor  Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, moist, no odor  Sw  Gray (10YR 6/1) clayey silt with fine sand, low plasticity, yellow staining from 10.4'-10.8', gravel from 10.8'-11.1', moist, no odor  1.1 Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, clayey silt inclusions (<.25") from 15'-15.5', moist, no odor  Sw  Sw  Sw  15.5 Sw  15.5	5-				Very Dark Gravish Brown (10VP 3/2) fine to medium sand, clavey silt inclusions	5.0		4	A. A.
Olive Brown (2.5R 4/3) clayey silt with fine sand, low plasticity, saturated, mild sweet odor  Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, moist, no odor  3.4  10- 1.6 1.1 Dark Yellowish Brown (10YR 4/4), fine sand, low plasticity, yellow staining from 10.4'-10.8', gravel from 10.8'-11.1', moist, no odor  Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, clayey silt inclusions (<.25") from 15'-15.5', moist, no odor  1.4 80 3.7.6 SW									\(\frac{1}{2}\)\(\fr
sweet odor    So						5.7			N A .
Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, moist, no odor  3.4  10-  1.6  1.1  Dark Yellowish Brown (10YR 6/1) clayey silt with fine sand, low plasticity, yellow staining from 10.4'-10.8', gravel from 10.8'-11.1', moist, no odor  1.4  80  2.1  Sw  SW  SW  SW  15-15.5', moist, no odor  1.5  SW  SW  15-15.5', moist, no odor  15-15.5', moist, no odor			0.1						Ÿ .
10					Sweet odd		ML		∆
10	_		0						A A .
Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, moist, no odor  3.4  10- 1.6  1.1  Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, moist, no odor  10.0  Gray (10YR 6/1) clayey silt with fine sand, low plasticity, yellow staining from 10.4'-10.8', gravel from 10.8'-11.1', moist, no odor  Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, clayey silt inclusions (<.25") from 15'-15.5', moist, no odor  SW  SW  11.1  SW  15.5  THITHILLIA			·	80		7.6			V V
10- 1.6 1.1 2.1 3.4 3.4 10- 1.6 1.1 2.1 3.4 3.4 3.4 3.4 3.4 3.5 3.4 3.6 3.7 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.8 3.8				00	Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, moist, no	, 10			P . V
10- 1.6 1.1     Gray (10YR 6/1) clayey silt with fine sand, low plasticity, yellow staining from 10.4'-10.8', gravel from 10.8'-11.1', moist, no odor  1.1     Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, clayey silt inclusions (<.25") from 15'-15.5', moist, no odor  2.1     O.1 15- 2.5 15-5 15-5 111111111	1 -		2.1		odor				Ÿ _ ♥ ·
10- 1.6 1.1     Gray (10YR 6/1) clayey silt with fine sand, low plasticity, yellow staining from 10.4'-10.8', gravel from 10.8'-11.1', moist, no odor  1.1     Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, clayey silt inclusions (<.25") from 15'-15.5', moist, no odor  2.1     O.1 15- 2.5 15-5 15-5 111111111									A A
10- 1.6 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1	1 _		2.4				SW		Δ ~ Δ ·
Gray (10YR 6/1) clayey silt with fine sand, low plasticity, yellow staining from 10.4'-10.8', gravel from 10.8'-11.1', moist, no odor  1.1  Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, clayey silt inclusions (<.25") from 15'-15.5', moist, no odor  2.1  0.1  15-  2.5			3.4						ν
Gray (10YR 6/1) clayey silt with fine sand, low plasticity, yellow staining from 10.4'-10.8', gravel from 10.8'-11.1', moist, no odor  1.1  Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, clayey silt inclusions (<.25") from 15'-15.5', moist, no odor  2.1  0.1  15-  2.5						100			N A
1.6 1.1 Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, clayey silt inclusions (<.25") from 15'-15.5', moist, no odor  1.4 2.1 0.1 15- 2.5 15.5 15.5	10-				Gray (10YR 6/1) clayey silt with fine sand, low plasticity, yellow staining from	10.0			A
1.1 Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, clayey silt inclusions (<.25") from 15'-15.5', moist, no odor  2.1 Sw  15- 2.5 — 15.5			1.6				ML		A b
Dark Yellowish Brown (10YR 4/4), fine to medium sand, poorly sorted, clayey silt inclusions (<.25") from 15'-15.5', moist, no odor  2.1  0.1  15- 2.5  15.5  15.5  15.5						11.1			Δ × Δ ·
1.4   silt inclusions (<.25") from 15"-15.5", moist, no odor			1.1						∵ V V
2.1 SW					silt inclusions (<.25") from 15'-15.5', moist, no odor				P . V .
- 2.1 SW	1 -		1.4						A
- 2.1 SW				80					. v . v
15.5 SW SW V V V V V V V V V V V V V V V V V									V . V
15— 2.5 — 15.5 —			2.1				SW		\(\forall \bar{\nabla}{\nabla} \cdot \bar{\nabla}{\nabla} \\(\forall \bar{\nabla}{\nabla} \cdot \bar{\nabla}{\nabla} \)
15.5 15.5 15.5 15.5 15.5 15.5 15.5 15.5									P
15.5			0.1						.d
15.5			0.1						
15.5									V V
	15-		2.5						V
						15.5			ν
	Ш								



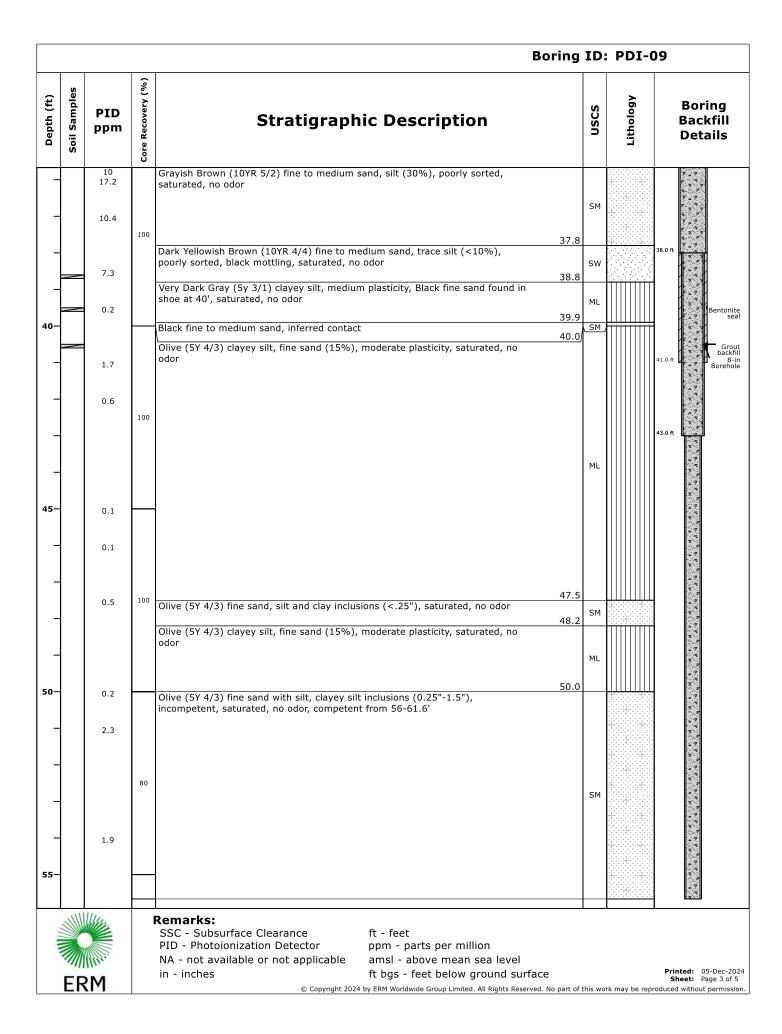
## **Remarks:**

SSC - Subsurface Clearance

PID - Photoionization Detector NA - not available or not applicable in - inches ft - feet

ppm - parts per million amsl - above mean sea level ft bgs - feet below ground surface

				Bor	ing	ID	PDI-0	9		
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details		
		1.3		Grayish Brown (10YR 5/2) clayey silt with fine sand, low plasticity, moist, no lodor		ML		V V		
-		0.1	40	Dark Yellowish Brown (10YR 4/4) fine to medium sand, poorly sorted, well rounded gravel (~.25"-1"), clayey silt inclusions (<.25-3") from 20-23.3', moist, no odor	15.9					
-										
-								7 7 10-in Forehole Grout backfill		
20-						SW		P		
-		0.1				3		P		
-		2.2						P		
-		20.3	100	Light Olive Brown (2.5Y 5/3) medium sand, moderately sorted, yellow staining,	23.3			P		
-		40.7		wet, mild sweet odor Brown (7.5YR 5/2) medium sand, moderately sorted, wet, mild sweet odor	23.7			ν ν ν ν ν ν ν ω ν		
25-			_		25.0			P		
		0.4		Dark Brown (10YR 3/3) fine to medium sand, silt (30%), poorly sorted, saturated, mild sweet odor		SM		P. v. v. v P. v v p v		
		2.1		Dark Yellowish Brown (10YR 4/4) fine to medium sand, trace silt (10%), poorly sorted, moist, no odor	26.5			\(\tilde{\pi}\) \(\pi \) \(\p		
		0.1	60			SW				
30-					30.0					
_		18.2 35.2		Brown (7.5YR 5/2) fine to medium sand, silt (30-40%), poorly sorted, yellow staining throughout, moist, mild sweet odor			+ +			
		33.3	60	Very Dark Gray (10YR 3/1) fine to medium sand, silt (30%), yellow staining from 32.2-32.7', light brown red staining from 32.7-33', saturated, mild sweet odor	32.2	SM	+ +			
		37					+ + + + +	W   P		
35-		10		Grayish Brown (10YR 5/2) fine to medium sand, silt (30%), poorly sorted, saturated, no odor	35.0		+ +			
1/2	Ille	William		Remarks:	I		<u> </u>			
				SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable in - inches ft bgs - feet below ground surface				<b>Printed:</b> 05-Dec-2024		
	ER	M		© Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No	part of t	:his wo	rk may be repr	Sheet: Page 2 of 5		



				Boring	ID:	PDI-0	)9
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description	nscs	Lithology	Boring Backfill Details
-		0.4	80	Olive (5Y 4/3) fine sand with silt, clayey silt inclusions (0.25"-1.5"), incompetent, saturated, no odor, competent from 56-61.6'	SM	+ + + + + + + + + + + + + + + + + + +	
60-		0.4		Olive (5Y 4/3) clayey silt with fine sand, low plasticity, saturated, no odor Olive (5Y 4/3) fine sand with silt and clay, saturated, no odor	ML	+ + + + + + + + + + + + + + + + + + + +	
65-		0.2	70		SM		
_		0.7	80	67.9 Olive (5Y 4/3) silt with fine sand and clay, low plasticity, saturated, no odor		+ + + + + +	6-in Borehole GROUT
70-		0.2					
  -    -		0.6	80		ML		
75-							on the second of
	ER	RM	I	Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable amsl - above mean sea level in - inches ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No part of	this wo	rk may be repr	Printed: 05-Dec-2024 Sheet: Page 4 of 5 oduced without permission.

				Bor	ing	ID:	PDI-0	)9
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		USCS	Lithology	Boring Backfill Details
-		0.2	80	Olive (5Y 4/3) silt with fine sand and clay, low plasticity, saturated, no odor  Olive (5y 4/3) fine sand with silt and clay, saturated, no odor	76.4	ML	+ +	
80-		1		Olive (5y 4/3) fine sand with silt and clay, incompetent, saturated, no odor	80.0		+ + + + + + + + + + + +	
-			80	Olive (5y 4/3) fine sand with silt and clay, competent, saturated, no odor	82.7	SM	+ + + + + +	
- 85-		0.6					+ + + + + + + + +	
		0.4 0.6 0.9	100	Dark Grayish Green (10Y-5GY 4/2) clayey silt with olive mottling, moderate plasticity, pebble sized inclusions from 86.7-87.2', saturated, no odor  Brecciated basalt gravel, subrounded, pebble to cobble sized clasts (0.25"-3.5"),	86.2 87.8	ML	+ + + + -	
90-		0.8		Boring terminated at 89 feet	89.0		+ ' + ' + ' · + + + + + + + ·	89.0 ft 7
-								
95-								
4110			I	Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable in - inches ft bgs - feet below ground surface		•		<b>Printed:</b> 05-Dec-2024 <b>Sheet:</b> Page 5 of 5
	ER	RM		PID - Photoionization Detector ppm - parts per million NA - not available or not applicable amsl - above mean sea level	part of t	his wor	'k may be repr	Sheet: Page

Drilling Start Date: 30-Jul-2024
Drilling End Date: 30-Jul-2024
Drilling Contractor: Cascade Drilling

Drilling Method: Sonic
Rig Make/Model: TSI
Driller: Chris Baker
SSC Contractor: GPRS
SSC Method: Private Locate
SSC Diam./Depth: Not Applicable

Northing: 702296.722
Easting: 7627605.096
Surface Elevation: 37.0 ft amsl
Borehole Diameter: 10 in

Water Encountered: 25.0 ft bgs
Logged By: David Stone
Reviewed By: Avery Soplata, RG
Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
0-				GROUND SURFACE Asphalt			/no (/no (	N P .
				L Gravel, poorly sorted, angular, 0.25"-2" in diameter, Gray-Brown silty fine sand	0.2/	GW	0000	\( \text{\tint{\text{\text{\text{\text{\text{\text{\text{\text{\tint}\xi}\\ \text{\ti}\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\ti}\text{\tin}\text{\tin}\tint{\text{\text{\text{\text{\texi}\text{\text{\ti}\text{\text{\text{\text{\texi}\text{\texi}\text{\text{\text{\texi}\text{\texitile}\text{\text{\text{\text{\texi}\tint{\texitile}\text{\ti}\tittt{\text{\texi}\text{\texititt{\text{\texi}\text{\tex
-		0.6		matrix, dry, no odor	1.1/		100000 100000	A . A
				Brown (10YR 5/3) silt with fine sand, gravel to cobble inclusions (<.25"-5"),		ML		\(\frac{1}{2}\), \(\frac{1}\), \(\frac{1}\), \(\frac{1}{2}\), \(\frac{1}{2}\), \(\frac{1}{
-		0.9		poorly sorted, angular, loose, moist, no odor	2.2			$\begin{matrix} \nabla & \cdot & \nabla & \cdot \\ \cdot & \nabla & \cdot & \nabla \\ \cdot & \cdot & \cdot & \nabla \end{matrix}$
			90	Yellowish Brown (10 YR 5/4) fine sand, with silt, poorly sorted, loose, moist, no odor		SM		Ø
4		1.2			2.9	ML		A . A .
				Yellowish Brown (10YR 5/4) silt with clay, minor fine sand, low plasticity, moist, no odor	2.0		+	4 b
		0.4		Pale Brown (10YR 6/3) fine sand with silt, minor clay, loose, competent	3.2			♥
		0.4		fragments ranging in size from 0.25"-2", moist, no odor		SM		Δ. Δ.
5-					5.0			A A A
"		0.4		Pale Brown (10YR 6/3) fine sand with silt, minor clay, competent, wet, no odor	5.4,			4. V V
				Light Olive Brown (2.5Y 5/3) fine to medium sand with silt, yellow staining from				A . A
٦		0.1		5.4-6', diffused yellow staining from 6-6.7', yellow grains from 6.7-10', moist, no odor				\(\frac{1}{2}\) \(\frac{1}2\) \(\frac{1}2\) \(\frac{1}2\) \(\frac{1}2\) \(\frac{1}2\) \(\frac{1}2\) \(1
								V V
⊢		0.5						A . A .
			100					
-		0.1						▼
								7 7 V
-		0.2						Δ ~ Δ ·
								A A
ا_0		0.1		D 1 V II 1 1 D (40VD 2/4) C 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	10.0			
		U.1		Dark Yellowish Brown (10YR 3/4) fine to medium sand with silt, poorly sorted, subrounded gravel inclusions from 10-11.5', moist, no odor		SW		v ∨ ∨
		0.1						Ø Ø
		0.1						4 4
								A A A
٦		0.1						V . ∇ . ∇
			100		12.9			A A
٦		0.1		Dark Grayish Brown (2.5Y 4/2) fine to medium sand with silt, poorly sorted, moist, no odor				□ ∇ · ∇ ∇ · Γ ∇ · ∇
				inioist, no oddi				
$\dashv$		0.2						Δ ~ Δ · ·
								▼
.5-		0.1		Very Dark Grayish Brown (10YR 3/2) fine sand with silt, gravel to cobble sized	15.0			A A
				clasts, poorly sorted, moist, no odor		SM		A ~ A .



# **Remarks:**

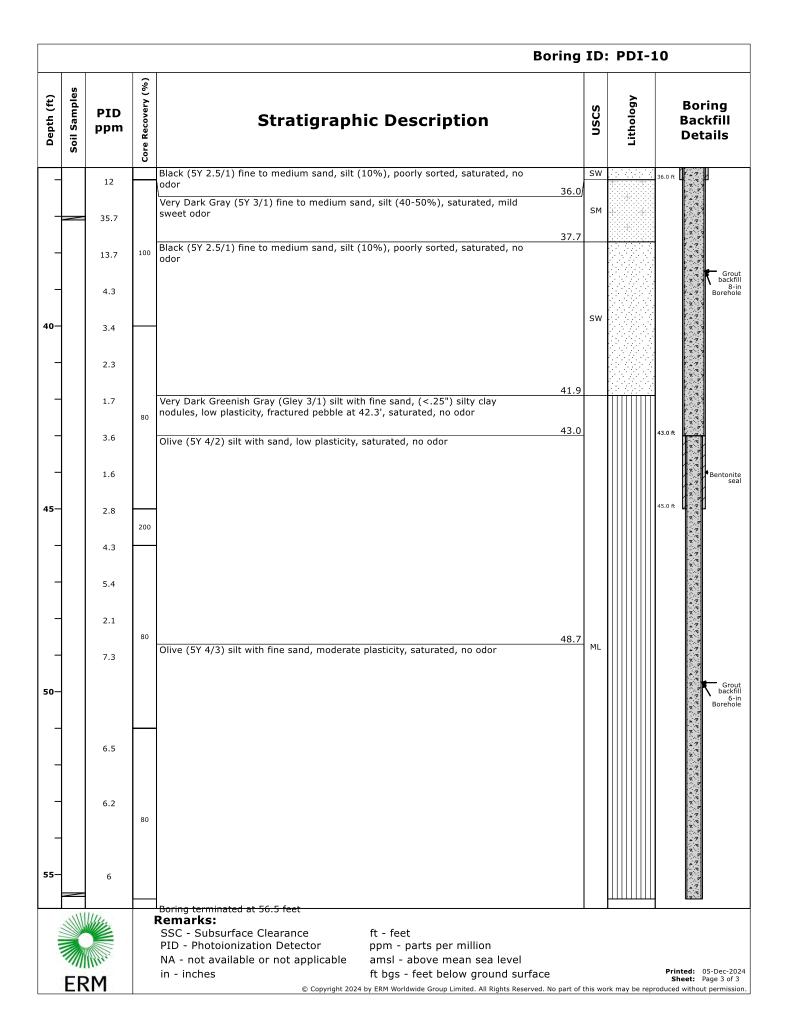
in - inches

SSC - Subsurface Clearance

PID - Photoionization Detector NA - not available or not applicable ft - feet

ppm - parts per million amsl - above mean sea level ft bgs - feet below ground surface

				Во	ring	ID	PDI-1	.0
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
_		0.2		Very Dark Grayish Brown (10YR 3/2) fine sand with silt, gravel to cobble sized clasts, poorly sorted, moist, no odor		SM	+ +	▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼
_		0.2	80	Dark Yellowish Brown (10YR 3/4) fine to medium sand with silt, poorly sorted, moist, mild sweet odor	17.0			V V 10-in Sorehole Grout backfill
_		0.5		Brown (7.5YR 4/2) fine to medium sand with silt, silty clay fragments throughout (0.25"-5"), yellow staining from 18-18.2', yellow grains from 18.2-20', moist, mild sweet odor	18.0	SW		9 P
20-		1.3		Reddish Gray (5YR 5/2) fine to medium sand with silt, Grayish White staining, moist, mild sweet odor	20.0	- CM		
		1.1		Reddish Gray (5YR 5/2) fine to medium sand, silt (50%), poorly sorted, grading down of light yellow staining to bright yellow staining from 20.5-21.2', moist, mild sweet odor	21.2	SM		▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼
_		1.3	100	Reddish Gray (5YR 5/2) fine to medium sand, silt (10-20%), poorly sorted, clayey silt inclusions (.25"-3"), yellow staining from 21.2-22.7', wet, mild sweet odor				
25-		2.1	_	Dark Grayish Brown (2.5Y 4/2) fine to medium sand with silt (10-20%), poorly	25.0	SW		
_		5.8		sorted, clayey silt inclusions (.25"-3"), diffuse yellow staining from 27.3'-28.9', saturated, sweet odor				
_		117	100					
_		215		Reddish Gray (YR 5/2) fine to medium sand, silt (20-30%), poorly sorted, diffuse yellow staining, saturated, sweet odor	28.9	SM		▼
30-		299		Dark Brown (10YR 3/2) silt with fine sand, poorly sorted, low plasticity, yellow staining throughout that appears stratified, saturated, mild sweet odor	29.5 30.0	<b>.</b>		
-		137		Gray (5Y 5/1) Silt with fine to medium sand, poorly sorted, very low plasticity, loose, clayey silt inclusions (0.25"-2"), saturated, sweet odor	31.8	ML		V V V
-		216	100	Gray (5Y 5/1) fine to medium sand, silt (40-50%), poorly sorted, saturated, sweet odor	32.9	SM	1	
		199		Very Dark Gray (5Y 3/1) fine to medium sand, silt (10-20%), poorly sorted, saturated, sweet odor  Very Dark Gray (5Y 3/1) silt with fine sand and clay, low plasticity, saturated,	33.2	ML		7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
35-		162 244		wild sweet odor  Very Dark Gray (5Y 3/1) fine to medium sand, silt (30-40%), poorly sorted, saturated, no odor	34.0	SM	+ +	
	11	Z44 1/c		Black (5Y 2.5/1) fine to medium sand, silt (10%), poorly sorted, saturated, no lodor	35.0	SW		Bentonite seal
111				Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable amsl - above mean sea level				
	ER	M		in - inches ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. N	o part of t	this wo	rk may be repr	Printed: 05-Dec-2024 Sheet: Page 2 of 3 oduced without permission.



Drilling Start Date: 05-Aug-2024
Drilling End Date: 05-Aug-2024
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic

Drilling Method: Sonic
Rig Make/Model: TSI
Driller: Chris Baker
SSC Contractor: Cascade/GPRS
SSC Method: Air-knife/Private Locate

SSC Diam./Depth: 12.5-in / 8-ft

Northing: 702392.358
Easting: 7627520.724
Surface Elevation: 37.0 ft amsl
Borehole Diameter: 10 in
Borehole Depth: 51.5 ft bgs
Water Encountered: 29.0 ft bgs
Logged By: David Stone
Reviewed By: Avery Soplata, RG

Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
0-				GROUND SURFACE Asphalt				N P
_		0		Very Dark Gray (5YR 3/1) fine sand with silt, trace angular gravel (.25"-1'), dry, no odor	0.6	SM		V V V
				Cray (Gley1 6/) silt, very fine sand (20%) silt/clay chunks present, low plasticity, dry, no odor	1.0			V V V
			100	Cray (Gley1 6/) silt, very fine sand (20%) silt/clay chunks present, low plasticity, moist, no odor	2.0/			A A
_						ML		V ~ V . V . V . V . V . V . V . V . V .
_								♥ V V V V V V V V V V V V V V V V V V V
5-								\$\bar{\pi} \
_				Dark Gray (Gley1 4/) fine to medium sand, minor silt/clay clasts, moist, no odor	6.0			V V V
			100	, (,, , ,, ,,		SW		P
					8.0			
		14.8		Gray (10YR 6/1) silt with fine sand, minor clay, competent, low plasticity, moist, no odor	0.0			▼
-					9.5	ML		V V V
10-		19.3		Gray(10YR 6/1) silt with fine sand, loose, moist, no odor	10.3			A
				Brown (10YR 5/3) fine to medium sand, minor silt, trace gravel, poorly sorted, dark brown silt fragments, yellow grained staining, moist, no odor				V V V
			71					▼
-								\( \frac{1}{2} \) \( \frac{1} \) \( \frac{1} \) \( \frac{1}{2} \) \( \frac{1}{2}
-						SW		V V V V V V V V V V V V V V V V V V V
		25.4						P
15-		25.2			15.0			
		23.2						V V
	1111	114.		Remarks:	ļ			



**Remarks:** 

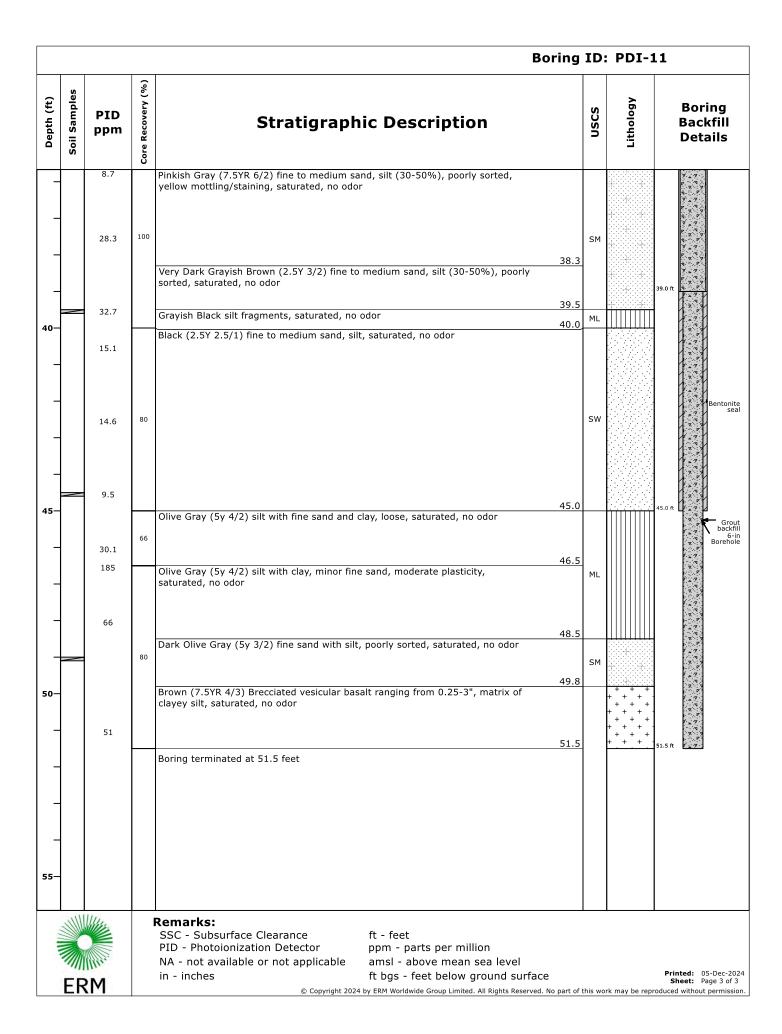
in - inches

SSC - Subsurface Clearance

PID - Photoionization Detector NA - not available or not applicable ft - feet

ppm - parts per million amsl - above mean sea level ft bgs - feet below ground surface

				Вог	ring	ID:	PDI-1	.1
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
20-		34 22 37.8 27.1		Pinkish Gray (7.5YR 6/2) fine to medium sand, trace silt, silt inclusions, yellow staining from 16.8'-18.5', moist, no odor from 15'-18, mild sweet odor from 18'-20'  Pinkish Gray (7.5YR 6/2) fine to medium sand, trace silt, yellow silt fragments (.25"-1") from 24'-25', moist, mild sweet odor	20.0	SW		10-in corehole Grout backfill
25— —		25.7		Pinkish Gray (7.5YR 6/2) fine to medium sand, silt (10-30%), poorly sorted, yellow mottling/staining, wet, mild sweet odor	25.0	SM	+ + + + +	
-		16.7	100	Pinkish Gray (7.5YR 6/2) silt, fine to medium sand (50%), poorly sorted, competent, wet, mild sweet odor  Pinkish Gray (7.5YR 6/2) fine to medium sand, silt (20-30%), silt increases to	27.9	ML	+ + + + + + + + + + + + + + + + + + +	4
30-		21.4		(30-50%) at 30', poorly sorted, yellow mottling/staining from 28.2'-30' and 31.8'-34', saturated, mild sweet odor		CM	+ + + + + + + + + + + + + + + + + + +	
  -  -		27.3	100			SM	+ + + + + + + +	
35-		20.8		Dark Grayish Brown (10YR 4/2) fine to medium sand, minor silt, poorly sorted, saturated, mild sweet odor  Pinkish Gray (7.5YR 6/2) fine to medium sand, silt (30-50%), poorly sorted, yellow mottling/staining, saturated, no odor	34.0	SW		
6	Wile	Wife	ı	Remarks:				
	ER	RM		SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable in - inches ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No	part of t	his wo	rk may be repr	Printed: 05-Dec-2024 Sheet: Page 2 of 3 oduced without permission.



Drilling Start Date: 06-Aug-2024
Drilling End Date: 06-Aug-2024
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic

Drilling Method: Sonic
Rig Make/Model: TSI
Driller: Chris Baker
SSC Contractor: Cascade/GPRS
SSC Method: Air-knife/Private Locate
SSC Diam./Depth: 12.5-in / 8.92-ft

Northing: 702485.369
Easting: 7627442.531
Surface Elevation: 37.0 ft amsl
Borehole Diameter: 10 in

Borehole Depth: 50.0 ft bgs
Water Encountered: 29.8 ft bgs
Logged By: David Stone
Reviewed By: Avery Soplata, RG
Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
0-				GROUND SURFACE Asphalt				ij. Ň. ÞĬ.
				Cobble (2"-4"), rounded, sand matrix (<10%)	0.6		30 30	V V
-		0			1.3	GW	0000 0000 0000	\(\frac{\partial}{\partial}\) \(\fr
				Dark Grayish Brown (10YR 4/2) fine sand with silt, silt/clay clasts presents, dry,	1.5			, A. A.
-				no odor		SM		V V V
			100					V V
-		0		Dark Grayish Brown (10YR 4/2) clay/silt with minor fine to medium sand	3.0			V V
				(<10%), medium plasticity, sand has white flecks, moist, no odor		CL		Ÿ ♥
-						CL		P V V
				Very Dark Gray (2.5Y 3/1) medium sand, trace silt (<10%) as clasts, moist, no	4.5			
5-		0		odor				Ø
								A 7 A
l ⊣								V V
			100					P
		0						7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
								4 ~ V
▎╶┤		0		Dark Brown (10YR 3/3) medium sand, trace sand and silt (<10%), moderately	8.0			P V V
				sorted, low plasticity silt fragments (0.5-3"), moist, no odor				P 9 9
▎╶╽		3.5	100					V V
								Ψ
10-						SW		V V
						٥.,		P 7 7
		2.3						V V
		2.5						4 . P
								V V
			100					7 V
╽								V V
								V V
		4.5						4
		7.5						V V
15-								V V V
								. φ
		110						V V



# **Remarks:**

SSC - Subsurface Clearance

PID - Photoionization Detector NA - not available or not applicable

in - inches

ft - feet

ppm - parts per million amsl - above mean sea level

ft bgs - feet below ground surface

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Sheet: Page 1 of 3

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				Bor	ing	ID:	PDI-1	.2
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		USCS	Lithology	Boring Backfill Details
		2.5	50	Dark Brown (10YR 3/3) medium sand, trace sand and silt (<10%), moderately sorted, low plasticity silt fragments (0.5-3"), moist, no odor				10-in corehole Grout backfill
		2.8	80			sw		
25-		11.4						
_		0.8						V P
-		1.3	100					
-		3.2	_		29.8			
30-		1.4		Gray (10YR 5/1) fine to medium sand, silt (25-40%), poorly sorted, wet, mild sweet odor  Very Dark Grayish Brown (10YR 3/2) fine to medium sand, silt (40-50%), poorly sorted, saturated, no odor	30.0		+ + + + +	
-		1.2	80	Very Dark Grayish Brown (10YR 3/2) fine to medium sand, silt (25%), 33-35' becomes Dark Grayish Brown, silt increases to 30-40%, saturated, no odor	31.5		+ +	▼
		2				SM	+ +	V V V V V V V V V V V V V V V V V V V
35-		2.6		Very Dark Gray (10YR 3/1) fine to medium sand, silt (30-40%), poorly sorted, saturated, no odor	35.0		+ + + + + +	
2		Wife.		Remarks:			<u> </u>	
	ER	RM		SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable in - inches amsl - above mean sea level ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No	part of th	his wor	rk may be repr	Printed: 05-Dec-2024 Sheet: Page 2 of 3 oduced without permission.

					Boring	ID:	PDI-1	12
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
_		2.1		Very Dark Gray (10YR 3/1) fine to medium sand, silt (30-40%), poorly sorted, saturated, no odor	36.2	SM		36.0 ft   V - V - V - V - V - V - V - V - V - V
_		1.9	90	Very Dark Gray (2.5Y 3/1) silt with clay, trace fine sand, moderated plasticity, saturated, no odor		ML		• Bentonite seal
_		0.6		Black (2.5Y 2.5/1) Fine to medium sand, trace silt (<10%), saturated, no odor	38.8	SW		7. V V. V V. V V. V
40-				Dark Greenish Gray (GLEY1 4/5GY) silt with clay and fine sand, low plasticity, saturated, no odor	40.0			40.0 ft
_		6.7	80			ML		
-   -		4.3		Very Dark Greenish Gray (GLEY 1 3/10Y) Fine sand with silt, saturated, no odor	43.0	SM	# # # # # # # # # # # # # # # # # # #	Grout backfill 8-in Borehole
45-				Olive (5Y 4/3) silt with clay, trace fine sand (<10%), low plasticity, orange staining from 45'-46.8', saturated, no odor	45.0			
_		4.2				ML		V P
_		0.3	80	Brecciated vesicular basalt (<.25"-4"), tannish red silt with fine sand matrix	48.0		+ + +	
_			100				+ + + + + + + + + + + + + + + + + + +	▼ P ▼ P ▼ P
50-		0.2		Boring terminated at 50 feet	50.0		+ + +	50.0 ft [2.2.2]
_								
_								
55-								
- 26				Remarks: SSC - Subsurface Clearance ft - feet				
	ER	RM		PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable in - inches ppm - parts per million amsl - above mean sea level ft bgs - feet below ground sur  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Rese		this wo	rk mav he repr	Printed: 05-Dec-2024 Sheet: Page 3 of 3 roduced without permission.

**Drilling Start Date:** 31-Jul-2024 Drilling End Date: 31-Jul-2024 **Drilling Contractor:** Cascade Drilling

**Drilling Method:** Sonic Rig Make/Model: TSI Driller: Chris Baker **SSC Contractor: GPRS SSC Method:** Private Locate SSC Diam./Depth: Not Applicable Northing: 702171.531 7627590.523 Easting: **Surface Elevation:** 37.0 ft amsl Borehole Diameter: 10 in

**Borehole Depth:** 84.5 ft bgs Water Encountered: 5.0 ft bgs Logged By: David Stone Reviewed By: Avery Soplata, RG

Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfil Details
			GROUND SURFACE				
1			Asphalt GROONS SON NEE	0.2/			¬
			Grayish Brown gravel, angular, fine sand and silt matrix, dry, no odor		GW	0000	. v v
1	1.4		L Dark Brown (10YR 3/3) silty fine sand, gravel present (<.5"), dry, no odor	0.7/			Ø . ♥ .
			Dark Brown (10YR 3/3) fine to medium sand, silt (10-20%), poorly sorted, silt inclusions (0.25"-3"), moist, no odor	1.4/			\(\frac{1}{\sqrt{V}}\)\(\frac{1}{\sqrt{V}}\)\(\frac{1}{\sqrt{V}}\)
	2	90	inclusions (6.23 -3 ), moist, no oddi		SM		V V
							V . V . V . V . V . V . V . V . V . V .
	2.1			4.0			P
	2.1		Dark Yellowish Brown (10YR 3/4) silt with fine sand, low plasticity, Grayish Brown Mottling, wet, no odor			<b> </b>	V V
_		_	<u>-</u>	5.0	ML	<b> </b>	A A
			Dark Grayish Brown (10YR 4/2), silt (60%), fine sand, loose, low plasticity, sheen in pooled water, saturated, mild sweet odor			<b> </b>	A . A . A.
	34.4			5.7	SM		A A A
1	27.3		Dark Grayish Brown (10YR 4/2) fine to medium sand, silt (40-50%), poorly sorted, sheen in pooled water, saturated, mild sweet odor		ЭM		A b .
]	31.8	60	Dark Grayish Brown (10YR 4/2) silt with fine sand, trace clay, sheen on pooled water, blackish-gray stringers, reddish brown blebs from 6.5-7', saturated, mild sweet odor	6.2			V V V V V V V V V V V V V V V V V V V
1	53.1						\( \rangle \) \
-							V V V V V V V V V V V V V V V V V V V
1						<b> </b>	A. A. A.
						<b> </b>	Δ Δ Δ ·
	15000			11.0	ML	<b> </b>	V . V
1	15000		Dark Grayish Brown (10YR 4/2), silt with clay, trace fine sand, low plasticity, Free flowing DNAPL, saturated with DNAPL, sheen on pooled water,		1111		A . A . A . A . A . A . A . A . A . A .
-	8400		Brownish Tan mottling, Grayish Brown shiny staining from 11-11.5', saturated, strong sweet odor	12.0		<b> </b>	V P
-	7900	80	Very Dark Gray (10YR 3/1) silt with clay, trace fine sand, moderate plasticity, light tan laminations, Gray staining from 13-15', pooled DNAPL from 13'-15', 20% DNAPL saturated from 13-13.5', 50-60% DNAPL saturated from 13.5'-15', saturated, strong sweet odor	12.0			V V V V V V V V V V V
-	15000		Saturated, strong sweet oddi				V V V
				15.0			V V Sore
	15000		Very Dark Gray (10YR 3/1) silt with fine sand and clay, low plasticity, sheen present in pooled water, Gray shiny staining, saturated, strong sweet odor				ba v v v ba
		ı	Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable amsl - above mean sea level in - inches ft bgs - feet below ground surface				Printed: 05-Dec

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				Во	ring	ID	: PDI-1	.3
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
		15000 15000		Very Dark Gray (10YR 3/1) silt with fine sand and clay, low plasticity, sheen present in pooled water, Gray shiny staining, saturated, strong sweet odor		ML		
		2153 8100	90	Very Dark Grayish Brown (2.5Y 3/2) fine sand, silt (50%), diffused staining from 17.3'-19', concentrated gray staining from 19'-20',wet, strong sweet odor	17.3		# ::	▼ . ▼
		15000				SM	+ + +	▼
20-		605		Very Dark Grayish Brown (2.5Y 3/2) silt with fine sand and clay, low plasticity, loose, sheen on pooled liquid, Tan clayey silt inclusion at 22', light shiny gray staining at 24', saturated, strong sweet odor	20.0		4	Y
		1600 15000	80					
		7500			25.0	ML		Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y
25— —		458 247		Very Dark Grayish Brown (2.5Y 3/2) silt with fine sand, trace clay, low plasticity, reddish tan fluid in solution, saturated, strong sweet odor	25.0			9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
		315 500	100	Very Dark Gray (2.5Y 3/1) fine to medium sand with silt, poorly sorted,	27.8			
		187		saturated, mild sweet odor		SM	+ + + + + + + + + + + + + + + + + + +	29.0 ft
30-		163 11.3 3.3		Black (2.5Y 2.5/1) medium to coarse sand with subrounded gravel, poorly sorted, ceramic fragment at 31', saturated, mild sweet odor	30.0			
		6.2	90	Black (2.5Y 2.5/1) fine to medium sand with minor subrounded gravel, poorly sorted, woody debris ( $\sim$ 6") at 32.8', saturated, no odor	32.5	SW		
35-		4.8		Black (2.5Y 2.5/1) medium to coarse sand with subrounded gravel, poorly sorted, saturated, no odor	35.0			Bentonite seal Grout backfill 8-in Borehole
	Wille	8  Ше.		Remarks:			. 1. 1. 1. 1. 1. 1	YII v
1111111	ER	RM		SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million NA - not available or not applicable amsl - above mean sea level in - inches ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. N		this wo	irk mav be repp	Printed: 05-Dec-2024 Sheet: Page 2 of 5 oduced without permission.

				Вс	ring	ID	PDI-1	13
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
40-		8 15.2 29.8 16.5 3.5 16.5 18.7		Black (2.5Y 2.5/1) medium to coarse sand with subrounded gravel, poorly sorted, saturated, no odor  Black (2.5Y 3/1) fine to medium sand with minor silt, poorly sorted, woody debris at 37.4', Very Dark Gray (2.5Y 3/1 clayey silt bed (2.5") from 38.1-38.3', saturated, no odor  Dark Olive Gray (5Y 3/2) clayey silt, trace fine sand, low plasticity, gravel to cobble inclusions (<.25"-4"), saturated, no odor  Olive (5Y 4/3) silt with fine sand and clay, moderate plasticity, saturated, no odor	39.1 40.0	sw		39.0 ft
45- -		12 10.1 16.6	80	Dark Greenish Gray (GLEY1 4/1) silt with fine sand and clay, very low plasticity/fryable, saturated, no odor	48.0	ML		
50-		10.1 7.6 5.1	70	Dark Greenish Gray (GLEY1 4/1) silt with fine sand and clay, moderate plasticity, loose silty clay fragments/nodules (<.25") from 51.2'-52.4', saturated, no odor	50.0			
THE STATE OF THE S	ER	RM	ı	Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable amsl - above mean sea level in - inches ft bgs - feet below ground surface © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved.		this wo	rk may be repi	Printed: 05-Dec-2024 Sheet: Page 3 of 5 roduced without permission.

				Boring	ID	PDI-1	.3
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description	nscs	Lithology	Boring Backfill Details
-		5.3		Dark Greenish Gray (GLEY1 4/1) silt with fine sand and clay, moderate plasticity, loose silty clay fragments/nodules (<.25") from 51.2'-52.4', saturated, no odor			
_		12.4					 A.
		13.4	80		ML		
-		11.7			IMIL		- ¬¬ ¬¬ ¬¬ ¬¬ ¬¬ ¬¬ ¬¬ ¬¬ ¬¬ ¬¬ ¬¬ ¬¬ ¬¬
-							V
60-				60.0  Dark Greenish Gray (GLEY1 4/1) clay with silt, trace fine sand, low plasticity,			\$ P
				Brownish mottling, saturated, no odor 60.7	CL		-
		4.5		Dark Greenish Gray (GLEY1 4/1) silt with fine sand and clay, low plasticity, Brown mottling from 64'-65', saturated, no odor			▼ P
-			100				6-in Borehole Grout backfill
-		5.4					\(\bar{\pi}\) \(\baran\pi\) \(\bar{\pi}\) \(\bar{\pi}\) \(\bar{\pi}\) \(\bar{\pi}\) \
_							
				65.0			. Ф Ф
65-		3.9		Olive (5Y 4/3) silt with fine sand, trace clay, low plasticity, Light Gray Brown mottling from 65'-66.2', Mottling from 71'-72', saturated, no odor			* \(\frac{1}{2}\)
-		10.4					
-							V ∵ P
_			80				
					ML		
-		11.7					\$ P
70-							~ ∆ . ∆ . ∆
-		11.7					, p
							∑ ∇ ∇
			70				∇ ∇ 
-		7.8					V
-							₩     
75-							Δ Δ Δ
							A A
				Remarks: SSC - Subsurface Clearance ft - feet			
				PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable amsl - above mean sea level			Drintado OF Do- 2021
	ER	RM		in - inches  ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No part of	this wo	rk may be repr	Printed: 05-Dec-2024 Sheet: Page 4 of 5 oduced without permission.

				Borin	j ID	: PDI-:	13
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description	USCS	Lithology	Boring Backfill Details
- 80-		4.8	80	Olive (5Y 4/3) silt with fine sand, trace clay, low plasticity, Light Gray Brown mottling from 65'-66.2', Mottling from 71'-72', saturated, no odor  Olive (5Y 4/3) silt and clay, trace fine sand, moderate plasticity, saturated, no odor  Olive (5Y 4/3) silt with fine sand, trace clay, low plasticity, saturated, no odor			
-		6.2 4.8	111	Very Dark Greenish Gray (GLEY1 3/1) fine sand, silt (50%), basalt chips in shoe (<.25"), Light Gray mottling from 82'-83', saturated, no odor	SM		V V V V V V V V V V V V V V V V V V V
85-				Boring terminated at 84.5 feet			
90-							
	ER	RM		Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable amsl - above mean sea level in - inches ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No part	of this w	ork may be rep	Printed: 05-Dec-2024 Sheet: Page 5 of 5 roduced without permission.

Drilling Start Date: 02-Aug-2024
Drilling End Date: 02-Aug-2024
Drilling Contractor: Cascade Drilling

Drilling Contractor: Cascade Drilling Drilling Method: Sonic TSI Chris Baker SSC Contractor: GPRS SSC Method: Private Locate SSC Diam./Depth: Not Applicable

Northing: 702480.330
Easting: 7627645.067
Surface Elevation: 35.0 ft amsl
Borehole Diameter: 10 in

Borehole Depth: 49.5 ft bgs
Water Encountered: 29.3 ft bgs
Logged By: David Stone
Reviewed By: Avery Soplata, RG
Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

Depth (ft) Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
0-	12.1	110	GROUND SURFACE  Gravel (<.25"-1.5"), angular, poorly sorted, gray sand matrix, dry, no odor  Dark Brown (10YR 3/3) fine sand with silt, poorly sorted, subrounded gravel inclusions, debris (brick), dry, no odor  Light Brownish Gray (10YR 6/2) silt with fine sand, poorly sorted, angular gravel, dry, no odor	0.8 1.3	GW	) 60 0 60 0 90 0 0 0 1	
- - 5-	6.7		Dark Brown (10YR 3/3) silt with fine sand and clay, gravel to cobble sized inclusions (<.25"-7"), moist and loose from 2.5'-4.8', wet and competent from 4.8'-5', moderate plasticity, no odor  Light Brownish Gray (10YR 6/2) silt with fine sand, poorly sorted, angular gravel, dry, no odor, likely slough	5.0			
-	1.7	50	Dark Brown (10YR 3/3) silt with fine sand and clay, gravel to cobble sized inclusions (<.25"-7"), competent, moderate plasticity, wet, no odor	6.4	ML		
<b>-</b>	27.6	120					
_ _ 5-	9.9 2.4		Dark Brown (10YR 3/3) silt with fine sand and clay, gravel to cobble sized inclusions (<.25"-7"), competent, moderate plasticity, 8" cobble at 19', brick debris at 20', saturated, no odor	14.5			



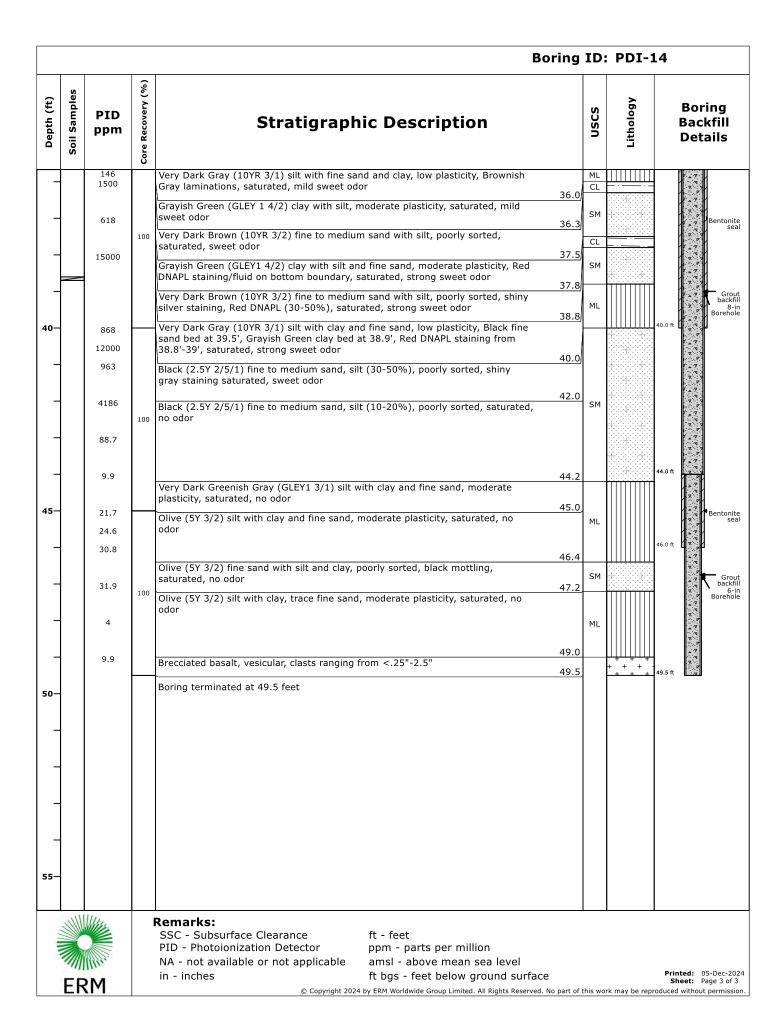
## Remarks:

SSC - Subsurface Clearance

PID - Photoionization Detector NA - not available or not applicable in - inches ft - feet

ppm - parts per million amsl - above mean sea level ft bgs - feet below ground surface

				Во	ring	ID:	PDI-1	.4
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
_		3.1		Dark Brown (10YR 3/3) silt with fine sand and clay, gravel to cobble sized inclusions (<.25"-7"), competent, moderate plasticity, 8" cobble at 19', brick debris at 20', saturated, no odor				10-in Forehole
-		2.1	110					Grenole Grout backfill
20-		4.7 9.3		Dark Brown (10YR 3/3) silt with clay and fine sand, trace rounded gravel (less than above), moderate plasticity, gray mottling from 20.8'-21.6', saturated, no odor	20.0	ML		
_			90					
		2.5		Fractured rock debris (basalt clasts (.25"-5"), poorly sorted, silt with fine to medium sand matrix, saturated, no odor	23.5	GM		
25-		20.6		Very Dark Grayish Brown (10YR 3/2) silt with clay and fine sand, moderate plasticity, rounded gravel inclusions (.25"-2"), saturated, no odor	25.0	ML	000000	
_		15.3		Dark Brown (10YR 3/3) fine to medium sand, poorly sorted, trace silt, clayey silt inclusions throughout (.25"-2"), moist from 27'-29.3', saturated from 29.3'-30', no odor	27.0		+	
		5.2					+ + + + + + + + +	
30-		3.9 10.2 9.6		Very Dark Grayish Brown (10YR 3/2) fine to medium sand, silt (20-30%), poorly sorted, saturated, sweet odor	30.0	SM	+ + + + + +	
		16.2 86.1	100	Very Dark Gray (10YR 3/1) fine to medium sand, silt (30-50%), poorly sorted, saturated, sweet odor	32.4		+ + + + + + + + + + + + + + + + + + + +	
		78.8		No Recovery  Very Dark Gray (10YR 3/1) silt with fine sand and clay, low plasticity, Brownish Gray laminations, saturated, mild sweet odor	34.0	ML		34.0 ft
35-	11111	90.9		Remarks:		ML		
	ER			SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million NA - not available or not applicable in - inches ft bgs - feet below ground surface				Printed: 05-Dec-2024 Sheet: Page 2 of 3



Drilling Start Date: 25-Jul-2024
Drilling End Date: 25-Jul-2024
Drilling Contractor: Cascade Drilling

Drilling Contractor: Cascade Drillin

Drilling Method: Sonic

Rig Make/Model: TSI

Driller: Chris Baker

SSC Contractor: GPRS

SSC Method: Private Locate

SSC Diam./Depth: Not Applicable

Northing: 702406.048
Easting: 7627748.132
Surface Elevation: 37.0 ft amsl
Borehole Diameter: 10 in

Borehole Diameter: 10 in
Borehole Depth: 54.0 ft bgs
Water Encountered: 22.0 ft bgs
Logged By: Avery Soplata
Reviewed By: Avery Soplata, RG
Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
<b>o</b> -		0.5		GROUND SURFACE  Dark Brown (2.5Y 4/2) Gravelly silt, pebbles and gravel (.25"-1"), subrounded to subangular, loose, moist, no odor  Dark Grayish Brown (2.5Y 4/2) silty fine sand, pebbles and cobble (.5"-4"), loose, poorly sorted, dry, no odor	1.0	ML		
_		1.2	100	Dark Yellowish Brown (10YR 3/4) silt, dense, low plasticity, debris (brick,	4.0	SM	+ + + + + + + + + + + + + + + + + + + +	
5—				carbon, ACM, glass), dry, no odor  Dark Yellowish Brown (10YR 4/4) clayey silt, moderate plasticity, debris (carbon, graphite), moist, no odor	5.0			
_		0.3	100	Dark Grayish Brown (2.5Y 4/2) clayey silt, moderate plasticity, moist, no odor  Dark Yellowish Brown (10YR 4/4) clayey silt, pebbles (.25"-1"), moderate plasticity, Dark Brown to Black organics at 10.5' and 11.5', moist, no odor	6.9 7.8			
o- _		0.4				ML		
_		0.4	100					
_ 5—		1.6		Dark Grayish Brown (2.5Y 4/2) clayey silt, dispersed cobbles (1"-2"), moderate plasticity, moist, no odor	14.0 15.0/			
	1112	11.		Domoniko.				7 ,



# **Remarks:**

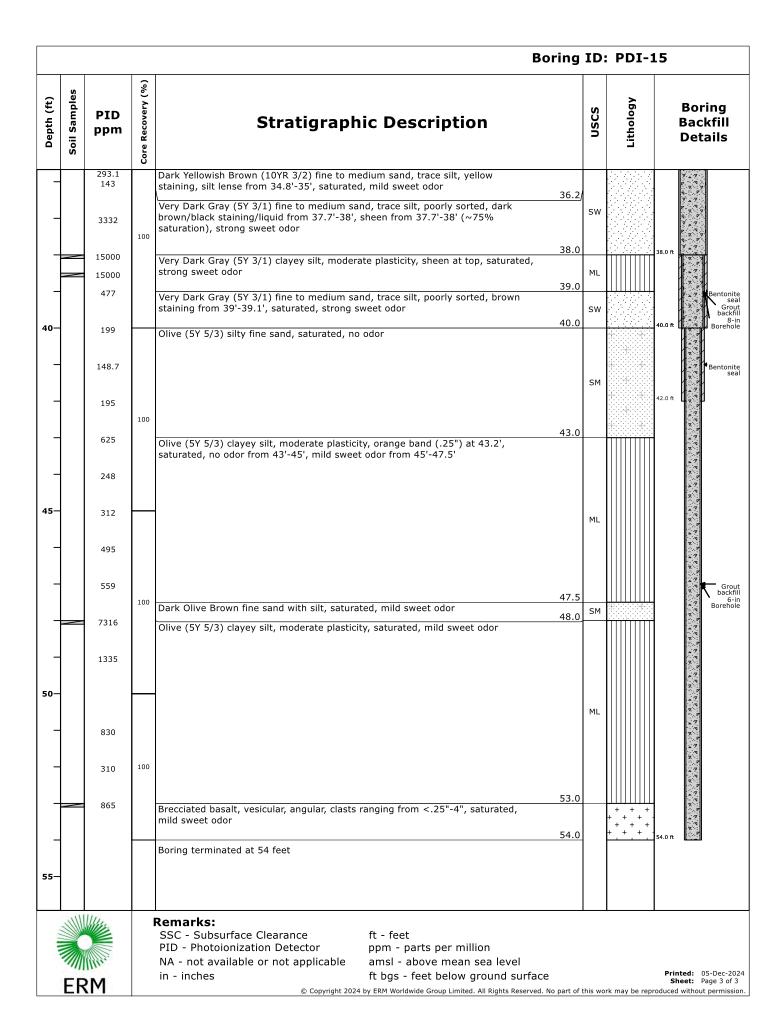
in - inches

SSC - Subsurface Clearance

PID - Photoionization Detector NA - not available or not applicable ft - feet

ppm - parts per million amsl - above mean sea level ft bgs - feet below ground surface

				Вог	ing	ID	PDI-1	.5
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
		3.6	100	Dark Brown (10YR 3/3) clayey silt, abundant debris (graphite, ACM, glass, brick), black metallic viscous material at 15', reddish purple sand at 15.5', moist, mild odor		ML		
20-		1.8		Brown (10YR 4/3) fine sand, cobble (0.25"-4"), debris (brick, glass), moist, no odor	19.0	SM	+ + + + + + + + + + + + + + + + + + +	10-in Grehole Grout backfill
-		2.6	100	Olive Brown (2.5Y 4/4) clayey silt, cobbles, debris (brick, glass, ACM, graphite, roots), moderate plasticity, small inclusions of reddish purple sand, wet, no odor  Olive Brown (2.5Y 4/4) clayey silt, cobbles (0.5"-4"), debris, moderate plasticity, wet, no odor	21.3			V V V V V V V V V V V V V V V V V V V
25-		1.6		Brown (10YR 4/3) clayey silt, cobbles (.25"-4"), moderate plasticity, wet, no odor  Olive Brown (2.5Y 4/4) to Brown (10YR 4/3) clayey silt, cobbles (.25"-4"),	24.2 25.0	ML		
       		1.7	60	angular basalt fragments, trace ACM, metal fragments (5") at 29.1', wet, no odor				
30-		0.8		Black (2.5Y 2.5/1) fine to medium sand, trace silt, clayey silt inclusions (.25"-4"), poorly sorted, saturated, no odor  Dark Brown (10YR 3/3) fine to medium sand, trace silt, moderately sorted,	29.2			
		3.4		loose, saturated, no odor from 29.6'-30', mild sweet odor from 30'-32.5'		SW		
		4.5 5.8	100	Dark Gray (2.5Y 4/1) clayey silt, low plasticity, yellow staining from 33'-33.3', saturated, mild sweet odor  Dark Vollowich Brown (10VR 3/2) fine to medium sand, trace silt, yellow	32.5	ML		
35-		15.3 75.3		Dark Yellowish Brown (10YR 3/2) fine to medium sand, trace silt, yellow staining, saturated, mild sweet odor  Dark Gray (2.5Y 4/1) clayey silt, low plasticity, saturated, mild sweet odor  Dark Yellowish Brown (10YR 3/2) fine to medium sand, trace silt, yellow staining, silt lense from 34.8'-35', saturated, mild sweet odor	33.8	SW ML SW		
	1111	293.1		Remarks:				▼
	ED	M	'	SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million NA - not available or not applicable in - inches ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No				Printed: 05-Dec-2024 Sheet: Page 2 of 3



**Drilling Start Date:** 26-Jul-2024 Drilling End Date: 26-Jul-2024 **Drilling Contractor:** Cascade Drilling

**Drilling Method:** Sonic Rig Make/Model: TSI **Driller:** Chris Baker **SSC Contractor:** GPRS SSC Method: Private Locate SSC Diam./Depth: Not Applicable Northing: 702356.310 7627796.733 Easting: **Surface Elevation:** 35.0 ft amsl Borehole Diameter: 10 in

**Borehole Depth:** 54.0 ft bgs Water Encountered: 21.7 ft bgs Logged By: Avery Soplata Reviewed By: Avery Soplata, RG

Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		sosn	Lithology	Boring Backfil Details
o-				GROUND SURFACE Light Brownish Gray (2.5Y 6/2) gravelly fine sand, trace silt, loose, pebbles and				<b>∀.</b> ∴ ₽`.
				cobbles (.25"-2"), subangular, dry, no odor	1.2	SM		▼
				Light Olive Brown (2.5Y 5/3) gravelly fine to medium sand, trace silt, loose,	1.3			A . A . A . A . A . A . A . A . A . A .
-		14.5		pebbles and cobbles (.25"-2"), black staining from 2.3'-2.6', dry, no odor				A
			100	Dark Yellowish Brown (10YR 3/4) fine to medium sand, trace silt, loose, pebbles	2.6			A A
-				and cobbles (.25"-3"), subrounded to subangular, debris (brick, glass), moist, no odor				V V
-						SW		V V
5-								∇
								V V V
4					6.3			V V V
				Dark Yellowish Brown (10YR 4/4) clayey silt, moderate plasticity, cobbles (.5"-2"), subrounded to subangular, debris (brick, glass, nails), moist, no odor	0.5			P V V
-		9.6		(1.5 -2 ), Subrounded to Subangular, debris (brick, glass, flatis), filoset, no odor				A. T. A.
			100					V V
-				Very Dark Grayish Brown (10YR 3/2) clayey silt, mostly debris (rubber, graphite,	8.2			A b .
				ACM, brick, glass, rubble), moderate plasticity, loose, moist, no odor				A T A
								4
0-								, , , , , , , , , , , , , , , , , , ,
						ML		\(\rangle \times \rangle \times \ra
								A . A .
								Ψ
4		17		Dark Yellowish Brown (10YR 4/4) clayey silt, pebbles (.25"-1"), moderate	12.0			V V V
			100	plasticity, ~30% cobbles/debris (.5"-2"), moist, no odor				ν ν ν ν ν ν
$\dashv$					13.3			V V V
		22.4		Brown (10YR 4/3) clayey silt, pebbles (.25"-1"), moderate plasticity, $\sim$ 30% cobbles/debris (.5"-2"), moist, no odor	14.0			A A A
		23.1		Debris (ACM, gravel, glass)				V V V
5-		10.9		Dark Grey (2.5Y 4/1) clayey silt, moderate plasticity, moist, no odor	14.4/	ML		A . A .
		10.9		Dark Greyish Brown (2.5Y 4/2) clayey silt, moderate plasticity, 15-20% cobbles (.5"-2"), debris (glass, brick, roots), moist, no odor	15.0/			A A A



in - inches

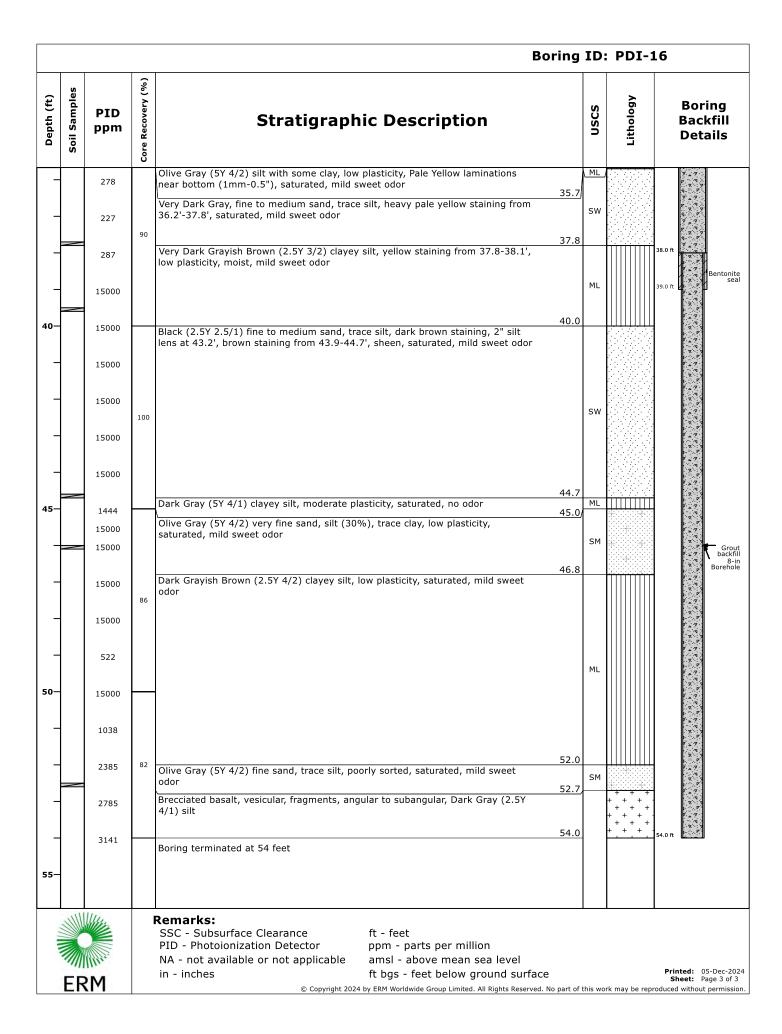
SSC - Subsurface Clearance

PID - Photoionization Detector NA - not available or not applicable ft - feet

ppm - parts per million amsl - above mean sea level

ft bgs - feet below ground surface

				Во	ring	ID	: PDI-1	.6
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
_		12.2	100	Dark Greyish Brown (2.5Y 4/2) clayey silt, moderate plasticity, 15-20% cobbles (.5"-2"), debris (glass, brick, roots), moist, no odor				
20-		9.2 14.9				ML		10-in Forehole Grout backfill
_		8.9	ļ		21.7			
_		23.1 12.5	100	Black (2.5Y 2.5/1) fine to medium sand, silt (20%), 1" silt lens at 22', sheen, reddish staining at 23', saturated, mild sweet odor  Dark Greyish Brown clayey silt, moderate plasticity, cobbles (.25"-2"), roots,	23.0	SM	+ + + + + + + + + + + + + + + + + + + +	
_		7.7		pink staining from 23'-23.1', saturated, mild sweet odor		ML		
25-		9.1 19.8 18.1		Mottled Dark Grayish Brown and Dark Yellowish Brown clayey silt, cobbles, moderate plasticity, moist, mild odor Black (2.5Y 2.5/1) fine to medium sand, silt (20%), sheen, saturated, mild	25.0 25.3	SW		
_		21.5	100	sweet odor Light Olive Brown (2.5Y 5/1) clayey silt, cobbles, moderate plasticity, moist, mild sweet odor	25.6 26.4	ML		V V V V V V V V V V V V V V V V V V V
_		20.2	100	Olive Brown (2.5Y 4/3) clayey silt, cobbles, moderate plasticity, saturated, mild odor  Very Dark Gray (2.5Y 3/1) fine to medium sand, silt (20%), large cobbles (2"-4"), graphite, saturated, mild sweet odor	27.9 28.6	SM	+ +	* * * * * * * * * * * * * * * * * * *
30-		16.9 65.2		Dark Yellowish Brown fine to medium sand, trace silt, poorly sorted, saturated, mild sweet odor Light Olive Brown clayey silt, moderate plasticity, wood chips, saturated, mild sweet odor	29.6/	SW		
_		24.3 16.9		Very Dark Gray (2.5Y 3/1) sandy silt, pebbles (.25"5"), low plasticity, saturated, no odor  Very Dark Gray, fine to medium sand with silt, poorly sorted, pebbles and	30.0	ML		
_		63.5 244.7	90	cobbles (.5"-3"), wood chips, saturated, mild sweet odor		SM	+ + +	
_		397		Very Dark Gray, clayey silt, moderate plasticity, saturated, mild sweet odor	33.7	ML		P V P V V V V V V V V V V V V V V V V V
35-	11/22	139.4		Olive Gray (5Y 4/2) silt with some clay, low plasticity, Pale Yellow laminations near bottom (1mm-0.5"), saturated, mild sweet odor	35.0			₹ ₩ \ \ ₩ \ . ₹ \ \$ \ \ \ \ \ . \ \ \ \ \ \ \ \ \ \ \ \ \
				SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million NA - not available or not applicable in - inches ft bgs - feet below ground surface				<b>Printed:</b> 05-Dec-2024
	ER	M		© Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. N	o part of t	this wo	ork may be repr	Sheet: Page 2 of 3



Drilling Start Date: 29-Jul-2024
Drilling End Date: 29-Jul-2024
Drilling Contractor: Cascade Drilling

Drilling Contractor: Cascade Drilling Drilling Method: Sonic TSI Chris Baker SSC Contractor: GPRS SSC Method: Private Locate SSC Diam./Depth: Not Applicable

 Northing:
 702325.223

 Easting:
 7627836.641

 Surface Elevation:
 35.0 ft amsl

 Borehole Diameter:
 10 in

Borehole Depth: 54.5 ft bgs
Water Encountered: 20.0 ft bgs
Logged By: David Stone
Reviewed By: Avery Soplata, RG

Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		SOSO	Lithology	Boring Backfill Details
0-				GROUND SURFACE Light Yellowish Brown (10YR 6/4) fine sand with silt, angular gravel				v
				(<.25"-1.5"), poorly sorted, dry, no odor				ν ν ν ν ν ν
		0.9			1.5			A A
			90	Dark Brown (10YR 3/3) fine sand with silt, gravel to cobble sized clasts, angular to subrounded, poorly sorted, debris (carbon, ACM), 7" Asphalt cobble at 3', 4" Asphalt cobble at 3.5', moist, mild sweet odor		SM		V V V V V V V V V V V V V V V V V V V
-								V . V
		2.2			3.8			φ φ φ φ
-				Dark Brown (10YR 3/3) silt with fine sand, low plasticity, debris (carbon, ACM), moist, no odor		ML		V V
		1.1			5.0	ML		V V
5-				Light Yellowish Brown (10YR 6/4) fine sand with silt, angular gravel (<.25"-1.5"), poorly sorted,dry, no odor, slough from 0'-1.5'		SM		A A
					6.0	311		D. A.
				Debris (tile, carbon, wire, asphalt, brick) ranging in size from 0.25"-6", silty matrix				A 7 A
4		1.5						A A .
			80	Dark Yellowish Brown (10YR 3/4) silt with fine sand and clay, moderate	7.5			A A A
-		1.2		plasticity, dispersed gravel, debris (carbon, ACM), moist, no odor		ML		
ıo-			•					V V
		0.0						A A A
		0.8						A . A . A
4				Dark Yellowish Brown (10YR 3/4) silt with clay, high plasticity, Gray banding	11.8			V V
			100	throughout, increases in concentration from 12.4'-12.9', saturated, no odor	12.0	МН	k × ×	Φ
$\dashv$		0.9		Very Dark Grayish Brown (2.5YR 3/2) fine to medium sand, silt (25%), poorly	12.9		K X X	A . A .
				sorted, 5" cobble at 14', dispersed clayey silt and gravel, wet, no odor		SM		V . V
$\dashv$					14.3			A A A
				Dark Yellowish Brown (10YR 3/4) silt with clay, high plasticity, Gray banding, saturated, no odor		МН	< × ×	V V
15-		0.9		Dark Yellowish Brown (10YR 3/4) fragmented silty clay, fine sand, gravel,	15.0	CL		∇ ∇ ∇ ∇ ∇ ∇
				subrounded to subangular, debris (carbon, brick, ACM), moist, no odor				D . A .



# **Remarks:**

SSC - Subsurface Clearance

PID - Photoionization Detector

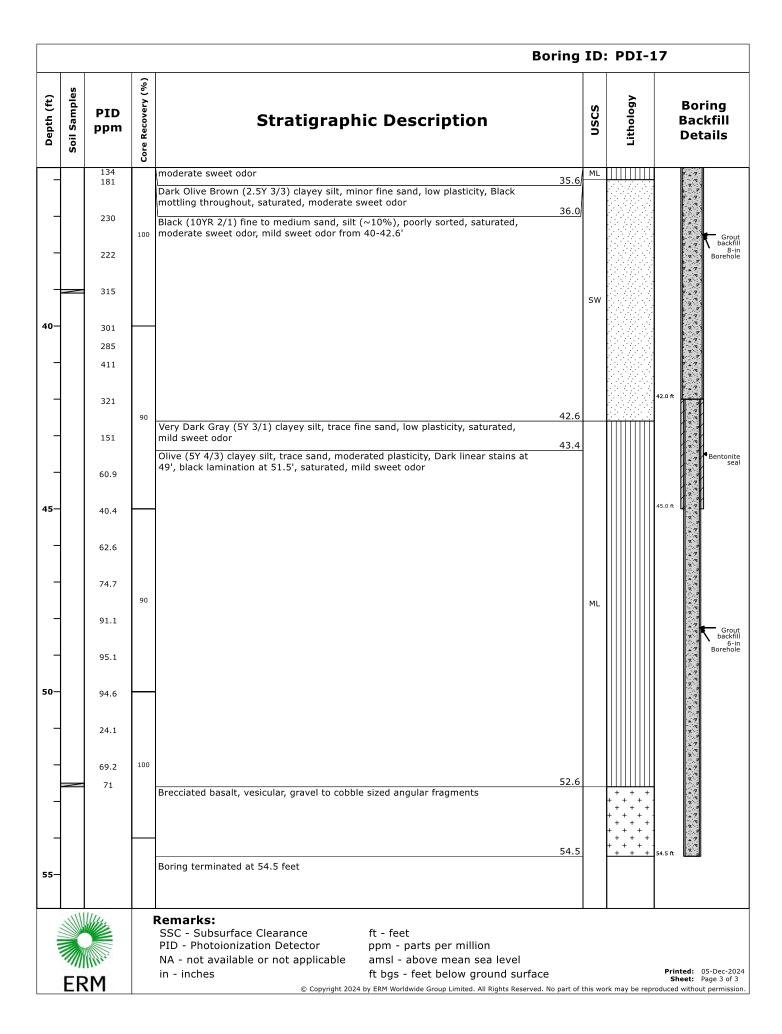
NA - not available or not applicable in - inches

ft - feet

ppm - parts per million amsl - above mean sea level

ft bgs - feet below ground surface

				Во	ring	ID:	PDI-1	7
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
_		0.9		Dark Yellowish Brown (10YR 3/4) fragmented silty clay, fine sand, gravel, subrounded to subangular, debris (carbon, brick, ACM), moist, no odor  Dark Yellowish Brown (10YR 3/4) clayey silt with fine sand, moderate plasticity,	15.7	CL		y v v v v v v v v v v v v v v v v v v v
_		1.5	100	debris (carbon, brick, gravel), 10" piece of wood at 18', wet, no odor	18.0			Grout y v backfill
_				Dark Yellowish Brown (10YR 3/4) fragmented silt with fine sand, poorly sorted, gravel to cobble sized clasts (<.25"-3"), subrounded, debris (wood, carbon), moist, no odor  Very Dark Grayish Brown (2.5YR 3/2) silt with fine sand, dispersed gravel,	18.8			\$\bar{\pi} \pi \bar{\pi} \
20-		1.8		debris (carbon, wood), wet, no odor  Dark Yellowish Brown (10YR 3/4) silt with fine sand, dispersed gravel, debris (carbon, wood), dark yellowish brown (10YR 4/4) mottling, wet, no odor	20.0	ML		
_		2.2						7
_		2	100					V V V V V V V V V V V V V V V V V V V
25-		1.2		Dark Yellowish Brown (10YR 4/4) silty clay, gravel, subrounded, moderate plasticity, brick debris, Very Dark Grayish Brown (2.5YR 3/2) mottling from 27'-28', 7" piece of wood at 28', 6" cobble at 29' saturated, no odor	23.9			7
_		1.8						
_		1.2	90			CL		V P V
-								
30-		2.3 11.1 13.6		Dark Grayish Brown (10YR 4/2) fine to medium sand, silt ( $\sim$ 10%), poorly sorted, clayey silt fragments (.25"-2"), yellow staining from 32.4'-32.8', saturated, mild sweet odor	30.0			7
-		11.8	100			SW		\$\frac{1}{2} \cdot \frac{1}{2}
_		32.5	100	Very Dark Gray (10YR 3/1) silt with fine sand, low plasticity, yellow staining increasing from 33'-34.6, yellow lamination at 34', yellow staining appears depositional/stratified, saturated, mild sweet odor	32.8	ML		33.0 ft
35-		47 51.7		Dark Grayish Brown (10YR 4/2) fine to medium sand, silt ( $\sim$ 10%), poorly sorted, clayey silt (.25"-2"), saturated, mild sweet odor	34.6	sw		Dentonite seal
		134		Black (10YR 2/1) fine to medium sand, silt (~10%), poorly sorted, saturated,	35.0			( \$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
				Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million				
	ER	MS M		NA - not available or not applicable amsl - above mean sea level in - inches ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. N		this wo	rk may be repro	Printed: 05-Dec-2024 Sheet: Page 2 of 3 adduced without permission.



**Drilling Start Date:** 06-Aug-2024 **Drilling End Date:** 07-Aug-2024 **Drilling Contractor:** Cascade Drilling

Drilling Contractor: Cascade Drilling Drilling Method: Sonic TSI Chris Baker SSC Contractor: GPRS SSC Method: Private Locate SSC Diam./Depth: Not Applicable

 Northing:
 702478.324

 Easting:
 7627618.254

 Surface Elevation:
 37.0 ft amsl

 Borehole Diameter:
 10 in

Borehole Depth: 51.3 ft bgs
Water Encountered: 29.0 ft bgs
Logged By: David Stone
Reviewed By: Avery Soplata, RG

Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description	nscs	Lithology	Boring Backfill Details
0-				GROUND SURFACE  Angular gravel (<.25"-1.5"), Pale Gray silt with fine sand matrix, dry, no odor		0000	<u></u>
_		35.6		1.	GM 0	00000	▼
_				Asphalt 1.  Dark Brown (10YR 3/3) silt with fine sand, low plasticity, loose/fragmented, subrounded gravel to cobble inclusions (.25"-3"), moist, no odor	2/		7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
		3.5	60		ML		
5-				5	0		A
		25.3		Angular gravel (<.25"-1.5"), Pale Gray silt with fine sand matrix, dry, no odor, slough  6  Dark Brown (10YR 3/3) silt with fine sand and clay, moderate plasticity, subrounded cobble to gravel inclusions (0.25"-4"), Gray mottling 12.5'-20', wet, no odor	GM 0		Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y
			40				
10-							4
-		5.6			ML		** ** **  ** ** **  ** ** **  ** **  ** **  ** **  ** **  ** **  ** **
-			100				
		2.4					
15-		16.2					V V V V V V V V V V V V V V V V V V V
-5		16.2					~ v · v ~ · p · v · v



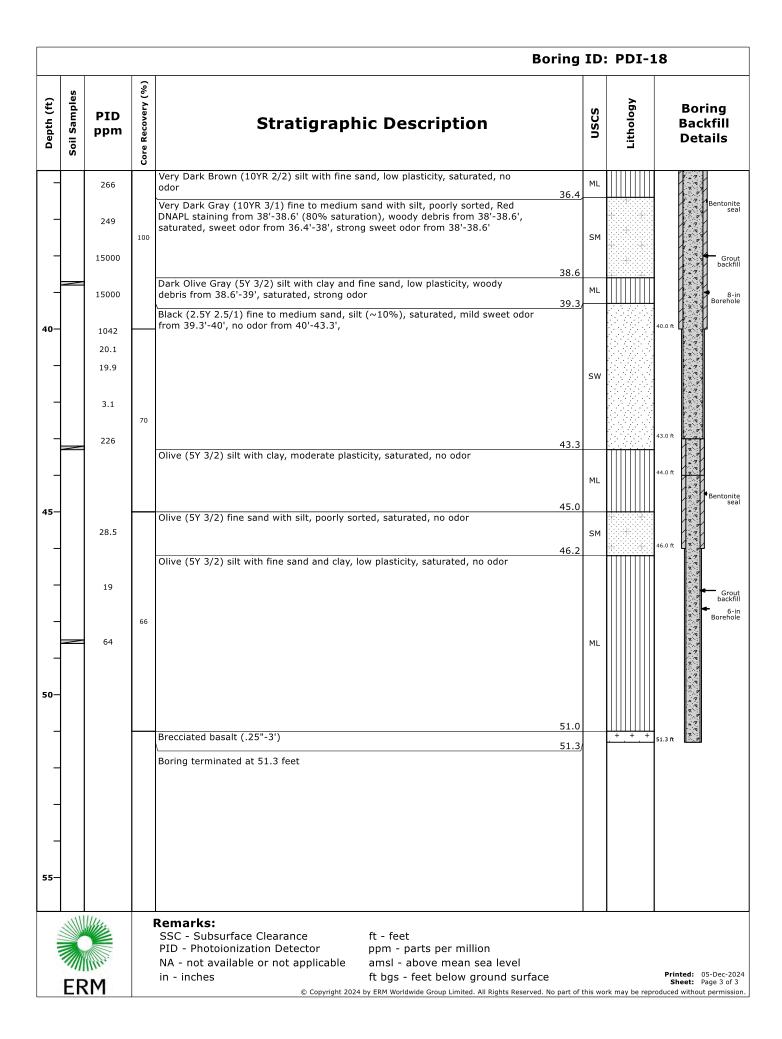
**Remarks:** 

SSC - Subsurface Clearance

PID - Photoionization Detector NA - not available or not applicable in - inches ft - feet

ppm - parts per million amsl - above mean sea level ft bgs - feet below ground surface

				Bor	ing	ID	PDI-1	18
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
_		10.6	40	Dark Brown (10YR 3/3) silt with fine sand and clay, moderate plasticity, subrounded cobble to gravel inclusions (0.25"-4"), Gray mottling 12.5'-20', wet, no odor				Grout backfill
20-				Very Dark Brown (10YR 2/2) silt with fine sand, trace clay, moderate plasticity,	20.0			
_		5.3	100	pebble to cobble sized clast inclusions (.5"-3"), glass debris at 24', woody debris at 26', wet, no odor		ML		
_		7.6						** ** ** ** ** ** ** ** ** ** ** ** **
25-								4 b b
_		11.4 31.1			26.3			A
_		14.6	100	Dark Brown (10YR 3/3) medium sand, moderately sorted, loose, competent silt with fine to medium sand bed with low plasticity (28.1'-28.3'), moist from 26.3'-28.8', saturated from 28.8'-30', no odor	20.5			
_		39.5 37.4				SW		
30-		1.2		Brown (10YR 4/3) fine to medium sand with silt, poorly sorted, silt fraction increases down interval (30-50%), saturated, no odor	30.0			P
-		9.1			32.3	SM	+ + +	P
-		41.5	100	Very Dark Gray (10YR 3/1) fine to medium sand, silt (10%), poorly sorted, saturated, no odor		SW		33.0 ft P
_		59.7		Very Dark Brown (10YR 2/2) silt with fine sand, low plasticity, saturated, no odor	33.8	ML		34.0 ft
35-	.111	189	-					
				Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable amsl - above mean sea level				
	ER	M		in - inches  ft bgs - feet below ground surface © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No	part of t	his wo	rk may be repi	<b>Printed:</b> 05-Dec-2024 <b>Sheet:</b> Page 2 of 3 roduced without permission.



Drilling Start Date: 01-Aug-2024
Drilling End Date: 01-Aug-2024
Drilling Contractor: Cascade Drilling

Drilling Contractor: Cascade Drilling Drilling Method: Sonic TSI Chris Baker SSC Contractor: GPRS SSC Method: Private Locate SSC Diam./Depth: Not Applicable

Northing: 702411.834
Easting: 7627653.686
Surface Elevation: 37.0 ft amsl
Borehole Diameter: 10 in

Borehole Depth: 55.0 ft bgs
Water Encountered: 32.0 ft bgs
Logged By: David Stone
Reviewed By: Avery Soplata, RG

Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

	_	<b>,</b>	-	, ,			
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description	nscs	Lithology	Boring Backfill Details
				GROUND SURFACE			
0-				Gray gravel, poorly sorted, subangular-angular, 0.25"-1", dry, no odor	_ GM	180000	, ў
				0.! Dark Brown (10YR 3/3) silt with clay, trace fine sand, gravel to cobble inclusions	ML		
-		1.3		(.25"-4"), very low plasticity, moist, no odor		0000	▼
				Gray gravel, subangular, silty fine sand matrix, 0.25"-1", moist, no odor	2	0000	V V V V
-				2.:	2	0000	P . V . V . V V . P
			110	Dark Brown (10YR 3/3) silt with clay, trace fine sand, gravel to cobble inclusions		0000	V V
_		1		(.25"-4"), very low plasticity, moist, no odor	GM	20000	\$ p
		_					Γ
						0000	7 7 7 7 7 7
						0000	V V
				5.(			V V V
5-		2.2		Dark Brown (10YR 3/3) silt with clay and fine sand, very low plasticity, gravel to	<del>'</del>		A . A .
		1		cobble sized inclusions (<.25"-5"), poorly sorted, subrounded, debris (carbon,			Ÿ V
-		0.9		ACM), moist, no odor			. v. v
				6.0	5		A
l _				Dark Yellowish Brown (10YR 4/4) silt with clay and fine sand, low plasticity, competent, gravel to cobble sized inclusions (.5"-4"), debris (graphite, ACM)			· · · · · · · · · · · · · · · · · · ·
			80	from 8-9', debris (carbon, ACM) from 10'-10.8', moist, no odor			4
			80		ML		V V
-					'		Δ. Δ.
-		1.5					P 7 7
							V V
10-							∵ ∇ ∵ ∇ ¬ · · · P
		10.4					P 7 7
١ _		10.1		10.8 Gravel to cobble sized rock debris (Asphalt, carbon, ACM) in Dark Gray-Brown	3		φ
				silty fine sand matrix, Orangish to Reddish staining/rust markings, Turqoise			,
				powder on graphite at 11.5'			Ø
-							7 7 7 7 7 7
			100	13.0		$\bowtie$	¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬
-		6.1		Very Dark Grayish Brown (2.5Y 3/2) silt with fine sand and clay, low plasticity,	1		V V
				wet, no odor		<b> </b>	D d
-						<b> </b>	. ф
		3.7			ML	<b> </b>	. v . v
15-				15.0	)	<b> </b>	7 . V . V
-		0 1				<b> </b>	A . A
		8.1					V
	1111	1111		Remarks:			



# **Remarks:**

in - inches

SSC - Subsurface Clearance

PID - Photoionization Detector NA - not available or not applicable ft - feet

ppm - parts per million amsl - above mean sea level

ft bgs - feet below ground surface

Printed: 05-Dec-2024
Sheet: Page 1 of 3

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				Во	ring	ID	PDI-1	.9
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
_		8.1		Very Dark Grayish Brown (2.5Y 3/2) silt with fine sand and clay, moderate plasticity, loose, debris (carbon, brick, ACM, asphalt, rubble), Yellow mottling, wet, no odor				▼
_		5	5	Very Dark Grayish Brown (2.5Y 3/2) silt with fine sand and clay, low plasticity, competent, Gray laminations of clay from 19.7'-20', Light yellow mottling, glass tubing fragment at 18.5', wet, no odor.	18.0	ML		10-in v 10-in Grout backfiil
20-		2.5		Very Dark Grayish Brown (2.5Y 3/2) silt with clay and fine sand, moderate plasticity, inclusions of gravel to cobble sized clasts (.5"-5"), debris (graphite, ACM, glass, asphalt, brick), wet, no odor	20.0			
_			100	Gravel, rounded, poorly sorted, (<.25"-1"), wet, no odor  Dark Yellowish Brown (10YR 3/4) fine to medium sand with silt, poorly sorted,	21.6	GW	00000	
_		7.5		Very Dark Grayish Brown (10YR 3/4) fine to medium sand with silt, poorly sorted, silty clay inclusions (.25"-3"), debris (ACM), moist, no odor  Very Dark Grayish Brown (10YR 3/2) silt with fine sand and clay, moderate plasticity, debris (glass, carbon rods, asphalt, carbon, ACM), Yellow mottling from 23'-24', Orangish staing from 26'-27', wet, no odor	23.0	SM		
25-		4.4	150			ML		
_		17.2			27.0			
_		18.8	100	Dark Yellowish Brown (10YR 3/4) fine to medium sand with trace silt, poorly sorted, subrounded gravel inclusions, moist, no odor  Very Dark Grayish Brown (10YR 3/2) silt with fine sand, low plasticity, subrounded gravel inclusions, wood debris at 28', moist, no odor	27.5 <i>j</i> 28.5 <i>j</i>	SW ML		
30-		11.9		Dark Yellowish Brown (10YR 3/4) fine to medium sand, trace silt, poorly sorted, silt inclusions (.25"-3"), moist, no odor	20.3)			
_		13.2				SW		V . V . V . V . V . V . V . V . V . V .
-		79 35.5	90	Very Dark Gray (2.5Y 3/1) fine to medium sand, silt (20-30%), poorly sorted, Gray silty clay inclusions (33.3'-35'), wood debris at 33.2', Yellow mottling, saturated, mild sweet odor	32.0		+ +	
_		28.5			25.6	SM	+ + + + + + + + + + + + + + + + + + + +	
35-	1111	86 173		Very Dark Gray (2.5Y 3/1) silt with clay and fine sand, low plasticity, laminations, .5" Black bed at 37', saturated, sweet odor	35.0	ML		35.0 ft
				SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million NA - not available or not applicable amsl - above mean sea level				<b>Printed:</b> 05-Dec-2024
	ER	M		in - inches ft bgs - feet below ground surface © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. N		this wo	rk may be repr	Sheet: Page 2 of 3

				Bor	ing	ID:	PDI-1	19
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
_		173 120		Very Dark Gray (2.5Y 3/1) silt with clay and fine sand, low plasticity, laminations, .5" Black bed at 37', saturated, sweet odor				7 . V
_		121				ML		
		13.1	100	Very Dark Greenish Gray (10Y 3/1) clay with silt, low plasticity, saturated, mild sweet odor	37.5	CL		7 A V
		13.1		Very Dark Gray (10YR 3/1) fine to medium sand with silt, poorly sorted, DNAPL (Red) staining 50-70% saturation (38.6'-39.3'), saturated, strong sweet odor	38.0/	SM	† †	7 V
-		15000		Very Dark Olive Gray (5Y 3/2) silt and clay with fine sand, saturated, mild sweet	39.3			7 7
40-		1100		odor  Black (2.5Y 2.5/1) fine to medium sand with silt, poorly sorted, clayey silt	40.0	ML		7 ▼ ▼ PBentonite seal
-		309 119		inclusions (40'-42.6'), shiny gray staining 30-50% saturation (40'-42'), DNAPL globule (2") at 41.3', DNAPL globule (1") at 41.7', DNAPL globule (3") at 42.4', dispersed DNAPL (<.5") from 42-43.5', 6" metal tie at 41', saturated, strong			+ +	Seal
_		1300		sweet odor				V . V
			100			SM	+ + + + + + + + + + + + + + + + + + +	7 . V
-		454					+ +	▼
		54			45.0		+ +	45.0 ft
45-		69 36.3		Olive (5Y 5/3) silt with clay, trace fine sand, moderate plasticity, saturated, mild sweet odor				Grout backfill 8-in Borehole
_		47.9	70			ML		
_		23.1			50.0			
50-		16.8		Dark Olive Gray (5Y 3/1) fine sand, silt (20-30%), poorly sorted, saturated, mild sweet odor	30.0		+ + + + + + + + + + + + + + + + + + + +	7
-		10.0				SM	+ +	7
-		18.3		Olive (5Y 5/3) silt with fine sand, trace clay, low plasticity, Reddish-Brown	52.0			7 . V
			80	laminations (53.5'), saturated, mild sweet odor		ML		7 . 7 
		16.5			54.0			A A
				Brecciated vesicular basalt fragments (.25"-2"), silty fine matrix, mild sweet odor	55.0		+ + + + + + + + + + + + + + + + + + + +	7
55-				Boring terminated at 55 feet	-			
1		William	ı	Remarks: SSC - Subsurface Clearance ft - feet				
				PID - Photoionization Detector ppm - parts per million NA - not available or not applicable amsl - above mean sea level				<b>Printed:</b> 05-Dec-2024
	ER	M		in - inches ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No	part of t	his woı	rk may be repr	Sheet: Page 3 of 3

Drilling Start Date: 07-Aug-2024
Drilling End Date: 08-Aug-2024
Drilling Contractor: Cascade Drilling

Drilling Contractor: Cascade Drilling Drilling Method: Sonic TSI Chris Baker SSC Contractor: GPRS SSC Method: Private Locate SSC Diam./Depth: Not Applicable

Northing: 702303.810
Easting: 7627756.341
Surface Elevation: 35.0 ft amsl
Borehole Diameter: 10 in 10

Borehole Depth: 58.0 ft bgs
Water Encountered: 29.0 ft bgs
Logged By: David Stone
Reviewed By: Avery Soplata, RG
Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

PID	Core Recovery	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
		GROUND SURFACE				
		Gray gravel (.25"-1.5"), poorly sorted, subrounded to subangular, loose, silty			00000	V V
29.9					0000	A A
				GM		P
					00000	A A A
1	100	Very Dark Grayish Brown (10YR 3/2) silt with fine sand, trace clay, gravel to	2.6			P
17.1		cobble inclusions (.25"-4"), debris (brick), loose, moist, no odor				∇ ∇ ∇ ∇ ∇ ∇
		Very dark Gray (10YR 3/1) silt with fine sand trace clay semi-competent	4.0			7 V V
		gravel to cobbles (.5"-5"), moist, no odor	г о			A
43.4		Very Dark Gray (5Y 3/1) silt with fine sand, trace clay, low plasticity, competent,	5.0	ML		A
25.7		(6.3-6.9'), loose angular gravel and brick fragments (7.3-8'), moist, no odor				V V V
25.7						V V V
						A A A
12.6	100		9.0			V V
		Black (10YR 2/1) Fine to medium sand, silt (10-20%), gravel, subrounded,	6.0			ν ν ν ν
		tar-like odor				\(\frac{1}{2}\) \(\frac{1}2\) \(\frac{1}2\) \(\frac{1}2\) \(\frac{1}2\) \(\frac{1}2\) \(\frac{1}2\) \(1
117.5				SM		V V
						V . V . V . V . V . V . V . V . V . V .
47.1			10.9			V V
36.2		Very Dark Greenish Gray (GLEY1 3/5GY) silt with fine sand, trace clay, low plasticity, moist, no odor		ML		
115		Black (10YR 2/1) fine to medium sand, silt, poorly sorted, gravel to cobbles	11.1			V V V
	100	(.25"-4"), debris (ACM, glass, brick, metal, scraps, rubber band) moist, tar-like odor		CM		P
63.6				311		7 V V
						V V V
74		Very Dark Gray (5Y 3/1) silt with fine sand and clay, moderate plasticity	14.3			A A A
11.5		subrounded, gravel to cobbles (.5"-4"), shiny gray staining (14.3'-14.8'), wet,		ML		A A A
27.8			15.0	SM		Ø
	29.9  17.1  43.4  25.7  12.6  117.5  47.1  36.2  115  63.6  74  11.5	29.9 100 17.1 100 17.1 100 17.1 100 117.5 100 63.6 74 11.5	GROUND SURFACE  Gray gravel (.25"-1.5"), poorly sorted, subrounded to subangular, loose, silty fine sand matrix, moist, no odor  Very Dark Grayish Brown (10YR 3/2) silt with fine sand, trace clay, gravel to cobble inclusions (.25"-4"), debris (brick), loose, moist, no odor  Very dark Gray (10YR 3/1) silt with fine sand, trace clay, semi-competent, gravel to cobbles (.5"-5"), moist, no odor  Very Dark Gray (5Y 3/1) silt with fine sand, trace clay, low plasticity, competent, subrounded concrete with pebbles (5" average), black and grey mottling (6.3-6.9"), loose angular gravel and brick fragments (7.3-8"), moist, no odor  117.5  Black (10YR 2/1) Fine to medium sand, silt (10-20%), gravel, subrounded, debris (glass, rounded masses of sand with tar-like substance), moist, slight tar-like odor  117.5  Very Dark Greenish Gray (GLEY1 3/5GY) silt with fine sand, trace clay, low plasticity, moist, no odor  Black (10YR 2/1) fine to medium sand, silt, poorly sorted, gravel to cobbles (.25"-4"), debris (ACM, glass, brick, metal, scraps, rubber band) moist, tar-like odor  Very Dark Gray (5Y 3/1) silt with fine sand and clay, moderate plasticity, subrounded, gravel to cobbles (.5"-4"), shiny gray staining (14.3'-14.8"), wet, tar-like odor	GROUND SURFACE  Gray gravel (.25"-1.5"), poorly sorted, subrounded to subangular, loose, silty fine sand matrix, moist, no odor  17.1  100  Very Dark Grayish Brown (10YR 3/2) silt with fine sand, trace clay, gravel to cobble inclusions (.25"-4"), debris (brick), loose, moist, no odor  Very dark Gray (10YR 3/1) silt with fine sand, trace clay, semi-competent, gravel to cobbles (.5"-5"), moist, no odor  43.4  Very Dark Gray (5Y 3/1) silt with fine sand, trace clay, low plasticity, competent, subrounded concrete with pebbles (5" average), black and grey mottling (6.3-6.9"), loose angular gravel and brick fragments (7.3-8"), moist, no odor  11.6  Black (10YR 2/1) Fine to medium sand, silt (10-20%), gravel, subrounded, debris (glass, rounded masses of sand with tar-like substance), moist, slight tar-like odor  11.1  36.2  Very Dark Greenish Gray (GLEY1 3/5GY) silt with fine sand, trace clay, low plasticity, moist, no odor  11.1  36.2  Very Dark Greenish Gray (GLEY1 3/5GY) silt with fine sand, trace clay, low plasticity, moist, no odor  11.1  36.2  Very Dark Greenish Gray (GLEY1 3/5GY) silt with fine sand, trace clay, low plasticity, moist, no odor  11.1  36.2  Very Dark Greenish Gray (GLEY1 3/5GY) silt with fine sand, trace clay, low plasticity, moist, no odor  11.1  36.2  Very Dark Greenish Gray (GLEY1 3/5GY) silt with fine sand, trace clay, low plasticity, moist, silt place trace clay, low place	GROUND SURFACE  Gray gravel (.25"-1.5"), poorly sorted, subrounded to subangular, loose, silty fine sand matrix, moist, no odor  Very Dark Grayish Brown (10YR 3/2) silt with fine sand, trace clay, gravel to cobble inclusions (.25"-4"), debris (brick), loose, moist, no odor  Very dark Gray (10YR 3/1) silt with fine sand, trace clay, semi-competent, gravel to cobbles (.5"-5"), moist, no odor  Very Dark Gray (SY 3/1) silt with fine sand, trace clay, low plasticity, competent, subrounded concrete with pebbles (5" average), black and grey mottling (6.3-6.9"), loose angular gravel and brick fragments (7.3-8"), moist, no odor  12.6  Biack (10YR 2/1) Fine to medium sand, silt (10-20%), gravel, subrounded, debris (glass, rounded masses of sand with tar-like substance), moist, slight tar-like odor  Very Dark Greenish Gray (GLEY1 3/5GY) silt with fine sand, trace clay, low plasticity, moist, no odor  Very Dark Greenish Gray (GLEY1 3/5GY) silt with fine sand, trace clay, low plasticity, moist, no odor  Biack (10YR 2/1) fine to medium sand, silt, poorly sorted, gravel to cobbles (.25"-4"), debris (ACM, glass, brick, metal, scraps, rubber band) moist, tar-like odor  Very Dark Gray (5Y 3/1) silt with fine sand and clay, moderate plasticity, subrounded, gravel to cobbles (.25"-4"), shiny gray staining (14.3"-14.8"), wet, tar-like odor	Gray gravel (.25"-1.5"), poorly sorted, subrounded to subangular, loose, silty fine sand matrix, moist, no odor  29.9  100  Very Dark Grayish Brown (10YR 3/2) silt with fine sand, trace clay, gravel to cobble inclusions (.25"-4"), debris (brick), loose, moist, no odor  Very dark Gray (10YR 3/1) silt with fine sand, trace clay, semi-competent, gravel to cobbles (.5"-5"), moist, no odor  43.4  Very Dark Gray (5Y 3/1) silt with fine sand, trace clay, semi-competent, subrounded concrete with pebbles (5" average), black and grey mottling (6.3-6.9"), loose angular gravel and brick fragments (7.3-8"), moist, no odor  117.5  12.6  100  Black (10YR 2/1) Fine to medium sand, silt (10-20%), gravel, subrounded, debris (glass, rounded masses of sand with tar-like substance), moist, slight tar-like odor  117.5  Very Dark Greenish Gray (GLEY1 3/5GY) silt with fine sand, trace clay, low plasticity, moist, no odor  117.5  SM  47.1  36.2  Very Dark Greenish Gray (GLEY1 3/5GY) silt with fine sand, trace clay, low plasticity, moist, no odor  117.5  Very Dark Greenish Gray (GLEY1 3/5GY) silt with fine sand, trace clay, low plasticity, moist, no odor  118.5  Very Dark Greenish Gray (GLEY1 3/5GY) silt with fine sand, trace clay, low plasticity, moist, no odor  119.9  Very Dark Greenish Gray (GLEY1 3/5GY) silt with fine sand, trace clay, low plasticity, moist, no odor  110.9  Very Dark Greenish Gray (GLEY1 3/5GY) silt with fine sand, trace clay, low plasticity, moist, no odor  110.9  Very Dark Greenish Gray (GLEY1 3/5GY) silt with fine sand and clay, moderate plasticity, subrounded, gravel to cobbles (.5"-4"), shiny gray staining (14.3"-14.8"), wet, tar-like odor  115.0  SM



## **Remarks:**

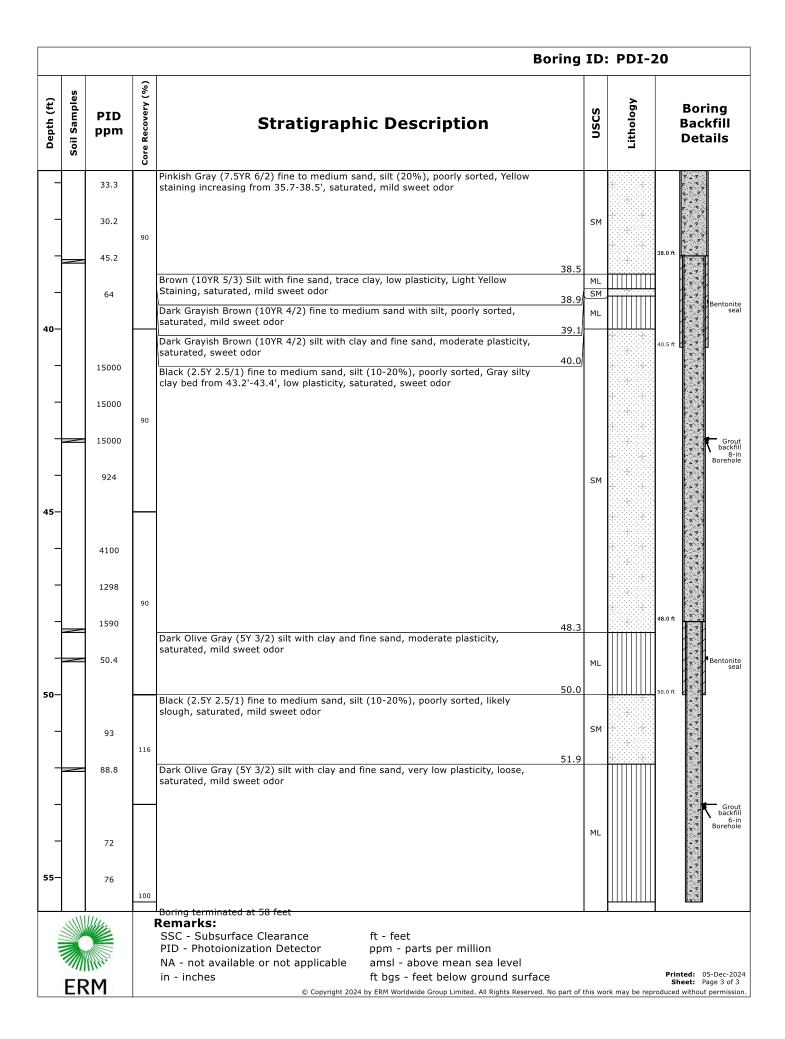
in - inches

SSC - Subsurface Clearance

PID - Photoionization Detector NA - not available or not applicable ft - feet

ppm - parts per million amsl - above mean sea level ft bgs - feet below ground surface

				Во	ring	ID:	PDI-2	20
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
		27.8 27.1		Black (10YR 2/1) fine to medium sand with silt, poorly sorted, rounded masses of sand with tar-like substance, subrounded gravel (likely slough from 11.1-14.3'), moist, tar like odor	1.5	SM		▼
		20.4	110	Very Dark Grey (10YR 3/1) silt with fine sand and clay, low plasticity, gravel to cobbles (.5"-3"), debris (metal scraps, nails, glass, brick), moist, tar-like odor	16.7	ML		
		27.8	110	Black (10YR 2/1) fine to medium sand with silt, poorly sorted, gravels to cobbles (.25"-3"), debris (metal scraps, nails, glass, brick), moist, tar-like odor	17.5/	SM	+ + + + + + + + + + + + + + + + + + + +	V V
-		22.7		Very Dark Grey (10YR 3/1) silt with fine sand, trace clay, low plasticity, competent, gravel to cobbles (.25"-4.5"), debris from 20.8'-22.3' (graphite rods,	19.0			7 7 7 10-in 7 7 8 orehole 8 Front backfill
20-		8.7		ACM, brick, wood, rubber), Yellow brick aggregate at 21', shiny Gray mottling from 19.3'-20', wet, tar-like odor				7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
		1.7				ML		V P
-		5.9			22.3			
		7.7	100	Very Dark Grey (5Y 3/1) silt with fine sand, trace clay, moderate plasticity, competent, gravel and debris (.25"-6") (concrete, metal scraps, wood, brick, graphite, ACM), Reddish-Orange fine to medium sand bed with silt from 22.8-22.9', poorly sorted, wet, tar-like odor				P
-		2.2		Dark Yellowish Brown (10YR 4/4) fine to medium sand, silt (20-30%), poorly sorted, silt inclusions (.25"-2"), wet, no odor	23.8	SM	† † † † † † † † † † † † † † † † † † †	
25-		6		Very Dark Grey (5Y 3/1) silt with fine sand and clay, low plasticity, gravel and debris (graphite, brick, rubber, wood, ACM), wet, mild tar-like odor	25.0			4 b.
-		3.6				ML		\$\partial \partial \part
-		7.8	100					\$\cdot \cdot
		7.9		Dark Yellowish Brown (10YR 4/4) fine to medium sand, trace silt, poorly sorted, yellow staining increasing from 31-32.8' (10-50%), saturated at 29', mild sweet	28.0			V V V V V V V V V V V V V V V V V V V
-		5.2	_	odor ( )				
30-		1.3				SW		P. W. V.
		2.1						V V
-		4.1	80		22.0			
-		3.5		Pale Yellow (5Y 7/4) silt with fine sand, low plasticity, Brown mottling, saturated, mild sweet odor	32.8	ML	+ +	V V V
		21.8		Pinkish Gray (7.5YR 6/2) fine to medium sand, silt (20%), poorly sorted, Yellow staining increasing from 35.7-38.5', saturated, mild sweet odor	.,	SM	+ +	(
35-		27.6					+ +	
	Ille	1664		 Remarks:				<del></del>
111111111111111111111111111111111111111				SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million NA - not available or not applicable amsl - above mean sea level				
	ER	M		in - inches  ft bgs - feet below ground surface © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. I		:his wo	rk may be repr	<b>Printed:</b> 05-Dec-2024 <b>Sheet:</b> Page 2 of 3 oduced without permission.



Drilling Start Date: 08-Aug-2024
Drilling End Date: 09-Aug-2024
Drilling Contractor: Cascade Drilling

Drilling Contractor: Cascade Drilling Drilling Method: Sonic TSI Chris Baker SSC Contractor: GPRS SSC Method: Private Locate SSC Diam./Depth: Not Applicable

Northing: 702307.332
Easting: 7627798.821
Surface Elevation: 35.0 ft amsl
Borehole Diameter: 10 in
Borehole Denth: 56.0 ft bgs

Borehole Depth: 56.0 ft bgs
Water Encountered: 25.0 ft bgs
Logged By: David Stone
Reviewed By: Avery Soplata, RG
Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description	nscs	Lithology	Boring Backfill Details
0-				GROUND SURFACE Gray-Brown gravel to cobble sized clasts (.25"-3"), subangular to angular, loose,		0000	4
				poorly sorted, silty fine sand matrix, dry, no odor			
					GM		V
-		0.7		2.1  Dark Brown (10YR 3/3) silt with fine sand and clay, subrounded gravel			\(\frac{1}{2}\) \(\frac{1}\) \(\frac{1}{2}\) \(\frac{1}2\) \(\frac{1}2\) \(\frac{1}2\) \(\frac{1}2\) \(
			100	inclusions (.25"-1.5"), loose from 2.1'-4.5', competent from 4.5'-5',wood debris at 4.5', brick debris at 3', moist, no odor			V
-				at 4.3 , blick debits at 3 , moist, no oddi			A
-							V 4 V
		1.8		5.0			A A
5-				Very Dark Greenish Gray (GLEY1 3/5GY) silt with fine sand and clay, moderate plasticity, rounded cobble to gravel sized inclusions (.25"-5"), 8" cobble at 13',			A A
_		0.1		woody debris, debris (metal and ACM) at 14.9', Dark Brown silt with fine sand and gravel at 11.1'-11.4', likely slough from 2.1'-5', wet, no odor			A A
				and graver de 11.1 11.17, interly stought from 2.11 37, tree, no such			A A
-							4 A
_			100				A
-		0.2			ML		V . V . V . V . V . V . V . V . V . V .
1.0							\( \frac{1}{2} \) \( \frac{1} \) \( \frac{1} \) \( \frac{1}{2} \) \( \frac{1}{2} \
10-							V 2 V
-		30.5					\(\frac{\partial}{\partial}\)
							\( \vec{\pi} \) \( \vec{\pi}
			100				∇
-							∇
							∇. Δ. ∇ ∇
-		0 -					∇ ∇ . ∇ . ∇ . ∇ . ∇ .
15-		8.5		15.0			∇ ∇ ∇ − ∇ ∇ − ∇ ∇ − ∇
		26.3					V
$\vdash$	- 111	111.	<u> </u>		1		



## **Remarks:**

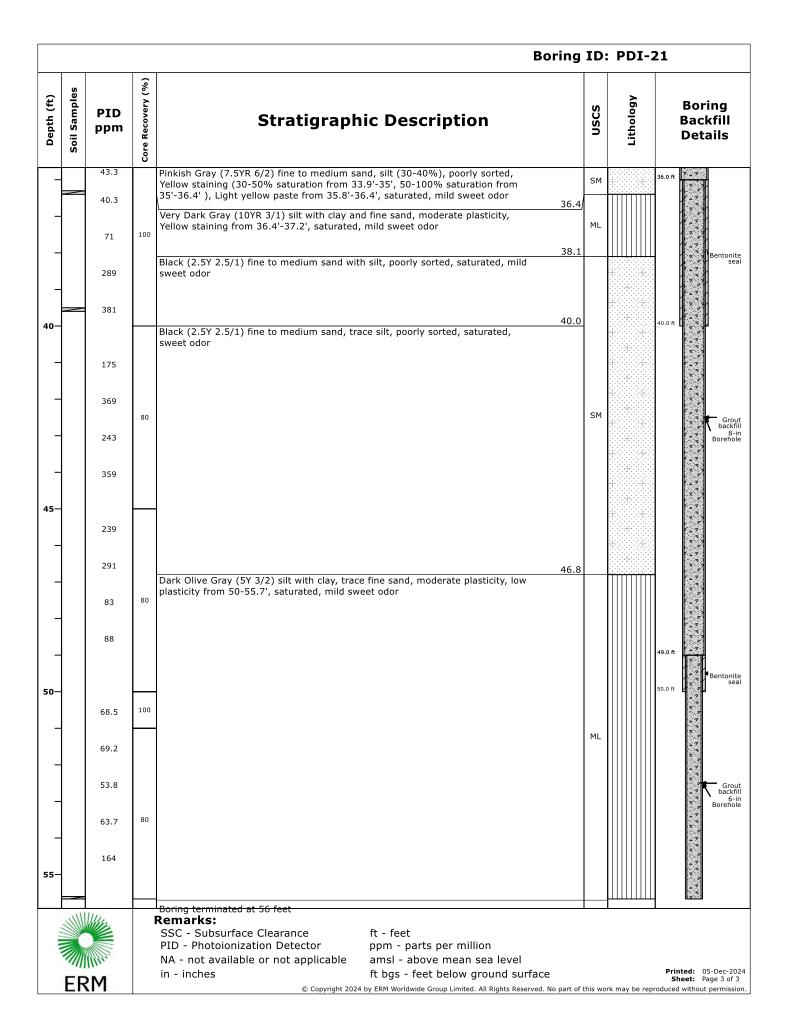
SSC - Subsurface Clearance PID - Photoionization Detector

NA - not available or not applicable in - inches

ft - feet

ppm - parts per million amsl - above mean sea level ft bgs - feet below ground surface

				Е	oring	ID:	PDI-2	1
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
_		26.3		Very Dark Greenish Gray (GLEY1 3/5GY) silt with fine sand and clay, moderate plasticity, rounded cobble to gravel sized inclusions (.25"-5"), Debris (graphite				V . V .
_		6.1		at 15.5', wood at 16.5' and 17.7' and 18', metal wire at 19.7'), shiny/ sheen staining appears on fine to medium sand bands within silt from 19.6'-20', wet, tar like odor				\$\times \times \t
		3.1	100					V V V
_		3.8						V V 10-in Sorehole V V Grout backfill V V
		3.5			20.0			Ÿ . ♥
20-		25		Very Dark Greenish Gray (GLEY1 3/5GY) silt with fine sand and clay, moderate plasticity, rounded cobble to gravel sized inclusions (.25"-5"), wet, tar-like odor	20.0			8. 7 7 8 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7
		28						P
-		10	100					
_		10.5	100			ML		8
-		5.3		Brown (10YR 4/3) silt and clay with fine sand, gravel to cobble sized clasts	24.0	=		V . V . V . V . V . V . V . V . V . V .
25-			•	inclusions (.25"-6"), subrounded, Dark Gray to Green mottling, wet, mild tar like odor $$	25.0			Ø
25		12.4 14		Very Dark Greenish Gray (GLEY1 3/5GY) silt with clay, trace fine sand, gravel to cobble sized inclusions (.25"-5"), Blackish Gray mottling, shiny/sheen silver		1		V V V
-		10.8		staining in fine to medium sand from 26-27.8, saturated, mild tar-like odor				P
-								V V V
_		7 14.3	100	Brown (10YR 4/3) silt with clay, trace fine sand, Dark Gray mottling, gravel to cobble inclusions (.25"-6"), shiny/sheen silver staining in fine to medium sand from 27.8-28.2, graphite at 29.6', saturated, no odor	27.8	-		V V V V V V V
_		11.5						P
30-				Very Dark Gray (10YR 3/1) fine to medium sand, silt (30-40%), poorly sorted,	30.0			\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
_		4.5		silt framents, debris (gravel, brick), saturated, no odor	31.2			V V V
_		6.1		Dark Yellowish Brown (10YR 3/4) fine to medium sand with silt, poorly sorted, silt inclusions, saturated, no odor	32.2	SM	+ +	9
_		27.1	100	Pinkish Gray (7.5YR 6/2) fine to medium sand, silt (30-40%), poorly sorted, dispersed yellow staining, saturated, mild sweet odor	32.2	•	+ + + + + + + + + + + + + + + + + + +	N
_		53.8		Brown (10YR 4/3) silt and clay, trace fine sand, competent, low plasticity, saturated, sweet odor	33.5	ML		7 . 7 . 7 . 7 . 7 . 7 . 7 . 7 . 7 . 7 .
35-		65.1		Pinkish Gray (7.5YR 6/2) fine to medium sand, silt (30-40%), poorly sorted, Yellow staining (30-50% saturation from 33.9'-35', 50-100% saturation from 35'-36.4'), Light yellow paste from 35.8'-36.4', saturated, mild sweet odor	33.9	SM	+ + + + + + + + + + + + + + + + + + +	
		43.3						γ ¬ ¬ ¬ ¬ ¬ ¬ ¬ ¬ ¬ ¬ ¬ ¬ ¬ ¬ ¬ ¬ ¬ ¬ ¬
	We	William		Remarks:		•		
				SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable amsl - above mean sea level				<b>Printed:</b> 05-Dec-2024
	ER	M		in - inches ft bgs - feet below ground surfa © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserve		this wo	rk may be repr	Sheet: Page 2 of 3



**Drilling Start Date:** 14-Aug-2024 **Drilling End Date:** 16-Aug-2024 **Drilling Contractor:** Cascade Drilling

**Drilling Method:** Sonic Rig Make/Model: TSI **Driller:** Chris Baker **SSC Contractor:** GPRS SSC Method: Private Locate SSC Diam./Depth: Not Applicable Northing: 702203.024 Easting: 7627786.431 **Surface Elevation:** 37.0 ft amsl Borehole Diameter: 10 in

**Borehole Depth:** 89.0 ft bgs Water Encountered: 24.0 ft bgs Logged By: David Stone Reviewed By: Avery Soplata, RG Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill
Del	Soil	<b>PP</b>	Core Re			ר	Ë	Details
어				GROUND SURFACE Concrete			4	N P.
_		0.7		Very Dark Grayish Brown (10YR 3/2) fine to course grained sand, trace silt, poorly sorted, rounded gravel inclusions (.25"-2"), subangular cobbles from 5'-13', loose from 5'-13', moist, no odor	0.4)		<u> </u>	V . V . P . P . V . V . V . V . V . V .
_		2.1	100					
_								7 V V V V V V V V V V V V V V V V V V V
5-		3.1						V V
		0.7						A
$\dashv$								V V
						sw		V V
4						3**		∀
		1	100					A b .
-								A A .
								ν ν ν
-								V . V
								A A
0-		17.1						A A A
								V V
$\dashv$		3						<i>p</i>
								∇
$\dashv$								A A .
		4.2	100					A . A .
$\dashv$				Very Dark Grayish Brown (10YR 3/2) sandy silt, moist, no odor	13.0	ML		V V
				Debris (brick, metal scraps, soft white material, orange-yellow powder, gravel)	13.6	111		V . V
				The second secon				V V V V V V V V V V V V V V V V V V V
.5-		17.5		Very Dark Grayish Brown (10YR 3/2) fine to coarse sand, poorly sorted, loose,	15.0	CV	(XXXX	A A A
		4.3		metal wire at 18', dispersed rounded gravel (.25"-1.5"), moist, no odor		SW	40,000,00	,



## **Remarks:**

in - inches

SSC - Subsurface Clearance

PID - Photoionization Detector NA - not available or not applicable ft - feet

ppm - parts per million amsl - above mean sea level

				В	oring	ID	PDI-2	.2
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
_ _ _ _ 20-		<ul><li>4.3</li><li>5.6</li><li>3.3</li></ul>	90	Very Dark Grayish Brown (10YR 3/2) fine to coarse sand, poorly sorted, loose, metal wire at 18', dispersed rounded gravel (.25"-1.5"), moist, no odor	20.8	SW		
-		5.8	110	Very Dark Grayish Brown (10YR 3/2) fine to medium sand, silt (~30%), poorly sorted, competent, loose from 21.4'-22', gravel (.25"-1.5") from 21.4'-22.6', debris (graphite, brick) from 21.4'-22.6', moist, no odor  Dark Brown (10YR 3/3) fine to medium sand, silt (10-20%), poorly sorted, loose, gravel to cobble inclusions (.25"-5"), Yellow granular material, debris (brick, graphite), moist, slight sweet odor	22.6	SM	+ + + + + + + + + + + + + + + + + + + +	10-in orehole Grout V
25-		6.6		Debris (graphite, concrete aggregate, brick) gravel to cobble clasts (.25"-6"), fine sand with silt matrix, saturated, no odor  Dark Gray (10YR 4/1) fine to medium sand with silt, poorly sorted, gravel to cobble inclusions (.25"-5"), debris (wood, concrete aggregate, brick, graphite), saturated, no odor	24.3		+ +	V V V
-		7.6	100	Very Dark Grayish Brown (10YR 3/2) fine to medium sand, silt, poorly sorted, silt inclusions (.25"-2.5"), Yellow brick debris, debris (brick, graphite, wood, sub-rounded gravel (.5")) from 26.4'-27.7', saturated, no odor  Very Dark Grayish Brown (10YR 3/2) fine to medium sand, silt, Yellow brick debris, debris (brick, graphite, wood, sub-rounded gravel (.5")) from 26.4'-27.7', saturated, no odor  Very Dark Grayish Brown (10YR 3/2) fine sand and silt with gravel (~.5"),	26.4		+ + + + + + + +	
30-		12.9		Pinkish Gray (7.5YR 6/2) fine to medium sand with silt, poorly sorted, saturated, no odor  Pinkish Gray (7.5YR 6/2) fine to medium sand with silt, poorly sorted, saturated, no odor  Pinkish Gray (7.5YR 6/2) fine to medium sand with silt, poorly sorted, Dark Brown fine sand with silt from 30.8'-32.2' likely slough, sub-rounded gravel	29.0 30.0	SM	+ + + + + + + + + + + + + + + + + + + +	
-		9.7 6.5	100	(.5"-1.5") from 36'-37', wood (1") at 34', saturated, slight sweet odor			+ + + + + + + + + + + + + + + + + + +	V V V V V V V V V V V V V V V V V V V
35-		14.4					+ + + + + + + +	
S		16.4	ı	Remarks: SSC - Subsurface Clearance ft - feet				P
III.	ER	M		SSC - Subsurface Clearance PID - Photoionization Detector NA - not available or not applicable in - inches  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved.		this wo	rk may be repr	Printed: 05-Dec-2024 Sheet: Page 2 of 5 oduced without permission.

				Bori	ng I	D:	PDI-2	22
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
-		16.4 27	100	Pinkish Gray (7.5YR 6/2) fine to medium sand with silt, poorly sorted, Dark Brown fine sand with silt from 30.8'-32.2' likely slough, sub-rounded gravel (.5"-1.5") from 36'-37', wood (1") at 34', saturated, slight sweet odor			+ + + + + + +	
40-		15.8 18.3 84.8	100	Black (2.5YR 2.5/1) fine to medium sand with silt, poorly sorted, gravel (.5"-1.5") from 41'-42.5', 1" Very Dark Gray (5Y 3/1) silt with clay and trace fine sand bed at 43.4', low plasticity, wood debris from 41.5'-42', saturated, no odor	0.7	SM		
45— —		47 14.4 9.6		Black (2.5Y 2.5/1) fine to medium sand, Light Brown/Gray silt inclusions, poorly sorted, gravel (.5"-1"), wood debris, saturated, no odor	4.6 6.4		+ + + + + + + + + + + + + + + + + + +	46.0 ft V
_		7.2 12.3	80	Olive Gray (5Y 4/2) silt with clay and fine sand, moderate plasticity, saturated, no odor		ML		Bentonite seal
50-		12.13		Olive Gray (5Y 4/2) fine sand with silt, trace clay, loose, saturated, no odor  Olive (5Y 4/3) silt with fine sand and clay, low plasticity, saturated, no odor	0.0	SM	+ + + + + + + + + + + + + + + + + + +	49.0 ft
_		1.7	90			ML		
-		1.6	90	Olive (5Y 4/3) fine sand with silt, saturated, no odor	4.0	SM ML	+ + + +	
55-				Remarks: SSC - Subsurface Clearance ft - feet				, 3.
	EF	RM		PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable in - inches ppm - parts per million  amsl - above mean sea level  ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No page	rt of thi	is wo	rk may be repi	Printed: 05-Dec-2024 Sheet: Page 3 of 5 roduced without permission.

				Bor	ing	ID	: PDI-2	.2
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
		2		Olive (5Y 4/3) silt with fine sand and clay, low plasticity, saturated, no odor				
- 60-		1.8	90			ML		
		0.9						
-				Olive (5Y 4/3) fine sand with silt and clay, saturated, no odor	62.0			
			90			SM	+ + + + + + + + + + + + + + + + + + + +	V
				Olive (5Y 4/3) silt with clay, trace fine sand, low plasticity, Light Brown and	63.5			
		0.9		Tan/Light Olive Mottling, saturated, no odor		ML		
65-		0.5		Olive (5Y 4/3) fine sand with silt, trace clay, saturated, no odor	65.0			
-		1.2			67.5	SM	+ + + + + +	
70-		0.8	80	Olive (5Y 4/3) silt with clay, trace fine sand, moderated plasticity, saturated, no odor	67.5	ML		6-in Borehole Grout backfiil
10-								. ▼ . ▼
-		1.3		Olive (5Y 4/3) fine sand with silt, trace clay, saturated, no odor	71.0			- V
			100		72.0		+ + + + + + + + + + + + + + + + + + +	Control   Con
		1.2		Dark Olive Gray (5Y 3/2) fine sand with silt, trace clay, saturated, no odor	73.0	SM	+ + + + + + + + + + + + + + + + + + +	□
75-		/ <b>_</b>		Dark Olive Gray (5Y 3/2) silt with clay, trace fine sand, low plasticity, saturated, no odor	75.0	ML	+ + + + + + + + + + + + + + + + + + + +	
	11111	1111		Remarks:				- y · · ·
11111	ER	M		SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million NA - not available or not applicable amsl - above mean sea level in - inches ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No				Printed: 05-Dec-2024 Sheet: Page 4 of 5

				Вог	ring	ID	PDI-2	22
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
-		1.8	100	Dark Olive Gray (5Y 3/2) silt with clay, trace fine sand, low plasticity, saturated, no odor  Dark Olive Gray (5Y 3/2) fine sand with silt (50%) and clay, competent, saturated, no odor	76.2/	ML	# + + + + +	
80-		2.2 3.3		Dark Olive Gray (5Y 3/2) fine sand with silt and clay, loose, Light Olive Gray silt inclusions (2"-3") from 82.4'-83', saturated, no odor	80.0	SM	+ + + + + + + + + + + + + + + + + + +	
-		4.4	80					
85— —		4.4		Very Dark Gray (Gley1 3/N) clay with silt and fine sand, competent, loose fine sand with silt bed (2") at 85.3', saturated, no odor  Very Dark Gray (Gley1 3/N) fine sand with silt and clay, competent, saturated, no odor	85.0 86.2	CL	+ +	
-		4.2	100	Brecciated vesicular basalt (.25"-2"), fine sand with silt and clay matrix, several rounded basalt fragements.	88.3 89.0	SM	+ + + + + + + + + + + + + + + + + + + +	v 7 v 7 v 7 v 7 v 7 v 7 v 7 v 7 v 7 v 7
90-				Boring terminated at 89 feet				
95-			-	Remarks:				
////	ER	2M		SSC - Subsurface Clearance PID - Photoionization Detector NA - not available or not applicable in - inches    Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No	part of t	this wo	rk may be repi	Printed: 05-Dec-2024 Sheet: Page 5 of 5 oduced without permission.

Drilling Start Date: 16-Aug-2024
Drilling End Date: 19-Aug-2024
Drilling Contractor: Cascade Drilling

Drilling Contractor: Cascade Drillin

Drilling Method: Sonic

Rig Make/Model: TSI

Driller: Chris Baker

SSC Contractor: GPRS

SSC Method: Private Locate

SSC Diam./Depth: Not Applicable

 Northing:
 702213.111

 Easting:
 7627737.135

 Surface Elevation:
 37.0 ft amsl

 Borehole Diameter:
 10 in

Borehole Depth: 80.0 ft bgs
Water Encountered: 26.0 ft bgs
Logged By: David Stone
Reviewed By: Avery Soplata, RG

Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

Concrete  Concrete  Very Dark Grayish Brown (10YR 3/2) fine to medium grained sand, trace silt, one drilling process), metal wire debris at 2', moist, no odor  Section 100  Section 100  Section 100  Section 100  Section 100  Concrete 100  Very Dark Grayish Brown (10YR 3/2) fine to medium grained sand, trace silt, one odor 100  Section 100  Very Dark Grayish Brown (10YR 3/2) fine to medium grained sand, trace silt, poorly sorted, silty fine to medium sand fragments (likely from drilling process), wet, no odor 11.1  Language 100  Debris (graphite, ACM, metal wire at 15'), no odor 15.00  Section 11.50  Section 100  Section	Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
Very Dark Grayish Brown (10YR 3/2) fine to medium grained sand, trace silt, poorly sorted, silty fine to medium sand fragments from 2-13' (likely from drilling process), metal wire debris at 2', moist, no odor  5.1  6.9  6.9  6.9  6.9  Very Dark Grayish Brown (10YR 3/2) fine to medium grained sand, trace silt, poorly sorted, silty fine to medium sand fragments (likely from drilling process), wet, no odor  Very Dark Grayish Brown (10YR 3/2) fine to medium grained sand, trace silt, poorly sorted, silty fine to medium sand fragments (likely from drilling process), wet, no odor  Debris (asphalt (2-6"), ACM) subrounded gravel (2"), Very Dark Grayish Brown (10YR 3/2) fine to medium sand matrix, no odor  14.1  Debris (asphalt (2-6"), ACM) subrounded gravel (2"), Very Dark Grayish Brown (10YR 3/2) fine to medium sand matrix, no odor	0-				GROUND SURFACE Concrete			. q	\$
5.—  10  4.3  100  Very Dark Grayish Brown (10YR 3/2) fine to medium grained sand, trace sit, poorly sorted, sitty fine to medium sand fragments (likely from drilling process), wet, no odor  Debris (graphalt (2-6"), ACM) subrounded gravel (2"), Very Dark Grayish Brown (10YR 3/2) fine to medium and fragments (likely from drilling process), wet, no odor  Debris graphite, ACM, metal wire at 15"), no odor  14.1  Debris graphite, ACM, metal wire at 15"), no odor	-		6.7	100	Very Dark Grayish Brown (10YR 3/2) fine to medium grained sand, trace silt, poorly sorted, silty fine to medium sand fragments from 2-13' (likely from	0.5		¥	Y
5-  6.9  6.9  5.1  Very Dark Grayish Brown (10YR 3/2) fine to medium grained sand, trace silt, poorly sorted, silty fine to medium sand fragments (likely from drilling process), wet, no odor  Debris (asphalt (2-6"), ACM) subrounded gravel (2"), Very Dark Grayish Brown (10YR 3/2) fine to medium sand matrix, no odor  Debris (asphalt (2-6"), ACM) subrounded gravel (2"), Very Dark Grayish Brown (10YR 3/2) fine to medium sand matrix, no odor  Debris (graphite, ACM, metal wire at 15"), no odor	_		9						
5.1  Very Dark Grayish Brown (10YR 3/2) fine to medium grained sand, trace silt, poorly sorted, silty fine to medium sand fragments (likely from drilling process), wet, no odor  Debris (asphalt (2-6"), ACM) subrounded gravel (2"), Very Dark Grayish Brown (10YR 3/2) fine to medium sand matrix, no odor  Debris (asphalt (2-6"), ACM) subrounded gravel (2"), Very Dark Grayish Brown (10YR 3/2) fine to medium sand matrix, no odor	5-		9.9	100					7
4.3  Very Dark Grayish Brown (10YR 3/2) fine to medium grained sand, trace silt, poorly sorted, silty fine to medium sand fragments (likely from drilling process), wet, no odor  15.1  Debris (asphalt (2-6"), ACM) subrounded gravel (2"), Very Dark Grayish Brown (10YR 3/2) fine to medium sand matrix, no odor  14.1  Debris (graphite, ACM, metal wire at 15"), no odor	_	-	8.2				SW		
4.3 Very Dark Grayish Brown (10YR 3/2) fine to medium grained sand, trace silt, poorly sorted, silty fine to medium sand fragments (likely from drilling process), wet, no odor  Debris (asphalt (2-6"), ACM) subrounded gravel (2"), Very Dark Grayish Brown (10YR 3/2) fine to medium sand matrix, no odor  14.1 Debris (graphite, ACM, metal wire at 15'), no odor	_		6.9	66					\$\frac{1}{2}  \frac{1}{2}   \frac{1}{2}  \frac{1}{2}  \frac{1}{2}  \frac
Very Dark Grayish Brown (10YR 3/2) fine to medium grained sand, trace silt, poorly sorted, silty fine to medium sand fragments (likely from drilling process), wet, no odor  Debris (asphalt (2-6"), ACM) subrounded gravel (2"), Very Dark Grayish Brown (10YR 3/2) fine to medium sand matrix, no odor  14.1  Debris (graphite, ACM, metal wire at 15'), no odor	10-		5.1						
poorly sorted, silty fine to medium sand fragments (likely from drilling process), wet, no odor  Debris (asphalt (2-6"), ACM) subrounded gravel (2"), Very Dark Grayish Brown (10YR 3/2) fine to medium sand matrix, no odor  14.9  Debris (graphite, ACM, metal wire at 15'), no odor	-		4.3	100	Very Dark Capaigh Brown (10VD 2/2) fine to readings against and sound trape oils	13.0			V   A   A   A   A   A   A   A   A   A
15 4.3 Debris (graphite, ACM, metal wire at 15'), no odor	_				poorly sorted, silty fine to medium sand fragments (likely from drilling process), wet, no odor  Debris (asphalt (2-6"), ACM) subrounded gravel (2"), Very Dark Grayish Brown				
	15-		4.3		Debris (graphite, ACM, metal wire at 15'), no odor		SM	+	V V V V V V V V V V V V V V V V V V V



## **Remarks:**

SSC - Subsurface Clearance

PID - Photoionization Detector

NA - not available or not applicable in - inches

ft - feet

ppm - parts per million amsl - above mean sea level ft bgs - feet below ground surface

				Воі	ring	ID:	PDI-2	.3
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
		1.7		Dark Brown (10YR 3/3) fine to medium sand with silt, poorly sorted, loose, debris (concrete, asphalt (2-5") at 15.5'-17'), moist, no odor			+ + +	V . V . V . V . V . V . V . V . V . V .
		0.7	100		10.5		+ + + + + + + + + + + + + + + + + + +	V V V V V V V V V V V V V V V V V V V
				Dark Brown (10YR 3/3) fine to medium sand with silt (30-50%), poorly sorted, debris (asphalt, graphite, wood, metal wire, concrete (.25-8", ACM), wet, no odor	18.5		+ + +	V . V . V . V . V . V . V . V . V . V .
20-		1.8 8.8		Dark Brown (10YR 3/3) fine to medium sand with silt, poorly sorted, gravel to cobble size inclusions (.25"-7"), debris (ACM, wood), concrete with pebble aggregate (5"-7") likely blocked entry of material into flapper, moist, no odor	20.0		* * * * * * * *	10-in v arrehole Grout backfill
-			30				+ + + + + + + + + + + + + + + + + + +	V . V . V . V . V . V . V . V . V . V .
25-		3.8		Dark Brown (10YR 3/3) fine to medium sand with silt (30-50%), poorly sorted, gravel to pebble size inclusions (.5".3"), debris (wood, rubber pipe piece, white	25.0	SM	+ + + + + + + + + + + + + + + + + + + +	V V V V V V V V V V V V V V V V V V V
			•	granular cream colored material (.25"-1.5"), silt inclusions (1"-3") at 26.6', saturated at 26', no odor  Dark Brown (10YR 3/3) fine to medium sand with silt, poorly sorted, Yellow	27.0		+ + + + + + + + + + + + + + + + + + + +	
-		2.1	120	Brown staining at 29', saturated, slight sweet odor			+ + + + + + + + + + + + + + + + + + +	
30-		1.9 5.5		Dark Brown (10YR 3/3) fine to medium sand, silt (30-50%), poorly sorted, gravel to pebble sized clasts (.25"-2"), debris (glass, wood, graphite), likely slough from 25'-28', saturated, mild sweet odor	30.0		+ + + + + + + + + + + + + + + + + + +	
		5.5	90	Dark Brown (10YR 3/3) fine to medium sand with silt, poorly sorted, Orange fine-grained (likely clay) (1.5") inclusion at 33', wood debris at 33', saturated, mild sweet odor	32.8		+ + + + + + + + + + + + + + + + + + +	V V V V V V V V V V V V V V V V V V V
35-		6.3		Pinkish Gray (5YR 6/2) fine to medium sand, trace silt, poorly sorted, saturated, mild sweet odor	35.0	SW		
			I	Remarks: SSC - Subsurface Clearance ft - feet				
III.	ER	RM		PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable in - inches ppm - parts per million  amsl - above mean sea level  ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No	part of t	his wo	rk may be repr	<b>Printed:</b> 05-Dec-2024 <b>Sheet:</b> Page 2 of 5 oduced without permission.

				E	Boring	ID:	PDI-2	23
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
		6.3		Pinkish Gray (5YR 6/2) fine to medium sand, trace silt, poorly sorted, saturated, mild sweet odor				<b>∀</b>
_		4.3		imia sweet odor	37.4	SW		
_		18.1	110	Light Brownish Gray (10YR 6/2) clay with silt, trace fine sand, moderate plasticity, saturated, sweet odor	37.7	CL		\(\frac{\partial}{p}\) \(\frac{\partial}{p}\
_		11.5		Pinkish Gray (5YR 6/2) fine to medium sand, trace silt, poorly sorted, dispersed Yellow staining at 39.6'-40' (40-80% saturation) and 41'-41.7' (20-50% saturation), saturated, mild sweet odor from 37.7'-40', sweet odor from 40'-41.7'.				\$\frac{1}{2} \times \frac{1}{2}
		25		40-41.7		sw		∵
40-		74						V V
_		47 80			41.7			41.0 ft
_		66	110	Very Dark Gray (10YR 3/1) silt with clay and fine sand, moderate plasticity, competent, Light Yellow staining at 41.7'-42.4', saturated, slight sweet odor		ML		
-				Black (2.5YR 2.5/1) fine to medium sand, poorly sorted, saturated, no odor	43.2			Bentonite seal
-		46 24		black (215 fix 215, 1) fine to mediani sand, poolit, sortee, saturated, no saoi		SW		Grout backfill 8-in Borehole
45-		24		Olive Gray (5Y 4/2) silt with clay and fine sand, low plasticity, three pebble	45.0			45.0 ft 7√
_		6.7		inclusions (1.5"-3"), metal wire and tape inclusions (likely from shelby tube), saturated, no odor	46.4	ML		46.0 ft V
_		6.1		Olive Gray (5Y 4/2) fine sand with silt and clay, silt percentage increase from 48'-50', more competent, saturated, no odor	10.1		+ +	**************************************
50-		5.7	70			SM	+ + + + + + + + + + + + + + + + + + +	TO THE STATE OF TH
_		3.4					+ + + +	Bentonite seal
_				Olive Gray (5Y 4/2) silt with clay, trace fine sand, moderate plasticity, saturated,	52.0		+ + + + + + + + + + + + + + + + + + + +	W
		4.2	100	no odor Olive Gray (5Y 4/2) fine sand with silt and clay, loose from 52.6'-53.8',	52.6	ML		
_				competent from 53.8'-55', silt with clay and fine sand bed from 58-58.6', saturated, no odor		SM	+ + +	
55-		5					+ + +	55.0 ft
	1111	Miller		Remarks:			I .	<u> </u>
				SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million NA - not available or not applicable amsl - above mean sea level				<b>Printed:</b> 05-Dec-2024
	ER	M		in - inches ft bgs - feet below ground surfa © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserve		this wo	rk may be rep	Sheet: Page 3 of 5

				Boring ID: PDI-23						
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description	SUSI		Lithology	Boring Backfill Details		
-		7.5 5.2	80	Olive Gray (5Y 4/2) fine sand with silt and clay, loose from 52.6'-53.8', competent from 53.8'-55', silt with clay and fine sand bed from 58-58.6', saturated, no odor	SI	1	+ + +			
60-		9.2	90	Olive Gray (5Y 4/2) silt with fine sand and clay, low plasticity, saturated, no odor	50.0					
65—		9.2	30	Olive Gray (5Y 4/2) fine sand with silt and clay, saturated, no odor	55.0			Rorehole Grout Dackfill		
-		7.1 5.9	90		sr	4	* * * * *			
70-		3.8	90	Olive Gray (5Y 4/2) silt with clay, trace fine sand, moderate plasticity, saturated, no odor	71.4 M 72.4					
75-		9.2			sı	4	+			
				Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million NA - not available or not applicable amsl - above mean sea level	l	·				

ERM

in - inches

					Boring	ID:	PDI-2	23
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
-		12.9		Olive Gray (5Y 4/2) fine sand with silt and clay, saturated, no odor				
80-		12.5	100	Very Dark Brown (10YR 2/2) fine to medium sand with silt, poorly sorted, saturated, no odor  Olive Gray (5Y 4/2) silt with fine sand, trace clay, low plasticity, competent saturated, no odor  Rounded basalt fragments (.25"-1.5"), angular basalt fragments (<.25")  Boring terminated at 80 feet	79.0 79.1 t, 79.9 80.0	SM ML		80.0 ft
95-								
		er a Sa						
				Remarks:  SSC - Subsurface Clearance PID - Photoionization Detector NA - not available or not applicable in - inches  ft - feet ppm - parts per million amsl - above mean sea le ft bgs - feet below ground				Printed: 05-Dec-2024
	ER	M		© Copyright 2024 by ERM Worldwide Group Limited. All Right		his wo	rk may be repr	<b>Sheet:</b> Page 5 of 5 roduced without permission.

Drilling Start Date: 09-Aug-2024
Drilling End Date: 12-Aug-2024
Drilling Contractor: Cascade Drilling

Drilling Method: Sonic
Rig Make/Model: TSI
Driller: Chris Baker
SSC Contractor: GPRS
SSC Method: Private Locate
SSC Diam./Depth: Not Applicable

Northing: 702245.053
Easting: 7627717.812
Surface Elevation: 37.0 ft amsl
Borehole Diameter: 10 in

Borehole Depth: 75.0 ft bgs
Water Encountered: 26.0 ft bgs
Logged By: David Stone
Reviewed By: Avery Soplata, RG

Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
				CROUND CUREAGE				
0-				GROUND SURFACE Asphalt			/n0 (/n0 (	N P.
_		0.9	100	Gravel to cobbles sized clasts (.25"-6"), poorly sorted, Dark Brown-Gray silty fine sand matrix, dry, no odor	0.2	GW	000000000000000000000000000000000000000	
_				Dark Grayish Brown (10YR 4/2) medium sand with silt, gravel (.25"-1") and silt inclusions, moist, no odor	2.0		+ +	
-		29.6	133		3.7	SM	+ +	A A A
_		11.2		Black (10YR 2/1) silt with fine sand, poorly sorted, gravel to cobble inclusions (.25"-4"), debris (wood, carbon), moist, no odor  Dark Grayish brown (10YR 4/2) fine to medium sand, silt (~20%), poorly	4.5	ML		V V V
5-		14.7		sorted, gravel to cobble inclusions (.25"-4"), debris (wood, plastic, graphite), moist, no odor	5.0	SM	# * * * * * * * * * * * * * * * * * * *	
_		12.1		Black (10YR 2/1) fine sand with silt, rounded gravel and cobble sized inclusions (.25"-3"), debris (brick, graphite), moist, no odor	5.5			6
-		9.7		Brown (10YR 4/3) fine to medium sand with silt and gravel (.25"-1"), poorly sorted, moist, faint sweet odor	6.8			A A A
			70	6 inch cobble, woody debris	7.2		+	V . V
_		11.3		Brown (10YR 4/3) fine to medium sand with silt and gravel (.25"-1.5"), brick debris, moist, no odor	10.0		+ + + + + + + + + + + + + + + + + + +	
10-		1.3		Dark Brown (10YR 3/3) fine to medium sand, silt, poorly sorted, silt inclusions (.25"-3"), gravel to cobble inclusions (.25"-3.5") wood debris at 10.7', Dark Yellow-Brown staining at 12', moist, faint sweet odor	10.0	SM	+	▼
_		1.1				314	+ +	A 7 A A A A A A A A A A A A A A A A A A
		1.1	60					P
-					4.5.6		+ + + + + +	\( \frac{1}{2} \) \( \frac{1} \) \( \frac{1} \) \( \frac{1}{2} \) \( \frac{1}{2} \
15-					15.0	ML		P
	1112	11.					L	



## **Remarks:**

SSC - Subsurface Clearance

PID - Photoionization Detector NA - not available or not applicable in - inches ft - feet

ppm - parts per million amsl - above mean sea level ft bgs - feet below ground surface

				В	oring	ID:	PDI-2	24
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
	Soil San		90	Dark Grayish Brown (10YR 4/2) silt with fine sand and clay, low plasticity, loose, fragmented, angular gravel to cobble inclusions (.25"-4"), moist, faint sweet odor  Black (10YR 2/1) gravel (.25"-1"), sub-angular, poorly sorted, fine sand with silt matrix, wet, faint sweet odor  Very Dark Grayish Brown (10YR 3/2) fine to medium sand, trace silt, poorly sorted, subrounded gravel inclusions (<.5"), building debris at 17.5', rubber at 17.8', brick at 17.5', wet, mild sweet odor  Very Dark Gray (10YR 3/1) silt with fine sand and angular gravel (<.5"), moist, faint sweet odor  Dark Grayish Brown (10YR 4/2) fine to medium sand with silt, poorly sorted, silt inclusions (<.5"), wet, faint sweet odor  Dusky Red (2.5YR 3/2) fine to medium sand, silt (30-50%), poorly sorted, rounded gravel inclusions, wet, sweet odor. Film on top of water in Oil-n-Soil collected at 23.1'.  Dark Grayish Brown (10YR 4/2) fine to medium sand with silt, poorly sorted, wet, mild sweet odor  Dark Gray (10YR 4/1) fine to medium sand, silt (30-50%), poorly sorted, Yellow staining from 23.7'-23.9', wet, sweet odor  Reddish Gray (5YR 5/2), fine to medium sand with silt (~25%), poorly sorted, wet, mild sweet odor  Reddish Gray (5YR 5/2), fine to medium sand with silt (~25%), poorly sorted, wet, mild sweet odor  Reddish Gray (5YR 5/2), fine to medium sand with silt (~25%), poorly sorted, wet, mild sweet odor  Reddish Gray (5YR 5/2), fine to medium sand with silt (~25%), poorly sorted, woody debris at 28.6'-29' and 30'-33' and 35'-35.5', silt bed at 29.1'-29.2', low plasticity, silt inclusions (.25"-2") at 33.3', saturated at 26', mild sweet odor from 25'-30', faint sweet odor from 30'-36.7'.	20.0 21.0 22.8 23.2 23.7 24.4 25.0	ML GW SM ML	Lithol  Lithol	
35-		20.5 23 43 261	100				+ + + + + + + + + + + + + + + + + + + +	
	ER	2M		Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable amsl - above mean sea level in - inches ft bgs - feet below ground surfac  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved.		this wo	rk may be repr	Printed: 05-Dec-2024 Sheet: Page 2 of 4 oduced without permission.

				В	oring	ID	: PDI-2	24
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
		261		Reddish Gray (5YR 5/2), fine to medium sand with silt (~25%), poorly sorted, woody debris at 28.6'-29' and 30'-33' and 35'-35.5', silt bed at 29.1'-29.2', low		614	400000000000000000000000000000000000000	36.0 ft
		79		plasticity, silt inclusions (.25"-2") at 33.3', saturated at 26', mild sweet odor from 25'-30', faint sweet odor from 30'-36.7'.		SM	+	7 2
-				Light Yellowish Brown (2.5Y 6/3) silt with fine sand and clay, low plasticity,	36.7	ML		V . V
		95.5	100	Light Brown mottling throughout, saturated, mild sweet odor	37.2	SM		7 ~ 7
		45		Dark Gray (10YR 4/1) fine to medium sand with silt ( $\sim$ 50%), poorly sorted, saturated, mild sweet odor	27.0	ML	4	Bentonite seal
-		13		Dark Grayish Brown (10YR 4/2) silt with clay, trace fine sand, moderate	37.9			7 × V
		53		plasticity, saturated, faint sweet odor Black (2.5Y 2.5/1) fine to medium sand, poorly sorted, silt inclusions (.25"-2"),	38.3			Grout backfill
40-				color grades to Black from Very Dark Brown, Dark Brown liquid from 42.7'-43', saturated, faint sweet odor				40.0 ft 8-in Borehole
_		10		Saturated, raine sweet odor		SM		₩ V
		3.1					+	A .
-		1.6						\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
			80		43.0			7 P
-		4.3		Dark Olive Gray (5Y 3/2) silt with some clay, low plasticity, saturated, faint sweet odor	+5.0			43.0 ft v
_		7.9		Sweet oddi		ML		® ▼ Bentonite
		, , ,						seal
45-				Slough, contains Black sand from above and Dark Brown liquid as above,	45.0			45.0 ft
				bentonite chips				* 0
-				Dark Olive Gray (5Y 3/2) silt with some clay and fine sand, low plasticity,	47.0			
			70	saturated, mild sweet odor				° P   ∇   ∇
-								~ V
_						ML		\(\forall \) \(\
50-		21.2		Dark Olive Gray (5Y 3/2) sandy silt, saturated, no odor	50.0			V
		2.2						7 7 7 8
-		2.7				SM		
_		2.1		Olive Cove (EV E (2)) also we all the section of a big in the section of a big	52.0			
		212	80	Olive Gray (5Y 5/2) clayey silt, moderate plasticity, wet, no odor  Dark Olive Gray (5Y 3/2) sandy silt, saturated, no odor	52.5	ML		© P
-		3.7		Dark Olive Gray (5Y 3/2) saltdy slit, saturated, no odol  Dark Olive Gray (5Y 3/2) silt with some fine sand, trace clay, low plasticity,	53.0	SM		ν · · · · · · · · · · · · · · · · · · ·
				saturated, no odor				
		1.8				ML		
55-								
								^ 4 ∇ Δ
	11111	Mille		Remarks:		ı	I	<u> </u>
				SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million				
		Illin		NA - not available or not applicable amsl - above mean sea level				<b>Printed:</b> 05-Dec-2024
	ER	M		in - inches ft bgs - feet below ground surfac  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved.		this wo	rk may be rep	Sheet: Page 3 of 4

					Boring	ID:	PDI-2	24
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		USCS	Lithology	Boring Backfill Details
		2		Dark Olive Gray (5Y 3/2) silt with some fine sand, trace clay, low plasticity, saturated, no odor				
-		4.4		Olive Gray (5Y 5/2) clayey silt, moderate plasticity, wet, no odor	57.0			, p
-		2.9	80	Dark Olive Gray (5Y 3/2) silt with some sand, trace clay, low plasticity, saturated, no odor	57.5			
_								6-in Borehole
60-		5.1		Olive Gray (5Y 5/2) clayey silt, moderate plasticity, wet, no odor	60.0			Grout backfill
				Dark Olive Gray (5Y 3/2) silt with some fine sand, trace clay, low plasticity,	60.7			-
_				saturated, no odor				, A
-		7.5						
_			80					
-		2.3						
65-		0.5				ML		
								∴
-								
_		1.5	80					
								A.:
-								, v
70-		1.7						
								, V
		0.8						
-		1.4						∆ 
_		0.7	90					
		0.7		Brecciated basalt, vesicular	73.5		+ + + +	
-							+ + + +	
75-				Boring terminated at 75 feet	75.0		+ + + +	75.0 ft
	1111	Milita		 Remarks:				
				SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million				
		Hills		NA - not available or not applicable in - inches amsl - above mean sea level ft bgs - feet below ground sur	face			Printed: 05-Dec-2024
	ER	M		© Copyright 2024 by ERM Worldwide Group Limited. All Rights Rese		his wor	k may be repr	Sheet: Page 4 of 4 roduced without permission.

Drilling Start Date: 12-Aug-2024
Drilling End Date: 13-Aug-2024
Drilling Contractor: Cascade Drilling

Drilling Method: Sonic
Rig Make/Model: TSI
Driller: Chris Baker
SSC Contractor: GPRS
SSC Method: Private Locate
SSC Diam./Depth: Not Applicable

 Northing:
 702327.958

 Easting:
 7627773.343

 Surface Elevation:
 37.0 ft amsl

 Borehole Diameter:
 10 in

Borehole Depth: 56.0 ft bgs
Water Encountered: 35.0 ft bgs
Logged By: Avery Soplata
Reviewed By: Avery Soplata, RG

Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

GROUND SURFACE  Very Dark Grey gravely sand, gravel ranges from .25°-2°, poorly sorted, loose, moist, no odor  Sw  Very Dark Brown (7.5YR 2.5/3) cobbles (.25°-4°), silt inclustions, dry, no odor  Dark Grayish Brown (10YR 4/2) silt with gravel and cobbles (.5°-4°), low plasticity, dry, no odor  Dark Grayish Brown (10YR 4/2) silt with trace cobbles (.5°-1°), dry, no odor  Very Dark Gray silt with trace clay, rare cobbles (.5°-6°), low plasticity, moist, no odor  Very Dark Gray silt, trace clay, rare cobbles (.5°-6°), low plasticity, moist, faint tar like odor  Very Dark Gray silt, trace clay, rare cobbles (.5°-6°), low plasticity, moist, faint tar like odor  Very Dark Gray silt, trace clay, rare cobbles (.5°-6°), low plasticity, moist, faint tar like odor  Very Dark Gray silt, trace clay, rare cobbles (.5°-6°), low plasticity, moist, faint tar like odor  10-  10-  10-  10-  10-  10-  10-  10	Depth (ft) Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
Very Dark Gray gravely sand, gravel ranges from .25"-2", poorly sorted, loose, moist, no odor  Very Dark Brown (7.5YR 2.5/3) cobbles (.25"-4"), silt inclustions, dry, no odor  Dark Grayish Brown (10YR 4/2) silt with gravel and cobbles (.5"-4"), low plasticity, dry, no odor  Dark Grayish Brown (10YR 4/2) silt with trace cobbles (.5"-1"), dry, no odor  Very Dark Gray silt with trace clay, rare cobbles (.5"-6"), low plasticity, moist, no odor  3.7  Very Dark Gray silt with trace clay, rare cobbles (.5"-6"), low plasticity, moist, no odor  Very Dark Gray silt, trace clay, rare cobbles (.5"-6"), low plasticity, moist, faint tar like odor  Very Dark Gray silt, trace clay, rare cobbles (.5"-6"), low plasticity, moist, faint tar like odor  Debris (white brick, metals scraps, rubber (solid and semi-solid), gravelly black sand matrix, loose, moist, tar-like odor  Very Dark Gray silt, low plasticity, gravel and cobbles (.25"-1"), burnt wood chips at 12', roots and plant matter (12"-13"), moist, faint odor  Very Dark Gray silt with some clay, moderate plasticity, gravel and cobbles								
Very Dark Brown (7.5YR 2.5/3) cobbles (.25"-4"), silt inclustions, dry, no odor  Dark Grayish Brown (10YR 4/2) silt with gravel and cobbles (.5"-4"), low plasticity, dry, no odor  Dark Grayish Brown (10YR 4/2) silt with trace cobbles (.5"-1"), dry, no odor  A.4  2.7  Very Dark Gray silt with trace clay, rare cobbles (.5"-6"), low plasticity, moist, no odor  Black fine to medium sand, semi-solid rubber material, tar-like odor  Very Dark Gray silt, trace clay, rare cobbles (.5"-6"), low plasticity, moist, faint tar like odor  Debris (white brick, metals scraps, rubber (solid and semi-solid), gravelly black sand matrix, loose, moist, tar-like odor  Very Dark Gray silt, low plasticity, gravel and cobbles (.25"-1"), burnt wood chips at 12', roots and plant matter (12'-13'), moist, faint odor  Very Dark Gray silt with some clay, moderate plasticity, gravel and cobbles  Very Dark Gray silt with some clay, moderate plasticity, gravel and cobbles	0-			Very Dark Grey gravely sand, gravel ranges from .25"-2", poorly sorted, loose,				v
Very Dark Brown (7.5YR 2.5/3) cobbles (.25"-4"), silt inclustions, dry, no odor  2.8  Dark Grayish Brown (10YR 4/2) silt with gravel and cobbles (.5"-4"), low plasticity, dry, no odor  Dark Grayish Brown (10YR 4/2) silt with trace cobbles (.5"-1"), dry, no odor  A.2  Very Dark Gray silt with trace clay, rare cobbles (.5"-6"), low plasticity, moist, no odor  3.7  Black fine to medium sand, semi-solid rubber material, tar-like odor  Very Dark Gray silt, trace clay, rare cobbles (.5"-6"), low plasticity, moist, faint tar like odor  Debris (white brick, metals scraps, rubber (solid and semi-solid), gravelly black sand matrix, loose, moist, tar-like odor  16.1  Very Dark Gray silt, low plasticity, gravel and cobbles (.25"-1"), burnt wood chips at 12', roots and plant matter (12'-13'), moist, faint odor  Very Dark Gray silt with some clay, moderate plasticity, gravel and cobbles  Very Dark Gray silt with some clay, moderate plasticity, gravel and cobbles	+			moist, no odor		sw		
Dark Grayish Brown (10YR 4/2) silt with gravel and cobbles (.5"-4"), low plasticity, dry, no odor  4.2  Dark Grayish Brown (10YR 4/2) silt with trace cobbles (.5"-1"), dry, no odor  4.2  Very Dark Gray silt with trace clay, rare cobbles (.5"-6"), low plasticity, moist, no odor  3.7  Black fine to medium sand, semi-solid rubber material, tar-like odor 8.2 SW Very Dark Gray silt, trace clay, rare cobbles (.5"-6"), low plasticity, moist, faint tar like odor 9.0  Debris (white brick, metals scraps, rubber (solid and semi-solid), gravelly black sand matrix, loose, moist, tar-like odor 10.0  Very Dark Gray silt, low plasticity, gravel and cobbles (.25"-1"), burnt wood chips at 12", roots and plant matter (12"-13"), moist, faint odor  Very Dark Gray silt with some clay, moderate plasticity, gravel and cobbles				Very Dark Brown (7.5YR 2.5/3) cobbles (.25"-4"), silt inclustions, dry, no odor	1.8		8080	V V V
Dark Grayish Brown (10YR 4/2) silt with gravel and cobbles (.5"-4"), low plasticity, dry, no odor  4.4  2.7  Very Dark Gray silt with trace clay, rare cobbles (.5"-6"), low plasticity, moist, no odor  Black fine to medium sand, semi-solid rubber material, tar-like odor  Very Dark Gray silt, trace clay, rare cobbles (.5"-6"), low plasticity, moist, faint tar like odor  Debris (white brick, metals scraps, rubber (solid and semi-solid), gravelly black sand matrix, loose, moist, tar-like odor  Very Dark Gray silt, low plasticity, gravel and cobbles (.25"-1"), burnt wood chips at 12', roots and plant matter (12'-13'), moist, faint odor  1.5  Very Dark Gray silt with some clay, moderate plasticity, gravel and cobbles		5.5	100		20			A A .
Dark Gray ish Brown (10YR 4/2) silt with trace cobbles (.5"-1"), dry, no odor  4.4  2.7  Very Dark Gray silt with trace clay, rare cobbles (.5"-6"), low plasticity, moist, no odor  Black fine to medium sand, semi-solid rubber material, tar-like odor 8.2  Very Dark Gray silt, trace clay, rare cobbles (.5"-6"), low plasticity, moist, faint tar like odor  Debris (white brick, metals scraps, rubber (solid and semi-solid), gravelly black sand matrix, loose, moist, tar-like odor  Very Dark Gray silt, low plasticity, gravel and cobbles (.25"-1"), burnt wood chips at 12', roots and plant matter (12'-13'), moist, faint odor  Very Dark Gray silt with some clay, moderate plasticity, gravel and cobbles	-				2.0			V V V
2.7  Very Dark Gray silt with trace clay, rare cobbles (.5"-6"), low plasticity, moist, no odor  3.7  Black fine to medium sand, semi-solid rubber material, tar-like odor  Very Dark Gray silt, trace clay, rare cobbles (.5"-6"), low plasticity, moist, faint tar like odor  Debris (white brick, metals scraps, rubber (solid and semi-solid), gravelly black sand matrix, loose, moist, tar-like odor  16.1  Very Dark Gray silt, low plasticity, gravel and cobbles (.25"-1"), burnt wood chips at 12', roots and plant matter (12'-13'), moist, faint odor  Very Dark Gray silt with some clay, moderate plasticity, gravel and cobbles  Very Dark Gray silt with some clay, moderate plasticity, gravel and cobbles	-			Dark Grayish Brown (10YR 4/2) silt with trace cobbles (.5"-1"), dry, no odor	4.2			A A A A A A A A A A A A A A A A A A A
Very Dark Gray silt with trace clay, rare cobbles (.5"-6"), low plasticity, moist, no odor  3.7  Black fine to medium sand, semi-solid rubber material, tar-like odor  Very Dark Gray silt, trace clay, rare cobbles (.5"-6"), low plasticity, moist, faint tar like odor  Debris (white brick, metals scraps, rubber (solid and semi-solid), gravelly black sand matrix, loose, moist, tar-like odor  Very Dark Gray silt, low plasticity, gravel and cobbles (.25"-1"), burnt wood chips at 12', roots and plant matter (12'-13'), moist, faint odor  1.5  Very Dark Gray silt with some clay, moderate plasticity, gravel and cobbles	5-	4.4				ML		V V V
no odor    100		2.7			6.0			Ψ . Ψ
Black fine to medium sand, semi-solid rubber material, tar-like odor  Very Dark Gray silt, trace clay, rare cobbles (.5"-6"), low plasticity, moist, faint tar like odor  Debris (white brick, metals scraps, rubber (solid and semi-solid), gravelly black sand matrix, loose, moist, tar-like odor  Very Dark Gray silt, low plasticity, gravel and cobbles (.25"-1"), burnt wood chips at 12', roots and plant matter (12'-13'), moist, faint odor  1.5  Very Dark Gray silt with some clay, moderate plasticity, gravel and cobbles								V V V
Black fine to medium sand, semi-solid rubber material, tar-like odor  Very Dark Gray silt, trace clay, rare cobbles (.5"-6"), low plasticity, moist, faint tar like odor  Debris (white brick, metals scraps, rubber (solid and semi-solid), gravelly black sand matrix, loose, moist, tar-like odor  16.1  Very Dark Gray silt, low plasticity, gravel and cobbles (.25"-1"), burnt wood chips at 12', roots and plant matter (12'-13'), moist, faint odor  1.5  Very Dark Gray silt with some clay, moderate plasticity, gravel and cobbles		3.7	100		7 7			V V
Very Dark Gray silt, trace clay, rare cobbles (.5"-6"), low plasticity, moist, faint tar like odor  Debris (white brick, metals scraps, rubber (solid and semi-solid), gravelly black sand matrix, loose, moist, tar-like odor  Very Dark Gray silt, low plasticity, gravel and cobbles (.25"-1"), burnt wood chips at 12', roots and plant matter (12'-13'), moist, faint odor  1.5  Very Dark Gray silt with some clay, moderate plasticity, gravel and cobbles  Very Dark Gray silt with some clay, moderate plasticity, gravel and cobbles	4	"		Black fine to medium sand, semi-solid rubber material, tar-like odor		SW		<i>P</i>
Debris (white brick, metals scraps, rubber (solid and semi-solid), gravelly black sand matrix, loose, moist, tar-like odor  16.1  Very Dark Gray silt, low plasticity, gravel and cobbles (.25"-1"), burnt wood chips at 12', roots and plant matter (12'-13'), moist, faint odor  1.5  Very Dark Gray silt with some clay, moderate plasticity, gravel and cobbles								A A A
Very Dark Gray silt, low plasticity, gravel and cobbles (.25"-1"), burnt wood chips at 12', roots and plant matter (12'-13'), moist, faint odor  1.5  Very Dark Gray silt, low plasticity, gravel and cobbles (.25"-1"), burnt wood chips at 12', roots and plant matter (12'-13'), moist, faint odor								V V V V V V V V V V V V V V V V V V V
2.2 Very Dark Gray silt with some clay, moderate plasticity, gravel and cobbles	0-	16.1			2010			▼
2.2 Very Dark Gray silt with some clay, moderate plasticity, gravel and cobbles		1.5						P
2.2 Very Dark Gray silt with some clay, moderate plasticity, gravel and cobbles	+							V V V
		2 2	100		13.0	ML	<u>                                     </u>	V . V
				Very Dark Gray silt with some clay, moderate plasticity, gravel and cobbles (.25"-2"), plant matter, moist, no odor			<u>                                     </u>	V V
	-							
5-    <sub>2.2</sub>	5-	2.2					<u>                                     </u>	V . V .
								V V V



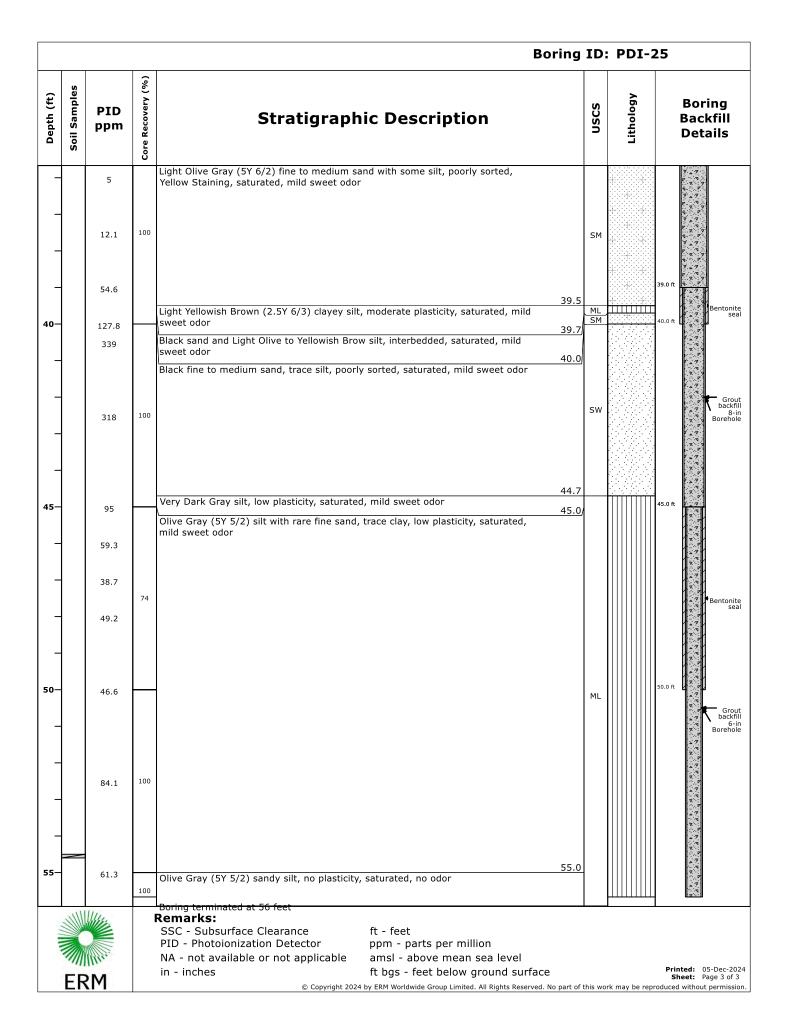
## **Remarks:**

SSC - Subsurface Clearance

PID - Photoionization Detector NA - not available or not applicable in - inches ft - feet

ppm - parts per million amsl - above mean sea level ft bgs - feet below ground surface

					Boring	ID	: PDI-2	.5
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
_		2.6		Very Dark Gray silt with some clay, moderate plasticity, gravel and cobbles (.25"-2"), plant matter, moist, no odor				▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼
-   -		1.7	100	Dark Gray, clayey silt, moderate plasticity, gravel and cobbles (.25"-4"), plant matter, moist, no odor	18.0	ML		7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
20-		1.4		Black fine to medium sand, large silt inclusions (2"-4"), gravel and cobbles	20.0			N P 10-in V V Sorehole F V V Grout backfill
-   -		7.9 4.8	100	(.25"-2"), moist, no odor		SM	+ + + + + + + + + + + + + + + + + + + +	
25-		2.4		Debris (glass, metal scraps), cobbles (2"-4"), Dark Grayish Brown silt matrix  Mottled Very Dark Gray to Dark Olive Gray silt with some clay, moderate	24.0		+ +	Y . Y . Y . Y . Y . Y . Y . Y . Y . Y .
-		2	70	plasticity, gravel and cobbles (.5"-2"), glass debris, moist, no odor		ML		
30-		2						
-		1.9	100	Dark Olive Gray (5Y 3/2) sandy silt, gravel and cobbles (.5"-2"), low plasticity, moist, mild sweet odor  Dark Yellowish Brown fine to medium sand with some silt, poorly sorted, contains cobbles (1"-2"), silt inclusions, moist, mild sweet odor	32.5 33.0/ 33.5		######################################	
35-		2.5	•	Gray (5Y 5/1) fine to medium sand with some silt, poorly sorted, Yellow staining, woody debris at 34.5', Light Olive Gray (5Y 6/2) fine to medium sand with some silt, poorly sorted, Yellow Staining, saturated, mild sweet odor	35.0	SM	* * * * * * * * * * * * * * * * * * *	
			ı	Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million NA - not available or not applicable amsl - above mean sea level	200			<b>Printed:</b> 05-Dec-2024
	ER	M		in - inches ft bgs - feet below ground surfa © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserv		this wo	ork may be repr	Sheet: Page 2 of 3



Drilling Start Date: 13-Aug-2024
Drilling End Date: 14-Aug-2024
Drilling Contractor: Cascade Drilling

Drilling Contractor: Cascade Drillin
Drilling Method: Sonic
Rig Make/Model: TSI
Driller: Chris Baker
SSC Contractor: GPRS
SSC Method: Private Locate
SSC Diam./Depth: Not Applicable

Northing:702358.753Easting:7627750.156Surface Elevation:37.0 ft amslBorehole Diameter:10 in

Borehole Depth: 55.0 ft bgs
Water Encountered: 29.5 ft bgs
Logged By: David Stone
Reviewed By: Avery Soplata, RG

Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

Depth (rt)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description	nscs	Lithology	Boring Backfill Details
0-				GROUND SURFACE			
				Very Dark Gray (10YR 3/1) gravelly sand, debris (brick, graphite), poorly sorted, loose, dry, no odor	GW		
		4.3	100	Very Dark Gray (10YR 3/1) gravelly silt, debris, gravel ranging from .5"-2", fragmented, loose, dry, mild odor	2.5	00000	
							V V V V V V V V V V V V V V V V V V V
<b>5</b> -		5.2		Very Dark Gray (10YR 3/1) gravelly silt, debris (ACM), gravel ranging from .5"-2", fragmented, loose, Dark Brown Mottling, moist, no odor	5.0		\$\partial \partial \part
_		4.2	100				V 4 V V V V V V V V V V V V V V V V V V
					ML		P. V.
<b>,</b>		2.5					V V V
				Very Dark Gray (10YR 3/1) silt with some clay, moderate plasticity, .5" beds of plant matter at 12.3' and 12.8', moist, no odor	L.5		V V   P V   V   V   V   V   V   V   V   V
-		5.3	100	, , , , , , , , , , , , , , , , , , , ,			7
;-		2.2		Very Dark Gray (10YR 3/1) silt with fine sand and some clay, subrounded gravel, moderate plasticity, Light Yellow Mottling (14.8'-15'), moist, no odor	5.0		\( \rangle \) \



## **Remarks:**

in - inches

SSC - Subsurface Clearance

PID - Photoionization Detector NA - not available or not applicable ft - feet

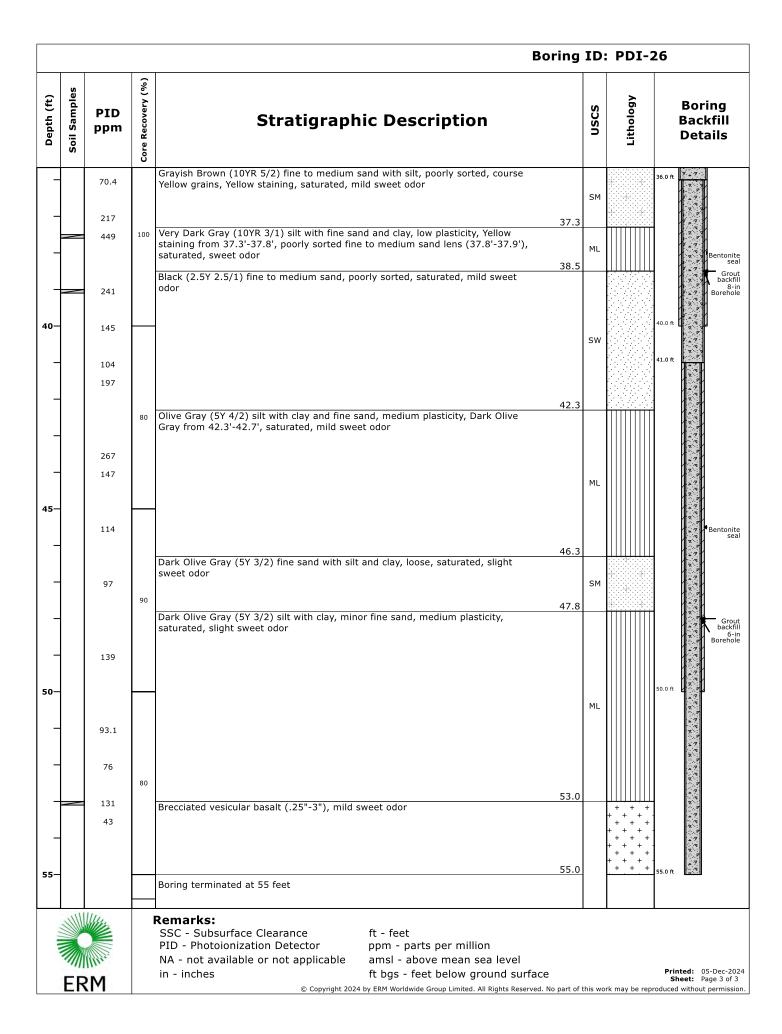
ppm - parts per million amsl - above mean sea level

ft bgs - feet below ground surface

Printed: 05-Dec-2024
Sheet: Page 1 of 3

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				Во	ring	ID	: PDI-2	26
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
		1.1		Very Dark Gray (10YR 3/1) silt with fine sand and some clay, subrounded gravel, moderate plasticity, Light Yellow Mottling (14.8'-15'), moist, no odor				▼
								▼
		2.1	110					7 7 10-in Sorehole
								Grout backfill
20-		1.9		Dark Grayish Brown (10YR 4/2) silt with fine sand and some clay, subrounded	20.0	ML		
		2		gravel, moderate plasticity, gravel increases from 23.1'-23.6', cobbles (2.5") from 23.6'-24', moist, no odor				**************************************
		2.3	100					V V V V V V V V V V V V V V V V V V V
					24.0			∇ ∇ ∇ ∇ ∇ ∇ ∇ ∇
				Very Dark Gray (10YR 3/1) fine to medium sand, silt fragments (.25"-2"), poorly sorted, moist, no odor		SM	+ +	(4) ・・・・ ア・・・ マ・・・・ マ・・・ マ・・・ マ・・・ マ・・・ マ・
25-		5.2		Dark Gray Brown (10YR 4/2) silt with fine sand and clay, moderate plasticity, subangular gravel to cobbles sized inclusions (.25"-4"), metal wire in concrete	25.0			▼
-		3.6		debris at 27.2', wet, no odor		ML		
-						MIL		
		8.9	110		28.2			V . V V . V V V
				Very Dark Gray (10YR 3/1) fine to medium sand with silt, poorly sorted, silty clay fragments (.25"-4"), shift to Dark Grey from 29.2'-29.5', wet, slight sweet odor			+ + + + + + + + + + + + + + + + + + + +	
20			_	Dark Brown (10YR 3/3) fine to medium sand, minor silt, poorly sorted, woody debris at 32', increase in silt from 31-32.7' (10%-30%), Yellow staining from	29.5		+ + + + + + + + + + + + + + + + + + + +	Ψ
30-		6.4		31.5'-32.7' saturated, slight sweet odor		SM		▼
		3.6						7 4 V
		4.3	80		22 -		H	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
		5.9		Dark Gray (10YR 4/1) silt with fine sand, low plasticity, Yellow Mottling, Yellow staining, saturated, mild sweet odor	32.7	ML		▼
		11.2		Grayish Brown (10YR 5/2) fine to medium sand with silt, poorly sorted, course Yellow grains, Yellow staining, saturated, mild sweet odor	رد.ی			P
35-						SM	+ +	
								Ψ Δ Ψ
(6)			ı	Remarks: SSC - Subsurface Clearance ft - feet				
				PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable amsl - above mean sea level				Printed: 05-Dec 2024
	ER	M		in - inches ft bgs - feet below ground surface © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. N		his wo	ork may be repr	Printed: 05-Dec-2024 Sheet: Page 2 of 3 roduced without permission.



Drilling Start Date: 27-Aug-2024
Drilling End Date: 27-Aug-2024
Drilling Contractor: Cascade Drilling

Drilling Method: Sonic
Rig Make/Model: TSI
Driller: Chris Baker
SSC Contractor: Cascade/GPRS
SSC Method: Air-knife/Private Locate
SSC Diam./Depth: 10-in / 5-ft

Northing: 702326.523
Easting: 7627629.749
Surface Elevation: 37.0 ft amsl
Borehole Diameter: 10 in
Borehole Depth: 51.0 ft bgs
Water Encountered: 34.0 ft bgs

Coordinates are draft values. Survey Pending.

David Stone

Avery Soplata, RG

Logged By:

**Reviewed By:** 

Site Name: Arkema Portland

Location: Portland, OR

Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
0-				GROUND SURFACE				n <del>a kas</del> an
		0		Asphalt  Very Dark Gray (10YR 3/1) fine to medium sand with gravel (.25"-1") and silt (<10%), moist, no odor	0.4	SW		\( \dagger \)
				Gravel (.25"-1') with fine sand, silt (25%) matrix, angular, moist, slight sweet chemical odor	0.6	GW	00000	V V V
_		0		Very Dark Grayish Brown (10YR 3/2) fine to medium grain sand, silt clumps, moist, slight sweet chemical odor	2.0	SM	+	
		0		No recovery	2.5			V V
				Very Dark Grayish Brown (10YR 3/2) fine to medium grain sand, silt clumps, moist, slight sweet chemical odor	4.0			V V V
5-					5.5	SM	# # # # # # # # # # # # # # # # # # #	\$\cdot \cdot \chi \chi \chi \chi \chi \chi \chi \chi
_				No recovery				V V V
-								* * * * * * * * * * * * * * * * * * *
				Very Dark Grayish Brown (10YR 3/2) fine to medium sand, silt (30-40%), poorly	8.0			V V V V V V V V V V V V V V V V V V V
_		0.8	50	sorted, wet, no odor			+ + +	
10-				Very Dark Grayish Brown (10YR 3/2) fine to medium sand with silt, poorly sorted, moist, no odor	10.0		+ +	
-		0.4						V V V
-						SM	+ + +	
			100					V V
_		0.4					+ +	
15-							+ +	\$\frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{
	- (11)	1///		Pamarke:				7 7



## **Remarks:**

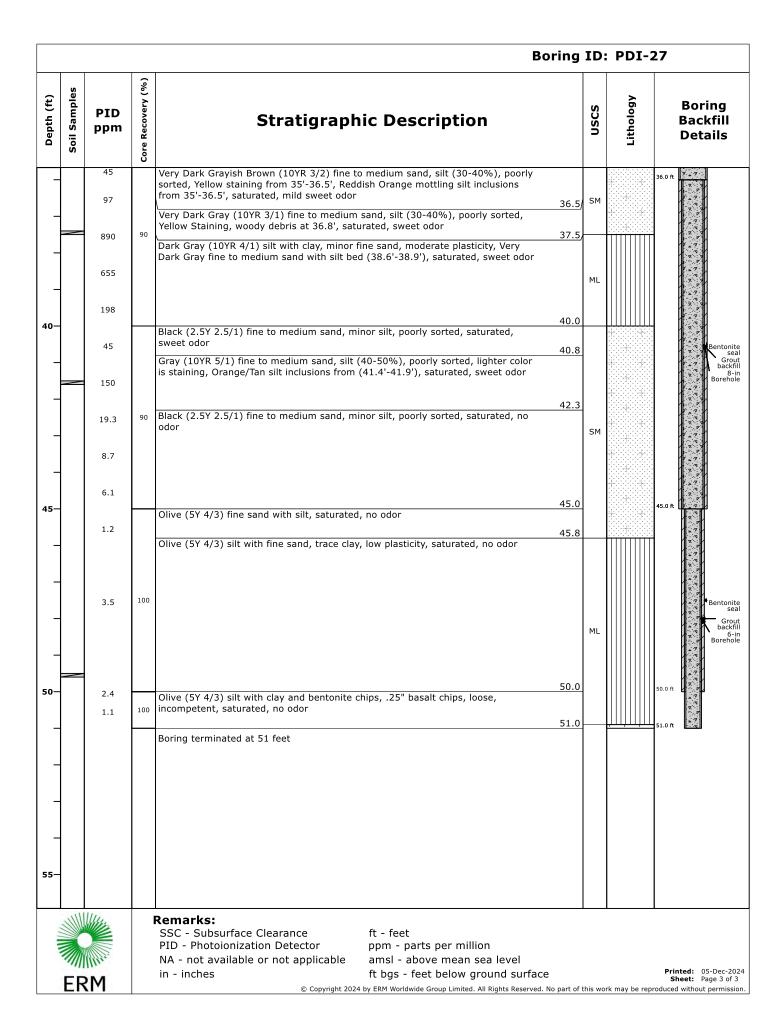
in - inches

SSC - Subsurface Clearance

PID - Photoionization Detector NA - not available or not applicable ft - feet

ppm - parts per million amsl - above mean sea level ft bgs - feet below ground surface

				Bori	ng :	ID:	PDI-2	27
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
_		0.1		Very Dark Grayish Brown (10YR 3/2) fine to medium sand with silt, poorly sorted, moist, no odor				
_			100			SM	+ +	10-in v v v corehole
_		0.5				3M	+ + + + + + + + + + + + + + + + + + +	Grout backfill
20-		0.4		Very Dark Grayish Brown (10YR 3/2) silt with fine sand, moist, no odor	1.0		+ + +	
_			60		2.0	ML		
_		0.4					*	
25-							+ + + + + + + + + + + + + + + + + + + +	\$\frac{1}{2} \rightarrow P^2 \\ \begin{picture}(10,0)  \chap
_		0.5					+ + + + + + + + + + + + + + + + + + + +	V V V V V V V V V V V V V V V V V V V
-			100	Very Dark Grayish Brown (10YR 3/2) fine to medium sand with silt, poorly	28.0		+ +	V
_		0.6		sorted, silt inclusions (.25˚-3"), moist, slight sweet odor, mild sweet odor from 30'-34'		SM	+ + + + + + + + + + + + + + + + + + + +	
30-		0.9					+ + + +	
_		0.0	100				+ +	
_		0.8			34.0		T + T + + + + + + + + + + + + + + + + +	
35-		11.5		Very Dark Grayish Brown (10YR 3/2) fine to medium sand, silt (30-40%), poorly sorted, Yellow staining from 35'-36.5', Reddish Orange mottling silt inclusions from 35'-36.5', saturated, mild sweet odor			+ + + + +	Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y
		45						P V
100			'	Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million NA - not available or not applicable amsl - above mean sea level				
	ER	M		in - inches ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No pa	art of th	nis woi	rk may be repr	Printed: 05-Dec-2024 Sheet: Page 2 of 3 oduced without permission.



Drilling Start Date: 26-Aug-2024
Drilling End Date: 26-Aug-2024
Drilling Contractor: Cascade Drilling

Drilling Contractor: Cascade Drillin

Drilling Method: Sonic

Rig Make/Model: TSI

Driller: Chris Baker

SSC Contractor: GPRS

SSC Method: Private Locate

SSC Diam./Depth: Not Applicable

Northing: 702404.382
Easting: 7627625.966
Surface Elevation: 35.0 ft amsl
Borehole Diameter: 10 in

Borehole Depth: 56.0 ft bgs
Water Encountered: 35.0 ft bgs
Logged By: David Stone
Reviewed By: Avery Soplata, RG

Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		SOSU	Lithology	Boring Backfill Details
0-		0.7		GROUND SURFACE  Very Dark Gray (10YR 3/1) gravel (.25"-1.5"), subangular, poorly sorted, silty fine sand matrix, geotextile liner at .8', moist, no odor		GW	0000 0000 0000 0000	V V
				Very Dark Gray (10YR 3/1) clayey silt, low plasticity, gravel to cobble inclusions (.25"-5"), moist, no odor	1.1	ML		V V V V V V V
		0.4	100	Gravel and pea gravel, subrounded, poorly sorted, moist, no odor	2.3	GW	) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\( \daggregartarrow  \q
				Very Dark Gray (10YR 3/1) clayey silt, low plasticity, gravel to cobble inclusions (.25"-6"), moist, no odor	3.0		000000	V V V V V V V V V V V V V V V V V V V
5-		1						
		3.9			6.0			A A
				Very Dark Greenish Gray (Gley1 3/1) clayey silt with fine sand, gravel to cobble sized inclusions (.25"-6"), graphite at 9', ACM from 9-10', tile debris at 9.5', larger debris (graphite, concrete, metal wire, tile, ACM) from 10'-12.8' (.25"-8"), moist, no odor	0.0			\( \frac{1}{2} \) \( \frac{1} \) \( \frac{1} \) \( \frac{1}{2} \) \( \frac{1}{2} \
-		0.5	100			ML		V V V V V V V V
								V
.0-		1.3 0.6						▼
-		0.6						V V V V V V V V V V V V V V V V V V V
-		1.2	120		12.8			V V V V V V V V V V V V V V V V V V V
				Very Dark Grayish Brown (10YR 3/2) fine to medium sand with silt, poorly sorted, gravel to cobble inclusions (.25"-5"), moist, no odor		SM		V V V
-					14.5			V . V
15-		0.6		Gravel (.25"-1.5"), poorly sorted, subrounded, cobble inclusions (3"-4"), Gray to Brown silty fine sand matrix, wet, no odor	15.0	GW ML	1000000 1000000	▼
		1.6						P 7



## **Remarks:**

in - inches

SSC - Subsurface Clearance

PID - Photoionization Detector NA - not available or not applicable ft - feet

ppm - parts per million amsl - above mean sea level

ft bgs - feet below ground surface

				Во	ring	ID	: PDI-2	8
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
-		3.3	100	Very Dark Greenish Gray (Gley1 3/1) clayey silt, trace sand, gravel to pebble inclusions (.25"-3"), debris (graphite, ACM, glass, tubing, tile fragments), aphalt inclusion (5") at 18', wet, no odor	18.2	ML		
_ 20- -		0.5 0.9		Very Dark Grayish Brown (10YR 3/2) fine to medium sand with silt, poorly sorted, silty fine sand inclusions (0.25"-3") from 20'-25', metal wire at 20', moist, slight sweet odor			# # # # # # # #	10-in Rorehole Grout backfill
-		0.3	70			SM	+ + + + + + + + + +	
25— —		4.5		Very Dark Greenish Gray (Gley1 3/1) silt with fine sand, low plasticity, gravel to cobble inclusions (.25"-4"), debris (wood, graphite, ACM, brick) moist, no odor	25.0	ML		
_		4.1	120	Very Dark Grayish Brown (10YR 3/2) fine to medium sand with silt, poorly sorted, gravel inclusions (.25"-4"), moist, slight sweet odor  Very Dark Greenish Gray (Gley1 3/1) silt with fine sand, gravel (40%, subrounded, .25"-3"), poorly sorted, moist, no odor	27.0	SM		
30-		7 7.8				ML		
		12	120	Very Dark Grayish Brown (10YR 3/2) fine to medium sand with silt, poorly sorted, gravel inclusions (.25"-4"), moist, slight sweet odor	32.0	SM	+ +	
35-		133.5	_	Dark Gray (10YR 4/1) silt, low plasticity, wet, no odor Dark Gray (10YR 4/1) fine to medium sand, poorly sorted, wet, mild sweet odor	34.6 34.9 35.0	ML SM ML		
			ı	Remarks:  SSC - Subsurface Clearance ft - feet  PID - Photoionization Detector ppm - parts per million				
	ER	M.		NA - not available or not applicable amsl - above mean sea level ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No	part of t	:his wo	rk may be repro	Printed: 05-Dec-2024 Sheet: Page 2 of 3 oduced without permission.

				Вс	oring	ID:	PDI-2	28
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
_		38		Dark Gray (10YR 4/1) sandy silt, no plasticity, saturated, faint sweet odor	35.8	ML		▼.
		30		Dark Gray (10YR 4/1) fine to medium silty sand, saturated, faint sweet odor	33.0			A A
-		48.8			37.3		+	37.0 ft 7 7
			100	Very Dark Grayish Brown (10YR 3/2) silty sand with clay, saturated, faint sweet odor			+ : : : : : : : : : : : : : : : : : : :	V V
_		33.1			38.5	SM		V V
_		44.4		Dark Gray (10YR 4/1) silty sand, silt lens at 39.5', saturated, faint sweet odor			+ + + + + + + + + + + + + + + + + + +	
40-		61.2			40.0			V V
<b>-</b>		61.3 24.3		Black (10YR 2/1) fine to medium sand, trace silt, poorly sorted, silt inclusions (.5"-3"), saturated, faint sweet odor				Bentonite
								Grout backfill 8-in Borehole
-			90			SW		Do enoie
_		42.1						
								V V
-								
					45.0			45.0 ft
45-		13.7 47		Olive (5Y 4/2) silt with clay, trace fine sand, low plasticity, saturated, no odor				
_		47				ML		A V
								V V
-		48.2		Olive Gray (5Y 4/2) fine sand with silt, saturated, no odor	47.2			
			50	Olive Gray (51 4/2) file Sand With Silt, Saturated, no odor				Bentonite seal
								A V
_						SM		~ V
50-				No recovery	50.0			50.0 ft
					51.0			Grout backfill
				Olive Gray (5Y 4/2) fine sand with silt, saturated, no odor				6-in Borehole
_							4:::::::	₩ : ₩ : ₩ :
			50					₩
_					F2 F	SM		
					53.5			A V
		6.9		Olive Gray (5Y 4/2) fine sand with silt, Black fine to medium sand inclusions (likely slough), saturated, no odor	54.9		+ +	▼
55-		2.0	100	Olive Gray (5Y 4/2) fine to medium sand, poorly sorted, saturated, no odor	55.3		+ + + +	
		3.8	100	Brecciated vesiculatr basalt (.25"-2.5")				₩
				Remarksinated at 56 feet  SSC - Subsurface Clearance ft - feet  PID - Photoionization Detector ppm - parts per million				
		Milio		NA - not available or not applicable amsl - above mean sea level	_			<b>Printed:</b> 05-Dec-2024
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**Drilling Start Date:** 23-Aug-2024 **Drilling End Date:** 23-Aug-2024 **Drilling Contractor:** Cascade Drilling

Drilling Contractor: Cascade Drillin
Drilling Method: Sonic
Rig Make/Model: TSI
Driller: Chris Baker
SSC Contractor: GPRS
SSC Method: Private Locate
SSC Diam./Depth: Not Applicable

 Northing:
 702453.762

 Easting:
 7627650.547

 Surface Elevation:
 37.0 ft amsl

 Borehole Diameter:
 10 in

 Borehole Depth:
 51.5 ft bgs

Water Encountered: 30.0 ft bgs
Logged By: Avery Soplata
Reviewed By: Avery Soplata, RG
Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

		aiii./ De	_	Not Applicable Coordinates are trait values. Survey rename.	_		
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description	nscs	Lithology	Boring Backfill Details
0-				GROUND SURFACE Gravel with some medium sand, subangular, loose, roots, dry, no odor	GW	) <u>o</u> O <u>o</u> o (	W. · v. · V
_				0.8  Dark Brown (10YR 3/3) fine to coarse sand, poorly sorted, loose, asphalt at 1.5', dry, no odor			
_				1.7 Brown (10YR 4/3) silt, trace clay, no plasticity, trace rust coloring, dry, no odor			4
_		1.2	80				
_		0.3					4 . P . P . P . P . P . P . P . P . P .
5-		1.6		5.0 Brown (10YR 4/3) silt, trace fine sand and clay, moderate plasticity, gravel and	_		N
_				cobble inclusions (.5"-6"), brick debris, Gray mottling from 10'-11.5' and 12.5'-15', moist, no odor			\$
_		2.2					
_			100				
_					ML		
10-		2.1					V V V
_							P
_							▼
		2.5	100				P
_							\(\frac{\partial}{\partial} \) \(\frac{\partial}{\partial} \
15-		2.6		15.0			
							Ø
	111	T.C.					



# **Remarks:**

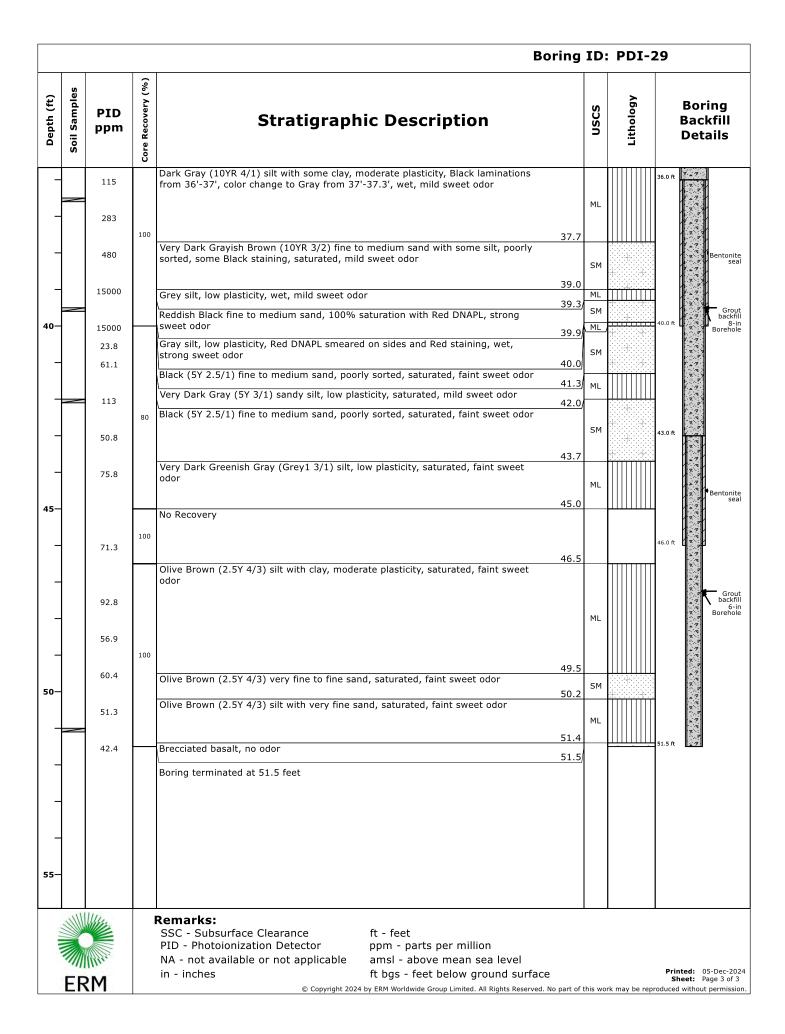
SSC - Subsurface Clearance PID - Photoionization Detector

NA - not available or not applicable in - inches

ft - feet

ppm - parts per million amsl - above mean sea level ft bgs - feet below ground surface

				Вог	ring	ID	: PDI-2	29
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
-		3.2	100	Brown (10YR 4/3) silt, trace fine sand and clay, moderate plasticity, gravel and cobble inclusions (.5"-6"), brick debris, Gray mottling from 15'-22.3', wet, no odor		ML		10-in Grout backfill
20-		5.2						
-		5.5	100	Dark Yellowish Brown (10YR 3/4) fine to medium sand, trace silt, poorly sorted, silt inclusions (.5"-1.5"), wood chips, moist, no odor	22.3	SW		
25- -		5.9		Dark Grayish Brown (10YR 4/2) silt with trace clay, moderate plasticity, gravel and cobble inclusions (.5"-4"), debris (brick, wood), Dark Yellowish Brown sand lens at 27.4', wet, no odor	25.0			
-		3.6	100	Dark Grayish Brown (10YR 4/2) sandy silt, fine to medium sand, gravel inclusions (.25"), wood chips, wet from, no odor	28.0	ML		
30-		5.8	•	Dark Grayish Brown (10YR 4/2) sandy silt, fine to medium sand, gravel inclusions (.25"), wood chips, saturated from, no odor	30.0			
		4.5 3.3	100	Dark Yellowish Brown (10YR 3/4) fine to medium sand with some silt, poorly sorted, slight sweet odor		SM	+ +	
		13.1 27.4		Very Dark Gray (10YR 3/1) fine to medium sand with some silt, poorly sorted, wet, mild sweet odor	33.5	ML	+ · · · · · · · · · · · · · · · · · · ·	
35-		85.9		Dark Gray (10YR 4/1) silt with some clay, moderate plasticity, Black laminations from 36'-37', color change to Gray from 37'-37.3', wet, mild sweet odor	35.0			Y Y Y Y
	ER	M		Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable in - inches ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No				<b>Printed:</b> 05-Dec-2024 <b>Sheet:</b> Page 2 of 3



Drilling Start Date: 21-Aug-2024
Drilling End Date: 22-Aug-2024
Drilling Contractor: Cascade Drilling

Drilling Contractor: Cascade Drilling Drilling Method: Sonic TSI Chris Baker SSC Contractor: GPRS SSC Method: Private Locate SSC Diam./Depth: Not Applicable

Northing: 702461.223
Easting: 7627595.330
Surface Elevation: 35.0 ft amsl
Borehole Diameter: 10 in

Borehole Depth: 50.0 ft bgs
Water Encountered: 33.5 ft bgs
Logged By: David Stone
Reviewed By: Avery Soplata, RG

Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

33	CDI	am./ De	puii.	Not Applicable Coordinates are draft values. Survey Pending.				
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
0-				GROUND SURFACE Gravel and pea gravel (<.25"-5"), angular, silty fine sand (30% matrix),				N. Š. PŠ
				geotextile line at 1.5', moist, no odor				V V
-		2.1						V V V
<u>-</u>						CW		7 . 7
			110	Gray pea gravel and gravel, subangular, poorly sorted, silty fine sand matrix	2.4	GW		V . V
-		3		(20% matrix), wet, no odor			00000	V V V
-				Dark Yellowish Brown (10YR 3/4) fine to medium sand with silt, poorly sorted,	4.2		20000	V V
5-		1.5		silt inclusion (.5"-6") from 6.1-7, woody debris with gravel from 5'-6', moist, no odor				V V
								▼ ▼ ▼ ▼ ▼
-							+ 3 + 3	▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼
		3.7						P ∵ ∀ .
-		4.9	60					ν ν ν ν ν ν
_		4.9						Ø
						SM		7
-								V V V
10-								
10-		3.1			10.6			V V V
-		3.9		Black (2.5Y 2.5/1) fine to medium sand with silt, poorly sorted, gravel inclusions (.25"-1"), silver staining/sheen from 12.4'-12.5', wet, mild sweet odor				A A A
								A A
-		4.4			12.5			V V
_		3.8	100	Brown (10YR 4/3) silt with clay, trace fine sand, moderate plasticity, gravel to cobble inclusions (.25"-4"), wet, no odor				. v . v . v . v . v . v . v . v . v . v
		5.0						\( \tilde{\pi} \) \(
-		3.5				ML		A ~ A ~
					15.0			V V
15-				Black (2.5Y 2.5/1) fine to medium sand with silt, poorly sorted, gravel inclusions (.25"-3"), silver sheen from 17.6'-17.9', asphalt at 17.5', wet, no odor	25.0	SW		A ~ A
	- 111	Tr.		,,,,,,,,,,,				· · · · · · <del>□</del>



# **Remarks:**

SSC - Subsurface Clearance

PID - Photoionization Detector
NA - not available or not applicable

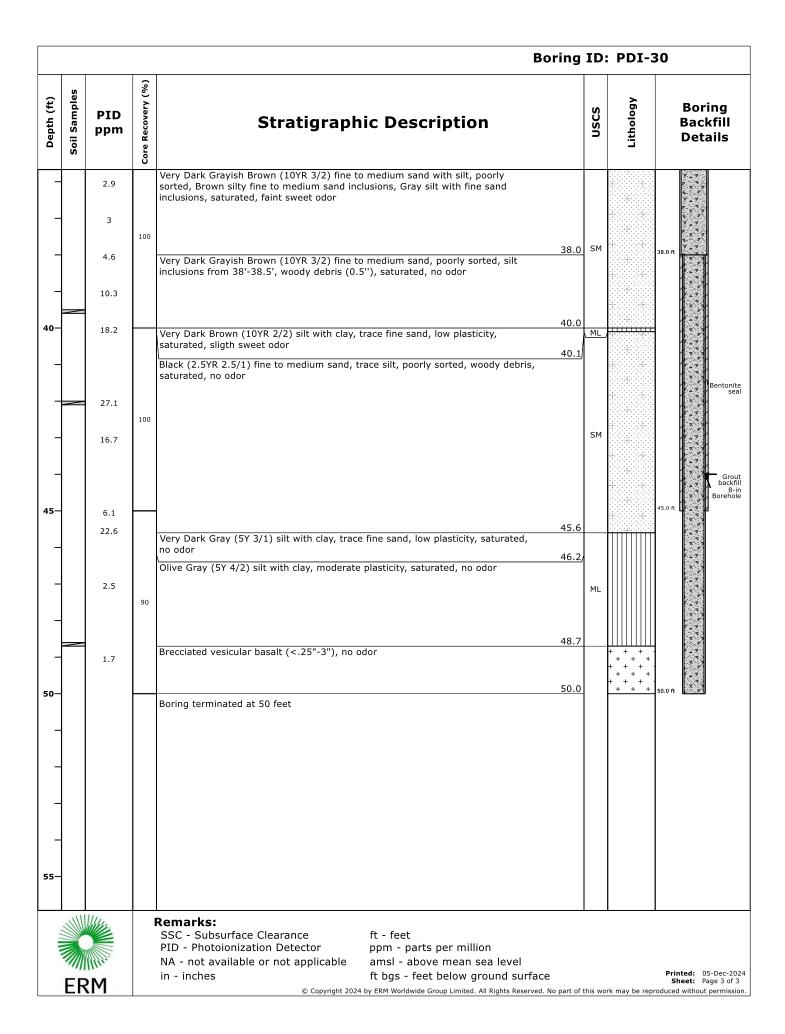
NA - not available or not applicable in - inches

ft - feet

ppm - parts per million amsl - above mean sea level

ft bgs - feet below ground surface

				Bor	ing	ID	: PDI-3	80
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
-		2.1	90	Black (2.5Y 2.5/1) fine to medium sand with silt, poorly sorted, gravel inclusions (.25"-3"), silver sheen from 17.6'-17.9', asphalt at 17.5', wet, no odor		sw		Y - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 -
-		3.8		Brown (10YR 4/3) silt with clay, trace fine sand, moderate plasticity, gravel to cobble inclusions (.25"-6"), Gray mottling at 12.2'-13.3', Brown fine to medium sand inclusion at 25', wet, no odor	17.9			v v 10-in Grenole
20-		1.2						Grout backfill
-			110			ML		
25—		2.8			25.7			Y - Y - Y - Y - Y - Y - Y - Y - Y - Y -
-		3.2	100	Brown (10YR 4/3) fine to medium sand with silt, poorly sorted, silt inclusions likely from drilling process, wet, no odor		SM		
30-		3.7		Very Dark Grayish Brown (10YR 3/2) silt with fine to medium sand and gravel (.25"-1"), angular, low plasticity, wet, no odor	30.0	ML		
		2.3 3.2 3.2	80	Brown (10YR 4/3) fine to medium sand with silt, poorly sorted, moist, no odor	31.2		+ + +	
- 35-		7.7	•	Brown (10YR 4/3) fine to medium sand with silt, poorly sorted, saturated, no odor  Very Dark Brown (10YR 2/2) fine to medium sand with silt, poorly sorted, low plasticity, Greenish Gray silt and clay inclusions, saturated, slight sweet odor	33.5 33.8 35.0	SM	+ + + + + + + +	
			ı	Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable amsl - above mean sea level			***************************************	
	ER	M		in - inches  ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No	part of t	his wo	rk may be repr	Printed: 05-Dec-2024 Sheet: Page 2 of 3 oduced without permission.



**Drilling Start Date:** 20-Aug-2024 **Drilling End Date:** 21-Aug-2024 **Drilling Contractor:** Cascade Drilling

Drilling Method: Sonic
Rig Make/Model: TSI
Driller: Chris Baker
SSC Contractor: GPRS
SSC Method: Private Locate
SSC Diam./Depth: Not Applicable

 Northing:
 702423.446

 Easting:
 7627539.776

 Surface Elevation:
 36.0 ft amsl

 Borehole Diameter:
 10 in

 Borehole Depth:
 55.5 ft bgs

Borehole Depth: 55.5 ft bgs
Water Encountered: 31.5 ft bgs
Logged By: David Stone
Reviewed By: Avery Soplata, RG
Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		SOSO	Lithology	Boring Backfill Details
				GROUND SURFACE				
o-				Gravel (.25"-1"), poorly sorted, sub-angular, Gray Brown silty fine sand matrix, moist, no odor			0000 0000 0000	V
4		1.9				GW		\(\frac{1}{2}\) \(\frac{1}\) \(\frac{1}{2}\) \(\frac{1}2\) \(\frac{1}2\) \(\frac{1}\) \(\frac{1}2\) \(1
				Very Dark Grayish Brown (10YR 3/2), silt and fine sand with gravel (.25"-1"),	1.4	ML		7 7 7 4 7 7 7 8 7
-				angular, competent, geotextile debris, moist, no odor  Gravel and pea gravel (<.25"-3"), subangular, Gray Brown silty fine sand matrix,	1.9	GW	00000	A A
		3	120	moist, no odor	2.7			V V V
		2		Dark Brown (10YR 3/3) silt with fine sand, gravel to cobble inclusions (.25"-5"), loose, low plasticity, brick debris, Gray mottling from 4.5'-6', 7" cobble at 7.5', moist, no odor				P
5-		9.6						7
-		3.5						V V V V V V V V V V V V V V V V V V V
-		3.3	60	Dark Brown (10YR 3/3) fragmented silt (.25"-3"), silty fine sand matrix, subrounded gravel inclusions (<.25"-2"), brick at 7.8', Dark Brown mottling from 11'-12', moist, no odor	7.5	ML		V 4 V V V V V V V V V V V V V V V V V V
								V V V V V V V V V V V V V V V V V V V
o-								V V
+		2.5						7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
$\dashv$				Van. Dark Curvish Brauer (40VD 2/2) fire to readily a readily a readily at the second with a ""	12.2			
$\frac{1}{2}$			110	Very Dark Grayish Brown (10YR 3/2) fine to medium sand with silt, poorly sorted, moist, no odor				V V V V V V V V V V V V V V V V V V V
$\frac{1}{2}$		2.1			14.3	SM		P V
_		2.7		Gray (10YR 6/1) fine to medium sand with silt, poorly sorted, moist, no odor	15.0			V V
5-				Very Dark Grayish Brown (10YR 3/2) silt with fine sand and clay, low plasticity, subrounded gravel inclusions (.25"-3"), moist, no odor		ML		A 7 A



**Remarks:** 

SSC - Subsurface Clearance

PID - Photoionization Detector NA - not available or not applicable in - inches ft - feet

ppm - parts per million amsl - above mean sea level

ft bgs - feet below ground surface

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				E	Boring	ID	: PDI-3	1
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
_		5.1		Very Dark Grayish Brown (10YR 3/2) silt with fine sand and clay, low plasticity, subrounded gravel inclusions (.25"-3"), moist, no odor  Very Dark Grayish Brown (10YR 3/2) fine to medium sand with silt, poorly	16.0	ML SM		V . V . V . V . V . V . V . V . V . V .
_			100	very Dark Grayish Brown (10YR 3/2) silt with fine sand and clay, low plasticity, subrounded gravel inclusions (.25"-3"), moist, no odor	16.8	ML		To-in To-in
_		7.1		Very Dark Grayish Brown (10YR 3/2) fine to medium sand with silt, poorly sorted, silt with fine sand inclusions (.25"-4"), 3" cobble at 19', moist, no odor			+ + + + + + + + + + + + + + + + + + + +	
20-				Brown (2.5YR 4/3) fine to medium sand with silt, poorly sorted, silt inclusions (.25"-4") from 20'-20.6', gravel (.25"-1"), moist, no odor	20.0		+ + + + + + + + + + + + + + + + + + +	
_		8.5		Gray (10YR 6/1) fine to medium sand with silt, poorly sorted, moist, no odor	21.4		# # #   # # #	Y P P
_		6.5	110				+ + + + + + + + + + + + + + + + + + +	₩
_		4.8		Brown (7.5YR 4/3) fine to medium sand with silt, poorly sorted, moist, no odor	24.0		+ +	V V V V V V V V V V V V V V V V V V V
25-		,		Dark Gray (10YR 4/1) fine to medium sand with silt, poorly sorted, moist, no odor	25.0		* * * * * * * * * * * * * * * * * * *	\$\forall  \$\times  \text{\$\times  \text{\$\times \q \text{\$\times  \text{\$\times  \text{\$\times  \text{\$\times
_		4		Gray (10YR 6/1) fine to medium sand with silt, poorly sorted, moist, no odor		SM	+ + + + + + + + + + + + + + + + + + +	▼
_		7.9	110	Brown (7.5YR 4/3) fine to medium sand with silt, poorly sorted, moist, no odor	28.3		# # #   # # # #	
30-		7.3					+ + + + + + + + + + + + + + + + + + + +	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
30-		2.8						
_		4.4	80	Brown (7.5YR 4/3) fine to medium sand with silt, poorly sorted, saturated, no odor  Very Dark Gray (10YR 3/1) fine to medium sand, silt (40-50%), competent from	31.5		+ +	
_		5.1		32.8-33.4', Light Brown mottling, saturated, mild sweet odor			+ + +	
35-		3.6 4.6			25 -		+ +	▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼ ▼
					35.4	ML		
				Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable amsl - above mean sea level				
	ER	RM		in - inches  ft bgs - feet below ground surfa  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserve		this wo	ork may be repro	Printed: 05-Dec-2024 Sheet: Page 2 of 3 oduced without permission.

				Во	ring	ID:	PDI-3	31
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
_		3.9		Very Dark Gray (10YR 3/1) silt with fine sand and minor clay, low plasticity, bed of poorly sorted fine to medium sand with silt (40-50%) from 36'-36.4', Light Brown mottling, Olive and Brown mottling, saturated, mild sweet odor				
_		3.2	100			ML		Bentonite seal Grout
_		1.8		Black (2.5YR 2.5/1) fine to medium sand, trace silt, poorly sorted, wood debris at 39', saturated, faint sweet odor	39.0			8-in Borehole
40-		3.8		Black (2.5YR 2.5/1) fine to medium sand, trace silt, poorly sorted', saturated, no odor	10.0	SW		40.0 ft
_		2.7	80	Very Dark Greenish Gray (GLEY1 3/5GY) silt and clay, trace fine sand, low plasticity, saturated, no odor	42.6 43.5			42.0 ft
45-		1.6		Olive Gray (5Y 4/2) silt and clay with fine sand, low plasticity, saturated, no odor	13.3	ML		
_		2.3		Dark Olive Gray (5Y 3/2) fine sand with silt and clay, saturated, no odor	46.1			Bentonite seal
_		2.1	100			SM	*	GROUT 6-in Borehole
50-		1			50.9		+ +	50.0 ft
				Olive Gray (5Y 4/2) silt and clay, trace fine sand, moderate plasticity, Orange lamination/rust at 52', saturated, no odor	52.1	ML		P P
_		1.4	91	Dark Olive Gray (5Y 3/2) fine sand with silt, saturated, no odor	F2 0	SM	+ + +	
55-		1.4		Brecciated vesicular basalt (.25"-3"), silty fine sand matrix, saturated, no odor	53.8		+ + + + + + + + + + + + + + + +	
				Boring terminated at 55.5 feet	55.5		+ + +	55.5 ft
100			I	Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable amsl - above mean sea level	•			
	ER	M		in - inches ft bgs - feet below ground surface © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No	part of t	his wo	rk may be repr	<b>Printed:</b> 05-Dec-2024 <b>Sheet:</b> Page 3 of 3 roduced without permission.

**Drilling Start Date:** 28-Aug-2024 **Drilling End Date:** 28-Aug-2024 **Drilling Contractor:** Cascade Drilling

Drilling Contractor: Cascade Drillin

Drilling Method: Sonic

Rig Make/Model: TSI

Driller: Chris Baker

SSC Contractor: GPRS

SSC Method: Private Locate

SSC Diam./Depth: Not Applicable

 Northing:
 702284.685

 Easting:
 7627816.148

 Surface Elevation:
 35.0 ft amsl

 Borehole Diameter:
 10 in

Borehole Depth: 69.0 ft bgs
Water Encountered: 28.5 ft bgs
Logged By: David Stone
Reviewed By: Avery Soplata, RG

Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

		aiii./ De		Not Applicable coordinates are draft values. Survey renaing.				
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
0-				GROUND SURFACE				
۱ ۳				Brown (10YR 4/3) fine sand with silt and subangular gravel (0.25"-1.5"), poorly				<b>∀</b>
				sorted, dry, no odor		SM		A A A
+		0					timiti	ν Δ ∵ Σ Φ
				Gravel and cobble clasts (0.25"-4"), subangular, Brown silty fine sand matrix,	1.5		ا مون مور	\(\forall \) \(\f
4				dry, no odor		GW		<i>v</i>
			120		2.7	GW		A . A
			120	Dark Brown (10YR 3/3) silt with fine sand, cobble inclusions (3"-7"), low	2.7		<u>nnnn</u>	V ∇
٦				plasticity, debris (ACM and graphite), tan mottling from 3'-4', moist, no odor				7 N N
								A * A
+						ML		V V
								Ø
5-					5.0			<b>4</b>
"		0.1		Gravel (0.25"-2.5"), subangular			0000	A A
		0.7			6.0	GW	0000	A * A
$\dashv$				Dark Brown (10YR 3/3) silt with fine sand, trace clay, gravel inclusions	6.0			A A
				(0.25"-2"), moderate plasticity, color change to (10YR 3/3) Very Dark Brown at				P. V. V
				8.2', moist, no odor				Δ. Δ.
			120					\(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\) \(\frac{1}{2}\)
		0.4	120					N N N
٦					8.4			A. * A
				Very Dark Brown (10YR 2/2) silt with fine sand, trace clay, gravel inclusions	0.4			V V V
4				(0.25"-2"), cobble inclusions (3"-4") at 10.5' and 15', wet, no odor				D
								<b>∀</b> ∇
								A A
٦		0.7						Ø
		0.5				ML		V V
$\dashv$						ITIL		V V
								Δ. Δ.
$\perp$								V . ∨ .
			120					₽ <b>∀</b> ∀
		0.8	120					A ~ A
$\dashv$								4
								<b>P</b>
4								<b>À</b>
								A A A
_					15.0			A * A
5-		1.2		Brown (10YR 2/2) silt with fine sand, debris (concrete aggregate, brick, rebar),				A. V. P.
		1.3		wet, faint asphalt-like odor				A A A
ㅗ	-111							



**Remarks:** 

SSC - Subsurface Clearance

PID - Photoionization Detector

NA - not available or not applicable in - inches

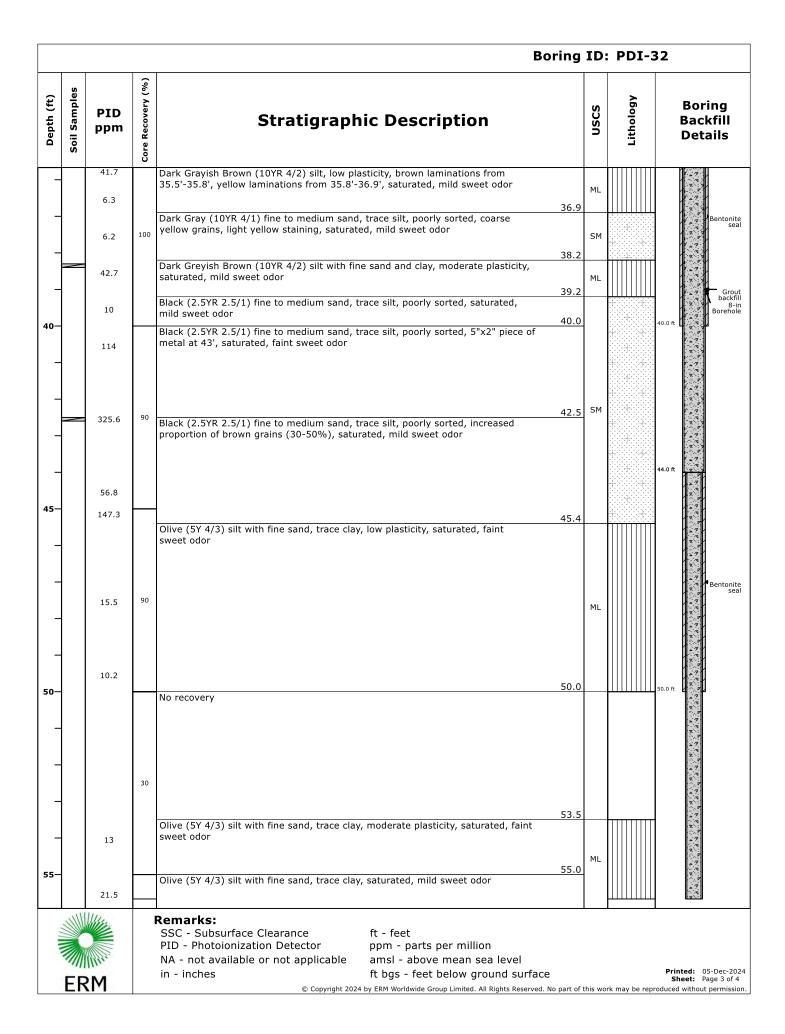
ft - feet

ppm - parts per million amsl - above mean sea level

ft bgs - feet below ground surface

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				Во	ring	ID:	PDI-3	32
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
		1.3		Brown (10YR 2/2) silt with fine sand, debris (concrete aggregate, brick, rebar), wet, faint asphalt-like odor				Δ. Δ
-		2.3	120	Very Dark Brown (10YR 2/2) silt with fine sand, trace clay, moderate plasticity, gravel to cobble inclusions (0.25"-8"), glass at 19.5', wet, no odor	18.0			10-in orehole Grout backfill
20-		0.8			20.0			A A
-		1.7	110	Very Dark Brown (10YR 2/2) silt with fine sand, trace clay, gravel to cobble inclusions (0.5"-5"), graphite at 23', shiny silver staining (21.5'-23'), wet, tar-like odor	22.0	ML		
25-		5.2		Dark Yellowish Brown (10YR 3/4) silt with fine sand, trace clay, moderate plasticity, gravel to pebble inclusions (0.25"-4"), wet, no odor	23.0			
		3.3			25.8			V V V
_		1.7 5.1	100	Grayish Brown (10YR 5/2) fine to medium sand, trace silt, poorly sorted, moist, sweet odor	2310	SM	+ + + + + + + +	
		11.6		Grayish Brown (10YR 5/2) fine to medium sand, trace silt, poorly sorted, saturated, sweet odor	28.5		+ + +	
30-		21.5 3.5		Dark Grayish Brown (10YR 4/2) silt with fine sand, low plasticity, dark brown laminations, saturated, sweet odor	30.0	ML		▼
				Very Dark Brown (10YR 2/2) silt with fine sand, trace clay, moderate plasticity, gravel inclusions (0.25"-1"), brick debris at 30.4', saturated, tar-like odor	30.9			∇ × ∇ · · · · · · · · · · · · · · · · ·
		13.9		Gray (10YR 5/1) fine to medium sand, trace silt, poorly sorted, cobble at 33.5' (11"), saturated, sweet odor	50.9		+ +	▼
		31.4 32.5	80			SM	+ + + + + + + + + + + + + + + + + + +	
							+ +	34.0 ft
35-		41.7			35.5		+ +	v
	1112	1/1/		Bowneyles:				II. A 4
	ER	M		Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable in - inches ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. N				Printed: 05-Dec-2024 Sheet: Page 2 of 4



					Boring	ID	: PDI-3	32
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
		21.5		Olive (5Y 4/3) silt with fine sand, trace clay, saturated, mild sweet odor	F6 2			- V
-		17.8		Olive (5Y 4/3) silt with fine sand, trace clay, low plasticity, saturated, mild sweet odor	56.3			6-in Borehole GROUT
-		65.8 55.8	90			ML		100 mm
-		48.1						
60-				Olive (5Y 4/3) fine sand with silt, trace clay, saturated, mild sweet odor	60.0			V
		12.2			60.9	SM	+	
		15.9		Olive (5Y 4/3) silt with fine sand and clay, moderate plasticity, saturated, mild sweet odor  Olive (5Y 4/3) fine sand with silt, trace clay, saturated, mild sweet odor	61.8	ML		\$ \frac{1}{2} \fra
_		23.8	90			SM	+ +	
-		36.5		Olive (EV 4/2) eith with fine and twee day, law placticity, activated saile	64.2		+ +	
		23.3		Olive (5Y 4/3) silt with fine sand, trace clay, low plasticity, saturated, mild sweet odor		ML		N P
65-		16.6		Very Dark Grey (5Y 3/1) fine to medium sand with silt, saturated, mild sweet odor	65.4			
		20.7	125			SM	+ +	
		32.2					+ + + + + + + + + + + + + + + + + + +	V P
-		10.2		Brecciated vessicular basalt, clasts (0.25"-2"), mild sweet odor.  Boring terminated at 69 feet	68.5 69.0		+ + +	69.0 ft 🚉
70-								
-								
-								
-								
-								
75-								
			ı	Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable amsl - above mean sea level				
	ER	M		in - inches  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserve		this wo	ork may be repr	<b>Printed:</b> 05-Dec-2024 <b>Sheet:</b> Page 4 of 4 roduced without permission.

Drilling Start Date: 29-Aug-2024
Drilling End Date: 29-Aug-2024
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic

Drilling Method: Sonic
Rig Make/Model: TSI
Driller: Chris Baker
SSC Contractor: Cascade/GPRS
SSC Method: Air-knife/Private Locate

10-in / 3-ft

SSC Diam./Depth:

Northing: 702255.930
Easting: 7627785.330
Surface Elevation: 36.0 ft amsl
Borehole Diameter: 10 in
Borehole Depth: 81.0 ft bgs
Water Encountered: 27.0 ft bgs

Coordinates are draft values. Survey Pending.

David Stone

Avery Soplata, RG

Logged By:

Reviewed By:

Site Name: Arkema Portland

Location: Portland, OR

Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfil Details
0-				GROUND SURFACE Asphalt				.d b
				Grayish Brown fine to medium sand with gravel and cobbles (0.5"-1.5"), subangular, dry, no odor	0.2	SP		V
		F7 7			3.0			V . V . V . V . V . V . V . V . V . V .
		57.7		Asphalt L	3.3/		<b> </b>	A A A
+			200	Very Dark Grayish Brown (10YR 3/2) silt with fine sand, trace clay, gravel to cobble inclusions (0.25"-3.5"), loose from 3.3'-4.5', competent from 4.5'-5', gray mottling from 4.5'-5', moist, no odor				V V V V V V V V V V V V V V V V V V V
5-		50.4		Dark Gray (10YR 4/1) silt with fine sand and gravel (<0.25"-1.5"), poorly	5.0		<b> </b>	V V
		5		sorted, wet, no odor				A . A .
		3.4		Dark Brown (10YR 3/3) silt with fine sand, trace clay, subrounded gravel inclusions (0.25"-1.5"), 4" basalt clast at 12.3', concrete aggregate at 13.3', competent, moist, no odor	6.7			
		1.2						V . V . V . V . V . V . V . V . V . V .
						ML		V V
10-							<b> </b>	V V
-		0.8						V V V
+								
			120					V V
		1.9			127		<b> </b>	V V
+		1.9		Dark Gray (10YR 4/1) silt with fine sand and subrounded gravel to cobble clasts (<0.25"-3"), poorly sorted, debris (tile, graphite, brick, and ACM), moist, faint sweet odor	13.7			P V V
15-		3.7			15.0			7
1111				Remarks: SSC - Subsurface Clearance ft - feet				· · · · · · ·

FRM

SSC - Subsurface Clearance

in - inches

PID - Photoionization Detector NA - not available or not applicable ft - feet

ppm - parts per million amsl - above mean sea level ft bgs - feet below ground surface

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					Boring	ID:	PDI-3	3
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
-		30.6	H	Dark Brown (10YR 3/3) silt with fine sand, trace clay, competent, subrounded gravel to cobble inclusions (0.25"-3"), rubber and glass debris at 19.5', moist, no odor				Y . Y . Y . Y . Y . Y . Y . Y . Y . Y .
-		49.9	110					10-in orehole Grout backfill
20-		17.6 38		Very Dark Grayish Brown (10YR 3/2) silt with fine sand, trace clay and debris (ACM, graphite, rubber, glass, concrete, and tile), metal wire debris from 25'-25.9', gravel to pebble inclusions (0.25"-1.5"), 10" concrete gravel aggregate at 24', wet, tar-like odor from 20'-25', mild tar-like odor from	20.0	ML		
-			100	25'-25.9',				
		9.8						
25-		119.5 113						4 .
		49		Very Dark Grayish Brown (10YR 3/2) fine to medium sand, trace silt, poorly sorted, wet, sweet odor	25.9			
		21.5	90	Very Dark Grayish Brown (10YR 3/2) fine to medium sand, trace silt, poorly sorted, tile debris at 28', dark gray to black mottling from 27.5'-28', saturated, sweet odor	27.0		+ + + +	
		60		Very Dark Grayish Brown (10YR 3/2) fine to medium sand, trace silt, poorly sorted, dark gray to black mottling, saturated, sweet odor		SM	+ + +	
30-		32.9		Very Dark Grayish Brown (10YR 3/2) fine to medium sand with silt (30-40%), gravel inclusions (1"-2"), yellow-orange mottling from 31'-32.5', saturated, faint sweet odor	30.0		+ + +	
_		70.8	100		32.8		+ + + + + + + + + + + + + + + + + + + +	
		108		Dark Gray (10YR 4/1) silt with fine to medium sand, loose, ACM and graphite at 33', light yellow-tan staining from 33.5'-35', saturated, mild sweet odor		ML		
35-		106 36			35.0	SM		
WIN.			ı	Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million				
	W/// ER	M		NA - not available or not applicable in - inches amsl - above mean sea level ft bgs - feet below ground surface (Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserv		this wo	rk may be repr	Printed: 05-Dec-2024 Sheet: Page 2 of 5 oduced without permission.

				Во	ring	ID:	PDI-3	33
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
_		139 139		Dark Gray (10YR 4/1) fine to coarse sand with silt, poorly sorted, 2.5' long chain at 35', wood debris at 36.5', coarse yellow grains, yellow staining, saturated, sweet odor		SM	+ + +	36.0 ft
_		189 150	80	Very Dark Gray (10YR 3/1) silt with clay, trace fine sand, moderate plasticity, yellow staining 37.3'-37.9', saturated, sweet odor	37.3	ML		₩ Bentonite
_		118		Black (2.5Y 2.5/1) fine to medium sand, trace silt, poorly sorted, dark red/brown 1" wide linear stain at 38.7', saturated, mild sweet odor		SM	+ + +	seal
40-				No recovery, core was accidently disposed of	40.0		<u> </u>	40.0 ft
_			100		45.0			Grout backfill B-in Borehole
45-				Black (2.5YR 2.5/1) fine to medium sand, trace silt, poorly sorted, coarse yellow grains from 45'-47.2', graphite at 48', saturated, mild sweet odor	13.0		+ + + + + + + + + + + + + + + + + + + +	V V
		117	90			SM	+ +	
_		118 119					+ + + + + + + + + + + + + + + + + + +	49.0 ft
50-		113		Olive (5Y 4/3) silt with clay and fine sand, moderate plasticity, dark gray mottling 52.5'-53.5', saturated, mild sweet odor	50.0		+ +	5. 5. 7. 5. 5. 7. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5.
-		113						
_		117	90			ML		Bentonite seal
_		116			55.0			
55-		50.2		Olive (5Y 4/3) fine sand with silt and clay, saturated, mild sweet odor	33.0	SM	+	55.0 ft
				Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million NA - not available or not applicable amsl - above mean sea level				<b>Printed:</b> 05-Dec-2024
	ER	M		in - inches ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. N		this wo	rk may be repi	Sheet: Page 3 of 5

				Borin	g II	D: PD	I-33
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description	9091	Lithology	Boring Backfill Details
		50.2		Olive (5Y 4/3) fine sand with silt and clay, saturated, mild sweet odor		100000	
-		120 50.7	80	57	.8	м	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
_				Olive (5Y 4/3) silt with fine sand, trace clay, low plasticity, saturated, mild sweet odor	м	L	
60-		33		61 Olive (5Y 4/3) fine sand with silt, trace clay, saturated, mild sweet odor	.5		V
		27.8 77.7	70		S	м + + + +	
65-				65	.0		. v. r.
_		101.7		Olive (5Y 4/3) silt with clay, trace fine sand, low plasticity, saturated, mild sweet odor	м	L	Borehold GROUT
- 70-		20.3	80	Very Dark Greenish Gray (GLEY1 3/5GY) fine to medium sand, poorly sorted, saturated, no odor	S	w	**************************************
-		20.4 39.4					# 7
_		8.7	80	Olive (5Y 4/3) silt with clay, trace fine sand, moderate plasticity, orange mottling, saturated, faint sweet odor  Olive (5Y 4/3) fine sand with silt, saturated, no odor	М	L	
75-		9.2		Very Dark Greenish Gray (GLEY1 3/5GY) fine sand with silt, trace clay, saturated, no odor	.0 s	м + + +	
- 3	1111	Witte.		Remarks:			I
27/100	ER	RM		SSC - Subsurface Clearance PID - Photoionization Detector NA - not available or not applicable in - inches  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No part	of this	work may be	Printed: 05-Dec-2024 Sheet: Page 4 of 5 e reproduced without permission.

				Boring	ID:	PDI-3	33
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description	nscs	Lithology	Boring Backfill Details
_		9.2		Very Dark Greenish Gray (GLEY1 3/5GY) fine sand with silt, trace clay, saturated, no odor		400000000000000000000000000000000000000	
		5.3		Saturated, no odd.			\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
_					SM		
_		14.5	100			+ + :	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
		4.8		78.5 Brecciated vessicular basalt, clasts (0.25"-2"), 8" shint metal piece at 78.6, no	;		
-				odor		+ + + +	7 V
80-		3.3		80.0		+ + + +	
			100	Brecciated vessicular basalt, clasts (0.25"-2"), no odor		+ + + +	
-				81.0 Boring terminated at 81 feet	<u> </u>	+ + +	81.0 ft
-							
85-							
-							
_							
-							
_							
90-							
_							
-							
-							
95-							
	1111	1111		Remarks:	1		
				SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million			



NA - not available or not applicable

in - inches

amsl - above mean sea level

Drilling Start Date: 29-Aug-2024
Drilling End Date: 30-Aug-2024
Drilling Contractor: Cascade Drilling
Drilling Method: Sonic
Rig Make/Model: TSI

Rig Make/Model: TSI

Driller: Chris Baker

SSC Contractor: Cascade/GPRS

SSC Method: Air-knife/Private Locate

SSC Diam./Depth: 10-in / 3-ft

Northing: 702276.818
Easting: 7627735.991
Surface Elevation: 36.0 ft amsl
Borehole Diameter: 10 in
Borehole Depth: 62.0 ft bgs
Water Encountered: 28.3 ft bgs
Logged By: Avery Soplata
Reviewed By: Avery Soplata, RG

Coordinates are draft values. Survey Pending.

Site Name: Arkema Portland

Location: Portland, OR

Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		sosn	Lithology	Boring Backfil Details
<b>-</b>			GROUND SURFACE Gravel and concrete		GW	200000	Ŋ P
			Asphalt	0.5		00.00	V V V
-			Concrete	0.8		V V V V V V V V V V V V V V V V V V V	4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.4.
				3.0			∵ ∇ · · ∇ ∇ · · ∇
			Grayish Brown silty sand, gravels and cobbles (.5"-1.5"), subangular to subrounded, ACM, dry, no odor		SM		νν ν
			Asphalt and gravel	3.5			V V V
			Asphale and graver				A * A .
	_			5.0			Δ Δ Δ . Δ . Δ . . Δ . Δ
5-	7		Concrete aggregate			4 . b. 4 . b.	V V
				5.9		Δ Δ Δ Δ Δ	A. A.
			Very Dark Grayish Brown (10YR 3/2) fine sand with silt, gravel inclusions (.25"-2"), debris (graphite, concrete aggregate, ACM), moist, no odor	7.0	SM		▼
	38.8	110	Dark Grayish Brown (10YR 4/2) fine to medium sand with silt, poorly sorted, silt inclusions (.25"-3"), moist, no odor	8.1	SM		P
			Dark Grayish Brown (10YR 4/2) silt with fine sand, subrounded gravel (<.25"-4"), poorly sorted, debris (concrete, graphite, ACM) from 9'-9.5', moist, no odor  Very Dark Grayish Brown (10YR 3/2) silt with fine sand, gravel (.25"-2"), 50%	9.5	ML		4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
0-	35.8	<del> </del>	debris (metal wire, graphite, ACM, Brick, concrete) moist, no odor	10.0/			A A
-	1.8		Dark Grayish Brown (10YR 4/2) fine sand with silt, gravel (.25"-1.5"), silt inclusions, debris (concrete, brick, ACM, graphite), 8" concrete block at 13', moist, no odor	10.0			V V V V V V V V V V V V V V V V V V V
	1.3						V . V .
+							A . A .
	1.3	60			SM		A A A
-							A A A A A A A A A A A A A A A A A A A
							A A A
5-	5.7			15.0	ML		V . V .
		$\vdash$					p ∵ ∇ ∴



#### **Remarks:**

SSC - Subsurface Clearance PID - Photoionization Detector

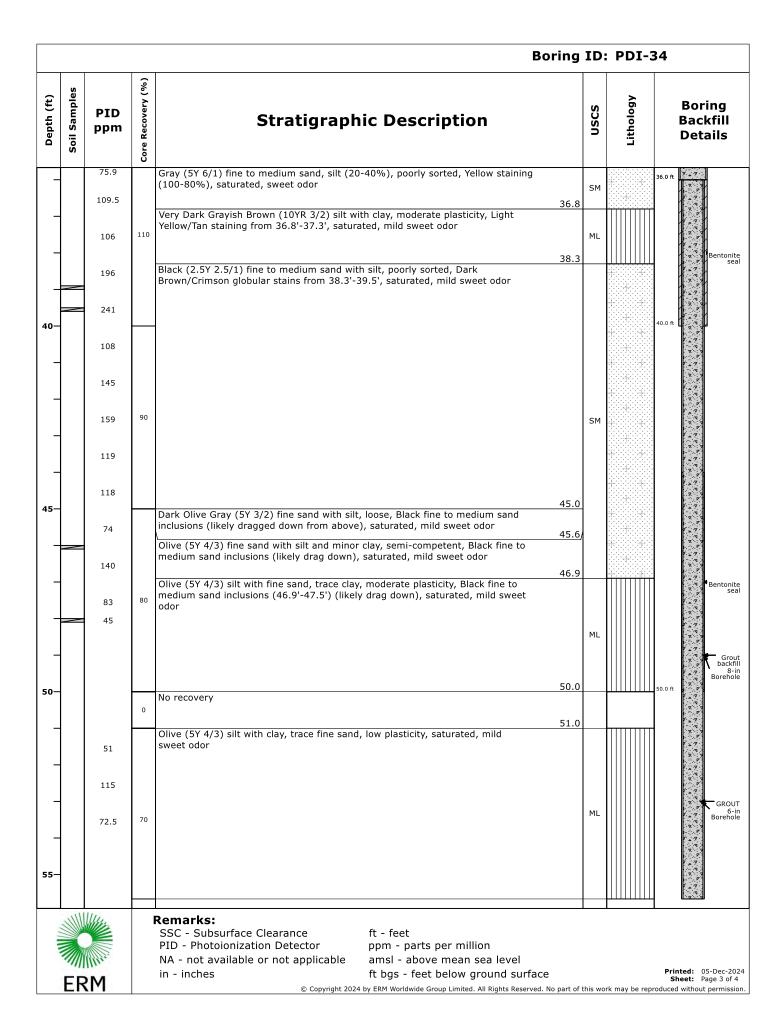
NA - not available or not applicable in - inches

ft - feet

ppm - parts per million amsl - above mean sea level ft bgs - feet below ground surface

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				Во	ring	ID	PDI-3	34
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description		nscs	Lithology	Boring Backfill Details
		3.2		Dark Grayish Brown (10YR 4/2) silt with fine sand, gravel (.25"-3"), debris (ACM, graphite, metal, rubber tubing, concrete aggregate (2"-6")), moist, no odor	16.0	ML		\$\frac{1}{2}\frac{1}{2
		15.7	110	Debris (concrete aggregate coated with white powder from 16'-17.5'), debris (Gravel, ACM, and white substance that is plastic to the touch and easily friable from 17.5'-18.4'), debris (ACM from 18.4'-19.2'), debris (graphite, ACM coated	16.0			
		3.1		with sparkly purple substance from 19.2'-20.2) with silty fine sand matrix and pea gravel, wet, no odor				y y 10-in v y gorehole y y Grout backfill
		3						\$\frac{\partial}{\partial}\partial
20-		3.8		Dark Yellowish Brown (10YR 4/2) fine to medium sand, trace silt, poorly sorted, moist, faint sweet odor	20.2			
		1.7		moise, fame sweet odd.			+ +	
		3.4	100			SM	+ + + + + + + + + + + + + + + + + + +	
		5.5					+ +	V V V
		3			25.0		+ +	\$\frac{\partial}{\partial}\partial
25-		6.8		Very Dark Gray (10YR 3/1) silt with clay and fine sand, interbedded gravel (.25"-3") and debris (graphite, concrete aggregate, glass, rubber, tile), competent from 25'-26.3', loose from 26.3'-28.3', moist, no odor	23.0			
		8.6				ML		
		5.4	90					A A
		5.6		Very Dark Grayish Brown (10YR 3/2) fine to medium sand with silt, poorly sorted, Yellow staining from 28.7'-30' (30-70%), saturated, mild sweet odor	28.3		† † † † † † † † † † † † † † † † † † †	
30-		3.3		Carry (FV.C.(1) fine he madium and with all papers and Velley, shaining from	30.0		+	V V V V V V V V V V V V V V V V V V V
		16.9		Gray (5Y 6/1) fine to medium sand with silt, poorly sorted, Yellow staining from 30'-31.5' (100-50%), saturated, mild sweet odor			+ +	
		53.1				SM	+ +	7
		68.7	90				+ + +	
		147					+ + + + +	*
35-		201		Gray (5Y 6/1) fine to medium sand, silt (20-40%), poorly sorted, Yellow staining	35.0		+ +	9 . 7 . 7 . 7 . 7 . 7 . 9 . 7 .
	1111	75.9		(100-80%), saturated, sweet odor				7 7 7
				Remarks: SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million				
	ER	M.		NA - not available or not applicable in - inches amsl - above mean sea level ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No	part of t	his wo	rk may be repr	Printed: 05-Dec-2024 Sheet: Page 2 of 4 oduced without permission.



				Bori	ng ID	: PDI-3	34
Depth (ft)	Soil Samples	PID ppm	Core Recovery (%)	Stratigraphic Description	nscs	Lithology	Boring Backfill Details
60-		81 85.8 73.7 41.5	90	Brecciated vesicular basalt (<.25"-5"), Olive silt with clay and minor fine sand matrix, saturated, faint sweet odor	9.8 2.0		62.0 ft
30105	ER	RM	I	Remarks:  SSC - Subsurface Clearance ft - feet PID - Photoionization Detector ppm - parts per million  NA - not available or not applicable amsl - above mean sea level in - inches ft bgs - feet below ground surface  © Copyright 2024 by ERM Worldwide Group Limited. All Rights Reserved. No page	rt of this w	ork may be rep	Printed: 05-Dec-2024 Sheet: Page 4 of 4 roduced without permission.



## APPENDIX B LABORATORY ANALYTICAL REPORTS

### 10

Attn: Avery Soplata ERM-West 1050 SW 6th Avenue Suite 1650 Portland, Oregon 97204

PREPARED FOR

**ANALYTICAL REPORT** 

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### **JOB DESCRIPTION**

Arkema PDI Sampling

### **JOB NUMBER**

580-141924-1

Eurofins Seattle 5755 8th Street East Tacoma WA 98424

## **Eurofins Seattle**

#### **Job Notes**

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

#### **Authorization**

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Authorized for release by Sheri Cruz, Project Manager I Sheri.Cruz@et.eurofinsus.com (253)922-2310

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Client: ERM-West

Project/Site: Arkema PDI Sampling

Laboratory Job ID: 580-141924-1

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#### **Case Narrative**

Client: ERM-West Job ID: 580-141924-1

Project: Arkema PDI Sampling

Job Narrative 580-141924-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 7/10/2024 1:25 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.9°C.

#### GC/MS VOA

Job ID: 580-141924-1

Method 8260D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 580-464922 and analytical batch 580-464910 recovered outside control limits for the following analytes: Bromomethane and Chloroethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D: The [QC] associated with 580-464910 is compliant under 8260D criteria for Dichlorodifluoromethane. The software does not display the data to the whole number as is listed in the method (i.e. limit of 20%). When applying the evaluation to a whole number, the QC passes the criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**Eurofins Seattle** 

**3** 

**Eurofins Seattle** 

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#### **Definitions/Glossary**

Client: ERM-West Job ID: 580-141924-1

Project/Site: Arkema PDI Sampling

#### **Qualifiers**

#### **GC/MS VOA**

Qualifier Qualifier Description

\*+ LCS and/or LCSD is outside acceptance limits, high biased.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### **Glossary**

Abbreviation These commonly used abbreviations may or may not be present in this report.

Example 2 Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery
CFL Contains Free Liquid
CFU Colony Forming Unit
CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent
POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-141924-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-01-SO-24-20240708

Lab Sample ID: 580-141924-1 Date Collected: 07/08/24 15:40 **Matrix: Solid** 

Date Received: 07/10/24 13:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050	mg/Kg		07/15/24 10:27	07/15/24 12:44	
1,1,1-Trichloroethane	ND		0.040	0.0046	mg/Kg		07/15/24 10:27	07/15/24 12:44	
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076	mg/Kg		07/15/24 10:27	07/15/24 12:44	
1,1,2-Trichloroethane	ND		0.020	0.0074	mg/Kg		07/15/24 10:27	07/15/24 12:44	
1,1-Dichloroethane	ND		0.040	0.0092	mg/Kg		07/15/24 10:27	07/15/24 12:44	
1,1-Dichloroethene	ND		0.040	0.012	mg/Kg		07/15/24 10:27	07/15/24 12:44	
1,1-Dichloropropene	ND		0.040	0.0053	mg/Kg		07/15/24 10:27	07/15/24 12:44	
1,2,3-Trichlorobenzene	ND		0.080	0.040	mg/Kg		07/15/24 10:27	07/15/24 12:44	
1,2,3-Trichloropropane	ND		0.040	0.012	mg/Kg		07/15/24 10:27	07/15/24 12:44	
1,2,4-Trichlorobenzene	ND		0.080	0.043	mg/Kg		07/15/24 10:27	07/15/24 12:44	
1,2,4-Trimethylbenzene	ND		0.040	0.014	mg/Kg		07/15/24 10:27	07/15/24 12:44	
1,2-Dibromo-3-Chloropropane	ND		0.060		mg/Kg		07/15/24 10:27	07/15/24 12:44	
1,2-Dibromoethane	ND		0.020	0.0038			07/15/24 10:27	07/15/24 12:44	
1,2-Dichlorobenzene	ND		0.040	0.0087			07/15/24 10:27	07/15/24 12:44	
1,2-Dichloroethane	ND		0.020	0.0055			07/15/24 10:27	07/15/24 12:44	
1,2-Dichloropropane	ND		0.020	0.0066			07/15/24 10:27	07/15/24 12:44	
1,3,5-Trimethylbenzene	ND		0.040	0.0076	0 0		07/15/24 10:27	07/15/24 12:44	
I,3-Dichlorobenzene	ND		0.060		mg/Kg		07/15/24 10:27	07/15/24 12:44	
I,3-Dichloropropane	ND		0.060	0.0056			07/15/24 10:27	07/15/24 12:44	
I,4-Dichlorobenzene	0.022	J	0.060		mg/Kg		07/15/24 10:27	07/15/24 12:44	
2,2-Dichloropropane	ND		0.040		mg/Kg			07/15/24 12:44	
2-Chlorotoluene	ND		0.040	0.0088				07/15/24 12:44	
I-Chlorotoluene	ND		0.040	0.0098				07/15/24 12:44	
1-Isopropyltoluene	ND		0.040		mg/Kg			07/15/24 12:44	
Benzene	ND		0.020	0.0038				07/15/24 12:44	
Bromobenzene	ND		0.040	0.0042				07/15/24 12:44	
Bromochloromethane	ND		0.040	0.0062	0 0			07/15/24 12:44	
Bromodichloromethane	ND		0.040	0.0055				07/15/24 12:44	
3romoform	ND		0.040	0.0045	0 0			07/15/24 12:44	
Bromomethane	ND	*+	0.10		mg/Kg			07/15/24 12:44	
Carbon tetrachloride	ND		0.020	0.0044				07/15/24 12:44	
Chlorobenzene	3.7		0.040	0.0048				07/15/24 12:44	
Chloroethane	ND	*+	0.080		mg/Kg			07/15/24 12:44	
Chloroform	ND	· • • • • • • • • • • • • • • • • • • •	0.020	0.0042				07/15/24 12:44	
Chloromethane	ND		0.060		mg/Kg			07/15/24 12:44	
cis-1,2-Dichloroethene	ND		0.060		mg/Kg			07/15/24 12:44	
cis-1,3-Dichloropropene	ND		0.020	0.0040				07/15/24 12:44	
Dibromochloromethane	ND		0.020	0.0040				07/15/24 12:44	
Dibromomethane	ND ND		0.020	0.0049				07/15/24 12:44	
Dichlorodifluoromethane	ND				mg/Kg			07/15/24 12:44	
			0.25						
Ethylbenzene Hoveeblerebutediene	0.024	J	0.040	0.0091				07/15/24 12:44	
Hexachlorobutadiene	ND ND		0.10		mg/Kg			07/15/24 12:44 07/15/24 12:44	
sopropylbenzene	ND		0.040	0.0086					
Methyl tert-butyl ether	ND 0.40		0.040	0.0060				07/15/24 12:44	
n-Xylene & p-Xylene	0.16		0.040	0.0071				07/15/24 12:44	
Naphthalene	ND		0.15		mg/Kg			07/15/24 12:44	
n-Butylbenzene	ND		0.040		mg/Kg			07/15/24 12:44	
N-Propylbenzene D- <b>Xylene</b>	ND 0.035		0.040 0.040	0.015	mg/Kg			07/15/24 12:44 07/15/24 12:44	

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-141924-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-01-SO-24-20240708

Date Collected: 07/08/24 15:40

Date Received: 07/10/24 13:25

Toluene-d8 (Surr)

Lab Sample ID: 580-141924-1

07/15/24 10:27 07/15/24 12:44

**Matrix: Solid** 

Method: SW846 8260D - Vo	latile Organic	Compound	ds by GC/MS	(Conti	nued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		07/15/24 10:27	07/15/24 12:44	1
Styrene	ND		0.040	0.013	mg/Kg		07/15/24 10:27	07/15/24 12:44	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		07/15/24 10:27	07/15/24 12:44	1
Tetrachloroethene	0.016	J	0.040	0.0053	mg/Kg		07/15/24 10:27	07/15/24 12:44	1
Toluene	ND		0.060	0.014	mg/Kg		07/15/24 10:27	07/15/24 12:44	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		07/15/24 10:27	07/15/24 12:44	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		07/15/24 10:27	07/15/24 12:44	1
Trichloroethene	ND		0.040	0.010	mg/Kg		07/15/24 10:27	07/15/24 12:44	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		07/15/24 10:27	07/15/24 12:44	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		07/15/24 10:27	07/15/24 12:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				07/15/24 10:27	07/15/24 12:44	1
4-Bromofluorobenzene (Surr)	101		80 - 120				07/15/24 10:27	07/15/24 12:44	1
Dibromofluoromethane (Surr)	101		80 - 120				07/15/24 10:27	07/15/24 12:44	1

Method: SW846 8260D - Vo	_	•	•		11:4	_	Dunmanad	A	D!! F
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		0.25	0.026	mg/Kg		07/16/24 08:56	07/16/24 14:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				07/16/24 08:56	07/16/24 14:41	1
4-Bromofluorobenzene (Surr)	97		80 - 120				07/16/24 08:56	07/16/24 14:41	1
Dibromofluoromethane (Surr)	100		80 - 120				07/16/24 08:56	07/16/24 14:41	1
Toluene-d8 (Surr)	102		80 - 120				07/16/24 08:56	07/16/24 14:41	1

80 - 120

100

7/17/2024

Client: ERM-West Job ID: 580-141924-1

Project/Site: Arkema PDI Sampling

**Client Sample ID: TB-01-SO-20240708** 

Lab Sample ID: 580-141924-2 Date Collected: 07/08/24 00:01 **Matrix: Solid** 

Date Received: 07/10/24 13:25

Analyte	Result Qualifier	RL _	MDL		<u>D</u>	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	0.019	0.0048				07/15/24 12:01	1
1,1,1-Trichloroethane	ND	0.038	0.0044				07/15/24 12:01	1
1,1,2,2-Tetrachloroethane	ND	0.019	0.0072				07/15/24 12:01	1
1,1,2-Trichloroethane	ND	0.019	0.0070	0 0			07/15/24 12:01	1
1,1-Dichloroethane	ND	0.038	0.0088	mg/Kg		07/15/24 10:27	07/15/24 12:01	1
1,1-Dichloroethene	ND	0.038		mg/Kg		07/15/24 10:27	07/15/24 12:01	1
1,1-Dichloropropene	ND	0.038	0.0050			07/15/24 10:27	07/15/24 12:01	1
1,2,3-Trichlorobenzene	ND	0.076	0.038	mg/Kg		07/15/24 10:27	07/15/24 12:01	1
1,2,3-Trichloropropane	ND	0.038	0.011	mg/Kg		07/15/24 10:27	07/15/24 12:01	1
1,2,4-Trichlorobenzene	ND	0.076	0.041	mg/Kg		07/15/24 10:27	07/15/24 12:01	1
1,2,4-Trimethylbenzene	ND	0.038	0.013	mg/Kg		07/15/24 10:27	07/15/24 12:01	1
1,2-Dibromo-3-Chloropropane	ND	0.057	0.014	mg/Kg		07/15/24 10:27	07/15/24 12:01	1
1,2-Dibromoethane	ND	0.019	0.0036	mg/Kg		07/15/24 10:27	07/15/24 12:01	1
1,2-Dichlorobenzene	ND	0.038	0.0083	mg/Kg		07/15/24 10:27	07/15/24 12:01	1
1,2-Dichloroethane	ND	0.019	0.0052	mg/Kg		07/15/24 10:27	07/15/24 12:01	1
1,2-Dichloropropane	ND	0.019	0.0063	mg/Kg		07/15/24 10:27	07/15/24 12:01	1
1,3,5-Trimethylbenzene	ND	0.038	0.0072	mg/Kg		07/15/24 10:27	07/15/24 12:01	1
1,3-Dichlorobenzene	ND	0.057		mg/Kg		07/15/24 10:27	07/15/24 12:01	1
1,3-Dichloropropane	ND	0.057	0.0053			07/15/24 10:27	07/15/24 12:01	1
1,4-Dichlorobenzene	ND	0.057		mg/Kg			07/15/24 12:01	1
2,2-Dichloropropane	ND	0.038		mg/Kg			07/15/24 12:01	1
2-Chlorotoluene	ND	0.038	0.0084				07/15/24 12:01	1
4-Chlorotoluene	ND	0.038	0.0093				07/15/24 12:01	1
4-Isopropyltoluene	ND	0.038	0.0097				07/15/24 12:01	1
Benzene	ND	0.019	0.0036				07/15/24 12:01	
Bromobenzene	ND	0.038	0.0040				07/15/24 12:01	1
Bromochloromethane	ND	0.038	0.0059				07/15/24 12:01	1
Bromodichloromethane	ND	0.038	0.0052				07/15/24 12:01	· 1
Bromoform	ND	0.038	0.0043				07/15/24 12:01	1
Bromomethane	ND *+	0.095		mg/Kg			07/15/24 12:01	1
Carbon tetrachloride	ND '	0.019	0.0042				07/15/24 12:01	
Chlorobenzene	ND	0.019	0.0042	0 0			07/15/24 12:01	1
Chloroethane	ND *+	0.036		mg/Kg			07/15/24 12:01	1
Chloroform	ND +	0.070	0.0040				07/15/24 12:01	' 1
Chloromethane	ND ND	0.019	0.0040				07/15/24 12:01	1
								1
cis-1,2-Dichloroethene	ND ND	0.057		mg/Kg			07/15/24 12:01	
cis-1,3-Dichloropropene	ND	0.019	0.0038				07/15/24 12:01	1
Dibromochloromethane	ND	0.019	0.0047				07/15/24 12:01	1
Dibromomethane	ND	0.038	0.0070	T T			07/15/24 12:01	
Dichlorodifluoromethane	ND	0.24		mg/Kg			07/15/24 12:01	1
Ethylbenzene	0.021 J	0.038	0.0087				07/15/24 12:01	1
Hexachlorobutadiene	ND	0.095		mg/Kg			07/15/24 12:01	
Isopropylbenzene	ND	0.038	0.0082				07/15/24 12:01	1
Methyl tert-butyl ether	ND	0.038	0.0057				07/15/24 12:01	1
m-Xylene & p-Xylene	0.15	0.038	0.0068				07/15/24 12:01	
Naphthalene	ND	0.14		mg/Kg			07/15/24 12:01	1
n-Butylbenzene	ND	0.038		mg/Kg			07/15/24 12:01	1
N-Propylbenzene	ND	0.038		mg/Kg		07/15/24 10:27	07/15/24 12:01	1
o-Xylene	0.031 J	0.038	0.0048	mg/Kg		07/15/24 10:27	07/15/24 12:01	1

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-141924-1

Project/Site: Arkema PDI Sampling

Date Received: 07/10/24 13:25

**Client Sample ID: TB-01-SO-20240708** 

Date Collected: 07/08/24 00:01

Lab Sample ID: 580-141924-2

**Matrix: Solid** 

Method: SW846 8260D - Vo	latile Organic	Compound	inds by GC/MS (Continued)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.038	0.0082	mg/Kg		07/15/24 10:27	07/15/24 12:01	1
Styrene	ND		0.038	0.012	mg/Kg		07/15/24 10:27	07/15/24 12:01	1
t-Butylbenzene	ND		0.038	0.0073	mg/Kg		07/15/24 10:27	07/15/24 12:01	1
Tetrachloroethene	ND		0.038	0.0050	mg/Kg		07/15/24 10:27	07/15/24 12:01	1
Toluene	ND		0.057	0.013	mg/Kg		07/15/24 10:27	07/15/24 12:01	1
trans-1,2-Dichloroethene	ND		0.057	0.014	mg/Kg		07/15/24 10:27	07/15/24 12:01	1
trans-1,3-Dichloropropene	ND		0.038	0.0067	mg/Kg		07/15/24 10:27	07/15/24 12:01	1
Trichloroethene	ND		0.038	0.0098	mg/Kg		07/15/24 10:27	07/15/24 12:01	1
Trichlorofluoromethane	ND		0.076	0.025	mg/Kg		07/15/24 10:27	07/15/24 12:01	1
Vinyl chloride	ND		0.095	0.018	mg/Kg		07/15/24 10:27	07/15/24 12:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				07/15/24 10:27	07/15/24 12:01	1
4-Bromofluorobenzene (Surr)	99		80 - 120				07/15/24 10:27	07/15/24 12:01	1
Dibromofluoromethane (Surr)	101		80 - 120				07/15/24 10:27	07/15/24 12:01	1
Toluene-d8 (Surr)	101		80 - 120				07/15/24 10:27	07/15/24 12:01	1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - RA										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Methylene Chloride	ND		0.24	0.025	mg/Kg		07/16/24 08:56	07/16/24 13:36	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				07/16/24 08:56	07/16/24 13:36	1	
4-Bromofluorobenzene (Surr)	100		80 - 120				07/16/24 08:56	07/16/24 13:36	1	
Dibromofluoromethane (Surr)	100		80 - 120				07/16/24 08:56	07/16/24 13:36	1	
Toluene-d8 (Surr)	101		80 - 120				07/16/24 08:56	07/16/24 13:36	1	

7/17/2024

Client: ERM-West Job ID: 580-141924-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-01-SO-55-20240709

Lab Sample ID: 580-141924-3

Date Collected: 07/09/24 14:25 **Matrix: Solid** Date Received: 07/10/24 13:25

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050	mg/Kg		07/15/24 10:27	07/15/24 13:05	
1,1,1-Trichloroethane	ND		0.040	0.0046			07/15/24 10:27	07/15/24 13:05	
1,1,2,2-Tetrachloroethane	ND		0.020	0.0075			07/15/24 10:27	07/15/24 13:05	
1,1,2-Trichloroethane	ND		0.020	0.0073			07/15/24 10:27	07/15/24 13:05	
1,1-Dichloroethane	ND		0.040	0.0091			07/15/24 10:27	07/15/24 13:05	
1,1-Dichloroethene	ND		0.040	0.012	mg/Kg		07/15/24 10:27	07/15/24 13:05	
1,1-Dichloropropene	ND		0.040	0.0053			07/15/24 10:27	07/15/24 13:05	
1,2,3-Trichlorobenzene	ND		0.079		mg/Kg		07/15/24 10:27	07/15/24 13:05	
1,2,3-Trichloropropane	ND		0.040		mg/Kg		07/15/24 10:27	07/15/24 13:05	
1,2,4-Trichlorobenzene	ND		0.079		mg/Kg		07/15/24 10:27	07/15/24 13:05	
1,2,4-Trimethylbenzene	ND		0.040		mg/Kg		07/15/24 10:27	07/15/24 13:05	
1,2-Dibromo-3-Chloropropane	ND		0.060		mg/Kg			07/15/24 13:05	
1,2-Dibromoethane	ND		0.020	0.0038				07/15/24 13:05	
1,2-Dichlorobenzene	ND		0.040	0.0086				07/15/24 13:05	
1,2-Dichloroethane	ND		0.020	0.0055				07/15/24 13:05	
1,2-Dichloropropane	ND		0.020	0.0066				07/15/24 13:05	
1,3,5-Trimethylbenzene	ND		0.040	0.0075				07/15/24 13:05	
1,3-Dichlorobenzene	ND		0.060		mg/Kg			07/15/24 13:05	
1,3-Dichloropropane	ND		0.060	0.0056				07/15/24 13:05	
1,4-Dichlorobenzene	ND		0.060		mg/Kg			07/15/24 13:05	
2,2-Dichloropropane	ND		0.040		mg/Kg			07/15/24 13:05	
2-Chlorotoluene	ND		0.040	0.0087				07/15/24 13:05	
4-Chlorotoluene	ND		0.040	0.0097				07/15/24 13:05	
1-Isopropyltoluene	ND		0.040		mg/Kg			07/15/24 13:05	
Benzene	ND		0.020	0.0038				07/15/24 13:05	
Bromobenzene	ND		0.040	0.0042				07/15/24 13:05	
Bromochloromethane	ND		0.040	0.0062				07/15/24 13:05	
Bromodichloromethane	ND		0.040	0.0055				07/15/24 13:05	
Bromoform	ND		0.040	0.0045				07/15/24 13:05	
Bromomethane		*+	0.099		mg/Kg			07/15/24 13:05	
Carbon tetrachloride	ND		0.020	0.0044				07/15/24 13:05	
Chlorobenzene	0.59		0.040	0.0048	0 0			07/15/24 13:05	
Chloroethane	ND	*+	0.079	0.021				07/15/24 13:05	
Chloroform	ND		0.020	0.0042				07/15/24 13:05	
Chloromethane	ND		0.060		mg/Kg			07/15/24 13:05	
cis-1,2-Dichloroethene	ND		0.060		mg/Kg			07/15/24 13:05	
cis-1,3-Dichloropropene	ND		0.020	0.0040				07/15/24 13:05	
Dibromochloromethane	ND		0.020	0.0049				07/15/24 13:05	
Dibromomethane	ND		0.040	0.0073	0 0			07/15/24 13:05	
Dichlorodifluoromethane	ND		0.25		mg/Kg			07/15/24 13:05	
Ethylbenzene	0.018	1	0.040	0.0090				07/15/24 13:05	
Hexachlorobutadiene	ND	3	0.099		mg/Kg			07/15/24 13:05	
sopropylbenzene	ND		0.040	0.0085				07/15/24 13:05	
Methyl tert-butyl ether	ND ND		0.040	0.0060				07/15/24 13:05	
m-Xylene & p-Xylene	0.12		0.040	0.0000				07/15/24 13:05	
					mg/Kg			07/15/24 13:05	
Naphthalene Butylbenzene	ND ND		0.15 0.040					07/15/24 13:05	
n-Butylbenzene N-Propylbenzene	ND ND		0.040		mg/Kg mg/Kg			07/15/24 13:05	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-141924-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-01-SO-55-20240709

Lab Sample ID: 580-141924-3 Date Collected: 07/09/24 14:25 **Matrix: Solid** 

Date Received: 07/10/24 13:25

Method: SW846 8260D - Vo	latile Organic	Compound	npounds by GC/MS (Continued)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.040	0.0085	mg/Kg		07/15/24 10:27	07/15/24 13:05	1
Styrene	ND		0.040	0.013	mg/Kg		07/15/24 10:27	07/15/24 13:05	1
t-Butylbenzene	ND		0.040	0.0076	mg/Kg		07/15/24 10:27	07/15/24 13:05	1
Tetrachloroethene	0.0058	J	0.040	0.0053	mg/Kg		07/15/24 10:27	07/15/24 13:05	1
Toluene	ND		0.060	0.013	mg/Kg		07/15/24 10:27	07/15/24 13:05	1
trans-1,2-Dichloroethene	ND		0.060	0.014	mg/Kg		07/15/24 10:27	07/15/24 13:05	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		07/15/24 10:27	07/15/24 13:05	1
Trichloroethene	ND		0.040	0.010	mg/Kg		07/15/24 10:27	07/15/24 13:05	1
Trichlorofluoromethane	ND		0.079	0.026	mg/Kg		07/15/24 10:27	07/15/24 13:05	1
Vinyl chloride	ND		0.099	0.019	mg/Kg		07/15/24 10:27	07/15/24 13:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		80 - 121				07/15/24 10:27	07/15/24 13:05	1
4-Bromofluorobenzene (Surr)	99		80 - 120				07/15/24 10:27	07/15/24 13:05	1
Dibromofluoromethane (Surr)	102		80 - 120				07/15/24 10:27	07/15/24 13:05	1
Toluene-d8 (Surr)	101		80 - 120				07/15/24 10:27	07/15/24 13:05	1

Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		0.25	0.026	mg/Kg		07/16/24 08:56	07/16/24 15:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				07/16/24 08:56	07/16/24 15:03	1
4-Bromofluorobenzene (Surr)	98		80 - 120				07/16/24 08:56	07/16/24 15:03	1
Dibromofluoromethane (Surr)	102		80 - 120				07/16/24 08:56	07/16/24 15:03	1
Toluene-d8 (Surr)	103		80 - 120				07/16/24 08:56	07/16/24 15:03	1

#### **QC Sample Results**

Client: ERM-West Job ID: 580-141924-1

RL

0.020

0.040

**MDL** Unit

0.0050 mg/Kg

0.0046 mg/Kg

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS

MB MB Result Qualifier

ND

Lab Sample ID: MB 580-464922/5-A

Matrix: Solid

Analyte

**Analysis Batch: 464910** 

1,1,1,2-Tetrachloroethane

1,1,1-Trichloroethane

cis-1,2-Dichloroethene

cis-1,3-Dichloropropene

Dibromochloromethane

Dichlorodifluoromethane

Hexachlorobutadiene

Methyl tert-butyl ether

m-Xylene & p-Xylene

Isopropylbenzene

Dibromomethane

Ethylbenzene

Naphthalene

n-Butylbenzene

N-Propylbenzene

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 464922

07/15/24 09:10 07/15/24 11:40

07/15/24 09:10 07/15/24 11:40

07/15/24 09:10 07/15/24 11:40

07/15/24 09:10 07/15/24 11:40

07/15/24 09:10 07/15/24 11:40

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07/15/24 09:10 07/15/24 11:40

07/15/24 09:10 07/15/24 11:40 07/15/24 09:10 07/15/24 11:40

Analyzed

Prepared

1, 1, 1- Trichioroethane	ND	0.040	0.0046 Hig/Ng	07/13/24 09.10 07/13/24 11.40	
1,1,2,2-Tetrachloroethane	ND	0.020	0.0076 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
1,1,2-Trichloroethane	ND	0.020	0.0074 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
1,1-Dichloroethane	ND	0.040	0.0092 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
1,1-Dichloroethene	ND	0.040	0.012 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
1,1-Dichloropropene	ND	0.040	0.0053 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
1,2,3-Trichlorobenzene	ND	0.080	0.040 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
1,2,3-Trichloropropane	ND	0.040	0.012 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
1,2,4-Trichlorobenzene	ND	0.080	0.043 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
1,2,4-Trimethylbenzene	ND	0.040	0.014 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
1,2-Dibromo-3-Chloropropane	ND	0.060	0.015 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
1,2-Dibromoethane	ND	0.020	0.0038 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
1,2-Dichlorobenzene	ND	0.040	0.0087 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
1,2-Dichloroethane	ND	0.020	0.0055 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
1,2-Dichloropropane	ND	0.020	0.0066 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
1,3,5-Trimethylbenzene	ND	0.040	0.0076 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
1,3-Dichlorobenzene	ND	0.060	0.013 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
1,3-Dichloropropane	ND	0.060	0.0056 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
1,4-Dichlorobenzene	ND	0.060	0.011 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
2,2-Dichloropropane	ND	0.040	0.012 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
2-Chlorotoluene	ND	0.040	0.0088 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
4-Chlorotoluene	ND	0.040	0.0098 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
4-Isopropyltoluene	ND	0.040	0.010 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
Benzene	ND	0.020	0.0038 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
Bromobenzene	ND	0.040	0.0042 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
Bromochloromethane	ND	0.040	0.0062 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
Bromodichloromethane	ND	0.040	0.0055 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
Bromoform	ND	0.040	0.0045 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
Bromomethane	ND	0.10	0.038 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
Carbon tetrachloride	ND	0.020	0.0044 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
Chlorobenzene	ND	0.040	0.0048 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
Chloroethane	ND	0.080	0.021 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
Chloroform	ND	0.020	0.0042 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
Chloromethane	ND	0.060	0.010 mg/Kg	07/15/24 09:10 07/15/24 11:40	1
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0.060

0.020

0.020

0.040

0.25

0.040

0.10

0.040

0.040

0.040

0.15

0.040

0.040

0.013 mg/Kg

0.0040 mg/Kg

0.0049 mg/Kg

0.0074 mg/Kg

0.046 mg/Kg

0.0091 mg/Kg

0.024 mg/Kg

0.0086 mg/Kg

0.0060 mg/Kg

0.0071 mg/Kg

0.039 mg/Kg

0.019 mg/Kg

0.015 mg/Kg

3

4

6

Dil Fac

0

10

### **QC Sample Results**

Client: ERM-West Job ID: 580-141924-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-464922/5-A

Matrix: Solid

**Analysis Batch: 464910** 

**Client Sample ID: Method Blank** 

**Prep Type: Total/NA** 

**Prep Batch: 464922** 

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.040	0.0050	mg/Kg		07/15/24 09:10	07/15/24 11:40	1
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		07/15/24 09:10	07/15/24 11:40	1
Styrene	ND		0.040	0.013	mg/Kg		07/15/24 09:10	07/15/24 11:40	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		07/15/24 09:10	07/15/24 11:40	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		07/15/24 09:10	07/15/24 11:40	1
Toluene	ND		0.060	0.014	mg/Kg		07/15/24 09:10	07/15/24 11:40	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		07/15/24 09:10	07/15/24 11:40	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		07/15/24 09:10	07/15/24 11:40	1
Trichloroethene	ND		0.040	0.010	mg/Kg		07/15/24 09:10	07/15/24 11:40	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		07/15/24 09:10	07/15/24 11:40	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		07/15/24 09:10	07/15/24 11:40	1

MB MB

Surrogate	%Recovery Qua	alifier Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102	80 - 121	07/15/24 09:10	07/15/24 11:40	1
4-Bromofluorobenzene (Surr)	103	80 - 120	07/15/24 09:10	07/15/24 11:40	1
Dibromofluoromethane (Surr)	101	80 - 120	07/15/24 09:10	07/15/24 11:40	1
Toluene-d8 (Surr)	102	80 - 120	07/15/24 09:10	07/15/24 11:40	1

Lab Sample ID: LCS 580-464922/1-A

**Matrix: Solid** 

Analysis Batch: 464910

Client Sample	ID: Lab Contro	I Sample
	Prep Type:	Total/NA

**Prep Batch: 464922** 

7 maryolo Batom 404010	Spike	LCS	LCS				%Rec
Analyte	Added		Qualifier	Unit	D	%Rec	Limits
1,1,1,2-Tetrachloroethane	0.800	0.717		mg/Kg		90	79 - 128
1,1,1-Trichloroethane	0.800	0.719		mg/Kg		90	78 - 135
1,1,2,2-Tetrachloroethane	0.800	0.667		mg/Kg		83	77 - 122
1,1,2-Trichloroethane	0.800	0.667		mg/Kg		83	80 - 123
1,1-Dichloroethane	0.800	0.691		mg/Kg		86	78 - 126
1,1-Dichloroethene	0.800	0.749		mg/Kg		94	73 - 134
1,1-Dichloropropene	0.800	0.697		mg/Kg		87	76 - 140
1,2,3-Trichlorobenzene	0.800	0.689		mg/Kg		86	58 - 146
1,2,3-Trichloropropane	0.800	0.649		mg/Kg		81	77 - 127
1,2,4-Trichlorobenzene	0.800	0.723		mg/Kg		90	74 - 131
1,2,4-Trimethylbenzene	0.800	0.726		mg/Kg		91	73 - 138
1,2-Dibromo-3-Chloropropane	0.800	0.599		mg/Kg		75	64 - 129
1,2-Dibromoethane	0.800	0.643		mg/Kg		80	77 - 123
1,2-Dichlorobenzene	0.800	0.692		mg/Kg		87	78 - 126
1,2-Dichloroethane	0.800	0.639		mg/Kg		80	76 - 124
1,2-Dichloropropane	0.800	0.685		mg/Kg		86	73 - 130
1,3,5-Trimethylbenzene	0.800	0.734		mg/Kg		92	72 - 134
1,3-Dichlorobenzene	0.800	0.714		mg/Kg		89	78 - 132
1,3-Dichloropropane	0.800	0.675		mg/Kg		84	80 - 120
1,4-Dichlorobenzene	0.800	0.713		mg/Kg		89	77 - 123
2,2-Dichloropropane	0.800	0.718		mg/Kg		90	75 - 134
2-Chlorotoluene	0.800	0.722		mg/Kg		90	77 - 134
4-Chlorotoluene	0.800	0.703		mg/Kg		88	71 - 137
4-Isopropyltoluene	0.800	0.733		mg/Kg		92	71 - 142
Benzene	0.800	0.698		mg/Kg		87	79 - 135

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Spike

Added

Client: ERM-West Job ID: 580-141924-1

LCS LCS

Result Qualifier Unit

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-464922/1-A

**Matrix: Solid** 

Analyte

**Analysis Batch: 464910** 

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

**Prep Batch: 464922** 

		%Rec	
D	%Rec	Limits	
_	85	78 - 126	
	84	76 - 131	
	87	78 - 125	
	83	71 - 130	
	137	55 - 150	
	91	76 - 140	
	88	80 - 125	
	158	26 - 150	
	84	74 - 133	
	76	52 - 142	
	90	80 - 125	
	80	80 - 122	
	84	75 - 125	
	79	72 - 130	
	74	33 - 150	
	89	80 - 135	

Allalyte	Added	ivesuit Q	uanner Onit	D /oixec	Lillits	
Bromobenzene	0.800	0.681	mg/Kg	85	78 - 126	
Bromochloromethane	0.800	0.673	mg/Kg	84	76 - 131	
Bromodichloromethane	0.800	0.694	mg/Kg	87	78 - 125	
Bromoform	0.800	0.665	mg/Kg	83	71 - 130	
Bromomethane	0.800	1.09	mg/Kg	137	55 - 150	
Carbon tetrachloride	0.800	0.728	mg/Kg	91	76 - 140	
Chlorobenzene	0.800	0.702	mg/Kg	88	80 - 125	
Chloroethane	0.800	1.26 *+	- mg/Kg	158	26 - 150	
Chloroform	0.800	0.673	mg/Kg	84	74 - 133	
Chloromethane	0.800	0.605	mg/Kg	76	52 - 142	
cis-1,2-Dichloroethene	0.800	0.723	mg/Kg	90	80 - 125	
cis-1,3-Dichloropropene	0.800	0.644	mg/Kg	80	80 - 122	
Dibromochloromethane	0.800	0.673	mg/Kg	84	75 - 125	
Dibromomethane	0.800	0.631	mg/Kg	79	72 - 130	
Dichlorodifluoromethane	0.800	0.593	mg/Kg	74	33 - 150	
Ethylbenzene	0.800	0.709	mg/Kg	89	80 - 135	
Hexachlorobutadiene	0.800	0.776	mg/Kg	97	65 - 145	
Isopropylbenzene	0.800	0.816	mg/Kg	102	80 - 131	
Methyl tert-butyl ether	0.800	0.686	mg/Kg	86	71 - 126	
m-Xylene & p-Xylene	0.800	0.702	mg/Kg	88	80 - 132	
Naphthalene	0.800	0.669	mg/Kg	84	56 - 145	
n-Butylbenzene	0.800	0.728	mg/Kg	91	69 - 143	
N-Propylbenzene	0.800	0.729	mg/Kg	91	78 - 133	
o-Xylene	0.800	0.711	mg/Kg	89	80 - 132	
sec-Butylbenzene	0.800	0.751	mg/Kg	94	71 - 143	
Styrene	0.800	0.699	mg/Kg	87	79 - 129	
t-Butylbenzene	0.800	0.737	mg/Kg	92	72 - 144	
Tetrachloroethene	0.800	0.696	mg/Kg	87	75 - 141	
Toluene	0.800	0.700	mg/Kg	88	75 - 125	
trans-1,2-Dichloroethene	0.800	0.671	mg/Kg	84	77 - 134	
trans-1,3-Dichloropropene	0.800	0.679	mg/Kg	85	80 - 121	
Trichloroethene	0.800	0.702	mg/Kg	88	80 - 134	
Trichlorofluoromethane	0.800	0.723	mg/Kg	90	71 - 150	
Vinyl chloride	0.800	0.691	mg/Kg	86	62 - 144	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		80 - 121
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
Toluene-d8 (Surr)	101		80 - 120

Lab Sample ID: LCSD 580-464922/2-A

**Matrix: Solid** 

Analyte

**Analysis Batch: 464910** 

1,1,1,2-Tetrachloroethane

1,1,1-Trichloroethane

	C	Client Sample ID: Lab Control Sample Dup								
			Prep Type: Total/NA							
				Prep Batch: 4649						
LCSD	LCSD				%Rec		RPD			
Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit			
0.839		mg/Kg	_	105	79 - 128	16	20			

78 - 135

104

**Eurofins Seattle** 

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mg/Kg

0.830

Spike

Added

0.800

0.800

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### **QC Sample Results**

Client: ERM-West Job ID: 580-141924-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-464922/2-A

**Matrix: Solid** 

Analysis Batch: 464910

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

**Prep Batch: 464922** 

Analysis Batch: 464910		0.11				Prep Batch: 464922		
Analyte	Spike Added		LCSD Qualifier	Unit	D %Rec	%Rec Limits	RPD	RPD Limit
1,1,2,2-Tetrachloroethane	0.800 O.800	0.775	Qualifier	mg/Kg	— b /6Rec	77 - 122	15	20
1,1,2-Trichloroethane	0.800	0.765		mg/Kg	96	80 - 123	14	20
1.1-Dichloroethane	0.800	0.790		mg/Kg	99	78 <sub>-</sub> 126	13	20
1,1-Dichloroethane	0.800	0.790		mg/Kg	108	73 - 134	14	25
1,1-Dichloropropene	0.800	0.777		mg/Kg	97	76 - 140	11	20
1,2,3-Trichlorobenzene	0.800	0.777			98	78 - 140 58 - 146	13	28
1,2,3-Trichloropropane	0.800	0.780		mg/Kg	90	77 - 127	10	20
1,2,4-Trichlorobenzene	0.800	0.720		mg/Kg	105	74 - 131	15	26
1,2,4-Trimethylbenzene	0.800	0.636		mg/Kg	98	74 - 131	8	20
1,2-Dibromo-3-Chloropropane	0.800	0.765		mg/Kg	82	64 - 129	9	40
				mg/Kg		77 <sub>-</sub> 123	14	20
1,2-Dibromoethane	0.800	0.743		mg/Kg	93			
1,2-Dichlorobenzene	0.800	0.776		mg/Kg	97	78 - 126	11	20
1,2-Dichloroethane	0.800	0.722		mg/Kg	90	76 - 124	12	20
1,2-Dichloropropane	0.800	0.757		mg/Kg	95	73 - 130	10	20
1,3,5-Trimethylbenzene	0.800	0.809		mg/Kg	101	72 - 134	10	24
1,3-Dichlorobenzene	0.800	0.784		mg/Kg	98	78 - 132	9	20
1,3-Dichloropropane	0.800	0.764		mg/Kg	96	80 - 120	12	20
1,4-Dichlorobenzene	0.800	0.797		mg/Kg	100	77 - 123	11	20
2,2-Dichloropropane	0.800	0.814		mg/Kg	102	75 - 134	13	20
2-Chlorotoluene	0.800	0.784		mg/Kg	98	77 - 134	8	21
4-Chlorotoluene	0.800	0.766		mg/Kg	96	71 - 137	9	21
4-Isopropyltoluene	0.800	0.818		mg/Kg	102	71 - 142	11	29
Benzene	0.800	0.796		mg/Kg	100	79 - 135	13	20
Bromobenzene	0.800	0.753		mg/Kg	94	78 - 126	10	20
Bromochloromethane	0.800	0.778		mg/Kg	97	76 - 131	14	20
Bromodichloromethane	0.800	0.783		mg/Kg	98	78 - 125	12	20
Bromoform	0.800	0.721		mg/Kg	90	71 - 130	8	20
Bromomethane	0.800	1.31	*+	mg/Kg	164	55 - 150	18	26
Carbon tetrachloride	0.800	0.837		mg/Kg	105	76 - 140	14	20
Chlorobenzene	0.800	0.805		mg/Kg	101	80 - 125	14	20
Chloroethane	0.800	1.18		mg/Kg	147	26 - 150	7	40
Chloroform	0.800	0.781		mg/Kg	98	74 - 133	15	20
Chloromethane	0.800	0.710		mg/Kg	89	52 - 142	16	40
cis-1,2-Dichloroethene	0.800	0.827		mg/Kg	103	80 - 125	13	20
cis-1,3-Dichloropropene	0.800	0.742		mg/Kg	93	80 - 122	14	20
Dibromochloromethane	0.800	0.773		mg/Kg	97	75 - 125	14	20
Dibromomethane	0.800	0.716		mg/Kg	89	72 - 130	13	40
Dichlorodifluoromethane	0.800	0.713		mg/Kg	89	33 - 150	18	31
Ethylbenzene	0.800	0.820		mg/Kg	102	80 - 135	15	20
Hexachlorobutadiene	0.800	0.914		mg/Kg	114	65 - 145	16	36
Isopropylbenzene	0.800	0.937		mg/Kg	117	80 - 131	14	20
Methyl tert-butyl ether	0.800	0.764		mg/Kg	95	71 - 126	11	20
m-Xylene & p-Xylene	0.800	0.800		mg/Kg	100	80 - 132	13	20
Naphthalene	0.800	0.754		mg/Kg	94	56 - 145	12	25
n-Butylbenzene	0.800	0.734		mg/Kg	98	69 - 143	8	31
N-Propylbenzene	0.800	0.767		mg/Kg	102	78 - 133	11	24
o-Xylene	0.800	0.825				80 - 132	15	20
sec-Butylbenzene	0.800	0.828		mg/Kg	103 104	71 <sub>-</sub> 143	10	20 29
				mg/Kg				
Styrene	0.800	0.799		mg/Kg	100	79 - 129	13	20

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Job ID: 580-141924-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-464922/2-A

**Matrix: Solid** 

Client: ERM-West

Analysis Batch: 464910

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

**Prep Batch: 464922** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
t-Butylbenzene	0.800	0.813		mg/Kg		102	72 - 144	10	27
Tetrachloroethene	0.800	0.823		mg/Kg		103	75 - 141	17	20
Toluene	0.800	0.788		mg/Kg		99	75 - 125	12	20
trans-1,2-Dichloroethene	0.800	0.763		mg/Kg		95	77 - 134	13	20
trans-1,3-Dichloropropene	0.800	0.766		mg/Kg		96	80 - 121	12	20
Trichloroethene	0.800	0.807		mg/Kg		101	80 - 134	14	20
Trichlorofluoromethane	0.800	0.853		mg/Kg		107	71 - 150	16	30
Vinyl chloride	0.800	0.810		mg/Kg		101	62 - 144	16	20

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		80 - 121
4-Bromofluorobenzene (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
Toluene-d8 (Surr)	101		80 - 120

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

Prep Batch: 465027

MB MB

101

103

Analyte Methylene Chloride	Result ND	Qualifier		Unit mg/Kg	_ <u>D</u>	Prepared 07/16/24 08:56	Analyzed 07/16/24 12:53	Dil Fac
	МВ	MB						
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121			07/16/24 08:56	07/16/24 12:53	1
4-Bromofluorobenzene (Surr)	100		80 - 120			07/16/24 08:56	07/16/24 12:53	1

80 - 120

80 - 120

Lab Sample ID: LCS 580-465027/1-A

Lab Sample ID: LCSD 580-465027/2-A

Lab Sample ID: MB 580-465027/5-A

**Matrix: Solid** 

Toluene-d8 (Surr)

**Matrix: Solid** 

**Analysis Batch: 465025** 

Analysis Batch: 465025

Dibromofluoromethane (Surr)

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

07/16/24 08:56 07/16/24 12:53

07/16/24 08:56 07/16/24 12:53

**Prep Batch: 465027** 

%Rec

Spike LCS LCS Analyte Added Result Qualifier Unit Limits D %Rec Methylene Chloride 0.800 0.663 mg/Kg 56 - 140

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		80 - 121
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
Toluene-d8 (Surr)	102		80 - 120

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

**Analysis Batch: 465025** 

**Matrix: Solid** 

**Prep Batch: 465027** Spike LCSD LCSD %Rec **RPD** Analyte Added Result Qualifier Unit %Rec Limits **RPD** Limit Methylene Chloride 0.800 0.705 mg/Kg 88 56 - 140

**Eurofins Seattle** 

### **QC Sample Results**

Client: ERM-West Job ID: 580-141924-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-465027/2-A

**Matrix: Solid** 

Surrogate

**Analysis Batch: 465025** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

**Prep Batch: 465027** 

 LCSD
 LCSD

 %Recovery
 Qualifier
 Limits

 97
 80 - 12°

 1,2-Dichloroethane-d4 (Surr)
 97
 80 - 121

 4-Bromofluorobenzene (Surr)
 97
 80 - 120

 Dibromofluoromethane (Surr)
 99
 80 - 120

 Toluene-d8 (Surr)
 101
 80 - 120

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#### **Lab Chronicle**

Client: ERM-West Job ID: 580-141924-1

Project/Site: Arkema PDI Sampling

Date Received: 07/10/24 13:25

Client Sample ID: PDI-01-SO-24-20240708

Lab Sample ID: 580-141924-1 Date Collected: 07/08/24 15:40 **Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			464922	BYM	EET SEA	07/15/24 10:27
Total/NA	Analysis	8260D		1	464910	BYM	EET SEA	07/15/24 12:44
Total/NA	Prep	5035	RA		465027	BYM	EET SEA	07/16/24 08:56
Total/NA	Analysis	8260D	RA	1	465025	BYM	EET SEA	07/16/24 14:41

Client Sample ID: TB-01-SO-20240708

Lab Sample ID: 580-141924-2

**Matrix: Solid** 

Date Collected: 07/08/24 00:01 Date Received: 07/10/24 13:25

Batch Batch Dilution Batch Prepared Method or Analyzed **Prep Type** Type Run **Factor** Number Analyst Lab 07/15/24 10:27 Total/NA Prep 5035 464922 BYM EET SEA

Total/NA 8260D 464910 BYM 07/15/24 12:01 Analysis **EET SEA** 1 Total/NA Prep 5035 RA 465027 BYM **EET SEA** 07/16/24 08:56 Total/NA 465025 BYM EET SEA 07/16/24 13:36 Analysis 8260D RA 1

Client Sample ID: PDI-01-SO-55-20240709 Lab Sample ID: 580-141924-3

Date Collected: 07/09/24 14:25 **Matrix: Solid** 

Date Received: 07/10/24 13:25

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			464922	BYM	EET SEA	07/15/24 10:27
Total/NA	Analysis	8260D		1	464910	BYM	EET SEA	07/15/24 13:05
Total/NA	Prep	5035	RA		465027	BYM	EET SEA	07/16/24 08:56
Total/NA	Analysis	8260D	RA	1	465025	BYM	EET SEA	07/16/24 15:03

#### **Laboratory References:**

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

### **Accreditation/Certification Summary**

Client: ERM-West Job ID: 580-141924-1

Project/Site: Arkema PDI Sampling

#### **Laboratory: Eurofins Seattle**

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	<b>Expiration Date</b>
Oregon	NELAP	4167	07-07-24 *

 $^{\star} \ \text{Accreditation/Certification renewal pending - accreditation/certification considered valid}.$ 

**Eurofins Seattle** 

# **Sample Summary**

Client: ERM-West

Project/Site: Arkema PDI Sampling

Job ID: 580-141924-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-141924-1	PDI-01-SO-24-20240708	Solid	07/08/24 15:40	07/10/24 13:25
580-141924-2	TB-01-SO-20240708	Solid	07/08/24 00:01	07/10/24 13:25
580-141924-3	PDI-01-SO-55-20240709	Solid	07/09/24 14:25	07/10/24 13:25

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Eurofins Seattle 5755 8th Street East Tacoma, WA 98424 Phone: 253-922-2310

Environment Testing

: eurofins

Client Information		Carrier Tracking No(s):	
Client Contact:	Stone	580-62780-19268 6	
Avery Soplata	562 606 K366	C	
Company: ERM-West	PWSID:	0	
Address:	Analysis	sis Requested	
1050 SW 6th Avenue Suite 1650			
Criy: Portland	TAT Requested (days):	F - MeOH E - NahSO4	
State, Zip: OR: 97204	a l	A - HCL	
Phone:	PO#:		
Email:	(0		
avery.soplata@erm.com	Or N (o) t Mec		
Project name. Arkema - PDI Investigation	or N all sit all bra	SIGN	
Site: Act Konch	Planting (New York)	contai Other:	
	Sample Matrix O S/MS Sample (Ivened to the control of the control	To TedmuM	
Sample Identification	G=grab) BT=Tissue, A=AI) III D 88 82	Special Instructions Note:	
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	Solid		
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		580-141924 Chain of Custody	
Possible Hazard Identification			T
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JII, IV, Other (specify)		Disposal By Lab Archive For Months irrements:	
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Relinquished by:	Company	Method of Shipment:	Г
Relinquished by:	SI	1 1024 150 Company E.	
Relinquished by:	110/24 1325 M.E.	Date Time: Configuration 1275 Configura	T
Custody Seals Intact:   Custody Seal No		Date/Time:	T
Δ Yes Δ No	Cooler Temperature(s) °C and Other Remarks:	ther Remarks: 3.8/3.9 C. 10	T

5755 8th Street East
Tacoma, WA 98424
Phone: 353,023,3310

💸 eurofins

Environment Testing

Phone: 253-922-2310															-	-	-				
Client Information	Sampler:	id 51	me	Lab F	ом: z, She	eri I						Carrie	r Tracki	ng No(s	s):		COC 580-	No: -62780-19	268.6		
Client Information Client Contact:	Phone:		On-		ıil:							State	of Origi	n:	~		Page	: .			
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Company: ERM-West			PWSID.						Ana	lysis	Req	uest	ed				000 #				
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Email: avery.soplata@erm.com	WO #:				0 3	St Me	st_LI	st							1 1	8			AMERICA COMM	garany	
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Sample Identification	Sample Date	Sample Time	(C=comp, G=grab) BT	D=waste/oil, :Tissue, A=Air)	Field Fil	8260	8260	8260D								Total		Special	Instruc	tions/No	ote:
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PDI-01-50-24-20240708	7/8/2024	1540	6	Solid	П	χ										1					
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Empty Kit Relinquished by:		Date:			Tim	e:							Method	of Ship							
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Client: ERM-West Job Number: 580-141924-1

Login Number: 141924 List Source: Eurofins Seattle

List Number: 1

Creator: O'Connell, Jason I

Creator. O Connen, Jason I		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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# PREPARED FOR

**ANALYTICAL REPORT** 

Attn: Avery Soplata ERM-West 1050 SW 6th Avenue Suite 1650 Portland, Oregon 97204 Generated 7/19/2024 2:21:49 PM

# **JOB DESCRIPTION**

Arkema PDI Sampling

#### **JOB NUMBER**

580-141999-1

Eurofins Seattle 5755 8th Street East Tacoma WA 98424



# **Eurofins Seattle**

#### **Job Notes**

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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#### **Authorization**

Generated 7/19/2024 2:21:49 PM

Authorized for release by Sheri Cruz, Project Manager I Sheri.Cruz@et.eurofinsus.com (253)922-2310

Shuid any

Client: ERM-West

Project/Site: Arkema PDI Sampling

Laboratory Job ID: 580-141999-1

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#### **Case Narrative**

Client: ERM-West Job ID: 580-141999-1

Project: Arkema PDI Sampling

Job ID: 580-141999-1 Eurofins Seattle

# Job Narrative 580-141999-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these
  situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise
  specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed
  unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 7/12/2024 11:35 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.9°C.

#### GC/MS VOA

Method 8260D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 580-464922 and analytical batch 580-464910 recovered outside control limits for the following analytes: Bromomethane and Chloroethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D: The [QC] associated with 580-464910 is compliant under 8260D criteria for Dichlorodifluoromethane. The software does not display the data to the whole number as is listed in the method (i.e. limit of 20%). When applying the evaluation to a whole number, the QC passes the criteria.

Method 8260D: Surrogate recovery for the following samples were outside the upper control limit: PDI-02-SO-29-20240710 (580-141999-2), PDI-02-SO-26.5-20240710 (580-141999-3) and PDI-02-SO-34.5-20240710 (580-141999-5). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8260D: The following samples were analyzed at reduced volume due to high concentrations of target analytes: PDI-02-SO-29-20240710 (580-141999-2), PDI-02-SO-26.5-20240710 (580-141999-3) and PDI-02-SO-34.5-20240710 (580-141999-5). The calculation was performed using an initial volume adjustment rather than a dilution factor. The reporting limits have been elevated by the appropriate factor.

Method 8260D: The following samples were provided to the laboratory with a significantly different initial weight than that required by the reference method: PDI-02-SO-29-20240710 (580-141999-2) and PDI-02-SO-34.5-20240710 (580-141999-5). Deviations in the weight by more than 20% may affect reporting limits and potentially method performance. The method specifies 10g. The amount provided was above this range.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **General Chemistry**

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**Eurofins Seattle** 

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#### **Definitions/Glossary**

Client: ERM-West Job ID: 580-141999-1

Project/Site: Arkema PDI Sampling

#### **Qualifiers**

#### **GC/MS VOA**

Qualifier **Qualifier Description** 

LCS and/or LCSD is outside acceptance limits, high biased.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

S1+ Surrogate recovery exceeds control limits, high biased.

#### **Glossary**

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery CFL Contains Free Liquid **CFU** Colony Forming Unit **CNF** Contains No Free Liquid

Duplicate Error Ratio (normalized absolute difference) **DER** 

Dil Fac **Dilution Factor** 

Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

**EDL** Estimated Detection Limit (Dioxin) LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level" MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

Method Detection Limit MDL ML Minimum Level (Dioxin) MPN Most Probable Number MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present

**Practical Quantitation Limit PQL** 

**PRES** Presumptive QC **Quality Control** 

**RER** Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

**RPD** Relative Percent Difference, a measure of the relative difference between two points

Toxicity Equivalent Factor (Dioxin) **TEF TEQ** Toxicity Equivalent Quotient (Dioxin)

**TNTC** Too Numerous To Count

Client: ERM-West Job ID: 580-141999-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-02-SO-23-20240710

Lab Sample ID: 580-141999-1 Date Collected: 07/10/24 17:20 **Matrix: Solid** 

Date Received: 07/12/24 11:35

Analyte	Result Qualifier	RL _	MDL	Unit	D	Prepared	Analyzed	Dil F
1,1,1,2-Tetrachloroethane	ND	0.018	0.0044	mg/Kg		07/15/24 10:27	07/15/24 13:26	
1,1,1-Trichloroethane	ND	0.035	0.0040	mg/Kg		07/15/24 10:27	07/15/24 13:26	
1,1,2,2-Tetrachloroethane	ND	0.018	0.0067	mg/Kg		07/15/24 10:27	07/15/24 13:26	
1,1,2-Trichloroethane	ND	0.018	0.0065	mg/Kg		07/15/24 10:27	07/15/24 13:26	
1,1-Dichloroethane	ND	0.035	0.0081	mg/Kg		07/15/24 10:27	07/15/24 13:26	
1,1-Dichloroethene	ND	0.035	0.011	mg/Kg		07/15/24 10:27	07/15/24 13:26	
1,1-Dichloropropene	ND	0.035	0.0047	mg/Kg		07/15/24 10:27	07/15/24 13:26	
1,2,3-Trichlorobenzene	ND	0.070	0.035	mg/Kg		07/15/24 10:27	07/15/24 13:26	
1,2,3-Trichloropropane	ND	0.035	0.010	mg/Kg		07/15/24 10:27	07/15/24 13:26	
1,2,4-Trichlorobenzene	ND	0.070	0.037	mg/Kg		07/15/24 10:27	07/15/24 13:26	
1,2,4-Trimethylbenzene	ND	0.035	0.012	mg/Kg		07/15/24 10:27	07/15/24 13:26	
1,2-Dibromo-3-Chloropropane	ND	0.053	0.013	mg/Kg		07/15/24 10:27	07/15/24 13:26	
1,2-Dibromoethane	ND	0.018	0.0033	mg/Kg		07/15/24 10:27	07/15/24 13:26	
1,2-Dichlorobenzene	ND	0.035	0.0077	mg/Kg		07/15/24 10:27	07/15/24 13:26	
1,2-Dichloroethane	ND	0.018	0.0048	mg/Kg		07/15/24 10:27	07/15/24 13:26	
1,2-Dichloropropane	ND	0.018	0.0058			07/15/24 10:27	07/15/24 13:26	
1,3,5-Trimethylbenzene	ND	0.035	0.0067			07/15/24 10:27	07/15/24 13:26	
,3-Dichlorobenzene	ND	0.053		mg/Kg		07/15/24 10:27	07/15/24 13:26	
,3-Dichloropropane	ND	0.053	0.0049			07/15/24 10:27	07/15/24 13:26	
,4-Dichlorobenzene	ND	0.053	0.0095			07/15/24 10:27	07/15/24 13:26	
2,2-Dichloropropane	ND	0.035		mg/Kg		07/15/24 10:27	07/15/24 13:26	
?-Chlorotoluene	ND	0.035	0.0077				07/15/24 13:26	
l-Chlorotoluene	ND	0.035	0.0086				07/15/24 13:26	
I-Isopropyltoluene	ND	0.035	0.0090	0 0			07/15/24 13:26	
Benzene	ND	0.018	0.0033				07/15/24 13:26	
Bromobenzene	ND	0.035	0.0037				07/15/24 13:26	
Bromochloromethane	ND	0.035	0.0055				07/15/24 13:26	
Bromodichloromethane	ND	0.035	0.0048				07/15/24 13:26	
Bromoform	ND	0.035	0.0040				07/15/24 13:26	
Bromomethane	ND *+	0.088		mg/Kg			07/15/24 13:26	
Carbon tetrachloride	ND	0.018	0.0039				07/15/24 13:26	
Chlorobenzene	0.026 J	0.035	0.0042				07/15/24 13:26	
Chloroethane	ND *+	0.070		mg/Kg			07/15/24 13:26	
Chloroform	ND	0.018	0.0037				07/15/24 13:26	
Chloromethane	ND	0.053	0.0089				07/15/24 13:26	
cis-1,2-Dichloroethene	ND ND	0.053		mg/Kg			07/15/24 13:26	
sis-1,3-Dichloropropene	ND	0.033	0.0035				07/15/24 13:26	
Dibromochloromethane	ND ND	0.018	0.0033				07/15/24 13:26	
Dibromomethane	ND ND	0.018					07/15/24 13:26	
Dichlorodifluoromethane	ND	0.035	0.0065	mg/Kg			07/15/24 13:26	
Ethylbenzene	0.018 J	0.035	0.0080				07/15/24 13:26	
dexachlorobutadiene	ND	0.088		mg/Kg			07/15/24 13:26	
sopropylbenzene	ND	0.035	0.0076				07/15/24 13:26	
Methyl tert-butyl ether	ND	0.035	0.0053				07/15/24 13:26	
n-Xylene & p-Xylene	0.12	0.035	0.0062				07/15/24 13:26	
Naphthalene	ND	0.13		mg/Kg			07/15/24 13:26	
n-Butylbenzene	ND	0.035		mg/Kg			07/15/24 13:26	
N-Propylbenzene	ND	0.035	0.013	mg/Kg		07/15/24 10:27	07/15/24 13:26	

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-141999-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-02-SO-23-20240710

Lab Sample ID: 580-141999-1 Date Collected: 07/10/24 17:20 **Matrix: Solid** 

Date Received: 07/12/24 11:35

Method: SW846 8260D - Vo	latile Organic	Compound	ds by GC/MS	(Conti	nued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.035	0.0076	mg/Kg		07/15/24 10:27	07/15/24 13:26	1
Styrene	ND		0.035	0.011	mg/Kg		07/15/24 10:27	07/15/24 13:26	1
t-Butylbenzene	ND		0.035	0.0068	mg/Kg		07/15/24 10:27	07/15/24 13:26	1
Tetrachloroethene	0.0067	J	0.035	0.0047	mg/Kg		07/15/24 10:27	07/15/24 13:26	1
Toluene	ND		0.053	0.012	mg/Kg		07/15/24 10:27	07/15/24 13:26	1
trans-1,2-Dichloroethene	ND		0.053	0.013	mg/Kg		07/15/24 10:27	07/15/24 13:26	1
trans-1,3-Dichloropropene	ND		0.035	0.0062	mg/Kg		07/15/24 10:27	07/15/24 13:26	1
Trichloroethene	ND		0.035	0.0091	mg/Kg		07/15/24 10:27	07/15/24 13:26	1
Trichlorofluoromethane	ND		0.070	0.023	mg/Kg		07/15/24 10:27	07/15/24 13:26	1
Vinyl chloride	ND		0.088	0.016	mg/Kg		07/15/24 10:27	07/15/24 13:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				07/15/24 10:27	07/15/24 13:26	1
4-Bromofluorobenzene (Surr)	98		80 - 120				07/15/24 10:27	07/15/24 13:26	1
Dibromofluoromethane (Surr)	103		80 - 120				07/15/24 10:27	07/15/24 13:26	1
Toluene-d8 (Surr)	103		80 - 120				07/15/24 10:27	07/15/24 13:26	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		0.22	0.023	mg/Kg		07/16/24 08:56	07/16/24 16:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 121				07/16/24 08:56	07/16/24 16:30	1
4-Bromofluorobenzene (Surr)	98		80 - 120				07/16/24 08:56	07/16/24 16:30	1
Dibromofluoromethane (Surr)	99		80 - 120				07/16/24 08:56	07/16/24 16:30	1
Toluene-d8 (Surr)	102		80 - 120				07/16/24 08:56	07/16/24 16:30	1

Client: ERM-West Job ID: 580-141999-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-02-SO-29-20240710

Lab Sample ID: 580-141999-2 Date Collected: 07/10/24 17:25 Matrix: Solid Date Received: 07/12/24 11:35 Percent Solids: 90.4

Method: SW846 8260D - Volatile Organic Compounds by GC/MS **MDL** Unit Dil Fac Analyte Result Qualifier D Prepared Analyzed mg/Kg 1,1,1,2-Tetrachloroethane ND 0.018 0.0045 07/15/24 10:27 07/15/24 13:48 0.036 1,1,1-Trichloroethane 0.015 J 0.0041 mg/Kg 07/15/24 10:27 07/15/24 13:48 1,1,2,2-Tetrachloroethane ND 0.018 0.0068 mg/Kg 07/15/24 10:27 07/15/24 13:48 ND 07/15/24 10:27 07/15/24 13:48 1,1,2-Trichloroethane 0.018 0.0066 mg/Kg 1.1-Dichloroethane ND 0.036 0.0083 mg/Kg 07/15/24 10:27 07/15/24 13:48 1,1-Dichloroethene NΠ 0.036 0.011 mg/Kg 07/15/24 10:27 07/15/24 13:48 1,1-Dichloropropene ND 0.036 0.0048 07/15/24 10:27 07/15/24 13:48 mg/Kg ND 0.072 0.036 07/15/24 10:27 07/15/24 13:48 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.036 0.010 mg/Kg 07/15/24 10:27 07/15/24 13:48 0.038 1,2,4-Trichlorobenzene ND 0.072 mg/Kg 07/15/24 10:27 07/15/24 13:48 1,2,4-Trimethylbenzene ND 0.036 0.012 mg/Kg 07/15/24 10:27 07/15/24 13:48 1.2-Dibromo-3-Chloropropane ND 0.054 0.014 ma/Ka 07/15/24 10:27 07/15/24 13:48 1 1,2-Dibromoethane ND 0.018 0.0034 mg/Kg 07/15/24 10:27 07/15/24 13:48 0.036 0.0078 mg/Kg 07/15/24 10:27 07/15/24 13:48 1,2-Dichlorobenzene 0.47 ND 0.018 0.0049 mg/Kg 07/15/24 10:27 07/15/24 13:48 1.2-Dichloroethane 0.0059 1,2-Dichloropropane ND 0.018 mg/Kg 07/15/24 10:27 07/15/24 13:48 0.0068 0.0095 0.036 mg/Kg 07/15/24 10:27 07/15/24 13:48 1,3,5-Trimethylbenzene 0.054 0.012 mg/Kg 07/15/24 10:27 07/15/24 13:48 1.3-Dichlorobenzene 0.046 ND 0.054 0.0050 mg/Kg 07/15/24 10:27 07/15/24 13:48 1,3-Dichloropropane 1,4-Dichlorobenzene 2.0 0.054 0.0097 mg/Kg 07/15/24 10:27 07/15/24 13:48 2,2-Dichloropropane ND 0.036 0.011 mg/Kg 07/15/24 10:27 07/15/24 13:48 2-Chlorotoluene ND 0.036 0.0079 mg/Kg 07/15/24 10:27 07/15/24 13:48 4-Chlorotoluene ND 0.0088 mg/Kg 07/15/24 10:27 07/15/24 13:48 0.036 4-Isopropyltoluene 0.027 0.036 0.0092 mg/Kg 07/15/24 10:27 07/15/24 13:48 0.018 0.0034 mg/Kg 07/15/24 10:27 07/15/24 13:48 Benzene 0.0037 0.0038 07/15/24 10:27 07/15/24 13:48 **Bromobenzene** 0.017 0.036 mg/Kg Bromochloromethane ND 0.036 0.0056 mg/Kg 07/15/24 10:27 07/15/24 13:48 Bromodichloromethane 0.0049 07/15/24 13:48 ND 0.036 mg/Kg 07/15/24 10:27 0.0040 Bromoform NΩ 0.036 mg/Kg 07/15/24 10:27 07/15/24 13:48 NΠ 0.034 07/15/24 10:27 07/15/24 13:48 Bromomethane 0.090 mg/Kg Carbon tetrachloride ND 0.018 0.0039 mg/Kg 07/15/24 10:27 07/15/24 13:48 0.46 mg/Kg 07/18/24 08:34 07/18/24 13:53 **590** 39 Chlorobenzene Chloroethane 0.072 0.019 mg/Kg 07/15/24 10:27 07/15/24 13:48 ND 07/15/24 10:27 07/15/24 13:48 Chloroform 0.037 0.018 0.0038 mg/Kg Chloromethane ND 0.054 0.0091 mg/Kg 07/15/24 10:27 07/15/24 13:48 cis-1.2-Dichloroethene ND 0.054 0.011 mg/Kg 07/15/24 10:27 07/15/24 13:48 cis-1,3-Dichloropropene ND 0.018 0.0036 mg/Kg 07/15/24 10:27 07/15/24 13:48 Dibromochloromethane ND 0.018 0.0044 mg/Kg 07/15/24 10:27 07/15/24 13:48 ND 0.0066 mg/Kg 07/15/24 10:27 07/15/24 13:48 Dibromomethane 0.036 Dichlorodifluoromethane ND 0.22 0.041 mg/Kg 07/15/24 10:27 07/15/24 13:48 Hexachlorobutadiene ND 0.090 0.021 mg/Kg 07/15/24 10:27 07/15/24 13:48 Isopropylbenzene ND 0.036 0.0077 mg/Kg 07/15/24 10:27 07/15/24 13:48 ND 0.0054 07/15/24 10:27 07/15/24 13:48 Methyl tert-butyl ether 0.036 mg/Kg m-Xylene & p-Xylene 0.0064 07/15/24 10:27 07/15/24 13:48 ND 0.036 mg/Kg 07/15/24 10:27 07/15/24 13:48 **Naphthalene** 0.066 0.13 0.035 mg/Kg n-Butylbenzene ND 0.036 0.017 mg/Kg 07/15/24 10:27 07/15/24 13:48 N-Propylbenzene ND 07/15/24 10:27 07/15/24 13:48 0.036 0.013 mg/Kg sec-Butylbenzene ND 0.036 0.0077 mg/Kg 07/15/24 10:27 07/15/24 13:48 Styrene ND 0.036 0.011 mg/Kg 07/15/24 10:27 07/15/24 13:48

Client: ERM-West Job ID: 580-141999-1

Project/Site: Arkema PDI Sampling

Date Received: 07/12/24 11:35

4-Bromofluorobenzene (Surr)

Dibromofluoromethane (Surr)

Toluene-d8 (Surr)

Client Sample ID: PDI-02-SO-29-20240710

Date Collected: 07/10/24 17:25

Lab Sample ID: 580-141999-2

07/15/24 09:18 07/17/24 12:35

07/15/24 09:18 07/17/24 12:35

07/15/24 09:18 07/17/24 12:35

**Matrix: Solid** Percent Solids: 90.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
t-Butylbenzene	ND		0.036	0.0069	mg/Kg	<u></u>	07/15/24 10:27	07/15/24 13:48	1
Toluene	0.027	J	0.054	0.012	mg/Kg	☼	07/15/24 10:27	07/15/24 13:48	1
trans-1,2-Dichloroethene	ND		0.054	0.013	mg/Kg	₽	07/15/24 10:27	07/15/24 13:48	1
trans-1,3-Dichloropropene	ND		0.036	0.0063	mg/Kg	☼	07/15/24 10:27	07/15/24 13:48	1
Trichloroethene	0.012	J	0.036	0.0092	mg/Kg	₩	07/15/24 10:27	07/15/24 13:48	1
Trichlorofluoromethane	ND		0.072	0.023	mg/Kg	₩	07/15/24 10:27	07/15/24 13:48	1
Vinyl chloride	ND		0.090	0.017	mg/Kg	☼	07/15/24 10:27	07/15/24 13:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				07/15/24 10:27	07/15/24 13:48	1
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				07/18/24 08:34	07/18/24 13:53	1
4-Bromofluorobenzene (Surr)	104		80 - 120				07/15/24 10:27	07/15/24 13:48	1
4-Bromofluorobenzene (Surr)	100		80 - 120				07/18/24 08:34	07/18/24 13:53	1
Dibromofluoromethane (Surr)	98		80 - 120				07/15/24 10:27	07/15/24 13:48	1
Dibromofluoromethane (Surr)	104		80 - 120				07/18/24 08:34	07/18/24 13:53	1
Toluene-d8 (Surr)	139	S1+	80 - 120				07/15/24 10:27	07/15/24 13:48	1
Toluene-d8 (Surr)	100		80 - 120				07/18/24 08:34	07/18/24 13:53	1
Method: SW846 8260D - Vo	latile Organic	Compound	ds by GC/MS	- DL					
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		0.39	0.088	mg/Kg	<u></u>	07/15/24 09:18	07/17/24 12:35	1
Methylene Chloride	ND		2.4	0.25	mg/Kg	☼	07/15/24 09:18	07/17/24 12:35	1
o-Xylene	ND		0.39	0.048	mg/Kg	☆	07/15/24 09:18	07/17/24 12:35	1
Tetrachloroethene	0.35	J	0.39	0.051	mg/Kg	₩	07/15/24 09:18	07/17/24 12:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		80 - 121				07/15/24 09:18	07/17/24 12:35	1

General Chemistry						_	_		
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	90.4		0.1	0.1	%			07/16/24 15:50	1
Percent Moisture (SM22 2540G)	9.6		0.1	0.1	%			07/16/24 15:50	1

80 - 120

80 - 120

80 - 120

98

100

104

Client: ERM-West Job ID: 580-141999-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-02-SO-26.5-20240710

Lab Sample ID: 580-141999-3 Date Collected: 07/10/24 17:45 Matrix: Solid Date Received: 07/12/24 11:35 Percent Solids: 88.1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS **MDL** Unit Dil Fac Analyte Result Qualifier D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.023 0.0057 mg/Kg 07/15/24 10:27 07/15/24 14:09 1,1,1-Trichloroethane 0.026 J 0.046 0.0053 mg/Kg 07/15/24 10:27 07/15/24 14:09 1,1,2,2-Tetrachloroethane ND 0.023 0.0087 mg/Kg 07/15/24 10:27 07/15/24 14:09 0.0085 07/15/24 10:27 07/15/24 14:09 1,1,2-Trichloroethane ND 0.023 mg/Kg 0.046 0.011 mg/Kg 07/15/24 10:27 07/15/24 14:09 1 1-Dichloroethane ND 1,1-Dichloroethene NΠ 0.046 0.014 mg/Kg 07/15/24 10:27 07/15/24 14:09 1,1-Dichloropropene ND 0.046 0.0061 07/15/24 10:27 07/15/24 14:09 mg/Kg 1,2,3-Trichlorobenzene ND 0.092 0.045 07/15/24 10:27 07/15/24 14:09 mg/Kg 1,2,3-Trichloropropane ND 0.046 0.013 mg/Kg 07/15/24 10:27 07/15/24 14:09 1,2,4-Trichlorobenzene 0.092 0.049 mg/Kg 07/15/24 10:27 07/15/24 14:09 0.087 1,2,4-Trimethylbenzene 0.046 0.015 mg/Kg 07/15/24 10:27 07/15/24 14:09 0.051 1.2-Dibromo-3-Chloropropane ND 0.069 0.017 ma/Ka 07/15/24 10:27 07/15/24 14:09 1 1,2-Dibromoethane ND 0.023 0.0043 mg/Kg 07/15/24 10:27 07/15/24 14:09 0.046 0.010 mg/Kg 07/15/24 10:27 07/15/24 14:09 1,2-Dichlorobenzene 4.5 ND 0.023 0.0063 mg/Kg 07/15/24 10:27 07/15/24 14:09 1.2-Dichloroethane 0.0076 1,2-Dichloropropane ND 0.023 mg/Kg 07/15/24 10:27 07/15/24 14:09 0.046 0.0087 mg/Kg 07/15/24 10:27 07/15/24 14:09 1,3,5-Trimethylbenzene 0.016 0.069 0.015 mg/Kg 07/15/24 10:27 07/15/24 14:09 1.3-Dichlorobenzene 0.39 ND 0.069 0.0064 mg/Kg 07/15/24 10:27 07/15/24 14:09 1,3-Dichloropropane 2,2-Dichloropropane ND 0.046 0.014 mg/Kg 07/15/24 10:27 07/15/24 14:09 2-Chlorotoluene 0.046 0.010 mg/Kg 07/15/24 10:27 07/15/24 14:09 0.053 0.042 J 0.046 0.011 mg/Kg 07/15/24 10:27 07/15/24 14:09 4-Chlorotoluene 0.012 mg/Kg 07/15/24 10:27 07/15/24 14:09 4-Isopropyltoluene 0.13 0.046 0.0083 0.023 0.0043 mg/Kg 07/15/24 10:27 07/15/24 14:09 **Benzene** 0.046 0.0048 mg/Kg 07/15/24 10:27 07/15/24 14:09 **Bromobenzene** 0.11 0.0071 07/15/24 10:27 07/15/24 14:09 Bromochloromethane ND 0.046 mg/Kg Bromodichloromethane NΩ 0.046 0.0063 mg/Kg 07/15/24 10:27 07/15/24 14:09 Bromoform 0.0051 mg/Kg 07/15/24 10:27 07/15/24 14:09 ND 0.046 ND Bromomethane 0.11 0.043 mg/Kg 07/15/24 10:27 07/15/24 14:09 0.023 0.0050 07/15/24 10:27 07/15/24 14:09 Carbon tetrachloride 0.011 mg/Kg Chloroethane ND 0.092 0.024 mg/Kg 07/15/24 10:27 07/15/24 14:09 0.023 0.0048 mg/Kg 07/15/24 10:27 07/15/24 14:09 0.057 Chloroform Chloromethane 0.069 0.012 mg/Kg 07/15/24 10:27 07/15/24 14:09 ND cis-1,2-Dichloroethene ND 0.014 07/15/24 10:27 07/15/24 14:09 0.069 mg/Kg cis-1,3-Dichloropropene ND 0.023 0.0046 mg/Kg 07/15/24 10:27 07/15/24 14:09 Dibromochloromethane ND 0.023 0.0056 mg/Kg 07/15/24 10:27 07/15/24 14:09 0.0085 Dibromomethane ND 0.046 mg/Kg 07/15/24 10:27 07/15/24 14:09 Dichlorodifluoromethane ND 0.29 0.053 mg/Kg 07/15/24 10:27 07/15/24 14:09 0.027 mg/Kg 07/15/24 10:27 07/15/24 14:09 Hexachlorobutadiene 0.035 0.11 0.0098 Isopropylbenzene ND 0.046 mg/Kg 07/15/24 10:27 07/15/24 14:09 Methyl tert-butyl ether ND 0.046 0.0069 mg/Kg 07/15/24 10:27 07/15/24 14:09 m-Xylene & p-Xylene ND 0.046 0.0081 mg/Kg 07/15/24 10:27 07/15/24 14:09 0.045 07/15/24 10:27 07/15/24 14:09 **Naphthalene** 0.17 mg/Kg 0.28 n-Butylbenzene 0.046 0.021 07/15/24 10:27 07/15/24 14:09 ND mg/Kg ND 07/15/24 10:27 07/15/24 14:09 N-Propylbenzene 0.046 0.017 mg/Kg sec-Butylbenzene ND 0.046 0.0098 mg/Kg 07/15/24 10:27 07/15/24 14:09 ND 07/15/24 10:27 07/15/24 14:09 Styrene 0.046 0.015 mg/Kg t-Butylbenzene 0.0090 J 0.046 8800.0 mg/Kg 07/15/24 10:27 07/15/24 14:09 0.015 mg/Kg **Toluene** 0.26 0.069 07/15/24 10:27 07/15/24 14:09

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-141999-1

Project/Site: Arkema PDI Sampling

Percent Solids (SM22 2540G)

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-02-SO-26.5-20240710

Lab Sample ID: 580-141999-3 Date Collected: 07/10/24 17:45 **Matrix: Solid** 

Date Received: 07/12/24 11:35 Percent Solids: 88.1

Method: SW846 8260D - Vo	olatile Organic	Compoun	ds by GC/MS	(Conti	inued)				
Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		0.069	0.017	mg/Kg	₩	07/15/24 10:27	07/15/24 14:09	1
trans-1,3-Dichloropropene	ND		0.046	0.0080	mg/Kg	₩	07/15/24 10:27	07/15/24 14:09	1
Trichloroethene	0.027	J	0.046	0.012	mg/Kg	₩	07/15/24 10:27	07/15/24 14:09	1
Trichlorofluoromethane	ND		0.092	0.030	mg/Kg	₩	07/15/24 10:27	07/15/24 14:09	1
Vinyl chloride	ND		0.11	0.021	mg/Kg	₩	07/15/24 10:27	07/15/24 14:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 121				07/15/24 10:27	07/15/24 14:09	1
4-Bromofluorobenzene (Surr)	104		80 - 120				07/15/24 10:27	07/15/24 14:09	1
Dibromofluoromethane (Surr)	99		80 - 120				07/15/24 10:27	07/15/24 14:09	1
Toluene-d8 (Surr)	340	S1+	80 - 120				07/15/24 10:27	07/15/24 14:09	1
Method: SW846 8260D - Vo	olatile Organic	Compoun	ds by GC/MS	- DL					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	19		0.74	0.13	mg/Kg	<u></u>	07/15/24 09:18	07/17/24 12:56	1
Ethylbenzene	0.13	J	0.49	0.11	mg/Kg	₩	07/15/24 09:18	07/17/24 12:56	1
Methylene Chloride	ND		3.1	0.32	mg/Kg	₩	07/15/24 09:18	07/17/24 12:56	1
o-Xylene	0.063	J	0.49	0.062	mg/Kg	₩	07/15/24 09:18	07/17/24 12:56	1
Tetrachloroethene	2.3		0.49	0.065	mg/Kg	≎	07/15/24 09:18	07/17/24 12:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		80 - 121				07/15/24 09:18	07/17/24 12:56	1
4-Bromofluorobenzene (Surr)	101		80 - 120				07/15/24 09:18	07/17/24 12:56	1
Dibromofluoromethane (Surr)	99		80 - 120				07/15/24 09:18	07/17/24 12:56	1
Toluene-d8 (Surr)	115		80 - 120				07/15/24 09:18	07/17/24 12:56	1
- Method: SW846 8260D - Vo	olatile Organic	Compoun	ds by GC/MS	- RA					
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	3700		49	5.9	mg/Kg	<del>*</del>	07/19/24 08:50	07/19/24 12:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		80 - 121				07/19/24 08:50	07/19/24 12:10	1
4-Bromofluorobenzene (Surr)	101		80 - 120				07/19/24 08:50	07/19/24 12:10	1
Dibromofluoromethane (Surr)	106		80 - 120				07/19/24 08:50	07/19/24 12:10	1
Toluene-d8 (Surr)	99		80 - 120				07/19/24 08:50	07/19/24 12:10	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac

07/16/24 15:50

07/16/24 15:50

0.1

0.1

88.1

11.9

0.1 %

0.1 %

Client: ERM-West Job ID: 580-141999-1

Project/Site: Arkema PDI Sampling

**Client Sample ID: TB-01-SO-20240710** 

Lab Sample ID: 580-141999-4 Date Collected: 07/10/24 00:01 **Matrix: Solid** 

Date Received: 07/12/24 11:35

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND		0.019	0.0047	mg/Kg		07/15/24 10:27		
1,1,1-Trichloroethane	ND		0.037	0.0043			07/15/24 10:27	07/15/24 14:30	
1,1,2,2-Tetrachloroethane	ND		0.019	0.0071	mg/Kg		07/15/24 10:27	07/15/24 14:30	
1,1,2-Trichloroethane	ND		0.019	0.0069	mg/Kg		07/15/24 10:27	07/15/24 14:30	
1,1-Dichloroethane	ND		0.037	0.0086			07/15/24 10:27	07/15/24 14:30	
1,1-Dichloroethene	ND		0.037		mg/Kg		07/15/24 10:27	07/15/24 14:30	
1,1-Dichloropropene	ND		0.037	0.0050			07/15/24 10:27	07/15/24 14:30	
1,2,3-Trichlorobenzene	ND		0.075		mg/Kg			07/15/24 14:30	
1,2,3-Trichloropropane	ND		0.037		mg/Kg		07/15/24 10:27	07/15/24 14:30	
1,2,4-Trichlorobenzene	ND		0.075		mg/Kg			07/15/24 14:30	
1,2,4-Trimethylbenzene	ND		0.037		mg/Kg			07/15/24 14:30	
1,2-Dibromo-3-Chloropropane	ND		0.056		mg/Kg			07/15/24 14:30	
1,2-Dibromoethane	ND		0.019	0.0036				07/15/24 14:30	
1,2-Dichlorobenzene	0.026	J.	0.037	0.0081				07/15/24 14:30	
1,2-Dichloroethane	ND	•	0.019	0.0051				07/15/24 14:30	
1,2-Dichloropropane	ND		0.019	0.0062				07/15/24 14:30	
1,3,5-Trimethylbenzene	ND		0.037					07/15/24 14:30	
1,3-Dichlorobenzene	ND		0.056		mg/Kg			07/15/24 14:30	
1,3-Dichloropropane	ND		0.056	0.0052				07/15/24 14:30	
1,4-Dichlorobenzene	0.087		0.056		mg/Kg			07/15/24 14:30	
2,2-Dichloropropane	0.007 ND		0.037		mg/Kg			07/15/24 14:30	
2-Chlorotoluene	ND		0.037	0.0082				07/15/24 14:30	
4-Chlorotoluene	ND		0.037	0.0092				07/15/24 14:30	
1-Isopropyltoluene	ND		0.037	0.0092				07/15/24 14:30	
Benzene	ND		0.037	0.0036				07/15/24 14:30	
Bromobenzene	ND		0.019	0.0030				07/15/24 14:30	
Bromochloromethane	ND		0.037	0.0058				07/15/24 14:30	
Bromodichloromethane	ND		0.037	0.0051				07/15/24 14:30	
Bromoform	ND ND		0.037	0.0031					
Bromomethane	ND ND	*.	0.037		mg/Kg			07/15/24 14:30 07/15/24 14:30	
Carbon tetrachloride	ND ND	*.	0.019	0.0041	0 0			07/15/24 14:30	
Chloroethane Chloroform	ND ND	+	0.075	0.020				07/15/24 14:30	
			0.019	0.0039	mg/Kg			07/15/24 14:30	
Chloromethane	ND		0.056	0.0094				07/15/24 14:30	
cis-1,2-Dichloroethene	ND		0.056		mg/Kg			07/15/24 14:30	
cis-1,3-Dichloropropene	ND		0.019	0.0037				07/15/24 14:30	
Dibromochloromethane	ND		0.019	0.0046				07/15/24 14:30	
Dibromomethane	ND		0.037	0.0069	0 0			07/15/24 14:30	
Dichlorodifluoromethane	ND		0.23		mg/Kg			07/15/24 14:30	
Ethylbenzene	0.020	J	0.037	0.0085				07/15/24 14:30	
Hexachlorobutadiene 	ND		0.094		mg/Kg			07/15/24 14:30	
sopropylbenzene	ND		0.037	0.0080				07/15/24 14:30	
Methyl tert-butyl ether	ND		0.037	0.0056				07/15/24 14:30	
n-Xylene & p-Xylene	0.13		0.037	0.0066				07/15/24 14:30	
Naphthalene	ND		0.14		mg/Kg			07/15/24 14:30	
n-Butylbenzene	ND		0.037		mg/Kg			07/15/24 14:30	
N-Propylbenzene	ND		0.037		mg/Kg			07/15/24 14:30	
o-Xylene	0.026	J	0.037	0.0047				07/15/24 14:30	
sec-Butylbenzene	ND		0.037	0.0080	mg/Kg		07/15/24 10:27	07/15/24 14:30	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-141999-1

Project/Site: Arkema PDI Sampling

**Client Sample ID: TB-01-SO-20240710** 

Lab Sample ID: 580-141999-4 Date Collected: 07/10/24 00:01

**Matrix: Solid** 

Date Received: 07/12/24 11:35

Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	(Conti	nued)				
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.037	0.012	mg/Kg		07/15/24 10:27	07/15/24 14:30	1
t-Butylbenzene	ND		0.037	0.0072	mg/Kg		07/15/24 10:27	07/15/24 14:30	1
Tetrachloroethene	0.010	J	0.037	0.0050	mg/Kg		07/15/24 10:27	07/15/24 14:30	1
Toluene	ND		0.056	0.013	mg/Kg		07/15/24 10:27	07/15/24 14:30	1
trans-1,2-Dichloroethene	ND		0.056	0.014	mg/Kg		07/15/24 10:27	07/15/24 14:30	1
trans-1,3-Dichloropropene	ND		0.037	0.0065	mg/Kg		07/15/24 10:27	07/15/24 14:30	1
Trichloroethene	ND		0.037	0.0096	mg/Kg		07/15/24 10:27	07/15/24 14:30	1
Trichlorofluoromethane	ND		0.075	0.024	mg/Kg		07/15/24 10:27	07/15/24 14:30	1
Vinyl chloride	ND		0.094	0.017	mg/Kg		07/15/24 10:27	07/15/24 14:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			80 - 121				07/15/24 10:27	07/15/24 14:30	1
4-Bromofluorobenzene (Surr)	100		80 - 120				07/15/24 10:27	07/15/24 14:30	1
Dibromofluoromethane (Surr)	100		80 - 120				07/15/24 10:27	07/15/24 14:30	1
Toluene-d8 (Surr)	102		80 - 120				07/15/24 10:27	07/15/24 14:30	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	6.8		0.037	0.0045	mg/Kg		07/15/24 09:18	07/17/24 11:31	1
Methylene Chloride	ND		0.23	0.024	mg/Kg		07/15/24 09:18	07/17/24 11:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		80 - 121				07/15/24 09:18	07/17/24 11:31	1
4-Bromofluorobenzene (Surr)	97		80 - 120				07/15/24 09:18	07/17/24 11:31	1
D'' (0 )	102		80 - 120				07/15/24 09:18	07/17/24 11:31	1
Dibromofluoromethane (Surr)	102		00 - 120				0171072100.10	01/11/21 11.01	,

Client: ERM-West Job ID: 580-141999-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-02-SO-34.5-20240710

Lab Sample ID: 580-141999-5 Date Collected: 07/10/24 18:45 Matrix: Solid Date Received: 07/12/24 11:35 Percent Solids: 93.3

Method: SW846 8260D - Volatile Organic Compounds by GC/MS **MDL** Unit D Dil Fac Analyte Result Qualifier Prepared Analyzed mg/Kg 1,1,1,2-Tetrachloroethane ND 0.018 0.0044 07/15/24 10:27 07/15/24 14:52 0.035 1,1,1-Trichloroethane 0.0068 J 0.0041 mg/Kg 07/15/24 10:27 07/15/24 14:52 1,1,2,2-Tetrachloroethane ND 0.018 0.0067 mg/Kg 07/15/24 10:27 07/15/24 14:52 0.0065 07/15/24 10:27 07/15/24 14:52 1,1,2-Trichloroethane ND 0.018 mg/Kg 1.1-Dichloroethane ND 0.035 0.0081 mg/Kg 07/15/24 10:27 07/15/24 14:52 1,1-Dichloroethene NΠ 0.035 0.011 mg/Kg 07/15/24 10:27 07/15/24 14:52 1,1-Dichloropropene ND 0.035 0.0047 07/15/24 10:27 07/15/24 14:52 mg/Kg ND 0.071 0.035 07/15/24 10:27 07/15/24 14:52 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.035 0.010 mg/Kg 07/15/24 10:27 07/15/24 14:52 1,2,4-Trichlorobenzene ND 0.071 0.038 mg/Kg 07/15/24 10:27 07/15/24 14:52 1,2,4-Trimethylbenzene ND 0.035 0.012 mg/Kg 07/15/24 10:27 07/15/24 14:52 1.2-Dibromo-3-Chloropropane ND 0.053 0.013 ma/Ka 07/15/24 10:27 07/15/24 14:52 1 1,2-Dibromoethane ND 0.018 0.0034 mg/Kg 07/15/24 10:27 07/15/24 14:52 0.25 0.035 0.0077 mg/Kg 07/15/24 10:27 07/15/24 14:52 1,2-Dichlorobenzene ND 0.018 0.0049 mg/Kg 07/15/24 10:27 07/15/24 14:52 1.2-Dichloroethane 0.0058 1,2-Dichloropropane ND 0.018 mg/Kg 07/15/24 10:27 07/15/24 14:52 0.0067 1,3,5-Trimethylbenzene ND 0.035 mg/Kg 07/15/24 10:27 07/15/24 14:52 0.053 0.012 mg/Kg 07/15/24 10:27 07/15/24 14:52 1.3-Dichlorobenzene 0.024 ND 0.053 0.0049 mg/Kg 07/15/24 10:27 07/15/24 14:52 1,3-Dichloropropane 1,4-Dichlorobenzene 1.0 0.053 0.0095 mg/Kg 07/15/24 10:27 07/15/24 14:52 2,2-Dichloropropane ND 0.035 0.011 mg/Kg 07/15/24 10:27 07/15/24 14:52 2-Chlorotoluene ND 0.035 0.0078 mg/Kg 07/15/24 10:27 07/15/24 14:52 4-Chlorotoluene ND 0.035 0.0087 mg/Kg 07/15/24 10:27 07/15/24 14:52 4-Isopropyltoluene 0.019 0.035 0.0090 mg/Kg 07/15/24 10:27 07/15/24 14:52 0.0064 0.018 0.0034 mg/Kg 07/15/24 10:27 07/15/24 14:52 Benzene 0.0037 07/15/24 10:27 07/15/24 14:52 **Bromobenzene** 0.010 0.035 mg/Kg Bromochloromethane ND 0.035 0.0055 mg/Kg 07/15/24 10:27 07/15/24 14:52 Bromodichloromethane 0.0049 07/15/24 14:52 ND 0.035 mg/Kg 07/15/24 10:27 0.0040 Bromoform NΩ 0.035 mg/Kg 07/15/24 10:27 07/15/24 14:52 0.033 NΠ 07/15/24 10:27 07/15/24 14:52 Bromomethane 0.088 mg/Kg Carbon tetrachloride ND 0.018 0.0039 mg/Kg 07/15/24 10:27 07/15/24 14:52 0.46 mg/Kg 07/18/24 08:34 07/18/24 13:31 300 38 Chlorobenzene 0.071 0.018 mg/Kg 07/15/24 10:27 07/15/24 14:52 Chloroethane 0.023 07/15/24 10:27 07/15/24 14:52 Chloroform 0.067 0.018 0.0037 mg/Kg Chloromethane ND 0.053 0.0089 mg/Kg 07/15/24 10:27 07/15/24 14:52 cis-1.2-Dichloroethene ND 0.053 0.011 mg/Kg 07/15/24 10:27 07/15/24 14:52 cis-1,3-Dichloropropene ND 0.018 0.0035 mg/Kg 07/15/24 10:27 07/15/24 14:52 Dibromochloromethane ND 0.018 0.0043 mg/Kg 07/15/24 10:27 07/15/24 14:52 ND 0.035 0.0065 mg/Kg 07/15/24 10:27 07/15/24 14:52 Dibromomethane Dichlorodifluoromethane ND 0.22 0.041 mg/Kg 07/15/24 10:27 07/15/24 14:52 Hexachlorobutadiene ND 0.088 0.021 mg/Kg 07/15/24 10:27 07/15/24 14:52 Isopropylbenzene ND 0.035 0.0076 mg/Kg 07/15/24 10:27 07/15/24 14:52 ND 0.0053 mg/Kg 07/15/24 10:27 07/15/24 14:52 Methyl tert-butyl ether 0.035 0.035 07/15/24 10:27 07/15/24 14:52 **Naphthalene** 0.043 0.13 mg/Kg 07/15/24 10:27 07/15/24 14:52 n-Butylbenzene ND 0.035 0.016 mg/Kg N-Propylbenzene ND 0.035 0.013 mg/Kg 07/15/24 10:27 07/15/24 14:52 sec-Butylbenzene ND 0.0076 mg/Kg 07/15/24 10:27 07/15/24 14:52 0.035 Styrene ND 0.035 0.011 mg/Kg 07/15/24 10:27 07/15/24 14:52 t-Butylbenzene ND 0.035 0.0068 mg/Kg 07/15/24 10:27 07/15/24 14:52

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-141999-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-02-SO-34.5-20240710

Date Collected: 07/10/24 18:45 Date Received: 07/12/24 11:35

Lab Sample ID: 580-141999-5

**Matrix: Solid** Percent Solids: 93.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	0.029	J	0.053	0.012	mg/Kg	— <u></u>	07/15/24 10:27	07/15/24 14:52	1
trans-1,2-Dichloroethene	ND		0.053	0.013	mg/Kg	☼	07/15/24 10:27	07/15/24 14:52	1
trans-1,3-Dichloropropene	ND		0.035	0.0062	mg/Kg	☼	07/15/24 10:27	07/15/24 14:52	1
Trichloroethene	0.011	J	0.035	0.0091	mg/Kg	₩	07/15/24 10:27	07/15/24 14:52	1
Trichlorofluoromethane	ND		0.071	0.023	mg/Kg	₩	07/15/24 10:27	07/15/24 14:52	1
Vinyl chloride	ND		0.088	0.017	mg/Kg	☼	07/15/24 10:27	07/15/24 14:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 121				07/15/24 10:27	07/15/24 14:52	1
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				07/18/24 08:34	07/18/24 13:31	1
4-Bromofluorobenzene (Surr)	104		80 - 120				07/15/24 10:27	07/15/24 14:52	1
4-Bromofluorobenzene (Surr)	101		80 - 120				07/18/24 08:34	07/18/24 13:31	1
Dibromofluoromethane (Surr)	98		80 - 120				07/15/24 10:27	07/15/24 14:52	1
Dibromofluoromethane (Surr)	104		80 - 120				07/18/24 08:34	07/18/24 13:31	1
Toluene-d8 (Surr)	122	S1+	80 - 120				07/15/24 10:27	07/15/24 14:52	1
Toluene-d8 (Surr)	100		80 - 120				07/18/24 08:34	07/18/24 13:31	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		0.38	0.086	mg/Kg	☼	07/15/24 09:18	07/17/24 12:14	1
Methylene Chloride	ND		2.4	0.25	mg/Kg	₩	07/15/24 09:18	07/17/24 12:14	1
m-Xylene & p-Xylene	ND		0.38	0.067	mg/Kg	☼	07/15/24 09:18	07/17/24 12:14	1
o-Xylene	ND		0.38	0.047	mg/Kg	₩	07/15/24 09:18	07/17/24 12:14	1
Tetrachloroethene	0.20	J	0.38	0.050	mg/Kg	₩	07/15/24 09:18	07/17/24 12:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		80 - 121				07/15/24 09:18	07/17/24 12:14	1
4-Bromofluorobenzene (Surr)	99		80 - 120				07/15/24 09:18	07/17/24 12:14	1
Dibromofluoromethane (Surr)	101		80 - 120				07/15/24 09:18	07/17/24 12:14	1
Toluene-d8 (Surr)	102		80 - 120				07/15/24 09:18	07/17/24 12:14	1

General Chemistry								
Analyte	Result Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	93.3	0.1	0.1	%			07/16/24 15:50	1
Percent Moisture (SM22 2540G)	6.7	0.1	0.1	%			07/16/24 15:50	1

Client: ERM-West Job ID: 580-141999-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-02-SO-36-20240711

Lab Sample ID: 580-141999-6 Date Collected: 07/11/24 09:25 **Matrix: Solid** Date Received: 07/12/24 11:35 Percent Solids: 91.6

Analyto	tile Organic	Ouglifica	ום	MIDI	l Init		Dropored	Analyzad	Dil E-
Analyte		Qualifier	RL	MDL		_ D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND		0.026	0.0064		₩.			
1,1,1-Trichloroethane	ND		0.051	0.0059		₩.		07/15/24 15:14	
1,1,2,2-Tetrachloroethane	ND		0.026	0.0097		<del>.</del>		07/15/24 15:14	
1,1,2-Trichloroethane	ND		0.026	0.0095	0 0	: <del>*</del>		07/15/24 15:14	
1,1-Dichloroethane	ND		0.051		mg/Kg	Ď.		07/15/24 15:14	
1,1-Dichloroethene	ND		0.051		mg/Kg	<u>.</u> .		07/15/24 15:14	
1,1-Dichloropropene	ND		0.051	0.0068		Ď.		07/15/24 15:14	
1,2,3-Trichlorobenzene	ND		0.10		mg/Kg	☼		07/15/24 15:14	
1,2,3-Trichloropropane	ND		0.051		mg/Kg	<del>.</del>		07/15/24 15:14	
1,2,4-Trichlorobenzene	ND		0.10		mg/Kg	₩		07/15/24 15:14	
1,2,4-Trimethylbenzene	ND		0.051		mg/Kg	₩		07/15/24 15:14	
1,2-Dibromo-3-Chloropropane	ND		0.077		mg/Kg		07/15/24 10:27	07/15/24 15:14	
1,2-Dibromoethane	ND		0.026	0.0049		☼	07/15/24 10:27	07/15/24 15:14	
1,2-Dichlorobenzene	ND		0.051	0.011	mg/Kg	₩	07/15/24 10:27	07/15/24 15:14	
1,2-Dichloroethane	ND		0.026	0.0070		₩	07/15/24 10:27	07/15/24 15:14	
1,2-Dichloropropane	ND		0.026	0.0084	mg/Kg	☼	07/15/24 10:27	07/15/24 15:14	
1,3,5-Trimethylbenzene	ND		0.051	0.0097	mg/Kg	☼	07/15/24 10:27	07/15/24 15:14	
1,3-Dichlorobenzene	ND		0.077	0.017	mg/Kg	☼	07/15/24 10:27	07/15/24 15:14	
1,3-Dichloropropane	ND		0.077	0.0072	mg/Kg	☼	07/15/24 10:27	07/15/24 15:14	
1,4-Dichlorobenzene	ND		0.077	0.014	mg/Kg	☼	07/15/24 10:27	07/15/24 15:14	
2,2-Dichloropropane	ND		0.051	0.015	mg/Kg	₩	07/15/24 10:27	07/15/24 15:14	
2-Chlorotoluene	ND		0.051	0.011	mg/Kg	⊅	07/15/24 10:27	07/15/24 15:14	
1-Chlorotoluene	ND		0.051	0.013	mg/Kg	₩	07/15/24 10:27	07/15/24 15:14	
1-Isopropyltoluene	ND		0.051	0.013	mg/Kg	☼	07/15/24 10:27	07/15/24 15:14	
Benzene	ND		0.026	0.0049	mg/Kg	₽	07/15/24 10:27	07/15/24 15:14	
Bromobenzene	ND		0.051	0.0054	mg/Kg	☼	07/15/24 10:27	07/15/24 15:14	
Bromochloromethane	ND		0.051	0.0079	mg/Kg	☼	07/15/24 10:27	07/15/24 15:14	
Bromodichloromethane	ND		0.051	0.0070	mg/Kg	₩	07/15/24 10:27	07/15/24 15:14	
Bromoform	ND		0.051	0.0058		₩	07/15/24 10:27	07/15/24 15:14	
Bromomethane	ND	*+	0.13		mg/Kg	₩	07/15/24 10:27	07/15/24 15:14	
Carbon tetrachloride	ND		0.026	0.0056			07/15/24 10:27	07/15/24 15:14	
Chloroethane	ND	*+	0.10		mg/Kg	₩	07/15/24 10:27	07/15/24 15:14	
Chloroform	ND		0.026	0.0054		₩	07/15/24 10:27	07/15/24 15:14	
Chloromethane	ND		0.077		mg/Kg	 ☆	07/15/24 10:27	07/15/24 15:14	
cis-1,2-Dichloroethene	ND		0.077		mg/Kg	₩	07/15/24 10:27	07/15/24 15:14	
cis-1,3-Dichloropropene	ND		0.026	0.0051		₩		07/15/24 15:14	
Dibromochloromethane	ND		0.026	0.0063				07/15/24 15:14	
Dibromomethane	ND		0.051	0.0095		::: ::::::::::::::::::::::::::::::::::		07/15/24 15:14	
Dichlorodifluoromethane	ND		0.32		mg/Kg	Ť Ť		07/15/24 15:14	
Ethylbenzene	0.027		0.051		mg/Kg	T. ☆		07/15/24 15:14	
Hexachlorobutadiene	ND	•	0.13		mg/Kg			07/15/24 15:14	
sopropylbenzene	ND		0.051		mg/Kg	₩		07/15/24 15:14	
Methyl tert-butyl ether	ND		0.051	0.0077		¥. \$		07/15/24 15:14	
	0.17		0.051	0.0077	0 0	₩		07/15/24 15:14	
n-Xylene & p-Xylene					0 0	1\tr			
Naphthalene	ND ND		0.19		mg/Kg	<del>-</del>		07/15/24 15:14	
n-Butylbenzene	ND		0.051		mg/Kg	<b>*</b>		07/15/24 15:14	
N-Propylbenzene	ND		0.051		mg/Kg	₩.		07/15/24 15:14	
o-Xylene sec-Butylbenzene	<b>0.037</b> ND	J	0.051 0.051	0.0064	mg/Kg mg/Kg	<del>.</del>		07/15/24 15:14 07/15/24 15:14	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-141999-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-02-SO-36-20240711

Date Collected: 07/11/24 09:25 Date Received: 07/12/24 11:35

Lab Sample ID: 580-141999-6

**Matrix: Solid** Percent Solids: 91.6

Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	(Conti	inued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.051	0.016	mg/Kg	≎	07/15/24 10:27	07/15/24 15:14	1
t-Butylbenzene	ND		0.051	0.0099	mg/Kg	☼	07/15/24 10:27	07/15/24 15:14	1
Tetrachloroethene	0.014	J	0.051	0.0068	mg/Kg	₽	07/15/24 10:27	07/15/24 15:14	1
Toluene	ND		0.077	0.017	mg/Kg	≎	07/15/24 10:27	07/15/24 15:14	1
trans-1,2-Dichloroethene	ND		0.077	0.019	mg/Kg	≎	07/15/24 10:27	07/15/24 15:14	1
trans-1,3-Dichloropropene	ND		0.051	0.0090	mg/Kg	≎	07/15/24 10:27	07/15/24 15:14	1
Trichloroethene	ND		0.051	0.013	mg/Kg	≎	07/15/24 10:27	07/15/24 15:14	1
Trichlorofluoromethane	ND		0.10	0.033	mg/Kg	☼	07/15/24 10:27	07/15/24 15:14	1
Vinyl chloride	ND		0.13	0.024	mg/Kg	☼	07/15/24 10:27	07/15/24 15:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				07/15/24 10:27	07/15/24 15:14	1
4-Bromofluorobenzene (Surr)	100		80 - 120				07/15/24 10:27	07/15/24 15:14	1
Dibromofluoromethane (Surr)	99		80 - 120				07/15/24 10:27	07/15/24 15:14	1
Toluene-d8 (Surr)	102		80 - 120				07/15/24 10:27	07/15/24 15:14	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chlorobenzene	ND		0.051	0.0061	mg/Kg	<u></u>	07/15/24 09:18	07/17/24 11:53	
Methylene Chloride	ND		0.32	0.033	mg/Kg	₩	07/15/24 09:18	07/17/24 11:53	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	96		80 - 121				07/15/24 09:18	07/17/24 11:53	-
4-Bromofluorobenzene (Surr)	98		80 - 120				07/15/24 09:18	07/17/24 11:53	
Dibromofluoromethane (Surr)	101		80 - 120				07/15/24 09:18	07/17/24 11:53	
Toluene-d8 (Surr)	101		80 - 120				07/15/24 00:19	07/17/24 11:53	

General Chemistry								
Analyte	Result Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	91.6	0.1	0.1	%			07/16/24 15:50	1
Percent Moisture (SM22 2540G)	8.4	0.1	0.1	%			07/16/24 15:50	1

Client: ERM-West Job ID: 580-141999-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-02-SO-37-20240711

Lab Sample ID: 580-141999-7 Date Collected: 07/11/24 09:25 Matrix: Solid Date Received: 07/12/24 11:35 Percent Solids: 88.3

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.025 0.0062 mg/Kg 07/15/24 10:27 07/15/24 12:23 ND 1.1.1-Trichloroethane 0.049 0.0057 mg/Kg 07/15/24 10:27 07/15/24 12:23 1,1,2,2-Tetrachloroethane ND 0.025 0.0094 mg/Kg 07/15/24 10:27 07/15/24 12:23 0.0091 07/15/24 10:27 07/15/24 12:23 1,1,2-Trichloroethane ND 0.025 mg/Kg 1.1-Dichloroethane 0.049 0.011 mg/Kg 07/15/24 10:27 07/15/24 12:23 ND 1,1-Dichloroethene ND 0.049 0.015 mg/Kg 07/15/24 10:27 07/15/24 12:23 1,1-Dichloropropene ND 0.049 0.0065 07/15/24 10:27 07/15/24 12:23 mg/Kg ND 0.099 0.049 07/15/24 10:27 07/15/24 12:23 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.049 0.014 mg/Kg 07/15/24 10:27 07/15/24 12:23 1,2,4-Trichlorobenzene ND 0.099 0.053 mg/Kg 07/15/24 10:27 07/15/24 12:23 1,2,4-Trimethylbenzene ND 0.049 0.017 mg/Kg 07/15/24 10:27 07/15/24 12:23 mg/Kg 1.2-Dibromo-3-Chloropropane ND 0.074 0.019 07/15/24 10:27 07/15/24 12:23 1 07/15/24 10:27 07/15/24 12:23 1,2-Dibromoethane ND 0.025 0.0047 mg/Kg 1,2-Dichlorobenzene ND 0.049 0.011 mg/Kg 07/15/24 10:27 07/15/24 12:23 ND 0.025 0.0068 mg/Kg 07/15/24 10:27 07/15/24 12:23 1.2-Dichloroethane 0.0081 1,2-Dichloropropane NΩ 0.025 mg/Kg 07/15/24 10:27 07/15/24 12:23 ND 1,3,5-Trimethylbenzene 0.049 0.0094 mg/Kg 07/15/24 10:27 07/15/24 12:23 1,3-Dichlorobenzene ND 0.074 0.016 mg/Kg 07/15/24 10:27 07/15/24 12:23 1,3-Dichloropropane ND 0.074 0.0069 mg/Kg 07/15/24 10:27 07/15/24 12:23 mg/Kg 1,4-Dichlorobenzene ND 0.074 0.013 07/15/24 10:27 07/15/24 12:23 2,2-Dichloropropane ND 0.049 0.015 mg/Kg 07/15/24 10:27 07/15/24 12:23 2-Chlorotoluene ND 0.049 0.011 mg/Kg 07/15/24 10:27 07/15/24 12:23 4-Chlorotoluene ND 07/15/24 10:27 07/15/24 12:23 0.049 0.012 mg/Kg 4-Isopropyltoluene ND 0.049 0.013 mg/Kg 07/15/24 10:27 07/15/24 12:23 Benzene ND 0.025 0.0047 mg/Kg 07/15/24 10:27 07/15/24 12:23 0.0052 07/15/24 10:27 07/15/24 12:23 Bromobenzene ND 0.049 mg/Kg Bromochloromethane ND 0.049 0.0077 mg/Kg 07/15/24 10:27 07/15/24 12:23 Bromodichloromethane ND 0.0068 07/15/24 10:27 07/15/24 12:23 0.049 mg/Kg 0.0056 Bromoform NΩ 0.049 mg/Kg 07/15/24 10:27 07/15/24 12:23 0.047 ND 07/15/24 10:27 07/15/24 12:23 Bromomethane 0.12 mg/Kg Carbon tetrachloride ND 0.025 0.0054 mg/Kg 07/15/24 10:27 07/15/24 12:23 ND 0.049 0.0059 mg/Kg 07/15/24 10:27 07/15/24 12:23 Chlorobenzene Chloroethane 0.099 0.026 mg/Kg 07/15/24 10:27 07/15/24 12:23 ND Chloroform 07/15/24 10:27 07/15/24 12:23 ND 0.025 0.0052 mg/Kg Chloromethane ND 0.074 0.012 mg/Kg 07/15/24 10:27 07/15/24 12:23 cis-1.2-Dichloroethene ND 0.074 0.016 mg/Kg 07/15/24 10:27 07/15/24 12:23 cis-1,3-Dichloropropene ND 0.025 0.0049 mg/Kg 07/15/24 10:27 07/15/24 12:23 Dibromochloromethane ND 0.025 0.0060 mg/Kg 07/15/24 10:27 07/15/24 12:23 Dibromomethane ND 0.0091 07/15/24 10:27 07/15/24 12:23 0.049 mg/Kg Dichlorodifluoromethane ND 0.31 0.057 mg/Kg 07/15/24 10:27 07/15/24 12:23 Ethylbenzene 0.027 0.049 0.011 mg/Kg 07/15/24 10:27 07/15/24 12:23 Hexachlorobutadiene ND 0.12 0.029 mg/Kg 07/15/24 10:27 07/15/24 12:23 0.011 ND 07/15/24 10:27 07/15/24 12:23 Isopropylbenzene 0.049 mg/Kg Methyl tert-butyl ether 0.049 0.0074 07/15/24 10:27 07/15/24 12:23 ND mg/Kg 0.0088 0.049 07/15/24 10:27 07/15/24 12:23 m-Xylene & p-Xylene 0.19 mg/Kg Naphthalene ND 0.19 0.048 mg/Kg 07/15/24 10:27 07/15/24 12:23 n-Butylbenzene ND 07/15/24 10:27 07/15/24 12:23 0.049 0.023 mg/Kg N-Propylbenzene ND 0.049 0.019 mg/Kg 07/15/24 10:27 07/15/24 12:23 o-Xylene 0.041 J 0.049 0.0062 mg/Kg 07/15/24 10:27 07/15/24 12:23

Client: ERM-West Job ID: 580-141999-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-02-SO-37-20240711 Lab Sample ID: 580-141999-7

Date Collected: 07/11/24 09:25 **Matrix: Solid** Date Received: 07/12/24 11:35 Percent Solids: 88.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.049	0.011	mg/Kg	— <u></u>	07/15/24 10:27	07/15/24 12:23	1
Styrene	ND		0.049	0.016	mg/Kg	₽	07/15/24 10:27	07/15/24 12:23	1
t-Butylbenzene	ND		0.049	0.0095	mg/Kg	₽	07/15/24 10:27	07/15/24 12:23	1
Tetrachloroethene	0.0069	J	0.049	0.0065	mg/Kg	☼	07/15/24 10:27	07/15/24 12:23	1
Toluene	ND		0.074	0.017	mg/Kg	☼	07/15/24 10:27	07/15/24 12:23	1
trans-1,2-Dichloroethene	ND		0.074	0.018	mg/Kg	₽	07/15/24 10:27	07/15/24 12:23	1
trans-1,3-Dichloropropene	ND		0.049	0.0086	mg/Kg	☼	07/15/24 10:27	07/15/24 12:23	1
Trichloroethene	ND		0.049	0.013	mg/Kg	☼	07/15/24 10:27	07/15/24 12:23	1
Trichlorofluoromethane	ND		0.099	0.032	mg/Kg	₽	07/15/24 10:27	07/15/24 12:23	1
Vinyl chloride	ND		0.12	0.023	mg/Kg	₩	07/15/24 10:27	07/15/24 12:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				07/15/24 10:27	07/15/24 12:23	1
4-Bromofluorobenzene (Surr)	99		80 - 120				07/15/24 10:27	07/15/24 12:23	1
Dibromofluoromethane (Surr)	99		80 - 120				07/15/24 10:27	07/15/24 12:23	1
Toluene-d8 (Surr)	101		80 - 120				07/15/24 10:27	07/15/24 12:23	1
Method: SW846 8260D - Vo	olatile Organic	Compound	ds bv GC/MS	- RA					
Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND ND		0.31	0.032	mg/Kg	<u></u>	07/16/24 08:56	07/16/24 16:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		80 - 121				07/16/24 08:56	07/16/24 16:09	1
4-Bromofluorobenzene (Surr)	100		80 - 120				07/16/24 08:56	07/16/24 16:09	1
	100		80 - 120				07/16/24 08:56	07/16/24 16:09	1
Dibromofluoromethane (Surr)									

Allalyte	Result Qualifier	NL.	NL.	Ullit	U	riepaieu	Allalyzeu	DII Fac
Percent Solids (SM22 2540G)	88.3	0.1	0.1	%			07/16/24 15:50	1
Percent Moisture (SM22 2540G)	11.7	0.1	0.1	%			07/16/24 15:50	1

### **QC Sample Results**

Client: ERM-West Job ID: 580-141999-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-464922/5-A

**Matrix: Solid** 

**Analysis Batch: 464910** 

Client Sample ID: Method Blank

<b>Prep Batch: 464922</b>	Prep	Type:	Total/NA
•	Prep	<b>Batch</b>	: 464922
		Duto.	404022

Analyte	MB Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050	mg/Kg		07/15/24 09:10		1
1,1,1-Trichloroethane	ND		0.040	0.0046			07/15/24 09:10	07/15/24 11:40	1
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076			07/15/24 09:10	07/15/24 11:40	1
1,1,2-Trichloroethane	ND		0.020	0.0074	mg/Kg		07/15/24 09:10	07/15/24 11:40	1
1,1-Dichloroethane	ND		0.040	0.0092	mg/Kg		07/15/24 09:10	07/15/24 11:40	1
1,1-Dichloroethene	ND		0.040		mg/Kg		07/15/24 09:10	07/15/24 11:40	1
1,1-Dichloropropene	ND		0.040	0.0053	mg/Kg		07/15/24 09:10	07/15/24 11:40	1
1,2,3-Trichlorobenzene	ND		0.080		mg/Kg		07/15/24 09:10	07/15/24 11:40	1
1,2,3-Trichloropropane	ND		0.040		mg/Kg		07/15/24 09:10	07/15/24 11:40	1
1,2,4-Trichlorobenzene	ND		0.080		mg/Kg		07/15/24 09:10	07/15/24 11:40	1
1,2,4-Trimethylbenzene	ND		0.040		mg/Kg			07/15/24 11:40	1
1,2-Dibromo-3-Chloropropane	ND		0.060		mg/Kg			07/15/24 11:40	1
1,2-Dibromoethane	ND		0.020	0.0038				07/15/24 11:40	1
1,2-Dichlorobenzene	ND		0.040	0.0087				07/15/24 11:40	1
1,2-Dichloroethane	ND		0.020	0.0055				07/15/24 11:40	1
1,2-Dichloropropane	ND		0.020	0.0066				07/15/24 11:40	
1,3,5-Trimethylbenzene	ND		0.040	0.0076				07/15/24 11:40	
1,3-Dichlorobenzene	ND		0.060		mg/Kg			07/15/24 11:40	
1,3-Dichloropropane	ND		0.060	0.0056				07/15/24 11:40	······································
1,4-Dichlorobenzene	ND		0.060		mg/Kg			07/15/24 11:40	1
2,2-Dichloropropane	ND		0.040		mg/Kg			07/15/24 11:40	1
2-Chlorotoluene	ND		0.040	0.0088				07/15/24 11:40	· · · · · · · · · · · · · · · · · · ·
4-Chlorotoluene	ND		0.040	0.0098				07/15/24 11:40	1
4-Isopropyltoluene	ND		0.040		mg/Kg			07/15/24 11:40	1
Benzene	ND		0.040	0.0038				07/15/24 11:40	'
Bromobenzene	ND		0.020	0.0030				07/15/24 11:40	1
Bromochloromethane	ND ND		0.040	0.0042				07/15/24 11:40	1
	ND		0.040	0.0055				07/15/24 11:40	
Bromodichloromethane Bromoform	ND ND		0.040					07/15/24 11:40	1
Bromomethane	ND ND		0.040	0.0045				07/15/24 11:40	
					mg/Kg				1
Carbon tetrachloride	ND		0.020	0.0044				07/15/24 11:40 07/15/24 11:40	1
Chlorobenzene	ND		0.040	0.0048					1
Chloroethane	ND		0.080		mg/Kg			07/15/24 11:40	1
Chloroform	ND		0.020	0.0042				07/15/24 11:40	1
Chloromethane	ND		0.060		mg/Kg			07/15/24 11:40	1
cis-1,2-Dichloroethene	ND		0.060		mg/Kg			07/15/24 11:40	
cis-1,3-Dichloropropene	ND		0.020	0.0040				07/15/24 11:40	1
Dibromochloromethane	ND		0.020	0.0049				07/15/24 11:40	1
Dibromomethane	ND		0.040	0.0074				07/15/24 11:40	1
Dichlorodifluoromethane	ND		0.25		mg/Kg			07/15/24 11:40	1
Ethylbenzene	ND		0.040	0.0091				07/15/24 11:40	1
Hexachlorobutadiene	ND		0.10		mg/Kg			07/15/24 11:40	1
Isopropylbenzene	ND		0.040	0.0086				07/15/24 11:40	1
Methyl tert-butyl ether	ND		0.040	0.0060				07/15/24 11:40	1
m-Xylene & p-Xylene	ND		0.040	0.0071				07/15/24 11:40	1
Naphthalene	ND		0.15		mg/Kg			07/15/24 11:40	1
n-Butylbenzene	ND		0.040		mg/Kg			07/15/24 11:40	1
N-Propylbenzene	ND		0.040	0.015	mg/Kg		07/15/24 09:10	07/15/24 11:40	1

### **QC Sample Results**

Client: ERM-West Job ID: 580-141999-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-464922/5-A

**Matrix: Solid** 

**Analysis Batch: 464910** 

Client Sample ID: Method Blank

**Prep Type: Total/NA** 

**Prep Batch: 464922** 

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.040	0.0050	mg/Kg		07/15/24 09:10	07/15/24 11:40	1
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		07/15/24 09:10	07/15/24 11:40	
Styrene	ND		0.040	0.013	mg/Kg		07/15/24 09:10	07/15/24 11:40	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		07/15/24 09:10	07/15/24 11:40	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		07/15/24 09:10	07/15/24 11:40	•
Toluene	ND		0.060	0.014	mg/Kg		07/15/24 09:10	07/15/24 11:40	•
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		07/15/24 09:10	07/15/24 11:40	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		07/15/24 09:10	07/15/24 11:40	•
Trichloroethene	ND		0.040	0.010	mg/Kg		07/15/24 09:10	07/15/24 11:40	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		07/15/24 09:10	07/15/24 11:40	
Vinyl chloride	ND		0.10	0.019	mg/Kg		07/15/24 09:10	07/15/24 11:40	•

MB MB

Surrogate	%Recovery Qua	alifier Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102	80 - 121	07/15/24 09:10	07/15/24 11:40	1
4-Bromofluorobenzene (Surr)	103	80 - 120	07/15/24 09:10	07/15/24 11:40	1
Dibromofluoromethane (Surr)	101	80 - 120	07/15/24 09:10	07/15/24 11:40	1
Toluene-d8 (Surr)	102	80 - 120	07/15/24 09:10	07/15/24 11:40	1

Lab Sample ID: LCS 580-464922/1-A

**Matrix: Solid** 

Analysis Batch: 464910

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

**Prep Batch: 464922** 

Analysis Batch. 464910	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1,1,2-Tetrachloroethane	0.800	0.717		mg/Kg		90	79 - 128
1,1,1-Trichloroethane	0.800	0.719		mg/Kg		90	78 - 135
1,1,2,2-Tetrachloroethane	0.800	0.667		mg/Kg		83	77 - 122
1,1,2-Trichloroethane	0.800	0.667		mg/Kg		83	80 - 123
1,1-Dichloroethane	0.800	0.691		mg/Kg		86	78 - 126
1,1-Dichloroethene	0.800	0.749		mg/Kg		94	73 - 134
1,1-Dichloropropene	0.800	0.697		mg/Kg		87	76 - 140
1,2,3-Trichlorobenzene	0.800	0.689		mg/Kg		86	58 - 146
1,2,3-Trichloropropane	0.800	0.649		mg/Kg		81	77 - 127
1,2,4-Trichlorobenzene	0.800	0.723		mg/Kg		90	74 - 131
1,2,4-Trimethylbenzene	0.800	0.726		mg/Kg		91	73 - 138
1,2-Dibromo-3-Chloropropane	0.800	0.599		mg/Kg		75	64 - 129
1,2-Dibromoethane	0.800	0.643		mg/Kg		80	77 - 123
1,2-Dichlorobenzene	0.800	0.692		mg/Kg		87	78 - 126
1,2-Dichloroethane	0.800	0.639		mg/Kg		80	76 - 124
1,2-Dichloropropane	0.800	0.685		mg/Kg		86	73 - 130
1,3,5-Trimethylbenzene	0.800	0.734		mg/Kg		92	72 - 134
1,3-Dichlorobenzene	0.800	0.714		mg/Kg		89	78 - 132
1,3-Dichloropropane	0.800	0.675		mg/Kg		84	80 - 120
1,4-Dichlorobenzene	0.800	0.713		mg/Kg		89	77 - 123
2,2-Dichloropropane	0.800	0.718		mg/Kg		90	75 - 134
2-Chlorotoluene	0.800	0.722		mg/Kg		90	77 - 134
4-Chlorotoluene	0.800	0.703		mg/Kg		88	71 - 137
4-Isopropyltoluene	0.800	0.733		mg/Kg		92	71 - 142
Benzene	0.800	0.698		mg/Kg		87	79 - 135

**Eurofins Seattle** 

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Spike

Added

Client: ERM-West Job ID: 580-141999-1

LCS LCS

Result Qualifier

Unit

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-464922/1-A

**Matrix: Solid** 

Analyte

Analysis Batch: 464910

**Client Sample ID: Lab Control Sample** 

D %Rec

%Rec

Limits

**Prep Type: Total/NA** 

**Prep Batch: 464922** 

Bromobenzene	0.800	0.681	mg/Kg	85	78 - 126	
Bromochloromethane	0.800	0.673	mg/Kg	84	76 - 131	
Bromodichloromethane	0.800	0.694	mg/Kg	87	78 - 125	
Bromoform	0.800	0.665	mg/Kg	83	71 - 130	
Bromomethane	0.800	1.09	mg/Kg	137	55 - 150	
Carbon tetrachloride	0.800	0.728	mg/Kg	91	76 - 140	
Chlorobenzene	0.800	0.702	mg/Kg	88	80 - 125	
Chloroethane	0.800	1.26 *+	mg/Kg	158	26 - 150	
Chloroform	0.800	0.673	mg/Kg	84	74 - 133	
Chloromethane	0.800	0.605	mg/Kg	76	52 - 142	
cis-1,2-Dichloroethene	0.800	0.723	mg/Kg	90	80 - 125	
cis-1,3-Dichloropropene	0.800	0.644	mg/Kg	80	80 - 122	
Dibromochloromethane	0.800	0.673	mg/Kg	84	75 - 125	
Dibromomethane	0.800	0.631	mg/Kg	79	72 - 130	
Dichlorodifluoromethane	0.800	0.593	mg/Kg	74	33 - 150	
Ethylbenzene	0.800	0.709	mg/Kg	89	80 - 135	
Hexachlorobutadiene	0.800	0.776	mg/Kg	97	65 - 145	
Isopropylbenzene	0.800	0.816	mg/Kg	102	80 - 131	
Methyl tert-butyl ether	0.800	0.686	mg/Kg	86	71 - 126	
m-Xylene & p-Xylene	0.800	0.702	mg/Kg	88	80 - 132	
Naphthalene	0.800	0.669	mg/Kg	84	56 - 145	
n-Butylbenzene	0.800	0.728	mg/Kg	91	69 - 143	
N-Propylbenzene	0.800	0.729	mg/Kg	91	78 - 133	
o-Xylene	0.800	0.711	mg/Kg	89	80 - 132	
sec-Butylbenzene	0.800	0.751	mg/Kg	94	71 - 143	
Styrene	0.800	0.699	mg/Kg	87	79 - 129	
t-Butylbenzene	0.800	0.737	mg/Kg	92	72 - 144	
Tetrachloroethene	0.800	0.696	mg/Kg	87	75 - 141	
Toluene	0.800	0.700	mg/Kg	88	75 - 125	

0.800

0.800

0.800

0.800

0.800

0.671

0.679

0.702

0.723

0.691

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		80 - 121
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
Toluene-d8 (Surr)	101		80 - 120

Lab Sample ID: LCSD 580-464922/2-A

**Matrix: Solid** 

trans-1,2-Dichloroethene

Trichlorofluoromethane

Trichloroethene

Vinyl chloride

trans-1,3-Dichloropropene

Analysis Batch: 464910

<b>Client Sample ID: Lab</b>	<b>Control Sample Dup</b>
	Prep Type: Total/NA
	Dran Databy 464000

84

85

88

90

77 - 134

80 - 121

80 - 134

71 - 150

62 - 144

Analysis Baton: 404010							i icp be	ALOII	JTULL
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	0.800	0.839		mg/Kg		105	79 - 128	16	20
1,1,1-Trichloroethane	0.800	0.830		mg/Kg		104	78 <sub>-</sub> 135	14	20

**Eurofins Seattle** 

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#### **QC Sample Results**

Client: ERM-West Job ID: 580-141999-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-464922/2-A

**Matrix: Solid** 

Analysis Batch: 464910

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

**Prep Batch: 464922** 

Analysis Batch: 464910						Prep Ba	atch: 46	
Analyte	Spike Added		LCSD Qualifier	Unit	D %Rec	%Rec Limits	RPD	RPD Limit
1,1,2,2-Tetrachloroethane	0.800 O.800	0.775	Qualifier	mg/Kg	— b /6Rec	77 - 122	15	20
1,1,2-Trichloroethane	0.800	0.765		mg/Kg	96	80 - 123	14	20
1.1-Dichloroethane	0.800	0.790		mg/Kg	99	78 <sub>-</sub> 126	13	20
1,1-Dichloroethane	0.800	0.790		mg/Kg	108	73 - 134	14	25
1,1-Dichloropropene	0.800	0.777		mg/Kg	97	76 - 140	11	20
1,2,3-Trichlorobenzene	0.800	0.777			98	78 - 140 58 - 146	13	28
1,2,3-Trichloropropane	0.800	0.780		mg/Kg	90	77 - 127	10	20
1,2,4-Trichlorobenzene	0.800	0.720		mg/Kg	105	74 - 131	15	26
1,2,4-Trimethylbenzene	0.800	0.636		mg/Kg	98	74 - 131	8	20
1,2-Dibromo-3-Chloropropane	0.800	0.765		mg/Kg	82	64 - 129	9	40
				mg/Kg		77 - 123	14	20
1,2-Dibromoethane	0.800	0.743		mg/Kg	93			
1,2-Dichlorobenzene	0.800	0.776		mg/Kg	97	78 - 126	11	20
1,2-Dichloroethane	0.800	0.722		mg/Kg	90	76 <sub>-</sub> 124	12	20
1,2-Dichloropropane	0.800	0.757		mg/Kg	95	73 - 130	10	20
1,3,5-Trimethylbenzene	0.800	0.809		mg/Kg	101	72 - 134	10	24
1,3-Dichlorobenzene	0.800	0.784		mg/Kg	98	78 - 132	9	20
1,3-Dichloropropane	0.800	0.764		mg/Kg	96	80 - 120	12	20
1,4-Dichlorobenzene	0.800	0.797		mg/Kg	100	77 - 123	11	20
2,2-Dichloropropane	0.800	0.814		mg/Kg	102	75 - 134	13	20
2-Chlorotoluene	0.800	0.784		mg/Kg	98	77 - 134	8	21
4-Chlorotoluene	0.800	0.766		mg/Kg	96	71 - 137	9	21
4-Isopropyltoluene	0.800	0.818		mg/Kg	102	71 - 142	11	29
Benzene	0.800	0.796		mg/Kg	100	79 - 135	13	20
Bromobenzene	0.800	0.753		mg/Kg	94	78 - 126	10	20
Bromochloromethane	0.800	0.778		mg/Kg	97	76 - 131	14	20
Bromodichloromethane	0.800	0.783		mg/Kg	98	78 - 125	12	20
Bromoform	0.800	0.721		mg/Kg	90	71 - 130	8	20
Bromomethane	0.800	1.31	*+	mg/Kg	164	55 - 150	18	26
Carbon tetrachloride	0.800	0.837		mg/Kg	105	76 - 140	14	20
Chlorobenzene	0.800	0.805		mg/Kg	101	80 - 125	14	20
Chloroethane	0.800	1.18		mg/Kg	147	26 - 150	7	40
Chloroform	0.800	0.781		mg/Kg	98	74 - 133	15	20
Chloromethane	0.800	0.710		mg/Kg	89	52 - 142	16	40
cis-1,2-Dichloroethene	0.800	0.827		mg/Kg	103	80 - 125	13	20
cis-1,3-Dichloropropene	0.800	0.742		mg/Kg	93	80 - 122	14	20
Dibromochloromethane	0.800	0.773		mg/Kg	97	75 - 125	14	20
Dibromomethane	0.800	0.716		mg/Kg	89	72 - 130	13	40
Dichlorodifluoromethane	0.800	0.713		mg/Kg	89	33 - 150	18	31
Ethylbenzene	0.800	0.820		mg/Kg	102	80 - 135	15	20
Hexachlorobutadiene	0.800	0.914		mg/Kg	114	65 - 145	16	36
Isopropylbenzene	0.800	0.937		mg/Kg	117	80 - 131	14	20
Methyl tert-butyl ether	0.800	0.764		mg/Kg	95	71 - 126	11	20
m-Xylene & p-Xylene	0.800	0.800		mg/Kg	100	80 - 132	13	20
Naphthalene	0.800	0.754		mg/Kg	94	56 - 145	12	25
n-Butylbenzene	0.800	0.734		mg/Kg	98	69 - 143	8	31
N-Propylbenzene	0.800	0.767		mg/Kg	102	78 - 133	11	24
o-Xylene	0.800	0.825				80 - 132	15	20
sec-Butylbenzene	0.800	0.828		mg/Kg	103 104	71 <sub>-</sub> 143	10	20 29
				mg/Kg				
Styrene	0.800	0.799		mg/Kg	100	79 - 129	13	20

**Eurofins Seattle** 

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Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-464922/2-A

**Matrix: Solid** 

Client: ERM-West

Analysis Batch: 464910

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

**Prep Batch: 464922** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
t-Butylbenzene	0.800	0.813		mg/Kg		102	72 - 144	10	27
Tetrachloroethene	0.800	0.823		mg/Kg		103	75 - 141	17	20
Toluene	0.800	0.788		mg/Kg		99	75 - 125	12	20
trans-1,2-Dichloroethene	0.800	0.763		mg/Kg		95	77 - 134	13	20
trans-1,3-Dichloropropene	0.800	0.766		mg/Kg		96	80 - 121	12	20
Trichloroethene	0.800	0.807		mg/Kg		101	80 - 134	14	20
Trichlorofluoromethane	0.800	0.853		mg/Kg		107	71 - 150	16	30
Vinyl chloride	0.800	0.810		mg/Kg		101	62 - 144	16	20

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		80 - 121
4-Bromofluorobenzene (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
Toluene-d8 (Surr)	101		80 - 120

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

Analyzed

Prep Batch: 465027

Dil Fac

MB MB

**Matrix: Solid** 

**Analyte** 

**Analysis Batch: 465025** 

Lab Sample ID: MB 580-465027/5-A

Result Qualifier

Methylene Chloride	ND		0.25	0.026 mg/Kg	07/16/24 08:56	07/16/24 12:53	1
	MB	МВ					
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121		07/16/24 08:56	07/16/24 12:53	1
4-Bromofluorobenzene (Surr)	100		80 - 120		07/16/24 08:56	07/16/24 12:53	1
Dibromofluoromethane (Surr)	101		80 - 120		07/16/24 08:56	07/16/24 12:53	1
Toluene-d8 (Surr)	103		80 - 120		07/16/24 08:56	07/16/24 12:53	1

RL

Lab Sample ID: LCS 580-465027/1-A

**Matrix: Solid** 

Analysis Batch: 465025

465025	
	Spike
	Added

LCS LCS

**MDL** Unit

D %Rec

Prepared

Prep Type: Total/NA **Prep Batch: 465027** %Rec

Limits

**Client Sample ID: Lab Control Sample** 

Analyte Result Qualifier Unit Methylene Chloride 0.800 0.663 mg/Kg

Spike

Added

0.800

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		80 - 121
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
Toluene-d8 (Surr)	102		80 - 120

**Client Sample ID: Lab Control Sample Dup** 

Lab Sample ID: LCSD 580-465027/2-A

**Matrix: Solid** 

Methylene Chloride

Analyte

**Analysis Batch: 465025** 

Prep Type: Total/NA **Prep Batch: 465027** LCSD LCSD %Rec **RPD** Result Qualifier Unit %Rec Limits RPD Limit 0.705 mg/Kg 88 56 - 140

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-465027/2-A

**Matrix: Solid** 

Analysis Batch: 465025

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

**Prep Batch: 465027** 

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		80 - 121
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
Toluene-d8 (Surr)	101		80 - 120

Client Sample ID: Method Blank

Prep Type: Total/NA

**Prep Batch: 465155** 

Lab Sample ID: MB 580-465155/5-A

**Matrix: Solid** 

**Analysis Batch: 465153** 

	MB I	MB							
Analyte	Result (	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		0.040	0.0048	mg/Kg		07/17/24 09:18	07/17/24 11:10	1
Ethylbenzene	ND		0.040	0.0091	mg/Kg		07/17/24 09:18	07/17/24 11:10	1
Methylene Chloride	ND		0.25	0.026	mg/Kg		07/17/24 09:18	07/17/24 11:10	1
m-Xylene & p-Xylene	ND		0.040	0.0071	mg/Kg		07/17/24 09:18	07/17/24 11:10	1
o-Xylene	ND		0.040	0.0050	mg/Kg		07/17/24 09:18	07/17/24 11:10	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		07/17/24 09:18	07/17/24 11:10	1

MB MB Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1,2-Dichloroethane-d4 (Surr) 97 80 - 121 07/17/24 09:18 07/17/24 11:10 4-Bromofluorobenzene (Surr) 100 80 - 120 07/17/24 09:18 07/17/24 11:10 Dibromofluoromethane (Surr) 100 80 - 120 07/17/24 09:18 07/17/24 11:10 Toluene-d8 (Surr) 80 - 120 07/17/24 09:18 07/17/24 11:10 101

Lab Sample ID: LCS 580-465155/1-A

**Matrix: Solid** 

**Analysis Batch: 465153** 

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

**Prep Batch: 465155** 

	<b>Spike</b>	LUS	LUS				%Rec		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits		
Chlorobenzene	0.800	0.865		mg/Kg		108	80 - 125		
Ethylbenzene	0.800	0.849		mg/Kg		106	80 - 135		
Methylene Chloride	0.800	0.764		mg/Kg		96	56 - 140		
m-Xylene & p-Xylene	0.800	0.839		mg/Kg		105	80 - 132		
o-Xylene	0.800	0.849		mg/Kg		106	80 - 132		
Tetrachloroethene	0.800	0.862		mg/Kg		108	75 - 141		

_00		
%Recovery	Qualifier	Limits
97		80 - 121
98		80 - 120
100		90 120

LCS LCS

102

Lab Sample ID: LCSD 580-465155/2-A

**Matrix: Solid** 

Toluene-d8 (Surr)

Surrogate

**Analysis Batch: 465153** 

1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr)

Prep Type: Total/NA **Prep Batch: 465155** 

Spike LCSD LCSD %Rec **RPD** Analyte Added Result Qualifier Unit %Rec Limits **RPD** Limit Chlorobenzene 0.800 0.835 mg/Kg 104 80 - 125 20 Ethylbenzene 0.800 80 - 135 20 0.823 mg/Kg 103

80 - 120

**Eurofins Seattle** 

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Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-465155/2-A

**Matrix: Solid** 

Client: ERM-West

Analysis Batch: 465153

Prep Type: Total/NA

**Prep Batch: 465155** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Methylene Chloride	0.800	0.722		mg/Kg		90	56 - 140	6	20
m-Xylene & p-Xylene	0.800	0.804		mg/Kg		100	80 - 132	4	20
o-Xylene	0.800	0.808		mg/Kg		101	80 - 132	5	20
Tetrachloroethene	0.800	0.812		mg/Kg		101	75 - 141	6	20

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96		80 - 121
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
Toluene-d8 (Surr)	102		80 - 120

Lab Sample ID: MB 580-465292/5-A **Client Sample ID: Method Blank** 

**Matrix: Solid** 

**Analysis Batch: 465296** 

Prep Type: Total/NA

**Prep Batch: 465292** 

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		0.040	0.0048	mg/Kg		07/18/24 08:34	07/18/24 11:01	1
	MR	MR							

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		80 - 121	07/18/24 08:34	07/18/24 11:01	1
4-Bromofluorobenzene (Surr)	101		80 - 120	07/18/24 08:34	07/18/24 11:01	1
Dibromofluoromethane (Surr)	102		80 - 120	07/18/24 08:34	07/18/24 11:01	1
Toluene-d8 (Surr)	99		80 - 120	07/18/24 08:34	07/18/24 11:01	1

Lab Sample ID: LCS 580-465292/1-A

Matrix: Solid

Analysis Batch: 465296

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

**Prep Batch: 465292** 

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chlorobenzene	0.800	0.737		mg/Kg		92	80 - 125	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		80 - 121
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
Toluene-d8 (Surr)	101		80 - 120

Lab Sample ID: LCSD 580-465292/2-A

**Matrix: Solid** 

Analysis Batch: 465296

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA **Prep Batch: 465292** 

-	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chlorobenzene	0.800	0.727		mg/Kg		91	80 - 125	1	20

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		80 - 121
4-Bromofluorobenzene (Surr)	102		80 - 120

Project/Site: Arkema PDI Sampling

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-465292/2-A

**Matrix: Solid** 

Client: ERM-West

Analysis Batch: 465296

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

**Prep Batch: 465292** 

LCSD LCSD

%Recovery Qualifier Surrogate Limits Dibromofluoromethane (Surr) 102 80 - 120 Toluene-d8 (Surr) 100 80 - 120

Lab Sample ID: MB 580-465428/3-A

**Matrix: Solid** 

Analysis Batch: 465426

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

**Prep Batch: 465428** 

Analyte Result Qualifier MDL Unit Prepared Analyzed Dil Fac 07/19/24 08:50 07/19/24 10:21 Chlorobenzene ND 0.040 0.0048 mg/Kg

MB MB

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared Analyze	ed Dil Fac
1,2-Dichloroethane-d4 (Surr)	100	80 - 121	07/19/24 08:50 07/19/24 1	0:21 1
4-Bromofluorobenzene (Surr)	99	80 - 120	07/19/24 08:50 07/19/24 1	0:21 1
Dibromofluoromethane (Surr)	106	80 - 120	07/19/24 08:50 07/19/24 1	0:21 1
Toluene-d8 (Surr)	101	80 - 120	07/19/24 08:50 07/19/24 1	0:21 1

Lab Sample ID: LCS 580-465428/1-A **Client Sample ID: Lab Control Sample** 

LCS LCS

**Matrix: Solid** 

**Analysis Batch: 465426** 

Prep Type: Total/NA

Prep Batch: 465428

%Rec

Added Result Qualifier Analyte Unit D %Rec Limits Chlorobenzene 0.800 0.761 95 80 - 125 mg/Kg

Spike

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		80 - 121
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
Toluene-d8 (Surr)	102		80 - 120

Lab Sample ID: LCSD 580-465428/2-A Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** 

Analysis Batch: 465426

Prep Type: Total/NA

Prep Batch: 465428

Spike LCSD LCSD %Rec **RPD** Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit 0.800 0.785 80 - 125 Chlorobenzene mg/Kg 3

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		80 - 121
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120
Toluene-d8 (Surr)	104		80 - 120

**Eurofins Seattle** 

Project/Site: Arkema PDI Sampling

Client: ERM-West

Client Sample ID: PDI-02-SO-23-20240710

Date Collected: 07/10/24 17:20 Date Received: 07/12/24 11:35

Lab Sample ID: 580-141999-1

**Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			464922	BYM	EET SEA	07/15/24 10:27
Total/NA	Analysis	8260D		1	464910	BYM	EET SEA	07/15/24 13:26
Total/NA	Prep	5035	RA		465027	BYM	EET SEA	07/16/24 08:56
Total/NA	Analysis	8260D	RA	1	465025	BYM	EET SEA	07/16/24 16:30

Client Sample ID: PDI-02-SO-29-20240710

Lab Sample ID: 580-141999-2 Date Collected: 07/10/24 17:25

**Matrix: Solid** 

Date Received: 07/12/24 11:35

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	465135	JS	EET SEA	07/16/24 15:50

Client Sample ID: PDI-02-SO-29-20240710

Lab Sample ID: 580-141999-2 Date Collected: 07/10/24 17:25

**Matrix: Solid** 

Date Received: 07/12/24 11:35 Percent Solids: 90.4

_	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			464922	BYM	EET SEA	07/15/24 10:27
Total/NA	Analysis	8260D		1	464910	BYM	EET SEA	07/15/24 13:48
Total/NA	Prep	5035	DL		465155	BYM	EET SEA	07/15/24 09:18
Total/NA	Analysis	8260D	DL	1	465153	BYM	EET SEA	07/17/24 12:35
Total/NA	Prep	5035			465292	BYM	EET SEA	07/18/24 08:34
Total/NA	Analysis	8260D		1	465296	BYM	EET SEA	07/18/24 13:53

Client Sample ID: PDI-02-SO-26.5-20240710

Lab Sample ID: 580-141999-3 Date Collected: 07/10/24 17:45

**Matrix: Solid** 

Date Received: 07/12/24 11:35

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	465135	JS	EET SEA	07/16/24 15:50

Client Sample ID: PDI-02-SO-26.5-20240710

Lab Sample ID: 580-141999-3 Date Collected: 07/10/24 17:45 **Matrix: Solid** 

Date Received: 07/12/24 11:35 Percent Solids: 88.1

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			464922	BYM	EET SEA	07/15/24 10:27
Total/NA	Analysis	8260D		1	464910	BYM	EET SEA	07/15/24 14:09
Total/NA	Prep	5035	DL		465155	BYM	EET SEA	07/15/24 09:18
Total/NA	Analysis	8260D	DL	1	465153	BYM	EET SEA	07/17/24 12:56
Total/NA	Prep	5035	RA		465428	BYM	EET SEA	07/19/24 08:50
Total/NA	Analysis	8260D	RA	1	465426	BYM	EET SEA	07/19/24 12:10

Project/Site: Arkema PDI Sampling

Client: ERM-West

Client Sample ID: TB-01-SO-20240710

Date Collected: 07/10/24 00:01 Date Received: 07/12/24 11:35

Lab Sample ID: 580-141999-4

**Matrix: Solid** 

Batch Batch Dilution Batch Prepared **Prep Type** Method **Factor** Number Analyst or Analyzed Type Run Lab Total/NA 5035 464922 BYM EET SEA 07/15/24 10:27 Prep Total/NA 8260D 07/15/24 14:30 Analysis 464910 BYM **EET SEA** 1 Total/NA Prep 5035 RA 465155 BYM **EET SEA** 07/15/24 09:18 EET SEA Total/NA Analysis 8260D 465153 BYM 07/17/24 11:31 RA 1

Client Sample ID: PDI-02-SO-34.5-20240710

Date Collected: 07/10/24 18:45 Date Received: 07/12/24 11:35

Lab Sample ID: 580-141999-5

**Matrix: Solid** 

ı		Batch	Batch		Dilution	Batch			Prepared
	Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
	Total/NA	Analysis	2540G		1	465135	JS	EET SEA	07/16/24 15:50

Client Sample ID: PDI-02-SO-34.5-20240710

Date Collected: 07/10/24 18:45 Date Received: 07/12/24 11:35

Lab Sample ID: 580-141999-5 **Matrix: Solid** 

Percent Solids: 93.3

_	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			464922	BYM	EET SEA	07/15/24 10:27
Total/NA	Analysis	8260D		1	464910	BYM	EET SEA	07/15/24 14:52
Total/NA	Prep	5035	DL		465155	BYM	EET SEA	07/15/24 09:18
Total/NA	Analysis	8260D	DL	1	465153	BYM	EET SEA	07/17/24 12:14
Total/NA	Prep	5035			465292	BYM	EET SEA	07/18/24 08:34
Total/NA	Analysis	8260D		1	465296	BYM	EET SEA	07/18/24 13:31

Client Sample ID: PDI-02-SO-36-20240711

Date Collected: 07/11/24 09:25

Date Received: 07/12/24 11:35

Lab Sam	ple ID	): <b>580</b> -1	141999-6
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**Matrix: Solid** 

	Batch	Batch		Dilution	Batch		Prepared
Prep Type	Туре	Method	Run	Factor	Number Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G			465135 JS	EET SEA	07/16/24 15:50

Client Sample ID: PDI-02-SO-36-20240711

Date Collected: 07/11/24 09:25 Date Received: 07/12/24 11:35

Lab Sample ID: 580-141999-6

**Matrix: Solid** 

Percent Solids: 91.6

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			464922	BYM	EET SEA	07/15/24 10:27
Total/NA	Analysis	8260D		1	464910	BYM	EET SEA	07/15/24 15:14
Total/NA	Prep	5035	RA		465155	BYM	EET SEA	07/15/24 09:18
Total/NA	Analysis	8260D	RA	1	465153	BYM	EET SEA	07/17/24 11:53

**Eurofins Seattle** 

#### **Lab Chronicle**

Client: ERM-West Job ID: 580-141999-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-02-SO-37-20240711

Lab Sample ID: 580-141999-7 Date Collected: 07/11/24 09:25

**Matrix: Solid** 

Date Received: 07/12/24 11:35

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	465135	JS	EET SEA	07/16/24 15:50

Client Sample ID: PDI-02-SO-37-20240711 Lab Sample ID: 580-141999-7

Date Collected: 07/11/24 09:25 **Matrix: Solid** 

Date Received: 07/12/24 11:35 Percent Solids: 88.3

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	<del></del>		464922	BYM	EET SEA	07/15/24 10:27
Total/NA	Analysis	8260D		1	464910	BYM	EET SEA	07/15/24 12:23
Total/NA	Prep	5035	RA		465027	BYM	EET SEA	07/16/24 08:56
Total/NA	Analysis	8260D	RA	1	465025	BYM	EET SEA	07/16/24 16:09

**Laboratory References:** 

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

### **Accreditation/Certification Summary**

Client: ERM-West Job ID: 580-141999-1

Project/Site: Arkema PDI Sampling

#### **Laboratory: Eurofins Seattle**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Progra	am	Identification Number	Expiration Date		
Oregon	NELAF	)	4167	07-07-24 *		
The following analytes	are included in this repo	rt, but the laboratory is r	not certified by the governing author	ity. This list may include ar		
,		,	not certified by the governing author	ity. This list may include ar		
for which the agency of	loes not offer certification	•	, , ,	ity. This list may include ar		
,		,	not certified by the governing author  Analyte	ity. This list may include ar		

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a a

 $<sup>{}^{\</sup>star}\operatorname{Accreditation/Certification\ renewal\ pending\ -\ accreditation/certification\ considered\ valid}.$ 

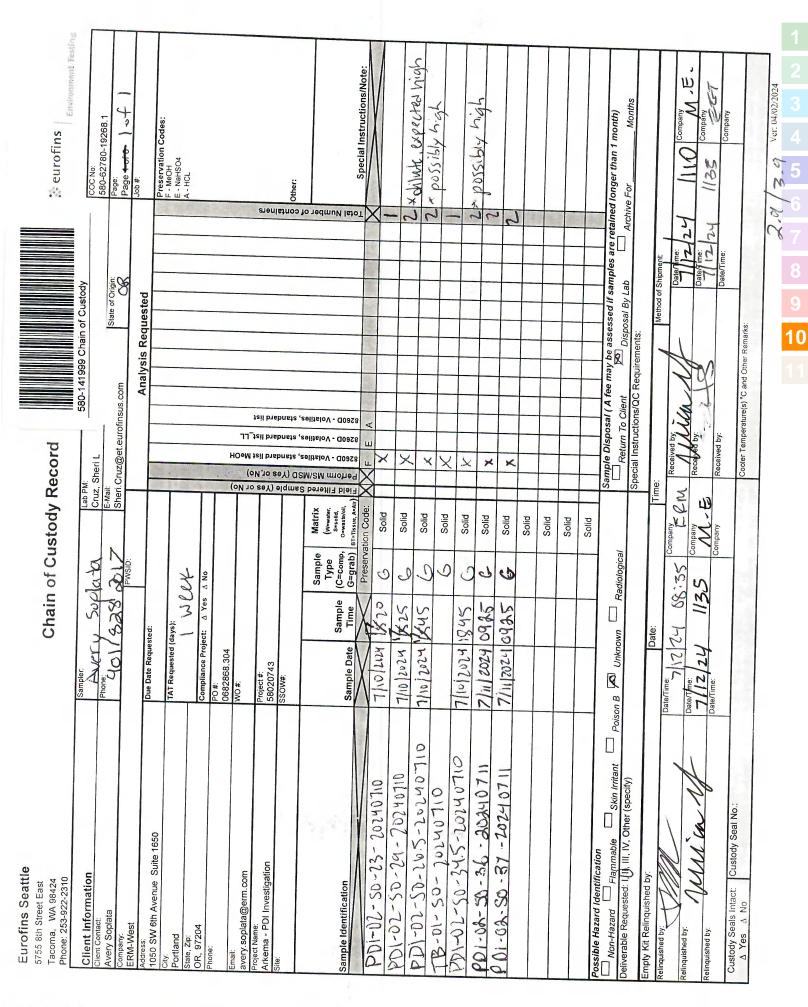
# **Sample Summary**

Client: ERM-West

Project/Site: Arkema PDI Sampling

Job ID: 580-141999-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-141999-1	PDI-02-SO-23-20240710	Solid	07/10/24 17:20	07/12/24 11:35
580-141999-2	PDI-02-SO-29-20240710	Solid	07/10/24 17:25	07/12/24 11:35
580-141999-3	PDI-02-SO-26.5-20240710	Solid	07/10/24 17:45	07/12/24 11:35
580-141999-4	TB-01-SO-20240710	Solid	07/10/24 00:01	07/12/24 11:35
580-141999-5	PDI-02-SO-34.5-20240710	Solid	07/10/24 18:45	07/12/24 11:35
580-141999-6	PDI-02-SO-36-20240711	Solid	07/11/24 09:25	07/12/24 11:35
580-141999-7	PDI-02-SO-37-20240711	Solid	07/11/24 09:25	07/12/24 11:35



5755 8th Street East Tacoma, WA 98424 Phone: 253-922-2310

# Chain of Custody Record



🎊 eurofins

Environment Testing

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Client Information	Sampler:	, 5001	ata		o PM: uz, Sh	neri L	-										COC No: <b>580-62</b> 7	780-192	68.1		
Client Contact:	Phone:	828	217		Mail: neri.Cr		ot our	- ofinau	o oom			State of 0	Origin:	terit is kalifik di menjana kecar			<sup>Page:</sup> Page <del>←</del>		) of	1	
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ERM-West	-		<u></u>			-			An	alysis	Req	ueste	d							***********	
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City:	TAT Requested (d		4.45		$\sqcap 1$												E - NaHS( A - HCL	<b>D4</b>			
Portland State, Zip:	-{	1 WE	ex																		
OR, 97204	Compliance Proje	ct: ∆ Yes	Δ No																		
Phone:	PO#: 0682868.304						<b>=</b>											m 6	aП		
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avery.soplata@erm.com Project Name:	Project #:					ž	standard list Me	dist								TIONS					
Arkema - PDI Investigation	58020743					se s	ndar	standard list								12					
Site:	SSOW#:				Samp			- 1 -								هر در	Other:	+ 2			
			Sample	Matrix	ered	MS/N	8260D - Volatiles,	Volatiles,								Total Number					
		١	Туре	(W=water, S=solid,	崮	E	>   >	, ×								Ž					
Sample Identification	Sample Date	Sample Time	(C=c <sub>omp</sub> , G=grab)	O=waste/oil, BT=Tissue, A=A	(ir)	Perfor	8260	8260D								Tota	Sr	pecial li	nstruct	ions/N	ote:
AND THE PROPERTY OF THE PROPER		F-		tion Code:	- A		=	А							100	X				100 M	and the second
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PD1-02-50-265-26240710	7/10/2024	1445	6	Solid			X										* po				
TB-01-50- 20240710			6	Solid		/	X									1					
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Possible Hazard Identification  ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poi	C 🐼 (/n/c		Badiala sia	.1		Sam			a <b>I ( A f</b> Client	ee may	y be a	<b>ssesse</b> Disposal	d if sa	mples			<b>d long</b> e ive For	er than		h) onths	
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Δ Yes Δ No						1	16	1.00014	. 1/ 6						agent residen						

Client: ERM-West Job Number: 580-141999-1

Login Number: 141999 List Source: Eurofins Seattle

List Number: 1

Creator: Silva, Shawn 1

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# **ANALYTICAL REPORT**

### PREPARED FOR

Attn: Avery Soplata ERM-West 1050 SW 6th Avenue Suite 1650 Portland, Oregon 97204 Generated 7/25/2024 2:51:50 PM

# **JOB DESCRIPTION**

Arkema - PDI Investigation

### **JOB NUMBER**

580-142079-1

Eurofins Seattle 5755 8th Street East Tacoma WA 98424



# **Eurofins Seattle**

#### **Job Notes**

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

#### **Authorization**

Generated 7/25/2024 2:51:50 PM

Authorized for release by Sheri Cruz, Project Manager I Sheri.Cruz@et.eurofinsus.com (253)922-2310

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Client: ERM-West

Project/Site: Arkema - PDI Investigation

Laboratory Job ID: 580-142079-1

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#### **Case Narrative**

Client: ERM-West Job ID: 580-142079-1

Project: Arkema - PDI Investigation

Job ID: 580-142079-1 Eurofins Seattle

# Job Narrative 580-142079-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these
  situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise
  specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed
  unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 7/16/2024 1:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.8°C.

#### GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-465636 recovered above the upper control limit for Bromomethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: PDI-03-SO-19.5-20240712 (580-142079-1), PDI-03-SO-25.5-20240712 (580-142079-2), PDI-03-SO-29.5-20240712 (580-142079-3), PDI-03-SO-39.5-20240712 (580-142079-4), PDI-03-SO-42-20240712 (580-142079-5), TB-01-SO-20240716 (580-142079-6) and (CCVIS 580-465636/3).

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-465636 recovered outside acceptance criteria, low biased, for 1,2,3-Trichlorobenzene. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte, the data are reported.

Method 8260D: The method blank for preparation batch 580-465638 and analytical batch 580-465636 contained Benzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-465991 recovered outside acceptance criteria, low biased, for Chloroethane. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte, the data are reported.

Method 8260D: The method blank for preparation batch 580-465985 and analytical batch 580-465991 contained Methylene Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8260D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 580-465985 and analytical batch 580-465991 recovered outside control limits for the following analytes: Chloroethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D: The following samples was provided to the laboratory with a significantly different initial weight than that required by the reference method: PDI-03-SO-42-20240712 (580-142079-5). Deviations in the weight by more than 20% may affect reporting limits and potentially method performance. The method specifies 10g. The amount provided was above this range.

Method 8260D: Surrogate recovery for the following samples were outside the upper control limit: PDI-03-SO-29.5-20240712 (580-142079-3) and PDI-03-SO-39.5-20240712 (580-142079-4). This sample did not contain any chemically associated analytes; therefore, re-extraction and/or re-analysis was performed.

Method 8260D: Surrogate recovery for the following samples were outside control limits: PDI-03-SO-29.5-20240712 (580-142079-3) and PDI-03-SO-39.5-20240712 (580-142079-4). Evidence of matrix interference through second analysis is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8260D: The result for Chlorobenzene was above the upper calibration range and is reported as an Estimated ("E") value in samples: PDI-03-SO-29.5-20240712 (580-142079-3) and PDI-03-SO-39.5-20240712 (580-142079-4) The result reported is from

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#### **Case Narrative**

Client: ERM-West Job ID: 580-142079-1

Project: Arkema - PDI Investigation

#### Job ID: 580-142079-1 (Continued)

**Eurofins Seattle** 

lowest level of dilution. Determination is the best analytical result achievable.

Method 8260D: Surrogate recovery for the following samples was outside control limits: PDI-03-SO-29.5-20240712 (580-142079-3) and PDI-03-SO-39.5-20240712 (580-142079-4). Re-extraction and/or re-analysis was performed and surrogate recovery was outside control limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **General Chemistry**

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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#### **Definitions/Glossary**

Client: ERM-West Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

#### **Qualifiers**

#### **GC/MS VOA**

Qualifier	Qualifier Description
*_	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
В	Compound was found in the blank and sample.
E	Result exceeded calibration range.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.

#### **Glossary**

DL

DLC

DL, RA, RE, IN

Ciocoary	
Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor

Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contamina

Detection Limit (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

Decision Level Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent
POS Positive / Present
PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

Client Sample ID: PDI-03-SO-19.5-20240712

Lab Sample ID: 580-142079-1 Date Collected: 07/12/24 10:55 Matrix: Solid Date Received: 07/16/24 13:00 Percent Solids: 78.0

Method: SW846 8260D - Volatile Organic Compounds by GC/MS **MDL** Unit Dil Fac Analyte Result Qualifier D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.041 0.010 mg/Kg 07/22/24 09:35 07/22/24 12:29 0.083 1,1,1-Trichloroethane 0.014 0.0095 mg/Kg 07/22/24 09:35 07/22/24 12:29 1,1,2,2-Tetrachloroethane ND 0.041 0.016 mg/Kg 07/22/24 09:35 07/22/24 12:29 0.015 07/22/24 09:35 07/22/24 12:29 1,1,2-Trichloroethane ND 0.041 mg/Kg 1.1-Dichloroethane ND 0.083 0.019 mg/Kg 07/22/24 09:35 07/22/24 12:29 1,1-Dichloroethene NΠ 0.083 0.026 mg/Kg 07/22/24 09:35 07/22/24 12:29 1,1-Dichloropropene ND 0.083 0.011 mg/Kg 07/22/24 09:35 07/22/24 12:29 ND 0.17 0.082 07/22/24 09:35 07/22/24 12:29 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.083 0.024 mg/Kg 07/22/24 09:35 07/22/24 12:29 1,2,4-Trichlorobenzene ND 0.17 0.088 mg/Kg 07/22/24 09:35 07/22/24 12:29 1,2,4-Trimethylbenzene ND 0.083 0.028 mg/Kg 07/22/24 09:35 07/22/24 12:29 0.032 mg/Kg 1.2-Dibromo-3-Chloropropane ND 0.12 07/22/24 09:35 07/22/24 12:29 1 1,2-Dibromoethane ND 0.041 0.0079 mg/Kg 07/22/24 09:35 07/22/24 12:29 1,2-Dichlorobenzene ND 0.083 0.018 mg/Kg 07/22/24 09:35 07/22/24 12:29 ND 0.041 0.011 mg/Kg 07/22/24 09:35 07/22/24 12:29 1.2-Dichloroethane 07/22/24 09:35 07/22/24 12:29 1,2-Dichloropropane NΩ 0.041 0.014 mg/Kg ND 1,3,5-Trimethylbenzene 0.083 0.016 mg/Kg 07/22/24 09:35 07/22/24 12:29 1,3-Dichlorobenzene ND 0.12 0.028 mg/Kg 07/22/24 09:35 07/22/24 12:29 07/22/24 09:35 07/22/24 12:29 1,3-Dichloropropane ND 0.012 mg/Kg 0.12 1,4-Dichlorobenzene ND 0.12 0.022 mg/Kg 07/22/24 09:35 07/22/24 12:29 2,2-Dichloropropane ND 0.083 0.025 mg/Kg ť. 07/22/24 09:35 07/22/24 12:29 2-Chlorotoluene ND 0.083 0.018 mg/Kg 07/22/24 09:35 07/22/24 12:29 4-Chlorotoluene ND 0.083 0.020 mg/Kg 07/22/24 09:35 07/22/24 12:29 4-Isopropyltoluene ND 0.083 0.021 mg/Kg 07/22/24 09:35 07/22/24 12:29 0.041 0.0079 mg/Kg 07/22/24 09:35 07/22/24 12:29 Benzene 0.011 J B 0.0087 07/22/24 09:35 07/22/24 12:29 Bromobenzene ND 0.083 mg/Kg Bromochloromethane ND 0.083 0.013 mg/Kg 07/22/24 09:35 07/22/24 12:29 Bromodichloromethane 07/22/24 09:35 07/22/24 12:29 ND 0.083 0.011 mg/Kg 0.0093 07/22/24 12:29 Bromoform NΩ 0.083 mg/Kg 07/22/24 09:35 0.078 07/22/24 09:35 07/22/24 12:29 ND Bromomethane 0.21 mg/Kg Carbon tetrachloride ND 0.041 0.0091 mg/Kg 07/22/24 09:35 07/22/24 12:29 0.083 0.010 mg/Kg 07/22/24 09:35 07/22/24 12:29 0.54 Chlorobenzene 0.033 0.041 0.0087 mg/Kg 07/22/24 09:35 07/22/24 12:29 Chloroform ND 0.021 07/22/24 09:35 07/22/24 12:29 Chloromethane 0.12 mg/Kg cis-1,2-Dichloroethene ND 0.12 0.026 mg/Kg 07/22/24 09:35 07/22/24 12:29 cis-1.3-Dichloropropene ND 0.041 0.0083 mg/Kg 07/22/24 09:35 07/22/24 12:29 Dibromochloromethane ND 0.041 0.010 mg/Kg 07/22/24 09:35 07/22/24 12:29 Dibromomethane ND 0.083 0.015 mg/Kg 07/22/24 09:35 07/22/24 12:29 Dichlorodifluoromethane ND 0.095 mg/Kg 07/22/24 12:29 0.52 07/22/24 09:35 Ethylbenzene 0.042 J 0.083 0.019 mg/Kg 07/22/24 09:35 07/22/24 12:29 Hexachlorobutadiene ND 0.21 0.050 mg/Kg 07/22/24 09:35 07/22/24 12:29 Isopropylbenzene ND 0.083 0.018 mg/Kg 07/22/24 09:35 07/22/24 12:29 0.012 ND 0.083 07/22/24 09:35 07/22/24 12:29 Methyl tert-butyl ether mg/Kg 0.083 0.015 07/22/24 09:35 07/22/24 12:29 m-Xylene & p-Xylene 0.28 mg/Kg Naphthalene ND 07/22/24 09:35 07/22/24 12:29 0.31 0.081 mg/Kg n-Butylbenzene ND 0.083 0.038 mg/Kg 07/22/24 09:35 07/22/24 12:29 N-Propylbenzene ND 07/22/24 09:35 07/22/24 12:29 0.083 0.031 mg/Kg o-Xylene 0.061 0.083 0.010 mg/Kg 07/22/24 09:35 07/22/24 12:29 sec-Butylbenzene ND 0.083 0.018 mg/Kg 07/22/24 09:35 07/22/24 12:29

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

Percent Moisture (SM22 2540G)

22.0

Client Sample ID: PDI-03-SO-19.5-20240712

Lab Sample ID: 580-142079-1 Date Collected: 07/12/24 10:55 **Matrix: Solid** 

Date Received: 07/16/24 13:00 Percent Solids: 78.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.083	0.026	mg/Kg	<u></u>	07/22/24 09:35	07/22/24 12:29	1
t-Butylbenzene	ND		0.083	0.016	mg/Kg	≎	07/22/24 09:35	07/22/24 12:29	1
Tetrachloroethene	0.31		0.083	0.011	mg/Kg	₽	07/22/24 09:35	07/22/24 12:29	1
Toluene	ND		0.12	0.028	mg/Kg	≎	07/22/24 09:35	07/22/24 12:29	1
trans-1,2-Dichloroethene	ND		0.12	0.030	mg/Kg	☼	07/22/24 09:35	07/22/24 12:29	1
trans-1,3-Dichloropropene	ND		0.083	0.015	mg/Kg	≎	07/22/24 09:35	07/22/24 12:29	1
Trichloroethene	ND		0.083	0.021	mg/Kg	☼	07/22/24 09:35	07/22/24 12:29	1
Trichlorofluoromethane	ND		0.17	0.054	mg/Kg	☼	07/22/24 09:35	07/22/24 12:29	1
Vinyl chloride	ND		0.21	0.039	mg/Kg	☼	07/22/24 09:35	07/22/24 12:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				07/22/24 09:35	07/22/24 12:29	1
4-Bromofluorobenzene (Surr)	102		80 - 120				07/22/24 09:35	07/22/24 12:29	1
Dibromofluoromethane (Surr)	103		80 - 120				07/22/24 09:35	07/22/24 12:29	1
Toluene-d8 (Surr)	102		80 - 120				07/22/24 09:35	07/22/24 12:29	1
Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	*+	0.17	0.043	mg/Kg	<u></u>	07/24/24 16:02	07/25/24 05:51	1
Methylene Chloride	0.082	JB	0.52	0.054	mg/Kg	₩	07/24/24 16:02	07/25/24 05:51	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
			0.1	0.1	%			07/24/24 16:17	

0.1

0.1 %

07/24/24 16:17

Client: ERM-West Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

Client Sample ID: PDI-03-SO-25.5-20240712

Lab Sample ID: 580-142079-2 Date Collected: 07/12/24 12:00 **Matrix: Solid** Date Received: 07/16/24 13:00 Percent Solids: 90.9

Method: SW846 8260D - Analyte 1,1,1,2-Tetrachloroethane 1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethene 1,1-Dichloropropene		Qualifier	RL 0.024	MDL 0.0061		D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethene	<b>0.010</b> ND		0.024	0.0061					
1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethene	ND	J		0.0001	mg/Kg	₩	07/22/24 09:35	07/22/24 12:50	1
1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethene			0.048	0.0056	mg/Kg	☼	07/22/24 09:35	07/22/24 12:50	•
1,1-Dichloroethane 1,1-Dichloroethene	ND		0.024	0.0092	mg/Kg	₩	07/22/24 09:35	07/22/24 12:50	
1,1-Dichloroethene			0.024	0.0090	mg/Kg	≎	07/22/24 09:35	07/22/24 12:50	
	ND		0.048	0.011	mg/Kg	≎	07/22/24 09:35	07/22/24 12:50	
1,1-Dichloropropene	ND		0.048	0.015	mg/Kg	₽	07/22/24 09:35	07/22/24 12:50	
	ND		0.048	0.0064	mg/Kg	₽	07/22/24 09:35	07/22/24 12:50	,
1,2,3-Trichlorobenzene	ND		0.097	0.048	mg/Kg	₽	07/22/24 09:35	07/22/24 12:50	
1,2,3-Trichloropropane	ND		0.048	0.014	mg/Kg	₽	07/22/24 09:35	07/22/24 12:50	
1,2,4-Trichlorobenzene	ND		0.097	0.052	mg/Kg	₽	07/22/24 09:35	07/22/24 12:50	
1,2,4-Trimethylbenzene	ND		0.048	0.016	mg/Kg	☼	07/22/24 09:35	07/22/24 12:50	
1,2-Dibromo-3-Chloropropane	ND		0.073	0.018	mg/Kg	☼	07/22/24 09:35	07/22/24 12:50	
1,2-Dibromoethane	ND		0.024	0.0046	mg/Kg	₩	07/22/24 09:35	07/22/24 12:50	
1,2-Dichlorobenzene	0.017	J	0.048	0.011	mg/Kg	☼	07/22/24 09:35	07/22/24 12:50	
1,2-Dichloroethane	ND		0.024	0.0067	0 0	☆		07/22/24 12:50	
1,2-Dichloropropane	ND		0.024	0.0080			07/22/24 09:35	07/22/24 12:50	
1,3,5-Trimethylbenzene	ND		0.048	0.0092	0 0	₽	07/22/24 09:35	07/22/24 12:50	
1,3-Dichlorobenzene	ND		0.073		mg/Kg	₩		07/22/24 12:50	
1,3-Dichloropropane	ND		0.073	0.0068		 ₩	07/22/24 09:35	07/22/24 12:50	
1,4-Dichlorobenzene	0.054	J	0.073		mg/Kg			07/22/24 12:50	
2,2-Dichloropropane	ND		0.048		mg/Kg	Ü		07/22/24 12:50	
2-Chlorotoluene	ND		0.048		mg/Kg			07/22/24 12:50	
1-Chlorotoluene	ND		0.048		mg/Kg			07/22/24 12:50	
4-Isopropyltoluene	ND		0.048		mg/Kg			07/22/24 12:50	
Benzene	0.012	JR	0.024	0.0046				07/22/24 12:50	
Bromobenzene	ND	<b>.</b>	0.048	0.0051	0 0	ά		07/22/24 12:50	
Bromochloromethane	ND		0.048	0.0075		Ť Ŭ		07/22/24 12:50	
Bromodichloromethane	ND		0.048	0.0067		. T 		07/22/24 12:50	
Bromoform	ND.		0.048	0.0054	0 0	Ť.		07/22/24 12:50	
Bromomethane	ND		0.12		mg/Kg	Ť		07/22/24 12:50	
Carbon tetrachloride	ND		0.024	0.0053				07/22/24 12:50	
Chlorobenzene	5.9		0.048	0.0058		Ť		07/22/24 12:50	
Chloroform	0.047		0.024	0.0051		γ. Υ		07/22/24 12:50	
Chloromethane	ND		0.024		mg/Kg			07/22/24 12:50	
cis-1,2-Dichloroethene	ND		0.073		mg/Kg	Ď.		07/22/24 12:50	
cis-1,3-Dichloropropene	ND ND		0.073	0.0048		γ. γ.	07/22/24 09:35		
Dibromochloromethane	ND		0.024	0.0048			07/22/24 09:35		
Dibromomethane	ND ND		0.024	0.0039				07/22/24 12:50	
Dichlorodifluoromethane	ND ND		0.30		mg/Kg	*		07/22/24 12:50	
					mg/Kg		07/22/24 09:35		
Ethylbenzene	0.029	J	0.048			<i>₩</i>			
Hexachlorobutadiene	ND ND		0.12		mg/Kg	\$.} 		07/22/24 12:50	
sopropylbenzene	ND		0.048		mg/Kg	<del>.</del>		07/22/24 12:50	
Methyl tert-butyl ether	ND		0.048	0.0073		ά.		07/22/24 12:50	
m-Xylene & p-Xylene	0.16		0.048	0.0086		₩.		07/22/24 12:50	
Naphthalene	ND		0.18		mg/Kg	· · · · · · · · · · · ·		07/22/24 12:50	
n-Butylbenzene	ND		0.048		mg/Kg	<b>‡</b>		07/22/24 12:50	•
N-Propylbenzene	ND		0.048		mg/Kg	₽		07/22/24 12:50	
o-Xylene sec-Butylbenzene	<b>0.033</b> ND	J	0.048	0.0061	mg/Kg mg/Kg		07/22/24 09:35 07/22/24 09:35	07/22/24 12:50	1

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Client: ERM-West Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

Client Sample ID: PDI-03-SO-25.5-20240712

Lab Sample ID: 580-142079-2 Date Collected: 07/12/24 12:00

**Matrix: Solid** Date Received: 07/16/24 13:00 Percent Solids: 90.9

Method: SW846 8260D - Vola Analyte	_	Qualifier	RL	(Conti	•	D	Prepared	Analyzed	Dil Fac
Styrene	ND	<u> </u>	0.048		mg/Kg	— <u>=</u>	07/22/24 09:35	07/22/24 12:50	1
t-Butylbenzene	ND		0.048		mg/Kg	Ď.		07/22/24 12:50	
Tetrachloroethene	0.066		0.048	0.0064	0 0	T.		07/22/24 12:50	
Toluene	ND		0.073		mg/Kg	Ť Ť		07/22/24 12:50	
trans-1.2-Dichloroethene	ND		0.073		mg/Kg	Ť Ť		07/22/24 12:50	1
trans-1,3-Dichloropropene	ND		0.048	0.0085				07/22/24 12:50	
Trichloroethene	ND		0.048		mg/Kg	Ť Ť		07/22/24 12:50	1
Trichlorofluoromethane	ND		0.097		mg/Kg	Ϋ́		07/22/24 12:50	1
Vinyl chloride	ND		0.12		mg/Kg	₩			1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				07/22/24 09:35	07/22/24 12:50	
4-Bromofluorobenzene (Surr)	97		80 - 120				07/22/24 09:35	07/22/24 12:50	1
Dibromofluoromethane (Surr)	103		80 - 120				07/22/24 09:35	07/22/24 12:50	1
Dibromofluoromethane (Surr) Toluene-d8 (Surr)	103 104		80 - 120 80 - 120					07/22/24 12:50 07/22/24 12:50	
Toluene-d8 (Surr)	104	Compound	80 - 120	- RA					
Toluene-d8 (Surr)  Method: SW846 8260D - Vola	104	Compound Qualifier	80 - 120	- RA	Unit	D			,
Toluene-d8 (Surr)  Method: SW846 8260D - Vola Analyte	104	Qualifier	80 - 120 ds by GC/MS	MDL	Unit mg/Kg	<u>D</u>	07/22/24 09:35	07/22/24 12:50	1
Toluene-d8 (Surr)  Method: SW846 8260D - Vola  Analyte  Chloroethane	104 tile Organic Result	Qualifier	80 - 120 ds by GC/MS RL	MDL 0.025			07/22/24 09:35  Prepared 07/24/24 16:02	07/22/24 12:50 Analyzed	1
Toluene-d8 (Surr)  Method: SW846 8260D - Vola  Analyte  Chloroethane  Methylene Chloride	tile Organic Result 0.10	Qualifier  *+ J B	80 - 120 ds by GC/MS RL 0.097	MDL 0.025	mg/Kg	<u></u>	07/22/24 09:35  Prepared 07/24/24 16:02	07/22/24 12:50  Analyzed 07/25/24 06:15	Dil Fac
Toluene-d8 (Surr)  Method: SW846 8260D - Vola Analyte Chloroethane Methylene Chloride  Surrogate	tile Organic Result 0.10 0.048	Qualifier  *+ J B	80 - 120 ds by GC/MS RL 0.097 0.30	MDL 0.025	mg/Kg	<u></u>	07/22/24 09:35  Prepared  07/24/24 16:02  07/24/24 16:02	07/22/24 12:50  Analyzed 07/25/24 06:15 07/25/24 06:15	Dil Fac
Method: SW846 8260D - Vola Analyte Chloroethane Methylene Chloride Surrogate 1,2-Dichloroethane-d4 (Surr)	tile Organic Result 0.10 0.048	Qualifier  *+ J B	80 - 120  ds by GC/MS RL 0.097 0.30  Limits	MDL 0.025	mg/Kg	<u></u>	07/22/24 09:35  Prepared 07/24/24 16:02 07/24/24 16:02  Prepared 07/24/24 16:02	07/22/24 12:50  Analyzed 07/25/24 06:15 07/25/24 06:15  Analyzed	Dil Fac
Toluene-d8 (Surr)  Method: SW846 8260D - Vola Analyte Chloroethane Methylene Chloride  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr)	tile Organic Result 0.10 0.048  %Recovery 95	Qualifier  *+ J B	80 - 120  ds by GC/MS RL 0.097 0.30  Limits 80 - 121	MDL 0.025	mg/Kg	<u></u>	Prepared 07/24/24 16:02 07/24/24 16:02 Prepared 07/24/24 16:02 07/24/24 16:02 07/24/24 16:02	07/22/24 12:50  Analyzed 07/25/24 06:15 07/25/24 06:15  Analyzed 07/25/24 06:15	Dil Fac
Method: SW846 8260D - Vola Analyte Chloroethane Methylene Chloride Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr)	tile Organic Result 0.10 0.048  %Recovery 95 98	Qualifier  *+ J B	80 - 120 ds by GC/MS RL 0.097 0.30 Limits 80 - 121 80 - 120	MDL 0.025	mg/Kg	<u></u>	Prepared 07/24/24 16:02 07/24/24 16:02 Prepared 07/24/24 16:02 07/24/24 16:02 07/24/24 16:02 07/24/24 16:02	Analyzed 07/25/24 06:15 07/25/24 06:15 Analyzed 07/25/24 06:15 07/25/24 06:15	Dil Fac
	104 tile Organic Result 0.10 0.048 %Recovery 95 98 102	Qualifier  *+ J B	80 - 120 ds by GC/MS RL 0.097 0.30 Limits 80 - 121 80 - 120 80 - 120	MDL 0.025	mg/Kg	<u></u>	Prepared 07/24/24 16:02 07/24/24 16:02 Prepared 07/24/24 16:02 07/24/24 16:02 07/24/24 16:02 07/24/24 16:02	Analyzed 07/25/24 06:15 07/25/24 06:15 Analyzed 07/25/24 06:15 07/25/24 06:15 07/25/24 06:15 07/25/24 06:15	Dil Fac
Method: SW846 8260D - Vola Analyte Chloroethane Methylene Chloride Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr) General Chemistry	### 104  tile Organic Result  0.10 0.048  ###################################	Qualifier  *+ J B	80 - 120 ds by GC/MS RL 0.097 0.30 Limits 80 - 121 80 - 120 80 - 120	MDL 0.025	mg/Kg mg/Kg	<u></u>	Prepared 07/24/24 16:02 07/24/24 16:02 Prepared 07/24/24 16:02 07/24/24 16:02 07/24/24 16:02 07/24/24 16:02	Analyzed 07/25/24 06:15 07/25/24 06:15 Analyzed 07/25/24 06:15 07/25/24 06:15 07/25/24 06:15 07/25/24 06:15	Dil Fac
Method: SW846 8260D - Vola Analyte Chloroethane Methylene Chloride Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)	### 104  tile Organic Result  0.10 0.048  ###################################	Qualifier *+ J B  Qualifier	80 - 120  ds by GC/MS RL 0.097 0.30  Limits 80 - 121 80 - 120 80 - 120 80 - 120	MDL 0.025 0.031	mg/Kg mg/Kg	— <u>~</u> ☆	Prepared 07/24/24 16:02 07/24/24 16:02 Prepared 07/24/24 16:02 07/24/24 16:02 07/24/24 16:02 07/24/24 16:02 07/24/24 16:02	Analyzed 07/25/24 06:15 07/25/24 06:15 Analyzed 07/25/24 06:15 07/25/24 06:15 07/25/24 06:15 07/25/24 06:15	Dil Fac

Client: ERM-West Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

Client Sample ID: PDI-03-SO-29.5-20240712

Lab Sample ID: 580-142079-3 Date Collected: 07/12/24 12:00 Matrix: Solid Date Received: 07/16/24 13:00 Percent Solids: 88.5

Method: SW846 8260D - Volatile Organic Compounds by GC/MS **MDL** Unit Dil Fac Analyte Result Qualifier D Prepared Analyzed mg/Kg 1,1,1,2-Tetrachloroethane ND 0.027 0.0068 07/22/24 09:35 07/22/24 13:12 0.054 1,1,1-Trichloroethane 0.57 0.0062 mg/Kg 07/22/24 09:35 07/22/24 13:12 1,1,2,2-Tetrachloroethane ND 0.027 0.010 mg/Kg 07/22/24 09:35 07/22/24 13:12 ND 07/22/24 09:35 07/22/24 13:12 1,1,2-Trichloroethane 0.027 0.010 mg/Kg 1.1-Dichloroethane ND 0.054 0.012 mg/Kg 07/22/24 09:35 07/22/24 13:12 1,1-Dichloroethene ND 0.054 0.017 mg/Kg 07/22/24 09:35 07/22/24 13:12 0.0098 0.054 0.0072 mg/Kg 07/22/24 09:35 07/22/24 13:12 1,1-Dichloropropene ND 0.054 07/22/24 09:35 07/22/24 13:12 1,2,3-Trichlorobenzene 0 11 mg/Kg 1,2,3-Trichloropropane 0.052 0.054 0.016 mg/Kg 07/22/24 09:35 07/22/24 13:12 0.11 0.058 mg/Kg 07/22/24 09:35 07/22/24 13:12 1,2,4-Trichlorobenzene 0.12 1,2,4-Trimethylbenzene 0.043 J 0.054 0.018 mg/Kg 07/22/24 09:35 07/22/24 13:12 0.021 mg/Kg 1.2-Dibromo-3-Chloropropane ND 0.081 07/22/24 09:35 07/22/24 13:12 1 07/22/24 09:35 07/22/24 13:12 1,2-Dibromoethane ND 0.027 0.0052 mg/Kg 0.054 0.012 mg/Kg 07/22/24 09:35 07/22/24 13:12 1,2-Dichlorobenzene 5.3 ND 0.027 0.0075 mg/Kg 07/22/24 09:35 07/22/24 13:12 1.2-Dichloroethane 0.0090 07/22/24 09:35 07/22/24 13:12 1,2-Dichloropropane ND 0.027 mg/Kg 0.026 0.054 0.010 mg/Kg 07/22/24 09:35 07/22/24 13:12 1,3,5-Trimethylbenzene 0.081 0.018 mg/Kg 07/22/24 09:35 07/22/24 13:12 1.3-Dichlorobenzene 0.78 0.0076 07/22/24 09:35 07/22/24 13:12 ND 0.081 mg/Kg 1,3-Dichloropropane mg/Kg 2,2-Dichloropropane ND 0.054 0.016 07/22/24 09:35 07/22/24 13:12 2-Chlorotoluene 0.054 0.012 mg/Kg 07/22/24 09:35 07/22/24 13:12 0.066 0.064 0.054 0.013 mg/Kg 07/22/24 09:35 07/22/24 13:12 4-Chlorotoluene 0.054 0.014 mg/Kg 07/22/24 09:35 07/22/24 13:12 4-Isopropyltoluene 0.10 Benzene ND 0.027 0.0052 mg/Kg 07/22/24 09:35 07/22/24 13:12 **Bromobenzene** 0.054 0.0057 mg/Kg 07/22/24 09:35 07/22/24 13:12 0.32 0.0084 07/22/24 09:35 07/22/24 13:12 Bromochloromethane ND 0.054 mg/Kg Bromodichloromethane ND 0.054 0.0075 mg/Kg 07/22/24 09:35 07/22/24 13:12 Bromoform ND 0.0061 07/22/24 09:35 07/22/24 13:12 0.054 mg/Kg Bromomethane NΩ 0.14 0.051 mg/Kg 07/22/24 09:35 07/22/24 13:12 0.027 0.0060 07/22/24 09:35 07/22/24 13:12 Carbon tetrachloride 0.024 mg/Kg Chloroform 0.10 0.027 0.0057 mg/Kg 07/22/24 09:35 07/22/24 13:12 Chloromethane ND 0.081 0.014 mg/Kg 07/22/24 09:35 07/22/24 13:12 cis-1,2-Dichloroethene ND 0.081 0.017 mg/Kg 07/22/24 09:35 07/22/24 13:12 ND 07/22/24 09:35 07/22/24 13:12 cis-1,3-Dichloropropene 0.027 0.0054 mg/Kg Dibromochloromethane ND 0.027 0.0067 mg/Kg 07/22/24 09:35 07/22/24 13:12 Dibromomethane ND 0.054 0.010 mg/Kg 07/22/24 09:35 07/22/24 13:12 Dichlorodifluoromethane ND 0.34 0.062 mg/Kg 07/22/24 09:35 07/22/24 13:12 Ethylbenzene ND 0.054 0.012 mg/Kg 07/22/24 09:35 07/22/24 13:12 0.032 mg/Kg 07/22/24 09:35 07/22/24 13:12 Hexachlorobutadiene 0.081 0.14 Isopropylbenzene ND 0.054 0.012 mg/Kg 07/22/24 09:35 07/22/24 13:12 Methyl tert-butyl ether ND 0.054 0.0081 mg/Kg 07/22/24 09:35 07/22/24 13:12 m-Xylene & p-Xylene ND 0.054 0.0096 mg/Kg 07/22/24 09:35 07/22/24 13:12 ND 0.053 mg/Kg 07/22/24 09:35 07/22/24 13:12 Naphthalene 0.20 n-Butylbenzene 0.054 0.025 07/22/24 09:35 07/22/24 13:12 ND mg/Kg ND 0.054 07/22/24 09:35 07/22/24 13:12 N-Propylbenzene 0.020 mg/Kg sec-Butylbenzene ND 0.054 0.012 mg/Kg 07/22/24 09:35 07/22/24 13:12 ND 0.017 mg/Kg 07/22/24 09:35 07/22/24 13:12 Styrene 0.054 t-Butylbenzene 0.017 J 0.054 0.010 mg/Kg 07/22/24 09:35 07/22/24 13:12 **Toluene** 0.081 0.018 mg/Kg 07/22/24 09:35 07/22/24 13:12 6.3

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

1,2-Dichloroethane-d4 (Surr)

4-Bromofluorobenzene (Surr)

Dibromofluoromethane (Surr)

Toluene-d8 (Surr)

Client Sample ID: PDI-03-SO-29.5-20240712

Date Collected: 07/12/24 12:00 Date Received: 07/16/24 13:00

Lab Sample ID: 580-142079-3

07/24/24 16:02 07/25/24 07:01

07/24/24 16:02 07/25/24 07:01

07/24/24 16:02 07/25/24 07:01 07/24/24 16:02 07/25/24 07:01

**Matrix: Solid** 

Percent Solids: 88.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		0.081	0.020	mg/Kg	<u></u>	07/22/24 09:35	07/22/24 13:12	1
trans-1,3-Dichloropropene	ND		0.054	0.0095	mg/Kg	☆	07/22/24 09:35	07/22/24 13:12	1
Trichloroethene	0.048	J	0.054	0.014	mg/Kg	⊅	07/22/24 09:35	07/22/24 13:12	1
Trichlorofluoromethane	ND		0.11	0.035	mg/Kg	☆	07/22/24 09:35	07/22/24 13:12	1
Vinyl chloride	ND		0.14	0.025	mg/Kg	≎	07/22/24 09:35	07/22/24 13:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				07/22/24 09:35	07/22/24 13:12	1
4-Bromofluorobenzene (Surr)	114		80 - 120				07/22/24 09:35	07/22/24 13:12	1
Dibromofluoromethane (Surr)	98		80 - 120				07/22/24 09:35	07/22/24 13:12	1
Toluene-d8 (Surr)	3105	S1+	80 - 120				07/22/24 09:35	07/22/24 13:12	1
Method: SW846 8260D - Vo	olatile Organic	Compoun	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	*+	1.2	0.30	mg/Kg	<del>-</del>	07/24/24 16:02	07/25/24 07:01	1
Methylene Chloride	ND		3.6	0.38	mg/Kg	☼	07/24/24 16:02	07/25/24 07:01	1
o-Xylene	0.077	J	0.58	0.073	mg/Kg	☼	07/24/24 16:02	07/25/24 07:01	1
Tetrachloroethene	10		0.58	0.077	mg/Kg	☼	07/24/24 16:02	07/25/24 07:01	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	28		8.8	1.6	mg/Kg	₩	07/25/24 08:33	07/25/24 12:47	1
Chlorobenzene	16000	E	5.8	0.70	mg/Kg	₩	07/25/24 08:33	07/25/24 12:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	63	S1-	80 - 121				07/25/24 08:33	07/25/24 12:47	1
4-Bromofluorobenzene (Surr)	92		80 - 120				07/25/24 08:33	07/25/24 12:47	1
Dibromofluoromethane (Surr)	60	S1-	80 - 120				07/25/24 08:33	07/25/24 12:47	1

80 - 121

80 - 120

80 - 120

80 - 120

92

92

85

156 S1+

General Chemistry Analyte	Result Qualifier	RL	RL Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	88.5	0.1	0.1 %			07/18/24 09:40	1
Percent Moisture (SM22 2540G)	11.5	0.1	0.1 %			07/18/24 09:40	1

Client: ERM-West Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

Client Sample ID: PDI-03-SO-39.5-20240712

Lab Sample ID: 580-142079-4 Date Collected: 07/12/24 14:35 Matrix: Solid Date Received: 07/16/24 13:00 Percent Solids: 87.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS **MDL** Unit Dil Fac Analyte Result Qualifier D Prepared Analyzed 0.030 mg/Kg 1,1,1,2-Tetrachloroethane ND 0.0074 07/22/24 09:35 07/22/24 13:33 0.059 1,1,1-Trichloroethane 0.15 0.0068 mg/Kg 07/22/24 09:35 07/22/24 13:33 1,1,2,2-Tetrachloroethane ND 0.030 0.011 mg/Kg 07/22/24 09:35 07/22/24 13:33 ND 07/22/24 09:35 07/22/24 13:33 1,1,2-Trichloroethane 0.030 0.011 mg/Kg ND 0.059 0.014 mg/Kg 07/22/24 09:35 07/22/24 13:33 1 1-Dichloroethane 1,1-Dichloroethene NΠ 0.059 0.018 mg/Kg 07/22/24 09:35 07/22/24 13:33 1,1-Dichloropropene ND 0.059 0.0078 mg/Kg 07/22/24 09:35 07/22/24 13:33 ND 0.12 0.059 07/22/24 09:35 07/22/24 13:33 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane 0.094 0.059 0.017 mg/Kg 07/22/24 09:35 07/22/24 13:33 0.12 0.063 mg/Kg 07/22/24 09:35 07/22/24 13:33 1,2,4-Trichlorobenzene 0.098 1,2,4-Trimethylbenzene 0.043 0.059 0.020 mg/Kg 07/22/24 09:35 07/22/24 13:33 0.022 mg/Kg 1,2-Dibromo-3-Chloropropane ND 0.089 07/22/24 09:35 07/22/24 13:33 1 07/22/24 13:33 1,2-Dibromoethane ND 0.030 0.0056 mg/Kg 07/22/24 09:35 0.059 0.013 mg/Kg 07/22/24 09:35 07/22/24 13:33 1,2-Dichlorobenzene 5.6 ND 0.030 0.0081 mg/Kg 07/22/24 09:35 07/22/24 13:33 1.2-Dichloroethane 0.0098 07/22/24 09:35 07/22/24 13:33 1,2-Dichloropropane ND 0.030 mg/Kg 0.029 0.059 0.011 mg/Kg 07/22/24 09:35 07/22/24 13:33 1,3,5-Trimethylbenzene 0.089 0.020 mg/Kg 07/22/24 09:35 07/22/24 13:33 1.3-Dichlorobenzene 0.71 07/22/24 09:35 07/22/24 13:33 ND 0.089 0.0083 mg/Kg 1,3-Dichloropropane mg/Kg 2,2-Dichloropropane ND 0.059 0.018 07/22/24 09:35 07/22/24 13:33 2-Chlorotoluene 0.059 0.013 mg/Kg ť. 07/22/24 09:35 07/22/24 13:33 0.088 0.059 0.014 mg/Kg 07/22/24 09:35 07/22/24 13:33 4-Chlorotoluene 0.078 0.059 0.015 mg/Kg 07/22/24 09:35 07/22/24 13:33 4-Isopropyltoluene 0.053 0.051 0.030 0.0056 mg/Kg 07/22/24 09:35 07/22/24 13:33 **Benzene Bromobenzene** 0.059 0.0062 mg/Kg 07/22/24 09:35 07/22/24 13:33 0.42 0.0092 07/22/24 09:35 07/22/24 13:33 Bromochloromethane ND 0.059 mg/Kg Bromodichloromethane ND 0.059 0.0081 mg/Kg 07/22/24 09:35 07/22/24 13:33 Bromoform ND 0.0067 mg/Kg 07/22/24 09:35 07/22/24 13:33 0.059 0.056 Bromomethane ND 0.15 mg/Kg 07/22/24 09:35 07/22/24 13:33 07/22/24 09:35 07/22/24 13:33 0.0065 Carbon tetrachloride 0.30 0.030 mg/Kg Chloroform 1.7 0.030 0.0062 mg/Kg 07/22/24 09:35 07/22/24 13:33 Chloromethane ND 0.089 0.015 mg/Kg 07/22/24 09:35 07/22/24 13:33 cis-1,2-Dichloroethene ND 0.089 0.019 mg/Kg 07/22/24 09:35 07/22/24 13:33 ND 07/22/24 09:35 07/22/24 13:33 cis-1,3-Dichloropropene 0.030 0.0059 mg/Kg Dibromochloromethane ND 0.030 0.0072 mg/Kg 07/22/24 09:35 07/22/24 13:33 Dibromomethane ND 0.059 0.011 mg/Kg 07/22/24 09:35 07/22/24 13:33 Dichlorodifluoromethane ND 0.37 0.068 mg/Kg 07/22/24 09:35 07/22/24 13:33 Ethylbenzene ND 0.059 0.013 mg/Kg 07/22/24 09:35 07/22/24 13:33 0.035 mg/Kg 07/22/24 13:33 Hexachlorobutadiene 0.037 J 0.15 07/22/24 09:35 Isopropylbenzene 0.40 0.059 0.013 mg/Kg 07/22/24 09:35 07/22/24 13:33 Methyl tert-butyl ether ND 0.059 0.0089 mg/Kg 07/22/24 09:35 07/22/24 13:33 m-Xylene & p-Xylene ND 0.059 0.010 mg/Kg 07/22/24 09:35 07/22/24 13:33 0.058 ND 07/22/24 09:35 07/22/24 13:33 Naphthalene 0.22 mg/Kg n-Butylbenzene 0.059 0.027 07/22/24 09:35 07/22/24 13:33 ND mg/Kg ND 0.059 07/22/24 09:35 07/22/24 13:33 N-Propylbenzene 0.022 mg/Kg sec-Butylbenzene ND 0.059 0.013 mg/Kg 07/22/24 09:35 07/22/24 13:33 0.022 07/22/24 09:35 07/22/24 13:33 t-Butylbenzene 0.059 0.011 mg/Kg trans-1,2-Dichloroethene ND 0.089 0.022 mg/Kg 07/22/24 09:35 07/22/24 13:33 trans-1,3-Dichloropropene ND 0.059 0.010 mg/Kg 07/22/24 09:35 07/22/24 13:33

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

Percent Solids (SM22 2540G)

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-03-SO-39.5-20240712

Lab Sample ID: 580-142079-4 Date Collected: 07/12/24 14:35 **Matrix: Solid** 

Date Received: 07/16/24 13:00 Percent Solids: 87.9

Method: SW846 8260D - Vo Analyte	_	Qualifier	RL	•	Unit	D	Prepared	Analyzed	Dil Fa
Trichloroethene	0.025		0.059		mg/Kg	— <del>-</del>	07/22/24 09:35	07/22/24 13:33	
Trichlorofluoromethane	ND		0.12		mg/Kg	Ť Ť		07/22/24 13:33	
Vinyl chloride	ND		0.15		mg/Kg			07/22/24 13:33	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	95	<u> </u>	80 - 121					07/22/24 13:33	
4-Bromofluorobenzene (Surr)	114		80 - 120				07/22/24 09:35	07/22/24 13:33	
Dibromofluoromethane (Surr)	98		80 - 120				07/22/24 09:35	07/22/24 13:33	
Toluene-d8 (Surr)	7268	S1+	80 - 120				07/22/24 09:35	07/22/24 13:33	
Method: SW846 8260D - Vo	olatile Organic	Compoun	ds by GC/MS	- RA					
Analyte	_	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fa
Chloroethane	ND	*+	1.3	0.33	mg/Kg	<u></u>	07/24/24 16:02	07/25/24 07:24	
Methylene Chloride	ND		4.0	0.41	mg/Kg	☼	07/24/24 16:02	07/25/24 07:24	
o-Xylene	ND		0.64	0.079	mg/Kg	☼	07/24/24 16:02	07/25/24 07:24	
Styrene	ND	*-	0.64	0.20	mg/Kg	₩	07/24/24 16:02	07/25/24 07:24	
Tetrachloroethene	12		0.64	0.084	mg/Kg	₩	07/24/24 16:02	07/25/24 07:24	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	95		80 - 121				07/24/24 16:02	07/25/24 07:24	
4-Bromofluorobenzene (Surr)	90		80 - 120				07/24/24 16:02	07/25/24 07:24	
Dibromofluoromethane (Surr)	87		80 - 120				07/24/24 16:02	07/25/24 07:24	
Toluene-d8 (Surr)	162	S1+	80 - 120				07/24/24 16:02	07/25/24 07:24	
Method: SW846 8260D - Vo	olatile Organic	Compoun	ds by GC/MS	- RAD	L				
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fa
1,4-Dichlorobenzene	30		9.5	1.7	mg/Kg	☼	07/25/24 08:33	07/25/24 13:08	
Chlorobenzene	15000	E	6.4	0.76	mg/Kg	☼	07/25/24 08:33	07/25/24 13:08	
Toluene	ND		9.5	2.1	mg/Kg	₩	07/25/24 08:33	07/25/24 13:08	
Surrogate	%Recovery		Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	61	S1-	80 - 121				07/25/24 08:33	07/25/24 13:08	
4 Duama efficiency have a second (Octob)	92		80 - 120				07/25/24 08:33	07/25/24 13:08	
4-Bromotiuoropenzene (Surr)		0.4	80 - 120				07/25/24 08:33	07/25/24 13:08	
, ,	59	S1-	00 - 120						
4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)	59 101	\$1-	80 - 120				07/25/24 08:33	07/25/24 13:08	
Dibromofluoromethane (Surr)		<i>S</i> 1-					07/25/24 08:33	07/25/24 13:08	

07/18/24 09:40

07/18/24 09:40

0.1

0.1

87.9

12.1

0.1 %

0.1 %

Client: ERM-West Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

Client Sample ID: PDI-03-SO-42-20240712

Lab Sample ID: 580-142079-5 Date Collected: 07/12/24 15:40 **Matrix: Solid** Percent Solids: 84.4 Date Received: 07/16/24 13:00

Method: SW846 8260D - Vola Analyte	_	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.022	0.0056		— <del>-</del>	07/22/24 09:35	07/22/24 13:54	
1,1,1-Trichloroethane	ND		0.045	0.0051		ά	07/22/24 09:35	07/22/24 13:54	
1,1,2,2-Tetrachloroethane	ND		0.022	0.0085		ά	07/22/24 09:35	07/22/24 13:54	
1,1,2-Trichloroethane	ND		0.022	0.0083			07/22/24 09:35	07/22/24 13:54	
1,1-Dichloroethane	ND		0.045	0.010		Ť	07/22/24 09:35	07/22/24 13:54	
1,1-Dichloroethene	ND		0.045	0.014	0 0	Ť	07/22/24 09:35	07/22/24 13:54	
1,1-Dichloropropene	ND		0.045	0.0059				07/22/24 13:54	
1,2,3-Trichlorobenzene	ND		0.043		mg/Kg	Ď.		07/22/24 13:54	
	0.053		0.045		mg/Kg	Ď.		07/22/24 13:54	
<b>1,2,3-Trichloropropane</b> 1,2,4-Trichlorobenzene	0.033 ND		0.043		mg/Kg	¥. ☆		07/22/24 13:54	
	ND ND		0.045		mg/Kg		07/22/24 09:35	07/22/24 13:54	
1,2,4-Trimethylbenzene 1,2-Dibromo-3-Chloropropane	ND ND		0.045		0 0		07/22/24 09:35		
					mg/Kg	1\(\frac{1}{2}\)			
1,2-Dibromoethane	ND		0.022	0.0042				07/22/24 13:54	
1,2-Dichlorobenzene	0.054		0.045	0.0097		₩.	07/22/24 09:35	07/22/24 13:54	
1,2-Dichloroethane	ND		0.022	0.0061		<u>.</u> .	07/22/24 09:35	07/22/24 13:54	
1,2-Dichloropropane	ND		0.022	0.0074		: :	07/22/24 09:35	07/22/24 13:54	
1,3,5-Trimethylbenzene	ND		0.045	0.0085		<b>*</b>	07/22/24 09:35	07/22/24 13:54	
1,3-Dichlorobenzene	ND		0.067		mg/Kg	<del>.</del>	07/22/24 09:35	07/22/24 13:54	
1,3-Dichloropropane	ND		0.067	0.0062		☼	07/22/24 09:35	07/22/24 13:54	
1,4-Dichlorobenzene	0.20		0.067		mg/Kg	☼	07/22/24 09:35	07/22/24 13:54	
2,2-Dichloropropane	ND		0.045		mg/Kg		07/22/24 09:35	07/22/24 13:54	
2-Chlorotoluene	ND		0.045	0.0098		₩	07/22/24 09:35	07/22/24 13:54	
4-Chlorotoluene	ND		0.045		mg/Kg	☼	07/22/24 09:35	07/22/24 13:54	
4-Isopropyltoluene	ND		0.045		mg/Kg	₩	07/22/24 09:35	07/22/24 13:54	
Benzene	0.0054	JB	0.022	0.0042	mg/Kg	₩	07/22/24 09:35	07/22/24 13:54	
Bromobenzene	ND		0.045	0.0047	mg/Kg	☼	07/22/24 09:35	07/22/24 13:54	
Bromochloromethane	ND		0.045	0.0069	mg/Kg	☼	07/22/24 09:35	07/22/24 13:54	
Bromodichloromethane	ND		0.045	0.0061	mg/Kg	₩	07/22/24 09:35	07/22/24 13:54	
Bromoform	ND		0.045	0.0050	mg/Kg	☼	07/22/24 09:35	07/22/24 13:54	
Bromomethane	ND		0.11	0.042	mg/Kg	☼	07/22/24 09:35	07/22/24 13:54	
Carbon tetrachloride	ND		0.022	0.0049	mg/Kg	⊅	07/22/24 09:35	07/22/24 13:54	
Chloroform	0.0091	J	0.022	0.0047	mg/Kg	₩	07/22/24 09:35	07/22/24 13:54	
Chloromethane	ND		0.067	0.011	mg/Kg	₩	07/22/24 09:35	07/22/24 13:54	
cis-1,2-Dichloroethene	ND		0.067	0.014	mg/Kg	₩	07/22/24 09:35	07/22/24 13:54	
cis-1,3-Dichloropropene	ND		0.022	0.0045	mg/Kg	☼	07/22/24 09:35	07/22/24 13:54	
Dibromochloromethane	ND		0.022	0.0055	mg/Kg	☆	07/22/24 09:35	07/22/24 13:54	
Dibromomethane	ND		0.045	0.0083			07/22/24 09:35	07/22/24 13:54	
Dichlorodifluoromethane	ND		0.28		mg/Kg	₩	07/22/24 09:35	07/22/24 13:54	
Ethylbenzene	0.023	J	0.045		mg/Kg	Ϋ́		07/22/24 13:54	
Hexachlorobutadiene	ND		0.11		mg/Kg			07/22/24 13:54	
Isopropylbenzene	ND		0.045	0.0096		☆		07/22/24 13:54	
Methyl tert-butyl ether	ND		0.045	0.0067		~ \$		07/22/24 13:54	
m-Xylene & p-Xylene	0.14		0.045	0.0079				07/22/24 13:54	
Naphthalene	ND		0.043		mg/Kg			07/22/24 13:54	
napritrialerie n-Butylbenzene	ND ND		0.17		mg/Kg			07/22/24 13:54	
<del></del>						<del>.</del> .		07/22/24 13:54	
N-Propylbenzene	ND		0.045		mg/Kg	.T.			
o-Xylene	0.030	J	0.045	0.0056		₩.		07/22/24 13:54	•
sec-Butylbenzene	ND		0.045	0.0096		<u>⇔</u>		07/22/24 13:54	
Styrene	ND		0.045	0.014	mg/Kg	₩	07/22/24 09:35	07/22/24 13:54	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

Date Received: 07/16/24 13:00

Client Sample ID: PDI-03-SO-42-20240712

Date Collected: 07/12/24 15:40

Lab Sample ID: 580-142079-5

**Matrix: Solid** Percent Solids: 84.4

Method: SW846 8260D - Vo	latile Organic	Compound	ds by GC/MS	(Conti	nued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
t-Butylbenzene	ND		0.045	0.0086	mg/Kg	<u></u>	07/22/24 09:35	07/22/24 13:54	1
Tetrachloroethene	0.023	J	0.045	0.0059	mg/Kg	₩	07/22/24 09:35	07/22/24 13:54	1
Toluene	ND		0.067	0.015	mg/Kg	₩	07/22/24 09:35	07/22/24 13:54	1
trans-1,2-Dichloroethene	ND		0.067	0.016	mg/Kg	₩	07/22/24 09:35	07/22/24 13:54	1
trans-1,3-Dichloropropene	ND		0.045	0.0078	mg/Kg	₩	07/22/24 09:35	07/22/24 13:54	1
Trichloroethene	ND		0.045	0.011	mg/Kg	₩	07/22/24 09:35	07/22/24 13:54	1
Trichlorofluoromethane	ND		0.089	0.029	mg/Kg	₩	07/22/24 09:35	07/22/24 13:54	1
Vinyl chloride	ND		0.11	0.021	mg/Kg	≎	07/22/24 09:35	07/22/24 13:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		80 - 121				07/22/24 09:35	07/22/24 13:54	1
4-Bromofluorobenzene (Surr)	107		80 - 120				07/22/24 09:35	07/22/24 13:54	1
Dibromofluoromethane (Surr)	100		80 - 120				07/22/24 09:35	07/22/24 13:54	1
Toluene-d8 (Surr)	102		80 - 120				07/22/24 09:35	07/22/24 13:54	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	*+	0.96	0.25	mg/Kg	<del>*</del>	07/24/24 16:02	07/25/24 06:38	1
Methylene Chloride	ND		3.0	0.31	mg/Kg	₩	07/24/24 16:02	07/25/24 06:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 121				07/24/24 16:02	07/25/24 06:38	1
4-Bromofluorobenzene (Surr)	103		80 - 120				07/24/24 16:02	07/25/24 06:38	1
Dibromofluoromethane (Surr)	108		80 - 120				07/24/24 16:02	07/25/24 06:38	1
Toluene-d8 (Surr)	97		80 - 120				07/24/24 16:02	07/25/24 06:38	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	41		0.48	0.058	mg/Kg	<del>-</del>	07/25/24 08:33	07/25/24 12:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	67	S1-	80 - 121				07/25/24 08:33	07/25/24 12:27	1
4-Bromofluorobenzene (Surr)	99		80 - 120				07/25/24 08:33	07/25/24 12:27	1
Dibromofluoromethane (Surr)	59	S1-	80 - 120				07/25/24 08:33	07/25/24 12:27	1
Toluene-d8 (Surr)	106		80 - 120				07/25/24 08:33	07/25/24 12:27	1

General Chemistry							
Analyte	Result Qualifier	RL	RL Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	84.4	0.1	0.1 %			07/18/24 09:40	1
Percent Moisture (SM22 2540G)	15.6	0.1	0.1 %			07/18/24 09:40	1

Client: ERM-West Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

**Client Sample ID: TB-01-SO-20240716** 

Lab Sample ID: 580-142079-6 Date Collected: 07/16/24 00:00 **Matrix: Solid** 

Date Received: 07/16/24 13:00

Analyte	Result Qualifie	er RL	MDL	Unit	D	Prepared	Analyzed	Dil F
1,1,1,2-Tetrachloroethane	ND	0.020	0.0050	mg/Kg		07/22/24 09:35	07/22/24 12:07	
1,1,1-Trichloroethane	ND	0.040	0.0046	mg/Kg		07/22/24 09:35	07/22/24 12:07	
1,1,2,2-Tetrachloroethane	ND	0.020	0.0076	mg/Kg		07/22/24 09:35	07/22/24 12:07	
1,1,2-Trichloroethane	ND	0.020	0.0074	mg/Kg		07/22/24 09:35	07/22/24 12:07	
1,1-Dichloroethane	ND	0.040	0.0092	mg/Kg		07/22/24 09:35	07/22/24 12:07	
1,1-Dichloroethene	ND	0.040	0.012	mg/Kg		07/22/24 09:35	07/22/24 12:07	
1,1-Dichloropropene	ND	0.040	0.0053	mg/Kg		07/22/24 09:35	07/22/24 12:07	
1,2,3-Trichlorobenzene	ND	0.080	0.040	mg/Kg		07/22/24 09:35	07/22/24 12:07	
1,2,3-Trichloropropane	ND	0.040	0.012	mg/Kg		07/22/24 09:35	07/22/24 12:07	
1,2,4-Trichlorobenzene	ND	0.080	0.043	mg/Kg		07/22/24 09:35	07/22/24 12:07	
1,2,4-Trimethylbenzene	ND	0.040	0.014	mg/Kg		07/22/24 09:35	07/22/24 12:07	
1,2-Dibromo-3-Chloropropane	ND	0.060		mg/Kg		07/22/24 09:35	07/22/24 12:07	
1,2-Dibromoethane	ND	0.020	0.0038			07/22/24 09:35	07/22/24 12:07	
1,2-Dichlorobenzene	ND	0.040	0.0087			07/22/24 09:35	07/22/24 12:07	
1,2-Dichloroethane	ND	0.020	0.0055			07/22/24 09:35	07/22/24 12:07	
1,2-Dichloropropane	ND	0.020	0.0066			07/22/24 09:35	07/22/24 12:07	
1,3,5-Trimethylbenzene	ND	0.040	0.0076			07/22/24 09:35	07/22/24 12:07	
1,3-Dichlorobenzene	ND	0.060		mg/Kg		07/22/24 09:35	07/22/24 12:07	
1,3-Dichloropropane	ND	0.060	0.0056			07/22/24 09:35	07/22/24 12:07	
1.4-Dichlorobenzene	ND	0.060		mg/Kg			07/22/24 12:07	
2,2-Dichloropropane	ND	0.040		mg/Kg			07/22/24 12:07	
2-Chlorotoluene	ND	0.040	0.0088				07/22/24 12:07	
4-Chlorotoluene	ND	0.040	0.0098				07/22/24 12:07	
4-Isopropyltoluene	ND	0.040		mg/Kg			07/22/24 12:07	
Benzene	0.0038 JB	0.020	0.0038				07/22/24 12:07	
Bromobenzene	ND	0.040	0.0042				07/22/24 12:07	
Bromochloromethane	ND	0.040	0.0062	0 0			07/22/24 12:07	
Bromodichloromethane	ND	0.040	0.0055				07/22/24 12:07	
Bromoform	ND	0.040	0.0045	0 0			07/22/24 12:07	
Bromomethane	ND	0.10		mg/Kg			07/22/24 12:07	
Carbon tetrachloride	ND	0.020	0.0044				07/22/24 12:07	
Chlorobenzene	ND	0.040	0.0048				07/22/24 12:07	
Chloroform	ND	0.020	0.0042				07/22/24 12:07	
Chloromethane	ND	0.060		mg/Kg			07/22/24 12:07	
cis-1,2-Dichloroethene	ND	0.060		mg/Kg			07/22/24 12:07	
cis-1,3-Dichloropropene	ND	0.020	0.0040				07/22/24 12:07	
Dibromochloromethane	ND	0.020	0.0049				07/22/24 12:07	
Dibromomethane	ND	0.040	0.0074				07/22/24 12:07	
Dichlorodifluoromethane	ND	0.25		mg/Kg			07/22/24 12:07	
Ethylbenzene		0.040	0.0091				07/22/24 12:07	
Etriyiberizerie Hexachlorobutadiene	<b>0.024 J</b> ND	0.10		mg/Kg			07/22/24 12:07	
Isopropylbenzene	ND ND	0.10	0.024				07/22/24 12:07	
			0.0060					
Methyl tert-butyl ether	ND	0.040					07/22/24 12:07 07/22/24 12:07	
m-Xylene & p-Xylene	0.17 ND	0.040	0.0071				07/22/24 12:07	
Naphthalene	ND	0.15		mg/Kg				
n-Butylbenzene	ND	0.040		mg/Kg			07/22/24 12:07	
N-Propylbenzene	ND	0.040		mg/Kg			07/22/24 12:07	
o-Xylene	0.035 J	0.040	0.0050	mg/Kg		07/22/24 09:35	07/22/24 12:07	

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Client: ERM-West Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

**Client Sample ID: TB-01-SO-20240716** 

Date Collected: 07/16/24 00:00

Date Received: 07/16/24 13:00

Lab Sample ID: 580-142079-6

**Matrix: Solid** 

Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	(Conti	inued)				
Analyte	_	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.040	0.013	mg/Kg		07/22/24 09:35	07/22/24 12:07	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		07/22/24 09:35	07/22/24 12:07	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		07/22/24 09:35	07/22/24 12:07	1
Toluene	ND		0.060	0.014	mg/Kg		07/22/24 09:35	07/22/24 12:07	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		07/22/24 09:35	07/22/24 12:07	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		07/22/24 09:35	07/22/24 12:07	1
Trichloroethene	ND		0.040	0.010	mg/Kg		07/22/24 09:35	07/22/24 12:07	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		07/22/24 09:35	07/22/24 12:07	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		07/22/24 09:35	07/22/24 12:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				07/22/24 09:35	07/22/24 12:07	1
4-Bromofluorobenzene (Surr)	101		80 - 120				07/22/24 09:35	07/22/24 12:07	1
Dibromofluoromethane (Surr)	103		80 - 120				07/22/24 09:35	07/22/24 12:07	1
Toluene-d8 (Surr)	100		80 - 120				07/22/24 09:35	07/22/24 12:07	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	MD	*+	0.080	0.021	mg/Kg		07/24/24 16:02	07/25/24 05:28	1
Methylene Chloride	0.039	JB	0.25	0.026	mg/Kg		07/24/24 16:02	07/25/24 05:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		80 - 121				07/24/24 16:02	07/25/24 05:28	1
4-Bromofluorobenzene (Surr)	103		80 - 120				07/24/24 16:02	07/25/24 05:28	1
			80 - 120				07/04/04 16:00	07/25/24 05:28	1
Dibromofluoromethane (Surr)	101		80 - 120				07/24/24 16.02	07/23/24 03.26	,

Client: ERM-West Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

### Method: 8260D - Volatile Organic Compounds by GC/MS

MB MB

Lab Sample ID: MB 580-465638/5-A

**Matrix: Solid** 

n-Butylbenzene

o-Xylene

N-Propylbenzene

**Analysis Batch: 465636** 

Client Sample ID: Method Blank Prep Type: Total/NA

Prep	Type: Total/NA
Prep	Batch: 465638

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
1,1,1-Trichloroethane	ND		0.040	0.0046	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
1,1,2-Trichloroethane	ND		0.020	0.0074	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
1,1-Dichloroethane	ND		0.040	0.0092	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
1,1-Dichloroethene	ND		0.040	0.012	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
1,1-Dichloropropene	ND		0.040	0.0053	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
1,2,3-Trichlorobenzene	ND		0.080	0.040	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
1,2,3-Trichloropropane	ND		0.040	0.012	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
1,2,4-Trichlorobenzene	ND		0.080	0.043	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
1,2,4-Trimethylbenzene	ND		0.040	0.014	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
1,2-Dibromo-3-Chloropropane	ND		0.060	0.015	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
1,2-Dibromoethane	ND		0.020	0.0038	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
1,2-Dichlorobenzene	ND		0.040	0.0087	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
1,2-Dichloroethane	ND		0.020	0.0055	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
1,2-Dichloropropane	ND		0.020	0.0066	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
1,3,5-Trimethylbenzene	ND		0.040	0.0076	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
1,3-Dichlorobenzene	ND		0.060	0.013	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
1,3-Dichloropropane	ND		0.060	0.0056	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
1,4-Dichlorobenzene	ND		0.060	0.011	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
2,2-Dichloropropane	ND		0.040	0.012	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
2-Chlorotoluene	ND		0.040	0.0088	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
4-Chlorotoluene	ND		0.040	0.0098	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
4-Isopropyltoluene	ND		0.040	0.010	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
Benzene	0.00456	J	0.020	0.0038			07/22/24 09:35	07/22/24 11:45	1
Bromobenzene	ND		0.040	0.0042	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
Bromochloromethane	ND		0.040	0.0062	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
Bromodichloromethane	ND		0.040	0.0055	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
Bromoform	ND		0.040	0.0045			07/22/24 09:35	07/22/24 11:45	1
Bromomethane	ND		0.10	0.038	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
Carbon tetrachloride	ND		0.020	0.0044	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
Chlorobenzene	ND		0.040	0.0048			07/22/24 09:35	07/22/24 11:45	1
Chloroform	ND		0.020	0.0042			07/22/24 09:35	07/22/24 11:45	1
Chloromethane	ND		0.060		mg/Kg		07/22/24 09:35	07/22/24 11:45	1
cis-1,2-Dichloroethene	ND		0.060		mg/Kg		07/22/24 09:35	07/22/24 11:45	1
cis-1,3-Dichloropropene	ND		0.020	0.0040	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
Dibromochloromethane	ND		0.020	0.0049	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
Dibromomethane	ND		0.040	0.0074	mg/Kg		07/22/24 09:35	07/22/24 11:45	1
Dichlorodifluoromethane	ND		0.25		mg/Kg			07/22/24 11:45	1
Ethylbenzene	ND		0.040	0.0091				07/22/24 11:45	1
Hexachlorobutadiene	ND		0.10		mg/Kg			07/22/24 11:45	1
Isopropylbenzene	ND		0.040	0.0086				07/22/24 11:45	1
Methyl tert-butyl ether	ND		0.040	0.0060				07/22/24 11:45	
m-Xylene & p-Xylene	ND		0.040	0.0071				07/22/24 11:45	1
Naphthalene	ND		0.15		mg/Kg			07/22/24 11:45	1

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07/22/24 09:35 07/22/24 11:45

07/22/24 09:35 07/22/24 11:45

07/22/24 09:35 07/22/24 11:45

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0.040

0.040

0.040

0.019 mg/Kg

0.015 mg/Kg

0.0050 mg/Kg

ND

ND

ND

5

5

7

9

10

1'

Client: ERM-West Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-465638/5-A

**Matrix: Solid** 

**Analysis Batch: 465636** 

Client Sample ID: Method Blank

Prep Type: Total/NA

**Prep Batch: 465638** 

, <b>,</b>										
	MB	MB								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		07/22/24 09:35	07/22/24 11:45	1	
Styrene	ND		0.040	0.013	mg/Kg		07/22/24 09:35	07/22/24 11:45	1	
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		07/22/24 09:35	07/22/24 11:45	1	
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		07/22/24 09:35	07/22/24 11:45	1	
Toluene	ND		0.060	0.014	mg/Kg		07/22/24 09:35	07/22/24 11:45	1	
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		07/22/24 09:35	07/22/24 11:45	1	
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		07/22/24 09:35	07/22/24 11:45	1	
Trichloroethene	ND		0.040	0.010	mg/Kg		07/22/24 09:35	07/22/24 11:45	1	
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		07/22/24 09:35	07/22/24 11:45	1	
Vinyl chloride	ND		0.10	0.019	mg/Kg		07/22/24 09:35	07/22/24 11:45	1	

MB MB

Surrogate	%Recovery (	Qualifier Li	mits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100	80	) <u>- 121</u>	07/22/24 09:35	07/22/24 11:45	1
4-Bromofluorobenzene (Surr)	99	80	) <sub>-</sub> 120	07/22/24 09:35	07/22/24 11:45	1
Dibromofluoromethane (Surr)	103	80	) <sub>-</sub> 120	07/22/24 09:35	07/22/24 11:45	1
Toluene-d8 (Surr)	101	80	) <sub>-</sub> 120	07/22/24 09:35	07/22/24 11:45	1

Lab Sample ID: LCS 580-465638/1-A

**Matrix: Solid** 

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

Analysis Batch: 465636							<b>Prep Batch: 465638</b>
	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	_ D	%Rec	Limits
1,1,1,2-Tetrachloroethane	0.800	0.812		mg/Kg		101	79 - 128
1,1,1-Trichloroethane	0.800	0.798		mg/Kg		100	78 - 135
1,1,2,2-Tetrachloroethane	0.800	0.738		mg/Kg		92	77 - 122
1,1,2-Trichloroethane	0.800	0.806		mg/Kg		101	80 - 123
1,1-Dichloroethane	0.800	0.819		mg/Kg		102	78 - 126
1,1-Dichloroethene	0.800	0.805		mg/Kg		101	73 - 134
1,1-Dichloropropene	0.800	0.813		mg/Kg		102	76 - 140
1,2,3-Trichlorobenzene	0.800	0.714		mg/Kg		89	58 - 146
1,2,3-Trichloropropane	0.800	0.740		mg/Kg		92	77 - 127
1,2,4-Trichlorobenzene	0.800	0.782		mg/Kg		98	74 - 131
1,2,4-Trimethylbenzene	0.800	0.866		mg/Kg		108	73 - 138
1,2-Dibromo-3-Chloropropane	0.800	0.763		mg/Kg		95	64 - 129
1,2-Dibromoethane	0.800	0.787		mg/Kg		98	77 - 123
1,2-Dichlorobenzene	0.800	0.868		mg/Kg		109	78 - 126
1,2-Dichloroethane	0.800	0.756		mg/Kg		95	76 - 124
1,2-Dichloropropane	0.800	0.804		mg/Kg		101	73 - 130
1,3,5-Trimethylbenzene	0.800	0.890		mg/Kg		111	72 - 134
1,3-Dichlorobenzene	0.800	0.826		mg/Kg		103	78 - 132
1,3-Dichloropropane	0.800	0.813		mg/Kg		102	80 - 120
1,4-Dichlorobenzene	0.800	0.824		mg/Kg		103	77 - 123
2,2-Dichloropropane	0.800	0.843		mg/Kg		105	75 - 134
2-Chlorotoluene	0.800	0.863		mg/Kg		108	77 - 134
4-Chlorotoluene	0.800	0.839		mg/Kg		105	71 - 137
4-Isopropyltoluene	0.800	0.876		mg/Kg		109	71 - 142
Benzene	0.800	0.734		mg/Kg		92	79 - 135
Bromobenzene	0.800	0.826		mg/Kg		103	78 - 126

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-465638/1-A

**Matrix: Solid** 

Analysis Batch: 465636

**Client Sample ID: Lab Control Sample** 

Fieh	Type. Total/NA
<b>Prep</b>	Batch: 465638
%Rec	

Analysis Batch. 403030	Spike	LCS LCS			%Rec
Analyte	Added	Result Quali	fier Unit	D %Rec	Limits
Bromochloromethane	0.800	0.797	mg/Kg	100	76 - 131
Bromodichloromethane	0.800	0.797	mg/Kg	100	78 - 125
Bromoform	0.800	0.725	mg/Kg	91	71 - 130
Bromomethane	0.800	0.892	mg/Kg	111	55 - 150
Carbon tetrachloride	0.800	0.765	mg/Kg	96	76 - 140
Chlorobenzene	0.800	0.819	mg/Kg	102	80 - 125
Chloroform	0.800	0.821	mg/Kg	103	74 - 133
Chloromethane	0.800	0.838	mg/Kg	105	52 - 142
cis-1,2-Dichloroethene	0.800	0.813	mg/Kg	102	80 - 125
cis-1,3-Dichloropropene	0.800	0.838	mg/Kg	105	80 - 122
Dibromochloromethane	0.800	0.771	mg/Kg	96	75 - 125
Dibromomethane	0.800	0.775	mg/Kg	97	72 - 130
Dichlorodifluoromethane	0.800	0.943	mg/Kg	118	33 - 150
Ethylbenzene	0.800	0.814	mg/Kg	102	80 - 135
Hexachlorobutadiene	0.800	0.845	mg/Kg	106	65 - 145
Isopropylbenzene	0.800	0.851	mg/Kg	106	80 - 131
Methyl tert-butyl ether	0.800	0.799	mg/Kg	100	71 - 126
m-Xylene & p-Xylene	0.800	0.814	mg/Kg	102	80 - 132
Naphthalene	0.800	0.693	mg/Kg	87	56 - 145
n-Butylbenzene	0.800	0.843	mg/Kg	105	69 - 143
N-Propylbenzene	0.800	0.857	mg/Kg	107	78 - 133
o-Xylene	0.800	0.836	mg/Kg	105	80 - 132
sec-Butylbenzene	0.800	0.860	mg/Kg	107	71 - 143
Styrene	0.800	0.805	mg/Kg	101	79 - 129
t-Butylbenzene	0.800	0.869	mg/Kg	109	72 - 144
Tetrachloroethene	0.800	0.765	mg/Kg	96	75 - 141
Toluene	0.800	0.815	mg/Kg	102	75 - 125
trans-1,2-Dichloroethene	0.800	0.794	mg/Kg	99	77 <sub>-</sub> 134
trans-1,3-Dichloropropene	0.800	0.813	mg/Kg	102	80 - 121
Trichloroethene	0.800	0.771	mg/Kg	96	80 - 134
Trichlorofluoromethane	0.800	0.863	mg/Kg	108	71 - 150
Vinyl chloride	0.800	0.859	mg/Kg	107	62 - 144

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		80 - 121
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
Toluene-d8 (Surr)	102		80 - 120

Lab Sample ID: LCSD 580-465638/2-A

**Matrix: Solid** 

Analysis Batch: 465636

Client Sample	ID: Lab	Control	Sampl	e E	)up
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**Prep Type: Total/NA Prep Batch: 465638** 

-	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	0.800	0.753		mg/Kg		94	79 - 128	7	20
1,1,1-Trichloroethane	0.800	0.759		mg/Kg		95	78 - 135	5	20
1,1,2,2-Tetrachloroethane	0.800	0.708		mg/Kg		89	77 - 122	4	20
1,1,2-Trichloroethane	0.800	0.721		mg/Kg		90	80 - 123	11	20

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-465638/2-A

Matrix: Solid

Analysis Batch: 465636

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA Prep Batch: 465638

Analysis Batch: 465636		Coribo I CCD I					Prep Batch: 465638		
Analyte	Spike Added		LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1-Dichloroethane	0.800	0.765		mg/Kg	— <u> </u>	96	78 - 126	7	20
1,1-Dichloroethene	0.800	0.784		mg/Kg		98	73 - 134	3	25
1,1-Dichloropropene	0.800	0.743		mg/Kg		93	76 - 140	9	20
1,2,3-Trichlorobenzene	0.800	0.739		mg/Kg		92	58 - 146	3	28
1,2,3-Trichloropropane	0.800	0.638		mg/Kg		80	77 - 127	15	20
1,2,4-Trichlorobenzene	0.800	0.757		mg/Kg		95	74 - 131	3	26
1,2,4-Trimethylbenzene	0.800	0.749		mg/Kg		94	73 - 138	14	22
1,2-Dibromo-3-Chloropropane	0.800	0.653		mg/Kg		82	64 - 129	15	40
1,2-Dibromoethane	0.800	0.720		mg/Kg		90	77 - 123	9	20
1,2-Dichlorobenzene	0.800	0.754		mg/Kg		94	78 - 126	14	20
1,2-Dichloroethane	0.800	0.689		mg/Kg		86	76 - 124	9	20
1,2-Dichloropropane	0.800	0.746		mg/Kg		93	73 - 130	8	20
1,3,5-Trimethylbenzene	0.800	0.771		mg/Kg		96	72 - 134	14	24
1,3-Dichlorobenzene	0.800	0.737		mg/Kg		92	78 - 132	11	20
1,3-Dichloropropane	0.800	0.721		mg/Kg		90	80 - 120	12	20
1,4-Dichlorobenzene	0.800	0.736		mg/Kg		92	77 - 123	11	20
2,2-Dichloropropane	0.800	0.763		mg/Kg		95	75 - 134	10	20
2-Chlorotoluene	0.800	0.755		mg/Kg		94	77 - 134	13	21
4-Chlorotoluene	0.800	0.727		mg/Kg		91	71 - 137	14	21
4-Isopropyltoluene	0.800	0.750		mg/Kg		94	71 - 142	15	29
Benzene	0.800	0.688		mg/Kg		86	79 - 135	6	20
Bromobenzene	0.800	0.730		mg/Kg		91	78 - 126	12	20
Bromochloromethane	0.800	0.749		mg/Kg		94	76 - 131	6	20
Bromodichloromethane	0.800	0.748		mg/Kg		93	78 - 125	6	20
Bromoform	0.800	0.645		mg/Kg		81	71 - 130	12	20
Bromomethane	0.800	0.943		mg/Kg		118	55 - 150	6	26
Carbon tetrachloride	0.800	0.733		mg/Kg		92	76 - 140	4	20
Chlorobenzene	0.800	0.720		mg/Kg		90	80 - 125	13	20
Chloroform	0.800	0.753		mg/Kg		94	74 - 133	9	20
Chloromethane	0.800	0.802		mg/Kg		100	52 - 142	4	40
cis-1,2-Dichloroethene	0.800	0.771		mg/Kg		96	80 - 125	5	20
cis-1,3-Dichloropropene	0.800	0.698		mg/Kg		87	80 - 122	18	20
Dibromochloromethane	0.800	0.704		mg/Kg		88	75 - 125	9	20
Dibromomethane	0.800	0.745		mg/Kg		93	72 - 130	4	40
Dichlorodifluoromethane	0.800	0.937		mg/Kg		117	33 - 150	1	31
Ethylbenzene	0.800	0.741		mg/Kg		93	80 - 135	9	20
Hexachlorobutadiene	0.800	0.758		mg/Kg		95	65 - 145	11	36
Isopropylbenzene	0.800	0.854		mg/Kg		107	80 - 131	0	20
Methyl tert-butyl ether	0.800	0.763		mg/Kg		95	71 - 126	5	20
m-Xylene & p-Xylene	0.800	0.735		mg/Kg		92	80 - 132	10	20
Naphthalene	0.800	0.720		mg/Kg		90	56 - 145	4	25
n-Butylbenzene	0.800	0.723		mg/Kg		90	69 - 143	15	31
N-Propylbenzene	0.800	0.762		mg/Kg		95	78 - 133	12	24
o-Xylene	0.800	0.779		mg/Kg		97	80 - 132	7	20
sec-Butylbenzene	0.800	0.748		mg/Kg		94	71 - 143	14	29
Styrene	0.800	0.749		mg/Kg		94	79 - 129	7	20
t-Butylbenzene	0.800	0.753		mg/Kg		94	72 - 144	14	27
Tetrachloroethene	0.800	0.696		mg/Kg		87	75 - 141	9	20
Toluene	0.800	0.721		mg/Kg		90	75 - 125	12	20

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Client: ERM-West Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-465638/2-A

**Matrix: Solid** 

Analysis Batch: 465636

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

**Prep Batch: 465638** 

	Spike	LCSD LCSD				%Rec		RPD
Analyte	Added	Result Qualit	fier Unit	D	%Rec	Limits	RPD	Limit
trans-1,2-Dichloroethene	0.800	0.764	mg/Kg		96	77 - 134	4	20
trans-1,3-Dichloropropene	0.800	0.739	mg/Kg		92	80 - 121	10	20
Trichloroethene	0.800	0.722	mg/Kg		90	80 - 134	7	20
Trichlorofluoromethane	0.800	0.828	mg/Kg		103	71 - 150	4	30
Vinyl chloride	0.800	0.841	mg/Kg		105	62 - 144	2	20

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		80 - 121
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120
Toluene-d8 (Surr)	101		80 - 120

Lab Sample ID: MB 580-465985/3-A

**Matrix: Solid** 

Analysis Batch: 465991

Client Sample ID: Method Blank

Prep Type: Total/NA

**Prep Batch: 465985** 

MB MB

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		0.080	0.021	mg/Kg		07/24/24 16:02	07/25/24 00:26	1
Methylene Chloride	0.0492	J	0.25	0.026	mg/Kg		07/24/24 16:02	07/25/24 00:26	1
o-Xylene	ND		0.040	0.0050	mg/Kg		07/24/24 16:02	07/25/24 00:26	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		07/24/24 16:02	07/25/24 00:26	1

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97	80 - 121	07/24/24 16:02	07/25/24 00:26	1
4-Bromofluorobenzene (Surr)	106	80 - 120	07/24/24 16:02	07/25/24 00:26	1
Dibromofluoromethane (Surr)	113	80 - 120	07/24/24 16:02	07/25/24 00:26	1
Toluene-d8 (Surr)	95	80 - 120	07/24/24 16:02	07/25/24 00:26	1

Lab Sample ID: LCS 580-465985/1-A

**Matrix: Solid** 

Analysis Batch: 465991

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 465985** 

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit D %Rec Limits 0.800 1.86 \*+ mg/Kg 233 26 - 150

Chloroethane Methylene Chloride 0.800 0.761 mg/Kg 56 - 140 95 o-Xylene 0.800 0.816 mg/Kg 102 80 - 132 Tetrachloroethene 0.800 0.676 mg/Kg 85 75 - 141

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	93		80 - 121
4-Bromofluorobenzene (Surr)	105		80 - 120
Dibromofluoromethane (Surr)	104		80 - 120
Toluene-d8 (Surr)	96		80 - 120

**Eurofins Seattle** 

Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-465985/2-A

**Matrix: Solid** 

Client: ERM-West

Analysis Batch: 465991

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA **Prep Batch: 465985** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloroethane	0.800	1.53	*+	mg/Kg		191	26 - 150	20	40
Methylene Chloride	0.800	0.673		mg/Kg		84	56 - 140	12	20
o-Xylene	0.800	0.716		mg/Kg		90	80 - 132	13	20
Tetrachloroethene	0.800	0.602		mg/Kg		75	75 - 141	12	20

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		80 - 121
4-Bromofluorobenzene (Surr)	104		80 - 120
Dibromofluoromethane (Surr)	105		80 - 120
Toluene-d8 (Surr)	90		80 - 120

**Client Sample ID: Method Blank** Prep Type: Total/NA

**Prep Batch: 466067** 

Lab Sample ID: MB 580-466067/1-A **Matrix: Solid** 

**Analysis Batch: 466068** 

Analyte	Result Qualifie	er RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND ND	0.060	0.011	mg/Kg		07/25/24 08:33	07/25/24 11:02	1
Chlorobenzene	ND	0.040	0.0048	mg/Kg		07/25/24 08:33	07/25/24 11:02	1
Toluene	ND	0.060	0.014	mg/Kg		07/25/24 08:33	07/25/24 11:02	1

MB MB

MB MB

Surrogate	%Recovery	Qualifier Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93	80 - 121	07/25/24 08:33	07/25/24 11:02	1
4-Bromofluorobenzene (Surr)	101	80 - 120	07/25/24 08:33	07/25/24 11:02	1
Dibromofluoromethane (Surr)	102	80 - 120	07/25/24 08:33	07/25/24 11:02	1
Toluene-d8 (Surr)	103	80 - 120	07/25/24 08:33	07/25/24 11:02	1

Lab Sample ID: LCS 580-466067/2-A

**Matrix: Solid** 

**Analysis Batch: 466068** 

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

**Prep Batch: 466067** %Rec

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,4-Dichlorobenzene	0.800	0.898		mg/Kg		112	77 - 123	
Chlorobenzene	0.800	0.840		mg/Kg		105	80 - 125	
Toluene	0.800	0.827		mg/Kg		103	75 - 125	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	92		80 - 121
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	96		80 - 120
Toluene-d8 (Surr)	107		80 - 120

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

**Analysis Batch: 466068** 

**Matrix: Solid** 

1,4-Dichlorobenzene

Chlorobenzene

Analyte

Lab Sample ID: LCSD 580-466067/3-A

**Prep Batch: 466067** Spike LCSD LCSD %Rec **RPD** Added Result Qualifier Unit %Rec Limits RPD Limit 0.800 0.947 118 77 - 123 5 20 mg/Kg 0.800 0.891 mg/Kg 111 80 - 125 20

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-466067/3-A **Client Sample ID: Lab Control Sample Dup** Prep Type: Total/NA **Matrix: Solid Analysis Batch: 466068 Prep Batch: 466067** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Toluene	 0.800	0.876		mg/Kg		110	75 - 125	6	20

	LCSD	LCSD					
Surrogate	%Recovery	Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	96		80 - 121				
4-Bromofluorobenzene (Surr)	99		80 - 120				
Dibromofluoromethane (Surr)	97		80 - 120				
Toluene-d8 (Surr)	104		80 - 120				

Method: 2540G - SM 2540G

Lab Sample ID: 580-142079-1 DU Client Sample ID: PDI-03-SO-19.5-20240712 Matrix: Solid **Prep Type: Total/NA** 

**Analysis Batch: 466006** 

	Sample	Sample	DU	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
Percent Solids	78.0		77.3		%		 0.9	20
Percent Moisture	22.0		22.7		%		3	20

Client: ERM-West Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

Client Sample ID: PDI-03-SO-19.5-20240712

Lab Sample ID: 580-142079-1 Date Collected: 07/12/24 10:55 Date Received: 07/16/24 13:00

**Matrix: Solid** 

Batch Dilution Batch Prepared Method **Factor** Number Analyst or Analyzed **Prep Type** Type Run Lab 07/24/24 16:17 Total/NA Analysis 2540G 466006 AUA EET SEA

Client Sample ID: PDI-03-SO-19.5-20240712

Lab Sample ID: 580-142079-1 Date Collected: 07/12/24 10:55 **Matrix: Solid** 

Date Received: 07/16/24 13:00 Percent Solids: 78.0

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			465638	BYM	EET SEA	07/22/24 09:35
Total/NA	Analysis	8260D		1	465636	BYM	EET SEA	07/22/24 12:29
Total/NA	Prep	5035	RA		465985	BYM	EET SEA	07/24/24 16:02
Total/NA	Analysis	8260D	RA	1	465991	BYM	EET SEA	07/25/24 05:51

Client Sample ID: PDI-03-SO-25.5-20240712 Lab Sample ID: 580-142079-2

Date Collected: 07/12/24 12:00 **Matrix: Solid** 

Date Received: 07/16/24 13:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	465324	AUA	EET SEA	07/18/24 09:40

Client Sample ID: PDI-03-SO-25.5-20240712 Lab Sample ID: 580-142079-2 Date Collected: 07/12/24 12:00 **Matrix: Solid** Date Received: 07/16/24 13:00 Percent Solids: 90.9

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			465638	BYM	EET SEA	07/22/24 09:35
Total/NA	Analysis	8260D		1	465636	BYM	EET SEA	07/22/24 12:50
Total/NA	Prep	5035	RA		465985	BYM	EET SEA	07/24/24 16:02
Total/NA	Analysis	8260D	RA	1	465991	BYM	EET SEA	07/25/24 06:15

Client Sample ID: PDI-03-SO-29.5-20240712 Lab Sample ID: 580-142079-3

Date Collected: 07/12/24 12:00 **Matrix: Solid** Date Received: 07/16/24 13:00

	Batch	Batch		Dilution	Batch		Prepared
Prep Type	Type	Method	Run	Factor	Number Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	465324 AUA	EET SEA	07/18/24 09:40

Client Sample ID: PDI-03-SO-29.5-20240712 Lab Sample ID: 580-142079-3

Date Collected: 07/12/24 12:00 Matrix: Solid Date Received: 07/16/24 13:00 Percent Solids: 88.5

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	RADL		466067	AC	EET SEA	07/25/24 08:33
Total/NA	Analysis	8260D	RADL	1	466068	AC	EET SEA	07/25/24 12:47
Total/NA	Prep	5035			465638	BYM	EET SEA	07/22/24 09:35
Total/NA	Analysis	8260D		1	465636	BYM	EET SEA	07/22/24 13:12

**Eurofins Seattle** 

#### **Lab Chronicle**

Client: ERM-West Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

Client Sample ID: PDI-03-SO-29.5-20240712

Lab Sample ID: 580-142079-3 Date Collected: 07/12/24 12:00 **Matrix: Solid** Date Received: 07/16/24 13:00 Percent Solids: 88.5

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	RA		465985	BYM	EET SEA	07/24/24 16:02
Total/NA	Analysis	8260D	RA	1	465991	BYM	EET SEA	07/25/24 07:01

Client Sample ID: PDI-03-SO-39.5-20240712

Lab Sample ID: 580-142079-4 Date Collected: 07/12/24 14:35 Matrix: Solid

Date Received: 07/16/24 13:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	465324	AUA	EET SEA	07/18/24 09:40

Client Sample ID: PDI-03-SO-39.5-20240712

Lab Sample ID: 580-142079-4 Date Collected: 07/12/24 14:35 **Matrix: Solid** 

Date Received: 07/16/24 13:00 Percent Solids: 87.9

-	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	RADL		466067	AC	EET SEA	07/25/24 08:33
Total/NA	Analysis	8260D	RADL	1	466068	AC	EET SEA	07/25/24 13:08
Total/NA	Prep	5035			465638	BYM	EET SEA	07/22/24 09:35
Total/NA	Analysis	8260D		1	465636	BYM	EET SEA	07/22/24 13:33
Total/NA	Prep	5035	RA		465985	BYM	EET SEA	07/24/24 16:02
Total/NA	Analysis	8260D	RA	1	465991	BYM	EET SEA	07/25/24 07:24

Client Sample ID: PDI-03-SO-42-20240712

Lab Sample ID: 580-142079-5 Date Collected: 07/12/24 15:40 **Matrix: Solid** 

Date Received: 07/16/24 13:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G	_	1	465324	AUA	EET SEA	07/18/24 09:40

Client Sample ID: PDI-03-SO-42-20240712 Lab Sample ID: 580-142079-5

Date Collected: 07/12/24 15:40 **Matrix: Solid** Date Received: 07/16/24 13:00 Percent Solids: 84.4

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	RADL		466067	AC	EET SEA	07/25/24 08:33
Total/NA	Analysis	8260D	RADL	1	466068	AC	EET SEA	07/25/24 12:27
Total/NA	Prep	5035			465638	BYM	EET SEA	07/22/24 09:35
Total/NA	Analysis	8260D		1	465636	BYM	EET SEA	07/22/24 13:54
Total/NA	Prep	5035	RA		465985	BYM	EET SEA	07/24/24 16:02
Total/NA	Analysis	8260D	RA	1	465991	BYM	EET SEA	07/25/24 06:38

**Eurofins Seattle** 

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#### **Lab Chronicle**

Client: ERM-West Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

**Client Sample ID: TB-01-SO-20240716** 

Lab Sample ID: 580-142079-6 Date Collected: 07/16/24 00:00

**Matrix: Solid** 

Date Received: 07/16/24 13:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			465638	BYM	EET SEA	07/22/24 09:35
Total/NA	Analysis	8260D		1	465636	BYM	EET SEA	07/22/24 12:07
Total/NA	Prep	5035	RA		465985	BYM	EET SEA	07/24/24 16:02
Total/NA	Analysis	8260D	RA	1	465991	BYM	EET SEA	07/25/24 05:28

#### **Laboratory References:**

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

### **Accreditation/Certification Summary**

Client: ERM-West Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

#### **Laboratory: Eurofins Seattle**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Progra	am	Identification Number	Expiration Date	
Oregon	NELA	ס	4167	07-07-25	
The following analyte	e are included in this reno	rt but the laboratory is a	not certified by the governing author	ity. This list may include and	
,	•	,	not certified by the governing author	ity. This list may include and	
,	s are included in this repo does not offer certification	,	not certified by the governing author	ity. This list may include ana	
,	•	,	not certified by the governing author  Analyte	ity. This list may include and	

**Eurofins Seattle** 

# **Sample Summary**

Client: ERM-West Job ID: 580-142079-1

Project/Site: Arkema - PDI Investigation

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-142079-1	PDI-03-SO-19.5-20240712	Solid	07/12/24 10:55	07/16/24 13:00
580-142079-2	PDI-03-SO-25.5-20240712	Solid	07/12/24 12:00	07/16/24 13:00
580-142079-3	PDI-03-SO-29.5-20240712	Solid	07/12/24 12:00	07/16/24 13:00
580-142079-4	PDI-03-SO-39.5-20240712	Solid	07/12/24 14:35	07/16/24 13:00
580-142079-5	PDI-03-SO-42-20240712	Solid	07/12/24 15:40	07/16/24 13:00
580-142079-6	TB-01-SO-20240716	Solid	07/16/24 00:00	07/16/24 13:00

#### **Eurofins Seattle**

5755 8th Street East Tacoma, WA 98424

# Chain of Custody Record

37	eurofins	
<b>G</b> (5)		

Environment Testing

Client Information	lau						PM: z, Sheri L				(s):	COC No: 580-62780-19268.5	
Client Contact Avery Soplata	Dhono:	2-606		Sh Sh	lail: eri.Cruz@	et.eum	ofinsus	com	State	of Origin.		Page: Page 5-of 8 O F	1
Company: ERM-West			PWSID:		T	ct.cure	3111303.		Pogues	4 a d		Job #:	
Address: 1050 SW 6th Avenue Suite 1650	Due Date Reques	ted:				-T-	TT	Analysis	Reques	tea		Preservation Codes:	
City:	TAT Requested (d	lays):										F - MeOH E - NaHSO4	
Portland State, Zip:		I we	ell									A - HCL	
OR, 97204	Compliance Project: $\Delta$ Yes $\Delta$ No												
Phone:	PO#:												
Email:	0682868.304 WO#:				<u> </u>	픙							
avery.soplata@erm.com	WO#.				No)	t MeOH							
Project Name:	Project #:					S b	S p				ne n		
Arkema - PDI Investigation Site:	58020743 SSOW#:	58020743					ndar	2			ntai		
Arkema	00011#				SD (	s, sta	s, sta	5	1		မို	Other:	
The state of the s			Sample	Matrix	De IS	- Volatiles	atile	6			Total Number of containers		
			Type	(W=water,	E E	\$   \$	5	K			E		
Sample Identification	Committe Date	Sample	(C=comp,	S=solid, O=waste/oil,	Field Filt Perform	8260D - Volat 8260D - Volat	8260D				直	100	
sample identification	Sample Date	Time		BT=Tissue, A=Air		_			0.00		۴	Special Instructions/	Note:
POT-03-30-19.5-2024 0712	07/12/2024	1055	i	Solid	XX,	X E	A		200 300	100			
00 To 2 SN - 1 TO 000 1 100	1, 1,		9	Sowaler							3		
PDI-03-50-255-2024-6712	07/12/2024	1200	6			X		4			2		
POI-03-50-29.5-20240712	07/12/2024	1200	6	Salvator		X		5			2	Habran Dild	to Scale
POT-03-50-29.5-20240712 PD1-03-50-39.5-20240712	57/12/2024	1435	6	S.Water		X	K				2	High conc. Dilu	ic Octivo
PDI-03-50-42-20240712	07/12/2024			5 Water			1				1 /2	High Conc. VIV	165cm
TB-01-50-20240716		1340	6				1					a section of the con-	
18-01-36 [00-10110	07/16/2024			) ₩ <del>ate</del> r		X					1		
				Water		III					100		
				Water							19		
				Water		Ш							
				Water		580	1420°		Custody		1/2		_
		_				300	3-1-20	3 Onair o	Oustody				-
Possible Hazard Identification				Water		1				1 1			
Non-Hazard					Sam	ole Dis <sub>i</sub>	posal (	A fee may	be assess	ed if samp	les are retain	ed longer than 1 month) hive For Months	
Deliverable Requested: I, (,)III, IV, Other (specify)	OISON B UNKN	own — I	Radiologica	1						sal By Lab	Arc	hive For Months	
						iai iiisti	uctions	/QC Requir	ements:				
mpty Kit Relinquished by:		Date:			Time:				1 1	lethod of Shipi	ment:		
siliquisited by.	Date/Time: 7/16	0/2024	1135	ERU	R	Ceived t	y:	1611	11/	Date	710/11	1145 Company	E.
elinquished by:	Date/Time:	- 1		Company	R	ceive	NV VI	in	1	Date	Time Color		<del>3,</del>
elinquished by:	Date/Time	4 1	300	M.			1	2-1	2		7/16/2	9 1300	51
				Company		ceive					e/Time:	Company	

#### Eurofins Seattle

5755 8th Street East Tacoma, WA 98424 Phone: 253-922-2310

# Chain of Custody Record

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Environment Testing

1 Hollo, 200 022 2070						
Client Information	Sampler: David 34	Lat Cr	o PM: uz, Sheri L		Carrier Tracking No(s):	COC No: 580-62780-19268.5
Client Information Client Contact:	Dhanai	i c s	Mail:		State of Origin:	Page:
Avery Soplata	562-60	6-8366 sh	eri.Cruz@et.eur	ofinsus.com		Page 5-of 6 0 r
Company:		PWSID:		Analysis R	oquested	Job #:
ERM-West Address:	Due Date Requested:			Allalysis K	equesteu	Preservation Codes:
1050 SW 6th Avenue Suite 1650	Due Date Nequesteu.					F - MeOH
City:	TAT Requested (days):		7			E - NaHSO4 A - HCL
Portland		cell				
State, Zip:	Compliance Project: $\Delta$ Ye					
OR, 97204 Phone:	PO#:	3 Δ NO	$\dashv$ $\mid$ $\mid$ $\mid$			
THORE.	0682868.304		a I			
Email:	WO #:		es or No)	!		
avery.soplata@erm.com			No) No)	i'   <u>ii</u>		5
Project Name: Arkema - PDI Investigation	Project #: 58020743		S o S	2 2		ri g
Site:	SSOW#:		Tang (3 langer 1			Ö Other:
Alkema			San (ISD			960
		Sample Matrix	AS/A	8260D - Volatiles		Number
		Type (W=water,		3   3   4   1		Num
	Samp		Field F Perfor 8260D			<u>\$</u>
Sample Identification	Sample Date Time		The second second second	THE RESIDENCE OF THE PARTY OF T		Special Instructions/Note:
The state of the s	$\rightarrow$	Preservation Code:	XXF E	A I I I I		X
POT-03-30-19.5-20240712	07/12/2024 1059	5 G Solid	X	*		2
PDI-03-50-155-2024-6712	07/12/2024 1200		v X	*		2
POI-03-50-29-5-20240712	07/12/2024 1200		Х Х			
PDI-03-50-395-20240712	57/12/2024/435		X	<del>                                       </del>		2 High conc. Dilute Same 2 High Conc. Dilutescape
PDI-03-50-42-20240712	07/12/2024 154		$\frac{1}{x}$	1		2 High Canc. VIIVIESCIPIE
				<del>   1                                   </del>		5
TB-01-50-20240716	07/16/2024	) Water		<del></del>		
		Water	<b></b>			98-2 6-76
		Water				
		Water				
		Water	5	80-142079 Chain of 0	Custody	
		Water				
Possible Hazard Identification			Sample D	isposal ( A fee may b	e assessed if samples are re	tained longer than 1 month)
Non-Hazard Flagmable Skin Irritant F	Poison B 🔀 Unknown	Radiological		turn To Client		Archive For Months
Deliverable Requested: I, (I,)III, IV, Other (specify)		,		structions/QC Requirer	ments:	
Empty Kit Relinquished by:	Date:		Time:		Method of Shipment:	
Relinquished by:	Date/Time: 1/11/20:3	14 1135 Company	Receive	ed by:	Date/Timey 10	Z4 1145 Company E.
Della since the same of the sa				INU CW	V   Date/Title	Compony
Relinquished by:	Date/Tithe:	1300 Company	F. Receive	- 2	1 7/16	124 1300 Company
Relinquished by:	Date/Time:	Company	Receiv	бу:	Date/Time:	Cathony
	7/10/24	1027 ETG		101	6 1/1/2	41000 FFT
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No			Coole	Temperature(s) °C and Other	Remarks: POXSIL	- 4.8/5.8

Client: ERM-West Job Number: 580-142079-1

Login Number: 142079 List Source: Eurofins Seattle

List Number: 1

Creator: Silva, Shawn 1

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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# PREPARED FOR

**ANALYTICAL REPORT** 

Attn: Avery Soplata ERM-West 1050 SW 6th Avenue Suite 1650 Portland, Oregon 97204 Generated 9/12/2024 9:06:09 PM

# **JOB DESCRIPTION**

Arkema - PDI Investigation

## **JOB NUMBER**

580-142079-2

Eurofins Seattle 5755 8th Street East Tacoma WA 98424



# **Eurofins Seattle**

### **Job Notes**

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

### **Authorization**

Generated 9/12/2024 9:06:09 PM

Authorized for release by Sheri Cruz, Project Manager I Sheri.Cruz@et.eurofinsus.com (253)922-2310

Shuid any

9/12/2024

Client: ERM-West

Project/Site: Arkema - PDI Investigation

Laboratory Job ID: 580-142079-2

# **Table of Contents**

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Sample Summary	10
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Receint Checklists	13

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#### Case Narrative

Client: ERM-West Job ID: 580-142079-2

Project: Arkema - PDI Investigation

**Eurofins Seattle** Job ID: 580-142079-2

> Job Narrative 580-142079-2

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 7/16/2024 1:00 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.8°C.

#### Receipt Exceptions

The following samples were activated for Method 1020A and 9045D analysis by the client on 9/5/2024: PDI-03-SO-29.5-20240712 (580-142079-3) and PDI-03-SO-39.5-20240712 (580-142079-4). This analysis was not originally requested on the chain-ofcustody (COC).

#### **General Chemistry**

Method 1020A: Method 1020A is applicable only to liquid matrices, however, this method has been modified to incorporate solid matrices. The method modification has been defined in the laboratories standard operating procedure (SOP). PDI-03-SO-29.5-20240712 (580-142079-3) and PDI-03-SO-39.5-20240712 (580-142079-4)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**Eurofins Seattle** 

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### **Definitions/Glossary**

Client: ERM-West Job ID: 580-142079-2

Project/Site: Arkema - PDI Investigation

#### **Qualifiers**

#### **General Chemistry**

Qualifier **Qualifier Description** 

HF Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

### **Glossary**

Abbreviation These commonly used abbreviations may or may not be present in this report. Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery **CFL** Contains Free Liquid CFU Colony Forming Unit CNF Contains No Free Liquid

Duplicate Error Ratio (normalized absolute difference) **DER** 

Dil Fac **Dilution Factor** 

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

Estimated Detection Limit (Dioxin) **EDL** LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level" MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit MLMinimum Level (Dioxin) MPN Most Probable Number Method Quantitation Limit MQL

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present

**PQL Practical Quantitation Limit** 

**PRES** Presumptive QC **Quality Control** 

Relative Error Ratio (Radiochemistry) **RER** 

Reporting Limit or Requested Limit (Radiochemistry) RL

**RPD** Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin) **TEQ** Toxicity Equivalent Quotient (Dioxin)

Too Numerous To Count **TNTC** 

**Eurofins Seattle** 

Page 5 of 13 9/12/2024

Client: ERM-West Job ID: 580-142079-2

Project/Site: Arkema - PDI Investigation

Date Collected: 07/12/24 12:00 Lab Sample 1D. 560-142079-3

Date Received: 07/16/24 13:00

General Chemistry									
Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 9045D)	6.2	HF			SU			09/09/24 13:22	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ignitability (SW846 1020A)	> 212				Degrees F			09/12/24 18:00	1

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Client: ERM-West Job ID: 580-142079-2

Project/Site: Arkema - PDI Investigation

Date Collected: 07/12/24 14:35

Date Received: 07/16/24 13:00

General Chemistry									
Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 9045D)	5.3	HF			SU			09/09/24 13:24	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ignitability (SW846 1020A)	> 212				Degrees F			09/12/24 18:00	1

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### **Lab Chronicle**

Client: ERM-West Job ID: 580-142079-2

Project/Site: Arkema - PDI Investigation

Client Sample ID: PDI-03-SO-29.5-20240712

Lab Sample ID: 580-142079-3 Date Collected: 07/12/24 12:00 **Matrix: Solid** 

Date Received: 07/16/24 13:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	1020A		1	471306	FCG	EET SEA	09/12/24 18:00
Total/NA	Analysis	9045D		1	470788	AUA	EET SEA	09/09/24 13:22

Client Sample ID: PDI-03-SO-39.5-20240712 Lab Sample ID: 580-142079-4

Date Collected: 07/12/24 14:35

Date Received: 07/16/24 13:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	1020A			471306	FCG	EET SEA	09/12/24 18:00
Total/NA	Analysis	9045D		1	470788	AUA	EET SEA	09/09/24 13:24

**Laboratory References:** 

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

**Matrix: Solid** 

# **Accreditation/Certification Summary**

Client: ERM-West Job ID: 580-142079-2

Project/Site: Arkema - PDI Investigation

### **Laboratory: Eurofins Seattle**

The accreditations/certifications listed below are applicable to this report.

Authority	Program	<b>Identification Number</b>	<b>Expiration Date</b>
Oregon	NELAP	4167	07-07-25

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# **Sample Summary**

Client: ERM-West

Project/Site: Arkema - PDI Investigation

Job ID: 580-142079-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-142079-3	PDI-03-SO-29.5-20240712	Solid	07/12/24 12:00	07/16/24 13:00
580-142079-4	PDI-03-SO-39.5-20240712	Solid	07/12/24 14:35	07/16/24 13:00

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### **Eurofins Seattle**

5755 8th Street East Tacoma, WA 98424 Phone: 253-922-2310

# Chain of Custody Record

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Environment Testing

Client Information	Sampler:	d 3to	Sne	Lab Cru	PM: z, She	ri L			Carrier T	racking No(s):		COC No: 580-62780-19268.5
Client Contact: Avery Soplata	Phone:	1-606	-836	E-M She		z@et.eu	rofinsi	ıs com	State of	Origin.		Page: Page 5-of 8 O F
Company ERM-West			PWSID:						Postunata			Job #:
Address: 1050 SW 6th Avenue Suite 1650	Due Date Request	ted:	1			T		Allalysis	Requeste			Preservation Codes:
City:	TAT Requested (d	lays):										F - MeOH E - NaHSO4
Portland State, Zip:		1 we	ek									A - HCL
OR, 97204	Compliance Proje		times a second									
Phone:	PO#:										93	
Email:	0682868.304 WO#:				ΘÑ.	정	_				100	
avery.soplata@erm.com					No 05	St M	list list				80	
Project Name: Arkema - PDI Investigation	Project #: 58020743				30 3	D 1	ard ard				aine	
Site:	SSOW#:				eld S	standard	tand	2			Sont	Other:
Askemol					I Sar MSD	s, s	8, 8	12			lo lo	
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Aug. Color	10.0	Sample	Type (C=comp,	(W=water, S=solid, O=waste/oil,	d Fil	0 0					N.	
Sample Identification	Sample Date	Time		BT=Tissue, A=Air)	Fiel Per	8260D	8260D	A			Tota	Special Instructions/Note:
		><	Preserva	tion Code:	$\times\!\!\!\times$	FE	Α				X	
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PDT-03-50-255-20246712	07/12/7024	1200	6	Sowater		X		K			2	
POT-03-50-29.5-20240712	07/12/2024	1200	6	Sauter		X	+	1				50.35
PD1-03-50-39.5-20240712	7/12/2024			_	$\vdash$		+				2	High conc. Dilute San High Conc. Dilutescape
PDI 32 (3) 112 010 11 12		_	6	S.Water	$\perp$	X					1	High Conc. D. Ivlesond
PDI-03-50-42-20240712	07/12/2024	1540	6	5 Water		X		X		11 1000	2	V
TB-01-50-20240716	07/16/2024			∫ Water		X					1	
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				Water		T i	1			1 1		
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Non-Hazard Flammable Skin Irritant Poleliverable Requested: I, (,)III, IV, Other (specify)	oison B  Unkno	own 🗀 I	Radiologica	1		Ret	urn To	Client	Disposal Disposal	By Lab	Arci	hive For Months
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elinquished by:	Date/Time:		1173	Company		Received	Loy.	uw	· V	Date/Time	MIN	Company
elinquished by:	111412	4 1	300	Company .	<u>-</u>		4	7-2	2	71	16/2	4 1300 Company
V V	Date/Time:			Company		Receive	бу:			Date/Time		Company
Custody Seals Intact: Custody Seal No.:						Cooler To	massal	ure(s) °C and Oth	D		e	4.8/5.8

#### Eurofins Seattle

5755 8th Street East Tacoma, WA 98424 Phone: 253-922-2310

# Chain of Custody Record

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Environment Testing

Client Information	Sampler: David St	Cr Cr	o PM: uz, Sheri L		Carrier Tracking No(s):	COC No: 580-62780-19268.5
Client Contact:	Phone: 562-60	. E-N	Mail: neri.Cruz@et.euro	ofingue com	State of Origin:	Page: Page 5 of 6 0 r
Avery Soplata Company:	760,00	PWSID:	len.Cruz@er.eurc			Job#:
ERM-West				Analysis	Requested	Preservation Codes:
Address: 1050 SW 6th Avenue Suite 1650	Due Date Requested:					F - MeOH E - NaHSO4
City:	TAT Requested (days):	. ) /				A - HCL
Portland State, Zip:	- I W	eell				
OR, 97204	Compliance Project: ∆ Ye	s ∆ No				
Phone:	PO#: 0682868.304		(a) ±			
Email:	WO #:		es or No) r No) list MeOH			
avery.soplata@erm.com Project Name:	Project #:		d list	l ist		Itainers
Arkema - PDI Investigation	58020743		res c	ndar		outai outai
Site:	SSOW#:		Samp ASD (A	s, sta		Other:
Take Take Take Take Take Take Take Take		Sample Matrix	Field Filtered S Perform MS/MS 8260D - Volatiles 8260D - Volatiles	la da ti		Number
		Type (W=water, S=solid,	orm Fig.			
Sample Identification	Sample Date Time		Field Filt Perform 8260D - V	82600		র ০ Special Instructions/Note:
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POT-03-50-29-5-20240712	07/12/2024 1200		X			a High conc, Dilute Same
PD1-03-50-395-20240712	57/12/2024/435	6 S.Water	X			2 High conc. Dilute Same 2 High Conc. Dilutesande
PDI-03-50-42-20240712	07/12/2024 154	0 6 S Water	X	X	1   1   1   1   1   1   1   1   1   1	2
TB-01-50-20240716	07/16/2024	∫ <del>Wate</del> r	X			1
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		Water				
		Water	58	30-142079 Chain	of Custody	
		Water			<u> </u>	
Possible Hazard Identification	<b>X</b>	7			be assessed if samples are	e retained longer than 1 month)
Non-Hazard Flammable Skin Irritant Deliverable Requested: I, (())III, IV, Other (specify)	⊃oison B	Radiological		urn To Client structions/QC Requ	Disposal By Lab irements:	Archive For Months
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### **Login Sample Receipt Checklist**

Client: ERM-West Job Number: 580-142079-2

Login Number: 142079 List Source: Eurofins Seattle

List Number: 1

Creator: Silva, Shawn 1

Creator: Silva, Snawn 1		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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# **ANALYTICAL REPORT**

## PREPARED FOR

Attn: Avery Soplata ERM-West 1050 SW 6th Avenue Suite 1650 Portland, Oregon 97204

Generated 10/15/2024 3:39:17 PM Revision 1

# **JOB DESCRIPTION**

Arkema PDI Sampling

### **JOB NUMBER**

580-142190-1

Eurofins Seattle 5755 8th Street East Tacoma WA 98424



# **Eurofins Seattle**

### **Job Notes**

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

### **Authorization**

Generated 10/15/2024 3:39:17 PM Revision 1

10/15/2024 (Rev. 1)

Authorized for release by Sheri Cruz, Project Manager I Sheri.Cruz@et.eurofinsus.com (253)922-2310

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Client: ERM-West

Project/Site: Arkema PDI Sampling

Laboratory Job ID: 580-142190-1

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#### **Case Narrative**

Client: ERM-West Job ID: 580-142190-1

Project: Arkema PDI Sampling

Job ID: 580-142190-1 Eurofins Seattle

Job Narrative 580-142190-1

Revised 10/14/24 to fix 10MS/MSD 8260D analytes not reporting.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these
  situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise
  specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed
  unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 7/19/2024 11:50 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.6°C.

#### **Receipt Exceptions**

The following samples were canceled by the lab on 7/23/24: PDI-04-SO-35-20240716 (580-142190-2). Client requested DOC on a soil with variation to filter a leachate batch. The operations were not setup to do this SOP variation for dissolved organic carbon on a soil. Client contacted on 7/23/24

#### GC/MS VOA

Method 8260D: The method blank for preparation batch 580-466429 and analytical batch 580-466432 contained Methylene Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8260D: The following sample was analyzed at reduced volume due to high concentrations of target analytes: PDI-04-SO-32-20240716 (580-142190-1). The calculation was performed using an initial volume adjustment rather than a dilution factor. The reporting limits have been elevated by the appropriate factor.

Method 8260D: The following samples were analyzed at reduced volume due to high concentrations of target analytes: PDI-04-SO-35-20240716 (580-142190-2), PDI-04-SO-38-20240716 (580-142190-3), PDI-05-SO-36.5-20240717 (580-142190-6), PDI-05-SO-37-20240717 (580-142190-7), PDI-05-SO-40.5-20240717 (580-142190-8), Dup-01-SQ-20240717 (580-142190-9), PDI-05-SO-53-20240717 (580-142190-11), PDI-06-SO-38.7-20240718 (580-142190-12), PDI-06-SO-40.5-20240718 (580-142190-13), PDI-06-SO-44.5-20240718 (580-142190-14) and PDI-06-SO-52-20240719 (580-142190-15). The calculation was performed using an initial volume adjustment rather than a dilution factor. The reporting limits have been elevated by the appropriate factor.

Method 8260D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-466321 and analytical batch 580-466343 recovered outside control limits for the following analytes: Methyl tert-butyl ether.

Method 8260D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 580-466429 and analytical batch 580-466432 recovered outside control limits for the following analytes: Trichlorofluoromethane. This analyte was biased low in the LCS/LCSD. Samples were reanalyzed for this analyte. Both sets of data have been reported.

Method 8260D: Reanalysis of the following samples were performed outside of the analytical holding time due to instrument failures: PDI-04-SO-32-20240716 (580-142190-1), PDI-04-SO-35-20240716 (580-142190-2), PDI-04-SO-38-20240716 (580-142190-3), PDI-04-SO-40.5-20240716 (580-142190-4), TB-02-SO-20240716 (580-142190-5), PDI-05-SO-36.5-20240717 (580-142190-6), PDI-05-SO-37-20240717 (580-142190-7), PDI-05-SO-40.5-20240717 (580-142190-8), Dup-01-SQ-20240717 (580-142190-9), PDI-05-SO-44.5-20240717 (580-142190-10[MS]), PDI-05-SO-44.5-20240717 (580-142190-10[MS]), PDI-05-SO-44.5-20240717 (580-142190-11), PDI-06-SO-38.7-20240718 (580-142190-12), PDI-06-SO-40.5-20240718 (580-142190-13), PDI-06-SO-44.5-20240718 (580-142190-14) and PDI-06-SO-52-20240719 (580-142190-15).

**Eurofins Seattle** 

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#### Case Narrative

Client: ERM-West Job ID: 580-142190-1

Project: Arkema PDI Sampling

### Job ID: 580-142190-1 (Continued)

**Eurofins Seattle** 

Method 8260D: Reanalysis of the following sample was performed outside of the analytical holding time due to over dilution in initial run: PDI-04-SO-32-20240716 (580-142190-1). Initial data reported as secondary.

Method 8260D: Reanalysis of the following sample was performed outside of the analytical holding time due to over dilution for Chlorobenzene: PDI-04-SO-32-20240716 (580-142190-1).

Method 8260D: The method blank for preparation batch 580-466927 and analytical batch 580-466931 contained Benzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8260D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 580-466619 and analytical batch 580-466626 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8260D: The method blank for preparation batch 580-466779 and analytical batch 580-466785 contained Chlorobenzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-466931 recovered outside acceptance criteria, low biased, for Bromomethane and Chloroethane. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated sample was non-detect for the analytes, the data are reported.

Method 8260D: The following sample is reported as secondary at an over dilution due to the re-analysis being performed outside of analytical holding time: PDI-04-SO-32-20240716 (580-142190-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **General Chemistry**

Method Moisture: The sample duplicate (DUP) precision for analytical batch 580-465790 was outside control limits. Sample matrix interference is suspected.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **VOA Prep**

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

**Eurofins Seattle** 

### **Definitions/Glossary**

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

#### **Qualifiers**

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Qualifier

Quaiiiioi	quanior 2000 i piron
*_	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.

B Compound was found in the blank and sample.

E Result exceeded calibration range.

Qualifier Description

F1 MS and/or MSD recovery exceeds control limits.

H Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

**General Chemistry** 

Qualifier Qualifier Description

F3 Duplicate RPD exceeds the control limit

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery
CFL Contains Free Liquid
CFU Colony Forming Unit
CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent
POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

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Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-04-SO-32-20240716

Lab Sample ID: 580-142190-1 Date Collected: 07/16/24 11:50 Matrix: Solid Date Received: 07/19/24 11:50 Percent Solids: 80.3

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 42 10 mg/Kg 07/25/24 15:32 07/30/24 03:53 ND 83 1.1.1-Trichloroethane 9.6 mg/Kg 07/25/24 15:32 07/30/24 03:53 1,1,2,2-Tetrachloroethane ND 42 16 mg/Kg 07/25/24 15:32 07/30/24 03:53 ND 42 1,1,2-Trichloroethane 15 mg/Kg 07/25/24 15:32 07/30/24 03:53 83 mg/Kg 07/25/24 15:32 07/30/24 03:53 1.1-Dichloroethane ND 19 1,1-Dichloroethene ND 83 26 mg/Kg 07/25/24 15:32 07/30/24 03:53 1,1-Dichloropropene ND 83 07/25/24 15:32 07/30/24 03:53 mg/Kg ND 170 07/25/24 15:32 07/30/24 03:53 1,2,3-Trichlorobenzene 83 mg/Kg 1,2,3-Trichloropropane ND 83 mg/Kg 07/25/24 15:32 07/30/24 03:53 1,2,4-Trichlorobenzene ND 170 89 mg/Kg 07/25/24 15:32 07/30/24 03:53 1,2,4-Trimethylbenzene ND 83 mg/Kg 07/25/24 15:32 07/30/24 03:53 1.2-Dibromo-3-Chloropropane ND 120 32 mg/Kg 07/25/24 15:32 07/30/24 03:53 1 1,2-Dibromoethane ND 42 7.9 mg/Kg 07/25/24 15:32 07/30/24 03:53 1,2-Dichlorobenzene ND 83 18 mg/Kg 07/25/24 15:32 07/30/24 03:53 42 ND mg/Kg 07/25/24 15:32 07/30/24 03:53 1.2-Dichloroethane 83 1,3,5-Trimethylbenzene NΩ mg/Kg 07/25/24 15:32 07/30/24 03:53 1,3-Dichlorobenzene ND 120 28 mg/Kg 07/25/24 15:32 07/30/24 03:53 1,3-Dichloropropane ND 120 mg/Kg 07/25/24 15:32 07/30/24 03:53 1.4-Dichlorobenzene ND 120 22 07/25/24 15:32 07/30/24 03:53 mg/Kg 2,2-Dichloropropane ND 83 mg/Kg 07/25/24 15:32 07/30/24 03:53 2-Chlorotoluene ND 83 18 mg/Kg 07/25/24 15:32 07/30/24 03:53 ₹ 20 4-Chlorotoluene ND 83 mg/Kg 07/25/24 15:32 07/30/24 03:53 4-Isopropyltoluene ND 83 21 07/25/24 15:32 07/30/24 03:53 mg/Kg Benzene ND 42 7.9 mg/Kg 07/25/24 15:32 07/30/24 03:53 Bromobenzene ND 83 8.7 mg/Kg 07/25/24 15:32 07/30/24 03:53 07/25/24 15:32 07/30/24 03:53 Bromochloromethane ND 83 mg/Kg Bromodichloromethane ND 83 11 mg/Kg 07/25/24 15:32 07/30/24 03:53 Bromoform 83 ND 9.4 mg/Kg 07/25/24 15:32 07/30/24 03:53 42 Carbon tetrachloride ND mg/Kg 07/25/24 15:32 07/30/24 03:53 ND 83 07/25/24 15:32 Chlorobenzene 10 mg/Kg 07/30/24 03:53 Chloroethane ND 170 43 mg/Kg 07/25/24 15:32 07/30/24 03:53 Chloroform ND 42 8.7 07/25/24 15:32 07/30/24 03:53 mg/Kg Chloromethane ND 120 07/25/24 15:32 07/30/24 03:53 mg/Kg cis-1,2-Dichloroethene ND 120 07/25/24 15:32 07/30/24 03:53 mg/Kg cis-1,3-Dichloropropene ND 42 mg/Kg 07/25/24 15:32 07/30/24 03:53 Dibromochloromethane ND 42 07/25/24 15:32 07/30/24 03:53 10 mg/Kg 83 Dibromomethane ND mg/Kg 07/25/24 15:32 07/30/24 03:53 Ethylbenzene ND 83 mg/Kg 07/25/24 15:32 07/30/24 03:53 ND 210 07/25/24 15:32 07/30/24 03:53 Hexachlorobutadiene 50 mg/Kg Isopropylbenzene ND 83 18 mg/Kg 07/25/24 15:32 07/30/24 03:53 Methyl tert-butyl ether ND 83 12 mg/Kg 07/25/24 15:32 07/30/24 03:53 **Methylene Chloride** 480 520 mg/Kg 07/25/24 15:32 07/30/24 03:53 J<sub>B</sub> 83 07/25/24 15:32 07/30/24 03:53 m-Xylene & p-Xylene ND mg/Kg Naphthalene 310 07/25/24 15:32 07/30/24 03:53 ND 81 mg/Kg ND n-Butylbenzene 83 38 mg/Kg 07/25/24 15:32 07/30/24 03:53 N-Propylbenzene ND 83 31 mg/Kg 07/25/24 15:32 07/30/24 03:53 ND 83 07/25/24 15:32 07/30/24 03:53 o-Xylene mg/Kg sec-Butylbenzene ND 83 mg/Kg 07/25/24 15:32 07/30/24 03:53 Styrene ND 83 26 mg/Kg 07/25/24 15:32 07/30/24 03:53

**Eurofins Seattle** 

10/15/2024 (Rev. 1)

Lab Sample ID: 580-142190-1

Client Sample ID: PDI-04-SO-32-20240716 Date Collected: 07/16/24 11:50

Matrix: Solid

Date Received: 07/19/24 11:50

Percent Solids: 80.3

Job ID: 580-142190-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
t-Butylbenzene	ND		83	16	mg/Kg	<u></u>	07/25/24 15:32	07/30/24 03:53	1
Tetrachloroethene	ND		83	11	mg/Kg	☼	07/25/24 15:32	07/30/24 03:53	1
Toluene	ND		120	28	mg/Kg	₩	07/25/24 15:32	07/30/24 03:53	1
trans-1,2-Dichloroethene	ND		120	30	mg/Kg	₩	07/25/24 15:32	07/30/24 03:53	1
trans-1,3-Dichloropropene	ND		83	15	mg/Kg	₩	07/25/24 15:32	07/30/24 03:53	1
Trichloroethene	ND		83	21	mg/Kg	⊅	07/25/24 15:32	07/30/24 03:53	1
Trichlorofluoromethane	ND	*_	170	54	mg/Kg	₩	07/25/24 15:32	07/30/24 03:53	1
Vinyl chloride	ND		210	39	mg/Kg	☼	07/25/24 15:32	07/30/24 03:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		80 - 121				07/25/24 15:32	07/30/24 03:53	1
4-Bromofluorobenzene (Surr)	97		80 - 120				07/25/24 15:32	07/30/24 03:53	1
Dibromofluoromethane (Surr)	117		80 - 120				07/25/24 15:32	07/30/24 03:53	1
Toluene-d8 (Surr)	97		80 - 120				07/25/24 15:32	07/30/24 03:53	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	Н	0.42	0.10	mg/Kg	☆	08/02/24 09:31	08/02/24 13:25	1
1,1,1-Trichloroethane	ND	Н	0.83	0.096	mg/Kg	☼	08/02/24 09:31	08/02/24 13:25	1
1,1,2,2-Tetrachloroethane	ND	Н	0.42	0.16	mg/Kg	☼	08/02/24 09:31	08/02/24 13:25	1
1,1,2-Trichloroethane	ND	Н	0.42	0.15	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
1,1-Dichloroethane	ND	Н	0.83	0.19	mg/Kg	☼	08/02/24 09:31	08/02/24 13:25	1
1,1-Dichloroethene	ND	Н	0.83	0.26	mg/Kg	☼	08/02/24 09:31	08/02/24 13:25	1
1,1-Dichloropropene	ND	Н	0.83	0.11	mg/Kg	⊅	08/02/24 09:31	08/02/24 13:25	1
1,2,3-Trichlorobenzene	ND	Н	1.7	0.83	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
1,2,3-Trichloropropane	ND	Н	0.83	0.24	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
1,2,4-Trichlorobenzene	ND	Н	1.7	0.89	mg/Kg	⊅	08/02/24 09:31	08/02/24 13:25	1
1,2,4-Trimethylbenzene	ND	Н	0.83	0.28	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
1,2-Dibromo-3-Chloropropane	ND	Н	1.2	0.32	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
1,2-Dibromoethane	ND	Н	0.42	0.079	mg/Kg	₽	08/02/24 09:31	08/02/24 13:25	1
1,2-Dichlorobenzene	ND	Н	0.83	0.18	mg/Kg	☆	08/02/24 09:31	08/02/24 13:25	1
1,2-Dichloroethane	ND	Н	0.42	0.11	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
1,2-Dichloropropane	ND	Н	0.42	0.14	mg/Kg	☆	08/02/24 09:31	08/02/24 13:25	1
1,3,5-Trimethylbenzene	ND	Н	0.83	0.16	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
1,3-Dichlorobenzene	ND	Н	1.2	0.28	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
1,3-Dichloropropane	ND	Н	1.2	0.12	mg/Kg	☼	08/02/24 09:31	08/02/24 13:25	1
1,4-Dichlorobenzene	ND	Н	1.2	0.22	mg/Kg	☼	08/02/24 09:31	08/02/24 13:25	1
2,2-Dichloropropane	ND	Н	0.83	0.25	mg/Kg	☼	08/02/24 09:31	08/02/24 13:25	1
2-Chlorotoluene	ND	Н	0.83	0.18	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
4-Chlorotoluene	ND	Н	0.83	0.20	mg/Kg	☼	08/02/24 09:31	08/02/24 13:25	1
4-Isopropyltoluene	ND	Н	0.83	0.21	mg/Kg	☼	08/02/24 09:31	08/02/24 13:25	1
Benzene	0.25	JHB	0.42	0.079	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
Bromobenzene	ND	Н	0.83	0.087	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
Bromochloromethane	ND	Н	0.83	0.13	mg/Kg	☼	08/02/24 09:31	08/02/24 13:25	1
Bromodichloromethane	ND	Н	0.83	0.11	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
Bromoform	ND	Н	0.83	0.094	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
Bromomethane	ND	Н	2.1	0.79	mg/Kg	☼	08/02/24 09:31	08/02/24 13:25	1
Carbon tetrachloride	ND	Н	0.42	0.091	mg/Kg	☼	08/02/24 09:31	08/02/24 13:25	1
Chlorobenzene	8.4	Н	0.83	0.10	mg/Kg	☼	08/02/24 09:31	08/02/24 13:25	1
Chloroethane	ND	Н	1.7	0.43	mg/Kg	₽	08/02/24 09:31	08/02/24 13:25	1

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Percent Moisture (SM22 2540G)

19.7

Client Sample ID: PDI-04-SO-32-20240716

Lab Sample ID: 580-142190-1 Date Collected: 07/16/24 11:50 **Matrix: Solid** Date Received: 07/19/24 11:50

Percent Solids: 80.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	ND	H	0.42	0.087	mg/Kg	<u></u>	08/02/24 09:31	08/02/24 13:25	1
Chloromethane	ND	Н	1.2	0.21	mg/Kg		08/02/24 09:31	08/02/24 13:25	1
cis-1,2-Dichloroethene	ND	Н	1.2	0.26		₩	08/02/24 09:31	08/02/24 13:25	1
cis-1,3-Dichloropropene	ND	Н	0.42	0.083	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
Dibromochloromethane	ND	Н	0.42		mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
Dibromomethane	ND	Н	0.83	0.15	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
Dichlorodifluoromethane	ND		5.2	0.95	mg/Kg		08/02/24 09:31	08/02/24 13:25	1
Ethylbenzene	ND	Н	0.83	0.19	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
Hexachlorobutadiene	ND	Н	2.1	0.50	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
Isopropylbenzene	ND	Н	0.83	0.18	mg/Kg	⊅	08/02/24 09:31	08/02/24 13:25	1
Methyl tert-butyl ether	0.14	JH	0.83	0.12	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
Methylene Chloride	ND	Н	5.2	0.54	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
m-Xylene & p-Xylene	0.50	JH	0.83	0.15	mg/Kg	₽	08/02/24 09:31	08/02/24 13:25	1
Naphthalene	1.9	JH	3.1	0.81	mg/Kg	⊅	08/02/24 09:31	08/02/24 13:25	1
n-Butylbenzene	ND	Н	0.83	0.38	mg/Kg	₽	08/02/24 09:31	08/02/24 13:25	1
N-Propylbenzene	ND	Н	0.83	0.31	mg/Kg	⊅	08/02/24 09:31	08/02/24 13:25	1
o-Xylene	0.19	JH	0.83	0.10	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
sec-Butylbenzene	ND	Н	0.83	0.18	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
Styrene	ND	Н	0.83	0.26	mg/Kg	₽	08/02/24 09:31	08/02/24 13:25	1
t-Butylbenzene	ND	Н	0.83	0.16	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
Tetrachloroethene	0.15	JH	0.83	0.11	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
Toluene	ND	Н	1.2	0.28	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
trans-1,2-Dichloroethene	ND	Н	1.2	0.30	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
trans-1,3-Dichloropropene	ND	Н	0.83	0.15	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
Trichloroethene	ND	Н	0.83	0.21	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
Trichlorofluoromethane	ND	Н	1.7	0.54	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
Vinyl chloride	ND	Н	2.1	0.39	mg/Kg	₩	08/02/24 09:31	08/02/24 13:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				08/02/24 09:31	08/02/24 13:25	1
4-Bromofluorobenzene (Surr)	99		80 - 120				08/02/24 09:31	08/02/24 13:25	1
Dibromofluoromethane (Surr)	101		80 - 120				08/02/24 09:31	08/02/24 13:25	1
Toluene-d8 (Surr)	98		80 - 120				08/02/24 09:31	08/02/24 13:25	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	80.3	·	0.1	0.1	%	_		07/22/24 15:04	1

07/22/24 15:04

0.1

0.1 %

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-04-SO-35-20240716

Lab Sample ID: 580-142190-2 Date Collected: 07/16/24 11:52 Matrix: Solid Date Received: 07/19/24 11:50 Percent Solids: 84.7

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 2.8 0.71 mg/Kg 07/25/24 15:32 07/30/24 01:10 ND 5.7 1.1.1-Trichloroethane 0.65 mg/Kg 07/25/24 15:32 07/30/24 01:10 1,1,2,2-Tetrachloroethane ND 2.8 1.1 mg/Kg 07/25/24 15:32 07/30/24 01:10 ND 2.8 1,1,2-Trichloroethane 1.0 mg/Kg 07/25/24 15:32 07/30/24 01:10 ND 5.7 mg/Kg 07/25/24 15:32 07/30/24 01:10 1.1-Dichloroethane 1.3 1,1-Dichloroethene ND 57 1.7 mg/Kg 07/25/24 15:32 07/30/24 01:10 1,1-Dichloropropene ND 5.7 0.75 07/25/24 15:32 07/30/24 01:10 mg/Kg ND 07/25/24 15:32 07/30/24 01:10 1,2,3-Trichlorobenzene 11 5.6 mg/Kg 1,2,3-Trichloropropane ND 5.7 mg/Kg 07/25/24 15:32 07/30/24 01:10 1,2,4-Trichlorobenzene ND 11 6.0 mg/Kg 07/25/24 15:32 07/30/24 01:10 1,2,4-Trimethylbenzene ND 5.7 1.9 mg/Kg 07/25/24 15:32 07/30/24 01:10 1.2-Dibromo-3-Chloropropane ND 8.5 2.1 mg/Kg 07/25/24 15:32 07/30/24 01:10 1 2.8 1,2-Dibromoethane ND 0.54 mg/Kg 07/25/24 15:32 07/30/24 01:10 5.7 1.2 mg/Kg 07/25/24 15:32 07/30/24 01:10 1,2-Dichlorobenzene 4.9 ND 28 0.78 mg/Kg 07/25/24 15:32 07/30/24 01:10 1,2-Dichloroethane 1,3,5-Trimethylbenzene ND 5.7 1.1 mg/Kg 07/25/24 15:32 07/30/24 01:10 1,3-Dichlorobenzene ND 8.5 1.9 07/25/24 15:32 07/30/24 01:10 mg/Kg 1,3-Dichloropropane ND 8.5 mg/Kg 07/25/24 15:32 07/30/24 01:10 1.4-Dichlorobenzene ND 8.5 07/25/24 15:32 07/30/24 01:10 1.5 mg/Kg 2,2-Dichloropropane ND 5.7 mg/Kg 07/25/24 15:32 07/30/24 01:10 2-Chlorotoluene ND 5.7 1.2 07/25/24 15:32 07/30/24 01:10 mg/Kg 4-Chlorotoluene ND 5.7 1.4 mg/Kg 07/25/24 15:32 07/30/24 01:10 4-Isopropyltoluene ND 5.7 07/25/24 15:32 07/30/24 01:10 1.4 mg/Kg Benzene ND 2.8 0.54 mg/Kg 07/25/24 15:32 07/30/24 01:10 Bromobenzene ND 5.7 0.59 mg/Kg 07/25/24 15:32 07/30/24 01:10 Bromochloromethane ND 5.7 0.88 mg/Kg 07/25/24 15:32 07/30/24 01:10 Bromodichloromethane ND 5.7 0.78 mg/Kg 07/25/24 15:32 07/30/24 01:10 Bromoform ND 5.7 0.64 mg/Kg 07/25/24 15:32 07/30/24 01:10 Carbon tetrachloride NΩ 2.8 0.62 mg/Kg 07/25/24 15:32 07/30/24 01:10 5.7 07/25/24 15:32 Chlorobenzene 2000 0.68 mg/Kg 07/30/24 01:10 Chloroethane ND 11 3.0 mg/Kg 07/25/24 15:32 07/30/24 01:10 28 0.59 mg/Kg 07/25/24 15:32 07/30/24 01:10 Chloroform 1.7 Chloromethane 8.5 07/25/24 15:32 07/30/24 01:10 ND mg/Kg ND 1.8 07/25/24 15:32 07/30/24 01:10 cis-1,2-Dichloroethene 8.5 mg/Kg cis-1,3-Dichloropropene ND 2.8 0.57 mg/Kg 07/25/24 15:32 07/30/24 01:10 Dibromochloromethane ND 0.69 07/25/24 15:32 07/30/24 01:10 28 mg/Kg Dibromomethane ND 5.7 1.0 mg/Kg 07/25/24 15:32 07/30/24 01:10 Ethylbenzene ND 5.7 1.3 mg/Kg 07/25/24 15:32 07/30/24 01:10 ND 07/25/24 15:32 07/30/24 01:10 Hexachlorobutadiene 14 3.4 mg/Kg 5.7 Isopropylbenzene ND 1.2 mg/Kg 07/25/24 15:32 07/30/24 01:10 Methyl tert-butyl ether ND 5.7 0.85 mg/Kg 07/25/24 15:32 07/30/24 01:10 **Methylene Chloride** 29 35 3.7 mg/Kg 07/25/24 15:32 07/30/24 01:10 5.7 07/25/24 15:32 07/30/24 01:10 m-Xylene & p-Xylene ND 1.0 mg/Kg Naphthalene 21 5.5 07/25/24 15:32 07/30/24 01:10 ND mg/Kg ND n-Butylbenzene 57 2.6 mg/Kg 07/25/24 15:32 07/30/24 01:10 N-Propylbenzene ND 5.7 mg/Kg 07/25/24 15:32 07/30/24 01:10 ND 5.7 07/25/24 15:32 07/30/24 01:10 o-Xylene 0.71 mg/Kg sec-Butylbenzene ND 5.7 1.2 mg/Kg 07/25/24 15:32 07/30/24 01:10 07/25/24 15:32 07/30/24 01:10 Styrene ND 5.7 1.8 mg/Kg

**Eurofins Seattle** 

10/15/2024 (Rev. 1)

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-04-SO-35-20240716

Date Collected: 07/16/24 11:52 Date Received: 07/19/24 11:50 Lab Sample ID: 580-142190-2

Matrix: Solid Percent Solids: 84.7

Job ID: 580-142190-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
t-Butylbenzene	ND		5.7	1.1	mg/Kg	<u></u>	07/25/24 15:32	07/30/24 01:10	1
Tetrachloroethene	5.7		5.7	0.75	mg/Kg	☼	07/25/24 15:32	07/30/24 01:10	1
Toluene	ND		8.5	1.9	mg/Kg	₩	07/25/24 15:32	07/30/24 01:10	1
trans-1,2-Dichloroethene	ND		8.5	2.1	mg/Kg	₩	07/25/24 15:32	07/30/24 01:10	1
trans-1,3-Dichloropropene	ND		5.7	0.99	mg/Kg	₩	07/25/24 15:32	07/30/24 01:10	1
Trichloroethene	ND		5.7	1.5	mg/Kg	⊅	07/25/24 15:32	07/30/24 01:10	1
Trichlorofluoromethane	ND	*_	11	3.7	mg/Kg	₩	07/25/24 15:32	07/30/24 01:10	1
Vinyl chloride	ND		14	2.6	mg/Kg	☼	07/25/24 15:32	07/30/24 01:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		80 - 121				07/25/24 15:32	07/30/24 01:10	1
4-Bromofluorobenzene (Surr)	86		80 - 120				07/25/24 15:32	07/30/24 01:10	1
Dibromofluoromethane (Surr)	101		80 - 120				07/25/24 15:32	07/30/24 01:10	1
Toluene-d8 (Surr)	96		80 - 120				07/25/24 15:32	07/30/24 01:10	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND	Н	5.7	1.9	mg/Kg	<u></u>	07/25/24 08:51	07/31/24 18:51	1
Bromomethane	ND	Н	28	11	mg/Kg	₩	07/25/24 08:51	07/31/24 18:51	1
Chloromethane	ND	Н	17	2.9	mg/Kg	₩	07/25/24 08:51	07/31/24 18:51	1
Dichlorodifluoromethane	ND	Н	71	13	mg/Kg	₩	07/25/24 08:51	07/31/24 18:51	1
Trichlorofluoromethane	ND	Н	23	7.4	mg/Kg	☼	07/25/24 08:51	07/31/24 18:51	1
Vinyl chloride	ND	Н	28	5.3	mg/Kg	☼	07/25/24 08:51	07/31/24 18:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		80 - 121				07/25/24 08:51	07/31/24 18:51	1
4-Bromofluorobenzene (Surr)	101		80 - 120				07/25/24 08:51	07/31/24 18:51	1
Dibromofluoromethane (Surr)	103		80 - 120				07/25/24 08:51	07/31/24 18:51	1
Toluene-d8 (Surr)	96		80 - 120				07/25/24 08:51	07/31/24 18:51	1
- Method: SW846 8260D - Vo	latile Organic	Compound	ds by GC/MS	- DL2					
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	990	нв	5.7	0.68	mg/Kg	₩	08/01/24 09:30	08/01/24 13:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		80 - 121				08/01/24 09:30	08/01/24 13:27	1
4-Bromofluorobenzene (Surr)	100		80 - 120				08/01/24 09:30	08/01/24 13:27	1
Dibromofluoromethane (Surr)	103		80 - 120				08/01/24 09:30	08/01/24 13:27	1
Toluene-d8 (Surr)	97		80 - 120				08/01/24 09:30	08/01/24 13:27	1

General Chemistry								
Analyte	Result Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	84.7	0.1	0.1	%			07/22/24 15:04	1
Percent Moisture (SM22 2540G)	15.3	0.1	0.1	%			07/22/24 15:04	1

Client: ERM-West Project/Site: Arkema PDI Sampling

Date Received: 07/19/24 11:50

Client Sample ID: PDI-04-SO-38-20240716

Date Collected: 07/16/24 11:56

Lab Sample ID: 580-142190-3 Matrix: Solid

Percent Solids: 88.8

Analyte	Result	Qualifier	RL _	MDL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND		0.24	0.060	mg/Kg	₩	07/25/24 15:32	07/29/24 23:37	
1,1,1-Trichloroethane	ND		0.48		mg/Kg	₩	07/25/24 15:32	07/29/24 23:37	
1,1,2,2-Tetrachloroethane	ND		0.24	0.091	mg/Kg	₩	07/25/24 15:32	07/29/24 23:37	
1,1,2-Trichloroethane	ND		0.24	0.088	mg/Kg	₩	07/25/24 15:32	07/29/24 23:37	
1,1-Dichloroethane	ND		0.48	0.11	mg/Kg	₩	07/25/24 15:32	07/29/24 23:37	
1,1-Dichloroethene	ND		0.48	0.15	mg/Kg	₩	07/25/24 15:32	07/29/24 23:37	
1,1-Dichloropropene	ND		0.48	0.063	mg/Kg	₩	07/25/24 15:32	07/29/24 23:37	
1,2,3-Trichlorobenzene	ND		0.95	0.47	mg/Kg	₩	07/25/24 15:32	07/29/24 23:37	
1,2,3-Trichloropropane	ND		0.48	0.14	mg/Kg	₩	07/25/24 15:32	07/29/24 23:37	
1,2,4-Trichlorobenzene	ND		0.95	0.51	mg/Kg	₩	07/25/24 15:32	07/29/24 23:37	
1,2,4-Trimethylbenzene	ND		0.48	0.16	mg/Kg	₩	07/25/24 15:32	07/29/24 23:37	
1,2-Dibromo-3-Chloropropane	ND		0.71	0.18	mg/Kg	₩	07/25/24 15:32	07/29/24 23:37	
1,2-Dibromoethane	ND		0.24	0.045	mg/Kg	₩	07/25/24 15:32	07/29/24 23:37	
1,2-Dichlorobenzene	3.8		0.48	0.10	mg/Kg	₩	07/25/24 15:32	07/29/24 23:37	
1,2-Dichloroethane	ND		0.24	0.066	mg/Kg	₩	07/25/24 15:32	07/29/24 23:37	
1,3,5-Trimethylbenzene	ND		0.48	0.091	mg/Kg	₩	07/25/24 15:32	07/29/24 23:37	
1,3-Dichlorobenzene	0.26	J	0.71	0.16	mg/Kg	₩	07/25/24 15:32	07/29/24 23:37	
1,3-Dichloropropane	ND		0.71		mg/Kg	₩	07/25/24 15:32	07/29/24 23:37	
1,4-Dichlorobenzene	9.1		0.71		mg/Kg		07/25/24 15:32	07/29/24 23:37	
2,2-Dichloropropane	ND		0.48		mg/Kg	₩	07/25/24 15:32	07/29/24 23:37	
2-Chlorotoluene	ND		0.48		mg/Kg	₩		07/29/24 23:37	
4-Chlorotoluene	ND		0.48		mg/Kg	∷ #		07/29/24 23:37	
4-Isopropyltoluene	ND		0.48		mg/Kg	₩		07/29/24 23:37	
Benzene	ND		0.24		mg/Kg	₩		07/29/24 23:37	
Bromobenzene	0.071		0.48		mg/Kg			07/29/24 23:37	
Bromochloromethane	ND		0.48		mg/Kg	₩.		07/29/24 23:37	
Bromodichloromethane	ND		0.48		mg/Kg	- T		07/29/24 23:37	
Bromoform	ND		0.48		mg/Kg			07/29/24 23:37	
Carbon tetrachloride	ND		0.44		mg/Kg	₩		07/29/24 23:37	
Chlorobenzene	180	F	0.48		mg/Kg	Ť.		07/29/24 23:37	
Chloroethane	ND	<del></del>	0.95		mg/Kg			07/29/24 23:37	
Chloroform	0.22		0.24		mg/Kg	₩		07/29/24 23:37	
Chloromethane	ND	3	0.71		mg/Kg	γ. γ.		07/29/24 23:37	
cis-1,2-Dichloroethene	ND		0.71		mg/Kg	**		07/29/24 23:37	
cis-1,3-Dichloropropene	ND		0.24		mg/Kg	₩		07/29/24 23:37	
Dibromochloromethane	ND		0.24		mg/Kg	*		07/29/24 23:37	
Dibromomethane	ND		0.48		mg/Kg			07/29/24 23:37	
Ethylbenzene	ND ND		0.48			**		07/29/24 23:37	
•					mg/Kg	*			
Hexachlorobutadiene	ND		1.2		mg/Kg	: : : : <u>:</u> :		07/29/24 23:37	
sopropylbenzene	ND		0.48		mg/Kg	12		07/29/24 23:37	
Methyl tert-butyl ether	ND		0.48		mg/Kg	₩.		07/29/24 23:37	
Methylene Chloride	2.4		3.0		mg/Kg	<u></u>		07/29/24 23:37	
m-Xylene & p-Xylene	0.22		0.48		mg/Kg	₩.		07/29/24 23:37	
Naphthalene	0.67	J	1.8		mg/Kg	₩.		07/29/24 23:37	
n-Butylbenzene	ND		0.48		mg/Kg			07/29/24 23:37	
N-Propylbenzene	ND		0.48		mg/Kg	₩		07/29/24 23:37	
o-Xylene	ND		0.48		mg/Kg	₩		07/29/24 23:37	
sec-Butylbenzene	ND		0.48	0.10	mg/Kg	₩	07/25/24 15:32	07/29/24 23:37	

**Eurofins Seattle** 

Lab Sample ID: 580-142190-3

Client Sample ID: PDI-04-SO-38-20240716 Date Collected: 07/16/24 11:56 **Matrix: Solid** Date Received: 07/19/24 11:50

Percent Solids: 88.8

Job ID: 580-142190-1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
t-Butylbenzene	ND		0.48	0.092	mg/Kg	<u></u>	07/25/24 15:32	07/29/24 23:37	1
Tetrachloroethene	1.1		0.48	0.063	mg/Kg	☼	07/25/24 15:32	07/29/24 23:37	1
Toluene	ND		0.71	0.16	mg/Kg	☼	07/25/24 15:32	07/29/24 23:37	1
trans-1,2-Dichloroethene	ND		0.71	0.17	mg/Kg	₩	07/25/24 15:32	07/29/24 23:37	1
trans-1,3-Dichloropropene	ND		0.48	0.083	mg/Kg	☼	07/25/24 15:32	07/29/24 23:37	1
Trichloroethene	ND		0.48	0.12	mg/Kg	⊅	07/25/24 15:32	07/29/24 23:37	1
Trichlorofluoromethane	ND	*_	0.95	0.31	mg/Kg	☼	07/25/24 15:32	07/29/24 23:37	1
Vinyl chloride	ND		1.2	0.22	mg/Kg	☼	07/25/24 15:32	07/29/24 23:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				07/25/24 15:32	07/29/24 23:37	1
4-Bromofluorobenzene (Surr)	86		80 - 120				07/25/24 15:32	07/29/24 23:37	1
Dibromofluoromethane (Surr)	98		80 - 120				07/25/24 15:32	07/29/24 23:37	1
Toluene-d8 (Surr)	100		80 - 120				07/25/24 15:32	07/29/24 23:37	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND	H	0.48	0.16	mg/Kg	<del>-</del>	07/25/24 08:51	07/31/24 16:40	1
Bromomethane	ND	Н	2.4	0.90	mg/Kg	☼	07/25/24 08:51	07/31/24 16:40	1
Chloromethane	ND	Н	1.4	0.24	mg/Kg	☼	07/25/24 08:51	07/31/24 16:40	1
Dichlorodifluoromethane	ND	Н	6.0	1.1	mg/Kg	⊅	07/25/24 08:51	07/31/24 16:40	1
Trichlorofluoromethane	ND	Н	1.9	0.62	mg/Kg	☼	07/25/24 08:51	07/31/24 16:40	1
Vinyl chloride	ND	Н	2.4	0.45	mg/Kg	☼	07/25/24 08:51	07/31/24 16:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		80 - 121				07/25/24 08:51	07/31/24 16:40	1
4-Bromofluorobenzene (Surr)	100		80 - 120				07/25/24 08:51	07/31/24 16:40	1
Dibromofluoromethane (Surr)	103		80 - 120				07/25/24 08:51	07/31/24 16:40	1
Toluene-d8 (Surr)	94		80 - 120				07/25/24 08:51	07/31/24 16:40	1
- Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	- DL2					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	130	НВ	0.48	0.057	mg/Kg	<del>*</del>	08/01/24 09:30	08/01/24 13:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

Chlorobenzene	130 H B	0.40	0.037 Hig/Ng	₩ 00/01/24 09.30	00/01/24 13.03	
Surrogate	%Recovery Qualifier	Limits		Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101	80 - 121		08/01/24 09:30	08/01/24 13:05	1
4-Bromofluorobenzene (Surr)	101	80 - 120		08/01/24 09:30	08/01/24 13:05	1
Dibromofluoromethane (Surr)	101	80 - 120		08/01/24 09:30	08/01/24 13:05	1
Toluene-d8 (Surr)	98	80 - 120		08/01/24 09:30	08/01/24 13:05	1

General Chemistry Analyte	Result Qualifier	RL	RL Unit	D Prepa	red Analyzed	Dil Fac
Percent Solids (SM22 2540G)	88.8	0.1	0.1 %		07/22/24 15:04	1
Percent Moisture (SM22 2540G)	11.2	0.1	0.1 %		07/22/24 15:04	1

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-04-SO-40.5-20240716

Lab Sample ID: 580-142190-4 Date Collected: 07/16/24 12:00 Matrix: Solid Date Received: 07/19/24 11:50 Percent Solids: 86.1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.023 0.0058 mg/Kg 07/25/24 15:32 07/29/24 23:13 ND 1.1.1-Trichloroethane 0.047 0.0054 mg/Kg 07/25/24 15:32 07/29/24 23:13 1,1,2,2-Tetrachloroethane ND 0.023 0.0089 mg/Kg 07/25/24 15:32 07/29/24 23:13 07/25/24 15:32 07/29/24 23:13 1,1,2-Trichloroethane ND 0.023 0.0087 mg/Kg 0.011 mg/Kg 07/25/24 15:32 07/29/24 23:13 1.1-Dichloroethane ND 0.047 1,1-Dichloroethene ND 0.047 0.014 mg/Kg 07/25/24 15:32 07/29/24 23:13 1,1-Dichloropropene ND 0.047 0.0062 07/25/24 15:32 07/29/24 23:13 mg/Kg ND 0.094 0.046 07/25/24 15:32 07/29/24 23:13 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.047 0.013 mg/Kg 07/25/24 15:32 07/29/24 23:13 1,2,4-Trichlorobenzene ND 0.094 0.050 mg/Kg 07/25/24 15:32 07/29/24 23:13 1,2,4-Trimethylbenzene ND 0.047 0.016 mg/Kg 07/25/24 15:32 07/29/24 23:13 mg/Kg 1.2-Dibromo-3-Chloropropane ND 0.070 0.018 07/25/24 15:32 07/29/24 23:13 1 1,2-Dibromoethane ND 0.023 0.0044 mg/Kg 07/25/24 15:32 07/29/24 23:13 1,2-Dichlorobenzene ND 0.047 0.010 mg/Kg 07/25/24 15:32 07/29/24 23:13 0.0064 ND 0.023 mg/Kg 07/25/24 15:32 07/29/24 23:13 1.2-Dichloroethane 0.0089 1,3,5-Trimethylbenzene NΩ 0.047 mg/Kg 07/25/24 15:32 07/29/24 23:13 ND 0.016 1,3-Dichlorobenzene 0.070 mg/Kg 07/25/24 15:32 07/29/24 23:13 1,3-Dichloropropane ND 0.070 0.0065 mg/Kg 07/25/24 15:32 07/29/24 23:13 1.4-Dichlorobenzene ND 0.070 0.013 mg/Kg 07/25/24 15:32 07/29/24 23:13 2,2-Dichloropropane ND 0.047 0.014 mg/Kg 07/25/24 15:32 07/29/24 23:13 2-Chlorotoluene NΠ 0.047 0.010 mg/Kg ť. 07/25/24 15:32 07/29/24 23:13 4-Chlorotoluene ND 0.047 0.011 mg/Kg 07/25/24 15:32 07/29/24 23:13 0.012 mg/Kg 07/25/24 15:32 07/29/24 23:13 4-Isopropyltoluene 0.023 0.047 Benzene ND 0.023 0.0044 mg/Kg 07/25/24 15:32 07/29/24 23:13 Bromobenzene ND 0.047 0.0049 mg/Kg 07/25/24 15:32 07/29/24 23:13 07/25/24 15:32 07/29/24 23:13 0.0073 Bromochloromethane ND 0.047 mg/Kg Bromodichloromethane ND 0.047 0.0064 mg/Kg 07/25/24 15:32 07/29/24 23:13 Bromoform 0.0053 07/25/24 15:32 07/29/24 23:13 ND 0.047 mg/Kg 0.0051 Carbon tetrachloride ND 0.023 mg/Kg 07/25/24 15:32 07/29/24 23:13 0.0056 07/25/24 15:32 07/29/24 23:13 Chlorobenzene 3.6 0.047 mg/Kg Chloroethane ND 0.094 0.024 mg/Kg 07/25/24 15:32 07/29/24 23:13 Chloroform ND 0.023 0.0049 mg/Kg 07/25/24 15:32 07/29/24 23:13 Chloromethane ND 0.070 0.012 mg/Kg 07/25/24 15:32 07/29/24 23:13 0.015 cis-1.2-Dichloroethene ND 07/25/24 15:32 07/29/24 23:13 0.070 mg/Kg cis-1,3-Dichloropropene ND 0.023 0.0047 mg/Kg 07/25/24 15:32 07/29/24 23:13 Dibromochloromethane ND 0.023 0.0057 mg/Kg 07/25/24 15:32 07/29/24 23:13 Dibromomethane ND 0.047 0.0087 mg/Kg 07/25/24 15:32 07/29/24 23:13 Ethylbenzene 0.023 0.047 0.011 mg/Kg 07/25/24 15:32 07/29/24 23:13 ND 0.028 mg/Kg 07/25/24 15:32 07/29/24 23:13 Hexachlorobutadiene 0.12 Isopropylbenzene ND 0.047 0.010 mg/Kg 07/25/24 15:32 07/29/24 23:13 Methyl tert-butyl ether ND 0.047 0.0070 mg/Kg 07/25/24 15:32 07/29/24 23:13 **Methylene Chloride** 0.27 0.29 0.030 mg/Kg 07/25/24 15:32 07/29/24 23:13 J<sub>B</sub> 0.0083 mg/Kg 07/25/24 15:32 07/29/24 23:13 m-Xylene & p-Xylene 0.047 0.16 Naphthalene 0.046 07/25/24 15:32 07/29/24 23:13 ND 0.18 mg/Kg ND 07/25/24 15:32 07/29/24 23:13 n-Butylbenzene 0.047 0.022 mg/Kg N-Propylbenzene ND 0.047 0.018 mg/Kg 07/25/24 15:32 07/29/24 23:13 0.0058 07/25/24 15:32 07/29/24 23:13 o-Xylene 0.031 J 0.047 mg/Kg sec-Butylbenzene ND 0.047 0.010 mg/Kg 07/25/24 15:32 07/29/24 23:13 0.015 mg/Kg 0.047 07/25/24 15:32 07/29/24 23:13 **Styrene** 0.015 J

**Eurofins Seattle** 

10/15/2024 (Rev. 1)

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-04-SO-40.5-20240716

Lab Sample ID: 580-142190-4 Date Collected: 07/16/24 12:00

**Matrix: Solid** Date Received: 07/19/24 11:50 Percent Solids: 86.1

Method: SW846 8260D - Vo		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
t-Butylbenzene	ND		0.047	0.0090	mg/Kg	— <u></u>	07/25/24 15:32	07/29/24 23:13	1
Tetrachloroethene	ND		0.047	0.0062	mg/Kg	₩	07/25/24 15:32	07/29/24 23:13	1
Toluene	ND		0.070	0.016	mg/Kg	₩	07/25/24 15:32	07/29/24 23:13	1
trans-1,2-Dichloroethene	ND		0.070	0.017	mg/Kg	₩	07/25/24 15:32	07/29/24 23:13	1
trans-1,3-Dichloropropene	ND		0.047	0.0082	mg/Kg	₩	07/25/24 15:32	07/29/24 23:13	1
Trichloroethene	ND		0.047	0.012	mg/Kg		07/25/24 15:32	07/29/24 23:13	1
Trichlorofluoromethane	ND	*-	0.094	0.030	mg/Kg	₩	07/25/24 15:32	07/29/24 23:13	1
Vinyl chloride	ND		0.12	0.022	mg/Kg	₽	07/25/24 15:32	07/29/24 23:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 121				07/25/24 15:32	07/29/24 23:13	1
4-Bromofluorobenzene (Surr)	103		80 - 120				07/25/24 15:32	07/29/24 23:13	1
Dibromofluoromethane (Surr)	108		80 - 120				07/25/24 15:32	07/29/24 23:13	1
Toluene-d8 (Surr)	98		80 - 120				07/25/24 15:32	07/29/24 23:13	1
_ Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	- RΔ					
Analyte	_	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac

Method: SW846 8260D - Vola	tile Organic	Compoun	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND	Н	0.023	0.0077	mg/Kg	<del>-</del>	07/25/24 08:51	07/31/24 15:12	1
Bromomethane	ND	Н	0.12	0.044	mg/Kg	₩	07/25/24 08:51	07/31/24 15:12	1
Chloromethane	ND	Н	0.070	0.012	mg/Kg	☼	07/25/24 08:51	07/31/24 15:12	1
Dichlorodifluoromethane	ND	Н	0.29	0.054	mg/Kg	₽	07/25/24 08:51	07/31/24 15:12	1
Trichlorofluoromethane	ND	Н	0.094	0.030	mg/Kg	₩	07/25/24 08:51	07/31/24 15:12	1
Vinyl chloride	ND	Н	0.12	0.022	mg/Kg	☼	07/25/24 08:51	07/31/24 15:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		80 - 121				07/25/24 08:51	07/31/24 15:12	1
4-Bromofluorobenzene (Surr)	100		80 - 120				07/25/24 08:51	07/31/24 15:12	1
Dibromofluoromethane (Surr)	101		80 - 120				07/25/24 08:51	07/31/24 15:12	1
Toluene-d8 (Surr)	98		80 - 120				07/25/24 08:51	07/31/24 15:12	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	86.1		0.1	0.1	%			07/22/24 15:04	1
Percent Moisture (SM22 2540G)	13.9		0.1	0.1	%			07/22/24 15:04	1

**Client Sample ID: TB-02-SO-20240716** 

Lab Sample ID: 580-142190-5

Date Collected: 07/16/24 00:01 **Matrix: Solid** Date Received: 07/19/24 11:50

Analyte	Result Qualifier	RL _	MDL	OIIIL	D	Prepared	Analyzed	Dil F
1,1,1,2-Tetrachloroethane	ND ND	0.020	0.0050	mg/Kg		07/25/24 15:32	07/29/24 22:50	
1,1,1-Trichloroethane	ND	0.040	0.0046	mg/Kg		07/25/24 15:32	07/29/24 22:50	
1,1,2,2-Tetrachloroethane	ND	0.020	0.0076	mg/Kg		07/25/24 15:32	07/29/24 22:50	
1,1,2-Trichloroethane	ND	0.020	0.0074	mg/Kg		07/25/24 15:32	07/29/24 22:50	
1,1-Dichloroethane	ND	0.040	0.0092	mg/Kg		07/25/24 15:32	07/29/24 22:50	
1,1-Dichloroethene	ND	0.040	0.012	mg/Kg		07/25/24 15:32	07/29/24 22:50	
1,1-Dichloropropene	ND	0.040	0.0053	mg/Kg		07/25/24 15:32	07/29/24 22:50	
,2,3-Trichlorobenzene	ND	0.080	0.040	mg/Kg		07/25/24 15:32	07/29/24 22:50	
I,2,3-Trichloropropane	ND	0.040	0.012	mg/Kg		07/25/24 15:32	07/29/24 22:50	
,2,4-Trichlorobenzene	ND	0.080		mg/Kg		07/25/24 15:32	07/29/24 22:50	
1,2,4-Trimethylbenzene	ND	0.040		mg/Kg		07/25/24 15:32	07/29/24 22:50	
I,2-Dibromo-3-Chloropropane	ND	0.060		mg/Kg		07/25/24 15:32	07/29/24 22:50	
I,2-Dibromoethane	ND	0.020	0.0038			07/25/24 15:32	07/29/24 22:50	
I,2-Dichlorobenzene	ND	0.040	0.0087			07/25/24 15:32	07/29/24 22:50	
I,2-Dichloroethane	ND	0.020	0.0055				07/29/24 22:50	
,3,5-Trimethylbenzene	ND	0.040	0.0076				07/29/24 22:50	
I,3-Dichlorobenzene	ND	0.060		mg/Kg			07/29/24 22:50	
,3-Dichloropropane	ND	0.060	0.0056				07/29/24 22:50	
I,4-Dichlorobenzene	ND	0.060		mg/Kg			07/29/24 22:50	
2,2-Dichloropropane	ND	0.040		mg/Kg			07/29/24 22:50	
2-Chlorotoluene	ND	0.040	0.0088				07/29/24 22:50	
I-Chlorotoluene	ND	0.040	0.0098				07/29/24 22:50	
I-Isopropyltoluene	ND	0.040		mg/Kg			07/29/24 22:50	
Benzene	ND	0.020	0.0038	0 0			07/29/24 22:50	
Bromobenzene	ND	0.040	0.0042				07/29/24 22:50	
Bromochloromethane	ND	0.040	0.0062				07/29/24 22:50	
Bromodichloromethane	ND	0.040	0.0055				07/29/24 22:50	
Bromoform	ND	0.040	0.0045				07/29/24 22:50	
Carbon tetrachloride	ND	0.020	0.0043				07/29/24 22:50	
Chlorobenzene	ND	0.020	0.0044				07/29/24 22:50	
Chloroethane	ND	0.040		mg/Kg			07/29/24 22:50	
Chloroform	ND	0.000	0.0042				07/29/24 22:50	
Chloromethane	ND ND	0.020		mg/Kg			07/29/24 22:50	
cis-1,2-Dichloroethene	ND	0.060		mg/Kg			07/29/24 22:50	
	ND	0.000	0.013				07/29/24 22:50	
cis-1,3-Dichloropropene  Dibromochloromethane	ND ND	0.020	0.0040	0 0			07/29/24 22:50	
							07/29/24 22:50	
Dibromomethane	ND	0.040	0.0074					
Ethylbenzene Hexachlorobutadiene	0.024 J	0.040	0.0091				07/29/24 22:50	
	ND	0.10		mg/Kg			07/29/24 22:50	
sopropylbenzene	ND	0.040	0.0086				07/29/24 22:50	
Methyl tert-butyl ether	ND	0.040	0.0060				07/29/24 22:50	
Methylene Chloride	0.21 JB	0.25		mg/Kg			07/29/24 22:50	
n-Xylene & p-Xylene	0.17	0.040	0.0071				07/29/24 22:50	
Naphthalene	ND	0.15		mg/Kg			07/29/24 22:50	
n-Butylbenzene	ND	0.040		mg/Kg			07/29/24 22:50	
N-Propylbenzene	ND	0.040		mg/Kg			07/29/24 22:50	
o-Xylene	0.035 J	0.040	0.0050				07/29/24 22:50	
sec-Butylbenzene	ND <b>0.014</b> J	0.040 0.040	0.0086	mg/Kg mg/Kg			07/29/24 22:50 07/29/24 22:50	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Date Received: 07/19/24 11:50

**Client Sample ID: TB-02-SO-20240716** 

Date Collected: 07/16/24 00:01

Lab Sample ID: 580-142190-5

**Matrix: Solid** 

Method: SW846 8260D - Vo	latile Organic	Compound	ds by GC/MS	(Conti	inued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		07/25/24 15:32	07/29/24 22:50	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		07/25/24 15:32	07/29/24 22:50	1
Toluene	ND		0.060	0.014	mg/Kg		07/25/24 15:32	07/29/24 22:50	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		07/25/24 15:32	07/29/24 22:50	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		07/25/24 15:32	07/29/24 22:50	1
Trichloroethene	ND		0.040	0.010	mg/Kg		07/25/24 15:32	07/29/24 22:50	1
Trichlorofluoromethane	ND	*-	0.080	0.026	mg/Kg		07/25/24 15:32	07/29/24 22:50	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		07/25/24 15:32	07/29/24 22:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		80 - 121				07/25/24 15:32	07/29/24 22:50	1
4-Bromofluorobenzene (Surr)	105		80 - 120				07/25/24 15:32	07/29/24 22:50	1
Dibromofluoromethane (Surr)	103		80 - 120				07/25/24 15:32	07/29/24 22:50	1
Toluene-d8 (Surr)	99		80 - 120				07/25/24 15:32	07/29/24 22:50	1

Toluene-d8 (Surr)	99		80 - 120				07/25/24 15:32	07/29/24 22:50	1
- Method: SW846 8260D - Vo	olatile Organic	Compoun	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND	Н	0.020	0.0066	mg/Kg		07/25/24 08:51	07/31/24 13:22	1
Bromomethane	ND	Н	0.10	0.038	mg/Kg		07/25/24 08:51	07/31/24 13:22	1
Chloromethane	ND	Н	0.060	0.010	mg/Kg		07/25/24 08:51	07/31/24 13:22	1
Dichlorodifluoromethane	ND	Н	0.25	0.046	mg/Kg		07/25/24 08:51	07/31/24 13:22	1
Trichlorofluoromethane	ND	Н	0.080	0.026	mg/Kg		07/25/24 08:51	07/31/24 13:22	1
Vinyl chloride	ND	Н	0.10	0.019	mg/Kg		07/25/24 08:51	07/31/24 13:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				07/25/24 08:51	07/31/24 13:22	1
4-Bromofluorobenzene (Surr)	102		80 - 120				07/25/24 08:51	07/31/24 13:22	1
Dibromofluoromethane (Surr)	100		80 - 120				07/25/24 08:51	07/31/24 13:22	1
Toluene-d8 (Surr)	100		80 - 120				07/25/24 08:51	07/31/24 13:22	1

10/15/2024 (Rev. 1)

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-05-SO-36.5-20240717

Lab Sample ID: 580-142190-6 Date Collected: 07/17/24 14:26 **Matrix: Solid** Date Received: 07/19/24 11:50 Percent Solids: 87.5

Method: SW846 8260D - Vola					_	_		
Analyte	Result Q			Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND	0.23		mg/Kg	₩		07/30/24 00:00	
1,1,1-Trichloroethane	ND	0.47		mg/Kg	₩		07/30/24 00:00	
1,1,2,2-Tetrachloroethane	ND	0.23		mg/Kg	<del>.</del>		07/30/24 00:00	
1,1,2-Trichloroethane	ND	0.23		mg/Kg	₩		07/30/24 00:00	
1,1-Dichloroethane	ND	0.47		mg/Kg	₩		07/30/24 00:00	
1,1-Dichloroethene	ND	0.47		mg/Kg	₩	07/25/24 15:32	07/30/24 00:00	
1,1-Dichloropropene	ND	0.47		mg/Kg	₩	07/25/24 15:32	07/30/24 00:00	
1,2,3-Trichlorobenzene	ND	0.94	0.47	mg/Kg	₩	07/25/24 15:32	07/30/24 00:00	
1,2,3-Trichloropropane	ND	0.47	0.14	mg/Kg	₩	07/25/24 15:32	07/30/24 00:00	
1,2,4-Trichlorobenzene	ND	0.94	0.50	mg/Kg	☼	07/25/24 15:32	07/30/24 00:00	
1,2,4-Trimethylbenzene	ND	0.47	0.16	mg/Kg	☼	07/25/24 15:32	07/30/24 00:00	
1,2-Dibromo-3-Chloropropane	ND	0.70	0.18	mg/Kg	☼	07/25/24 15:32	07/30/24 00:00	
1,2-Dibromoethane	ND	0.23	0.045	mg/Kg	₩	07/25/24 15:32	07/30/24 00:00	
1,2-Dichlorobenzene	0.61	0.47	0.10	mg/Kg	₩	07/25/24 15:32	07/30/24 00:00	
1,2-Dichloroethane	ND	0.23	0.065	mg/Kg	₩	07/25/24 15:32	07/30/24 00:00	
1,3,5-Trimethylbenzene	ND	0.47	0.089	mg/Kg	₩	07/25/24 15:32	07/30/24 00:00	
1,3-Dichlorobenzene	ND	0.70	0.16	mg/Kg	₩	07/25/24 15:32	07/30/24 00:00	
1,3-Dichloropropane	ND	0.70	0.066	mg/Kg	₩	07/25/24 15:32	07/30/24 00:00	
1,4-Dichlorobenzene	ND	0.70	0.13	mg/Kg	₩	07/25/24 15:32	07/30/24 00:00	
2,2-Dichloropropane	ND	0.47		mg/Kg	₩	07/25/24 15:32	07/30/24 00:00	
2-Chlorotoluene	ND	0.47	0.10	mg/Kg	₩	07/25/24 15:32	07/30/24 00:00	
1-Chlorotoluene	ND	0.47		mg/Kg	₩	07/25/24 15:32	07/30/24 00:00	
1-Isopropyltoluene	ND	0.47		mg/Kg	₩	07/25/24 15:32	07/30/24 00:00	
Benzene	ND	0.23		mg/Kg	₩		07/30/24 00:00	
Bromobenzene	ND	0.47		mg/Kg	∴		07/30/24 00:00	
3romochloromethane	ND	0.47		mg/Kg	₩		07/30/24 00:00	
3romodichloromethane	ND	0.47		mg/Kg	₩		07/30/24 00:00	
Bromoform	ND	0.47		mg/Kg	∴		07/30/24 00:00	
Carbon tetrachloride	ND	0.23		mg/Kg	₩.		07/30/24 00:00	
Chlorobenzene	28	0.47		mg/Kg			07/30/24 00:00	
Chloroethane	ND	0.94		mg/Kg	∴		07/30/24 00:00	
Chloroform	0.054 J	0.23		mg/Kg	₩.		07/30/24 00:00	
cis-1,2-Dichloroethene	ND	0.70		mg/Kg	~ ☆		07/30/24 00:00	
cis-1,3-Dichloropropene	ND	0.23		mg/Kg			07/30/24 00:00	
Dibromochloromethane	ND	0.23		mg/Kg	₩		07/30/24 00:00	
Dibromomethane	ND	0.47					07/30/24 00:00	
	ND	0.47		mg/Kg mg/Kg	· · · · · · · · · · · · · · · · · · ·		07/30/24 00:00	
Ethylbenzene Hexachlorobutadiene					φ.		07/30/24 00:00	
	ND	1.2		mg/Kg	φ.			
sopropylbenzene	ND	0.47		mg/Kg	<del></del>		07/30/24 00:00	
Methyl tert-butyl ether	ND	0.47		mg/Kg	<b>*</b>		07/30/24 00:00	
Methylene Chloride	2.3 J			mg/Kg	<b>*</b>		07/30/24 00:00	
m-Xylene & p-Xylene	0.15 J	0.47		mg/Kg	<del></del>		07/30/24 00:00	
Naphthalene	ND	1.8		mg/Kg	☼		07/30/24 00:00	
n-Butylbenzene	ND	0.47		mg/Kg	**		07/30/24 00:00	
N-Propylbenzene	ND	0.47		mg/Kg			07/30/24 00:00	
o-Xylene	ND	0.47		mg/Kg	₩		07/30/24 00:00	
sec-Butylbenzene	ND	0.47		mg/Kg	₩		07/30/24 00:00	
Styrene	ND	0.47	0.15	mg/Kg	₩	07/25/24 15:32	07/30/24 00:00	
t-Butylbenzene	ND	0.47	0.090	mg/Kg	₽	07/25/24 15:32	07/30/24 00:00	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-05-SO-36.5-20240717

Date Collected: 07/17/24 14:26 Date Received: 07/19/24 11:50 Lab Sample ID: 580-142190-6

Matrix: Solid

Percent Solids: 87.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	0.11	J	0.47	0.062	mg/Kg	— <u></u>	07/25/24 15:32	07/30/24 00:00	1
Toluene	ND		0.70	0.16	mg/Kg	₩	07/25/24 15:32	07/30/24 00:00	1
trans-1,2-Dichloroethene	ND		0.70	0.17	mg/Kg	₩	07/25/24 15:32	07/30/24 00:00	1
trans-1,3-Dichloropropene	ND		0.47	0.082	mg/Kg	₩	07/25/24 15:32	07/30/24 00:00	1
Trichloroethene	ND		0.47	0.12	mg/Kg	₩	07/25/24 15:32	07/30/24 00:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		80 - 121				07/25/24 15:32	07/30/24 00:00	1
4-Bromofluorobenzene (Surr)	102		80 - 120				07/25/24 15:32	07/30/24 00:00	1
Dibromofluoromethane (Surr)	90		80 - 120				07/25/24 15:32	07/30/24 00:00	1
Toluene-d8 (Surr)	97		80 - 120				07/25/24 15:32	07/30/24 00:00	1
Method: SW846 8260D - Vola Analyte		Compound Qualifier	ds by GC/MS RL	- RA MDL		D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		0.23		mg/Kg	☆	07/25/24 08:51	07/31/24 15:34	1
Bromomethane	ND		1.2	0.44	mg/Kg	₽	07/25/24 08:51	07/31/24 15:34	1
Bromomethane Chloromethane	ND ND		1.2 0.70	0.44 0.12	mg/Kg mg/Kg		07/25/24 08:51 07/25/24 08:51	07/31/24 15:34 07/31/24 15:34	1 1 1
Bromomethane Chloromethane Dichlorodifluoromethane	ND ND ND		1.2 0.70 2.9	0.44 0.12 0.54	mg/Kg mg/Kg mg/Kg	₽	07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	07/31/24 15:34 07/31/24 15:34 07/31/24 15:34	
Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane	ND ND ND ND		1.2 0.70 2.9 0.94	0.44 0.12 0.54 0.31	mg/Kg mg/Kg mg/Kg mg/Kg	<b>₽</b>	07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	07/31/24 15:34 07/31/24 15:34 07/31/24 15:34 07/31/24 15:34	1 1
Bromomethane Chloromethane Dichlorodifluoromethane	ND ND ND		1.2 0.70 2.9	0.44 0.12 0.54 0.31	mg/Kg mg/Kg mg/Kg	\$ \$	07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	07/31/24 15:34 07/31/24 15:34 07/31/24 15:34 07/31/24 15:34	1
Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane	ND ND ND ND	Qualifier	1.2 0.70 2.9 0.94	0.44 0.12 0.54 0.31	mg/Kg mg/Kg mg/Kg mg/Kg	\$ \$ \$	07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	07/31/24 15:34 07/31/24 15:34 07/31/24 15:34 07/31/24 15:34	
Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane Vinyl chloride	ND ND ND ND	Qualifier	1.2 0.70 2.9 0.94 1.2	0.44 0.12 0.54 0.31	mg/Kg mg/Kg mg/Kg mg/Kg	\$ \$ \$	07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	07/31/24 15:34 07/31/24 15:34 07/31/24 15:34 07/31/24 15:34 07/31/24 15:34	1 1 1 Dil Fac
Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane Vinyl chloride  Surrogate	ND ND ND ND ND	Qualifier	1.2 0.70 2.9 0.94 1.2	0.44 0.12 0.54 0.31	mg/Kg mg/Kg mg/Kg mg/Kg	\$ \$ \$	07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 <b>Prepared</b> 07/25/24 08:51	07/31/24 15:34 07/31/24 15:34 07/31/24 15:34 07/31/24 15:34 07/31/24 15:34 Analyzed	1 1 1 1 Dil Fac
Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane Vinyl chloride  Surrogate 1,2-Dichloroethane-d4 (Surr)	ND ND ND ND ND ND ND ND	Qualifier	1.2 0.70 2.9 0.94 1.2 Limits 80 - 121	0.44 0.12 0.54 0.31	mg/Kg mg/Kg mg/Kg mg/Kg	\$ \$ \$	07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 <b>Prepared</b> 07/25/24 08:51	07/31/24 15:34 07/31/24 15:34 07/31/24 15:34 07/31/24 15:34 07/31/24 15:34 Analyzed 07/31/24 15:34 07/31/24 15:34	1 1 1 <b>Dil Fac</b>
Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane Vinyl chloride  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr)	ND ND ND ND ND 103	Qualifier	1.2 0.70 2.9 0.94 1.2 Limits 80 - 121 80 - 120	0.44 0.12 0.54 0.31	mg/Kg mg/Kg mg/Kg mg/Kg	\$ \$ \$	07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 <b>Prepared</b> 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	07/31/24 15:34 07/31/24 15:34 07/31/24 15:34 07/31/24 15:34 07/31/24 15:34 Analyzed 07/31/24 15:34 07/31/24 15:34	1 1 1 <b>Dil Fac</b> 1
Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane Vinyl chloride  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr)	ND ND ND ND ND 203 101 102	Qualifier	1.2 0.70 2.9 0.94 1.2 Limits 80 - 121 80 - 120 80 - 120	0.44 0.12 0.54 0.31	mg/Kg mg/Kg mg/Kg mg/Kg	\$ \$ \$	07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 <b>Prepared</b> 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	07/31/24 15:34 07/31/24 15:34 07/31/24 15:34 07/31/24 15:34 07/31/24 15:34 Analyzed 07/31/24 15:34 07/31/24 15:34 07/31/24 15:34	1 1 1 <b>Dil Fac</b> 1
Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane Vinyl chloride  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)	ND ND ND ND WRecovery 103 101 102 99	Qualifier	1.2 0.70 2.9 0.94 1.2 Limits 80 - 121 80 - 120 80 - 120	0.44 0.12 0.54 0.31 0.22	mg/Kg mg/Kg mg/Kg mg/Kg	\$ \$ \$	07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 <b>Prepared</b> 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	07/31/24 15:34 07/31/24 15:34 07/31/24 15:34 07/31/24 15:34 07/31/24 15:34 Analyzed 07/31/24 15:34 07/31/24 15:34 07/31/24 15:34	1 1 Dil Fac 1 1 1
Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane Vinyl chloride  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)  General Chemistry	ND ND ND ND WRecovery 103 101 102 99		1.2 0.70 2.9 0.94 1.2 Limits 80 - 121 80 - 120 80 - 120 80 - 120	0.44 0.12 0.54 0.31 0.22	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	* * * *	07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 <b>Prepared</b> 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	07/31/24 15:34 07/31/24 15:34 07/31/24 15:34 07/31/24 15:34 07/31/24 15:34 Analyzed 07/31/24 15:34 07/31/24 15:34 07/31/24 15:34 07/31/24 15:34	1

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-05-SO-37-20240717

Lab Sample ID: 580-142190-7 Date Collected: 07/17/24 14:30 Matrix: Solid Date Received: 07/19/24 11:50 Percent Solids: 86.8

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 2.5 0.63 mg/Kg 07/25/24 15:32 07/30/24 01:33 ND 1,1,1-Trichloroethane 5.0 0.58 mg/Kg 07/25/24 15:32 07/30/24 01:33 1,1,2,2-Tetrachloroethane ND 2.5 0.95 mg/Kg 07/25/24 15:32 07/30/24 01:33 2.5 1,1,2-Trichloroethane ND 0.93 mg/Kg 07/25/24 15:32 07/30/24 01:33 5.0 mg/Kg 07/25/24 15:32 07/30/24 01:33 1 1-Dichloroethane ND 1.2 1,1-Dichloroethene ND 5.0 1.5 mg/Kg 07/25/24 15:32 07/30/24 01:33 ND 5.0 07/25/24 15:32 07/30/24 01:33 1,1-Dichloropropene mg/Kg ND 10 07/25/24 15:32 07/30/24 01:33 1,2,3-Trichlorobenzene 5.0 mg/Kg 1,2,3-Trichloropropane ND 5.0 mg/Kg 07/25/24 15:32 07/30/24 01:33 1,2,4-Trichlorobenzene ND 10 5.3 mg/Kg 07/25/24 15:32 07/30/24 01:33 1,2,4-Trimethylbenzene ND 5.0 mg/Kg 07/25/24 15:32 07/30/24 01:33 1.2-Dibromo-3-Chloropropane ND 7.5 1.9 mg/Kg 07/25/24 15:32 07/30/24 01:33 1 2.5 1,2-Dibromoethane ND 0.48 mg/Kg 07/25/24 15:32 07/30/24 01:33 5.0 1.1 mg/Kg 07/25/24 15:32 07/30/24 01:33 1,2-Dichlorobenzene 7.9 ND 2.5 0.69 07/25/24 15:32 07/30/24 01:33 1,2-Dichloroethane mg/Kg 1,3,5-Trimethylbenzene NΩ 5.0 0.95 mg/Kg 07/25/24 15:32 07/30/24 01:33 07/25/24 15:32 07/30/24 01:33 1,3-Dichlorobenzene ND 7.5 1.7 mg/Kg 1,3-Dichloropropane ND 7.5 mg/Kg 07/25/24 15:32 07/30/24 01:33 1.4-Dichlorobenzene ND 7.5 07/25/24 15:32 07/30/24 01:33 1.4 mg/Kg 2,2-Dichloropropane ND 5.0 mg/Kg 07/25/24 15:32 07/30/24 01:33 2-Chlorotoluene ND 5.0 1.1 07/25/24 15:32 07/30/24 01:33 mg/Kg ₹ 4-Chlorotoluene ND 5.0 1.2 mg/Kg 07/25/24 15:32 07/30/24 01:33 4-Isopropyltoluene ND 07/25/24 15:32 07/30/24 01:33 5.0 1.3 mg/Kg Benzene ND 2.5 0.48 mg/Kg 07/25/24 15:32 07/30/24 01:33 Bromobenzene ND 5.0 0.53 mg/Kg 07/25/24 15:32 07/30/24 01:33 Bromochloromethane ND 5.0 0.78 mg/Kg 07/25/24 15:32 07/30/24 01:33 Bromodichloromethane ND 5.0 0.69 mg/Kg 07/25/24 15:32 07/30/24 01:33 Bromoform ND 5.0 0.56 mg/Kg 07/25/24 15:32 07/30/24 01:33 Carbon tetrachloride NΩ 25 0.55 mg/Kg 07/25/24 15:32 07/30/24 01:33 5.0 07/25/24 15:32 Chlorobenzene 300 0.60 mg/Kg 07/30/24 01:33 Chloroethane ND 10 2.6 mg/Kg 07/25/24 15:32 07/30/24 01:33 Chloroform ND 2.5 0.53 07/25/24 15:32 07/30/24 01:33 mg/Kg 1.6 cis-1,2-Dichloroethene ND 7.5 07/25/24 15:32 07/30/24 01:33 mg/Kg ND 07/25/24 15:32 07/30/24 01:33 cis-1,3-Dichloropropene 2.5 0.50 mg/Kg Dibromochloromethane ND 2.5 0.61 mg/Kg 07/25/24 15:32 07/30/24 01:33 ND 5.0 0.93 07/25/24 15:32 07/30/24 01:33 Dibromomethane mg/Kg Ethylbenzene ND 5.0 mg/Kg 07/25/24 15:32 07/30/24 01:33 Hexachlorobutadiene ND 13 3.0 mg/Kg 07/25/24 15:32 07/30/24 01:33 ND 5.0 07/25/24 15:32 07/30/24 01:33 Isopropylbenzene 1.1 mg/Kg Methyl tert-butyl ether ND 5.0 0.75 mg/Kg 07/25/24 15:32 07/30/24 01:33 **Methylene Chloride** 30 31 3.3 mg/Kg 07/25/24 15:32 07/30/24 01:33 m-Xylene & p-Xylene ND 5.0 0.89 mg/Kg 07/25/24 15:32 07/30/24 01:33 19 07/25/24 15:32 07/30/24 01:33 Naphthalene ND 4.9 mg/Kg n-Butylbenzene 5.0 07/25/24 15:32 07/30/24 01:33 ND 2.3 mg/Kg ND N-Propylbenzene 5.0 1.9 mg/Kg 07/25/24 15:32 07/30/24 01:33 o-Xylene ND 5.0 0.63 mg/Kg 07/25/24 15:32 07/30/24 01:33 ND 5.0 07/25/24 15:32 07/30/24 01:33 sec-Butylbenzene 1.1 mg/Kg Styrene ND 5.0 mg/Kg 07/25/24 15:32 07/30/24 01:33 t-Butylbenzene ND 5.0 0.96 mg/Kg 07/25/24 15:32 07/30/24 01:33

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Percent Moisture (SM22 2540G)

13.2

Client Sample ID: PDI-05-SO-37-20240717 Lab Sample ID: 580-142190-7

Date Collected: 07/17/24 14:30 **Matrix: Solid** Date Received: 07/19/24 11:50 Percent Solids: 86.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	2.6	J	5.0	0.66	mg/Kg	— <u></u>	07/25/24 15:32	07/30/24 01:33	1
Toluene	ND		7.5	1.7	mg/Kg	☼	07/25/24 15:32	07/30/24 01:33	1
trans-1,2-Dichloroethene	ND		7.5	1.8	mg/Kg	₩	07/25/24 15:32	07/30/24 01:33	1
trans-1,3-Dichloropropene	ND		5.0	0.88	mg/Kg	₩	07/25/24 15:32	07/30/24 01:33	1
Trichloroethene	ND		5.0	1.3	mg/Kg	₩	07/25/24 15:32	07/30/24 01:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		80 - 121				07/25/24 15:32	07/30/24 01:33	1
4-Bromofluorobenzene (Surr)	97		80 - 120				07/25/24 15:32	07/30/24 01:33	1
Dibromofluoromethane (Surr)	117		80 - 120				07/25/24 15:32	07/30/24 01:33	1
Toluene-d8 (Surr)	95		80 - 120				07/25/24 15:32	07/30/24 01:33	1
	tile Organic	Compound	ds by GC/MS	- RΔ					
Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		2.5	0.83	mg/Kg	☼	07/25/24 08:51	07/31/24 17:02	1
Bromomethane	ND		13	4.7	mg/Kg	☼	07/25/24 08:51	07/31/24 17:02	1
Chloromethane	ND		7.5	1.3	mg/Kg	☼	07/25/24 08:51	07/31/24 17:02	1
Dichlorodifluoromethane	ND		31	5.7	mg/Kg	₽	07/25/24 08:51	07/31/24 17:02	1
Trichlorofluoromethane	ND		10	3.3	mg/Kg	☼	07/25/24 08:51	07/31/24 17:02	1
Vinyl chloride	ND		13	2.3	mg/Kg	☼	07/25/24 08:51	07/31/24 17:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		80 - 121				07/25/24 08:51	07/31/24 17:02	1
4-Bromofluorobenzene (Surr)	101		80 - 120				07/25/24 08:51	07/31/24 17:02	1
Dibromofluoromethane (Surr)	104		80 - 120				07/25/24 08:51	07/31/24 17:02	1
Toluene-d8 (Surr)	99		80 - 120				07/25/24 08:51	07/31/24 17:02	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	86.8		0.1	0.1	%		- <u>-</u> -	07/22/24 15:04	1
·									

0.1

0.1 %

07/22/24 15:04

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-05-SO-40.5-20240717

Lab Sample ID: 580-142190-8 Date Collected: 07/17/24 14:55 **Matrix: Solid** Date Received: 07/19/24 11:50 Percent Solids: 86.4

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND -	0.23	0.057	mg/Kg	<u></u>	07/25/24 15:32	07/30/24 00:23	
1,1,1-Trichloroethane	ND	0.46	0.053	mg/Kg	₩	07/25/24 15:32	07/30/24 00:23	
1,1,2,2-Tetrachloroethane	ND	0.23	0.087	mg/Kg	₽	07/25/24 15:32	07/30/24 00:23	
1,1,2-Trichloroethane	ND	0.23	0.085	mg/Kg	₩	07/25/24 15:32	07/30/24 00:23	
1,1-Dichloroethane	ND	0.46	0.11	mg/Kg	₩	07/25/24 15:32	07/30/24 00:23	
1,1-Dichloroethene	ND	0.46	0.14	mg/Kg	₽	07/25/24 15:32	07/30/24 00:23	
1,1-Dichloropropene	ND	0.46		mg/Kg		07/25/24 15:32	07/30/24 00:23	
1,2,3-Trichlorobenzene	ND	0.92		mg/Kg	₩	07/25/24 15:32	07/30/24 00:23	
1,2,3-Trichloropropane	ND	0.46		mg/Kg	₩	07/25/24 15:32	07/30/24 00:23	
1,2,4-Trichlorobenzene	ND	0.92		mg/Kg		07/25/24 15:32	07/30/24 00:23	
1,2,4-Trimethylbenzene	ND	0.46		mg/Kg	₩	07/25/24 15:32	07/30/24 00:23	
1,2-Dibromo-3-Chloropropane	ND	0.69		mg/Kg	₩	07/25/24 15:32		
1,2-Dibromoethane	ND	0.23		mg/Kg		07/25/24 15:32		
1,2-Dichlorobenzene	ND	0.46		mg/Kg	₩	07/25/24 15:32		
1.2-Dichloroethane	ND	0.23		mg/Kg	₩	07/25/24 15:32		
1,3,5-Trimethylbenzene	ND	0.46		mg/Kg		07/25/24 15:32		
1,3-Dichlorobenzene	ND	0.40		mg/Kg	₩	07/25/24 15:32		
1,3-Dichloropropane	ND ND	0.69		mg/Kg	₩	07/25/24 15:32		
1,4-Dichlorobenzene	ND	0.69		mg/Kg		07/25/24 15:32		
,	ND	0.46		mg/Kg	₩	07/25/24 15:32		
2,2-Dichloropropane 2-Chlorotoluene	ND	0.46						
1-Chlorotoluene				mg/Kg	· · · ·	07/25/24 15:32		
	ND	0.46		mg/Kg		07/25/24 15:32		
1-Isopropyltoluene	ND	0.46		mg/Kg	₩	07/25/24 15:32		
Benzene	ND	0.23		mg/Kg		07/25/24 15:32		
Bromobenzene	ND	0.46		mg/Kg	<b>*</b>	07/25/24 15:32		
3romochloromethane	ND	0.46	0.071	0 0	<b>*</b>	07/25/24 15:32		
3romodichloromethane	ND	0.46		mg/Kg	<del>.</del>	07/25/24 15:32		
Bromoform	ND	0.46		mg/Kg	₩	07/25/24 15:32		
Carbon tetrachloride	ND	0.23		mg/Kg	₩	07/25/24 15:32		
Chlorobenzene	26	0.46		mg/Kg	<del>.</del>	07/25/24 15:32		
Chloroethane	ND	0.92		mg/Kg	₩	07/25/24 15:32		
Chloroform	ND	0.23	0.048	mg/Kg	₩	07/25/24 15:32	07/30/24 00:23	
cis-1,2-Dichloroethene	ND	0.69	0.14	mg/Kg	₩	07/25/24 15:32	07/30/24 00:23	
cis-1,3-Dichloropropene	ND	0.23	0.046	mg/Kg	₩	07/25/24 15:32	07/30/24 00:23	
Dibromochloromethane	ND	0.23	0.056	mg/Kg	₩	07/25/24 15:32	07/30/24 00:23	
Dibromomethane	ND	0.46	0.085	mg/Kg	₩	07/25/24 15:32	07/30/24 00:23	
Ethylbenzene	ND	0.46	0.10	mg/Kg	₽	07/25/24 15:32	07/30/24 00:23	
Hexachlorobutadiene	ND	1.1	0.27	mg/Kg	₩	07/25/24 15:32	07/30/24 00:23	
sopropylbenzene	ND	0.46	0.098	mg/Kg	₩	07/25/24 15:32	07/30/24 00:23	
Methyl tert-butyl ether	ND	0.46	0.069	mg/Kg	₩	07/25/24 15:32	07/30/24 00:23	
Methylene Chloride	2.7 JB	2.9	0.30	mg/Kg	₩	07/25/24 15:32	07/30/24 00:23	
n-Xylene & p-Xylene	0.16 J	0.46	0.081	mg/Kg	₩	07/25/24 15:32	07/30/24 00:23	
Naphthalene	ND	1.7	0.45	mg/Kg	₩	07/25/24 15:32	07/30/24 00:23	
n-Butylbenzene	ND	0.46		mg/Kg	₩	07/25/24 15:32	07/30/24 00:23	
N-Propylbenzene	ND	0.46		mg/Kg	☼	07/25/24 15:32	07/30/24 00:23	
p-Xylene	ND	0.46		mg/Kg		07/25/24 15:32		
sec-Butylbenzene	ND	0.46		mg/Kg	.;;	07/25/24 15:32		
Styrene	ND	0.46		mg/Kg		07/25/24 15:32		
t-Butylbenzene	ND	0.46		mg/Kg	<del></del> .	07/25/24 15:32		

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-05-SO-40.5-20240717

Date Collected: 07/17/24 14:55 Date Received: 07/19/24 11:50

Analyte

Percent Solids (SM22 2540G)

Percent Moisture (SM22 2540G)

Lab Sample ID: 580-142190-8

Matrix: Solid

Percent Solids: 86.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		0.46	0.061	mg/Kg	<u></u>	07/25/24 15:32	07/30/24 00:23	1
Toluene	ND		0.69	0.15	mg/Kg	☼	07/25/24 15:32	07/30/24 00:23	1
trans-1,2-Dichloroethene	ND		0.69	0.17	mg/Kg	☼	07/25/24 15:32	07/30/24 00:23	1
trans-1,3-Dichloropropene	ND		0.46	0.080	mg/Kg	☼	07/25/24 15:32	07/30/24 00:23	1
Trichloroethene	ND		0.46	0.12	mg/Kg	₩	07/25/24 15:32	07/30/24 00:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	87		80 - 121				07/25/24 15:32	07/30/24 00:23	1
4-Bromofluorobenzene (Surr)	101		80 - 120				07/25/24 15:32	07/30/24 00:23	1
Dibromofluoromethane (Surr)	105		80 - 120				07/25/24 15:32	07/30/24 00:23	1
Dibromondolomethane (our)									
Toluene-d8 (Surr) Method: SW846 8260D - Vo	_	•	•	- RA	Unit	D		07/30/24 00:23	1 Dil Fac
Toluene-d8 (Surr)		Compound		- RA			07/25/24 15:32	07/30/24 00:23	1
Toluene-d8 (Surr)  Method: SW846 8260D - Vo Analyte	olatile Organic Result	Compound Qualifier	ds by GC/MS	MDL		<u>D</u>	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)  Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane	Diatile Organic Result ND	•	ds by GC/MS RL 0.23	<b>MDL</b> 0.076	mg/Kg	<u></u>	Prepared 07/25/24 08:51	Analyzed 07/31/24 15:56	·
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane	Diatile Organic Result ND ND	•	ds by GC/MS RL 0.23 1.1	MDL 0.076 0.43	mg/Kg mg/Kg		Prepared 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 15:56 07/31/24 15:56	Dil Fac
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane Chloromethane	Diatile Organic Result ND ND ND	•	ds by GC/MS RL 0.23 1.1 0.69	MDL 0.076 0.43 0.12	mg/Kg mg/Kg mg/Kg	\$ \$ \$	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 15:56 07/31/24 15:56 07/31/24 15:56	<b>Dil Fac</b> 1 1
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane Chloromethane Dichlorodifluoromethane	Diatile Organic Result ND ND ND ND ND	•	ds by GC/MS RL 0.23 1.1 0.69 2.9	0.076 0.43 0.12 0.53	mg/Kg mg/Kg mg/Kg mg/Kg	<u></u>	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 15:56 07/31/24 15:56 07/31/24 15:56 07/31/24 15:56	Dil Fac
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane	Diatile Organic Result ND ND ND ND ND ND ND ND	•	ds by GC/MS RL 0.23 1.1 0.69 2.9 0.92	0.076 0.43 0.12 0.53 0.30	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	# # # # #	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 15:56 07/31/24 15:56 07/31/24 15:56 07/31/24 15:56 07/31/24 15:56	Dil Fac 1 1 1 1 1
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane Chloromethane Dichlorodifluoromethane	Diatile Organic Result ND ND ND ND ND	•	ds by GC/MS RL 0.23 1.1 0.69 2.9	0.076 0.43 0.12 0.53 0.30	mg/Kg mg/Kg mg/Kg mg/Kg	\$ \$ \$	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 15:56 07/31/24 15:56 07/31/24 15:56 07/31/24 15:56 07/31/24 15:56	<b>Dil Fac</b> 1 1
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane	Diatile Organic Result ND ND ND ND ND ND ND ND	Qualifier	ds by GC/MS RL 0.23 1.1 0.69 2.9 0.92	0.076 0.43 0.12 0.53 0.30	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	# # # # #	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 15:56 07/31/24 15:56 07/31/24 15:56 07/31/24 15:56 07/31/24 15:56	Dil Fac 1 1 1 1 1
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane Vinyl chloride  Surrogate	Diatile Organic Result ND	Qualifier	0.23 1.1 0.69 2.9 0.92 1.1	0.076 0.43 0.12 0.53 0.30	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	# # # # #	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 15:56 07/31/24 15:56 07/31/24 15:56 07/31/24 15:56 07/31/24 15:56 07/31/24 15:56	Dil Fac 1 1 1 1 1 1
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane Vinyl chloride	ND N	Qualifier	0.23 1.1 0.69 2.9 0.92 1.1	0.076 0.43 0.12 0.53 0.30	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	# # # # #	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 15:56 07/31/24 15:56 07/31/24 15:56 07/31/24 15:56 07/31/24 15:56 07/31/24 15:56 Analyzed	Dil Fac  1 1 1 1 1 1 1 Dil Fac
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane Vinyl chloride  Surrogate 1,2-Dichloroethane-d4 (Surr)	ND N	Qualifier	0.23 1.1 0.69 2.9 0.92 1.1 Limits 80 - 121	0.076 0.43 0.12 0.53 0.30	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	# # # # #	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51  Prepared 07/25/24 08:51	Analyzed  07/31/24 15:56  07/31/24 15:56  07/31/24 15:56  07/31/24 15:56  07/31/24 15:56  Analyzed  07/31/24 15:56  07/31/24 15:56	Dil Fac  1 1 1 1 1 1 1 Dil Fac

RL

0.1

0.1

RL Unit

0.1 %

0.1 %

Prepared

Result Qualifier

86.4

13.6

Dil Fac

Analyzed

07/22/24 15:04

07/22/24 15:04

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Client Sample ID: Dup-01-SQ-20240717

Date Collected: 07/17/24 14:57
Date Received: 07/19/24 11:50
Percei

Lab Sample ID: 580-142190-9

Matrix: Solid Percent Solids: 86.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND		0.28	0.071	mg/Kg	— <u>=</u>		07/30/24 00:46	
1,1,1-Trichloroethane	ND		0.56		mg/Kg	Ť.		07/30/24 00:46	
1,1,2,2-Tetrachloroethane	ND		0.28	0.000	mg/Kg	÷		07/30/24 00:46	
1,1,2-Trichloroethane	ND		0.28	0.10	mg/Kg			07/30/24 00:46	
1,1-Dichloroethane	ND		0.56		mg/Kg	₩		07/30/24 00:46	
1,1-Dichloroethene	ND		0.56		mg/Kg	*		07/30/24 00:46	
1,1-Dichloropropene	ND		0.56		mg/Kg			07/30/24 00:46	
1,2,3-Trichlorobenzene	ND		1.1		mg/Kg	₩		07/30/24 00:46	
1,2,3-Trichloropropane	ND		0.56		mg/Kg	☆		07/30/24 00:46	
1,2,4-Trichlorobenzene	ND		1.1		mg/Kg	¥. ☆		07/30/24 00:46	
	ND		0.56		mg/Kg			07/30/24 00:46	
1,2,4-Trimethylbenzene					0 0	*			
1,2-Dibromo-3-Chloropropane	ND		0.85		mg/Kg	<del>.</del>		07/30/24 00:46	
1,2-Dibromoethane	ND		0.28		mg/Kg			07/30/24 00:46	
1,2-Dichlorobenzene	ND		0.56		mg/Kg	*		07/30/24 00:46	
1,2-Dichloroethane	ND		0.28		mg/Kg			07/30/24 00:46	
1,3,5-Trimethylbenzene	ND		0.56		mg/Kg	₩.		07/30/24 00:46	
1,3-Dichlorobenzene	ND		0.85		mg/Kg	<b>‡</b>		07/30/24 00:46	
1,3-Dichloropropane	ND		0.85	0.079	mg/Kg	<del>.</del> .		07/30/24 00:46	
1,4-Dichlorobenzene	0.21	J	0.85		mg/Kg	☼		07/30/24 00:46	
2,2-Dichloropropane	ND		0.56		mg/Kg	☼		07/30/24 00:46	
2-Chlorotoluene	ND		0.56		mg/Kg			07/30/24 00:46	
4-Chlorotoluene	ND		0.56		mg/Kg	☼		07/30/24 00:46	
4-Isopropyltoluene	ND		0.56		mg/Kg	☼		07/30/24 00:46	
Benzene	ND		0.28		mg/Kg			07/30/24 00:46	
Bromobenzene	ND		0.56		mg/Kg	☼	07/25/24 15:32	07/30/24 00:46	
Bromochloromethane	ND		0.56		mg/Kg	₩	07/25/24 15:32	07/30/24 00:46	
Bromodichloromethane	ND		0.56		mg/Kg		07/25/24 15:32	07/30/24 00:46	
Bromoform	ND		0.56		mg/Kg	≎	07/25/24 15:32	07/30/24 00:46	
Carbon tetrachloride	ND		0.28	0.062	mg/Kg	☼	07/25/24 15:32	07/30/24 00:46	
Chlorobenzene	18		0.56	0.068	mg/Kg	☼	07/25/24 15:32	07/30/24 00:46	
Chloroethane	ND		1.1	0.30	mg/Kg	☼	07/25/24 15:32	07/30/24 00:46	
Chloroform	ND		0.28	0.059	mg/Kg	☼	07/25/24 15:32	07/30/24 00:46	
cis-1,2-Dichloroethene	ND		0.85	0.18	mg/Kg	≎	07/25/24 15:32	07/30/24 00:46	
cis-1,3-Dichloropropene	ND		0.28	0.056	mg/Kg	₽	07/25/24 15:32	07/30/24 00:46	
Dibromochloromethane	ND		0.28	0.069	mg/Kg	☼	07/25/24 15:32	07/30/24 00:46	
Dibromomethane	ND		0.56	0.10	mg/Kg	≎	07/25/24 15:32	07/30/24 00:46	
Ethylbenzene	ND		0.56	0.13	mg/Kg	≎	07/25/24 15:32	07/30/24 00:46	
Hexachlorobutadiene	ND		1.4	0.34	mg/Kg	☼	07/25/24 15:32	07/30/24 00:46	
Isopropylbenzene	ND		0.56	0.12	mg/Kg	☼	07/25/24 15:32	07/30/24 00:46	
Methyl tert-butyl ether	ND		0.56	0.085	mg/Kg	☼	07/25/24 15:32	07/30/24 00:46	
Methylene Chloride	3.0	JB	3.5		mg/Kg	☼	07/25/24 15:32	07/30/24 00:46	
m-Xylene & p-Xylene	0.20	J	0.56		mg/Kg	☼	07/25/24 15:32	07/30/24 00:46	
Naphthalene	ND		2.1		mg/Kg	₩		07/30/24 00:46	
n-Butylbenzene	ND		0.56		mg/Kg	₩		07/30/24 00:46	
N-Propylbenzene	ND		0.56		mg/Kg	₽		07/30/24 00:46	
o-Xylene	ND		0.56		mg/Kg	₩		07/30/24 00:46	
sec-Butylbenzene	ND		0.56		mg/Kg	~ ☆		07/30/24 00:46	
Styrene	ND		0.56		mg/Kg	~ ☆		07/30/24 00:46	
t-Butylbenzene	ND		0.56		mg/Kg			07/30/24 00:46	

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Client Sample ID: Dup-01-SQ-20240717

Date Collected: 07/17/24 14:57 Date Received: 07/19/24 11:50

Lab Sample ID: 580-142190-9

**Matrix: Solid** 

Percent Solids: 86.4

Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	(Conti	nued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		0.56	0.075	mg/Kg	₽	07/25/24 15:32	07/30/24 00:46	1
Toluene	ND		0.85	0.19	mg/Kg	₽	07/25/24 15:32	07/30/24 00:46	1
trans-1,2-Dichloroethene	ND		0.85	0.21	mg/Kg	⊅	07/25/24 15:32	07/30/24 00:46	1
trans-1,3-Dichloropropene	ND		0.56	0.099	mg/Kg	☼	07/25/24 15:32	07/30/24 00:46	1
Trichloroethene	ND		0.56	0.15	mg/Kg	₩	07/25/24 15:32	07/30/24 00:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		80 - 121				07/25/24 15:32	07/30/24 00:46	1
4-Bromofluorobenzene (Surr)	100		80 - 120				07/25/24 15:32	07/30/24 00:46	1
Dibromofluoromethane (Surr)	113		80 - 120				07/25/24 15:32	07/30/24 00:46	1
Toluene-d8 (Surr)	94		80 - 120				07/25/24 15:32	07/30/24 00:46	1
- Method: SW846 8260D - Vo	olatile Organic	Compoun	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		0.28	0.093	mg/Kg	<del>-</del>	07/25/24 08:51	07/31/24 16:18	1
Bromomethane	ND		1.4	0.53	mg/Kg	☼	07/25/24 08:51	07/31/24 16:18	1
Chloromethane	ND		0.85	0.14	mg/Kg	☼	07/25/24 08:51	07/31/24 16:18	1
Dichlorodifluoromethane	ND		3.5	0.65	mg/Kg	₽	07/25/24 08:51	07/31/24 16:18	1
Trichlorofluoromethane	ND		1.1	0.37	mg/Kg	☼	07/25/24 08:51	07/31/24 16:18	1
Vinyl chloride	ND		1.4	0.26	mg/Kg	₩	07/25/24 08:51	07/31/24 16:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

Conoral Chamiatry					
Toluene-d8 (Surr)	101	80 - 120	07/25/24 08:51	07/31/24 16:18	1
Dibromofluoromethane (Surr)	103	80 - 120	07/25/24 08:51	07/31/24 16:18	1
4-Bromofluorobenzene (Surr)	99	80 - 120	07/25/24 08:51	07/31/24 16:18	1
1,2-Dichloroethane-d4 (Surr)	104	80 - 121	07/25/24 08:51	07/31/24 16:18	1

General Chemistry									
Analyte	Result (	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	86.4		0.1	0.1	%			07/22/24 15:04	1
Percent Moisture (SM22 2540G)	13.6		0.1	0.1	%			07/22/24 15:04	1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-05-SO-44.5-20240717

Date Collected: 07/17/24 15:55
Date Received: 07/19/24 11:50

Lab Sample ID: 580-142190-10

Matrix: Solid Percent Solids: 88.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND		0.021	0.0052		— <u></u>	07/29/24 15:00	07/29/24 18:58	
1,1,1-Trichloroethane	ND		0.042	0.0048		₩	07/29/24 15:00	07/29/24 18:58	
1,1,2,2-Tetrachloroethane	ND		0.021	0.0080		₩	07/29/24 15:00	07/29/24 18:58	
1,1,2-Trichloroethane	ND		0.021	0.0078			07/29/24 15:00	07/29/24 18:58	
1,1-Dichloroethane	ND		0.042	0.0097		₩	07/29/24 15:00	07/29/24 18:58	
1,1-Dichloroethene	ND		0.042		mg/Kg	₩	07/29/24 15:00	07/29/24 18:58	
1,1-Dichloropropene	ND		0.042	0.0056			07/29/24 15:00	07/29/24 18:58	
1,2,3-Trichlorobenzene	ND		0.084	0.042	mg/Kg	₩	07/29/24 15:00	07/29/24 18:58	
1,2,3-Trichloropropane	ND		0.042		mg/Kg	₩	07/29/24 15:00	07/29/24 18:58	
1,2,4-Trichlorobenzene	ND	F1	0.084		mg/Kg		07/29/24 15:00	07/29/24 18:58	
1,2,4-Trimethylbenzene	ND		0.042		mg/Kg	₩	07/29/24 15:00	07/29/24 18:58	
1,2-Dibromo-3-Chloropropane	ND		0.063		mg/Kg	₩		07/29/24 18:58	
1,2-Dibromoethane	ND		0.021	0.0040				07/29/24 18:58	
1,2-Dichlorobenzene	0.15		0.042	0.0091		₩		07/29/24 18:58	
1,2-Dichloroethane	ND		0.021	0.0058	0 0			07/29/24 18:58	
1,3,5-Trimethylbenzene	ND		0.042	0.0080		∷. ₩		07/29/24 18:58	
1,3-Dichlorobenzene	0.019	4	0.063		mg/Kg	₩.		07/29/24 18:58	
1,3-Dichloropropane	ND.		0.063	0.0059		- T		07/29/24 18:58	
1,4-Dichlorobenzene	ND		0.063		mg/Kg			07/29/24 18:58	
2,2-Dichloropropane	ND		0.042		mg/Kg	☆		07/29/24 18:58	
2-Chlorotoluene	ND		0.042	0.0092	0 0			07/29/24 18:58	
4-Chlorotoluene	ND		0.042		mg/Kg			07/29/24 18:58	
Benzene	ND		0.021	0.0040		☆		07/29/24 18:58	
Bromobenzene	ND		0.042	0.0044		₩		07/29/24 18:58	
Bromochloromethane	ND		0.042	0.0065				07/29/24 18:58	
Bromodichloromethane	ND		0.042	0.0058		₩		07/29/24 18:58	
Bromoform	ND		0.042	0.0036	0 0	₩		07/29/24 18:58	
Carbon tetrachloride	ND		0.042	0.0047		~ ~ .		07/29/24 18:58	
Chloroform			0.021	0.0044		₩		07/29/24 18:58	
cis-1,2-Dichloroethene	<b>0.030</b> ND		0.021		mg/Kg	₩		07/29/24 18:58	
Dibromochloromethane	ND		0.003	0.0051				07/29/24 18:58	
Dibromochioromethane Dibromomethane	ND ND		0.021	0.0031		₩		07/29/24 18:58	
	0.026		0.042			**		07/29/24 18:58	
Ethylbenzene				0.0096		1,7			
Hexachlorobutadiene	ND ND	гі	0.10	0.025	mg/Kg	1.t 		07/29/24 18:58 07/29/24 18:58	
Isopropylbenzene		*4	0.042			₩			
Methyl tert-butyl ether	ND	· · · · · · · · · · · · · · · · · · ·	0.042	0.0063		<u>.</u> .		07/29/24 18:58	
m-Xylene & p-Xylene	0.18		0.042	0.0075		Q:		07/29/24 18:58	
Naphthalene	ND	_	0.16		mg/Kg	<b>*</b>		07/29/24 18:58	
n-Butylbenzene	0.024	J	0.042		mg/Kg	<del></del>		07/29/24 18:58	
N-Propylbenzene	ND	_	0.042		mg/Kg	<b>*</b>		07/29/24 18:58	
o-Xylene	0.037	J	0.042	0.0052		<b>₩</b>		07/29/24 18:58	
sec-Butylbenzene	ND		0.042	0.0090		<u></u>		07/29/24 18:58	
Styrene	0.015	J	0.042		mg/Kg	₩		07/29/24 18:58	
-Butylbenzene	ND		0.042	0.0081		₩		07/29/24 18:58	
Tetrachloroethene	0.059		0.042	0.0056				07/29/24 18:58	
Toluene	ND		0.063		mg/Kg	₩.		07/29/24 18:58	
trans-1,2-Dichloroethene	ND		0.063		mg/Kg	<b>#</b>		07/29/24 18:58	
trans-1,3-Dichloropropene Trichloroethene	ND ND		0.042	0.0073		₩		07/29/24 18:58 07/29/24 18:58	

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-05-SO-44.5-20240717

Date Collected: 07/17/24 15:55

Lab Sample ID: 580-142190-10

**Matrix: Solid** 

Date Received: 07/19/24 11:50 Percent Solids: 88.0

Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		80 - 121				07/29/24 15:00	07/29/24 18:58	1
4-Bromofluorobenzene (Surr)	100		80 - 120				07/29/24 15:00	07/29/24 18:58	1
Dibromofluoromethane (Surr)	106		80 - 120				07/29/24 15:00	07/29/24 18:58	1
Toluene-d8 (Surr)	99		80 - 120				07/29/24 15:00	07/29/24 18:58	1
- Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	- DL					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		0.23	0.074	mg/Kg	<u></u>	07/25/24 08:51	07/31/24 13:44	1
4-Isopropyltoluene	ND		0.45	0.12	mg/Kg	₩	07/25/24 08:51	07/31/24 13:44	1
Bromomethane	ND	F1	1.1	0.43	mg/Kg	₩	07/25/24 08:51	07/31/24 13:44	1
Chlorobenzene	9.7		0.45	0.054	mg/Kg	₩	07/25/24 08:51	07/31/24 13:44	1
Chloroethane	ND	F1	0.90	0.24	mg/Kg	₩	07/25/24 08:51	07/31/24 13:44	1
Chloromethane	ND		0.68	0.11	mg/Kg	₩	07/25/24 08:51	07/31/24 13:44	1
cis-1,3-Dichloropropene	ND	F1	0.23	0.045	mg/Kg	₽	07/25/24 08:51	07/31/24 13:44	1
Dichlorodifluoromethane	ND		2.8	0.52	mg/Kg	₩	07/25/24 08:51	07/31/24 13:44	1
Methylene Chloride	ND		2.8	0.29	mg/Kg	₩	07/25/24 08:51	07/31/24 13:44	1
Trichlorofluoromethane	ND	F1	0.90	0.29	mg/Kg	₽	07/25/24 08:51	07/31/24 13:44	1
Vinyl chloride	ND		1.1	0.21	mg/Kg	₽	07/25/24 08:51	07/31/24 13:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		80 - 121				07/25/24 08:51	07/31/24 13:44	1
4-Bromofluorobenzene (Surr)	100		80 - 120				07/25/24 08:51	07/31/24 13:44	1
Dibromofluoromethane (Surr)	103		80 - 120				07/25/24 08:51	07/31/24 13:44	1
Toluene-d8 (Surr)	100		80 - 120				07/25/24 08:51	07/31/24 13:44	1

General Chemistry							
Analyte	Result Qualifier	RL	RL Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	88.0	0.1	0.1 %			07/22/24 15:04	
Percent Moisture (SM22 2540G)	12.0	0.1	0.1 %			07/22/24 15:04	•

Client Sample ID: PDI-05-SO-53-20240717

Date Collected: 07/17/24 17:20 Date Received: 07/19/24 11:50 Lab Sample ID: 580-142190-11

Matrix: Solid
Percent Solids: 80.2

Job ID: 580-142190-1

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
1,1,1,2-Tetrachloroethane	ND -	2.7	0.66	mg/Kg	₽	07/25/24 15:32	07/30/24 01:56	
1,1,1-Trichloroethane	ND	5.3	0.61	mg/Kg	≎	07/25/24 15:32	07/30/24 01:56	
1,1,2,2-Tetrachloroethane	ND	2.7	1.0	mg/Kg	☼	07/25/24 15:32	07/30/24 01:56	
1,1,2-Trichloroethane	ND	2.7	0.98	mg/Kg	☼	07/25/24 15:32	07/30/24 01:56	
1,1-Dichloroethane	ND	5.3	1.2	mg/Kg	☼	07/25/24 15:32	07/30/24 01:56	
1,1-Dichloroethene	ND	5.3	1.6	mg/Kg	☼	07/25/24 15:32	07/30/24 01:56	
1,1-Dichloropropene	ND	5.3	0.70	mg/Kg	₽	07/25/24 15:32	07/30/24 01:56	
1,2,3-Trichlorobenzene	ND	11	5.3	mg/Kg	☼	07/25/24 15:32	07/30/24 01:56	
1,2,3-Trichloropropane	ND	5.3	1.5	mg/Kg	☼	07/25/24 15:32	07/30/24 01:56	
1,2,4-Trichlorobenzene	ND	11	5.7	mg/Kg		07/25/24 15:32	07/30/24 01:56	
1,2,4-Trimethylbenzene	ND	5.3	1.8	mg/Kg	☆	07/25/24 15:32	07/30/24 01:56	
1,2-Dibromo-3-Chloropropane	ND	8.0	2.0	mg/Kg	☼	07/25/24 15:32	07/30/24 01:56	
1,2-Dibromoethane	ND	2.7	0.51	mg/Kg		07/25/24 15:32	07/30/24 01:56	
1,2-Dichlorobenzene	ND	5.3		mg/Kg	₩		07/30/24 01:56	
1,2-Dichloroethane	ND	2.7		mg/Kg	₩		07/30/24 01:56	
1,3,5-Trimethylbenzene	ND	5.3		mg/Kg			07/30/24 01:56	
1,3-Dichlorobenzene	ND	8.0		mg/Kg	₩	07/25/24 15:32	07/30/24 01:56	
1,3-Dichloropropane	ND	8.0		mg/Kg	₩	07/25/24 15:32	07/30/24 01:56	
1.4-Dichlorobenzene	ND	8.0		mg/Kg		07/25/24 15:32	07/30/24 01:56	
2,2-Dichloropropane	ND	5.3		mg/Kg	ά		07/30/24 01:56	
2-Chlorotoluene	ND	5.3		mg/Kg	ά		07/30/24 01:56	
1-Chlorotoluene	ND	5.3		mg/Kg	∵		07/30/24 01:56	
1-Isopropyltoluene	2.7 J	5.3		mg/Kg			07/30/24 01:56	
Benzene	ND	2.7		mg/Kg	-it		07/30/24 01:56	
Bromobenzene	ND	5.3		mg/Kg			07/30/24 01:56	
Bromochloromethane	ND	5.3		mg/Kg			07/30/24 01:56	
Bromodichloromethane	ND	5.3		mg/Kg	Ť.		07/30/24 01:56	
Bromoform	ND	5.3		mg/Kg	T.		07/30/24 01:56	
Carbon tetrachloride	ND	2.7		mg/Kg	Ť		07/30/24 01:56	
Chlorobenzene	79	5.3		mg/Kg	٠ ۲		07/30/24 01:56	
Chloroethane	ND	11		mg/Kg	T.		07/30/24 01:56	
Chloroform	ND	2.7		mg/Kg	Ť		07/30/24 01:56	
cis-1,2-Dichloroethene	ND	8.0		mg/Kg	Ϋ́ Ϋ́		07/30/24 01:56	
cis-1,3-Dichloropropene	ND	2.7		mg/Kg	· · · · · · · · · · · · · · · · · · ·		07/30/24 01:56	
Dibromochloromethane	ND	2.7		mg/Kg	÷		07/30/24 01:56	
Dibromomethane	ND	5.3		mg/Kg	γ. γ.		07/30/24 01:56	
	ND	5.3					07/30/24 01:56	
Ethylbenzene Hexachlorobutadiene	ND ND	13		mg/Kg mg/Kg			07/30/24 01:56	
sopropylbenzene	ND	5.3	1.1	mg/Kg			07/30/24 01:56	
		5.3					07/30/24 01:56	
Methyl tert-butyl ether	ND			mg/Kg	1.tr			
Methylene Chloride	28 JB	33		mg/Kg	ψ.		07/30/24 01:56	
m-Xylene & p-Xylene	ND	5.3		mg/Kg	<del>.</del> .		07/30/24 01:56	
Naphthalene	ND	20		mg/Kg	ψ.		07/30/24 01:56	
n-Butylbenzene	ND	5.3		mg/Kg	ψ.		07/30/24 01:56	
N-Propylbenzene	ND	5.3		mg/Kg	<del>.</del>		07/30/24 01:56	
o-Xylene	ND	5.3		mg/Kg	<b>*</b>		07/30/24 01:56	
sec-Butylbenzene Styrene	ND	5.3 5.3		mg/Kg mg/Kg	₽		07/30/24 01:56 07/30/24 01:56	
	ND				₩			

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-05-SO-53-20240717

Lab Sample ID: 580-142190-11 Date Collected: 07/17/24 17:20

**Matrix: Solid** Date Received: 07/19/24 11:50 Percent Solids: 80.2

Method: SW846 8260D - Vola Analyte	_	Qualifier	RL	MDL	inued) Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		5.3	0.70	mg/Kg	— <u>-</u>	07/25/24 15:32	07/30/24 01:56	
Toluene	ND		8.0		mg/Kg	☆		07/30/24 01:56	
trans-1.2-Dichloroethene	ND		8.0		mg/Kg		07/25/24 15:32	07/30/24 01:56	1
trans-1,3-Dichloropropene	ND		5.3		mg/Kg	₩	07/25/24 15:32	07/30/24 01:56	1
Trichloroethene	ND		5.3		mg/Kg	≎	07/25/24 15:32	07/30/24 01:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	109		80 - 121				07/25/24 15:32	07/30/24 01:56	
4-Bromofluorobenzene (Surr)	103		80 - 120				07/25/24 15:32	07/30/24 01:56	1
Dibromofluoromethane (Surr)	117		80 - 120				07/25/24 15:32	07/30/24 01:56	1
Toluene-d8 (Surr)	97		80 - 120				07/25/24 15:32	07/30/24 01:56	
- Method: SW846 8260D - Vol	atile Organic	Compound	ds by GC/MS	- RA					
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		2.7	0.88	mg/Kg	<u></u>	07/25/24 08:51	07/31/24 17:24	1
Bromomethane	ND		13	5.0	mg/Kg	☼	07/25/24 08:51	07/31/24 17:24	
Chloromethane	ND		8.0	1.3	mg/Kg	☼	07/25/24 08:51	07/31/24 17:24	•
Dichlorodifluoromethane	ND		33	6.1	mg/Kg	⊅	07/25/24 08:51	07/31/24 17:24	•
Trichlorofluoromethane	ND		11	3.5	mg/Kg	☼	07/25/24 08:51	07/31/24 17:24	
Vinyl chloride	ND		13	2.5	mg/Kg	₩	07/25/24 08:51	07/31/24 17:24	•
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	104		80 - 121				07/25/24 08:51	07/31/24 17:24	-
4-Bromofluorobenzene (Surr)	101		80 - 120				07/25/24 08:51	07/31/24 17:24	
Dibromofluoromethane (Surr)	104		80 - 120				07/25/24 08:51	07/31/24 17:24	
Toluene-d8 (Surr)	100		80 - 120				07/25/24 08:51	07/31/24 17:24	
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	80.2		0.1	0.1	0/			07/22/24 15:04	

0.1

0.1 %

19.8

10/15/2024 (Rev. 1)

07/22/24 15:04

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-06-SO-38.7-20240718

Lab Sample ID: 580-142190-12 Date Collected: 07/18/24 14:40 Matrix: Solid Date Received: 07/19/24 11:50 Percent Solids: 82.1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS **MDL** Unit Dil Fac Analyte Result Qualifier D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 3.8 0.95 mg/Kg 07/25/24 15:32 07/30/24 02:20 ND 7.6 1.1.1-Trichloroethane 0.88 mg/Kg 07/25/24 15:32 07/30/24 02:20 1,1,2,2-Tetrachloroethane ND 3.8 1.4 mg/Kg 07/25/24 15:32 07/30/24 02:20 ND 07/25/24 15:32 07/30/24 02:20 1,1,2-Trichloroethane 3.8 1.4 mg/Kg ND 7.6 mg/Kg 07/25/24 15:32 07/30/24 02:20 1.1-Dichloroethane 1.8 1,1-Dichloroethene ND 7.6 2.3 mg/Kg 07/25/24 15:32 07/30/24 02:20 1,1-Dichloropropene ND 7.6 07/25/24 15:32 07/30/24 02:20 mg/Kg ND 15 7.6 07/25/24 15:32 07/30/24 02:20 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 7.6 mg/Kg 07/25/24 15:32 07/30/24 02:20 1,2,4-Trichlorobenzene ND 15 8.1 mg/Kg 07/25/24 15:32 07/30/24 02:20 1,2,4-Trimethylbenzene ND 7.6 2.6 mg/Kg 07/25/24 15:32 07/30/24 02:20 mg/Kg 1.2-Dibromo-3-Chloropropane ND 11 2.9 07/25/24 15:32 07/30/24 02:20 1 1,2-Dibromoethane ND 3.8 0.72 mg/Kg 07/25/24 15:32 07/30/24 02:20 7.6 1.7 mg/Kg 07/25/24 15:32 07/30/24 02:20 1,2-Dichlorobenzene 16 ND 38 1.0 mg/Kg 07/25/24 15:32 07/30/24 02:20 1,2-Dichloroethane 1,3,5-Trimethylbenzene ND 7.6 1.4 mg/Kg 07/25/24 15:32 07/30/24 02:20 07/25/24 15:32 07/30/24 02:20 1,3-Dichlorobenzene ND 11 2.5 mg/Kg 1,3-Dichloropropane ND 11 1.1 mg/Kg 07/25/24 15:32 07/30/24 02:20 1.4-Dichlorobenzene ND 11 2.1 07/25/24 15:32 07/30/24 02:20 mg/Kg 2,2-Dichloropropane ND 7.6 mg/Kg 07/25/24 15:32 07/30/24 02:20 2-Chlorotoluene ND 7.6 1.7 mg/Kg 07/25/24 15:32 07/30/24 02:20 4-Chlorotoluene ND 7.6 1.9 mg/Kg 07/25/24 15:32 07/30/24 02:20 4-Isopropyltoluene ND 07/25/24 15:32 07/30/24 02:20 76 1.9 mg/Kg Benzene ND 3.8 0.72 mg/Kg 07/25/24 15:32 07/30/24 02:20 7.6 0.80 mg/Kg 07/25/24 15:32 07/30/24 02:20 **Bromobenzene** 1.3 07/25/24 15:32 07/30/24 02:20 Bromochloromethane ND 7.6 1.2 mg/Kg Bromodichloromethane ND 7.6 1.0 mg/Kg 07/25/24 15:32 07/30/24 02:20 Bromoform ND 7.6 0.86 mg/Kg 07/25/24 15:32 07/30/24 02:20 Carbon tetrachloride NΩ 3.8 0.84 mg/Kg 07/25/24 15:32 07/30/24 02:20 7.6 07/25/24 15:32 07/30/24 02:20 Chlorobenzene 3000 0.92 mg/Kg Chloroethane ND 15 4.0 mg/Kg 07/25/24 15:32 07/30/24 02:20 38 0.80 mg/Kg 07/25/24 15:32 07/30/24 02:20 Chloroform 1.9 cis-1,2-Dichloroethene 11 2.4 07/25/24 15:32 07/30/24 02:20 ND mg/Kg ND 07/25/24 15:32 07/30/24 02:20 cis-1,3-Dichloropropene 3.8 0.76 mg/Kg Dibromochloromethane ND 3.8 0.93 mg/Kg 07/25/24 15:32 07/30/24 02:20 Dibromomethane ND 7.6 07/25/24 15:32 07/30/24 02:20 1.4 mg/Kg Ethylbenzene ND 7.6 1.7 mg/Kg 07/25/24 15:32 07/30/24 02:20 Hexachlorobutadiene ND 19 4.6 mg/Kg 07/25/24 15:32 07/30/24 02:20 ND 7.6 07/25/24 15:32 07/30/24 02:20 Isopropylbenzene 1.6 mg/Kg Methyl tert-butyl ether ND 7.6 1.1 mg/Kg 07/25/24 15:32 07/30/24 02:20 **Methylene Chloride** 36 48 5.0 mg/Kg 07/25/24 15:32 07/30/24 02:20 m-Xylene & p-Xylene ND 76 mg/Kg 07/25/24 15:32 07/30/24 02:20 ND 07/25/24 15:32 07/30/24 02:20 Naphthalene 29 7.5 mg/Kg n-Butylbenzene 7.6 3.5 07/25/24 15:32 07/30/24 02:20 ND mg/Kg ND 07/25/24 15:32 07/30/24 02:20 N-Propylbenzene 76 2.9 mg/Kg o-Xylene ND 7.6 0.95 mg/Kg 07/25/24 15:32 07/30/24 02:20 sec-Butylbenzene ND 7.6 07/25/24 15:32 07/30/24 02:20 1.6 mg/Kg Styrene ND 7.6 mg/Kg 07/25/24 15:32 07/30/24 02:20 mg/Kg 07/25/24 15:32 07/30/24 02:20 t-Butylbenzene ND 7.6 1.5

Client: ERM-West Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-06-SO-38.7-20240718

Date Collected: 07/18/24 14:40 Date Received: 07/19/24 11:50

Lab Sample ID: 580-142190-12

**Matrix: Solid** Percent Solids: 82.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	15		7.6	1.0	mg/Kg	<u></u>	07/25/24 15:32	07/30/24 02:20	1
Toluene	ND		11	2.6	mg/Kg	₩	07/25/24 15:32	07/30/24 02:20	1
trans-1,2-Dichloroethene	ND		11	2.8	mg/Kg	₩	07/25/24 15:32	07/30/24 02:20	1
trans-1,3-Dichloropropene	ND		7.6	1.3	mg/Kg	₩	07/25/24 15:32	07/30/24 02:20	1
Trichloroethene	ND		7.6	2.0	mg/Kg	₩	07/25/24 15:32	07/30/24 02:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				07/25/24 15:32	07/30/24 02:20	1
4-Bromofluorobenzene (Surr)	83		80 - 120				07/25/24 15:32	07/30/24 02:20	1
Dibromofluoromethane (Surr)	102		80 - 120				07/25/24 15:32	07/30/24 02:20	1
Toluene-d8 (Surr)	96		80 - 120				07/25/24 15:32	07/30/24 02:20	1

Analyte	Result (	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		7.6	2.5	mg/Kg	<del>*</del>	07/25/24 08:51	07/31/24 19:13	1
Bromomethane	ND		38	14	mg/Kg	☆	07/25/24 08:51	07/31/24 19:13	1
Chloromethane	ND		23	3.9	mg/Kg	₩	07/25/24 08:51	07/31/24 19:13	1
Dichlorodifluoromethane	ND		95	18	mg/Kg	₩	07/25/24 08:51	07/31/24 19:13	1
Trichlorofluoromethane	ND		31	9.9	mg/Kg	☆	07/25/24 08:51	07/31/24 19:13	1
Vinyl chloride	ND		38	7.1	mg/Kg	≎	07/25/24 08:51	07/31/24 19:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

	Surrogate	<i>™</i> Recovery	Quaimer	LIIIIII	riepareu	Allalyzeu	DII Fac
	1,2-Dichloroethane-d4 (Surr)	104		80 - 121	07/25/24 08:51	07/31/24 19:13	1
	4-Bromofluorobenzene (Surr)	103		80 - 120	07/25/24 08:51	07/31/24 19:13	1
	Dibromofluoromethane (Surr)	104		80 - 120	07/25/24 08:51	07/31/24 19:13	1
L	Toluene-d8 (Surr)	95		80 - 120	07/25/24 08:51	07/31/24 19:13	1

Method: SW846 8260D - Vo Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	2000	В	7.6	0.92	mg/Kg	<del>*</del>	08/01/24 09:30	08/01/24 13:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		80 - 121				08/01/24 09:30	08/01/24 13:48	1
4-Bromofluorobenzene (Surr)	101		80 - 120				08/01/24 09:30	08/01/24 13:48	1
Dibromofluoromethane (Surr)	102		80 - 120				08/01/24 09:30	08/01/24 13:48	1
Dibioinionadioiniculario (Gali)									

General Chemistry Analyte	Result Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	82.1	0.1	0.1	%			07/23/24 10:49	1
Percent Moisture (SM22 2540G)	17.9	0.1	0.1	%			07/23/24 10:49	1

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-06-SO-40.5-20240718

Lab Sample ID: 580-142190-13 Date Collected: 07/18/24 16:10 Matrix: Solid Date Received: 07/19/24 11:50 Percent Solids: 84.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 2.6 0.65 mg/Kg 07/25/24 15:32 07/30/24 02:43 ND 5.2 1,1,1-Trichloroethane 0.60 mg/Kg 07/25/24 15:32 07/30/24 02:43 1,1,2,2-Tetrachloroethane ND 2.6 0.99 mg/Kg 07/25/24 15:32 07/30/24 02:43 ND 2.6 1,1,2-Trichloroethane 0.96 mg/Kg 07/25/24 15:32 07/30/24 02:43 ND 5.2 mg/Kg 07/25/24 15:32 07/30/24 02:43 1.1-Dichloroethane 1.2 1,1-Dichloroethene ND 5.2 1.6 mg/Kg 07/25/24 15:32 07/30/24 02:43 1,1-Dichloropropene ND 5.2 07/25/24 15:32 07/30/24 02:43 mg/Kg ND 10 07/25/24 15:32 07/30/24 02:43 1,2,3-Trichlorobenzene 5.1 mg/Kg 1,2,3-Trichloropropane ND 5.2 mg/Kg 07/25/24 15:32 07/30/24 02:43 1,2,4-Trichlorobenzene ND 10 5.5 mg/Kg 07/25/24 15:32 07/30/24 02:43 1,2,4-Trimethylbenzene ND 5.2 1.8 mg/Kg 07/25/24 15:32 07/30/24 02:43 1.2-Dibromo-3-Chloropropane ND 7.8 2.0 mg/Kg 07/25/24 15:32 07/30/24 02:43 1 2.6 1,2-Dibromoethane ND 0.49 mg/Kg 07/25/24 15:32 07/30/24 02:43 1,2-Dichlorobenzene ND 5.2 1.1 mg/Kg 07/25/24 15:32 07/30/24 02:43 ND 26 0.71 07/25/24 15:32 07/30/24 02:43 1.2-Dichloroethane mg/Kg 1,3,5-Trimethylbenzene NΩ 5.2 0.99 mg/Kg 07/25/24 15:32 07/30/24 02:43 07/25/24 15:32 07/30/24 02:43 1,3-Dichlorobenzene ND 7.8 1.7 mg/Kg 1,3-Dichloropropane ND 7.8 0.73 mg/Kg 07/25/24 15:32 07/30/24 02:43 1.4-Dichlorobenzene ND 78 07/25/24 15:32 07/30/24 02:43 1.4 mg/Kg 2,2-Dichloropropane ND 5.2 mg/Kg 07/25/24 15:32 07/30/24 02:43 2-Chlorotoluene ND 5.2 1.1 07/25/24 15:32 07/30/24 02:43 mg/Kg 4-Chlorotoluene ND 5.2 1.3 mg/Kg 07/25/24 15:32 07/30/24 02:43 4-Isopropyltoluene ND 5.2 07/25/24 15:32 07/30/24 02:43 1.3 mg/Kg Benzene ND 2.6 0.49 mg/Kg 07/25/24 15:32 07/30/24 02:43 Bromobenzene ND 5.2 0.54 mg/Kg 07/25/24 15:32 07/30/24 02:43 07/25/24 15:32 07/30/24 02:43 Bromochloromethane ND 5.2 0.80 mg/Kg Bromodichloromethane ND 5.2 0.71 mg/Kg 07/25/24 15:32 07/30/24 02:43 Bromoform ND 5.2 0.58 mg/Kg 07/25/24 15:32 07/30/24 02:43 Carbon tetrachloride ND 26 0.57 mg/Kg 07/25/24 15:32 07/30/24 02:43 5.2 07/25/24 15:32 Chlorobenzene 280 0.62 mg/Kg 07/30/24 02:43 Chloroethane ND 10 2.7 mg/Kg 07/25/24 15:32 07/30/24 02:43 Chloroform ND 26 0.54 07/25/24 15:32 07/30/24 02:43 mg/Kg 1.6 cis-1,2-Dichloroethene ND 7.8 07/25/24 15:32 07/30/24 02:43 mg/Kg ND 0.52 07/25/24 15:32 07/30/24 02:43 cis-1,3-Dichloropropene 26 mg/Kg Dibromochloromethane ND 2.6 0.64 mg/Kg 07/25/24 15:32 07/30/24 02:43 0.96 Dibromomethane ND 5.2 07/25/24 15:32 07/30/24 02:43 mg/Kg Ethylbenzene ND 5.2 1.2 mg/Kg 07/25/24 15:32 07/30/24 02:43 Hexachlorobutadiene ND 13 3.1 mg/Kg 07/25/24 15:32 07/30/24 02:43 ND 5.2 07/25/24 15:32 07/30/24 02:43 Isopropylbenzene 1.1 mg/Kg Methyl tert-butyl ether ND 5.2 0.78 mg/Kg 07/25/24 15:32 07/30/24 02:43 **Methylene Chloride** 27 32 3.4 mg/Kg 07/25/24 15:32 07/30/24 02:43 m-Xylene & p-Xylene ND 5.2 0.92 mg/Kg 07/25/24 15:32 07/30/24 02:43 ND 19 07/25/24 15:32 07/30/24 02:43 Naphthalene 5.1 mg/Kg n-Butylbenzene 5.2 07/25/24 15:32 07/30/24 02:43 ND mg/Kg ND N-Propylbenzene 52 1.9 mg/Kg 07/25/24 15:32 07/30/24 02:43 o-Xylene ND 5.2 0.65 mg/Kg 07/25/24 15:32 07/30/24 02:43 ND 5.2 07/25/24 15:32 07/30/24 02:43 sec-Butylbenzene 1.1 mg/Kg Styrene ND 5.2 mg/Kg 07/25/24 15:32 07/30/24 02:43 t-Butylbenzene mg/Kg ND 5.2 1.0 07/25/24 15:32 07/30/24 02:43

**Eurofins Seattle** 

10/15/2024 (Rev. 1)

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-06-SO-40.5-20240718

Date Collected: 07/18/24 16:10 Date Received: 07/19/24 11:50

**General Chemistry** 

Percent Solids (SM22 2540G)

Percent Moisture (SM22 2540G)

Analyte

Lab Sample ID: 580-142190-13

Matrix: Solid

Percent Solids: 84.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		5.2	0.69	mg/Kg	— <u></u>	07/25/24 15:32	07/30/24 02:43	1
Toluene	ND		7.8	1.8	mg/Kg	₩	07/25/24 15:32	07/30/24 02:43	1
trans-1,2-Dichloroethene	ND		7.8	1.9	mg/Kg	₽	07/25/24 15:32	07/30/24 02:43	1
trans-1,3-Dichloropropene	ND		5.2	0.91	mg/Kg	☼	07/25/24 15:32	07/30/24 02:43	1
Trichloroethene	ND		5.2	1.3	mg/Kg	₩	07/25/24 15:32	07/30/24 02:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				07/25/24 15:32	07/30/24 02:43	1
4-Bromofluorobenzene (Surr)	98		80 - 120				07/25/24 15:32	07/30/24 02:43	1
Dibromofluoromethane (Surr)	112		80 - 120				07/25/24 15:32	07/30/24 02:43	1
							07/05/04 15:30	07/30/24 02:43	1
Toluene-d8 (Surr) : Method: SW846 8260D - Vo	97 Dlatile Organic	Compound	80 - 120 ds by GC/MS	- RA			07/25/24 15.32	07/30/24 02.43	,
Method: SW846 8260D - Vo	olatile Organic	•	ds by GC/MS		11=24				·
Method: SW846 8260D - Vo Analyte	olatile Organic Result	Compound Qualifier	ds by GC/MS	MDL	Unit	<u>D</u>	Prepared	Analyzed	•
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane	platile Organic Result ND	•	ds by GC/MS RL 2.6	<b>MDL</b> 0.86	mg/Kg	<u></u>	Prepared 07/25/24 08:51	Analyzed 07/31/24 17:46	·
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane	Diatile Organic Result ND ND	•	ds by GC/MS RL 2.6 13	0.86 4.9	mg/Kg mg/Kg		Prepared 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 17:46 07/31/24 17:46	Dil Fac 1 1 1
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane	Diatile Organic Result ND ND ND	•	ds by GC/MS RL 2.6 13 7.8	0.86 4.9 1.3	mg/Kg mg/Kg mg/Kg	<u></u>	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 17:46 07/31/24 17:46 07/31/24 17:46	Dil Fac
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane Chloromethane Dichlorodifluoromethane	Diatile Organic Result ND ND ND ND	•	ds by GC/MS RL 2.6 13 7.8 32	0.86 4.9 1.3 6.0	mg/Kg mg/Kg mg/Kg mg/Kg	# # #	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 17:46 07/31/24 17:46 07/31/24 17:46 07/31/24 17:46	Dil Fac
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane Chloromethane	Diatile Organic Result ND ND ND	•	ds by GC/MS RL 2.6 13 7.8	MDL 0.86 4.9 1.3 6.0 3.4	mg/Kg mg/Kg mg/Kg	# # #	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 17:46 07/31/24 17:46 07/31/24 17:46 07/31/24 17:46 07/31/24 17:46	Dil Fac
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane	Diatile Organic Result ND ND ND ND ND ND	Qualifier	ds by GC/MS RL 2.6 13 7.8 32 10	MDL 0.86 4.9 1.3 6.0 3.4	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	# # # # #	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 17:46 07/31/24 17:46 07/31/24 17:46 07/31/24 17:46 07/31/24 17:46	Dil Fac 1 1 1 1 1 1
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane Vinyl chloride	Diatile Organic Result ND	Qualifier	2.6 13 7.8 32 10 13	MDL 0.86 4.9 1.3 6.0 3.4	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	# # # # #	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 17:46 07/31/24 17:46 07/31/24 17:46 07/31/24 17:46 07/31/24 17:46 07/31/24 17:46	Dil Fac 1 1 1 1 1 1 1 Dil Fac
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane Vinyl chloride  Surrogate	Diatile Organic Result ND	Qualifier	2.6 13 7.8 32 10 13	MDL 0.86 4.9 1.3 6.0 3.4	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	# # # # #	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 17:46 07/31/24 17:46 07/31/24 17:46 07/31/24 17:46 07/31/24 17:46 07/31/24 17:46 Analyzed	Dil Fac 1 1 1 1 1 1 1 Dil Fac
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane Vinyl chloride  Surrogate 1,2-Dichloroethane-d4 (Surr)	Dlatile Organic Result ND	Qualifier	2.6 13 7.8 32 10 13 Limits 80 - 121	MDL 0.86 4.9 1.3 6.0 3.4	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	# # # # #	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51  Prepared 07/25/24 08:51	Analyzed  07/31/24 17:46  07/31/24 17:46  07/31/24 17:46  07/31/24 17:46  07/31/24 17:46  Analyzed  07/31/24 17:46  07/31/24 17:46	Dil Fac  1 1 1 1 1 1 1 Dil Fac 1

RL

0.1

0.1

RL Unit

0.1 %

0.1 %

D

Prepared

Result Qualifier

84.2

**15.8** 

Dil Fac

Analyzed

07/23/24 10:49

07/23/24 10:49

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-06-SO-44.5-20240718

Lab Sample ID: 580-142190-14 Date Collected: 07/18/24 16:12 Matrix: Solid Date Received: 07/19/24 11:50 Percent Solids: 78.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Analyte Result Qualifier **MDL** Unit D Prepared Analyzed Dil Fac 1,1,1,2-Tetrachloroethane ND 2.5 0.63 mg/Kg 07/25/24 15:32 07/30/24 03:06 ND 1,1,1-Trichloroethane 5.0 0.58 mg/Kg 07/25/24 15:32 07/30/24 03:06 1,1,2,2-Tetrachloroethane ND 2.5 0.96 mg/Kg 07/25/24 15:32 07/30/24 03:06 2.5 1,1,2-Trichloroethane ND 0.93 mg/Kg 07/25/24 15:32 07/30/24 03:06 5.0 mg/Kg 07/25/24 15:32 07/30/24 03:06 1 1-Dichloroethane ND 1.2 1,1-Dichloroethene ND 5.0 1.5 mg/Kg 07/25/24 15:32 07/30/24 03:06 ND 5.0 07/25/24 15:32 07/30/24 03:06 1,1-Dichloropropene mg/Kg ND 10 07/25/24 15:32 07/30/24 03:06 1,2,3-Trichlorobenzene 5.0 mg/Kg 1,2,3-Trichloropropane ND 5.0 mg/Kg 07/25/24 15:32 07/30/24 03:06 1,2,4-Trichlorobenzene ND 10 5.4 mg/Kg 07/25/24 15:32 07/30/24 03:06 1,2,4-Trimethylbenzene ND 5.0 mg/Kg 07/25/24 15:32 07/30/24 03:06 1.2-Dibromo-3-Chloropropane ND 7.6 1.9 mg/Kg 07/25/24 15:32 07/30/24 03:06 1 2.5 1,2-Dibromoethane ND 0.48 mg/Kg 07/25/24 15:32 07/30/24 03:06 1,2-Dichlorobenzene ND 5.0 1.1 mg/Kg 07/25/24 15:32 07/30/24 03:06 ND 2.5 0.69 07/25/24 15:32 07/30/24 03:06 1.2-Dichloroethane mg/Kg 1,3,5-Trimethylbenzene NΩ 5.0 0.96 mg/Kg 07/25/24 15:32 07/30/24 03:06 07/25/24 15:32 07/30/24 03:06 1,3-Dichlorobenzene ND 7.6 1.7 mg/Kg 1,3-Dichloropropane ND 7.6 mg/Kg 07/25/24 15:32 07/30/24 03:06 1.4-Dichlorobenzene ND 76 07/25/24 15:32 07/30/24 03:06 1.4 mg/Kg 2,2-Dichloropropane ND 5.0 mg/Kg 07/25/24 15:32 07/30/24 03:06 2-Chlorotoluene ND 5.0 1.1 07/25/24 15:32 07/30/24 03:06 mg/Kg 4-Chlorotoluene ND 5.0 1.2 mg/Kg 07/25/24 15:32 07/30/24 03:06 4-Isopropyltoluene ND 07/25/24 15:32 07/30/24 03:06 5.0 1.3 mg/Kg Benzene ND 2.5 0.48 mg/Kg 07/25/24 15:32 07/30/24 03:06 Bromobenzene ND 5.0 0.53 mg/Kg 07/25/24 15:32 07/30/24 03:06 Bromochloromethane ND 5.0 0.78 mg/Kg 07/25/24 15:32 07/30/24 03:06 Bromodichloromethane ND 5.0 0.69 mg/Kg 07/25/24 15:32 07/30/24 03:06 Bromoform ND 5.0 0.57 mg/Kg 07/25/24 15:32 07/30/24 03:06 Carbon tetrachloride ND 25 0.55 mg/Kg 07/25/24 15:32 07/30/24 03:06 5.0 07/25/24 15:32 Chlorobenzene 86 0.60 mg/Kg 07/30/24 03:06 Chloroethane ND 10 2.6 mg/Kg 07/25/24 15:32 07/30/24 03:06 Chloroform ND 25 0.53 07/25/24 15:32 07/30/24 03:06 mg/Kg 1.6 cis-1,2-Dichloroethene ND 7.6 07/25/24 15:32 07/30/24 03:06 mg/Kg ND 07/25/24 15:32 07/30/24 03:06 cis-1,3-Dichloropropene 2.5 0.50 mg/Kg Dibromochloromethane ND 2.5 0.62 mg/Kg 07/25/24 15:32 07/30/24 03:06 ND 5.0 0.93 07/25/24 15:32 07/30/24 03:06 Dibromomethane mg/Kg Ethylbenzene ND 5.0 mg/Kg 07/25/24 15:32 07/30/24 03:06 Hexachlorobutadiene ND 13 3.0 mg/Kg 07/25/24 15:32 07/30/24 03:06 ND 5.0 07/25/24 15:32 Isopropylbenzene 1.1 mg/Kg 07/30/24 03:06 Methyl tert-butyl ether ND 5.0 0.76 mg/Kg 07/25/24 15:32 07/30/24 03:06 **Methylene Chloride** 30 31 3.3 mg/Kg 07/25/24 15:32 07/30/24 03:06 m-Xylene & p-Xylene ND 5.0 0.89 mg/Kg 07/25/24 15:32 07/30/24 03:06 19 07/25/24 15:32 07/30/24 03:06 Naphthalene ND 4.9 mg/Kg n-Butylbenzene 5.0 07/25/24 15:32 07/30/24 03:06 ND 2.3 mg/Kg ND N-Propylbenzene 5.0 1.9 mg/Kg 07/25/24 15:32 07/30/24 03:06 o-Xylene ND 5.0 0.63 mg/Kg 07/25/24 15:32 07/30/24 03:06 ND 5.0 07/25/24 15:32 07/30/24 03:06 sec-Butylbenzene 1.1 mg/Kg Styrene ND 5.0 mg/Kg 07/25/24 15:32 07/30/24 03:06 t-Butylbenzene ND 5.0 0.97 mg/Kg 07/25/24 15:32 07/30/24 03:06

**Eurofins Seattle** 

10/15/2024 (Rev. 1)

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-06-SO-44.5-20240718

Date Collected: 07/18/24 16:12 Date Received: 07/19/24 11:50

**General Chemistry** 

Percent Solids (SM22 2540G)

Percent Moisture (SM22 2540G)

Analyte

Lab Sample ID: 580-142190-14

**Matrix: Solid** 

Percent Solids: 78.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		5.0	0.67	mg/Kg	— <u></u>	07/25/24 15:32	07/30/24 03:06	1
Toluene	ND		7.6	1.7	mg/Kg	☼	07/25/24 15:32	07/30/24 03:06	1
trans-1,2-Dichloroethene	ND		7.6	1.8	mg/Kg	⊅	07/25/24 15:32	07/30/24 03:06	1
trans-1,3-Dichloropropene	ND		5.0	0.88	mg/Kg	☼	07/25/24 15:32	07/30/24 03:06	1
Trichloroethene	ND		5.0	1.3	mg/Kg	☼	07/25/24 15:32	07/30/24 03:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				07/25/24 15:32	07/30/24 03:06	1
4-Bromofluorobenzene (Surr)	97		80 - 120				07/25/24 15:32	07/30/24 03:06	1
Dibromofluoromethane (Surr)	116		80 - 120				07/25/24 15:32	07/30/24 03:06	1
T-1	00		00 400				07/25/24 15:22	07/30/24 03:06	1
Toluene-d8 (Surr) : Method: SW846 8260D - Vo	93 Diatile Organic	Compound	80 - 120 ds by GC/MS	- RA			07/23/24 13.32	07/30/24 03.00	,
Method: SW846 8260D - Vo	olatile Organic	•	ds by GC/MS		11-24	_			·
Method: SW846 8260D - Vo Analyte	olatile Organic Result	Compound Qualifier	ds by GC/MS	MDL		<u>D</u>	Prepared	Analyzed	Dil Fac
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane	Diatile Organic Result ND	•	ds by GC/MS RL 2.5	MDL 0.83	mg/Kg	<u></u>	Prepared 07/25/24 08:51	Analyzed 07/31/24 18:08	·
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane	Diatile Organic Result ND ND	•	ds by GC/MS RL 2.5 13	MDL 0.83 4.8	mg/Kg mg/Kg	<del>*</del>	Prepared 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 18:08 07/31/24 18:08	·
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane Chloromethane	Diatile Organic Result ND ND ND	•	ds by GC/MS RL 2.5 13 7.6	0.83 4.8 1.3	mg/Kg mg/Kg mg/Kg	\$ \$ \$	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 18:08 07/31/24 18:08 07/31/24 18:08	·
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane	Diatile Organic Result ND ND	•	ds by GC/MS RL 2.5 13 7.6 31	0.83 4.8 1.3 5.8	mg/Kg mg/Kg mg/Kg mg/Kg	<del>*</del>	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 18:08 07/31/24 18:08 07/31/24 18:08 07/31/24 18:08	·
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane Chloromethane Dichlorodifluoromethane	Diatile Organic Result ND ND ND ND ND	•	ds by GC/MS RL 2.5 13 7.6	0.83 4.8 1.3 5.8 3.3	mg/Kg mg/Kg mg/Kg	\$ \$ \$ \$	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 18:08 07/31/24 18:08 07/31/24 18:08	·
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane	Diatile Organic Result ND ND ND ND ND ND	Qualifier	ds by GC/MS RL 2.5 13 7.6 31 10	0.83 4.8 1.3 5.8 3.3	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	\$ \$ \$ \$	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 18:08 07/31/24 18:08 07/31/24 18:08 07/31/24 18:08 07/31/24 18:08	Dil Fac 1 1 1 1 1 1
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane Vinyl chloride	Diatile Organic Result ND	Qualifier	2.5 13 7.6 31 10 13	0.83 4.8 1.3 5.8 3.3	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	\$ \$ \$ \$	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 18:08 07/31/24 18:08 07/31/24 18:08 07/31/24 18:08 07/31/24 18:08 07/31/24 18:08	·
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane Vinyl chloride  Surrogate	Diatile Organic Result ND	Qualifier	2.5 13 7.6 31 10 13	0.83 4.8 1.3 5.8 3.3	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	\$ \$ \$ \$	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 18:08 07/31/24 18:08 07/31/24 18:08 07/31/24 18:08 07/31/24 18:08 07/31/24 18:08  Analyzed 07/31/24 18:08	Dil Fac 1 1 1 1 1 1
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane Vinyl chloride  Surrogate 1,2-Dichloroethane-d4 (Surr)	ND N	Qualifier	2.5 13 7.6 31 10 13 <b>Limits</b> 80 - 121	0.83 4.8 1.3 5.8 3.3	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	\$ \$ \$ \$	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51  Prepared 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 18:08 07/31/24 18:08 07/31/24 18:08 07/31/24 18:08 07/31/24 18:08 07/31/24 18:08  Analyzed 07/31/24 18:08	Dil Fac  1 1 1 1 1 1 1 1 Dil Fac 1

RL

0.1

0.1

RL Unit

0.1 %

0.1 %

D

Prepared

Result Qualifier

78.9

21.1

Eurofins S	Seattle
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Dil Fac

Analyzed

07/23/24 10:49

07/23/24 10:49

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-06-SO-52-20240719

Lab Sample ID: 580-142190-15 Date Collected: 07/19/24 10:05 **Matrix: Solid** Date Received: 07/19/24 11:50 Percent Solids: 81.4

nalyte	Result Qualifie	er RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
,1,1,2-Tetrachloroethane	ND ND	4.2	1.1	mg/Kg	— <u></u>	07/25/24 15:32	07/30/24 03:29	
,1,1-Trichloroethane	ND	8.4	0.97	mg/Kg	₩	07/25/24 15:32	07/30/24 03:29	
,1,2,2-Tetrachloroethane	ND	4.2		mg/Kg	☼	07/25/24 15:32	07/30/24 03:29	
,1,2-Trichloroethane	ND	4.2		mg/Kg		07/25/24 15:32	07/30/24 03:29	
,1-Dichloroethane	ND	8.4		mg/Kg	☼	07/25/24 15:32	07/30/24 03:29	
,1-Dichloroethene	ND	8.4		mg/Kg	☼	07/25/24 15:32	07/30/24 03:29	
,1-Dichloropropene	ND	8.4		mg/Kg		07/25/24 15:32	07/30/24 03:29	
,2,3-Trichlorobenzene	ND	17		mg/Kg	₩	07/25/24 15:32	07/30/24 03:29	
,2,3-Trichloropropane	ND	8.4		mg/Kg	₩	07/25/24 15:32	07/30/24 03:29	
,2,4-Trichlorobenzene	ND	17		mg/Kg			07/30/24 03:29	
,2,4-Trimethylbenzene	ND	8.4		mg/Kg	☆		07/30/24 03:29	
,2-Dibromo-3-Chloropropane	ND	13		mg/Kg	☆		07/30/24 03:29	
,2-Dibromoethane	ND	4.2		mg/Kg			07/30/24 03:29	
,2-Dichlorobenzene	ND	8.4		mg/Kg			07/30/24 03:29	
.2-Dichloroethane	ND	4.2		mg/Kg	~ \$		07/30/24 03:29	
,3,5-Trimethylbenzene	ND	8.4		mg/Kg			07/30/24 03:29	
,3-Dichlorobenzene	ND	13		mg/Kg			07/30/24 03:29	
3-Dichloropropane	ND	13		mg/Kg	~ \$		07/30/24 03:29	
4-Dichlorobenzene	ND	13		mg/Kg			07/30/24 03:29	
,2-Dichloropropane	ND	8.4		mg/Kg	₩		07/30/24 03:29	
-Chlorotoluene	ND	8.4		mg/Kg	₩		07/30/24 03:29	
Chlorotoluene	ND	8.4		mg/Kg			07/30/24 03:29	
-Isopropyltoluene	ND	8.4		mg/Kg	₩		07/30/24 03:29	
enzene	ND ND	4.2		mg/Kg	₩		07/30/24 03:29	
romobenzene	ND ND	8.4		mg/Kg	¥. \$		07/30/24 03:29	
romochloromethane	ND ND	8.4		mg/Kg			07/30/24 03:29	
romodichloromethane	ND ND	8.4			*		07/30/24 03:29	
romoform				mg/Kg	· · · · · · · · · · · ·			
	ND	8.4		mg/Kg			07/30/24 03:29	
arbon tetrachloride	ND	4.2		mg/Kg			07/30/24 03:29	
hlorobenzene	140	8.4		mg/Kg	<u></u> .		07/30/24 03:29	
hloroethane	ND	17		mg/Kg			07/30/24 03:29	
hloroform	ND	4.2		mg/Kg	<b>*</b>		07/30/24 03:29	
s-1,2-Dichloroethene	ND	13		mg/Kg	; .		07/30/24 03:29	
s-1,3-Dichloropropene	ND	4.2		mg/Kg			07/30/24 03:29	
ibromochloromethane	ND	4.2		mg/Kg	: <del>D</del>	07/25/24 15:32		
ibromomethane	ND	8.4		mg/Kg			07/30/24 03:29	
thylbenzene	ND	8.4		mg/Kg	☼		07/30/24 03:29	
exachlorobutadiene	ND	21		mg/Kg	₩		07/30/24 03:29	
opropylbenzene	ND	8.4		mg/Kg			07/30/24 03:29	
ethyl tert-butyl ether	ND	8.4		mg/Kg	₩		07/30/24 03:29	
ethylene Chloride	47 JB	53		mg/Kg	₩		07/30/24 03:29	
-Xylene & p-Xylene	ND	8.4		mg/Kg			07/30/24 03:29	
aphthalene	ND	32		mg/Kg	₩		07/30/24 03:29	
Butylbenzene	ND	8.4		mg/Kg	₩	07/25/24 15:32	07/30/24 03:29	
-Propylbenzene	ND	8.4		mg/Kg	≎		07/30/24 03:29	
-Xylene	ND	8.4		mg/Kg	₽		07/30/24 03:29	
ec-Butylbenzene	ND	8.4	1.8	mg/Kg	₽	07/25/24 15:32	07/30/24 03:29	
tyrene	ND	8.4	2.7	mg/Kg	₩	07/25/24 15:32	07/30/24 03:29	

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-06-SO-52-20240719

Lab Sample ID: 580-142190-15 Date Collected: 07/19/24 10:05

**Matrix: Solid** Date Received: 07/19/24 11:50 Percent Solids: 81.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		8.4	1.1	mg/Kg	— <u></u>	07/25/24 15:32	07/30/24 03:29	1
Toluene	ND		13	2.8	mg/Kg	☼	07/25/24 15:32	07/30/24 03:29	1
trans-1,2-Dichloroethene	ND		13	3.1	mg/Kg	₽	07/25/24 15:32	07/30/24 03:29	1
trans-1,3-Dichloropropene	ND		8.4	1.5	mg/Kg	☼	07/25/24 15:32	07/30/24 03:29	1
Trichloroethene	ND		8.4	2.2	mg/Kg	☼	07/25/24 15:32	07/30/24 03:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		80 - 121				07/25/24 15:32	07/30/24 03:29	1
4-Bromofluorobenzene (Surr)	98		80 - 120				07/25/24 15:32	07/30/24 03:29	1
Dibromofluoromethane (Surr)	116		80 - 120				07/25/24 15:32	07/30/24 03:29	1
Toluene-d8 (Surr) Method: SW846 8260D - Vo Analyte	_	Compound Qualifier	80 - 120 ds by GC/MS RL	- RA MDL	Unit	D	07/25/24 15:32  Prepared	07/30/24 03:29 Analyzed	
, ,	olatile Organic	•	ds by GC/MS				07/25/24 15:32	07/30/24 03:29	
Method: SW846 8260D - Vo Analyte	olatile Organic Result	•	ds by GC/MS	MDL			Prepared	Analyzed	
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane	olatile Organic Result ND	•	ds by GC/MS RL 4.2	MDL 1.4	mg/Kg	<del>-</del>	Prepared 07/25/24 08:51	Analyzed 07/31/24 18:30	
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane	olatile Organic Result ND ND	•	ds by GC/MS RL 4.2 21	1.4 8.0	mg/Kg mg/Kg		Prepared 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 18:30 07/31/24 18:30	
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane Chloromethane	olatile Organic Result ND ND ND	•	ds by GC/MS RL 4.2 21 13	1.4 8.0 2.1	mg/Kg mg/Kg mg/Kg	# # #	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 18:30 07/31/24 18:30 07/31/24 18:30	Dil Fac
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane Chloromethane Dichlorodifluoromethane	olatile Organic Result ND ND ND ND ND	•	ds by GC/MS RL 4.2 21 13 53	1.4 8.0 2.1 9.7	mg/Kg mg/Kg mg/Kg mg/Kg	<del>-</del>	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 18:30 07/31/24 18:30 07/31/24 18:30 07/31/24 18:30	
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane	olatile Organic Result ND ND ND	•	ds by GC/MS RL 4.2 21 13	1.4 8.0 2.1 9.7 5.5	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	\$ \$ \$ \$	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 18:30 07/31/24 18:30 07/31/24 18:30	Dil Fac
Method: SW846 8260D - Vo Analyte 1,2-Dichloropropane Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane Vinyl chloride	ND N	Qualifier	4.2 21 13 53 17 21	1.4 8.0 2.1 9.7 5.5	mg/Kg mg/Kg mg/Kg mg/Kg	\$ \$ \$ \$	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 18:30 07/31/24 18:30 07/31/24 18:30 07/31/24 18:30 07/31/24 18:30 07/31/24 18:30	Dil Fac
Method: SW846 8260D - Version Analyte 1,2-Dichloropropane Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane Vinyl chloride  Surrogate	ND N	Qualifier	ds by GC/MS RL 4.2 21 13 53 17 21 <i>Limits</i>	1.4 8.0 2.1 9.7 5.5	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	\$ \$ \$ \$	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 18:30 07/31/24 18:30 07/31/24 18:30 07/31/24 18:30 07/31/24 18:30 07/31/24 18:30 Analyzed	Dil Fac  1 1 1 1 1 1 1 1 1 Dil Fac
Method: SW846 8260D - Version   Analyte 1,2-Dichloropropane Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane Vinyl chloride  Surrogate 1,2-Dichloroethane-d4 (Surr)	ND N	Qualifier	4.2 21 13 53 17 21 <b>Limits</b> 80 - 121	1.4 8.0 2.1 9.7 5.5	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	\$ \$ \$ \$	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51	Analyzed 07/31/24 18:30 07/31/24 18:30 07/31/24 18:30 07/31/24 18:30 07/31/24 18:30 07/31/24 18:30 Analyzed	Dil Fac  1 1 1 1 1 1 1 1 1 Dil Fac
Method: SW846 8260D - Version   Analyte 1,2-Dichloropropane Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane Vinyl chloride  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr)	ND N	Qualifier	4.2 21 13 53 17 21 <b>Limits</b> 80 - 121 80 - 120	1.4 8.0 2.1 9.7 5.5	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	\$ \$ \$ \$	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51  Prepared 07/25/24 08:51 07/25/24 08:51	Analyzed  07/31/24 18:30 07/31/24 18:30 07/31/24 18:30 07/31/24 18:30 07/31/24 18:30  Analyzed  07/31/24 18:30 07/31/24 18:30	Dil Fac 1 1 1 1
Method: SW846 8260D - Version   Analyte 1,2-Dichloropropane Bromomethane Chloromethane Dichlorodifluoromethane Trichlorofluoromethane Vinyl chloride  Surrogate 1,2-Dichloroethane-d4 (Surr)	ND N	Qualifier	4.2 21 13 53 17 21 <b>Limits</b> 80 - 121	1.4 8.0 2.1 9.7 5.5	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	\$ \$ \$ \$	Prepared 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51 07/25/24 08:51  Prepared 07/25/24 08:51 07/25/24 08:51	Analyzed  07/31/24 18:30  07/31/24 18:30  07/31/24 18:30  07/31/24 18:30  07/31/24 18:30  Analyzed  07/31/24 18:30	Dil Fac

General Chemistry							
Analyte	Result Qualifier	RL	RL Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	81.4	0.1	0.1 %			07/23/24 10:49	1
Percent Moisture (SM22 2540G)	18.6	0.1	0.1 %			07/23/24 10:49	1

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

# Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-466321/5-A

**Matrix: Solid** 

Client Sample ID: Method Blank

Analysis Batch: 466343	MD	МВ						Prep Batch:	400321
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050		— <u>-</u>	07/29/24 08:45		1
1,1,1-Trichloroethane	ND		0.040	0.0046				07/29/24 11:30	1
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076			07/29/24 08:45		1
1,1,2-Trichloroethane	ND		0.020	0.0074			07/29/24 08:45		1
1,1-Dichloroethane	ND		0.040	0.0092			07/29/24 08:45		1
1,1-Dichloroethene	ND		0.040		mg/Kg		07/29/24 08:45		1
1,1-Dichloropropene	ND		0.040	0.0053				07/29/24 11:30	· · · · · · · · · · · · · · · · · · ·
1,2,3-Trichlorobenzene	ND		0.080		mg/Kg			07/29/24 11:30	1
1,2,3-Trichloropropane	ND		0.040		mg/Kg			07/29/24 11:30	1
1,2,4-Trichlorobenzene	ND		0.080		mg/Kg			07/29/24 11:30	· · · · · · · · · · · · · · · · · · ·
1,2,4-Trimethylbenzene	ND		0.040		mg/Kg			07/29/24 11:30	1
1,2-Dibromo-3-Chloropropane	ND		0.040		mg/Kg			07/29/24 11:30	1
1,2-Dibromoethane	ND		0.020	0.0038				07/29/24 11:30	
1,2-Dichlorobenzene	ND		0.020	0.0038				07/29/24 11:30	1
<i>'</i>	ND ND		0.040					07/29/24 11:30	
1,2-Dichloroethane				0.0055					
1,3,5-Trimethylbenzene	ND		0.040	0.0076				07/29/24 11:30	1
1,3-Dichlorobenzene	ND		0.060		mg/Kg			07/29/24 11:30	1
1,3-Dichloropropane	ND		0.060	0.0056				07/29/24 11:30	1
1,4-Dichlorobenzene	ND		0.060		mg/Kg			07/29/24 11:30	1
2,2-Dichloropropane	ND		0.040		mg/Kg			07/29/24 11:30	1
2-Chlorotoluene	ND		0.040	0.0088				07/29/24 11:30	1
4-Chlorotoluene	ND		0.040	0.0098				07/29/24 11:30	1
Benzene	ND		0.020	0.0038				07/29/24 11:30	1
Bromobenzene	ND		0.040	0.0042			07/29/24 08:45	07/29/24 11:30	1
Bromochloromethane	ND		0.040	0.0062	mg/Kg		07/29/24 08:45	07/29/24 11:30	1
Bromodichloromethane	ND		0.040	0.0055				07/29/24 11:30	1
Bromoform	ND		0.040	0.0045	mg/Kg		07/29/24 08:45	07/29/24 11:30	1
Carbon tetrachloride	ND		0.020	0.0044			07/29/24 08:45	07/29/24 11:30	1
Chloroform	ND		0.020	0.0042	mg/Kg		07/29/24 08:45	07/29/24 11:30	1
cis-1,2-Dichloroethene	ND		0.060	0.013	mg/Kg		07/29/24 08:45	07/29/24 11:30	1
Dibromochloromethane	ND		0.020	0.0049	mg/Kg		07/29/24 08:45	07/29/24 11:30	1
Dibromomethane	ND		0.040	0.0074	mg/Kg		07/29/24 08:45	07/29/24 11:30	1
Ethylbenzene	ND		0.040	0.0091	mg/Kg		07/29/24 08:45	07/29/24 11:30	1
Hexachlorobutadiene	ND		0.10	0.024	mg/Kg		07/29/24 08:45	07/29/24 11:30	1
Isopropylbenzene	ND		0.040	0.0086	mg/Kg		07/29/24 08:45	07/29/24 11:30	1
Methyl tert-butyl ether	ND		0.040	0.0060	mg/Kg		07/29/24 08:45	07/29/24 11:30	1
m-Xylene & p-Xylene	ND		0.040	0.0071	mg/Kg		07/29/24 08:45	07/29/24 11:30	1
Naphthalene	ND		0.15		mg/Kg		07/29/24 08:45	07/29/24 11:30	1
n-Butylbenzene	ND		0.040		mg/Kg		07/29/24 08:45	07/29/24 11:30	1
N-Propylbenzene	ND		0.040		mg/Kg		07/29/24 08:45	07/29/24 11:30	1
o-Xylene	ND		0.040	0.0050			07/29/24 08:45		1
sec-Butylbenzene	ND		0.040	0.0086			07/29/24 08:45		1
Styrene	ND		0.040		mg/Kg		07/29/24 08:45		1
t-Butylbenzene	ND		0.040	0.0077			07/29/24 08:45		1
Tetrachloroethene	ND		0.040	0.0053				07/29/24 11:30	1
Toluene	ND		0.060		mg/Kg			07/29/24 11:30	
trans-1,2-Dichloroethene	ND		0.060		mg/Kg			07/29/24 11:30	1
trans-1,3-Dichloropropene	ND		0.040	0.0070				07/29/24 11:30	1

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

MB MB

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Lab Sample ID: MB 580-466321/5-A

Lab Sample ID: LCS 580-466321/1-A

**Matrix: Solid** 

Toluene-d8 (Surr)

**Matrix: Solid** 

Analysis Batch: 466343

Client Sample ID: Method Blank

**Prep Type: Total/NA** 

**Prep Batch: 466321** 

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		0.040	0.010	mg/Kg		07/29/24 08:45	07/29/24 11:30	1
	МВ	MB							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		80 - 121				07/29/24 08:45	07/29/24 11:30	1
4-Bromofluorobenzene (Surr)	99		80 - 120				07/29/24 08:45	07/29/24 11:30	1
Dibromofluoromethane (Surr)	100		80 - 120				07/29/24 08:45	07/29/24 11:30	1

80 - 120

**Client Sample ID: Lab Control Sample** 

07/29/24 08:45 07/29/24 11:30

**Prep Type: Total/NA** 

Analysis Batch: 466343	Smiles	1.00	LCS				Prep Batch: 466321
Analyte	Spike Added	_	Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1,2-Tetrachloroethane	0.800	0.778		mg/Kg	_ =	97	79 - 128
1,1,1-Trichloroethane	0.800	0.685		mg/Kg		86	78 - 135
1,1,2,2-Tetrachloroethane	0.800	0.847		mg/Kg		106	77 - 122
1,1,2-Trichloroethane	0.800	0.785		mg/Kg		98	80 - 123
1,1-Dichloroethane	0.800	0.725		mg/Kg		91	78 - 126
1,1-Dichloroethene	0.800	0.700		mg/Kg		88	73 - 134
1,1-Dichloropropene	0.800	0.793		mg/Kg		99	76 - 140
1,2,3-Trichlorobenzene	0.800	0.836		mg/Kg		105	58 - 146
1,2,3-Trichloropropane	0.800	0.808		mg/Kg		101	77 - 127
1,2,4-Trichlorobenzene	0.800	0.886		mg/Kg		111	74 - 131
1,2,4-Trimethylbenzene	0.800	0.703		mg/Kg		88	73 - 138
1,2-Dibromo-3-Chloropropane	0.800	0.668		mg/Kg		84	64 - 129
1,2-Dibromoethane	0.800	0.823		mg/Kg		103	77 - 123
1,2-Dichlorobenzene	0.800	0.772		mg/Kg		97	78 - 126
1,2-Dichloroethane	0.800	0.730		mg/Kg		91	76 - 124
1,3,5-Trimethylbenzene	0.800	0.775		mg/Kg		97	72 - 134
1,3-Dichlorobenzene	0.800	0.773		mg/Kg		97	78 - 132
1,3-Dichloropropane	0.800	0.783		mg/Kg		98	80 - 120
1,4-Dichlorobenzene	0.800	0.750		mg/Kg		94	77 - 123
2,2-Dichloropropane	0.800	0.768		mg/Kg		96	75 - 134
2-Chlorotoluene	0.800	0.834		mg/Kg		104	77 - 134
4-Chlorotoluene	0.800	0.841		mg/Kg		105	71 - 137
Benzene	0.800	0.737		mg/Kg		92	79 - 135
Bromobenzene	0.800	0.826		mg/Kg		103	78 - 126
Bromochloromethane	0.800	0.751		mg/Kg		94	76 - 131
Bromodichloromethane	0.800	0.813		mg/Kg		102	78 - 125
Bromoform	0.800	0.742		mg/Kg		93	71 - 130
Carbon tetrachloride	0.800	0.706		mg/Kg		88	76 - 140
Chloroform	0.800	0.713		mg/Kg		89	74 - 133
cis-1,2-Dichloroethene	0.800	0.715		mg/Kg		89	80 - 125
Dibromochloromethane	0.800	0.788		mg/Kg		99	75 - 125
Dibromomethane	0.800	0.859		mg/Kg		107	72 - 130
Ethylbenzene	0.800	0.768		mg/Kg		96	80 - 135
Hexachlorobutadiene	0.800	0.878		mg/Kg		110	65 - 145
Isopropylbenzene	0.800	0.757		mg/Kg		95	80 - 131

Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-466321/1-A

**Matrix: Solid** 

Client: ERM-West

**Analysis Batch: 466343** 

Client Sample ID: Lab Control Sample

Prep Type: Total/NA
Prep Batch: 466321
%Rec

7a. <b>,</b> 0.10	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Methyl tert-butyl ether	0.800	0.742		mg/Kg		93	71 - 126
m-Xylene & p-Xylene	0.800	0.810		mg/Kg		101	80 - 132
Naphthalene	0.800	0.797		mg/Kg		100	56 - 145
n-Butylbenzene	0.800	0.758		mg/Kg		95	69 - 143
N-Propylbenzene	0.800	0.845		mg/Kg		106	78 - 133
o-Xylene	0.800	0.817		mg/Kg		102	80 - 132
sec-Butylbenzene	0.800	0.720		mg/Kg		90	71 - 143
Styrene	0.800	0.703		mg/Kg		88	79 - 129
t-Butylbenzene	0.800	0.695		mg/Kg		87	72 - 144
Tetrachloroethene	0.800	0.778		mg/Kg		97	75 - 141
Toluene	0.800	0.724		mg/Kg		91	75 - 125
trans-1,2-Dichloroethene	0.800	0.664		mg/Kg		83	77 - 134
trans-1,3-Dichloropropene	0.800	0.867		mg/Kg		108	80 - 121
Trichloroethene	0.800	0.816		mg/Kg		102	80 - 134

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	105		80 - 121
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
Toluene-d8 (Surr)	98		80 - 120

Lab Sample ID: LCSD 580-466321/2-A

**Matrix: Solid** 

Analysis Batch: 466343

Prep Type: Total/NA Prep Batch: 466321

Analysis Batch: 466343							Prep Ba	atcn: 40	06321
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	0.800	0.709		mg/Kg		89	79 - 128	9	20
1,1,1-Trichloroethane	0.800	0.647		mg/Kg		81	78 - 135	6	20
1,1,2,2-Tetrachloroethane	0.800	0.726		mg/Kg		91	77 - 122	15	20
1,1,2-Trichloroethane	0.800	0.744		mg/Kg		93	80 - 123	5	20
1,1-Dichloroethane	0.800	0.686		mg/Kg		86	78 - 126	5	20
1,1-Dichloroethene	0.800	0.651		mg/Kg		81	73 - 134	7	25
1,1-Dichloropropene	0.800	0.790		mg/Kg		99	76 - 140	0	20
1,2,3-Trichlorobenzene	0.800	0.746		mg/Kg		93	58 - 146	11	28
1,2,3-Trichloropropane	0.800	0.695		mg/Kg		87	77 - 127	15	20
1,2,4-Trichlorobenzene	0.800	0.823		mg/Kg		103	74 - 131	7	26
1,2,4-Trimethylbenzene	0.800	0.682		mg/Kg		85	73 - 138	3	22
1,2-Dibromo-3-Chloropropane	0.800	0.560		mg/Kg		70	64 - 129	18	40
1,2-Dibromoethane	0.800	0.774		mg/Kg		97	77 - 123	6	20
1,2-Dichlorobenzene	0.800	0.718		mg/Kg		90	78 - 126	7	20
1,2-Dichloroethane	0.800	0.680		mg/Kg		85	76 - 124	7	20
1,3,5-Trimethylbenzene	0.800	0.762		mg/Kg		95	72 - 134	2	24
1,3-Dichlorobenzene	0.800	0.760		mg/Kg		95	78 - 132	2	20
1,3-Dichloropropane	0.800	0.765		mg/Kg		96	80 - 120	2	20
1,4-Dichlorobenzene	0.800	0.737		mg/Kg		92	77 - 123	2	20
2,2-Dichloropropane	0.800	0.688		mg/Kg		86	75 - 134	11	20
2-Chlorotoluene	0.800	0.804		mg/Kg		101	77 - 134	4	21
4-Chlorotoluene	0.800	0.835		mg/Kg		104	71 - 137	1	21

**Eurofins Seattle** 

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Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-466321/2-A

**Matrix: Solid** 

Client: ERM-West

**Analysis Batch: 466343** 

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA Prep Batch: 466321

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	0.800	0.710		mg/Kg		89	79 - 135	4	20
Bromobenzene	0.800	0.816		mg/Kg		102	78 - 126	1	20
Bromochloromethane	0.800	0.675		mg/Kg		84	76 - 131	11	20
Bromodichloromethane	0.800	0.778		mg/Kg		97	78 - 125	4	20
Bromoform	0.800	0.680		mg/Kg		85	71 - 130	9	20
Carbon tetrachloride	0.800	0.666		mg/Kg		83	76 - 140	6	20
Chloroform	0.800	0.676		mg/Kg		84	74 - 133	5	20
cis-1,2-Dichloroethene	0.800	0.663		mg/Kg		83	80 - 125	8	20
Dibromochloromethane	0.800	0.774		mg/Kg		97	75 - 125	2	20
Dibromomethane	0.800	0.794		mg/Kg		99	72 - 130	8	40
Ethylbenzene	0.800	0.749		mg/Kg		94	80 - 135	3	20
Hexachlorobutadiene	0.800	0.903		mg/Kg		113	65 - 145	3	36
Isopropylbenzene	0.800	0.720		mg/Kg		90	80 - 131	5	20
Methyl tert-butyl ether	0.800	0.588	*1	mg/Kg		73	71 - 126	23	20
m-Xylene & p-Xylene	0.800	0.790		mg/Kg		99	80 - 132	3	20
Naphthalene	0.800	0.698		mg/Kg		87	56 - 145	13	25
n-Butylbenzene	0.800	0.746		mg/Kg		93	69 - 143	2	31
N-Propylbenzene	0.800	0.837		mg/Kg		105	78 - 133	1	24
o-Xylene	0.800	0.772		mg/Kg		97	80 - 132	6	20
sec-Butylbenzene	0.800	0.715		mg/Kg		89	71 - 143	1	29
Styrene	0.800	0.687		mg/Kg		86	79 - 129	2	20
t-Butylbenzene	0.800	0.724		mg/Kg		90	72 - 144	4	27
Tetrachloroethene	0.800	0.797		mg/Kg		100	75 - 141	2	20
Toluene	0.800	0.737		mg/Kg		92	75 - 125	2	20
trans-1,2-Dichloroethene	0.800	0.698		mg/Kg		87	77 - 134	5	20
trans-1,3-Dichloropropene	0.800	0.915		mg/Kg		114	80 - 121	5	20
Trichloroethene	0.800	0.830		mg/Kg		104	80 - 134	2	20

LCSD LCSD

Sample Sample

ND

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	89		80 - 121
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	92		80 - 120
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: 580-142190-10 MS

**Matrix: Solid** 

1,2,3-Trichloropropane

Analysis Batch: 466343

Client Sample	ID: PDI-05-SO-44.5-20240717
	Prop Type: Total/NA

103

%Rec

77 - 127

Prep Type: Total/NA Prep Batch: 466321

Result Qualifier Added Result Qualifier %Rec Analyte Unit D Limits ND 108 1,1,1,2-Tetrachloroethane 0.944 1.02 mg/Kg ₩ 79 - 128 1,1,1-Trichloroethane ND 0.944 0.979 mg/Kg ₩ 104 78 - 135 ND 0.944 1.08 77 - 122 1,1,2,2-Tetrachloroethane mg/Kg ☼ 114 1,1,2-Trichloroethane ND 0.944 0.927 mg/Kg ₩ 98 80 - 123 1,1-Dichloroethane ND 0.944 0.996 mg/Kg ₩ 105 78 - 126 1,1-Dichloroethene ND 0.944 0.970 mg/Kg 103 73 - 134 ND 108 76 - 140 1,1-Dichloropropene 0.944 1.02 mg/Kg ₩ 1,2,3-Trichlorobenzene ND 0.944 1.23 mg/Kg 130 58 - 146

Spike

0.944

MS MS

0.976

mg/Kg

**Eurofins Seattle** 

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3

5

7

8

10

1

Client: ERM-West Job ID: 580-142190-1

MS MS

1.06

0.974

1.01

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Sample Sample

ND

0.030

Lab Sample ID: 580-142190-10 MS

**Matrix: Solid** 

4-Chlorotoluene

Bromobenzene

Bromochloromethane

Carbon tetrachloride

cis-1,2-Dichloroethene

Dibromochloromethane

Dibromomethane

Bromodichloromethane

Benzene

Bromoform

Chloroform

**Analysis Batch: 466343** 

Client Sample ID: PDI-05-SO-44.5-20240717

112

103

107

₩

₩

₩

mg/Kg

mg/Kg

mg/Kg

71 - 137

79 - 135

72 - 130

**Prep Type: Total/NA** 

Pi

Prep E	Batch:	466321
%Rec		

Analyte	Result Qual	ifier Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,2,4-Trichlorobenzene	ND F1	0.944	1.34	F1	mg/Kg	<u></u>	142	74 - 131	
1,2,4-Trimethylbenzene	ND	0.944	0.985		mg/Kg	₽	104	73 - 138	
1,2-Dibromo-3-Chloropropane	ND	0.944	0.876		mg/Kg	☼	93	64 - 129	
1,2-Dibromoethane	ND	0.944	0.905		mg/Kg	₽	96	77 - 123	
1,2-Dichlorobenzene	0.15	0.944	1.18		mg/Kg	☼	109	78 - 126	
1,2-Dichloroethane	ND	0.944	0.909		mg/Kg	☼	96	76 - 124	
1,3,5-Trimethylbenzene	ND	0.944	1.09		mg/Kg	₽	115	72 - 134	
1,3-Dichlorobenzene	0.019 J	0.944	1.03		mg/Kg	☼	107	78 - 132	
1,3-Dichloropropane	ND	0.944	0.923		mg/Kg	☼	98	80 - 120	
1,4-Dichlorobenzene	ND F1	0.944	1.63	F1	mg/Kg	₽	173	77 - 123	
2,2-Dichloropropane	ND	0.944	1.04		mg/Kg	☼	111	75 - 134	
2-Chlorotoluene	ND	0.944	1.13		mg/Kg	☼	119	77 - 134	

Spike

0.944

0.944

0.944 1.03 mg/Kg ₩ 109 78 - 126 0.944 0.975 103 mg/Kg ∜ 76 - 131 0.944 1.08 115 78 - 125 mg/Kg 0.944 0.944 100 71 - 130 mg/Kg Ö 106 0.944 1.00 mg/Kg ☼ 76 - 140 0.944 0.986 ₩ 101 74 - 133 mg/Kg 0.944 0.986 mg/Kg ₩ 104 80 - 125 0.944 0.961 mg/Kg ₩ 102 75 - 125

Ethylbenzene 0.026 0.944 1.02 105 80 - 135 mg/Kg ☼ 215 Hexachlorobutadiene ND F1 0.944 2.03 F1 mg/Kg Ö 65 - 145Isopropylbenzene ND 0.944 1.05 111 80 - 131 mg/Kg 0.944 102 Methyl tert-butyl ether ND 0.961 mg/Kg ₩ 71 - 126 m-Xylene & p-Xylene 0.18 0.944 1.20 mg/Kg ☼ 108 80 - 132 0.944 Naphthalene ND 1.08 mg/Kg Ö 114 56 - 145 n-Butylbenzene 0.024 0.944 1.25 mg/Kg 130 69 - 143 N-Propylbenzene ND 0.944 1.18 ₩ 125 78 - 133 mg/Kg o-Xylene 0.037 J 0.944 1.12 mg/Kg ☼ 115 80 - 132

0.944

sec-Butylbenzene ND 0.944 1.12 ₩ 118 71 - 143 mg/Kg Styrene 0.015 0.944 0.896 mg/Kg ₩ 93 79 - 129 106 t-Butylbenzene ND 0.944 0.997 mg/Kg ☼ 72 - 144 Tetrachloroethene 0.059 0.944 1.05 105 75 - 141 mg/Kg ₩ 0.944 0.933 99 ND mg/Kg ₩ 75 - 125

trans-1,2-Dichloroethene ND 0.944 107 1.01 mg/Kg Ö 77 - 134 trans-1,3-Dichloropropene ND 0.944 0.978 104 80 - 121 mg/Kg ☼ Trichloroethene ND 0.944 1.04 110 80 - 134 mg/Kg ₩

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		80 - 121
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120
Toluene-d8 (Surr)	99		80 - 120

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 580-142190-10 MSD

Matrix: Solid

Client Sample ID: PDI-05-SO-44.5-20240717

**Prep Type: Total/NA** 

Analysis Batch: 466343	Sample	Sample	Spike	MSD	MSD				Prep Ba	itch: 40	66321 RPD
Analyte	•	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	ND		0.934	0.928		mg/Kg	— <u></u>	99	79 - 128	9	20
1,1,1-Trichloroethane	ND		0.934	0.869		mg/Kg	₩	93	78 - 135	12	20
1,1,2,2-Tetrachloroethane	ND		0.934	1.01		mg/Kg	₩	108	77 - 122	6	20
1,1,2-Trichloroethane	ND		0.934	0.920		mg/Kg		98	80 - 123	1	20
1,1-Dichloroethane	ND		0.934	0.905		mg/Kg	☼	97	78 - 126	9	20
1,1-Dichloroethene	ND		0.934	0.848		mg/Kg	☼	91	73 - 134	13	25
1,1-Dichloropropene	ND		0.934	0.974		mg/Kg		104	76 - 140	5	20
1,2,3-Trichlorobenzene	ND		0.934	1.15		mg/Kg	☼	123	58 - 146	7	28
1,2,3-Trichloropropane	ND		0.934	0.982		mg/Kg	₩	105	77 - 127	1	20
1,2,4-Trichlorobenzene	ND	F1	0.934	1.25	F1	mg/Kg		133	74 - 131	8	26
1,2,4-Trimethylbenzene	ND		0.934	0.888		mg/Kg	☼	95	73 - 138	10	22
1,2-Dibromo-3-Chloropropane	ND		0.934	0.881		mg/Kg	☼	94	64 - 129	1	40
1,2-Dibromoethane	ND		0.934	0.964		mg/Kg		103	77 - 123	6	20
1,2-Dichlorobenzene	0.15		0.934	1.10		mg/Kg	₩	102	78 - 126	7	20
1,2-Dichloroethane	ND		0.934	0.876		mg/Kg	₩	94	76 - 124	4	20
1,3,5-Trimethylbenzene	ND		0.934	0.989		mg/Kg		106	72 - 134	10	24
1,3-Dichlorobenzene	0.019	J	0.934	0.990		mg/Kg	₩	104	78 - 132	4	20
1,3-Dichloropropane	ND	_	0.934	0.928		mg/Kg	₩	99	80 - 120	1	20
1,4-Dichlorobenzene		F1	0.934	1.57	F1	mg/Kg		168	77 - 123	4	20
2,2-Dichloropropane	ND		0.934	0.895		mg/Kg	⊅	96	75 - 134	15	20
2-Chlorotoluene	ND		0.934	1.05		mg/Kg	⊅	112	77 - 134	7	21
4-Chlorotoluene	ND		0.934	1.03		mg/Kg		110	71 - 137	2	21
Benzene	ND		0.934	0.907		mg/Kg	~ ☆	97	79 - 135	7	20
Bromobenzene	ND		0.934	1.00		mg/Kg	₩	108	78 - 126	3	20
Bromochloromethane	ND		0.934	0.897		mg/Kg		96	76 - 131	8	20
Bromodichloromethane	ND		0.934	1.02		mg/Kg	~ ☆	109	78 - 125	6	20
Bromoform	ND		0.934	0.918		mg/Kg	₩	98	71 - 130	3	20
Carbon tetrachloride	ND		0.934	0.899		mg/Kg		96	76 - 140	11	20
Chloroform	0.030		0.934	0.908		mg/Kg	₩	94	74 - 133	8	20
cis-1,2-Dichloroethene	ND		0.934	0.900		mg/Kg	₩	96	80 <sub>-</sub> 125	9	20
Dibromochloromethane	ND		0.934	0.960		mg/Kg		103	75 - 125	0	20
Dibromomethane	ND		0.934	0.975		mg/Kg	₩	104	72 - 130	3	40
Ethylbenzene	0.026	J	0.934	0.931		mg/Kg	≎	97	80 - 135	9	20
Hexachlorobutadiene	0.020 ND		0.934	1.86			¥	199	65 - 145	9	36
Isopropylbenzene	ND ND	г	0.934	0.923	ГІ	mg/Kg mg/Kg	₩ \$	99	80 - 131	13	20
,	ND ND	*1	0.934	0.923					71 - 126	5	
Methyl tert-butyl ether	0.18		0.934	1.10		mg/Kg	<del>.</del> .	98	80 - 132		20
m-Xylene & p-Xylene	ND					mg/Kg	ψ.		56 - 145	8	
Naphthalene			0.934	1.06		mg/Kg	<b>‡</b>	114		2	25
n-Butylbenzene	0.024	J	0.934	1.15		mg/Kg	<del></del> .	120	69 - 143	8	31
N-Propylbenzene	ND		0.934	1.08		mg/Kg	₩	115	78 - 133	9	24
o-Xylene	0.037	J	0.934	1.00		mg/Kg	ψ.	104	80 - 132	11	20
sec-Butylbenzene	ND		0.934	1.02		mg/Kg		109	71 - 143		29
Styrene	0.015	J	0.934	0.850		mg/Kg	<b>#</b>	89	79 - 129	5	20
t-Butylbenzene	ND		0.934	0.960		mg/Kg	<b>#</b>	103	72 - 144	4	27
Tetrachloroethene	0.059		0.934	0.991		mg/Kg		100	75 - 141	6	20
Toluene	ND		0.934	0.877		mg/Kg	÷.	94	75 - 125	6	20
trans-1,2-Dichloroethene	ND		0.934	0.931		mg/Kg	☼	100	77 - 134	8	20

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20

1.07

mg/Kg

115

80 - 121

0.934

ND

trans-1,3-Dichloropropene

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 580-142190-10 MSD

Lab Sample ID: MB 580-466429/3-A

**Matrix: Solid** Analysis Batch: 466343

**Matrix: Solid** 

Chloromethane

cis-1,2-Dichloroethene

cis-1,3-Dichloropropene

**Analysis Batch: 466432** 

Client Sample ID: PDI-05-SO-44.5-20240717

Prep Type: Total/NA **Prep Batch: 466321** 

**RPD** %Rec

Sample Sample MSD MSD Spike Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limit Trichloroethene ND 0.934 1.02 mg/Kg 110 80 - 134 20

MSD MSD Surrogate %Recovery Qualifier Limits 1,2-Dichloroethane-d4 (Surr) 98 80 - 121 4-Bromofluorobenzene (Surr) 98 80 - 120 Dibromofluoromethane (Surr) 100 80 - 120 Toluene-d8 (Surr) 80 - 120 97

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

**Prep Batch: 466429** 

-	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
1,1,1-Trichloroethane	ND		0.040	0.0046	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
1,1,2-Trichloroethane	ND		0.020	0.0074	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
1,1-Dichloroethane	ND		0.040	0.0092	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
1,1-Dichloroethene	ND		0.040	0.012	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
1,1-Dichloropropene	ND		0.040	0.0053	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
1,2,3-Trichlorobenzene	ND		0.080	0.040	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
1,2,3-Trichloropropane	ND		0.040	0.012	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
1,2,4-Trichlorobenzene	ND		0.080	0.043	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
1,2,4-Trimethylbenzene	ND		0.040	0.014	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
1,2-Dibromo-3-Chloropropane	ND		0.060	0.015	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
1,2-Dibromoethane	ND		0.020	0.0038	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
1,2-Dichlorobenzene	ND		0.040	0.0087	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
1,2-Dichloroethane	ND		0.020	0.0055	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
1,3,5-Trimethylbenzene	ND		0.040	0.0076	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
1,3-Dichlorobenzene	ND		0.060	0.013	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
1,3-Dichloropropane	ND		0.060	0.0056	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
1,4-Dichlorobenzene	ND		0.060	0.011	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
2,2-Dichloropropane	ND		0.040	0.012	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
2-Chlorotoluene	ND		0.040	0.0088	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
4-Chlorotoluene	ND		0.040	0.0098	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
4-Isopropyltoluene	ND		0.040	0.010	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
Benzene	ND		0.020	0.0038	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
Bromobenzene	ND		0.040	0.0042	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
Bromochloromethane	ND		0.040	0.0062	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
Bromodichloromethane	ND		0.040	0.0055	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
Bromoform	ND		0.040	0.0045	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
Carbon tetrachloride	ND		0.020	0.0044	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
Chlorobenzene	ND		0.040	0.0048	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
Chloroethane	ND		0.080	0.021	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
Chloroform	ND		0.020	0.0042	mg/Kg		07/29/24 15:32	07/29/24 22:27	1

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07/29/24 15:32 07/29/24 22:27

07/29/24 15:32 07/29/24 22:27

07/29/24 15:32 07/29/24 22:27

0.060

0.060

0.020

0.010 mg/Kg

0.013 mg/Kg

0.0040 mg/Kg

ND

ND

ND

Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-466429/3-A

**Matrix: Solid** 

Client: ERM-West

**Analysis Batch: 466432** 

Client Sample ID: Method Blank

**Prep Type: Total/NA** 

**Prep Batch: 466429** 

, , , , , , , , , , , , , , , , , , , ,	MB	МВ							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		0.020	0.0049	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
Dibromomethane	ND		0.040	0.0074	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
Ethylbenzene	ND		0.040	0.0091	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
Hexachlorobutadiene	ND		0.10	0.024	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
Isopropylbenzene	ND		0.040	0.0086	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
Methyl tert-butyl ether	ND		0.040	0.0060	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
Methylene Chloride	0.165	J	0.25	0.026	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
m-Xylene & p-Xylene	ND		0.040	0.0071	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
Naphthalene	ND		0.15	0.039	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
n-Butylbenzene	ND		0.040	0.019	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
N-Propylbenzene	ND		0.040	0.015	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
o-Xylene	ND		0.040	0.0050	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
Styrene	ND		0.040	0.013	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
Toluene	ND		0.060	0.014	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
Trichloroethene	ND		0.040	0.010	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		07/29/24 15:32	07/29/24 22:27	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		07/29/24 15:32	07/29/24 22:27	1

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98	80 - 121	07/29/24 15:32	07/29/24 22:27	1
4-Bromofluorobenzene (Surr)	100	80 - 120	07/29/24 15:32	07/29/24 22:27	1
Dibromofluoromethane (Surr)	110	80 - 120	07/29/24 15:32	07/29/24 22:27	1
Toluene-d8 (Surr)	99	80 - 120	07/29/24 15:32	07/29/24 22:27	1

Lab Sample ID: LCS 580-466429/1-A

**Matrix: Solid** 

Analysis Batch: 466432

**Client Sample ID: Lab Control Sample Prep Type: Total/NA** 

Prep Batch: 466429

Alialysis Dalcii. 400432							Prep Datch. 400429
	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1,1,2-Tetrachloroethane	0.800	0.830		mg/Kg		104	79 - 128
1,1,1-Trichloroethane	0.800	0.741		mg/Kg		93	78 - 135
1,1,2,2-Tetrachloroethane	0.800	0.784		mg/Kg		98	77 - 122
1,1,2-Trichloroethane	0.800	0.769		mg/Kg		96	80 - 123
1,1-Dichloroethane	0.800	0.782		mg/Kg		98	78 - 126
1,1-Dichloroethene	0.800	0.784		mg/Kg		98	73 - 134
1,1-Dichloropropene	0.800	0.829		mg/Kg		104	76 - 140
1,2,3-Trichlorobenzene	0.800	0.853		mg/Kg		107	58 - 146
1,2,3-Trichloropropane	0.800	0.850		mg/Kg		106	77 - 127
1,2,4-Trichlorobenzene	0.800	0.910		mg/Kg		114	74 - 131
1,2,4-Trimethylbenzene	0.800	0.736		mg/Kg		92	73 - 138
1,2-Dibromo-3-Chloropropane	0.800	0.779		mg/Kg		97	64 - 129
1,2-Dibromoethane	0.800	0.788		mg/Kg		99	77 - 123
1,2-Dichlorobenzene	0.800	0.798		mg/Kg		100	78 <sub>-</sub> 126

**Eurofins Seattle** 

10/15/2024 (Rev. 1)

Spike

Added

Job ID: 580-142190-1 Client: ERM-West

LCS LCS

Result Qualifier Unit

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-466429/1-A

**Matrix: Solid** 

Analyte

**Analysis Batch: 466432** 

**Client Sample ID: Lab Control Sample Prep Type: Total/NA** 

Limits

D %Rec

**Prep Batch: 466429** %Rec

1,2-Dichloroethane	0.800	0.732	mg/Kg	91	76 - 124
1,3,5-Trimethylbenzene	0.800	0.804	mg/Kg	100	72 - 134
1,3-Dichlorobenzene	0.800	0.788	mg/Kg	99	78 - 132
1,3-Dichloropropane	0.800	0.780	mg/Kg	98	80 - 120
1,4-Dichlorobenzene	0.800	0.740	mg/Kg	92	77 - 123
2,2-Dichloropropane	0.800	0.767	mg/Kg	96	75 - 134
2-Chlorotoluene	0.800	0.883	mg/Kg	110	77 - 134
4-Chlorotoluene	0.800	0.844	mg/Kg	106	71 - 137
4-Isopropyltoluene	0.800	0.779	mg/Kg	97	71 - 142
Benzene	0.800	0.772	mg/Kg	96	79 - 135
Bromobenzene	0.800	0.838	mg/Kg	105	78 - 126
Bromochloromethane	0.800	0.791	mg/Kg	99	76 - 131
Bromodichloromethane	0.800	0.829	mg/Kg	104	78 - 125

z,z-bicilioroproparic	0.000	0.707	1119/119	50	10-10-	
2-Chlorotoluene	0.800	0.883	mg/Kg	110	77 - 134	
4-Chlorotoluene	0.800	0.844	mg/Kg	106	71 - 137	
4-Isopropyltoluene	0.800	0.779	mg/Kg	97	71 - 142	
Benzene	0.800	0.772	mg/Kg	96	79 - 135	
Bromobenzene	0.800	0.838	mg/Kg	105	78 - 126	
Bromochloromethane	0.800	0.791	mg/Kg	99	76 - 131	
Bromodichloromethane	0.800	0.829	mg/Kg	104	78 - 125	
Bromoform	0.800	0.785	mg/Kg	98	71 - 130	
Carbon tetrachloride	0.800	0.781	mg/Kg	98	76 - 140	
Chlorobenzene	0.800	0.741	mg/Kg	93	80 - 125	
Chloroethane	0.800	0.511	mg/Kg	64	26 - 150	
Chloroform	0.800	0.758	mg/Kg	95	74 - 133	
Chloromethane	0.800	0.573	mg/Kg	72	52 - 142	
cis-1,2-Dichloroethene	0.800	0.779	mg/Kg	97	80 - 125	
cis-1,3-Dichloropropene	0.800	0.861	mg/Kg	108	80 - 122	
Dibromochloromethane	0.800	0.804	mg/Kg	101	75 - 125	
Dibromomethane	0.800	0.878	mg/Kg	110	72 - 130	
Ethylbenzene	0.800	0.809	mg/Kg	101	80 - 135	
Hexachlorobutadiene	0.800	0.821	mg/Kg	103	65 - 145	
Isopropylbenzene	0.800	0.825	mg/Kg	103	80 - 131	
Methyl tert-butyl ether	0.800	0.800	mg/Kg	100	71 - 126	
Methylene Chloride	0.800	0.833	mg/Kg	104	56 - 140	
m-Xylene & p-Xylene	0.800	0.866	mg/Kg	108	80 - 132	
Naphthalene	0.800	0.885	mg/Kg	111	56 - 145	
n-Butylbenzene	0.800	0.784	mg/Kg	98	69 - 143	
N-Propylbenzene	0.800	0.891	mg/Kg	111	78 - 133	
o-Xylene	0.800	0.885	mg/Kg	111	80 - 132	
sec-Butylbenzene	0.800	0.750	mg/Kg	94	71 - 143	
Styrene	0.800	0.752	mg/Kg	94	79 - 129	
t-Butylbenzene	0.800	0.722	mg/Kg	90	72 - 144	
Tetrachloroethene	0.800	0.795	mg/Kg	99	75 - 141	
Toluene	0.800	0.759	mg/Kg	95	75 - 125	
trans-1,2-Dichloroethene	0.800	0.817	mg/Kg	102	77 - 134	
trans-1,3-Dichloropropene	0.800	0.836	mg/Kg	105	80 - 121	
Trichloroethene	0.800	0.909	mg/Kg	114	80 - 134	
Trichlorofluoromethane	0.800	0.470 *-	mg/Kg	59	71 - 150	
Vinyl chloride	0.800	0.617	mg/Kg	77	62 - 144	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	105		80 - 121
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	98		80 - 120

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-466429/1-A

Lab Sample ID: LCSD 580-466429/2-A

**Matrix: Solid** 

**Matrix: Solid** 

Chloromethane

Isopropylbenzene

Methyl tert-butyl ether

Analyte

**Analysis Batch: 466432** 

**Analysis Batch: 466432** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 466429** 

LCS LCS

%Recovery Qualifier Limits Surrogate Toluene-d8 (Surr) 80 - 120

Client Sample ID: Lab Control Sample Dup

%Rec

82

109

109

52 - 142

80 - 131

71 - 126

Limits

Prep Type: Total/NA **Prep Batch: 466429** %Rec **RPD** 

RPD

Limit 20

20

20

20

20

25

20

28

20

26

22

40

20

20

20

24

20

20

20

20

21

21

29 20

20

20

20

20

20

20

40

20

40

20

20

20

40

20

36

20

20

1,1,1,2-Tetrachloroethane 0.800 0.859 mg/Kg 107 79 - 128 3 1,1,1-Trichloroethane 0.800 0.813 mg/Kg 102 78 - 135 9 1,1,2,2-Tetrachloroethane 0.800 0.915 mg/Kg 114 77 - 12215 1.1.2-Trichloroethane 0.800 0.808 101 mg/Kg 80 - 1235 1,1-Dichloroethane 0.800 0.804 mg/Kg 100 78 - 126 3 mg/Kg 1,1-Dichloroethene 0.800 0.822 103 73 - 134 5 1,1-Dichloropropene 0.800 0.827 mg/Kg 103 76 - 140

LCSD LCSD

Result Qualifier

Unit

Spike

Added

1,2,3-Trichlorobenzene 0.800 0.897 mg/Kg 112 58 - 146 0.800 0.876 109 77 - 127 3 1,2,3-Trichloropropane mg/Kg 123 1,2,4-Trichlorobenzene 0.800 0.987 mg/Kg 74 - 1310.800 93 73 - 138 1,2,4-Trimethylbenzene 0.742 mg/Kg 1,2-Dibromo-3-Chloropropane 0.800 0.802 mg/Kg 100 64 - 1293 101

0.800 0.805 77 - 123 1.2-Dibromoethane mg/Kg 1,2-Dichlorobenzene 0.800 0.826 103 78 - 126 mg/Kg 0.800 0.745 93 1 2-Dichloroethane mg/Kg 76 - 1242 1,3,5-Trimethylbenzene 0.800 0.825 103 72 - 134 3 mg/Kg 0.800 0.804 100 78 - 132 2 1,3-Dichlorobenzene mg/Kg 100 2 1,3-Dichloropropane 0.800 0.798 mg/Kg 80 - 120 1.4-Dichlorobenzene 0.800 0.774 mg/Kg 97 77 - 123 5

0.800 106 2,2-Dichloropropane 0.849 mg/Kg 75 - 134 10 2-Chlorotoluene 0.800 0.890 mg/Kg 111 77 - 13471 - 137 2 4-Chlorotoluene 0.800 0.826 mg/Kg 103 4-Isopropyltoluene 0.800 0.812 mg/Kg 101 71 - 142 Benzene 0.800 0.792 99 79 - 135 mg/Kg 0.800 0.846 106 78 - 126 Bromobenzene mg/Kg 103

Bromochloromethane 0.800 0.823 76 - 131 mg/Kg Bromodichloromethane 0.800 0.858 107 78 - 125 mg/Kg Bromoform 0.800 0.807 101 71 - 130 3 mg/Kg Carbon tetrachloride 0.800 0.812 mg/Kg 102 76 - 140 Chlorobenzene 0.800 0.760 mg/Kg 95 80 - 125 Chloroethane 0.800 0.548 mg/Kg 69 26 - 150 Chloroform 0.800 0.780 98 74 - 1333 mg/Kg

0.800

0.800

0.800

mg/Kg cis-1,2-Dichloroethene 0.800 0.801 100 80 - 125 mg/Kg 107 cis-1,3-Dichloropropene 0.800 0.856 80 - 122 mg/Kg 100 Dibromochloromethane 0.800 0.800 mg/Kg 75 - 125 0.800 Dibromomethane 0.902 113 72 - 1303 mg/Kg Ethylbenzene 0.800 0.845 106 80 - 135 mg/Kg Hexachlorobutadiene 0.800 0.878 110 65 - 1457 mg/Kg

0.652

0.872

0.868

mg/Kg

mg/Kg

**Eurofins Seattle** 

6

13

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-466429/2-A

**Matrix: Solid** 

**Analysis Batch: 466432** 

**Client Sample ID: Lab Control Sample Dup** 

**Prep Type: Total/NA** 

**Prep Batch: 466429** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Methylene Chloride	0.800	0.909		mg/Kg		114	56 - 140	9	20
m-Xylene & p-Xylene	0.800	0.893		mg/Kg		112	80 - 132	3	20
Naphthalene	0.800	0.925		mg/Kg		116	56 - 145	4	25
n-Butylbenzene	0.800	0.826		mg/Kg		103	69 - 143	5	31
N-Propylbenzene	0.800	0.905		mg/Kg		113	78 - 133	2	24
o-Xylene	0.800	0.925		mg/Kg		116	80 - 132	4	20
sec-Butylbenzene	0.800	0.778		mg/Kg		97	71 - 143	4	29
Styrene	0.800	0.772		mg/Kg		97	79 - 129	3	20
t-Butylbenzene	0.800	0.723		mg/Kg		90	72 - 144	0	27
Tetrachloroethene	0.800	0.813		mg/Kg		102	75 - 141	2	20
Toluene	0.800	0.770		mg/Kg		96	75 - 125	1	20
trans-1,2-Dichloroethene	0.800	0.829		mg/Kg		104	77 - 134	2	20
trans-1,3-Dichloropropene	0.800	0.832		mg/Kg		104	80 - 121	1	20
Trichloroethene	0.800	0.840		mg/Kg		105	80 - 134	8	20
Trichlorofluoromethane	0.800	0.468	*-	mg/Kg		59	71 - 150	0	30
Vinyl chloride	0.800	0.691		mg/Kg		86	62 - 144	11	20

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	106		80 - 121
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	103		80 - 120
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: MB 580-466619/5-A

**Matrix: Solid** 

**Analysis Batch: 466626** 

Client Sample ID: Method Blank

**Prep Type: Total/NA** 

**Prep Batch: 466619** 

	MB	IVIB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		0.020	0.0066	mg/Kg		07/31/24 08:51	07/31/24 12:16	1
4-Isopropyltoluene	ND		0.040	0.010	mg/Kg		07/31/24 08:51	07/31/24 12:16	1
Bromomethane	ND		0.10	0.038	mg/Kg		07/31/24 08:51	07/31/24 12:16	1
Chlorobenzene	ND		0.040	0.0048	mg/Kg		07/31/24 08:51	07/31/24 12:16	1
Chloroethane	ND		0.080	0.021	mg/Kg		07/31/24 08:51	07/31/24 12:16	1
Chloromethane	ND		0.060	0.010	mg/Kg		07/31/24 08:51	07/31/24 12:16	1
cis-1,3-Dichloropropene	ND		0.020	0.0040	mg/Kg		07/31/24 08:51	07/31/24 12:16	1
Dichlorodifluoromethane	ND		0.25	0.046	mg/Kg		07/31/24 08:51	07/31/24 12:16	1
Methylene Chloride	ND		0.25	0.026	mg/Kg		07/31/24 08:51	07/31/24 12:16	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		07/31/24 08:51	07/31/24 12:16	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		07/31/24 08:51	07/31/24 12:16	1

ИΒ	MB	

Surrogate	%Recovery Qua	lifier Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103	80 - 121	07/31/24 08:51	07/31/24 12:16	1
4-Bromofluorobenzene (Surr)	102	80 - 120	07/31/24 08:51	07/31/24 12:16	1
Dibromofluoromethane (Surr)	100	80 - 120	07/31/24 08:51	07/31/24 12:16	1
Toluene-d8 (Surr)	100	80 - 120	07/31/24 08:51	07/31/24 12:16	1

Spike

Added

0.800

0.800

0.800

0.800

0.800

0.800

0.800

0.800

0.800

Job ID: 580-142190-1

Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

D

LCS LCS

0.772

0.747

1.00

0.704

0.992

0.832

0.738

0.872

0.631

Result Qualifier

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-466619/1-A

**Matrix: Solid** 

1,2-Dichloropropane

4-Isopropyltoluene

Bromomethane

Chlorobenzene

Chloromethane

cis-1,3-Dichloropropene

Dichlorodifluoromethane

Trichlorofluoromethane

Methylene Chloride

Chloroethane

Vinyl chloride

Analyte

Client: ERM-West

Analysis Batch: 466626

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 466619** 

	%Rec	
%Rec	Limits	
97	73 - 130	
93	71 - 142	
125	55 - 150	
88	80 - 125	
124	26 - 150	
104	52 - 142	
92	80 - 122	
109	33 - 150	
79	56 - 140	

71 - 150

62 - 144

0.800 0.869 mg/Kg 0.800 0.843 mg/Kg

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		80 - 121
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: LCSD 580-466619/2-A

**Matrix: Solid** 

**Analysis Batch: 466626** 

**Client Sample ID: Lab Control Sample Dup** Prep Type: Total/NA

109

105

**Prep Batch: 466619** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,2-Dichloropropane	0.800	0.798	-	mg/Kg		100	73 - 130	3	20
4-Isopropyltoluene	0.800	0.775		mg/Kg		97	71 - 142	4	29
Bromomethane	0.800	1.02		mg/Kg		127	55 - 150	2	26
Chlorobenzene	0.800	0.736		mg/Kg		92	80 - 125	4	20
Chloroethane	0.800	0.970		mg/Kg		121	26 - 150	2	40
Chloromethane	0.800	0.859		mg/Kg		107	52 - 142	3	40
cis-1,3-Dichloropropene	0.800	0.759		mg/Kg		95	80 - 122	3	20
Dichlorodifluoromethane	0.800	0.889		mg/Kg		111	33 - 150	2	31
Methylene Chloride	0.800	0.656		mg/Kg		82	56 - 140	4	20
Trichlorofluoromethane	0.800	0.875		mg/Kg		109	71 - 150	1	30
Vinyl chloride	0.800	0.863		mg/Kg		108	62 - 144	2	20

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		80 - 121
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
Toluene-d8 (Surr)	101		80 - 120

Lab Sample ID: MB 580-466779/5-A

**Matrix: Solid** 

**Analysis Batch: 466785** 

Client Sample ID: Method Blank **Prep Type: Total/NA** 

Prep Batch: 466779

MB MB Analyte Result Qualifier RL MDL Unit Prepared Analyzed Dil Fac Chlorobenzene 0.00734 J 0.040 0.0048 mg/Kg 08/01/24 08:00 08/01/24 12:43

Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

MR MR

Lab Sample ID: MB 580-466779/5-A

**Matrix: Solid** 

Client: ERM-West

**Analysis Batch: 466785** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

**Prep Batch: 466779** 

	iii D	WD.				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		80 - 121	08/01/24 08:00	08/01/24 12:43	1
4-Bromofluorobenzene (Surr)	101		80 - 120	08/01/24 08:00	08/01/24 12:43	1
Dibromofluoromethane (Surr)	98		80 - 120	08/01/24 08:00	08/01/24 12:43	1
Toluene-d8 (Surr)	98		80 - 120	08/01/24 08:00	08/01/24 12:43	1

Lab Sample ID: LCS 580-466779/1-A

**Matrix: Solid** 

**Analysis Batch: 466785** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 466779** 

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits Chlorobenzene 0.800 0.741 mg/Kg 80 - 125 93

LCS LCS Qualifier Limits Surrogate %Recovery 1,2-Dichloroethane-d4 (Surr) 99 80 - 121 101 80 - 120 4-Bromofluorobenzene (Surr) 80 - 120 Dibromofluoromethane (Surr) 100 Toluene-d8 (Surr) 100 80 - 120

Lab Sample ID: LCSD 580-466779/2-A

**Matrix: Solid** 

**Analysis Batch: 466785** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

**Prep Batch: 466779** %Rec **RPD** 

Spike LCSD LCSD Analyte Added %Rec Limits RPD Limit Result Qualifier Unit Chlorobenzene 0.800 90 80 - 125 0.724 mg/Kg 20

LCSD LCSD Surrogate %Recovery Qualifier Limits 1,2-Dichloroethane-d4 (Surr) 101 80 - 121 4-Bromofluorobenzene (Surr) 100 80 - 120 Dibromofluoromethane (Surr) 99 80 - 120 80 - 120 Toluene-d8 (Surr) 100

Lab Sample ID: MB 580-466927/5-A

**Matrix: Solid** 

**Analysis Batch: 466931** 

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 466927

MB MB Result Qualifier RL **MDL** Unit Prepared Dil Fac Analyte Analyzed 08/02/24 09:31 08/02/24 11:43 1,1,1,2-Tetrachloroethane ND 0.020 0.0050 mg/Kg 08/02/24 11:43 1,1,1-Trichloroethane ND 0.040 0.0046 mg/Kg 08/02/24 09:31 ND 1.1.2.2-Tetrachloroethane 0.020 0.0076 mg/Kg 08/02/24 09:31 08/02/24 11:43 1,1,2-Trichloroethane ND 0.020 0.0074 mg/Kg 08/02/24 09:31 08/02/24 11:43 1,1-Dichloroethane ND 0.0092 mg/Kg 08/02/24 09:31 08/02/24 11:43 0.040 0.040 0.012 mg/Kg 08/02/24 09:31 08/02/24 11:43 1,1-Dichloroethene ND ND 0.0053 mg/Kg 0.040 08/02/24 09:31 08/02/24 11:43 1,1-Dichloropropene 1,2,3-Trichlorobenzene ND 0.080 0.040 mg/Kg 08/02/24 09:31 08/02/24 11:43 ND 0.040 0.012 mg/Kg 08/02/24 09:31 08/02/24 11:43 1,2,3-Trichloropropane 1,2,4-Trichlorobenzene ND 0.080 0.043 mg/Kg 08/02/24 09:31 08/02/24 11:43 1,2,4-Trimethylbenzene ND 0.040 0.014 mg/Kg 08/02/24 09:31 08/02/24 11:43 1,2-Dibromo-3-Chloropropane 08/02/24 09:31 08/02/24 11:43 ND 0.060 0.015 mg/Kg

Job ID: 580-142190-1 Client: ERM-West

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-466927/5-A

**Matrix: Solid** 

Analysis Batch: 466931

Client Sample ID: Method Blank

**Prep Type: Total/NA** 

**Prep Batch: 466927** 

	MB								
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane	ND		0.020	0.0038			08/02/24 09:31		1
1,2-Dichlorobenzene	ND		0.040	0.0087			08/02/24 09:31		1
1,2-Dichloroethane	ND		0.020	0.0055			08/02/24 09:31		1
1,2-Dichloropropane	ND		0.020	0.0066			08/02/24 09:31	08/02/24 11:43	1
1,3,5-Trimethylbenzene	ND		0.040	0.0076			08/02/24 09:31	08/02/24 11:43	1
1,3-Dichlorobenzene	ND		0.060	0.013	mg/Kg		08/02/24 09:31	08/02/24 11:43	1
1,3-Dichloropropane	ND		0.060	0.0056	mg/Kg		08/02/24 09:31	08/02/24 11:43	1
1,4-Dichlorobenzene	ND		0.060	0.011	mg/Kg		08/02/24 09:31	08/02/24 11:43	1
2,2-Dichloropropane	ND		0.040	0.012	mg/Kg		08/02/24 09:31	08/02/24 11:43	1
2-Chlorotoluene	ND		0.040	0.0088	mg/Kg		08/02/24 09:31	08/02/24 11:43	1
4-Chlorotoluene	ND		0.040	0.0098	mg/Kg		08/02/24 09:31	08/02/24 11:43	1
4-Isopropyltoluene	ND		0.040	0.010	mg/Kg		08/02/24 09:31	08/02/24 11:43	1
Benzene	0.00542	J	0.020	0.0038	mg/Kg		08/02/24 09:31	08/02/24 11:43	1
Bromobenzene	ND		0.040	0.0042	mg/Kg		08/02/24 09:31	08/02/24 11:43	1
Bromochloromethane	ND		0.040	0.0062	mg/Kg		08/02/24 09:31	08/02/24 11:43	1
Bromodichloromethane	ND		0.040	0.0055	mg/Kg		08/02/24 09:31	08/02/24 11:43	1
Bromoform	ND		0.040	0.0045	mg/Kg		08/02/24 09:31	08/02/24 11:43	1
Bromomethane	ND		0.10		mg/Kg		08/02/24 09:31	08/02/24 11:43	1
Carbon tetrachloride	ND		0.020	0.0044			08/02/24 09:31	08/02/24 11:43	1
Chlorobenzene	ND		0.040	0.0048			08/02/24 09:31	08/02/24 11:43	1
Chloroethane	ND		0.080		mg/Kg		08/02/24 09:31	08/02/24 11:43	1
Chloroform	ND		0.020	0.0042			08/02/24 09:31		1
Chloromethane	ND		0.060		mg/Kg		08/02/24 09:31		1
cis-1,2-Dichloroethene	ND		0.060		mg/Kg		08/02/24 09:31		1
cis-1,3-Dichloropropene	ND		0.020	0.0040			08/02/24 09:31		1
Dibromochloromethane	ND		0.020	0.0049	0 0		08/02/24 09:31		1
Dibromomethane	ND		0.040	0.0074			08/02/24 09:31		1
Dichlorodifluoromethane	ND		0.25		mg/Kg		08/02/24 09:31		
Ethylbenzene	ND		0.040	0.0091			08/02/24 09:31		1
Hexachlorobutadiene	ND		0.10		mg/Kg		08/02/24 09:31		1
Isopropylbenzene	ND		0.040	0.0086			08/02/24 09:31		· · · · · · · · · · · · · · · · · · ·
Methyl tert-butyl ether	ND		0.040	0.0060			08/02/24 09:31		1
Methylene Chloride	ND		0.25		mg/Kg		08/02/24 09:31		1
m-Xylene & p-Xylene	ND		0.040	0.0071			08/02/24 09:31		·
Naphthalene	ND		0.15		mg/Kg		08/02/24 09:31		1
n-Butylbenzene	ND		0.040		mg/Kg			08/02/24 11:43	1
N-Propylbenzene	ND		0.040		mg/Kg			08/02/24 11:43	
o-Xylene	ND		0.040	0.0050			08/02/24 09:31		1
sec-Butylbenzene	ND		0.040	0.0036				08/02/24 11:43	1
Styrene	ND		0.040		mg/Kg			08/02/24 11:43	
t-Butylbenzene	ND ND		0.040	0.013			08/02/24 09:31		1
Tetrachloroethene	ND		0.040						1
	ND ND		0.040	0.0053			08/02/24 09:31		
Toluene					mg/Kg		08/02/24 09:31		1
trans-1,2-Dichloroethene	ND		0.060		mg/Kg		08/02/24 09:31		1
trans-1,3-Dichloropropene	ND		0.040	0.0070			08/02/24 09:31		
Trichloroethene	ND		0.040		mg/Kg		08/02/24 09:31		1
Trichlorofluoromethane	ND		0.080		mg/Kg		08/02/24 09:31		1
Vinyl chloride	ND		0.10	0.019	mg/Kg		08/02/24 09:31	08/02/24 11:43	1

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-466927/5-A

**Matrix: Solid** 

**Analysis Batch: 466931** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

**Prep Batch: 466927** 

	MB MB				
Surrogate %Reco	very Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101	80 - 121	08/02/24 09:31	08/02/24 11:43	1
4-Bromofluorobenzene (Surr)	99	80 - 120	08/02/24 09:31	08/02/24 11:43	1
Dibromofluoromethane (Surr)	99	80 - 120	08/02/24 09:31	08/02/24 11:43	1
Toluene-d8 (Surr)	99	80 - 120	08/02/24 09:31	08/02/24 11:43	1

Lab Sample ID: LCS 580-466927/1-A

**Matrix: Solid** 

Analysis Batch: 466931

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 466927

Analyse         Added         Result Qualifier         Unific         0         %Rec         Limits           1.1.1.2-Tistcahloroethane         0.800         0.827         mg/Kg         103         79.128           1.1.1.2-Tistchloroethane         0.800         0.791         mg/Kg         99         77.122           1.1.1.2-Tistchloroethane         0.800         0.792         mg/Kg         99         77.122           1.1-Dichloroethane         0.800         0.792         mg/Kg         99         73.134           1.1-Dichloroethene         0.800         0.792         mg/Kg         99         73.134           1.1-Dichloropropene         0.800         0.792         mg/Kg         99         73.134           1.2-3-Tirischloroptopene         0.800         0.764         mg/Kg         98         76.140           1.2-3-Tirischloroptopane         0.800         0.740         mg/Kg         93         77.127           1.2-A-Trichlorobenzene         0.800         0.740         mg/Kg         90         77.131           1.2-Dichromosthane         0.800         0.770         mg/Kg         97         71.123           1.2-Dichlorobenzene         0.800         0.752         mg/Kg         97	•	Spike	LCS	LCS				%Rec	
1,1,1 richioroethane         0.800         0.820         mg/kg         103         78.135           1,1,2,2 richachioroethane         0.800         0.791         mg/kg         98         80.123           1,1,2,2 richioroethane         0.800         0.831         mg/kg         194         78.126           1,1-Dichloroethane         0.800         0.781         mg/kg         199         73.134           1,1-Dichloroptopene         0.800         0.781         mg/kg         98         76.140           1,2,3-Trichlorobenzene         0.800         0.644         mg/kg         93         77.127           1,2,4-Trichlorobenzene         0.800         0.746         mg/kg         92         74.131           1,2,4-Trichlorobenzene         0.800         0.740         mg/kg         92         74.131           1,2,4-Trimethylbenzene         0.800         0.785         mg/kg         92         74.131           1,2,2-Dichromos-Schloropropane         0.800         0.785         mg/kg         96         77.123           1,2-Dichlorobenzene         0.800         0.795         mg/kg         94         76.124           1,2-Dichlorobenzene         0.800         0.781         mg/kg         97         78.	Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1.1.2.2-Tetrachloroethane         0.800         0.791         mg/kg         99         77.122           1.1.2-Tichloroethane         0.800         0.782         mg/kg         104         78.126           1.1-Dichloroethane         0.800         0.831         mg/kg         104         78.126           1.1-Dichloroethene         0.800         0.792         mg/kg         99         73.134           1.1-Dichloroethene         0.800         0.761         mg/kg         83         58.146           1.2.3-Trichloropropane         0.800         0.746         mg/kg         93         77.127           1.2.4-Trinchlorobenzene         0.800         0.740         mg/kg         93         77.127           1.2.4-Trinchloropropane         0.800         0.723         mg/kg         93         77.127           1.2.4-Trinchloropropane         0.800         0.782         mg/kg         93         77.123           1.2-Dichloropropane         0.800         0.785         mg/kg         98         64.129           1.2-Dichlorobenzene         0.800         0.791         mg/kg         99         78.123           1.2-Dichlorobenzene         0.800         0.781         mg/kg         94         76.124     <	1,1,1,2-Tetrachloroethane	0.800	0.827		mg/Kg		103	79 - 128	
1,1,2-Trichloroethane         0.800         0.782         mg/Kg         98         80.123           1,1-Dichloroethane         0.800         0.831         mg/Kg         194         78.126           1,1-Dichloroethene         0.800         0.792         mg/Kg         99         73.134           1,1-Dichloropropene         0.800         0.664         mg/Kg         98         76.140           1,2,3-Trichlorobenzene         0.800         0.746         mg/Kg         93         77.127           1,2,4-Trichlorobenzene         0.800         0.823         mg/Kg         92         74.131           1,2,4-Trichlorobenzene         0.800         0.746         mg/Kg         93         77.127           1,2,4-Trichlorobenzene         0.800         0.785         mg/Kg         98         64.129           1,2,2-Dichloropropane         0.800         0.776         mg/Kg         96         77.123           1,2-Dichlorobenzene         0.800         0.791         mg/Kg         97         78.126           1,2-Dichlorobenzene         0.800         0.781         mg/Kg         101         73.130           1,3-Dichlorobenzene         0.800         0.781         mg/Kg         104         72.134	1,1,1-Trichloroethane	0.800	0.820		mg/Kg		103	78 - 135	
1,1-Dichloroethane         0,800         0,831         mg/Kg         104         78-126           1,1-Dichloropropene         0,800         0,781         mg/Kg         98         75-140           1,2,3-Trichloropropene         0,800         0,781         mg/Kg         83         58-140           1,2,3-Trichloropropane         0,800         0,746         mg/Kg         93         77-127           1,2,4-Trichloropropane         0,800         0,740         mg/Kg         92         74-131           1,2,4-Trichloropropane         0,800         0,740         mg/Kg         93         77-123           1,2-Dibromo-3-Chloropropane         0,800         0,740         mg/Kg         98         64-129           1,2-Dibromo-3-Chloropropane         0,800         0,770         mg/Kg         98         64-129           1,2-Dibhrobenzene         0,800         0,771         mg/Kg         99         78-126           1,2-Dichloropropane         0,800         0,791         mg/Kg         99         78-126           1,2-Dichloropropane         0,800         0,801         mg/Kg         101         73-130           1,3-Dichloropropane         0,800         0,774         mg/Kg         97         77-123	1,1,2,2-Tetrachloroethane	0.800	0.791		mg/Kg		99	77 - 122	
1,1-Dichloroethene         0.800         0.792         mg/kg         99         73.134           1,1-Dichloropropene         0.800         0.781         mg/kg         98         76.140           1,2-3-Trichlorobenzene         0.800         0.664         mg/kg         83         58.146           1,2,3-Trichloropropane         0.800         0.746         mg/kg         93         77.127           1,2,4-Trichlorobenzene         0.800         0.740         mg/kg         92         74.131           1,2-Dichromo-3-Chloropropane         0.800         0.785         mg/kg         98         64.129           1,2-Dichlorobenzene         0.800         0.770         mg/kg         98         64.129           1,2-Dichlorobenzene         0.800         0.752         mg/kg         99         78.126           1,2-Dichlorobenzene         0.800         0.752         mg/kg         99         78.126           1,2-Dichlorobenzene         0.800         0.831         mg/kg         99         78.126           1,2-Dichlorobenzene         0.800         0.831         mg/kg         98         78.132           1,3-Dichlorobenzene         0.800         0.781         mg/kg         98         78.132	1,1,2-Trichloroethane	0.800	0.782		mg/Kg		98	80 - 123	
1,1-Dichloropropene         0.800         0.781         mg/Kg         88         76.140           1,2,3-Trichlorobenzene         0.800         0.664         mg/Kg         83         58.146           1,2,3-Trichloropane         0.800         0.746         mg/Kg         93         77-127           1,2,4-Trichlorobenzene         0.800         0.740         mg/Kg         92         74-131           1,2-4-Trimethylbenzene         0.800         0.745         mg/Kg         93         77-123           1,2-Dibromo-3-Chloropropane         0.800         0.770         mg/Kg         96         77-123           1,2-Dichlorobenzene         0.800         0.791         mg/Kg         99         78-126           1,2-Dichloropropane         0.800         0.791         mg/Kg         99         78-126           1,2-Dichloropropane         0.800         0.808         mg/Kg         94         76-124           1,2-Dichloropropane         0.800         0.808         mg/Kg         101         73-130           1,3-Dichlorobenzene         0.800         0.781         mg/Kg         98         78-132           1,3-Dichloropropane         0.800         0.774         mg/Kg         97         77-123 <td>1,1-Dichloroethane</td> <td>0.800</td> <td>0.831</td> <td></td> <td>mg/Kg</td> <td></td> <td>104</td> <td>78 - 126</td> <td></td>	1,1-Dichloroethane	0.800	0.831		mg/Kg		104	78 - 126	
1.2,3-Trichlorobenzene         0.800         0.664         mg/Kg         83         58.146           1.2,3-Trichloropropane         0.800         0.746         mg/Kg         93         77.127           1.2,4-Trinchlorobenzene         0.800         0.740         mg/Kg         92         74.131           1.2,2-Dirchloropropane         0.800         0.785         mg/Kg         98         64.129           1,2-Dibromo-3-Chloropropane         0.800         0.770         mg/Kg         98         64.129           1,2-Dichlorobenzene         0.800         0.770         mg/Kg         98         77.123           1,2-Dichlorobenzene         0.800         0.752         mg/Kg         99         78.126           1,2-Dichloropropane         0.800         0.752         mg/Kg         94         76.124           1,2-Dichloropropane         0.800         0.831         mg/Kg         94         77.123           1,3-Dichloropropane         0.800         0.831         mg/Kg         98         78.132           1,3-Dichloropropane         0.800         0.781         mg/Kg         97         77.123           1,3-Dichloropropane         0.800         0.774         mg/Kg         97         77.123     <	1,1-Dichloroethene	0.800	0.792		mg/Kg		99	73 - 134	
1,2,3-Trichloropropane       0.800       0.746       mg/kg       93       77-127         1,2,4-Trichlorobenzene       0.800       0.740       mg/kg       92       74-131         1,2,4-Trimethylbenzene       0.800       0.823       mg/kg       103       37-138         1,2-Dibromo-3-Chloropropane       0.800       0.785       mg/kg       98       64-129         1,2-Dibromethane       0.800       0.770       mg/kg       96       77-123         1,2-Dichlorobenzene       0.800       0.791       mg/kg       99       78-126         1,2-Dichloroptopane       0.800       0.808       mg/kg       94       76-124         1,2-Dichloroptopane       0.800       0.808       mg/kg       101       73-130         1,3-Dichloroptopane       0.800       0.831       mg/kg       104       72-134         1,3-Dichloroptopane       0.800       0.781       mg/kg       98       78-132         1,3-Dichloroptopane       0.800       0.774       mg/kg       97       80-120         1,4-Dichlorobenzene       0.800       0.778       mg/kg       97       77-123         2,2-Dichloroptopane       0.800       0.801       mg/kg       97 <t< td=""><td>1,1-Dichloropropene</td><td>0.800</td><td>0.781</td><td></td><td>mg/Kg</td><td></td><td>98</td><td>76 - 140</td><td></td></t<>	1,1-Dichloropropene	0.800	0.781		mg/Kg		98	76 - 140	
1,2,4-Trichlorobenzene         0.800         0.740         mg/Kg         92         74-131           1,2,4-Trimethylbenzene         0.800         0.823         mg/Kg         103         73-138           1,2-Dibromo-3-Chloropropane         0.800         0.785         mg/Kg         98         64-129           1,2-Dibromoethane         0.800         0.770         mg/Kg         96         77-123           1,2-Dichlorobenzene         0.800         0.791         mg/Kg         99         78-126           1,2-Dichlorobenzene         0.800         0.792         mg/Kg         94         76-124           1,2-Dichlorobenzene         0.800         0.808         mg/Kg         101         73-130           1,3-Dichlorobenzene         0.800         0.831         mg/Kg         104         72-134           1,3-Dichlorobenzene         0.800         0.781         mg/Kg         97         77-123           1,3-Dichlorobenzene         0.800         0.774         mg/Kg         97         77-123           1,3-Dichlorobroprane         0.800         0.778         mg/Kg         97         77-123           2,-Dichlorobroprane         0.800         0.781         mg/Kg         97         77-134	1,2,3-Trichlorobenzene	0.800	0.664		mg/Kg		83	58 - 146	
1,2,4-Trimethylbenzene         0.800         0.823         mg/Kg         103         73-138           1,2-Dibromo-3-Chloropropane         0.800         0.785         mg/Kg         98         64-129           1,2-Dibromoethane         0.800         0.770         mg/Kg         99         77-123           1,2-Dichlorobenzene         0.800         0.752         mg/Kg         94         76-124           1,2-Dichloropropane         0.800         0.808         mg/Kg         101         73-130           1,3-Dichlorobenzene         0.800         0.831         mg/Kg         97         80-132           1,3-Dichlorobenzene         0.800         0.774         mg/Kg         97         80-132           1,3-Dichloropropane         0.800         0.774         mg/Kg         97         80-120           1,4-Dichlorobenzene         0.800         0.774         mg/Kg         97         77-123           2,2-Dichloropropane         0.800         0.778         mg/Kg         97         77-123           2,2-Dichloropropane         0.800         0.781         mg/Kg         97         77-123           2,2-Dichloropropane         0.800         0.781         mg/Kg         98         71-134      <	1,2,3-Trichloropropane	0.800	0.746		mg/Kg		93	77 - 127	
1,2-Dibromo-3-Chloropropane         0.800         0.785         mg/Kg         98         64 . 129           1,2-Dibromoethane         0.800         0.770         mg/Kg         96         77 . 123           1,2-Dichlorobenzene         0.800         0.791         mg/Kg         99         78 . 126           1,2-Dichloroptropane         0.800         0.752         mg/Kg         94         76 . 124           1,2-Dichloroptropane         0.800         0.808         mg/Kg         101         73 . 130           1,3-Dichlorobenzene         0.800         0.831         mg/Kg         98         78 . 132           1,3-Dichlorobenzene         0.800         0.781         mg/Kg         97         80 . 120           1,4-Dichlorobenzene         0.800         0.774         mg/Kg         97         77 . 123           2,2-Dichloroptopane         0.800         0.778         mg/Kg         97         77 . 123           2,2-Dichlorobluene         0.800         0.892         mg/Kg         101         77 . 134           4-Chlorotoluene         0.800         0.811         mg/Kg         98         71 . 137           4-Isopropyltoluene         0.800         0.790         mg/Kg         98         76 . 131 <td>1,2,4-Trichlorobenzene</td> <td>0.800</td> <td>0.740</td> <td></td> <td>mg/Kg</td> <td></td> <td>92</td> <td>74 - 131</td> <td></td>	1,2,4-Trichlorobenzene	0.800	0.740		mg/Kg		92	74 - 131	
1,2-Dibromoethane       0.800       0.770       mg/Kg       96       77 - 123         1,2-Dichlorobenzene       0.800       0.791       mg/Kg       99       78 - 126         1,2-Dichloroethane       0.800       0.752       mg/Kg       94       76 - 124         1,2-Dichloropropane       0.800       0.808       mg/Kg       101       73 - 134         1,3-Dichlorobenzene       0.800       0.781       mg/Kg       98       78 - 134         1,3-Dichloropropane       0.800       0.774       mg/Kg       97       77 - 123         1,4-Dichlorobenzene       0.800       0.778       mg/Kg       97       77 - 123         2,2-Dichloropropane       0.800       0.781       mg/Kg       97       77 - 123         2,2-Dichloropropane       0.800       0.778       mg/Kg       97       77 - 123         2,2-Dichloropropane       0.800       0.891       mg/Kg       101       77 - 134         4-Chlorobluene       0.800       0.811       mg/Kg       101       77 - 134         4-Chlorobluene       0.800       0.790       mg/Kg       98       71 - 137         4-Isa prophyltoluene       0.800       0.773       mg/Kg       97	1,2,4-Trimethylbenzene	0.800	0.823		mg/Kg		103	73 - 138	
1,2-Dichlorobenzene         0.800         0.791         mg/kg         99         78.126           1,2-Dichloroethane         0.800         0.752         mg/kg         94         76.124           1,2-Dichloropropane         0.800         0.808         mg/kg         101         73.130           1,3,5-Trimethylbenzene         0.800         0.781         mg/kg         104         72.134           1,3-Dichlorobenzene         0.800         0.774         mg/kg         97         80.120           1,4-Dichlorobenzene         0.800         0.778         mg/kg         97         77.123           2,2-Dichloropropane         0.800         0.778         mg/kg         112         75.134           2,C-Dichloropropane         0.800         0.892         mg/kg         112         75.134           2,C-Dichloropropane         0.800         0.811         mg/kg         112         75.134           4-Chlorobluene         0.800         0.811         mg/kg         98         71.137           4-Isopropyltoluene         0.800         0.781         mg/kg         99         71.142           Benzene         0.800         0.773         mg/kg         97         79.135           Bromob	1,2-Dibromo-3-Chloropropane	0.800	0.785		mg/Kg		98	64 - 129	
1,2-Dichloroethane         0.800         0.752         mg/Kg         94         76-124           1,2-Dichloropropane         0.800         0.808         mg/Kg         101         73-130           1,3-Dichlorobenzene         0.800         0.831         mg/Kg         104         72-134           1,3-Dichlorobenzene         0.800         0.774         mg/Kg         98         78-132           1,4-Dichlorobenzene         0.800         0.778         mg/Kg         97         77-123           2,2-Dichloropropane         0.800         0.892         mg/Kg         112         75-134           2,C-Dichlorobluene         0.800         0.892         mg/Kg         101         77-123           2,C-Dichlorobluene         0.800         0.811         mg/Kg         101         77-134           4-Chlorobluene         0.800         0.781         mg/Kg         98         71-137           4-Chlorobluene         0.800         0.780         mg/Kg         98         71-134           4-Isopropyltoluene         0.800         0.780         mg/Kg         99         71-137           Benzene         0.800         0.770         mg/Kg         97         79-135           Bromochlorometha	1,2-Dibromoethane	0.800	0.770		mg/Kg		96	77 - 123	
1,2-Dichloropropane         0.800         0.808         mg/Kg         101         73 - 130           1,3,5-Trimethylbenzene         0.800         0.831         mg/Kg         104         72 - 134           1,3-Dichlorobenzene         0.800         0.781         mg/Kg         98         78 - 132           1,3-Dichloropropane         0.800         0.774         mg/Kg         97         80 - 120           1,4-Dichlorobenzene         0.800         0.778         mg/Kg         97         77 - 123           2,2-Dichloropropane         0.800         0.892         mg/Kg         112         75 - 134           2,-Chlorotoluene         0.800         0.811         mg/Kg         98         71 - 134           4-Chlorotoluene         0.800         0.781         mg/Kg         98         71 - 134           4-Sopropyltoluene         0.800         0.781         mg/Kg         98         71 - 134           4-Isopropyltoluene         0.800         0.790         mg/Kg         99         71 - 142           Benzene         0.800         0.773         mg/Kg         97         79 - 135           Bromochloromethane         0.800         0.782         mg/Kg         98         76 - 131	1,2-Dichlorobenzene	0.800	0.791		mg/Kg		99	78 - 126	
1,3,5-Trimethylbenzene       0.800       0.831       mg/Kg       104       72 - 134         1,3-Dichlorobenzene       0.800       0.781       mg/Kg       98       78 - 132         1,3-Dichloropropane       0.800       0.774       mg/Kg       97       80 - 120         1,4-Dichlorobenzene       0.800       0.778       mg/Kg       97       77 - 123         2,2-Dichloropropane       0.800       0.892       mg/Kg       112       75 - 134         2,C-Dichloropropane       0.800       0.892       mg/Kg       101       77 - 134         2,C-Dichloropropane       0.800       0.891       mg/Kg       101       77 - 134         2,C-Dichloropropane       0.800       0.891       mg/Kg       98       71 - 134         4-Chlorodoluene       0.800       0.781       mg/Kg       98       71 - 137         4-Chlorodoluene       0.800       0.790       mg/Kg       99       71 - 142         4-Isopropyltoluene       0.800       0.790       mg/Kg       97       79 - 135         Bromobelnzene       0.800       0.780       mg/Kg       98       78 - 126         Bromochloromethane       0.800       0.782       mg/Kg       97	1,2-Dichloroethane	0.800	0.752		mg/Kg		94	76 - 124	
1,3-Dichlorobenzene       0.800       0.781       mg/kg       98       78-132         1,3-Dichloropropane       0.800       0.774       mg/kg       97       80-120         1,4-Dichlorobenzene       0.800       0.778       mg/kg       97       77-123         2,2-Dichloropropane       0.800       0.892       mg/kg       112       75-134         2-Chlorotoluene       0.800       0.811       mg/kg       101       77-134         4-Chlorotoluene       0.800       0.781       mg/kg       98       71-137         4-Chlorotoluene       0.800       0.781       mg/kg       99       71-142         4-Isopropyltoluene       0.800       0.790       mg/kg       99       71-142         4-Isopropyltoluene       0.800       0.790       mg/kg       99       71-142         Benzene       0.800       0.773       mg/kg       99       71-142         Benzene       0.800       0.780       mg/kg       98       76-131         Bromochloromethane       0.800       0.782       mg/kg       98       76-131         Bromoform       0.800       0.774       mg/kg       97       71-130         Bromoform	1,2-Dichloropropane	0.800	0.808		mg/Kg		101	73 - 130	
1,3-Dichloropropane         0.800         0.774         mg/Kg         97         80 - 120           1,4-Dichlorobenzene         0.800         0.778         mg/Kg         97         77 - 123           2,2-Dichloropropane         0.800         0.892         mg/Kg         112         75 - 134           2-Chlorotoluene         0.800         0.811         mg/Kg         101         77 - 134           4-Chlorotoluene         0.800         0.781         mg/Kg         98         71 - 137           4-Chlorotoluene         0.800         0.781         mg/Kg         98         71 - 134           4-Chlorotoluene         0.800         0.781         mg/Kg         98         71 - 134           4-Chlorotoluene         0.800         0.790         mg/Kg         99         71 - 142           4-Isopropyltoluene         0.800         0.790         mg/Kg         97         79 - 135           Bromopharene         0.800         0.780         mg/Kg         97         79 - 135           Bromochloromethane         0.800         0.782         mg/Kg         98         76 - 131           Bromochloromethane         0.800         0.799         mg/Kg         97         71 - 130 <td< td=""><td>1,3,5-Trimethylbenzene</td><td>0.800</td><td>0.831</td><td></td><td>mg/Kg</td><td></td><td>104</td><td>72 - 134</td><td></td></td<>	1,3,5-Trimethylbenzene	0.800	0.831		mg/Kg		104	72 - 134	
1,4-Dichlorobenzene       0.800       0.778       mg/Kg       97       77 - 123         2,2-Dichloropropane       0.800       0.892       mg/Kg       112       75 - 134         2-Chlorotoluene       0.800       0.811       mg/Kg       101       77 - 134         4-Chlorotoluene       0.800       0.781       mg/Kg       98       71 - 137         4-Isopropyltoluene       0.800       0.790       mg/Kg       99       71 - 142         Benzene       0.800       0.773       mg/Kg       97       79 - 135         Bromobenzene       0.800       0.780       mg/Kg       98       78 - 126         Bromochloromethane       0.800       0.782       mg/Kg       98       76 - 131         Bromoform       0.800       0.779       mg/Kg       97       71 - 130         Bromomethane       0.800       0.774       mg/Kg       97       71 - 130         Bromothloride       0.800       0.553       mg/Kg       69       55 - 150         Carbon tetrachloride       0.800       0.880       mg/Kg       110       76 - 140         Chlorobenzene       0.800       0.730       mg/Kg       10       74 - 133         Ch	1,3-Dichlorobenzene	0.800	0.781		mg/Kg		98	78 - 132	
2,2-Dichloropropane       0.800       0.892       mg/Kg       112       75-134         2-Chlorotoluene       0.800       0.811       mg/Kg       101       77-134         4-Chlorotoluene       0.800       0.781       mg/Kg       98       71-137         4-Isopropyltoluene       0.800       0.790       mg/Kg       99       71-142         Benzene       0.800       0.773       mg/Kg       97       79-135         Bromobenzene       0.800       0.780       mg/Kg       98       76-131         Bromochloromethane       0.800       0.782       mg/Kg       98       76-131         Bromoform       0.800       0.799       mg/Kg       98       76-131         Bromoformethane       0.800       0.799       mg/Kg       100       78-125         Bromotethane       0.800       0.774       mg/Kg       97       71-130         Carbon tetrachloride       0.800       0.553       mg/Kg       10       76-140         Chloroethane       0.800       0.730       mg/Kg       91       80-125         Chloroform       0.800       0.798       mg/Kg       10       74-133         Chloromethane       0.800 </td <td>1,3-Dichloropropane</td> <td>0.800</td> <td>0.774</td> <td></td> <td>mg/Kg</td> <td></td> <td>97</td> <td>80 - 120</td> <td></td>	1,3-Dichloropropane	0.800	0.774		mg/Kg		97	80 - 120	
2-Chlorotoluene       0.800       0.811       mg/Kg       101       77-134         4-Chlorotoluene       0.800       0.781       mg/Kg       98       71-137         4-Isopropyltoluene       0.800       0.790       mg/Kg       99       71-142         Benzene       0.800       0.773       mg/Kg       97       79-135         Bromobenzene       0.800       0.780       mg/Kg       98       78-126         Bromochloromethane       0.800       0.782       mg/Kg       98       76-131         Bromoform       0.800       0.799       mg/Kg       97       71-130         Bromomethane       0.800       0.774       mg/Kg       97       71-130         Bromotetrachloride       0.800       0.553       mg/Kg       69       55-150         Carbon tetrachloride       0.800       0.880       mg/Kg       110       76-140         Chlorobenzene       0.800       0.730       mg/Kg       91       80-125         Chloroform       0.800       0.809       mg/Kg       101       26-150         Chloromethane       0.800       0.798       mg/Kg       100       74-133         Chloromethane       0.800 <td>1,4-Dichlorobenzene</td> <td>0.800</td> <td>0.778</td> <td></td> <td>mg/Kg</td> <td></td> <td>97</td> <td>77 - 123</td> <td></td>	1,4-Dichlorobenzene	0.800	0.778		mg/Kg		97	77 - 123	
4-Chlorotoluene       0.800       0.781       mg/Kg       98       71 - 137         4-Isopropyltoluene       0.800       0.790       mg/Kg       99       71 - 142         Benzene       0.800       0.773       mg/Kg       97       79 - 135         Bromobenzene       0.800       0.780       mg/Kg       98       78 - 126         Bromochloromethane       0.800       0.782       mg/Kg       98       76 - 131         Bromodichloromethane       0.800       0.799       mg/Kg       100       78 - 125         Bromoform       0.800       0.774       mg/Kg       97       71 - 130         Bromomethane       0.800       0.553       mg/Kg       69       55 - 150         Carbon tetrachloride       0.800       0.880       mg/Kg       110       76 - 140         Chlorobenzene       0.800       0.730       mg/Kg       91       80 - 125         Chloroform       0.800       0.809       mg/Kg       101       26 - 150         Chloromethane       0.800       0.878       mg/Kg       100       74 - 133         Chloromethane       0.800       0.878       mg/Kg       10       52 - 142         cis-1,2-Dic	2,2-Dichloropropane	0.800	0.892		mg/Kg		112	75 - 134	
4-Isopropyltoluene       0.800       0.790       mg/Kg       99       71 - 142         Benzene       0.800       0.773       mg/Kg       97       79 - 135         Bromobenzene       0.800       0.780       mg/Kg       98       78 - 126         Bromochloromethane       0.800       0.782       mg/Kg       98       76 - 131         Bromodichloromethane       0.800       0.799       mg/Kg       100       78 - 125         Bromoform       0.800       0.774       mg/Kg       97       71 - 130         Bromomethane       0.800       0.553       mg/Kg       69       55 - 150         Carbon tetrachloride       0.800       0.880       mg/Kg       110       76 - 140         Chlorobenzene       0.800       0.730       mg/Kg       91       80 - 125         Chloroethane       0.800       0.809       mg/Kg       101       26 - 150         Chloroform       0.800       0.798       mg/Kg       100       74 - 133         Chloromethane       0.800       0.878       mg/Kg       100       80 - 125         cis-1,2-Dichloroethene       0.800       0.797       mg/Kg       100       80 - 125         cis	2-Chlorotoluene	0.800	0.811		mg/Kg		101	77 - 134	
Benzene         0.800         0.773         mg/kg         97         79_135           Bromobenzene         0.800         0.780         mg/kg         98         78_126           Bromochloromethane         0.800         0.782         mg/kg         98         76_131           Bromodichloromethane         0.800         0.799         mg/kg         100         78_125           Bromoform         0.800         0.774         mg/kg         97         71_130           Bromomethane         0.800         0.553         mg/kg         69         55_150           Carbon tetrachloride         0.800         0.880         mg/kg         110         76_140           Chlorobenzene         0.800         0.730         mg/kg         91         80_125           Chloroform         0.800         0.809         mg/kg         101         26_150           Chloromethane         0.800         0.798         mg/kg         100         74_133           Chloromethane         0.800         0.878         mg/kg         100         74_133           cis-1,2-Dichloroethene         0.800         0.797         mg/kg         100         80_125           cis-1,3-Dichloropropene         0.800 </td <td>4-Chlorotoluene</td> <td>0.800</td> <td>0.781</td> <td></td> <td>mg/Kg</td> <td></td> <td>98</td> <td>71 - 137</td> <td></td>	4-Chlorotoluene	0.800	0.781		mg/Kg		98	71 - 137	
Bromobenzene         0.800         0.780         mg/Kg         98         78-126           Bromochloromethane         0.800         0.782         mg/Kg         98         76-131           Bromodichloromethane         0.800         0.799         mg/Kg         100         78-125           Bromoform         0.800         0.774         mg/Kg         97         71-130           Bromomethane         0.800         0.553         mg/Kg         69         55-150           Carbon tetrachloride         0.800         0.880         mg/Kg         110         76-140           Chlorobenzene         0.800         0.730         mg/Kg         91         80-125           Chloroethane         0.800         0.809         mg/Kg         101         26-150           Chloromethane         0.800         0.798         mg/Kg         100         74-133           Chloromethane         0.800         0.878         mg/Kg         110         52-142           cis-1,2-Dichloroethene         0.800         0.797         mg/Kg         100         80-125           cis-1,3-Dichloropropene         0.800         0.776         mg/Kg         97         80-122	4-Isopropyltoluene	0.800	0.790		mg/Kg		99	71 - 142	
Bromochloromethane         0.800         0.782         mg/Kg         98         76 - 131           Bromodichloromethane         0.800         0.799         mg/Kg         100         78 - 125           Bromoform         0.800         0.774         mg/Kg         97         71 - 130           Bromomethane         0.800         0.553         mg/Kg         69         55 - 150           Carbon tetrachloride         0.800         0.880         mg/Kg         110         76 - 140           Chlorobenzene         0.800         0.730         mg/Kg         91         80 - 125           Chloroethane         0.800         0.809         mg/Kg         101         26 - 150           Chloroform         0.800         0.798         mg/Kg         100         74 - 133           Chloroethane         0.800         0.878         mg/Kg         110         52 - 142           cis-1,2-Dichloroethene         0.800         0.797         mg/Kg         100         80 - 125           cis-1,3-Dichloropropene         0.800         0.776         mg/Kg         97         80 - 122	Benzene	0.800	0.773		mg/Kg		97	79 - 135	
Bromodichloromethane         0.800         0.799         mg/Kg         100         78 - 125           Bromoform         0.800         0.774         mg/Kg         97         71 - 130           Bromomethane         0.800         0.553         mg/Kg         69         55 - 150           Carbon tetrachloride         0.800         0.880         mg/Kg         110         76 - 140           Chlorobenzene         0.800         0.730         mg/Kg         91         80 - 125           Chloroethane         0.800         0.809         mg/Kg         101         26 - 150           Chloroform         0.800         0.798         mg/Kg         100         74 - 133           Chloromethane         0.800         0.878         mg/Kg         110         52 - 142           cis-1,2-Dichloroethene         0.800         0.797         mg/Kg         100         80 - 125           cis-1,3-Dichloropropene         0.800         0.776         mg/Kg         97         80 - 125	Bromobenzene	0.800	0.780		mg/Kg		98	78 - 126	
Bromoform         0.800         0.774         mg/Kg         97         71 - 130           Bromomethane         0.800         0.553         mg/Kg         69         55 - 150           Carbon tetrachloride         0.800         0.880         mg/Kg         110         76 - 140           Chlorobenzene         0.800         0.730         mg/Kg         91         80 - 125           Chloroethane         0.800         0.809         mg/Kg         101         26 - 150           Chloroform         0.800         0.798         mg/Kg         100         74 - 133           Chloromethane         0.800         0.878         mg/Kg         110         52 - 142           cis-1,2-Dichloroethene         0.800         0.797         mg/Kg         100         80 - 125           cis-1,3-Dichloropropene         0.800         0.776         mg/Kg         97         80 - 122	Bromochloromethane	0.800	0.782		mg/Kg		98	76 - 131	
Bromomethane         0.800         0.553         mg/Kg         69         55 - 150           Carbon tetrachloride         0.800         0.880         mg/Kg         110         76 - 140           Chlorobenzene         0.800         0.730         mg/Kg         91         80 - 125           Chloroethane         0.800         0.809         mg/Kg         101         26 - 150           Chloroform         0.800         0.798         mg/Kg         100         74 - 133           Chloromethane         0.800         0.878         mg/Kg         110         52 - 142           cis-1,2-Dichloroethene         0.800         0.797         mg/Kg         100         80 - 125           cis-1,3-Dichloropropene         0.800         0.776         mg/Kg         97         80 - 122	Bromodichloromethane	0.800	0.799		mg/Kg		100	78 - 125	
Carbon tetrachloride         0.800         0.880         mg/Kg         110         76 - 140           Chlorobenzene         0.800         0.730         mg/Kg         91         80 - 125           Chloroethane         0.800         0.809         mg/Kg         101         26 - 150           Chloroform         0.800         0.798         mg/Kg         100         74 - 133           Chloromethane         0.800         0.878         mg/Kg         110         52 - 142           cis-1,2-Dichloroethene         0.800         0.797         mg/Kg         100         80 - 125           cis-1,3-Dichloropropene         0.800         0.776         mg/Kg         97         80 - 122	Bromoform	0.800	0.774		mg/Kg		97	71 - 130	
Chlorobenzene       0.800       0.730       mg/Kg       91       80 - 125         Chloroethane       0.800       0.809       mg/Kg       101       26 - 150         Chloroform       0.800       0.798       mg/Kg       100       74 - 133         Chloromethane       0.800       0.878       mg/Kg       110       52 - 142         cis-1,2-Dichloroethene       0.800       0.797       mg/Kg       100       80 - 125         cis-1,3-Dichloropropene       0.800       0.776       mg/Kg       97       80 - 122	Bromomethane	0.800	0.553		mg/Kg		69	55 - 150	
Chloroethane         0.800         0.809         mg/Kg         101         26 - 150           Chloroform         0.800         0.798         mg/Kg         100         74 - 133           Chloromethane         0.800         0.878         mg/Kg         110         52 - 142           cis-1,2-Dichloroethene         0.800         0.797         mg/Kg         100         80 - 125           cis-1,3-Dichloropropene         0.800         0.776         mg/Kg         97         80 - 122	Carbon tetrachloride	0.800	0.880		mg/Kg		110	76 - 140	
Chloroform         0.800         0.798         mg/Kg         100         74 - 133           Chloromethane         0.800         0.878         mg/Kg         110         52 - 142           cis-1,2-Dichloroethene         0.800         0.797         mg/Kg         100         80 - 125           cis-1,3-Dichloropropene         0.800         0.776         mg/Kg         97         80 - 122	Chlorobenzene	0.800	0.730		mg/Kg		91	80 - 125	
Chloromethane         0.800         0.878         mg/Kg         110         52 - 142           cis-1,2-Dichloroethene         0.800         0.797         mg/Kg         100         80 - 125           cis-1,3-Dichloropropene         0.800         0.776         mg/Kg         97         80 - 122	Chloroethane	0.800	0.809		mg/Kg		101	26 - 150	
cis-1,2-Dichloroethene       0.800       0.797       mg/Kg       100       80 - 125         cis-1,3-Dichloropropene       0.800       0.776       mg/Kg       97       80 - 122	Chloroform	0.800	0.798		mg/Kg		100	74 - 133	
cis-1,3-Dichloropropene 0.800 0.776 mg/Kg 97 80 - 122	Chloromethane	0.800	0.878				110	52 - 142	
cis-1,3-Dichloropropene 0.800 0.776 mg/Kg 97 80 - 122	cis-1,2-Dichloroethene	0.800	0.797		mg/Kg		100	80 - 125	
Dibromochloromethane 0.800 0.812 mg/Kg 102 75 - 125	cis-1,3-Dichloropropene	0.800	0.776				97	80 - 122	
	Dibromochloromethane	0.800	0.812				102	75 - 125	

**Eurofins Seattle** 

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Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-466927/1-A

**Matrix: Solid** 

Dibromomethane

Ethylbenzene

Naphthalene

o-Xylene

Styrene

Toluene

n-Butylbenzene

N-Propylbenzene

sec-Butylbenzene

Tetrachloroethene

Trichloroethene

Vinyl chloride

trans-1,2-Dichloroethene

trans-1,3-Dichloropropene

Trichlorofluoromethane

t-Butylbenzene

Dichlorodifluoromethane

Hexachlorobutadiene

Methyl tert-butyl ether

Methylene Chloride

m-Xylene & p-Xylene

Isopropylbenzene

Analyte

Client: ERM-West

**Analysis Batch: 466931** 

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Prep Batch: 466927

LCS LCS Spike %Rec Added Result Qualifier Unit %Rec Limits 0.800 0.799 mg/Kg 100 72 - 130 mg/Kg 0.800 0.875 109 33 - 150 0.800 0.790 mg/Kg 99 80 - 135 0.800 0.829 mg/Kg 104 65 - 1450.800 0.899 112 80 - 131 mg/Kg 0.800 0.799 mg/Kg 100 71 - 126 0.800 0.652 mg/Kg 82 56 - 140 0.800 100 0.799 mg/Kg 80 - 132 86 0.800 0.691 mg/Kg 56 - 145 0.800 100 0.802 mg/Kg 69 - 143

0.814

0.830

0.791

0.824

0.818

0.742

0.791

0.771

0.811

0.776

0.888

0.865

104 80 - 132 mg/Kg 99 71 - 143 mg/Kg 103 79 - 129 mg/Kg mg/Kg 102 72 - 144 mg/Kg 93 75 - 141

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

102

99

96

101

97

111

108

78 - 133

75 - 125

77 - 134

80 - 121

80 - 134

71 - 150

62 - 144

LCS LCS

Qualifier Surrogate %Recovery Limits 1,2-Dichloroethane-d4 (Surr) 98 80 - 121 4-Bromofluorobenzene (Surr) 99 80 - 120 80 - 120 Dibromofluoromethane (Surr) 99 80 - 120 Toluene-d8 (Surr) 100

Lab Sample ID: LCSD 580-466927/2-A

**Matrix: Solid** 

Analysis Batch: 466931

Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA

**Prep Batch: 466927** 

						Op De		, o o = .
Spike	LCSD	LCSD				%Rec		RPD
Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
0.800	0.798		mg/Kg		100	79 - 128	4	20
0.800	0.800		mg/Kg		100	78 - 135	3	20
0.800	0.766		mg/Kg		96	77 - 122	3	20
0.800	0.749		mg/Kg		94	80 - 123	4	20
0.800	0.799		mg/Kg		100	78 - 126	4	20
0.800	0.763		mg/Kg		95	73 - 134	4	25
0.800	0.772		mg/Kg		96	76 - 140	1	20
0.800	0.718		mg/Kg		90	58 - 146	8	28
0.800	0.713		mg/Kg		89	77 - 127	4	20
0.800	0.742		mg/Kg		93	74 - 131	0	26
0.800	0.763		mg/Kg		95	73 - 138	8	22
0.800	0.731		mg/Kg		91	64 - 129	7	40
0.800	0.741		mg/Kg		93	77 - 123	4	20
0.800	0.740		mg/Kg		92	78 - 126	7	20
	Added  0.800 0.800 0.800 0.800 0.800 0.800 0.800 0.800 0.800 0.800 0.800 0.800 0.800 0.800 0.800	Added         Result           0.800         0.798           0.800         0.800           0.800         0.766           0.800         0.749           0.800         0.763           0.800         0.772           0.800         0.718           0.800         0.713           0.800         0.742           0.800         0.763           0.800         0.731           0.800         0.731           0.800         0.731           0.800         0.731           0.800         0.741	Added         Result         Qualifier           0.800         0.798         0.800           0.800         0.800         0.766           0.800         0.749         0.800           0.800         0.799         0.800           0.800         0.772         0.800           0.800         0.718         0.800           0.800         0.742         0.800           0.800         0.763           0.800         0.763           0.800         0.763           0.800         0.731           0.800         0.741	Added         Result         Qualifier         Unit           0.800         0.798         mg/Kg           0.800         0.800         mg/Kg           0.800         0.766         mg/Kg           0.800         0.749         mg/Kg           0.800         0.799         mg/Kg           0.800         0.763         mg/Kg           0.800         0.772         mg/Kg           0.800         0.718         mg/Kg           0.800         0.713         mg/Kg           0.800         0.742         mg/Kg           0.800         0.763         mg/Kg           0.800         0.731         mg/Kg           0.800         0.741         mg/Kg	Added         Result         Qualifier         Unit         D           0.800         0.798         mg/Kg         mg/Kg           0.800         0.800         mg/Kg         mg/Kg           0.800         0.766         mg/Kg           0.800         0.749         mg/Kg           0.800         0.799         mg/Kg           0.800         0.772         mg/Kg           0.800         0.718         mg/Kg           0.800         0.713         mg/Kg           0.800         0.742         mg/Kg           0.800         0.763         mg/Kg           0.800         0.731         mg/Kg           0.800         0.731         mg/Kg           0.800         0.741         mg/Kg	Added         Result         Qualifier         Unit         D         %Rec           0.800         0.798         mg/Kg         100           0.800         0.800         mg/Kg         100           0.800         0.766         mg/Kg         96           0.800         0.749         mg/Kg         94           0.800         0.799         mg/Kg         100           0.800         0.763         mg/Kg         95           0.800         0.772         mg/Kg         96           0.800         0.718         mg/Kg         90           0.800         0.713         mg/Kg         89           0.800         0.742         mg/Kg         93           0.800         0.763         mg/Kg         95           0.800         0.731         mg/Kg         95           0.800         0.731         mg/Kg         91           0.800         0.741         mg/Kg         93	Spike         LCSD         LCSD         WRec         Limits           0.800         0.798         mg/Kg         100         79 - 128           0.800         0.800         mg/Kg         100         78 - 135           0.800         0.766         mg/Kg         96         77 - 122           0.800         0.749         mg/Kg         94         80 - 123           0.800         0.799         mg/Kg         100         78 - 126           0.800         0.763         mg/Kg         95         73 - 134           0.800         0.772         mg/Kg         96         76 - 140           0.800         0.718         mg/Kg         90         58 - 146           0.800         0.713         mg/Kg         93         74 - 131           0.800         0.763         mg/Kg         95         73 - 138           0.800         0.742         mg/Kg         95         73 - 138           0.800         0.763         mg/Kg         95         73 - 138           0.800         0.741         mg/Kg         91         64 - 129           0.800         0.731         mg/Kg         91         64 - 129           0.800	Added         Result         Qualifier         Unit         D         %Rec         Limits         RPD           0.800         0.798         mg/Kg         100         79 - 128         4           0.800         0.800         mg/Kg         100         78 - 135         3           0.800         0.766         mg/Kg         96         77 - 122         3           0.800         0.749         mg/Kg         94         80 - 123         4           0.800         0.799         mg/Kg         100         78 - 126         4           0.800         0.763         mg/Kg         95         73 - 134         4           0.800         0.772         mg/Kg         96         76 - 140         1           0.800         0.718         mg/Kg         90         58 - 146         8           0.800         0.713         mg/Kg         93         74 - 131         0           0.800         0.763         mg/Kg         95         73 - 138         8           0.800         0.742         mg/Kg         95         73 - 138         8           0.800         0.763         mg/Kg         95         73 - 138         8

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-466927/2-A

Matrix: Solid

Analysis Batch: 466931

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA **Prep Batch: 466927** 

Analysis Batch: 466931	Spike	LCSD I	I CSD				%Rec RPD			
Analyte	Added	Result (		Unit	D	%Rec	Limits	RPD	Limit	
1,2-Dichloroethane	0.800	0.741		mg/Kg	_ =	93	76 - 124	1	20	
1,2-Dichloropropane	0.800	0.787		mg/Kg		98	73 - 130	3	20	
1,3,5-Trimethylbenzene	0.800	0.773		mg/Kg		97	72 - 134	7	24	
1,3-Dichlorobenzene	0.800	0.728		mg/Kg		91	78 - 132	7	20	
1,3-Dichloropropane	0.800	0.757		mg/Kg		95	80 - 120	2	20	
1,4-Dichlorobenzene	0.800	0.712		mg/Kg		89	77 - 123	9	20	
2,2-Dichloropropane	0.800	0.879		mg/Kg		110	75 - 134	1	20	
2-Chlorotoluene	0.800	0.756		mg/Kg		95	77 - 134	<del>.</del>	21	
4-Chlorotoluene	0.800	0.738		mg/Kg		92	71 - 137	6	21	
4-Isopropyltoluene	0.800	0.745		mg/Kg		93	71 - 142	6	29	
Benzene	0.800	0.751		mg/Kg		94	79 - 135	3	20	
Bromobenzene	0.800	0.741		mg/Kg		93	78 - 126	5	20	
Bromochloromethane	0.800	0.749		mg/Kg		94	76 - 120	4	20	
Bromodichloromethane	0.800	0.787		mg/Kg		98	78 - 125	2	20	
Bromoform	0.800	0.714		mg/Kg		89	71 - 130	8	20	
Bromomethane	0.800	0.564		mg/Kg		70	55 <sub>-</sub> 150	2	26	
Carbon tetrachloride	0.800	0.859		mg/Kg		107	76 - 140	2	20	
Chlorobenzene	0.800	0.691		mg/Kg		86	80 <sub>-</sub> 125	6	20	
Chloroethane	0.800	1.03		mg/Kg		129	26 - 150	24	40	
Chloroform	0.800	0.773		mg/Kg		97	74 - 133	3	20	
Chloromethane	0.800	0.773		mg/Kg		106	52 <sub>-</sub> 142	3	40	
cis-1,2-Dichloroethene	0.800	0.766		mg/Kg		96	80 - 125	4	20	
cis-1,3-Dichloropropene	0.800	0.753		mg/Kg		94	80 - 123	3	20	
Dibromochloromethane	0.800	0.733		mg/Kg		97	75 <sub>-</sub> 125	4	20	
Dibromomethane	0.800	0.771		mg/Kg		96	72 - 130	3	40	
Dichlorodifluoromethane	0.800	0.771		mg/Kg		104	33 - 150		31	
Ethylbenzene	0.800	0.741		mg/Kg		93	80 - 135	6	20	
Hexachlorobutadiene	0.800	0.741		mg/Kg		96	65 <sub>-</sub> 145	8	36	
Isopropylbenzene	0.800	0.767		mg/Kg		107	80 - 131		20	
Methyl tert-butyl ether	0.800	0.788		mg/Kg		99	71 - 126	1	20	
Methylene Chloride	0.800	0.788		mg/Kg		78	56 <sub>-</sub> 140	5	20	
m-Xylene & p-Xylene	0.800	0.758		mg/Kg		95	80 - 132		20	
Naphthalene	0.800	0.709		mg/Kg		89	56 <sub>-</sub> 145	3	25	
n-Butylbenzene	0.800	0.755		mg/Kg		94	69 - 143	6	31	
N-Propylbenzene	0.800	0.767				96	78 - 133	6	24	
. ,	0.800			mg/Kg		90 97	80 <sub>-</sub> 132	7	20	
o-Xylene sec-Butylbenzene	0.800	0.776 0.761		mg/Kg			71 - 143	-		
	0.800	0.781		mg/Kg		95	79 - 129	4	29	
Styrene				mg/Kg		98		5	20	
t-Butylbenzene	0.800	0.768		mg/Kg		96	72 <sub>-</sub> 144	6	27	
Tetrachloroethene	0.800	0.721		mg/Kg		90	75 - 141	3	20	
Toluene	0.800	0.743		mg/Kg		93	75 <sub>-</sub> 125	6	20	
trans-1,2-Dichloroethene	0.800	0.766		mg/Kg		96	77 - 134	1	20	
trans-1,3-Dichloropropene	0.800	0.793		mg/Kg		99	80 - 121	2	20	
Trichloroethene	0.800	0.758		mg/Kg		95	80 - 134	2	20	
Trichlorofluoromethane	0.800	0.875		mg/Kg		109	71 - 150	2	30	
Vinyl chloride	0.800	0.843		mg/Kg		105	62 - 144	3	20	

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-466927/2-A

**Matrix: Solid** 

Client: ERM-West

**Analysis Batch: 466931** 

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

Prep Batch: 466927

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		80 - 121
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
Toluene-d8 (Surr)	99		80 - 120

#### Method: 8260D - Volatile Organic Compounds by GC/MS - DL

Lab Sample ID: 580-142190-10 MS

**Matrix: Solid** 

**Analysis Batch: 466626** 

Client Sample ID: PDI-05-SO-44.5-20240717

Prep Type: Total/NA

**Prep Batch: 466619** 

Sample Sample Spike MS MS %Rec Result Qualifier **Analyte** Added Result Qualifier Unit %Rec Limits 1,2-Dichloropropane - DL ND 10.2 7.89 78 73 - 130 mg/Kg 4-Isopropyltoluene - DL ND 10.2 7.67 mg/Kg 76 71 - 142 ₩ Bromomethane - DL ND F1 10.2 18.7 F1 mg/Kg 185 55 - 150 Chlorobenzene - DL 97 10.2 21.4 mg/Kg 24 114 80 - 125Chloroethane - DL ND F1 10.2 19.2 F1 189 26 - 150 mg/Kg 52 - 142 Chloromethane - DL 10.2 6.83 67 NΩ mg/Kg ď÷ cis-1,3-Dichloropropene - DL ND 10.2 7.59 F1 mg/Kg ☼ 75 80 - 122 Dichlorodifluoromethane - DL ND 10.2 ₩ 70 33 - 150 7.13 mg/Kg Methylene Chloride - DL ND 10.2 6.86 mg/Kg 68 56 - 140 Trichlorofluoromethane - DL ND F1 10.2 7.02 F1 mg/Kg 69 71 - 150ď÷ Vinyl chloride - DL ND 10.2 7.24 mg/Kg 71 62 - 144

MS MS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr) -	103		80 - 121
DL			
4-Bromofluorobenzene (Surr) -	99		80 - 120
DL			
Dibromofluoromethane (Surr) -	103		80 - 120
DL			
Toluene-d8 (Surr) - DL	100		80 - 120

Client Sample ID: PDI-05-SO-44.5-20240717

**Matrix: Solid** 

**Analysis Batch: 466626** 

Lab Sample ID: 580-142190-10 MSD

Prep Type: Total/NA **Prep Batch: 466619** 

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,2-Dichloropropane - DL	ND		10.0	8.12		mg/Kg	<u></u>	81	73 - 130	3	20
4-Isopropyltoluene - DL	ND		10.0	8.05		mg/Kg	☼	80	71 - 142	5	29
Bromomethane - DL	ND	F1	10.0	23.8	F1	mg/Kg	☼	237	55 - 150	24	26
Chlorobenzene - DL	9.7		10.0	20.3		mg/Kg	☼	105	80 - 125	5	20
Chloroethane - DL	ND	F1	10.0	21.2	F1	mg/Kg	☼	211	26 - 150	10	40
Chloromethane - DL	ND		10.0	7.61		mg/Kg	☼	76	52 - 142	11	40
cis-1,3-Dichloropropene - DL	ND	F1	10.0	7.74	F1	mg/Kg	☼	77	80 - 122	2	20
Dichlorodifluoromethane - DL	ND		10.0	7.83		mg/Kg	☼	78	33 - 150	9	31
Methylene Chloride - DL	ND		10.0	6.98		mg/Kg	☼	70	56 - 140	2	20
Trichlorofluoromethane - DL	ND	F1	10.0	7.86		mg/Kg	☼	78	71 - 150	11	30
Vinyl chloride - DL	ND		10.0	8.19		mg/Kg	☼	82	62 - 144	12	20

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Method: 8260D - Volatile Organic Compounds by GC/MS - DL (Continued)

Lab Sample ID: 580-142190-10 MSD Client Sample ID: PDI-05-SO-44.5-20240717

**Matrix: Solid** 

**Analysis Batch: 466626** 

**Prep Type: Total/NA** 

**Prep Batch: 466619** 

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr) -	104		80 - 121
DL			
4-Bromofluorobenzene (Surr) -	99		80 - 120
DL			
Dibromofluoromethane (Surr) -	102		80 - 120
DL			
Toluene-d8 (Surr) - DL	99		80 - 120

Method: 2540G - SM 2540G

Lab Sample ID: 580-142190-12 DU Client Sample ID: PDI-06-SO-38.7-20240718

**Matrix: Solid Prep Type: Total/NA** 

**Analysis Batch: 465790** 

	Sample	Sample	DU	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
Percent Solids	82.1		86.8		%		 6	20
Percent Moisture	17.9		13.2	F3	%		30	20

#### Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-04-SO-32-20240716

Lab Sample ID: 580-142190-1 Date Collected: 07/16/24 11:50

**Matrix: Solid** 

Date Received: 07/19/24 11:50

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	465694	LT	EET SEA	07/22/24 15:04

Client Sample ID: PDI-04-SO-32-20240716

Lab Sample ID: 580-142190-1 Date Collected: 07/16/24 11:50 **Matrix: Solid** 

Date Received: 07/19/24 11:50 Percent Solids: 80.3

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	DL		466927	BYM	EET SEA	08/02/24 09:31
Total/NA	Analysis	8260D	DL	1	466931	AC	EET SEA	08/02/24 13:25
Total/NA	Prep	5035			466429	BYM	EET SEA	07/25/24 15:32
Total/NA	Analysis	8260D		1	466432	BYM	EET SEA	07/30/24 03:53

Client Sample ID: PDI-04-SO-35-20240716

Lab Sample ID: 580-142190-2 Date Collected: 07/16/24 11:52 **Matrix: Solid** 

Date Received: 07/19/24 11:50

	Batch	Batch		Dilution	Batch		Prepared
Prep Type	Туре	Method	Run	Factor	Number Analy	st Lab	or Analyzed
Total/NA	Analysis	2540G		1	465694 LT	EET SEA	07/22/24 15:04

Client Sample ID: PDI-04-SO-35-20240716

Lab Sample ID: 580-142190-2 Date Collected: 07/16/24 11:52 **Matrix: Solid** 

Date Received: 07/19/24 11:50 Percent Solids: 84.7

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	DL		466619	BYM	EET SEA	07/25/24 08:51
Total/NA	Analysis	8260D	DL	1	466626	BYM	EET SEA	07/31/24 18:51
Total/NA	Prep	5035	DL2		466779	BYM	EET SEA	08/01/24 09:30
Total/NA	Analysis	8260D	DL2	1	466785	BYM	EET SEA	08/01/24 13:27
Total/NA	Prep	5035			466429	BYM	EET SEA	07/25/24 15:32
Total/NA	Analysis	8260D		1	466432	BYM	EET SEA	07/30/24 01:10

Client Sample ID: PDI-04-SO-38-20240716 Lab Sample ID: 580-142190-3

Date Collected: 07/16/24 11:56 **Matrix: Solid** 

Date Received: 07/19/24 11:50

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G			465694	LT	EET SEA	07/22/24 15:04

Client Sample ID: PDI-04-SO-38-20240716

Date Collected: 07/16/24 11:56 **Matrix: Solid** 

Date Received: 07/19/24 11:50 Percent Solids: 88.8

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	DL	- <u></u> -	466619	BYM	EET SEA	07/25/24 08:51
Total/NA	Analysis	8260D	DL	1	466626	BYM	EET SEA	07/31/24 16:40

**Eurofins Seattle** 

Lab Sample ID: 580-142190-3

Client: ERM-West Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-04-SO-38-20240716

Date Collected: 07/16/24 11:56 Date Received: 07/19/24 11:50 Lab Sample ID: 580-142190-3

**Matrix: Solid** 

Percent Solids: 88.8

Job ID: 580-142190-1

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	DL2		466779	BYM	EET SEA	08/01/24 09:30
Total/NA	Analysis	8260D	DL2	1	466785	BYM	EET SEA	08/01/24 13:05
Total/NA	Prep	5035			466429	BYM	EET SEA	07/25/24 15:32
Total/NA	Analysis	8260D		1	466432	BYM	EET SEA	07/29/24 23:37

Client Sample ID: PDI-04-SO-40.5-20240716

Date Collected: 07/16/24 12:00

Date Received: 07/19/24 11:50

Lab Sample ID: 580-142190-4

**Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	465694	LT	EET SEA	07/22/24 15:04

Client Sample ID: PDI-04-SO-40.5-20240716

Date Collected: 07/16/24 12:00

Date Received: 07/19/24 11:50

Lab Sample ID: 580-142190-4 **Matrix: Solid** 

Percent Solids: 86.1

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	RA		466619	BYM	EET SEA	07/25/24 08:51
Total/NA	Analysis	8260D	RA	1	466626	BYM	EET SEA	07/31/24 15:12
Total/NA	Prep	5035			466429	BYM	EET SEA	07/25/24 15:32
Total/NA	Analysis	8260D		1	466432	BYM	EET SEA	07/29/24 23:13

Client Sample ID: TB-02-SO-20240716

Date Collected: 07/16/24 00:01

Date Received: 07/19/24 11:50

Lab Sample ID: 580-142190-5

**Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	RA		466619	BYM	EET SEA	07/25/24 08:51
Total/NA	Analysis	8260D	RA	1	466626	BYM	EET SEA	07/31/24 13:22
Total/NA	Prep	5035			466429	BYM	EET SEA	07/25/24 15:32
Total/NA	Analysis	8260D		1	466432	BYM	EET SEA	07/29/24 22:50

Client Sample ID: PDI-05-SO-36.5-20240717

Date Collected: 07/17/24 14:26

Date Received: 07/19/24 11:50

**Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G			465694	LT	EET SEA	07/22/24 15:04

Client Sample ID: PDI-05-SO-36.5-20240717

Date Collected: 07/17/24 14:26

Date Received: 07/19/24 11:50

Lab Sample ID: 580-142190-6

**Matrix: Solid** Percent Solids: 87.5

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	RA		466619	BYM	EET SEA	07/25/24 08:51
Total/NA	Analysis	8260D	RΔ	1	466626	RYM	FET SEA	07/31/24 15:34

#### Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-05-SO-36.5-20240717

Date Collected: 07/17/24 14:26

Lab Sample ID: 580-142190-6 **Matrix: Solid** Percent Solids: 87.5

Date Received: 07/19/24 11:50

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			466429	BYM	EET SEA	07/25/24 15:32
Total/NA	Analysis	8260D		1	466432	BYM	EET SEA	07/30/24 00:00

Client Sample ID: PDI-05-SO-37-20240717

Lab Sample ID: 580-142190-7

**Matrix: Solid** 

Date Collected: 07/17/24 14:30 Date Received: 07/19/24 11:50

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	465694	LT	EET SEA	07/22/24 15:04

Client Sample ID: PDI-05-SO-37-20240717

Lab Sample ID: 580-142190-7

**Matrix: Solid** 

Date Collected: 07/17/24 14:30 Date Received: 07/19/24 11:50 Percent Solids: 86.8

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	RA		466619	BYM	EET SEA	07/25/24 08:51
Total/NA	Analysis	8260D	RA	1	466626	BYM	EET SEA	07/31/24 17:02
Total/NA	Prep	5035			466429	BYM	EET SEA	07/25/24 15:32
Total/NA	Analysis	8260D		1	466432	BYM	EET SEA	07/30/24 01:33

Client Sample ID: PDI-05-SO-40.5-20240717

Lab Sample ID: 580-142190-8

**Matrix: Solid** 

Date Collected: 07/17/24 14:55 Date Received: 07/19/24 11:50

	Batch	Batch		Dilution	Batch		Prepared
Prep Type	Туре	Method	Run	Factor	Number Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	465694 LT	EET SEA	07/22/24 15:04

Client Sample ID: PDI-05-SO-40.5-20240717 Lab Sample ID: 580-142190-8

Date Collected: 07/17/24 14:55 **Matrix: Solid** Date Received: 07/19/24 11:50 Percent Solids: 86.4

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	RA		466619	BYM	EET SEA	07/25/24 08:51
Total/NA	Analysis	8260D	RA	1	466626	BYM	EET SEA	07/31/24 15:56
Total/NA	Prep	5035			466429	BYM	EET SEA	07/25/24 15:32
Total/NA	Analysis	8260D		1	466432	BYM	EET SEA	07/30/24 00:23

Client Sample ID: Dup-01-SQ-20240717

Lab Sample ID: 580-142190-9 Date Collected: 07/17/24 14:57

**Matrix: Solid** Date Received: 07/19/24 11:50

Batch **Batch** Dilution Batch Prepared **Prep Type** Туре Method Run Factor Number Analyst or Analyzed Lab EET SEA 07/22/24 15:04 Total/NA 2540G 465694 LT Analysis

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Client Sample ID: Dup-01-SQ-20240717

Date Collected: 07/17/24 14:57 Date Received: 07/19/24 11:50 Lab Sample ID: 580-142190-9

**Matrix: Solid** 

Percent Solids: 86.4

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	RA		466619	BYM	EET SEA	07/25/24 08:51
Total/NA	Analysis	8260D	RA	1	466626	BYM	EET SEA	07/31/24 16:18
Total/NA	Prep	5035			466429	BYM	EET SEA	07/25/24 15:32
Total/NA	Analysis	8260D		1	466432	BYM	EET SEA	07/30/24 00:46

Client Sample ID: PDI-05-SO-44.5-20240717

Date Collected: 07/17/24 15:55 Date Received: 07/19/24 11:50

Lab Sample ID: 580-142190-10

**Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	465694	LT	EET SEA	07/22/24 15:04

Client Sample ID: PDI-05-SO-44.5-20240717

Date Collected: 07/17/24 15:55 Date Received: 07/19/24 11:50

Lab Sample ID: 580-142190-10 **Matrix: Solid** 

Percent Solids: 88.0

_	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	DL		466619	BYM	EET SEA	07/25/24 08:51
Total/NA	Analysis	8260D	DL	1	466626	BYM	EET SEA	07/31/24 13:44
Total/NA	Prep	5035			466321	BYM	EET SEA	07/29/24 15:00
Total/NA	Analysis	8260D		1	466343	BYM	EET SEA	07/29/24 18:58

Client Sample ID: PDI-05-SO-53-20240717

Date Collected: 07/17/24 17:20 Date Received: 07/19/24 11:50

Lab Sample ID: 580-142190-11

**Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G			465694	LT	EET SEA	07/22/24 15:04

Client Sample ID: PDI-05-SO-53-20240717

Date Collected: 07/17/24 17:20 Date Received: 07/19/24 11:50

Lab Sample ID: 580-142190-11

**Matrix: Solid** 

Percent Solids: 80.2

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	RA		466619	BYM	EET SEA	07/25/24 08:51
Total/NA	Analysis	8260D	RA	1	466626	BYM	EET SEA	07/31/24 17:24
Total/NA	Prep	5035			466429	BYM	EET SEA	07/25/24 15:32
Total/NA	Analysis	8260D		1	466432	BYM	EET SEA	07/30/24 01:56

Client Sample ID: PDI-06-SO-38.7-20240718

Date Collected: 07/18/24 14:40 Date Received: 07/19/24 11:50

Lab Sample ID: 580-142190-12 **Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G			465790	AUA	EET SEA	07/23/24 10:49

Client: ERM-West Job ID: 580-142190-1

466432 BYM

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-06-SO-38.7-20240718

Date Collected: 07/18/24 14:40 Date Received: 07/19/24 11:50

Lab Sample ID: 580-142190-12

**Matrix: Solid** Percent Solids: 82.1

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	DL		466619	BYM	EET SEA	07/25/24 08:51
Total/NA	Analysis	8260D	DL	1	466626	BYM	EET SEA	07/31/24 19:13
Total/NA	Prep	5035	DL2		466779	BYM	EET SEA	08/01/24 09:30
Total/NA	Analysis	8260D	DL2	1	466785	BYM	EET SEA	08/01/24 13:48
Total/NA	Prep	5035			466429	BYM	EET SEA	07/25/24 15:32

Client Sample ID: PDI-06-SO-40.5-20240718

8260D

Analysis

Date Collected: 07/18/24 16:10 Date Received: 07/19/24 11:50

Total/NA

Lab Sample ID: 580-142190-13

EET SEA 07/30/24 02:20

**Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	465790	AUA	EET SEA	07/23/24 10:49

Client Sample ID: PDI-06-SO-40.5-20240718

Date Collected: 07/18/24 16:10 Date Received: 07/19/24 11:50

Lab Sample ID: 580-142190-13

**Matrix: Solid** Percent Solids: 84.2

Dilution Batch Batch Batch Prepared

Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	RA		466619	BYM	EET SEA	07/25/24 08:51
Total/NA	Analysis	8260D	RA	1	466626	BYM	EET SEA	07/31/24 17:46
Total/NA	Prep	5035			466429	BYM	EET SEA	07/25/24 15:32
Total/NA	Analysis	8260D		1	466432	BYM	EET SEA	07/30/24 02:43

Client Sample ID: PDI-06-SO-44.5-20240718

Date Collected: 07/18/24 16:12

Date Received: 07/19/24 11:50

Lab Sample	ID:	580-142190-14	
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**Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	465790	AUA	EET SEA	07/23/24 10:49

Client Sample ID: PDI-06-SO-44.5-20240718

Date Collected: 07/18/24 16:12 Date Received: 07/19/24 11:50

Lab Sample ID: 580-142190-14

**Matrix: Solid** Percent Solids: 78.9

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	RA		466619	BYM	EET SEA	07/25/24 08:51
Total/NA	Analysis	8260D	RA	1	466626	BYM	EET SEA	07/31/24 18:08
Total/NA	Prep	5035			466429	BYM	EET SEA	07/25/24 15:32
Total/NA	Analysis	8260D		1	466432	BYM	EET SEA	07/30/24 03:06

### **Lab Chronicle**

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-06-SO-52-20240719

Lab Sample ID: 580-142190-15 Date Collected: 07/19/24 10:05

**Matrix: Solid** 

Date Received: 07/19/24 11:50

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	465790	AUA	EET SEA	07/23/24 10:49

Client Sample ID: PDI-06-SO-52-20240719

Lab Sample ID: 580-142190-15

Date Collected: 07/19/24 10:05 **Matrix: Solid** Date Received: 07/19/24 11:50 Percent Solids: 81.4

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	RA		466619	BYM	EET SEA	07/25/24 08:51
Total/NA	Analysis	8260D	RA	1	466626	BYM	EET SEA	07/31/24 18:30
Total/NA	Prep	5035			466429	BYM	EET SEA	07/25/24 15:32
Total/NA	Analysis	8260D		1	466432	BYM	EET SEA	07/30/24 03:29

**Laboratory References:** 

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

# **Accreditation/Certification Summary**

Client: ERM-West Job ID: 580-142190-1

Project/Site: Arkema PDI Sampling

#### **Laboratory: Eurofins Seattle**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Progra	am	Identification Number	Expiration Date
Oregon	NELAF	)	4167	07-07-25
The fell accions an about	والمراجع المراجلة لمراز المراجل والمراجع والمراجع والمراجع	براء في المستحد المساط المساط المستحداث المستحداث المستحدد المستحد	and an artificant language and constitution and the same	the Third Call and the leading to the control of th
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0 ,	s are included in this report does not offer certification Prep Method	•	not certified by the governing author  Analyte	ity. This list may include analy

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### **Sample Summary**

Client: ERM-West

580-142190-15

Project/Site: Arkema PDI Sampling

PDI-06-SO-52-20240719

Lab Sample ID Client Sample ID Matrix Collected Received 580-142190-1 PDI-04-SO-32-20240716 07/16/24 11:50 07/19/24 11:50 Solid 580-142190-2 PDI-04-SO-35-20240716 Solid 07/16/24 11:52 07/19/24 11:50 580-142190-3 PDI-04-SO-38-20240716 Solid 07/16/24 11:56 07/19/24 11:50 580-142190-4 PDI-04-SO-40.5-20240716 Solid 07/16/24 12:00 07/19/24 11:50 580-142190-5 TB-02-SO-20240716 Solid 07/16/24 00:01 07/19/24 11:50 580-142190-6 PDI-05-SO-36.5-20240717 Solid 07/17/24 14:26 07/19/24 11:50 580-142190-7 PDI-05-SO-37-20240717 Solid 07/17/24 14:30 07/19/24 11:50 580-142190-8 PDI-05-SO-40.5-20240717 Solid 07/17/24 14:55 07/19/24 11:50 580-142190-9 Dup-01-SQ-20240717 Solid 07/17/24 14:57 07/19/24 11:50 Solid 580-142190-10 PDI-05-SO-44.5-20240717 07/17/24 15:55 07/19/24 11:50 580-142190-11 PDI-05-SO-53-20240717 Solid 07/17/24 17:20 07/19/24 11:50 580-142190-12 PDI-06-SO-38.7-20240718 Solid 07/18/24 14:40 07/19/24 11:50 580-142190-13 PDI-06-SO-40.5-20240718 Solid 07/18/24 16:10 07/19/24 11:50 580-142190-14 PDI-06-SO-44.5-20240718 Solid 07/18/24 16:12 07/19/24 11:50

Solid

07/19/24 10:05 07/19/24 11:50

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Job ID: 580-142190-1

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5755 8th Street East Tacoma, WA 98424 Phone: 253-922-2310

# Chain of Custody Record

eurofins

Environment Testing

Client Information	Sampler:			Lab		-		_580-	142190 (	Chain of	Custody		DC No:
Client Contact:	Phone:			Cru E-M	z, She	ri L				Ctoto	of Origin.		30-62780-19268.4
Avery Soplata Company:						@et.e	urofin	sus.com		State	oi Origin.		Page: Page 4-010 1 of 7
ERM-West			PWSID:					An	alysis F	Seunes	ed		Job#
Address: 1050 SW 6th Avenue Suite 1650	Due Date Request	ed:			علم					toques			Preservation Codes:
City:	TAT Requested (d											130	F - MeOH E - NaHSO4
Portland State, Zip:	1 7.	well	45		8 8							188	A - HCL
OR, 97204	Compliance Project	-											
Phone.	PO#: 0682868.304												
Email:	WO#:				<b>Q</b> ₹	ᅙ	_						
avery.soplata@erm.com Project Name:	2				No.	\$ E	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1				90	
Arkema - PDI Investigation	Project #: 58020743				S o .	P. P.	pre	T ard				l le l	
Site:	SSOW#:				SD (Ye		, standard list	C CEACH				1 10	Other:
4			Sample	Matrix	WS/M	8260D - Volatiles,	- Volatiles,	7				berof	
		C	Туре	(W=water, S=solid,	E E	۶	2 3					Number	
Sample Identification	Sample Date	Sample Time	(C=comp, G=grab)	O=waste/oil, BT+Tissue, A=Air)	Field I	32600	8260D	00				Total	8
		><		ation Code:	XX		A		E 65	32.5	S 020 000 0		Special Instructions/Note:
PD1-04-50-32-20240716	7/10/2024	1150	6	Solid		X						2	EXPECTED HAGH, DELTE
PD1-84-50-35-20240716	7/16/2024	1152	6	Solid		X		X				2	LATECTO 1126H, BUTE
PDI-04-50-38-20240716	7/16/2024	1156	6	Solid		X		11				2	1
PD1-04-50-40.5-20240716	1_11	1200	6	Solid		X	$\dashv$	++	+	++		2	
TB-02-50 - 2024 6716	7/10/2024	(-)		Solid		N		11	++	131			
PDI-05-50-365-20240717	7/17/2024	426	6	Solid		X	+				+++	7	ONOPINI dilule
201-05-50-37-20240717	1 1	1430	(2	Solid		V		11		1		7	expected high, dilute expected high, dilute
PDI-05-50-40.5-20240717		1455	6	Solid		X		11	11			2	apeared rightalian
DUD-01-5Q-20240717	7/17/304		6	Solid	$\Box$	X						2	
POI-05-80-20240717445-2024	7/17/2024		6	Solid	7	X						6	
POJ - 05 - 80 - 53 - 20240717 Possible Hazard Identification	7/17/2021		6	Solid		X						7	
Non-Hazard Flammable Skin Irritant Pois	On B A Linkna	D ,	Dodielosios	,	San	ple D	ispos	al (A fe	e may be	assesse	d if samples	are retaine	d longer than 1 month) ive For Months
Deliverable Requested: I, III, III, IV, Other (specify)	OTINITO	vvii r	Radiologica		Spe	cial In:	structi	o Client ions/QC	Requirem	Disposa ents:	l By Lab	Arch	ive For Months
mpty Kit Relinquished by:		Pate:		1	Time:					Me	hod of Shipment		
elinquished by. A.A.	Date/Time:	24	NUV	Company	F	Receive	d by:	, C,	17	1	Date/Tim	ie:	Company
elinquished by	Date/Time:	11	- (	Company		Receive	a by	MAL	0	]	Date/Tim	9/24	Company -
elinquished by:	7 [19]24 Date/Time:		50	AA - C	J. F	Receive	d by:	KI			Date/Tilin	14/14	Company
Custody Seals Intact: Custody Seal No.:						_							Company
Δ Yes Δ No					C	ooler T	empera	ature(s) °C	and Other R	emarks:	910.6	PI	DX SC TK

5755 8th Street East Tacoma, WA 98424 Phone: 253-922-2310

# Chain of Custody Record

C.	
eurofins	

Environment Testing

Client Information Client Contact	Sampler				PM: uz, She	eri L			_		Carrie	r Tracking No	(s):	COC No. 580-62780-	19268	2		
	Phone:			E-1	Mail:						State	of Origin:		Page:			( )	
Avery Soplata Company:		-	PWSID:	Sh	eri.Cru	z@el	euro	finsus.	.com					Page 2 10	- 2	_ 31	2	
ERM-West			IF WSID.						Anal	vsis R	eques	ted		Job#:				
Address: 1050 SW 6th Avenue Suite 1650	Due Date Request	ed:												Preservation F - MeOH	1 Codes	5:		
City: Portland	TAT Requested (d		be c											E - NaHSO4 A - HCL				
State, Zip:	1 1	wee	45									1 1						
OR, 97204	Compliance Proje	ct: A Yes	Δ Νο															
Phone:	PO#: 0682868,304					Ę												
Email: avery.soplata@erm.com	WO #:				2 2	ž	13											
Project Name:	Project #:			-	Yes or	i i	d list	dist					2 9					
Arkema - PDI Investigation	58020743				0 0	da	standard list_LL	standard list					containe					
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Sample Identification	Sample Date	Time		BT=Tissue, A=Al									Total	Specia	al Instr	ructio	ns/Note	e:
		$\sim$	Preserva	tion Code:	W	F	Е	А			8 85 /	3 (8)				=		9429
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PDI-06-50-405-20240718 PDI-06-50-445-20240718	7/18/2024		6	Solid		X	-						100			)		
PDI-06-50-44.5-20240718	7/18/2024	1612	6	Solid		X							- 0					
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Possible Hazard Identification  Non-Hazard Flammable Skin Irritant Po					Sá					may be				ned longer tha	an 1 mo	onth)		
Deliverable Requested: I, <b>V</b> , III, IV, Other (specify)	ison B Winkn	own	Radiological		St			n To C	client s/QC R		Dispos	al By Lab	An	chive For		Mon	ths	
Empty Kit Relinquished by:		Date:			1		mou			- quiron		ethod of Ship	mont:					
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Custody Seals Intact:						Cool	er Tem	perature	e(s) °C ar	d Other I	Remarks:		70	×				

Ver: 04/02/2024 10/15/2024 (Rev. 1)

5755 8th Street East Tacoma, WA 98424 Phone: 253-922-2310

# **Chain of Custody Record**



eurofins

Environment Testing

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Client Information	Sampler:			PM: uz, Sheri	i L								30-62780-19	268.4		
Client Contact:	Phone:		E-M		O -1	· C			State o	f Origin:			ige:	1 of	2	
Avery Soplata Company:		PWSID:	Sh	eri.Cruz	@et.eur	otinsus	.com						age 4-01-6 b#:			$\dashv$
ERM-West							Anal	ysis R	equest	ed						$\Box$
Address: 1050 SW 6th Avenue Suite 1650	Due Date Requested:						Ì					F-	reservation C - MeOH	odes:		
Dity:	TAT Requested (days):												- NaHSO4 - HCL			
Portland	7.12	elys					İ									
State, Zip: OR, 97204	Compliance Project:			11												
Phone:	PO#:			71												
Email:	0682868.304 WO#:			- 2	standard list MeOH											
avery.soplata@erm.com				No Sor	list N	i ist						8				
Project Name: Arkema - PDI Investigation	Project #: 58020743			e (Ye	dard dard	dard	3					ta i				
Site:	SSOW#:				stan	stan	ACA					O	her:			
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Sample Identification	1 N	Time G=grat	D) BT=Tissue, A=Ai		8260D		2					Total	Special	Instruction	ns/Note:	
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PD1-14-50-35-20240716. PD1-14-50-38-20240716	7/16/2024 11	52 6	Solid		X		X					2				
PD1-14-50-38-20240716	7/16/2024 1/5	56 6	Solid		X							2	V			
PD1-04-50-40.5-20240716		00 6	Solid		X							2			11.	
TB-02-50 - 2024 6716	7/16/2024		Solid		×				(4) (3) 2의 설립(							\$100 h \$100 h
PD1-05-50-365-20240717	7/17/2024/14	126 6	Solid		X							28	xpliked	high, o	lilute	
PDI-US-50-37-20240717	7/17/2024 14	130 6	Solid	$\coprod$	X							2 9	xpe ite	1 high	dilute	·
PDI-05-50-405-20240717	7/17/204 14	455 G	Solid	$\perp \! \! \! \! \! \! \! \perp$	X							2				
DUD-01-5Q-20240717	7/17/204/4	• 1	Solid	Ш.	X				1-1			12				_
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PDI- 05-80-53-20240717	7/17/202/17	20 6	Solid		X							1				
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5755 8th Street East Tacoma, WA 98424 Phone: 253-922-2310

# Chain of Custody Record

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Environment Testing

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Client: ERM-West Job Number: 580-142190-1

Login Number: 142190 List Source: Eurofins Seattle

List Number: 1

Creator: O'Connell, Jason I

Question Answer Comment
Radioactivity wasn't checked or is = background as measured by a survey  True meter.</td
The cooler's custody seal, if present, is intact.
Sample custody seals, if present, are intact.
The cooler or samples do not appear to have been compromised or tampered with.
Samples were received on ice.
Cooler Temperature is acceptable.
Cooler Temperature is recorded.
COC is present. True
COC is filled out in ink and legible.
COC is filled out with all pertinent information.
Is the Field Sampler's name present on COC?
There are no discrepancies between the containers received and the COC. True
Samples are received within Holding Time (excluding tests with immediate True HTs)
Sample containers have legible labels.  True
Containers are not broken or leaking.
Sample collection date/times are provided.  True
Appropriate sample containers are used.
Sample bottles are completely filled. True
Sample Preservation Verified. True
There is sufficient vol. for all requested analyses, incl. any requested  MS/MSDs  True
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").
Multiphasic samples are not present.
Samples do not require splitting or compositing.

# . .

# PREPARED FOR

**ANALYTICAL REPORT** 

Attn: Avery Soplata ERM-West 1050 SW 6th Avenue Suite 1650 Portland, Oregon 97204

Generated 7/30/2024 5:10:22 PM

# **JOB DESCRIPTION**

Arkema PDI Sampling

### **JOB NUMBER**

580-142311-1

Eurofins Seattle 5755 8th Street East Tacoma WA 98424



#### **Job Notes**

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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#### **Authorization**

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Authorized for release by Sheri Cruz, Project Manager I Sheri.Cruz@et.eurofinsus.com (253)922-2310

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Client: ERM-West

Project/Site: Arkema PDI Sampling

Laboratory Job ID: 580-142311-1

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#### **Case Narrative**

Client: ERM-West Job ID: 580-142311-1
Project: Arkema PDI Sampling

Job ID: 580-142311-1 Eurofins Seattle

# Job Narrative 580-142311-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these
  situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise
  specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed
  unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 7/23/2024 12:29 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.8°C.

#### GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-465981 recovered above the upper control limit for Dichlorodifluoromethane and Hexachlorobutadiene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: PDI-09-SO-38.6-20240719 (580-142311-3), TB-02-SO-20240719 (580-142311-4), PDI-09-SO-39.5-20240719 (580-142311-5), PDI-09-SO-40.5-20240722 (580-142311-6) and (CCVIS 580-465981/3).

Method 8260D: The method blank for preparation batch 580-465950 and analytical batch 580-465981 contained Hexachlorobutadiene and Methylene Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-466053 recovered outside acceptance criteria, low biased, for Dichlorodifluoromethane. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8260D: The MB associated with preparation batch 580-466542 and analytical batch 580-466537 was outside of control limits low for 1,2-Dichloroethane-d4 (Surr) and Dibromofluoromethane (Surr). 1,2-Dichloroethane-d4 (Surr) and Dibromofluoromethane (Surr) is not chemically associated with Chlorobenzene. All other QC was within control limits and samples have been re-analyzed multiple times for QC failures, therefore, results for Bromomethane and Chlorobenzene are reported from batch 466537. The following samples are affected: PDI-09-SO-39.5-20240719 (580-142311-5) and (MB 580-466542/3-A)

Method 8260D: The following sample was analyzed at reduced volume due to high concentrations of target analytes: PDI-09-SO-39.5-20240719 (580-142311-5). The calculation was performed using an initial volume adjustment rather than a dilution factor. The reporting limits have been elevated by the appropriate factor.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **General Chemistry**

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**Eurofins Seattle** 

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#### **Definitions/Glossary**

Client: ERM-West Job ID: 580-142311-1

Project/Site: Arkema PDI Sampling

#### **Qualifiers**

#### **GC/MS VOA**

Qualifier **Qualifier Description** 

В Compound was found in the blank and sample.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

S1-Surrogate recovery exceeds control limits, low biased.

#### **Glossary**

Abbreviation These commonly used abbreviations may or may not be present in this report. Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery CFL Contains Free Liquid **CFU** Colony Forming Unit **CNF** Contains No Free Liquid

Duplicate Error Ratio (normalized absolute difference) **DER** 

Dil Fac **Dilution Factor** 

Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

**EDL** Estimated Detection Limit (Dioxin) LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level" MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

Method Detection Limit MDL ML Minimum Level (Dioxin) MPN Most Probable Number MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present

**Practical Quantitation Limit PQL** 

**PRES** Presumptive **Quality Control** QC

**RER** Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

**RPD** Relative Percent Difference, a measure of the relative difference between two points

Toxicity Equivalent Factor (Dioxin) **TEF TEQ** Toxicity Equivalent Quotient (Dioxin)

**TNTC** Too Numerous To Count

**Eurofins Seattle** 

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7/30/2024

Client: ERM-West Job ID: 580-142311-1

Project/Site: Arkema PDI Sampling

Client Sample ID: RB-01-WQ-20240719

Lab Sample ID: 580-142311-1 Date Collected: 07/19/24 15:22

**Matrix: Water** 

Date Received: 07/23/24 12:29

Method: SW846 8260D - Vo Analyte	Result (	Qualifier F	RL MDI	_ Uni	t D	Prepared	Analyzed	Dil Fa
Dichlorodifluoromethane	ND		.0 0.5	 3 ug/l			07/25/24 17:38	
Chloromethane	ND	1	.0 0.2	3 ug/l			07/25/24 17:38	
Vinyl chloride	ND	1		2 ug/l			07/25/24 17:38	
Bromomethane	ND	1		1 ug/l			07/25/24 17:38	
Chloroethane	ND			5 ug/l			07/25/24 17:38	
Trichlorofluoromethane	ND			3 ug/l			07/25/24 17:38	
1,1-Dichloroethene	ND			3 ug/l			07/25/24 17:38	
Methylene Chloride	ND			4 ug/l			07/25/24 17:38	
trans-1,2-Dichloroethene	ND			9 ug/l			07/25/24 17:38	
1,1-Dichloroethane	ND			2 ug/l			07/25/24 17:38	,
2,2-Dichloropropane	ND			2 ug/l			07/25/24 17:38	
cis-1,2-Dichloroethene	ND			5 ug/l			07/25/24 17:38	
Bromochloromethane	ND			9 ug/l			07/25/24 17:38	
Chloroform	ND			o ug/l			07/25/24 17:38	
1,1,1-Trichloroethane	ND			9 ug/l			07/25/24 17:38	,
Carbon tetrachloride	ND			ug/l ug/l			07/25/24 17:38	,
1,1-Dichloropropene	ND			9 ug/l			07/25/24 17:38	
Benzene	ND			3 ug/l 4 ug/l			07/25/24 17:38	,
1,2-Dichloroethane	ND			ug/i 2 ug/l			07/25/24 17:38	,
Trichloroethene	ND ND			z ug/i 3 ug/l			07/25/24 17:38	
1,2-Dichloropropane	ND ND			3 ug/l 3 ug/l			07/25/24 17:38	
Dibromomethane	ND			ug/i ug/l			07/25/24 17:38	· · · · · · · .
Bromodichloromethane	ND ND			_				
	ND ND			9 ug/l			07/25/24 17:38	
cis-1,3-Dichloropropene	ND			2 ug/l			07/25/24 17:38	
Toluene				9 ug/l			07/25/24 17:38	•
trans-1,3-Dichloropropene	ND			1 ug/l			07/25/24 17:38	
1,1,2-Trichloroethane	ND			4 ug/l			07/25/24 17:38	
Tetrachloroethene	ND			1 ug/l			07/25/24 17:38	•
1,3-Dichloropropane	ND			5 ug/l			07/25/24 17:38	•
Dibromochloromethane	ND			3 ug/l			07/25/24 17:38	
1,2-Dibromoethane	ND			ug/l			07/25/24 17:38	•
Chlorobenzene	ND			4 ug/l			07/25/24 17:38	•
Ethylbenzene	ND			) ug/l			07/25/24 17:38	
1,1,1,2-Tetrachloroethane	ND			3 ug/l			07/25/24 17:38	•
1,1,2,2-Tetrachloroethane	ND			2 ug/l			07/25/24 17:38	•
m-Xylene & p-Xylene	ND			3 ug/l			07/25/24 17:38	
o-Xylene	ND			9 ug/l			07/25/24 17:38	•
Styrene	ND			3 ug/l	L		07/25/24 17:38	•
Bromoform	ND	1		1 ug/l			07/25/24 17:38	
Isopropylbenzene	ND	1		4 ug/l			07/25/24 17:38	,
Bromobenzene	ND	1		3 ug/l			07/25/24 17:38	•
N-Propylbenzene	ND	1	.0 0.5	) ug/l	L		07/25/24 17:38	
1,2,3-Trichloropropane	ND	1		1 ug/l			07/25/24 17:38	
2-Chlorotoluene	ND	1	.0 0.5	1 ug/l	L		07/25/24 17:38	•
1,3,5-Trimethylbenzene	ND	1	.0 0.5	5 ug/l	L		07/25/24 17:38	
4-Chlorotoluene	ND	1	.0 0.3	3 ug/l	L		07/25/24 17:38	
t-Butylbenzene	ND	2	.0 0.5	3 ug/l	L		07/25/24 17:38	•
1,2,4-Trimethylbenzene	ND	3	.0 0.6	1 ug/l	L		07/25/24 17:38	
sec-Butylbenzene	ND			9 ug/l			07/25/24 17:38	

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142311-1

Project/Site: Arkema PDI Sampling

Client Sample ID: RB-01-WQ-20240719

Date Collected: 07/19/24 15:22

Date Received: 07/23/24 12:29

Lab Sample ID: 580-142311-1

**Matrix: Water** 

Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	(Conti	inued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			07/25/24 17:38	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			07/25/24 17:38	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			07/25/24 17:38	1
n-Butylbenzene	ND		1.0	0.44	ug/L			07/25/24 17:38	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			07/25/24 17:38	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			07/25/24 17:38	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			07/25/24 17:38	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			07/25/24 17:38	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			07/25/24 17:38	1
Naphthalene	ND		3.0	0.93	ug/L			07/25/24 17:38	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			07/25/24 17:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120			•		07/25/24 17:38	1
4-Bromofluorobenzene (Surr)	96		80 - 120					07/25/24 17:38	1
Dibromofluoromethane (Surr)	110		80 - 120					07/25/24 17:38	1
1,2-Dichloroethane-d4 (Surr)	109		80 - 120					07/25/24 17:38	1

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Client: ERM-West Job ID: 580-142311-1

Project/Site: Arkema PDI Sampling

Date Received: 07/23/24 12:29

Client Sample ID: TB-01-WQ-20240719

Date Collected: 07/19/24 15:22

Lab Sample ID: 580-142311-2

**Matrix: Water** 

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Dichlorodifluoromethane	ND ND	1.0	0.53	ug/L			07/25/24 16:52	
Chloromethane	ND	1.0	0.28	ug/L			07/25/24 16:52	
Vinyl chloride	ND	1.0	0.22	ug/L			07/25/24 16:52	
Bromomethane	ND	1.0	0.21	ug/L			07/25/24 16:52	
Chloroethane	ND	1.0	0.35	ug/L			07/25/24 16:52	
Trichlorofluoromethane	ND	1.0	0.36	ug/L			07/25/24 16:52	
1,1-Dichloroethene	ND	1.0	0.28	ug/L			07/25/24 16:52	
Methylene Chloride	ND	5.0		ug/L			07/25/24 16:52	
rans-1,2-Dichloroethene	ND	1.0		ug/L			07/25/24 16:52	
1,1-Dichloroethane	ND	1.0		ug/L			07/25/24 16:52	
2,2-Dichloropropane	ND	1.0		ug/L			07/25/24 16:52	
cis-1,2-Dichloroethene	ND	1.0		ug/L			07/25/24 16:52	
Bromochloromethane	ND	1.0		ug/L			07/25/24 16:52	
Chloroform	ND	1.0		ug/L			07/25/24 16:52	
1,1,1-Trichloroethane	ND	1.0		ug/L			07/25/24 16:52	
Carbon tetrachloride	ND	1.0		ug/L			07/25/24 16:52	
1,1-Dichloropropene	ND	1.0		ug/L			07/25/24 16:52	
Benzene	ND	1.0		ug/L			07/25/24 16:52	
I,2-Dichloroethane	ND	1.0		ug/L			07/25/24 16:52	
richloroethene	ND	1.0		ug/L			07/25/24 16:52	
,2-Dichloropropane	ND	1.0		ug/L			07/25/24 16:52	
Dibromomethane	ND	1.0		ug/L			07/25/24 16:52	
Bromodichloromethane	ND	1.0		ug/L			07/25/24 16:52	
sis-1,3-Dichloropropene	ND	1.0		ug/L ug/L			07/25/24 16:52	
oluene	ND	1.0		ug/L ug/L			07/25/24 16:52	
	ND ND			-				
rans-1,3-Dichloropropene	ND ND	1.0		ug/L			07/25/24 16:52	
,1,2-Trichloroethane		1.0		ug/L			07/25/24 16:52	
Tetrachloroethene	ND	1.0		ug/L			07/25/24 16:52	
,3-Dichloropropane	ND	1.0		ug/L			07/25/24 16:52	
Dibromochloromethane	ND	1.0		ug/L			07/25/24 16:52	
,2-Dibromoethane	ND	1.0		ug/L			07/25/24 16:52	
Chlorobenzene	ND	1.0		ug/L			07/25/24 16:52	
Ethylbenzene	ND	1.0		ug/L			07/25/24 16:52	
I,1,1,2-Tetrachloroethane	ND	1.0		ug/L			07/25/24 16:52	
1,1,2,2-Tetrachloroethane	ND	1.0		ug/L			07/25/24 16:52	
n-Xylene & p-Xylene	ND	2.0		ug/L			07/25/24 16:52	
o-Xylene	ND	1.0		ug/L			07/25/24 16:52	
Styrene	ND	1.0		ug/L			07/25/24 16:52	
Bromoform	ND	1.0		ug/L			07/25/24 16:52	
sopropylbenzene	ND	1.0	0.44	ug/L			07/25/24 16:52	
Bromobenzene	ND	1.0		ug/L			07/25/24 16:52	
N-Propylbenzene	ND	1.0		ug/L			07/25/24 16:52	
,2,3-Trichloropropane	ND	1.0		ug/L			07/25/24 16:52	
2-Chlorotoluene	ND	1.0	0.51	ug/L			07/25/24 16:52	
,3,5-Trimethylbenzene	ND	1.0		ug/L			07/25/24 16:52	
l-Chlorotoluene	ND	1.0	0.38	ug/L			07/25/24 16:52	
-Butylbenzene	ND	2.0	0.58	ug/L			07/25/24 16:52	
1,2,4-Trimethylbenzene	ND	3.0	0.61	ug/L			07/25/24 16:52	
sec-Butylbenzene	ND	1.0	0.49	ug/L			07/25/24 16:52	

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142311-1

Project/Site: Arkema PDI Sampling

Date Received: 07/23/24 12:29

Client Sample ID: TB-01-WQ-20240719

Date Collected: 07/19/24 15:22

Lab Sample ID: 580-142311-2

**Matrix: Water** 

Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	(Conti	inued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			07/25/24 16:52	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			07/25/24 16:52	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			07/25/24 16:52	1
n-Butylbenzene	ND		1.0	0.44	ug/L			07/25/24 16:52	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			07/25/24 16:52	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			07/25/24 16:52	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			07/25/24 16:52	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			07/25/24 16:52	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			07/25/24 16:52	1
Naphthalene	ND		3.0	0.93	ug/L			07/25/24 16:52	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			07/25/24 16:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120			•		07/25/24 16:52	1
4-Bromofluorobenzene (Surr)	97		80 - 120					07/25/24 16:52	1
Dibromofluoromethane (Surr)	109		80 - 120					07/25/24 16:52	1
1.2-Dichloroethane-d4 (Surr)	111		80 - 120					07/25/24 16:52	1

7/30/2024

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Client: ERM-West Job ID: 580-142311-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-09-SO-38.6-20240719

Lab Sample ID: 580-142311-3 Date Collected: 07/19/24 16:00 **Matrix: Solid** Date Received: 07/23/24 12:29 Percent Solids: 83.9

Method: SW846 8260D - Vola				11-24	_	Da	A ! !	D:: -
Analyte	Result Q	<u> </u>	MDL		D	Prepared	Analyzed	Dil Fa
I,1,1,2-Tetrachloroethane	ND	0.023	0.0058		<b>*</b>		07/24/24 19:29	
1,1,1-Trichloroethane	ND	0.047	0.0054		<b>*</b>		07/24/24 19:29	
I,1,2,2-Tetrachloroethane	ND	0.023	0.0088		<del>.</del> .		07/24/24 19:29	
,1,2-Trichloroethane	ND	0.023	0.0086	0 0	☼		07/24/24 19:29	
,1-Dichloroethane	ND	0.047		mg/Kg	☼		07/24/24 19:29	
,1-Dichloroethene	ND	0.047		mg/Kg	<del>.</del>		07/24/24 19:29	
,1-Dichloropropene	ND	0.047	0.0062		₩		07/24/24 19:29	
,2,3-Trichloropropane	ND	0.047		mg/Kg	₩		07/24/24 19:29	
,2,4-Trimethylbenzene	ND	0.047		mg/Kg			07/24/24 19:29	
,2-Dibromo-3-Chloropropane	ND	0.070		mg/Kg	₩	07/24/24 13:53	07/24/24 19:29	
,2-Dibromoethane	ND	0.023	0.0044	mg/Kg	☼	07/24/24 13:53	07/24/24 19:29	
,2-Dichlorobenzene	ND	0.047	0.010	mg/Kg	☼	07/24/24 13:53	07/24/24 19:29	
I,2-Dichloroethane	ND	0.023	0.0064	mg/Kg	☼	07/24/24 13:53	07/24/24 19:29	
1,2-Dichloropropane	ND	0.023	0.0077	mg/Kg	☼	07/24/24 13:53	07/24/24 19:29	
,3,5-Trimethylbenzene	ND	0.047	0.0088	mg/Kg	☼	07/24/24 13:53	07/24/24 19:29	
,3-Dichlorobenzene	ND	0.070	0.015	mg/Kg	₩	07/24/24 13:53	07/24/24 19:29	
,3-Dichloropropane	ND	0.070	0.0065	mg/Kg	☼	07/24/24 13:53	07/24/24 19:29	
,4-Dichlorobenzene	ND	0.070	0.013	mg/Kg	₩	07/24/24 13:53	07/24/24 19:29	
2,2-Dichloropropane	ND	0.047	0.014	mg/Kg	₩	07/24/24 13:53	07/24/24 19:29	
-Chlorotoluene	ND	0.047	0.010	mg/Kg	☼	07/24/24 13:53	07/24/24 19:29	
-Chlorotoluene	ND	0.047	0.011	mg/Kg	₩	07/24/24 13:53	07/24/24 19:29	
-Isopropyltoluene	ND	0.047		mg/Kg		07/24/24 13:53	07/24/24 19:29	
Benzene	ND	0.023	0.0044		₩	07/24/24 13:53	07/24/24 19:29	
romobenzene	ND	0.047	0.0049		☆	07/24/24 13:53	07/24/24 19:29	
romochloromethane	ND	0.047	0.0072			07/24/24 13:53	07/24/24 19:29	
romodichloromethane	ND	0.047	0.0064		₩	07/24/24 13:53	07/24/24 19:29	
romoform	ND	0.047	0.0052		₩	07/24/24 13:53	07/24/24 19:29	
arbon tetrachloride	ND	0.023	0.0051	mg/Kg	i .		07/24/24 19:29	
Chlorobenzene	1.9	0.047	0.0056		₩		07/24/24 19:29	
Chloroethane	ND	0.093		mg/Kg			07/24/24 19:29	
Chloroform	ND	0.023	0.0049				07/24/24 19:29	
Chloromethane	ND	0.070		mg/Kg			07/24/24 19:29	
is-1,2-Dichloroethene	ND	0.070		mg/Kg			07/24/24 19:29	
sis-1,3-Dichloropropene	ND	0.023	0.0047		T.		07/24/24 19:29	
Dibromochloromethane	ND	0.023	0.0057		Ť		07/24/24 19:29	
Dibromomethane	ND	0.047	0.0086		~ \$		07/24/24 19:29	
Dichlorodifluoromethane	ND	0.29		mg/Kg	<del>-</del>		07/24/24 19:29	
	0.023 J			mg/Kg	☆		07/24/24 19:29	
Ethylbenzene Hexachlorobutadiene	0.023 J ND	0.047			1\tr		07/24/24 19:29	
				mg/Kg	:			
sopropylbenzene	ND	0.047		mg/Kg	₩.		07/24/24 19:29	
Methyl tert-butyl ether	ND	0.047	0.0070	0 0	<b>\$</b>		07/24/24 19:29	
Methylene Chloride	0.039 J			mg/Kg	<del>.</del>		07/24/24 19:29	
n-Xylene & p-Xylene	0.15	0.047	0.0083	0 0	<b>\$</b>		07/24/24 19:29	
-Butylbenzene	ND	0.047		mg/Kg	<b>*</b>		07/24/24 19:29	
I-Propylbenzene	ND	0.047		mg/Kg	<del>.</del>		07/24/24 19:29	
o-Xylene	0.031 J		0.0058		₩		07/24/24 19:29	
ec-Butylbenzene	ND	0.047		mg/Kg	₩		07/24/24 19:29	
Styrene	ND	0.047		mg/Kg	₩	07/24/24 13:53	07/24/24 19:29	
-Butylbenzene	ND	0.047	0.0090	mg/Kg	₩	07/24/24 13:53	07/24/24 19:29	

Client: ERM-West Job ID: 580-142311-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-09-SO-38.6-20240719

Date Collected: 07/19/24 16:00 Date Received: 07/23/24 12:29 Lab Sample ID: 580-142311-3

**Matrix: Solid** Percent Solids: 83.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		0.047	0.0062	mg/Kg	<u></u>	07/24/24 13:53	07/24/24 19:29	1
Toluene	ND		0.070	0.016	mg/Kg	₩	07/24/24 13:53	07/24/24 19:29	1
trans-1,2-Dichloroethene	ND		0.070	0.017	mg/Kg	₩	07/24/24 13:53	07/24/24 19:29	1
trans-1,3-Dichloropropene	ND		0.047	0.0081	mg/Kg	₽	07/24/24 13:53	07/24/24 19:29	1
Trichloroethene	ND		0.047	0.012	mg/Kg	₩	07/24/24 13:53	07/24/24 19:29	1
Trichlorofluoromethane	ND		0.093	0.030	mg/Kg	₩	07/24/24 13:53	07/24/24 19:29	1
Vinyl chloride	ND		0.12	0.022	mg/Kg	₩	07/24/24 13:53	07/24/24 19:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				07/24/24 13:53	07/24/24 19:29	1
4-Bromofluorobenzene (Surr)	100		80 - 120				07/24/24 13:53	07/24/24 19:29	1
Dibromofluoromethane (Surr)	100		80 - 120				07/24/24 13:53	07/24/24 19:29	1
Toluene-d8 (Surr)	101		80 - 120				07/24/24 13:53	07/24/24 19:29	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND		0.093	0.046	mg/Kg	<del>-</del>	07/29/24 08:45	07/29/24 15:29	1
1,2,4-Trichlorobenzene	ND		0.093	0.050	mg/Kg	☼	07/29/24 08:45	07/29/24 15:29	1
Naphthalene	ND		0.17	0.046	mg/Kg	☼	07/29/24 08:45	07/29/24 15:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				07/29/24 08:45	07/29/24 15:29	1
4-Bromofluorobenzene (Surr)	102		80 - 120				07/29/24 08:45	07/29/24 15:29	1
Dibromofluoromethane (Surr)	107		80 - 120				07/29/24 08:45	07/29/24 15:29	1
Toluene-d8 (Surr)	96		80 - 120				07/20/24 08:45	07/29/24 15:29	

Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	- RA2					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	ND		0.12	0.044	mg/Kg	₩	07/29/24 08:46	07/29/24 12:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		80 - 121				07/29/24 08:46	07/29/24 12:09	1
4-Bromofluorobenzene (Surr)	100		80 - 120				07/29/24 08:46	07/29/24 12:09	1
Dibromofluoromethane (Surr)	94		80 - 120				07/29/24 08:46	07/29/24 12:09	1
Toluene-d8 (Surr)	101		80 - 120				07/29/24 08:46	07/29/24 12:09	1

General Chemistry							
Analyte	Result Qualifier	RL	RL Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	83.9	0.1	0.1 %			07/25/24 19:34	1
Percent Moisture (SM22 2540G)	16.1	0.1	0.1 %			07/25/24 19:34	1

7/30/2024

Client: ERM-West Job ID: 580-142311-1

Project/Site: Arkema PDI Sampling

**Client Sample ID: TB-02-SO-20240719** 

Lab Sample ID: 580-142311-4 Date Collected: 07/19/24 16:00 **Matrix: Solid** 

Date Received: 07/23/24 12:29

1.1.1.2-Irtachloroethane	Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1.1.2.2-Trichtoroethane ND 0.020 0.0076 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.1Dichloroethane ND 0.040 0.0092 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.1Dichloroethane ND 0.040 0.0092 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.1Dichloroethane ND 0.040 0.0092 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.1Dichloroethane ND 0.040 0.012 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.2.2-Trichloropropane ND 0.040 0.012 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.2.2-Trichloropropane ND 0.040 0.011 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.2.2-Dirbromos-A-Chiropropane ND 0.060 0.015 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.2.Dirbromos-A-Chiropropane ND 0.060 0.015 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.2.Dirbromos-A-Chiropropane ND 0.060 0.015 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.2.Dirbromosthane ND 0.020 0.0093 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.2.Dirbromosthane ND 0.020 0.0095 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.2.Dirbromosthane ND 0.020 0.0095 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.2.Dirbromosthane ND 0.020 0.0095 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.3.Dirbropropane ND 0.040 0.0096 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.3.Dirbropropane ND 0.060 0.013 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.3.Dirbropropane ND 0.060 0.013 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.3.Dirbropropane ND 0.060 0.013 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.3.Dirbropropane ND 0.060 0.013 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.3.Dirbropropane ND 0.060 0.013 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.3.Dirbropropane ND 0.060 0.013 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.3.Dirbropropane ND 0.060 0.013 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.3.Dirbropropane ND 0.040 0.0098 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.3.Dirbropropane ND 0.040 0.0098 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.3.Dirbropropane ND 0.040 0.0098 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.3.Dirbropropane ND 0.040 0.0098 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.3.Dirbropropane ND 0.040 0.0098 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.3.Dirbropropane ND 0.040 0.0098 mg/Kg 07/24/24 15.33 07/24/24 19.07 1.3.Dirbropropane ND 0.040 0.0098 mg	1,1,1,2-Tetrachloroethane	ND	0.020	0.0050	mg/Kg		07/24/24 13:53	07/24/24 19:07	
1.1.2-Trichloroethane ND 0.020 0.0074 mg/Kg 07724/24 13:53 07724/24 19:07 1.1-Dichloroethane ND 0.040 0.0092 mg/Kg 07724/24 13:53 07724/24 19:07 1.1-Dichloroethane ND 0.040 0.012 mg/Kg 07724/24 13:53 07724/24 19:07 1.1-Dichloroptopene ND 0.040 0.012 mg/Kg 07724/24 13:53 07724/24 19:07 1.1-Dichloroptopene ND 0.040 0.012 mg/Kg 07724/24 13:53 07724/24 19:07 1.2-Dichloroptopene ND 0.040 0.012 mg/Kg 07724/24 13:53 07724/24 19:07 1.2-Dichloroptopene ND 0.040 0.014 mg/Kg 07724/24 13:53 07724/24 19:07 1.2-Dibromo-3-Chloroptopane ND 0.080 0.085 mg/Kg 07724/24 13:53 07724/24 19:07 1.2-Dibromo-bane ND 0.020 0.0038 mg/Kg 07724/24 13:53 07724/24 19:07 1.2-Dichlorobenzene ND 0.020 0.0055 mg/Kg 07724/24 13:53 07724/24 19:07 1.2-Dichloroptopane ND 0.020 0.0055 mg/Kg 07724/24 13:53 07724/24 19:07 1.2-Dichloroptopane ND 0.020 0.0056 mg/Kg 07724/24 13:53 07724/24 19:07 1.2-Dichloroptopane ND 0.020 0.0056 mg/Kg 07724/24 13:53 07724/24 19:07 1.2-Dichloroptopane ND 0.000 0.0056 mg/Kg 07724/24 13:53 07724/24 19:07 1.2-Dichloroptopane ND 0.000 0.0076 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dichloroptopane ND 0.000 0.0076 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dichloroptopane ND 0.000 0.0076 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dichloroptopane ND 0.000 0.0076 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dichloroptopane ND 0.000 0.0076 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dichloroptopane ND 0.000 0.0076 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dichloroptopane ND 0.000 0.0076 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dichloroptopane ND 0.000 0.0076 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dichloroptopane ND 0.000 0.0076 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dichloroptopane ND 0.000 0.0076 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dichloroptopane ND 0.000 0.0076 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dichloroptopane ND 0.000 0.0076 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dichloroptopane ND 0.000 0.0076 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dichloroptopane ND 0.000 0.0008 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dichloroptopane ND 0.0000 0	1,1,1-Trichloroethane	ND	0.040	0.0046	mg/Kg		07/24/24 13:53	07/24/24 19:07	
1.1-Dichloroethane ND 0.040 0.0922 mg/Kg 07724/24 13:53 07/24/24 19:07 1.1-Dichloroethene ND 0.040 0.0012 mg/Kg 07724/24 13:53 07/24/24 19:07 1.1-Dichloropropene ND 0.040 0.0053 mg/Kg 07724/24 13:53 07/24/24 19:07 1.2-Birchloropropane ND 0.040 0.0122 mg/Kg 07724/24 13:53 07/24/24 19:07 1.2-Birchloropropane ND 0.040 0.0142 mg/Kg 07724/24 13:53 07/24/24 19:07 1.2-Dichloropropane ND 0.040 0.0155 mg/Kg 07724/24 13:53 07/24/24 19:07 1.2-Dichlorome-S-Chloropropane ND 0.080 0.0155 mg/Kg 07724/24 13:53 07/24/24 19:07 1.2-Dichlorome-S-Chloropropane ND 0.040 0.0087 mg/Kg 07724/24 13:53 07/24/24 19:07 1.2-Dichlorome-S-Chloropropane ND 0.040 0.0087 mg/Kg 07724/24 13:53 07/24/24 19:07 1.2-Dichlorome-S-Chloropropane ND 0.040 0.0086 mg/Kg 07724/24 13:53 07/24/24 19:07 1.2-Dichloropropane ND 0.020 0.0055 mg/Kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloropropane ND 0.040 0.0066 mg/Kg 07724/24 13:53 07/24/24 19:07 1.3-Dichlorober.zene ND 0.060 0.0076 mg/Kg 07724/24 13:53 07/24/24 19:07 1.3-Dichlorober.zene ND 0.060 0.0076 mg/Kg 07724/24 13:53 07/24/24 19:07 1.3-Dichlorober.zene ND 0.060 0.0076 mg/Kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloropropane ND 0.060 0.0076 mg/Kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloropropane ND 0.060 0.0076 mg/Kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloropropane ND 0.060 0.0076 mg/Kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloropropane ND 0.060 0.0076 mg/Kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloropropane ND 0.060 0.0076 mg/Kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloropropane ND 0.040 0.0088 mg/Kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloropropane ND 0.040 0.0088 mg/Kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloropropane ND 0.040 0.0088 mg/Kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloropropane ND 0.040 0.0088 mg/Kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloropropane ND 0.040 0.0088 mg/Kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloropropane ND 0.040 0.		ND	0.020				07/24/24 13:53	07/24/24 19:07	
1.1-Dichloropthene ND 0.040 0.012 mg/kg 07724/24 13:53 07/24/24 19:07 1.2.3-Trichloroptropane ND 0.040 0.0053 mg/kg 07724/24 13:53 07/24/24 19:07 1.2.3-Trichloroptropane ND 0.040 0.014 mg/kg 07724/24 13:53 07/24/24 19:07 1.2.4-Trimethylbenzene ND 0.060 0.015 mg/kg 07724/24 13:53 07/24/24 19:07 1.2.2-Dibromoethane ND 0.060 0.015 mg/kg 07724/24 13:53 07/24/24 19:07 1.2-Dibromoethane ND 0.060 0.015 mg/kg 07724/24 13:53 07/24/24 19:07 1.2-Dibromoethane ND 0.000 0.0087 mg/kg 07724/24 13:53 07/24/24 19:07 1.2-Dibromoethane ND 0.000 0.0087 mg/kg 07724/24 13:53 07/24/24 19:07 1.2-Dichloroptropane ND 0.000 0.0087 mg/kg 07724/24 13:53 07/24/24 19:07 1.2-Dichloroptropane ND 0.000 0.0086 mg/kg 07724/24 13:53 07/24/24 19:07 1.2-Dichloroptropane ND 0.000 0.0086 mg/kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloroptropane ND 0.000 0.0066 mg/kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloroptropane ND 0.000 0.0066 mg/kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloroptropane ND 0.000 0.0066 mg/kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloroptropane ND 0.000 0.0066 mg/kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloroptropane ND 0.000 0.0066 mg/kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloroptropane ND 0.000 0.0068 mg/kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloroptropane ND 0.000 0.0088 mg/kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloroptropane ND 0.000 0.0088 mg/kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloroptropane ND 0.000 0.0088 mg/kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloroptropane ND 0.000 0.0011 mg/kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloroptropane ND 0.0040 0.0088 mg/kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloroptropane ND 0.0040 0.0088 mg/kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloroptropane ND 0.0040 0.0088 mg/kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloroptropane ND 0.0040 0.0088 mg/kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloroptropane ND 0.0040 0.0088 mg/kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloroptropane ND 0.0040 0.0088 mg/kg 07724/24 13:53 07/24/24 19:07 1.3-Dichloroptropane ND 0.0040 0.0098 mg/kg 07724/24 13:53 07/24/24 19:07 1.3-	1,1,2-Trichloroethane	ND	0.020	0.0074	mg/Kg		07/24/24 13:53	07/24/24 19:07	
1.1-Dichloroperhene ND 0.040 0.012 mg/kg 07724/24 13:53 07/24/24 19:07 12.3-Tinchloropropane ND 0.040 0.0053 mg/kg 07724/24 13:53 07/24/24 19:07 12.3-Tinchloropropane ND 0.040 0.012 mg/kg 07724/24 13:53 07/24/24 19:07 12.3-Tinchloropropane ND 0.040 0.014 mg/kg 07724/24 13:53 07/24/24 19:07 12.2-Dibromo-Chloropropane ND 0.060 0.015 mg/kg 07724/24 13:53 07/24/24 19:07 12.2-Dibromoethane ND 0.060 0.015 mg/kg 07724/24 13:53 07/24/24 19:07 12.2-Dibromoethane ND 0.000 0.0087 mg/kg 07724/24 13:53 07/24/24 19:07 12.2-Dichloroperpane ND 0.000 0.0087 mg/kg 07724/24 13:53 07/24/24 19:07 12.2-Dichloroperpane ND 0.000 0.0086 mg/kg 07724/24 13:53 07/24/24 19:07 12.2-Dichloroperpane ND 0.000 0.0086 mg/kg 07724/24 13:53 07/24/24 19:07 12.2-Dichloroperpane ND 0.000 0.0086 mg/kg 07724/24 13:53 07/24/24 19:07 13.5-Timethylbenzene ND 0.060 0.0076 mg/kg 07724/24 13:53 07/24/24 19:07 13.5-Timethylbenzene ND 0.060 0.0076 mg/kg 07724/24 13:53 07/24/24 19:07 13.5-Dichloroperpane ND 0.060 0.0086 mg/kg 07724/24 13:53 07/24/24 19:07 13.5-Dichloroperpane ND 0.060 0.0086 mg/kg 07724/24 13:53 07/24/24 19:07 13.5-Dichloroperpane ND 0.060 0.0086 mg/kg 07724/24 13:53 07/24/24 19:07 13.5-Dichloroperpane ND 0.060 0.0088 mg/kg 07724/24 13:53 07/24/24 19:07 22.2-Dichloroperpane ND 0.060 0.0088 mg/kg 07724/24 13:53 07/24/24 19:07 22.2-Dichloroperpane ND 0.060 0.0011 mg/kg 07724/24 13:53 07/24/24 19:07 22.2-Dichloroperpane ND 0.040 0.0088 mg/kg 07724/24 13:53 07/24/24 19:07 22.2-Dichloroperpane ND 0.040 0.0088 mg/kg 07724/24 13:53 07/24/24 19:07 22.2-Dichloroperpane ND 0.040 0.0098 mg/kg 07724/24 13:53 07/24/24 19:07 22.2-Dichloroperpane ND 0.040 0.0098 mg/kg 07724/24 13:53 07/24/24 19:07 22.2-Dichloroperpane ND 0.040 0.0098 mg/kg 07724/24 13:53 07/24/24 19:07 22.2-Dichloroperpane ND 0.040 0.0098 mg/kg 07724/24 13:53 07/24/24 19:07 22.2-Dichloroperpane ND 0.040 0.0098 mg/kg 07724/24 13:53 07/24/24 19:07 22.2-Dichloroperpane ND 0.040 0.0098 mg/kg 07724/24 13:53 07/24/24 19:07 22.2-Dichloroperpane ND 0.040 0.0098 mg/kg 07724/24 13:53 07/24/24 19:07 22.	1,1-Dichloroethane	ND	0.040	0.0092	mg/Kg		07/24/24 13:53	07/24/24 19:07	
1.1-Dichloropropene	1,1-Dichloroethene	ND	0.040				07/24/24 13:53	07/24/24 19:07	
1,2,2-Trinethropropane         ND         0,040         0.014         mg/Kg         07/24/24 13:33         07/24/24 19:07           1,2-Dibromo-3-Chloropropane         ND         0.060         0.015         mg/Kg         07/24/24 13:53         07/24/24 19:07           1,2-Dibromoethane         ND         0.020         0.0038         mg/Kg         07/24/24 13:53         07/24/24 19:07           1,2-Dichlorobenzene         ND         0.040         0.0087         mg/Kg         07/24/24 13:53         07/24/24 19:07           1,2-Dichlorobenzene         ND         0.020         0.0055         mg/Kg         07/24/24 13:53         07/24/24 19:07           1,2-Dichlorobenzene         ND         0.040         0.0076         mg/Kg         07/24/24 13:53         07/24/24 19:07           1,3-Dichlorobenzene         ND         0.060         0.013         mg/Kg         07/24/24 13:53         07/24/24 19:07           1,3-Dichlorobenzene         ND         0.060         0.0011         mg/Kg         07/24/24 13:53         07/24/24 19:07           1,3-Dichloropropane         ND         0.060         0.011         mg/Kg         07/24/24 13:53         07/24/24 19:07           1,4-Dichlorobenzene         ND         0.040         0.0088         mg/Kg	1,1-Dichloropropene	ND	0.040				07/24/24 13:53	07/24/24 19:07	
1,2,4-Trimethylbenzene ND 0.040 0.014 mg/Kg 07724/24 13:53 07724/24 19:07 1.2-Dibromo-3-Chioropropane ND 0.060 0.015 mg/Kg 07724/24 13:53 07724/24 19:07 1.2-Dibromo-3-Chioropropane ND 0.020 0.0038 mg/Kg 07724/24 13:53 07724/24 19:07 1.2-Dibriorobethane ND 0.020 0.0036 mg/Kg 07724/24 13:53 07724/24 19:07 1.2-Dibriorobethane ND 0.020 0.0056 mg/Kg 07724/24 13:53 07724/24 19:07 1.2-Dibrioropropane ND 0.020 0.0066 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dibriorobenzene ND 0.020 0.0066 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dibrioropropane ND 0.000 0.0076 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dibrioropropane ND 0.000 0.0036 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dibrioropropane ND 0.060 0.0036 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dibrioropropane ND 0.060 0.0036 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dibrioropropane ND 0.060 0.0036 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dibrioropropane ND 0.060 0.0036 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dibrioropropane ND 0.060 0.0036 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dibrioropropane ND 0.060 0.0036 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dibrioropropane ND 0.060 0.0038 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dibrioropropane ND 0.000 0.0038 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dibrioropropane ND 0.000 0.0038 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dibrioropropane ND 0.000 0.0038 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dibrioropropane ND 0.000 0.0038 mg/Kg 07724/24 13:53 07724/24 19:07 1.3-Dibrioropropane ND 0.000 0.0038 mg/Kg 07724/24 13:53 07724/24 19:07 13-Dibrioropropane ND 0.000 0.0038 mg/Kg 07724/24 13:53 07724/24 19:07 13-Dibrioropropane ND 0.000 0.0038 mg/Kg 07724/24 13:53 07724/24 19:07 13-Dibrioropropane ND 0.000 0.0038 mg/Kg 07724/24 13:53 07724/24 19:07 13-Dibrioropropane ND 0.000 0.0008 mg/Kg 07724/24 13:53 07724/24 19:07 13-Dibrioropropane ND 0.000 0.0008 mg/Kg 07724/24 13:53 07724/24 19:07 13-Dibrioropropane ND 0.000 0.0008 mg/Kg 07724/24 13:53 07724/24 19:07 13-Dibrioropropane ND 0.000 0.0008 mg/Kg 07724/24 13:53 07724/24 19:07 0724/24 13:05 07724/	• •	ND	0.040				07/24/24 13:53	07/24/24 19:07	
1,2-Dibromo-3-Chloropropane ND 0,060 0,015 mg/Kg 07724/24 13:53 07724/24 19:07 1,2-Dibromoethane ND 0,020 0,0038 mg/Kg 07724/24 13:53 07724/24 19:07 1,2-Dibromoethane ND 0,040 0,0087 mg/Kg 07724/24 13:53 07724/24 19:07 1,2-Dichloropropane ND 0,020 0,0055 mg/Kg 07724/24 13:53 07724/24 19:07 1,2-Dichloropropane ND 0,020 0,0055 mg/Kg 07724/24 13:53 07724/24 19:07 1,3-Dichloropropane ND 0,040 0,0076 mg/Kg 07724/24 13:53 07724/24 19:07 1,3-Dichloropropane ND 0,000 0,0076 mg/Kg 07724/24 13:53 07724/24 19:07 1,3-Dichloropropane ND 0,060 0,013 mg/Kg 07724/24 13:53 07724/24 19:07 1,3-Dichloropropane ND 0,060 0,0056 mg/Kg 07724/24 13:53 07724/24 19:07 1,3-Dichloropropane ND 0,060 0,0011 mg/Kg 07724/24 13:53 07724/24 19:07 1,3-Dichloropropane ND 0,060 0,011 mg/Kg 07724/24 13:53 07724/24 19:07 1,3-Dichloropropane ND 0,060 0,011 mg/Kg 07724/24 13:53 07724/24 19:07 2,2-Dichloropropane ND 0,040 0,0012 mg/Kg 07724/24 13:53 07724/24 19:07 2,2-Dichloropropane ND 0,040 0,0088 mg/Kg 07724/24 13:53 07724/24 19:07 4-Chlorotoluene ND 0,040 0,0088 mg/Kg 07724/24 13:53 07724/24 19:07 4-Spropyloluene ND 0,040 0,0088 mg/Kg 07724/24 13:53 07724/24 19:07 4-Isopropyloluene ND 0,040 0,0088 mg/Kg 07724/24 13:53 07724/24 19:07 8-Isopropyloluene ND 0,040 0,0082 mg/Kg 07724/24 13:53 07724/24 19:07 8-Isopropyloluene ND 0,040 0,0082 mg/Kg 07724/24 13:53 07724/24 19:07 8-Isomodehloromethane ND 0,040 0,0082 mg/Kg 07724/24 13:53 07724/24 19:07 8-Isomodehloromethane ND 0,040 0,0082 mg/Kg 07724/24 13:53 07724/24 19:07 8-Isomodehloromethane ND 0,040 0,0085 mg/Kg 07724/24 13:53 07724/24 19:07 8-Isomodehloromethane ND 0,040 0,0085 mg/Kg 07724/24 13:53 07724/24 19:07 8-Isomodehloromethane ND 0,040 0,0086 mg/Kg 07724/24 13:53 07724/24 19:07 0,0086 mg/Kg 07724/24	···	ND	0.040				07/24/24 13:53	07/24/24 19:07	
1.2-Dichloromethane         ND         0.020         0.0038         mg/Kg         07/24/24 13:53         07/24/24 19:07           1.2-Dichlorobenzene         ND         0.020         0.0055         mg/Kg         07/24/24 13:53         07/24/24 19:07           1.2-Dichloropropane         ND         0.020         0.0066         mg/Kg         07/24/24 13:53         07/24/24 19:07           1.3-Dichlorobenzene         ND         0.060         0.013         mg/Kg         07/24/24 13:53         07/24/24 19:07           1.3-Dichlorobenzene         ND         0.060         0.013         mg/Kg         07/24/24 13:53         07/24/24 19:07           1.3-Dichlorobenzene         ND         0.060         0.013         mg/Kg         07/24/24 13:53         07/24/24 19:07           1.3-Dichlorobenzene         ND         0.060         0.011         mg/Kg         07/24/24 13:53         07/24/24 19:07           2.2-Dichloroporpane         ND         0.040         0.001         mg/Kg         07/24/24 13:53         07/24/24 19:07           2.2-Dichloroporpane         ND         0.040         0.008         mg/Kg         07/24/24 13:53         07/24/24 19:07           2-Chloroborome         ND         0.040         0.008         mg/Kg         07/24/24 13:53 <td></td> <td>ND</td> <td>0.060</td> <td></td> <td></td> <td></td> <td>07/24/24 13:53</td> <td>07/24/24 19:07</td> <td></td>		ND	0.060				07/24/24 13:53	07/24/24 19:07	
1,2-Dichlorobenzene ND 0,040 0,0087 mg/Kg 07/24/24 13:53 07/24/24 19:07 1,2-Dichloropropane ND 0,020 0,0066 mg/Kg 07/24/24 13:53 07/24/24 19:07 1,3-Dichloropropane ND 0,040 0,040 0,076 mg/Kg 07/24/24 13:53 07/24/24 19:07 1,3-Dichlorobenzene ND 0,040 0,040 0,076 mg/Kg 07/24/24 13:53 07/24/24 19:07 1,3-Dichloropropane ND 0,060 0,0056 mg/Kg 07/24/24 13:53 07/24/24 19:07 1,3-Dichloropropane ND 0,060 0,0056 mg/Kg 07/24/24 13:53 07/24/24 19:07 1,3-Dichloropropane ND 0,060 0,0056 mg/Kg 07/24/24 13:53 07/24/24 19:07 1,4-Dichloropropane ND 0,060 0,0056 mg/Kg 07/24/24 13:53 07/24/24 19:07 1,4-Dichloropropane ND 0,040 0,0088 mg/Kg 07/24/24 13:53 07/24/24 19:07 2,2-Dichloropropane ND 0,040 0,0088 mg/Kg 07/24/24 13:53 07/24/24 19:07 2,2-Dichloropropane ND 0,040 0,0088 mg/Kg 07/24/24 13:53 07/24/24 19:07 2,2-Dichloropropane ND 0,040 0,0088 mg/Kg 07/24/24 13:53 07/24/24 19:07 2,2-Dichloropropane ND 0,040 0,0088 mg/Kg 07/24/24 13:53 07/24/24 19:07 2,2-Dichloropropane ND 0,040 0,0088 mg/Kg 07/24/24 13:53 07/24/24 19:07 2,2-Dichloropropane ND 0,040 0,0088 mg/Kg 07/24/24 13:53 07/24/24 19:07 2,2-Dichloropropane ND 0,040 0,0088 mg/Kg 07/24/24 13:53 07/24/24 19:07 2,2-Dichloropropane ND 0,040 0,0088 mg/Kg 07/24/24 13:53 07/24/24 19:07 2,2-Dichloropropane ND 0,040 0,0088 mg/Kg 07/24/24 13:53 07/24/24 19:07 2,2-Dichloropropane ND 0,040 0,0	• •	ND							
1,2-Dichloroethane ND 0,020 0,0055 mg/Kg 07/24/24 13:53 07/24/24 19:07 1,2-Dichloropropane ND 0,020 0,0066 mg/Kg 07/24/24 13:53 07/24/24 19:07 1,3-Dichloropropane ND 0,040 0,0076 mg/Kg 07/24/24 13:53 07/24/24 19:07 1,3-Dichlorobenzene ND 0,060 0,013 mg/Kg 07/24/24 13:53 07/24/24 19:07 1,3-Dichlorobenzene ND 0,060 0,013 mg/Kg 07/24/24 13:53 07/24/24 19:07 1,3-Dichloropropane ND 0,060 0,0015 mg/Kg 07/24/24 13:53 07/24/24 19:07 2,2-Dichloropropane ND 0,040 0,0012 mg/Kg 07/24/24 13:53 07/24/24 19:07 2,2-Dichloropropane ND 0,040 0,0012 mg/Kg 07/24/24 13:53 07/24/24 19:07 2,2-Dichloropropane ND 0,040 0,0018 mg/Kg 07/24/24 13:53 07/24/24 19:07 2,2-Dichloropropane ND 0,040 0,0018 mg/Kg 07/24/24 13:53 07/24/24 19:07 2-Chlorotoluene ND 0,040 0,0098 mg/Kg 07/24/24 13:53 07/24/24 19:07 2-Chlorotoluene ND 0,040 0,0098 mg/Kg 07/24/24 13:53 07/24/24 19:07 2-Chlorotoluene ND 0,040 0,0098 mg/Kg 07/24/24 13:53 07/24/24 19:07 2-Chlorotoluene ND 0,040 0,0098 mg/Kg 07/24/24 13:53 07/24/24 19:07 2-Chlorotoluene ND 0,040 0,0098 mg/Kg 07/24/24 13:53 07/24/24 19:07 2-Chlorotomethane ND 0,040 0,0062 mg/Kg 07/24/24 13:53 07/24/24 19:07 2-Chlorotomethane ND 0,040 0,0062 mg/Kg 07/24/24 13:53 07/24/24 19:07 2-Chlorotomethane ND 0,040 0,0062 mg/Kg 07/24/24 13:53 07/24/24 19:07 2-Chlorotomethane ND 0,040 0,0062 mg/Kg 07/24/24 13:53 07/24/24 19:07 2-Chlorotemethane ND 0,040 0,040 0,040 mg/Kg 07/24/24 13:53 07/24/24 19:07 2-Chlorotemethane ND 0,040 0,040 mg/Kg 07/24/24 13:53 07/24/24 19:07 2-Chlorotemethane ND 0,040 0,040 mg/Kg 07/24/24 13:53 07/24/24 19:07 2-Chlorotemethane ND 0,040 0,040 mg/Kg 07/24/24 13:53 07/24/24 19:07 2-Chlorotemethane ND 0,040 0,040 mg/Kg 07/24/24 13:53 07/24/24 19:07 2-Chlorotemethane ND 0,040 0,040 mg/Kg 07/24/24 13:53 07/24/24 19:07 2-Chlorotemethane ND 0,040 0,040 mg/Kg 07/24/24 13:53 07/24/24 19:07 2-Chlorotemethane ND 0,040 0,040 mg/Kg 07/24/24 13:53 07/24/24 19:07 2-Chlorotemethane ND 0,040 0,040 mg/Kg 07/24/24 13:53 07/24/24 19:07 2-Chlorotemethane ND 0,040 0,040 mg/Kg 07/24/24 13:53 07/24/24 19:07 2-Chlorotemet	*								
1,2-Dichloropropane ND 0,020 0,0066 mg/kg 07724/24 13:53 07/24/24 19:07 1,3-5-Timiethylbenzene ND 0,040 0,0076 mg/kg 07724/24 13:53 07/24/24 19:07 1,3-Dichlorobenzene ND 0,060 0,013 mg/kg 07724/24 13:53 07/24/24 19:07 1,3-Dichloropropane ND 0,060 0,011 mg/kg 07724/24 13:53 07/24/24 19:07 1,3-Dichloropropane ND 0,060 0,011 mg/kg 07724/24 13:53 07/24/24 19:07 1,3-Dichloropropane ND 0,060 0,011 mg/kg 07724/24 13:53 07/24/24 19:07 2-Chlorotopropane ND 0,040 0,012 mg/kg 07724/24 13:53 07/24/24 19:07 2-Chlorotoluene ND 0,040 0,0088 mg/kg 07724/24 13:53 07/24/24 19:07 2-Chlorotoluene ND 0,040 0,0098 mg/kg 07724/24 13:53 07/24/24 19:07 2-Chlorotoluene ND 0,040 0,0098 mg/kg 07724/24 13:53 07/24/24 19:07 2-Chlorotoluene ND 0,040 0,0098 mg/kg 07724/24 13:53 07/24/24 19:07 2-Chlorotoluene ND 0,040 0,0098 mg/kg 07724/24 13:53 07/24/24 19:07 2-Chlorotoluene ND 0,040 0,0008 mg/kg 07724/24 13:53 07/24/24 19:07 2-Chlorotoluene ND 0,040 0,0008 mg/kg 07724/24 13:53 07/24/24 19:07 2-Chlorotomethane ND 0,040 0,0002 mg/kg 07724/24 13:53 07/24/24 19:07 2-Chlorotomethane ND 0,040 0,0005 mg/kg 07724/24 13:53 07/24/24 19:07 2-Chlorotomethane ND 0,040 0,0005 mg/kg 07724/24 13:53 07/24/24 19:07 2-Chlorotethane ND 0,040 0,0005 mg/kg 07724/24 13:53 07/24/24 19:07 2-Chlorotethane ND 0,040 0,0045 mg/kg 07724/24 13:53 07/24/24 19:07 Chlorotethane ND 0,040 0,0040 0,0041 mg/kg 07724/24 13:53 07/24/24 19:07 Chlorotethane ND 0,040 0,0040 0,0041 mg/kg 07724/24 13:53 07/24/24 19:07 Chlorotethane ND 0,040 0,0040 0,0041 mg/kg 07724/24 13:53 07/24/24 19:07 Chlorotethane ND 0,040 0,0041 mg/kg 07724/24 13:53 07/24/24 19:07 Chlorotethane ND 0,040 0,0041 mg/kg 07724/24 13:53 07/24/24 19:07 Chlorotethane ND 0,040 0,040 mg/kg 07724/24 13:53 07/24/24 19:07 Chloromethane ND 0,040 0,041 mg/kg 07724/24 13:53 07/24/24 19:07 Chlorotethane ND 0,040 0,041 mg/kg 07724/24 13:53 07/24/24 19:07 Chlorotethane ND 0,040 0,041 mg/kg 07724/24 13:53 07/24/24 19:07 Chlorotethane ND 0,040 mg/kg 07724/24 13:53 07/24/24 19:07 Chlorotethane ND 0,040 mg/kg 07724/24 13:53 07/24/24 1									
1,3,5-Trimethylbenzene         ND         0.040         0.0076         mg/kg         07/24/24 13:53         07/24/24 19:07           1,3-Dichloropopane         ND         0.060         0.015         mg/kg         07/24/24 13:53         07/24/24 19:07           1,3-Dichloropopane         ND         0.060         0.001         mg/kg         07/24/24 13:53         07/24/24 19:07           2,2-Dichloropropane         ND         0.040         0.011         mg/kg         07/24/24 13:53         07/24/24 19:07           2,C-Dichloroptoluene         ND         0.040         0.0088         mg/kg         07/24/24 13:53         07/24/24 19:07           4-Chlorotoluene         ND         0.040         0.0088         mg/kg         07/24/24 13:53         07/24/24 19:07           4-Lsopropytloluene         ND         0.040         0.010         mg/kg         07/24/24 13:53         07/24/24 19:07           Benzene         0.038         J         0.020         0.0038         mg/kg         07/24/24 13:53         07/24/24 19:07           Bromocheromethane         ND         0.040         0.0062         mg/kg         07/24/24 13:53         07/24/24 19:07           Bromoform         ND         0.040         0.0052         mg/kg         07/24/24 13:53<									
1,3-Dichlorobenzene         ND         0.060         0.013         mg/kg         07/24/24 13:53         07/24/24 19:07           1,3-Dichloropropane         ND         0.060         0.0056         mg/kg         07/24/24 13:53         07/24/24 19:07           1,4-Dichloropropane         ND         0.060         0.011         mg/kg         07/24/24 13:53         07/24/24 19:07           2,2-Dichloropropane         ND         0.040         0.008         mg/kg         07/24/24 13:53         07/24/24 19:07           2-Chlorotoluene         ND         0.040         0.0088         mg/kg         07/24/24 13:53         07/24/24 19:07           4-Isopropyltoluene         ND         0.040         0.0098         mg/kg         07/24/24 13:53         07/24/24 19:07           Benzene         0.0038         J         0.020         0.0038         mg/kg         07/24/24 13:53         07/24/24 19:07           Bromochichoromethane         ND         0.040         0.0042         mg/kg         07/24/24 13:53         07/24/24 19:07           Bromochichoromethane         ND         0.040         0.0055         mg/kg         07/24/24 13:53         07/24/24 19:07           Bromochichoromethane         ND         0.040         0.0045         mg/kg	• •								
1,3-Dichloropropane         ND         0.060         0.0560         mg/Kg         07/24/24 13:53         07/24/24 19:07           1,4-Dichlorobenzene         ND         0.060         0.011         mg/Kg         07/24/24 13:53         07/24/24 19:07           2,2-Dichloropropane         ND         0.040         0.018         mg/Kg         07/24/24 13:53         07/24/24 19:07           2-Chlorotoluene         ND         0.040         0.0088         mg/Kg         07/24/24 13:53         07/24/24 19:07           4-Chlorotoluene         ND         0.040         0.0098         mg/Kg         07/24/24 13:53         07/24/24 19:07           4-Chlorotoluene         ND         0.040         0.0038         mg/Kg         07/24/24 13:53         07/24/24 19:07           4-Lospropytloluene         ND         0.040         0.0042         mg/Kg         07/24/24 13:53         07/24/24 19:07           Benzone         0.033         J         0.020         0.0038         mg/Kg         07/24/24 13:53         07/24/24 19:07           Bornodichloromethane         ND         0.040         0.0042         mg/Kg         07/24/24 13:53         07/24/24 19:07           Bromodichloromethane         ND         0.040         0.0045         mg/Kg         07/24/24									
1,4-Dichlorobenzene         ND         0.060         0.011         mg/Kg         07/24/24 13:53         07/24/24 19:07           2,2-Dichloropropane         ND         0.040         0.012         mg/Kg         07/24/24 13:53         07/24/24 19:07           2,Chlorotoluene         ND         0.040         0.0088         mg/Kg         07/24/24 13:53         07/24/24 19:07           4-Chlorotoluene         ND         0.040         0.0088         mg/Kg         07/24/24 13:53         07/24/24 19:07           4-Isopropyltoluene         ND         0.040         0.010         mg/Kg         07/24/24 13:53         07/24/24 19:07           Benzene         0.0038         J         0.020         0.0038         mg/Kg         07/24/24 13:53         07/24/24 19:07           Bromoehzene         ND         0.040         0.0042         mg/Kg         07/24/24 13:53         07/24/24 19:07           Bromochioromethane         ND         0.040         0.0055         mg/Kg         07/24/24 13:53         07/24/24 19:07           Bromofichioromethane         ND         0.040         0.0045         mg/Kg         07/24/24 13:53         07/24/24 19:07           Chlorotentane         ND         0.020         0.0044         mg/Kg         07/24/24 13:53									
2,2-Dichloropropane         ND         0.040         0.012         mg/kg         07/24/24 13:53         07/24/24 19:07           2-Chlorotoluene         ND         0.040         0.088         mg/kg         07/24/24 13:53         07/24/24 19:07           4-Chlorotoluene         ND         0.040         0.098         mg/kg         07/24/24 13:53         07/24/24 19:07           4-Isopropylfoluene         ND         0.040         0.010         mg/kg         07/24/24 13:53         07/24/24 19:07           Bernee         0.0038         J         0.020         0.0038         mg/kg         07/24/24 13:53         07/24/24 19:07           Bromochloromethane         ND         0.040         0.0042         mg/kg         07/24/24 13:53         07/24/24 19:07           Bromochloromethane         ND         0.040         0.0062         mg/kg         07/24/24 13:53         07/24/24 19:07           Bromochloromethane         ND         0.040         0.0045         mg/kg         07/24/24 13:53         07/24/24 19:07           Bromochloromethane         ND         0.040         0.0045         mg/kg         07/24/24 13:53         07/24/24 19:07           Chloroform         ND         0.080         0.021         mg/kg         07/24/24 13:53	• •								
2-Chlorotoluene         ND         0.040         0.088         mg/kg         07/24/24 13:53         07/24/24 19:07           4-Chlorotoluene         ND         0.040         0.0998         mg/kg         07/24/24 13:53         07/24/24 19:07           4-Chlorotoluene         ND         0.040         0.001         mg/kg         07/24/24 13:53         07/24/24 19:07           Benzene         0.0038         J         0.020         0.0038         mg/kg         07/24/24 13:53         07/24/24 19:07           Bromochloromethane         ND         0.040         0.0062         mg/kg         07/24/24 13:53         07/24/24 19:07           Bromodichloromethane         ND         0.040         0.0062         mg/kg         07/24/24 13:53         07/24/24 19:07           Bromodichloromethane         ND         0.040         0.0045         mg/kg         07/24/24 13:53         07/24/24 19:07           Bromodichloromethane         ND         0.040         0.0045         mg/kg         07/24/24 13:53         07/24/24 19:07           Carbon tetrachloride         ND         0.020         0.0044         mg/kg         07/24/24 13:53         07/24/24 19:07           Chlorobenzene         ND         0.040         0.0048         mg/kg         07/24/24 13:									
4-Chlorotoluene ND 0.040 0.008 mg/kg 07/24/24 13:53 07/24/24 19:07 4-Isopropyltoluene ND 0.040 0.010 mg/kg 07/24/24 13:53 07/24/24 19:07 Benzene 0.0038 J 0.020 0.0038 mg/kg 07/24/24 13:53 07/24/24 19:07 Bromobenzene ND 0.040 0.0042 mg/kg 07/24/24 13:53 07/24/24 19:07 Bromochloromethane ND 0.040 0.0062 mg/kg 07/24/24 13:53 07/24/24 19:07 Bromochloromethane ND 0.040 0.0055 mg/kg 07/24/24 13:53 07/24/24 19:07 Bromochloromethane ND 0.040 0.0055 mg/kg 07/24/24 13:53 07/24/24 19:07 Bromochloromethane ND 0.040 0.0055 mg/kg 07/24/24 13:53 07/24/24 19:07 Bromochrom ND 0.040 0.0055 mg/kg 07/24/24 13:53 07/24/24 19:07 Chlorobenzene ND 0.040 0.0045 mg/kg 07/24/24 13:53 07/24/24 19:07 Chlorobenzene ND 0.040 0.0048 mg/kg 07/24/24 13:53 07/24/24 19:07 Chlorobenzene ND 0.040 0.0048 mg/kg 07/24/24 13:53 07/24/24 19:07 Chlorobenzene ND 0.040 0.0048 mg/kg 07/24/24 13:53 07/24/24 19:07 Chlorobenzene ND 0.080 0.021 mg/kg 07/24/24 13:53 07/24/24 19:07 Chlorobentane ND 0.080 0.0040 mg/kg 07/24/24 13:53 07/24/24 19:07 cis-1,2-Dichlorobethene ND 0.060 0.013 mg/kg 07/24/24 13:53 07/24/24 19:07 cis-1,2-Dichloropepene ND 0.060 0.013 mg/kg 07/24/24 13:53 07/24/24 19:07 cis-1,3-Dichloropepene ND 0.020 0.0040 mg/kg 07/24/24 13:53 07/24/24 19:07 cis-1,3-Dichloromethane ND 0.020 0.0040 mg/kg 07/24/24 13:53 07/24/24 19:07 cis-1,3-Dichloromethane ND 0.020 0.0040 mg/kg 07/24/24 13:53 07/24/24 19:07 cis-1,3-Dichloromethane ND 0.020 0.0040 mg/kg 07/24/24 13:53 07/24/24 19:07 cis-1,3-Dichloromethane ND 0.020 0.0040 mg/kg 07/24/24 13:53 07/24/24 19:07 cis-1,3-Dichloromethane ND 0.020 0.0040 mg/kg 07/24/24 13:53 07/24/24 19:07 cis-1,3-Dichloromethane ND 0.020 0.0040 mg/kg 07/24/24 13:53 07/24/24 19:07 cis-1,3-Dichloromethane ND 0.020 0.0040 mg/kg 07/24/24 13:53 07/24/24 19:07 cis-1,3-Dichloromethane ND 0.040 0.0040 mg/kg 07/24/24 13:53 07/24/24 19:07 cis-1,3-Dichloromethane ND 0.040 0.0040 mg/kg 07/24/24 13:53 07/24/24 19:07 cis-1,3-Dichloromethane ND 0.040 0.0040 mg/kg 07/24/24 13:53 07/24/24 19:07 cis-1,3-Dichloromethane ND 0.040 0.0060 mg/kg 07/24	• •								
A-Isopropyltoluene									
Benzene         0.0038         J         0.020         0.0038         mg/kg         07/24/24 13:53         07/24/24 19:07           Bromochoromethane         ND         0.040         0.0042         mg/kg         07/24/24 13:53         07/24/24 19:07           Bromochloromethane         ND         0.040         0.0062         mg/kg         07/24/24 13:53         07/24/24 19:07           Bromofichloromethane         ND         0.040         0.0055         mg/kg         07/24/24 13:53         07/24/24 19:07           Bromoform         ND         0.040         0.0045         mg/kg         07/24/24 13:53         07/24/24 19:07           Carbon tetrachloride         ND         0.020         0.0044         mg/kg         07/24/24 13:53         07/24/24 19:07           Chlorobenzene         ND         0.040         0.0048         mg/kg         07/24/24 13:53         07/24/24 19:07           Chlorobethane         ND         0.080         0.021         mg/kg         07/24/24 13:53         07/24/24 19:07           Chloromethane         ND         0.060         0.010         mg/kg         07/24/24 13:53         07/24/24 19:07           Cis-1,2-Dichloropropene         ND         0.060         0.013         mg/kg         07/24/24 13:53									
Bromobenzene         ND         0.040         0.0042         mg/kg         07/24/24 13:53         07/24/24 19:07           Bromochloromethane         ND         0.040         0.0062         mg/kg         07/24/24 13:53         07/24/24 19:07           Bromodichloromethane         ND         0.040         0.0055         mg/kg         07/24/24 13:53         07/24/24 19:07           Bromoform         ND         0.040         0.0045         mg/kg         07/24/24 13:53         07/24/24 19:07           Carbon tetrachloride         ND         0.040         0.0048         mg/kg         07/24/24 13:53         07/24/24 19:07           Chlorobenzene         ND         0.040         0.0048         mg/kg         07/24/24 13:53         07/24/24 19:07           Chlorobethane         ND         0.080         0.021         mg/kg         07/24/24 13:53         07/24/24 19:07           Chloromethane         ND         0.020         0.0042         mg/kg         07/24/24 13:53         07/24/24 19:07           Chloromethane         ND         0.060         0.010         mg/kg         07/24/24 13:53         07/24/24 19:07           Cis-1,3-Dichloropropene         ND         0.060         0.013         mg/kg         07/24/24 13:53         07/24/24 19:0									
Bromochloromethane         ND         0.040         0.062         mg/Kg         07/24/24 13:53         07/24/24 19:07           Bromodichloromethane         ND         0.040         0.0055         mg/Kg         07/24/24 13:53         07/24/24 19:07           Bromoform         ND         0.040         0.0045         mg/Kg         07/24/24 13:53         07/24/24 19:07           Carbon tetrachloride         ND         0.020         0.0044         mg/Kg         07/24/24 13:53         07/24/24 19:07           Chlorobenzene         ND         0.040         0.0048         mg/Kg         07/24/24 13:53         07/24/24 19:07           Chloroethane         ND         0.080         0.021         mg/Kg         07/24/24 13:53         07/24/24 19:07           Chloroethane         ND         0.080         0.021         mg/Kg         07/24/24 13:53         07/24/24 19:07           Chloromethane         ND         0.060         0.010         mg/Kg         07/24/24 13:53         07/24/24 19:07           Chloropethane         ND         0.060         0.013         mg/Kg         07/24/24 13:53         07/24/24 19:07           cis-1,3-Dichloropropene         ND         0.060         0.013         mg/Kg         07/24/24 13:53         07/24/24 19:07 <td></td> <td></td> <td></td> <td></td> <td>0 0</td> <td></td> <td></td> <td></td> <td></td>					0 0				
Bromodichloromethane         ND         0.040         0.055         mg/kg         07/24/24 13:53         07/24/24 19:07           Bromoform         ND         0.040         0.045         mg/kg         07/24/24 13:53         07/24/24 19:07           Carbon tetrachloride         ND         0.020         0.0044         mg/kg         07/24/24 13:53         07/24/24 19:07           Chlorobenzene         ND         0.040         0.0048         mg/kg         07/24/24 13:53         07/24/24 19:07           Chloroform         ND         0.080         0.021         mg/kg         07/24/24 13:53         07/24/24 19:07           Chloroform         ND         0.020         0.0042         mg/kg         07/24/24 13:53         07/24/24 19:07           Chloromethane         ND         0.060         0.011         mg/kg         07/24/24 13:53         07/24/24 19:07           Cis-1,2-Dichloroethene         ND         0.060         0.013         mg/kg         07/24/24 13:53         07/24/24 19:07           cis-1,3-Dichloropropene         ND         0.020         0.0040         mg/kg         07/24/24 13:53         07/24/24 19:07           Dibromomethane         ND         0.020         0.0040         mg/kg         07/24/24 13:53         07/24/24 19:07<									
Bromoform         ND         0.040         0.045         mg/kg         07/24/24 13:53         07/24/24 19:07           Carbon tetrachloride         ND         0.020         0.0044         mg/kg         07/24/24 13:53         07/24/24 19:07           Chlorobenzene         ND         0.040         0.0048         mg/kg         07/24/24 13:53         07/24/24 19:07           Chloroethane         ND         0.080         0.021         mg/kg         07/24/24 13:53         07/24/24 19:07           Chloroform         ND         0.020         0.0042         mg/kg         07/24/24 13:53         07/24/24 19:07           Chloromethane         ND         0.060         0.010         mg/kg         07/24/24 13:53         07/24/24 19:07           cis-1,2-Dichloroethene         ND         0.060         0.013         mg/kg         07/24/24 13:53         07/24/24 19:07           cis-1,3-Dichloropropene         ND         0.020         0.0040         mg/kg         07/24/24 13:53         07/24/24 19:07           Dibromochloromethane         ND         0.020         0.0049         mg/kg         07/24/24 13:53         07/24/24 19:07           Dichlorodifluoromethane         ND         0.040         0.0074         mg/kg         07/24/24 13:53         07/									
Carbon tetrachloride         ND         0.020         0.0044         mg/Kg         07/24/24 13:53         07/24/24 19:07           Chlorobenzene         ND         0.040         0.048         mg/Kg         07/24/24 13:53         07/24/24 19:07           Chloroethane         ND         0.080         0.021         mg/Kg         07/24/24 13:53         07/24/24 19:07           Chloroform         ND         0.020         0.0042         mg/Kg         07/24/24 13:53         07/24/24 19:07           Chloromethane         ND         0.060         0.010         mg/Kg         07/24/24 13:53         07/24/24 19:07           Chloromethane         ND         0.060         0.010         mg/Kg         07/24/24 13:53         07/24/24 19:07           Chloroptomethane         ND         0.060         0.013         mg/Kg         07/24/24 13:53         07/24/24 19:07           cis-1,3-Dichloroptopene         ND         0.020         0.0040         mg/Kg         07/24/24 13:53         07/24/24 19:07           Dibromochloromethane         ND         0.020         0.0049         mg/Kg         07/24/24 13:53         07/24/24 19:07           Dichlorodifluoromethane         ND         0.040         0.0074         mg/Kg         07/24/24 13:53         07/24/									
Chlorobenzene         ND         0.040         0.048         mg/Kg         07/24/24 13:53         07/24/24 19:07           Chloroethane         ND         0.080         0.021         mg/Kg         07/24/24 13:53         07/24/24 19:07           Chloroform         ND         0.020         0.0042         mg/Kg         07/24/24 13:53         07/24/24 19:07           Chloromethane         ND         0.060         0.010         mg/Kg         07/24/24 13:53         07/24/24 19:07           Cis-1,2-Dichloroethene         ND         0.060         0.013         mg/Kg         07/24/24 13:53         07/24/24 19:07           cis-1,3-Dichloropropene         ND         0.020         0.0040         mg/Kg         07/24/24 13:53         07/24/24 19:07           Dibromochloromethane         ND         0.020         0.0049         mg/Kg         07/24/24 13:53         07/24/24 19:07           Dibromomethane         ND         0.040         0.0074         mg/Kg         07/24/24 13:53         07/24/24 19:07           Dibromomethane         ND         0.040         0.0074         mg/Kg         07/24/24 13:53         07/24/24 19:07           Dibromomethane         ND         0.040         0.0074         mg/Kg         07/24/24 13:53         07/24/24 19:0									
Chloroethane         ND         0.080         0.021         mg/Kg         07/24/24 13:53         07/24/24 19:07           Chloroform         ND         0.020         0.0042         mg/Kg         07/24/24 13:53         07/24/24 19:07           Chloromethane         ND         0.060         0.010         mg/Kg         07/24/24 13:53         07/24/24 19:07           cis-1,2-Dichloroethene         ND         0.060         0.013         mg/Kg         07/24/24 13:53         07/24/24 19:07           cis-1,3-Dichloropropene         ND         0.020         0.0040         mg/Kg         07/24/24 13:53         07/24/24 19:07           Dibromochloromethane         ND         0.020         0.0049         mg/Kg         07/24/24 13:53         07/24/24 19:07           Dibromomethane         ND         0.040         0.0074         mg/Kg         07/24/24 13:53         07/24/24 19:07           Ethylbenzene         ND         0.040         0.0041         mg/Kg         07/24/24 13:53         07/24/24 19:07           Hexachlorobutadiene         ND         0.040         0.0041         mg/Kg         07/24/24 13:53         07/24/24 19:07           Methyl tert-butyl ether         ND         0.040         0.0086         mg/Kg         07/24/24 13:53 <td< td=""><td></td><td></td><td></td><td></td><td>0 0</td><td></td><td></td><td></td><td></td></td<>					0 0				
Chloroform         ND         0.020         0.0042         mg/kg         07/24/24 13:53         07/24/24 19:07           Chloromethane         ND         0.060         0.010         mg/kg         07/24/24 13:53         07/24/24 19:07           cis-1,2-Dichloroethene         ND         0.060         0.013         mg/kg         07/24/24 13:53         07/24/24 19:07           cis-1,3-Dichloropropene         ND         0.020         0.0040         mg/kg         07/24/24 13:53         07/24/24 19:07           Dibromochloromethane         ND         0.020         0.0049         mg/kg         07/24/24 13:53         07/24/24 19:07           Dibromomethane         ND         0.040         0.0074         mg/kg         07/24/24 13:53         07/24/24 19:07           Dibromomethane         ND         0.040         0.0074         mg/kg         07/24/24 13:53         07/24/24 19:07           Ethylbenzene         ND         0.040         0.0091         mg/kg         07/24/24 13:53         07/24/24 19:07           Hexachlorobutadiene         ND         0.040         0.0091         mg/kg         07/24/24 13:53         07/24/24 19:07           Isopropylbenzene         ND         0.040         0.0086         mg/kg         07/24/24 13:53         07/									
Chloromethane         ND         0.060         0.010         mg/Kg         07/24/24 13:53         07/24/24 19:07           cis-1,2-Dichloroethene         ND         0.060         0.013         mg/Kg         07/24/24 13:53         07/24/24 19:07           cis-1,3-Dichloropropene         ND         0.020         0.0040         mg/Kg         07/24/24 13:53         07/24/24 19:07           Dibromochloromethane         ND         0.020         0.0049         mg/Kg         07/24/24 13:53         07/24/24 19:07           Dibromomethane         ND         0.040         0.0074         mg/Kg         07/24/24 13:53         07/24/24 19:07           Dichlorodifluoromethane         ND         0.040         0.0074         mg/Kg         07/24/24 13:53         07/24/24 19:07           Ethylbenzene         ND         0.040         0.0091         mg/Kg         07/24/24 13:53         07/24/24 19:07           Hexachlorobutadiene         ND         0.040         0.0091         mg/Kg         07/24/24 13:53         07/24/24 19:07           Isopropylbenzene         ND         0.040         0.0086         mg/Kg         07/24/24 13:53         07/24/24 19:07           Methyl tert-butyl ether         ND         0.040         0.0060         mg/Kg         07/24/24 13:5									
cis-1,2-Dichloroethene         ND         0.060         0.013         mg/Kg         07/24/24 13:53         07/24/24 19:07           cis-1,3-Dichloropropene         ND         0.020         0.0040         mg/Kg         07/24/24 13:53         07/24/24 19:07           Dibromochloromethane         ND         0.020         0.0049         mg/Kg         07/24/24 13:53         07/24/24 19:07           Dibromomethane         ND         0.040         0.0074         mg/Kg         07/24/24 13:53         07/24/24 19:07           Dichlorodifluoromethane         ND         0.25         0.046         mg/Kg         07/24/24 13:53         07/24/24 19:07           Ethylbenzene         ND         0.040         0.0091         mg/Kg         07/24/24 13:53         07/24/24 19:07           Hexachlorobutadiene         ND         0.10         0.024         mg/Kg         07/24/24 13:53         07/24/24 19:07           Isopropylbenzene         ND         0.040         0.0086         mg/Kg         07/24/24 13:53         07/24/24 19:07           Methyl tert-butyl ether         ND         0.040         0.0060         mg/Kg         07/24/24 13:53         07/24/24 19:07           Methyl tert-butyl ether         ND         0.040         0.0060         mg/Kg         07/24/									
cis-1,3-Dichloropropene         ND         0.020         0.040 mg/Kg         07/24/24 13:53         07/24/24 19:07           Dibromochloromethane         ND         0.020         0.0049 mg/Kg         07/24/24 13:53         07/24/24 19:07           Dibromomethane         ND         0.040         0.0074 mg/Kg         07/24/24 13:53         07/24/24 19:07           Dichlorodifluoromethane         ND         0.25         0.046 mg/Kg         07/24/24 13:53         07/24/24 19:07           Ethylbenzene         ND         0.040         0.0091 mg/Kg         07/24/24 13:53         07/24/24 19:07           Hexachlorobutadiene         ND         0.10         0.024 mg/Kg         07/24/24 13:53         07/24/24 19:07           Isopropylbenzene         ND         0.040         0.0086 mg/Kg         07/24/24 13:53         07/24/24 19:07           Methyl tert-butyl ether         ND         0.040         0.0060 mg/Kg         07/24/24 13:53         07/24/24 19:07           Methylene Chloride         0.031 J B         0.25         0.026 mg/Kg         07/24/24 13:53         07/24/24 19:07           m-Xylene & p-Xylene         ND         0.040         0.0071 mg/Kg         07/24/24 13:53         07/24/24 19:07           N-Propylbenzene         ND         0.040         0.019 mg/Kg									
Dibromochloromethane         ND         0.020         0.049 mg/Kg         07/24/24 13:53         07/24/24 19:07           Dibromomethane         ND         0.040         0.0074 mg/Kg         07/24/24 13:53         07/24/24 19:07           Dichlorodifluoromethane         ND         0.25         0.046 mg/Kg         07/24/24 13:53         07/24/24 19:07           Ethylbenzene         ND         0.040         0.0091 mg/Kg         07/24/24 13:53         07/24/24 19:07           Hexachlorobutadiene         ND         0.10         0.024 mg/Kg         07/24/24 13:53         07/24/24 19:07           Isopropylbenzene         ND         0.040         0.0086 mg/Kg         07/24/24 13:53         07/24/24 19:07           Methyl tert-butyl ether         ND         0.040         0.0060 mg/Kg         07/24/24 13:53         07/24/24 19:07           Methylene Chloride         0.031 JB         0.25         0.026 mg/Kg         07/24/24 13:53         07/24/24 19:07           m-Xylene & p-Xylene         ND         0.040         0.0071 mg/Kg         07/24/24 13:53         07/24/24 19:07           n-Butylbenzene         ND         0.040         0.019 mg/Kg         07/24/24 13:53         07/24/24 19:07           N-Propylbenzene         ND         0.040         0.015 mg/Kg         07									
Dibromomethane         ND         0.040         0.0074         mg/Kg         07/24/24 13:53         07/24/24 19:07           Dichlorodifluoromethane         ND         0.25         0.046         mg/Kg         07/24/24 13:53         07/24/24 19:07           Ethylbenzene         ND         0.040         0.0091         mg/Kg         07/24/24 13:53         07/24/24 19:07           Hexachlorobutadiene         ND         0.10         0.024         mg/Kg         07/24/24 13:53         07/24/24 19:07           Isopropylbenzene         ND         0.040         0.0086         mg/Kg         07/24/24 13:53         07/24/24 19:07           Methyl tert-butyl ether         ND         0.040         0.0060         mg/Kg         07/24/24 13:53         07/24/24 19:07           Methylene Chloride         0.031         J B         0.25         0.026         mg/Kg         07/24/24 13:53         07/24/24 19:07           m-Xylene & p-Xylene         ND         0.040         0.0071         mg/Kg         07/24/24 13:53         07/24/24 19:07           n-Butylbenzene         ND         0.040         0.019         mg/Kg         07/24/24 13:53         07/24/24 19:07           N-Propylbenzene         ND         0.040         0.019         mg/Kg         07/24/2	···								
Dichlorodifluoromethane         ND         0.25         0.046 mg/Kg         07/24/24 13:53         07/24/24 19:07           Ethylbenzene         ND         0.040         0.0091 mg/Kg         07/24/24 13:53         07/24/24 19:07           Hexachlorobutadiene         ND         0.10         0.024 mg/Kg         07/24/24 13:53         07/24/24 19:07           Isopropylbenzene         ND         0.040         0.0086 mg/Kg         07/24/24 13:53         07/24/24 19:07           Methyl tert-butyl ether         ND         0.040         0.0060 mg/Kg         07/24/24 13:53         07/24/24 19:07           Methylene Chloride         0.031 J B         0.25         0.026 mg/Kg         07/24/24 13:53         07/24/24 19:07           m-Xylene & p-Xylene         ND         0.040         0.0071 mg/Kg         07/24/24 13:53         07/24/24 19:07           n-Butylbenzene         ND         0.040         0.019 mg/Kg         07/24/24 13:53         07/24/24 19:07           N-Propylbenzene         ND         0.040         0.015 mg/Kg         07/24/24 13:53         07/24/24 19:07           o-Xylene         ND         0.040         0.0050 mg/Kg         07/24/24 13:53         07/24/24 19:07           sec-Butylbenzene         ND         0.040         0.0050 mg/Kg         07/24/24 1									
Ethylbenzene         ND         0.040         0.091         mg/Kg         07/24/24 13:53         07/24/24 19:07           Hexachlorobutadiene         ND         0.10         0.024         mg/Kg         07/24/24 13:53         07/24/24 19:07           Isopropylbenzene         ND         0.040         0.086         mg/Kg         07/24/24 13:53         07/24/24 19:07           Methyl tert-butyl ether         ND         0.040         0.060         mg/Kg         07/24/24 13:53         07/24/24 19:07           Methylene Chloride         0.031         J B         0.25         0.026         mg/Kg         07/24/24 13:53         07/24/24 19:07           m-Xylene & p-Xylene         ND         0.040         0.0071         mg/Kg         07/24/24 13:53         07/24/24 19:07           n-Butylbenzene         ND         0.040         0.019         mg/Kg         07/24/24 13:53         07/24/24 19:07           N-Propylbenzene         ND         0.040         0.015         mg/Kg         07/24/24 13:53         07/24/24 19:07           o-Xylene         ND         0.040         0.0050         mg/Kg         07/24/24 13:53         07/24/24 19:07           sec-Butylbenzene         ND         0.040         0.0050         mg/Kg         07/24/24 13:53									
Hexachlorobutadiene         ND         0.10         0.024 mg/Kg         07/24/24 13:53         07/24/24 19:07           Isopropylbenzene         ND         0.040         0.086 mg/Kg         07/24/24 13:53         07/24/24 19:07           Methyl tert-butyl ether         ND         0.040         0.0060 mg/Kg         07/24/24 13:53         07/24/24 19:07           Methylene Chloride         0.031 JB         0.25         0.026 mg/Kg         07/24/24 13:53         07/24/24 19:07           m-Xylene & p-Xylene         ND         0.040         0.0071 mg/Kg         07/24/24 13:53         07/24/24 19:07           n-Butylbenzene         ND         0.040         0.019 mg/Kg         07/24/24 13:53         07/24/24 19:07           N-Propylbenzene         ND         0.040         0.015 mg/Kg         07/24/24 13:53         07/24/24 19:07           o-Xylene         ND         0.040         0.0050 mg/Kg         07/24/24 13:53         07/24/24 19:07           sec-Butylbenzene         ND         0.040         0.0086 mg/Kg         07/24/24 13:53         07/24/24 19:07									
Isopropylbenzene									
Methyl tert-butyl ether         ND         0.040         0.060 mg/Kg         07/24/24 13:53         07/24/24 19:07           Methylene Chloride         0.031 JB         0.25         0.026 mg/Kg         07/24/24 13:53         07/24/24 19:07           m-Xylene & p-Xylene         ND         0.040         0.0071 mg/Kg         07/24/24 13:53         07/24/24 19:07           n-Butylbenzene         ND         0.040         0.019 mg/Kg         07/24/24 13:53         07/24/24 19:07           N-Propylbenzene         ND         0.040         0.015 mg/Kg         07/24/24 13:53         07/24/24 19:07           o-Xylene         ND         0.040         0.0050 mg/Kg         07/24/24 13:53         07/24/24 19:07           sec-Butylbenzene         ND         0.040         0.0086 mg/Kg         07/24/24 13:53         07/24/24 19:07									
Methylene Chloride         0.031 J B         0.25 0.026 mg/Kg         07/24/24 13:53 07/24/24 19:07           m-Xylene & p-Xylene         ND         0.040 0.0071 mg/Kg         07/24/24 13:53 07/24/24 19:07           n-Butylbenzene         ND         0.040 0.019 mg/Kg         07/24/24 13:53 07/24/24 19:07           N-Propylbenzene         ND         0.040 0.015 mg/Kg         07/24/24 13:53 07/24/24 19:07           o-Xylene         ND         0.040 0.0050 mg/Kg         07/24/24 13:53 07/24/24 19:07           sec-Butylbenzene         ND         0.040 0.0086 mg/Kg         07/24/24 13:53 07/24/24 19:07									
m-Xylene & p-Xylene         ND         0.040         0.0071         mg/Kg         07/24/24 13:53         07/24/24 19:07           n-Butylbenzene         ND         0.040         0.019         mg/Kg         07/24/24 13:53         07/24/24 19:07           N-Propylbenzene         ND         0.040         0.015         mg/Kg         07/24/24 13:53         07/24/24 19:07           o-Xylene         ND         0.040         0.050         mg/Kg         07/24/24 13:53         07/24/24 19:07           sec-Butylbenzene         ND         0.040         0.086         mg/Kg         07/24/24 13:53         07/24/24 19:07	•								
n-Butylbenzene         ND         0.040         0.019 mg/Kg         07/24/24 13:53         07/24/24 19:07           N-Propylbenzene         ND         0.040         0.015 mg/Kg         07/24/24 13:53         07/24/24 19:07           o-Xylene         ND         0.040         0.0050 mg/Kg         07/24/24 13:53         07/24/24 19:07           sec-Butylbenzene         ND         0.040         0.0086 mg/Kg         07/24/24 13:53         07/24/24 19:07									
N-Propylbenzene         ND         0.040         0.015         mg/Kg         07/24/24 13:53         07/24/24 19:07           o-Xylene         ND         0.040         0.050         mg/Kg         07/24/24 13:53         07/24/24 19:07           sec-Butylbenzene         ND         0.040         0.086         mg/Kg         07/24/24 13:53         07/24/24 19:07									
o-Xylene ND 0.040 0.050 mg/Kg 07/24/24 13:53 07/24/24 19:07 sec-Butylbenzene ND 0.040 0.086 mg/Kg 07/24/24 13:53 07/24/24 19:07	•								
sec-Butylbenzene ND 0.040 0.0086 mg/Kg 07/24/24 13:53 07/24/24 19:07									
,									
Styrene ND 0.040 0.013 mg/Kg 07/24/24 13:53 07/24/24 19:07	•								
t-Butylbenzene ND 0.040 0.0077 mg/Kg 07/24/24 13:53 07/24/24 19:07									

**Eurofins Seattle** 

7/30/2024

Client: ERM-West Job ID: 580-142311-1

Project/Site: Arkema PDI Sampling

**Client Sample ID: TB-02-SO-20240719** 

Lab Sample ID: 580-142311-4 Date Collected: 07/19/24 16:00 **Matrix: Solid** 

Date Received: 07/23/24 12:29

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		07/24/24 13:53	07/24/24 19:07	1
Toluene	ND		0.060	0.014	mg/Kg		07/24/24 13:53	07/24/24 19:07	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		07/24/24 13:53	07/24/24 19:07	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		07/24/24 13:53	07/24/24 19:07	1
Trichloroethene	ND		0.040	0.010	mg/Kg		07/24/24 13:53	07/24/24 19:07	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		07/24/24 13:53	07/24/24 19:07	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		07/24/24 13:53	07/24/24 19:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				07/24/24 13:53	07/24/24 19:07	1
4-Bromofluorobenzene (Surr)	97		80 - 120				07/24/24 13:53	07/24/24 19:07	1
Dibromofluoromethane (Surr)	101		80 - 120				07/24/24 13:53	07/24/24 19:07	1
Toluene-d8 (Surr)	101		80 - 120				07/24/24 13:53	07/24/24 19:07	1

Method: SW846 8260D - Vo	olatile Organic	Compoun	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND		0.080	0.040	mg/Kg		07/29/24 08:45	07/29/24 15:06	1
1,2,4-Trichlorobenzene	ND		0.080	0.043	mg/Kg		07/29/24 08:45	07/29/24 15:06	1
Naphthalene	ND		0.15	0.039	mg/Kg		07/29/24 08:45	07/29/24 15:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				07/29/24 08:45	07/29/24 15:06	1
4-Bromofluorobenzene (Surr)	103		80 - 120				07/29/24 08:45	07/29/24 15:06	1
Dibromofluoromethane (Surr)	105		80 - 120				07/29/24 08:45	07/29/24 15:06	1
Toluene-d8 (Surr)	98		80 - 120				07/29/24 08:45	07/29/24 15:06	1

Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	- RA2					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	ND		0.10	0.038	mg/Kg		07/29/24 08:46	07/29/24 11:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		80 - 121				07/29/24 08:46	07/29/24 11:48	1
4-Bromofluorobenzene (Surr)	100		80 - 120				07/29/24 08:46	07/29/24 11:48	1
Dibromofluoromethane (Surr)	103		80 - 120				07/29/24 08:46	07/29/24 11:48	1
Toluene-d8 (Surr)	101		80 - 120				07/29/24 08:46	07/29/24 11:48	1

Client: ERM-West Job ID: 580-142311-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-09-SO-39.5-20240719

Lab Sample ID: 580-142311-5 Date Collected: 07/19/24 16:15 Matrix: Solid Date Received: 07/23/24 12:29 Percent Solids: 91.3

Method: SW846 8260D - Volatile Organic Compounds by GC/MS **MDL** Unit Dil Fac Analyte Result Qualifier D Prepared Analyzed mg/Kg 1,1,1,2-Tetrachloroethane ND 0.020 0.0051 07/24/24 13:53 07/24/24 19:50 ND 1.1.1-Trichloroethane 0.041 0.0047 mg/Kg 07/24/24 13:53 07/24/24 19:50 1,1,2,2-Tetrachloroethane ND 0.020 0.0077 mg/Kg 07/24/24 13:53 07/24/24 19:50 ND 0.0075 07/24/24 13:53 07/24/24 19:50 1,1,2-Trichloroethane 0.020 mg/Kg ND 0.041 0.0093 mg/Kg 07/24/24 13:53 07/24/24 19:50 1 1-Dichloroethane 1,1-Dichloroethene ND 0.041 0.012 mg/Kg 07/24/24 13:53 07/24/24 19:50 1,1-Dichloropropene ND 0.041 0.0054 mg/Kg 07/24/24 13:53 07/24/24 19:50 ND 0.041 0.012 mg/Kg 07/24/24 13:53 07/24/24 19:50 1,2,3-Trichloropropane 1,2,4-Trimethylbenzene ND 0.041 0.014 mg/Kg 07/24/24 13:53 07/24/24 19:50 0.015 1,2-Dibromo-3-Chloropropane ND 0.061 mg/Kg 07/24/24 13:53 07/24/24 19:50 1,2-Dibromoethane ND 0.020 0.0039 mg/Kg 07/24/24 13:53 07/24/24 19:50 mg/Kg 1.2-Dichlorobenzene ND 0.041 8800.0 07/24/24 13:53 07/24/24 19:50 1 1,2-Dichloroethane ND 0.020 0.0056 mg/Kg 07/24/24 13:53 07/24/24 19:50 1,2-Dichloropropane ND 0.020 0.0067 mg/Kg 07/24/24 13:53 07/24/24 19:50 ND 0.041 0.0077 mg/Kg 07/24/24 13:53 07/24/24 19:50 1,3,5-Trimethylbenzene 1,3-Dichlorobenzene NΩ 0.061 0.014 mg/Kg 07/24/24 13:53 07/24/24 19:50 0.0057 1,3-Dichloropropane ND 0.061 mg/Kg 07/24/24 13:53 07/24/24 19:50 0.061 0.011 mg/Kg 07/24/24 13:53 07/24/24 19:50 1.4-Dichlorobenzene 0.023 ND 0.041 0.012 mg/Kg 07/24/24 13:53 07/24/24 19:50 2,2-Dichloropropane 2-Chlorotoluene ND 0.041 0.0089 mg/Kg 07/24/24 13:53 07/24/24 19:50 4-Chlorotoluene ND 0.041 0.010 mg/Kg ť. 07/24/24 13:53 07/24/24 19:50 0.033 0.041 0.010 mg/Kg 07/24/24 13:53 07/24/24 19:50 4-Isopropyltoluene 0.0075 0.0039 mg/Kg 07/24/24 13:53 07/24/24 19:50 **Benzene** 0.020 Bromobenzene ND 0.041 0.0043 mg/Kg 07/24/24 13:53 07/24/24 19:50 Bromochloromethane ND 0.041 0.0063 mg/Kg 07/24/24 13:53 07/24/24 19:50 Bromodichloromethane ND 0.0056 07/24/24 13:53 07/24/24 19:50 0.041 mg/Kg **Bromoform** ND 0.041 0.0046 mg/Kg 07/24/24 13:53 07/24/24 19:50 Carbon tetrachloride 0.0045 ND 0.020 mg/Kg 07/24/24 13:53 07/24/24 19:50 Chloroethane 0.021 ND 0.081 mg/Kg 07/24/24 13:53 07/24/24 19:50 Chloroform ND 0.0043 mg/Kg 07/24/24 13:53 07/24/24 19:50 0.020 Chloromethane ND 0.061 0.010 mg/Kg 07/24/24 13:53 07/24/24 19:50 ND 0.061 0.013 mg/Kg 07/24/24 13:53 07/24/24 19:50 cis-1.2-Dichloroethene mg/Kg cis-1,3-Dichloropropene ND 0.020 0.0041 07/24/24 13:53 07/24/24 19:50 ND 0.0050 07/24/24 13:53 07/24/24 19:50 Dibromochloromethane 0.020 mg/Kg Dibromomethane ND 0.041 0.0075 mg/Kg 07/24/24 13:53 07/24/24 19:50 Dichlorodifluoromethane ND 0.047 mg/Kg 07/24/24 13:53 07/24/24 19:50 0.25 0.0092 Ethylbenzene 0.024 0.041 mg/Kg 07/24/24 13:53 07/24/24 19:50 Hexachlorobutadiene ND 0.10 0.024 mg/Kg 07/24/24 13:53 07/24/24 19:50 ND 0.041 0.0087 mg/Kg 07/24/24 13:53 07/24/24 19:50 Isopropylbenzene 0.0061 Methyl tert-butyl ether ND 0.041 mg/Kg 07/24/24 13:53 07/24/24 19:50 **Methylene Chloride** 0.033 0.25 0.026 mg/Kg 07/24/24 13:53 07/24/24 19:50 J<sub>B</sub> m-Xylene & p-Xylene 0.14 0.041 0.0072 mg/Kg 07/24/24 13:53 07/24/24 19:50 0.019 0.041 07/24/24 13:53 07/24/24 19:50 n-Butylbenzene ND mg/Kg N-Propylbenzene 0.041 0.015 07/24/24 13:53 07/24/24 19:50 ND mg/Kg o-Xylene 0.030 0.041 0.0051 mg/Kg 07/24/24 13:53 07/24/24 19:50 sec-Butylbenzene ND 0.041 0.0087 mg/Kg 07/24/24 13:53 07/24/24 19:50 ND 07/24/24 13:53 07/24/24 19:50 Styrene 0.041 0.013 mg/Kg t-Butylbenzene ND 0.041 0.0078 mg/Kg 07/24/24 13:53 07/24/24 19:50 07/24/24 13:53 07/24/24 19:50 Tetrachloroethene 0.015 J 0.041 0.0054 mg/Kg

**Eurofins Seattle** 

7/30/2024

Client: ERM-West Job ID: 580-142311-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-09-SO-39.5-20240719

Date Collected: 07/19/24 16:15 Date Received: 07/23/24 12:29

Lab Sample ID: 580-142311-5

**Matrix: Solid** Percent Solids: 91.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		0.061	0.014	mg/Kg	<u></u>	07/24/24 13:53	07/24/24 19:50	1
trans-1,2-Dichloroethene	ND		0.061	0.015	mg/Kg	₩	07/24/24 13:53	07/24/24 19:50	1
trans-1,3-Dichloropropene	ND		0.041	0.0071	mg/Kg	₩	07/24/24 13:53	07/24/24 19:50	1
Trichloroethene	ND		0.041	0.010	mg/Kg	₩	07/24/24 13:53	07/24/24 19:50	1
Trichlorofluoromethane	ND		0.081	0.026	mg/Kg	₩	07/24/24 13:53	07/24/24 19:50	1
Vinyl chloride	ND		0.10	0.019	mg/Kg	₩	07/24/24 13:53	07/24/24 19:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		80 - 121				07/24/24 13:53	07/24/24 19:50	1
4-Bromofluorobenzene (Surr)	102		80 - 120				07/24/24 13:53	07/24/24 19:50	1
Dibromofluoromethane (Surr)	99		80 - 120				07/24/24 13:53	07/24/24 19:50	1
Toluene-d8 (Surr)	97		80 - 120				07/24/24 13:53	07/24/24 19:50	1

Method: SW846 8260D - Vo	nathe Organic	Compoun	as by GC/MS	- DL					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	ND		2.2	0.83	mg/Kg	<u></u>	07/30/24 08:00	07/30/24 15:06	1
Chlorobenzene	35		0.87	0.10	mg/Kg	₩	07/30/24 08:00	07/30/24 15:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		80 - 121				07/30/24 08:00	07/30/24 15:06	1
4-Bromofluorobenzene (Surr)	99		80 - 120				07/30/24 08:00	07/30/24 15:06	1
Dibromofluoromethane (Surr)	81		80 - 120				07/30/24 08:00	07/30/24 15:06	1
Toluene-d8 (Surr)	100		80 - 120				07/30/24 08:00	07/30/24 15:06	1

Method: SW846 8260D - Vo	name Organic	Compount	us by contino	- 11/					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND		0.081	0.040	mg/Kg	₽	07/29/24 08:45	07/29/24 15:52	1
1,2,4-Trichlorobenzene	ND		0.081	0.043	mg/Kg	₽	07/29/24 08:45	07/29/24 15:52	1
Naphthalene	0.51		0.15	0.040	mg/Kg	₩	07/29/24 08:45	07/29/24 15:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Surrogate 1,2-Dichloroethane-d4 (Surr)	% <b>Recovery</b> 99	Qualifier	80 - 121					<b>Analyzed</b> 07/29/24 15:52	Dil Fac
		Qualifier					07/29/24 08:45		<b>Dil Fac</b> 1 1
1,2-Dichloroethane-d4 (Surr)	99	Qualifier	80 - 121				07/29/24 08:45 07/29/24 08:45	07/29/24 15:52	1 1 1 1

General Chemistry Analyte	Result Qualifier	RL	RL Unit	t D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	91.3	0.1	0.1 %			07/25/24 19:34	1
Percent Moisture (SM22 2540G)	8.7	0.1	0.1 %			07/25/24 19:34	1

Client: ERM-West Job ID: 580-142311-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-09-SO-40.5-20240722

Lab Sample ID: 580-142311-6 Date Collected: 07/22/24 09:00 **Matrix: Solid** Date Received: 07/23/24 12:29 Percent Solids: 83.1

Method: SW846 8260D - Vola	Result Qualifier	DI	MIDI	l lmi4	P	Dronoved	A notice of	Dil E-
analyte	<u> </u>	RL		Unit	<u>D</u>	Prepared	Analyzed	Dil Fa
,1,1,2-Tetrachloroethane	ND	0.025	0.0063		₩.	07/24/24 13:53		
,1,1-Trichloroethane	ND	0.050	0.0058		<b>*</b>		07/24/24 20:11	
1,2,2-Tetrachloroethane	ND	0.025	0.0096				07/24/24 20:11	
1,2-Trichloroethane	ND	0.025	0.0093		<b>*</b>		07/24/24 20:11	
1-Dichloroethane	ND	0.050		mg/Kg	₽		07/24/24 20:11	
1-Dichloroethene	ND	0.050		mg/Kg	<u>.</u> .		07/24/24 20:11	
,1-Dichloropropene	ND	0.050	0.0067	0 0	☼		07/24/24 20:11	
,2,3-Trichloropropane	ND	0.050		mg/Kg	☼		07/24/24 20:11	
2,4-Trimethylbenzene	ND	0.050		mg/Kg		07/24/24 13:53		
,2-Dibromo-3-Chloropropane	ND	0.076		mg/Kg	₩	07/24/24 13:53		
,2-Dibromoethane	ND	0.025	0.0048		₩		07/24/24 20:11	
2-Dichlorobenzene	ND	0.050		mg/Kg	₩	07/24/24 13:53	07/24/24 20:11	
,2-Dichloroethane	ND	0.025	0.0069		₩	07/24/24 13:53	07/24/24 20:11	
2-Dichloropropane	ND	0.025	0.0083		₩	07/24/24 13:53	07/24/24 20:11	
3,5-Trimethylbenzene	ND	0.050	0.0096		₩	07/24/24 13:53	07/24/24 20:11	
3-Dichlorobenzene	ND	0.076	0.017	mg/Kg	₩	07/24/24 13:53	07/24/24 20:11	
3-Dichloropropane	ND	0.076	0.0071	mg/Kg	₩	07/24/24 13:53	07/24/24 20:11	
4-Dichlorobenzene	ND	0.076	0.014	mg/Kg	☼	07/24/24 13:53	07/24/24 20:11	
2-Dichloropropane	ND	0.050	0.015	mg/Kg	₽	07/24/24 13:53	07/24/24 20:11	
Chlorotoluene	ND	0.050	0.011	mg/Kg	₩	07/24/24 13:53	07/24/24 20:11	
Chlorotoluene	ND	0.050	0.012	mg/Kg	₩	07/24/24 13:53	07/24/24 20:11	
Isopropyltoluene	ND	0.050	0.013	mg/Kg	₩	07/24/24 13:53	07/24/24 20:11	
enzene	ND	0.025	0.0048	mg/Kg	₩	07/24/24 13:53	07/24/24 20:11	
romobenzene	ND	0.050	0.0053	mg/Kg	₩	07/24/24 13:53	07/24/24 20:11	
romochloromethane	ND	0.050	0.0078	mg/Kg	₩	07/24/24 13:53	07/24/24 20:11	
romodichloromethane	ND	0.050	0.0069	mg/Kg	₩	07/24/24 13:53	07/24/24 20:11	
romoform	ND	0.050	0.0057	mg/Kg	₩	07/24/24 13:53	07/24/24 20:11	
arbon tetrachloride	ND	0.025	0.0056	mg/Kg	₩	07/24/24 13:53	07/24/24 20:11	
hlorobenzene	0.11	0.050	0.0061		₩	07/24/24 13:53	07/24/24 20:11	
nloroethane	ND	0.10		mg/Kg	₩	07/24/24 13:53	07/24/24 20:11	
hloroform	ND	0.025	0.0053	mg/Kg	₩	07/24/24 13:53	07/24/24 20:11	
hloromethane	ND	0.076	0.013	mg/Kg	₩	07/24/24 13:53	07/24/24 20:11	
s-1,2-Dichloroethene	ND	0.076		mg/Kg	₩	07/24/24 13:53	07/24/24 20:11	
s-1,3-Dichloropropene	ND	0.025	0.0050		₩	07/24/24 13:53	07/24/24 20:11	
bromochloromethane	ND	0.025	0.0062		₩	07/24/24 13:53	07/24/24 20:11	
bromomethane	ND	0.050	0.0093	ma/Ka	₩	07/24/24 13:53	07/24/24 20:11	
chlorodifluoromethane	ND	0.32		mg/Kg		07/24/24 13:53		
hylbenzene	0.020 J	0.050		mg/Kg	₩.		07/24/24 20:11	
exachlorobutadiene	ND	0.13		mg/Kg			07/24/24 20:11	
opropylbenzene	ND	0.050		mg/Kg	 ∵		07/24/24 20:11	
ethyl tert-butyl ether	ND	0.050	0.0076				07/24/24 20:11	
ethylene Chloride	0.045 JB	0.32		mg/Kg	~ ☆		07/24/24 20:11	
-Xylene & p-Xylene	0.045 3 B	0.050	0.0090				07/24/24 20:11	
Butylbenzene	ND	0.050		mg/Kg	₩		07/24/24 20:11	
•	ND ND	0.050					07/24/24 20:11	
Propylbenzene				mg/Kg	· · · · · · · · · · · ·			
Xylene	0.034 J	0.050	0.0063		*		07/24/24 20:11	
c-Butylbenzene	ND	0.050		mg/Kg	₩.		07/24/24 20:11	
yrene Butylbenzene	ND ND	0.050 0.050	0.016	mg/Kg	₩		07/24/24 20:11 07/24/24 20:11	

Job ID: 580-142311-1 Client: ERM-West

Project/Site: Arkema PDI Sampling

**General Chemistry** 

Percent Solids (SM22 2540G)

Percent Moisture (SM22 2540G)

Analyte

Client Sample ID: PDI-09-SO-40.5-20240722

Lab Sample ID: 580-142311-6 Date Collected: 07/22/24 09:00 **Matrix: Solid** 

Date Received: 07/23/24 12:29 Percent Solids: 83.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		0.050	0.0067	mg/Kg	— <u></u>	07/24/24 13:53	07/24/24 20:11	-
Toluene	ND		0.076	0.017	mg/Kg	₩	07/24/24 13:53	07/24/24 20:11	
trans-1,2-Dichloroethene	ND		0.076	0.018	mg/Kg	₩	07/24/24 13:53	07/24/24 20:11	
trans-1,3-Dichloropropene	ND		0.050	0.0088	mg/Kg	☆	07/24/24 13:53	07/24/24 20:11	
Trichloroethene	ND		0.050	0.013	mg/Kg	☆	07/24/24 13:53	07/24/24 20:11	
Trichlorofluoromethane	ND		0.10	0.033	mg/Kg	₩	07/24/24 13:53	07/24/24 20:11	
Vinyl chloride	ND		0.13	0.024	mg/Kg	₽	07/24/24 13:53	07/24/24 20:11	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	102		80 - 121				07/24/24 13:53	07/24/24 20:11	
4-Bromofluorobenzene (Surr)	97		80 - 120				07/24/24 13:53	07/24/24 20:11	
Dibromofluoromethane (Surr)	101		80 - 120				07/24/24 13:53	07/24/24 20:11	
Toluene-d8 (Surr)	101		80 - 120				07/24/24 13:53	07/24/24 20:11	
Method: SW846 8260D	- Volatile Organic	Compound	ds by GC/MS	- RA					
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND		0.10	0.050	mg/Kg	<u></u>	07/29/24 08:45	07/29/24 16:15	
1,2,4-Trichlorobenzene	ND		0.10	0.054	mg/Kg	☼	07/29/24 08:45	07/29/24 16:15	
Naphthalene	ND		0.19	0.049	mg/Kg	₽	07/29/24 08:45	07/29/24 16:15	•
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	107		80 - 121				07/29/24 08:45	07/29/24 16:15	
							07/20/24 08:45	07/29/24 16:15	
4-Bromofluorobenzene (Surr)	101		80 - 120				01/23/24 00.43	01/29/24 10.13	
4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr)	101 107		80 - 120 80 - 120					07/29/24 16:15	
							07/29/24 08:45		
Dibromofluoromethane (Surr)	107 97	Compound	80 - 120 80 - 120	- RA2			07/29/24 08:45	07/29/24 16:15	
Dibromofluoromethane (Surr) Toluene-d8 (Surr) Method: SW846 8260D	107 97 - Volatile Organic	Compound Qualifier	80 - 120 80 - 120	- RA2 MDL	Unit	D	07/29/24 08:45	07/29/24 16:15	
Dibromofluoromethane (Surr) Toluene-d8 (Surr) Method: SW846 8260D Analyte	107 97 - Volatile Organic		80 - 120 80 - 120 ds by GC/MS	MDL	Unit mg/Kg	<u>D</u>	07/29/24 08:45 07/29/24 08:45	07/29/24 16:15 07/29/24 16:15 Analyzed	Dil Fa
Dibromofluoromethane (Surr) Toluene-d8 (Surr)  Method: SW846 8260D Analyte Bromomethane	107 97 - Volatile Organic Result	Qualifier	80 - 120 80 - 120 ds by GC/MS RL	MDL			07/29/24 08:45 07/29/24 08:45 Prepared	07/29/24 16:15 07/29/24 16:15 Analyzed	Dil Fa
Dibromofluoromethane (Surr) Toluene-d8 (Surr)  Method: SW846 8260D Analyte Bromomethane  Surrogate	- Volatile Organic Result	Qualifier	80 - 120 80 - 120 ds by GC/MS RL 0.13	MDL			07/29/24 08:45 07/29/24 08:45 Prepared 07/29/24 08:46 Prepared	07/29/24 16:15 07/29/24 16:15 Analyzed 07/29/24 12:50	Dil Fa
Dibromofluoromethane (Surr) Toluene-d8 (Surr)  Method: SW846 8260D Analyte Bromomethane  Surrogate 1,2-Dichloroethane-d4 (Surr)	- Volatile Organic Result ND %Recovery	Qualifier	80 - 120 80 - 120 ds by GC/MS RL 0.13	MDL			07/29/24 08:45 07/29/24 08:45 Prepared 07/29/24 08:46 Prepared 07/29/24 08:46	07/29/24 16:15 07/29/24 16:15 Analyzed 07/29/24 12:50 Analyzed	Dil Fa
Dibromofluoromethane (Surr) Toluene-d8 (Surr)	- Volatile Organic Result ND %Recovery 92	Qualifier	80 - 120 80 - 120 ds by GC/MS RL 0.13 Limits 80 - 121	MDL			07/29/24 08:45 07/29/24 08:45 Prepared 07/29/24 08:46 Prepared 07/29/24 08:46 07/29/24 08:46	07/29/24 16:15 07/29/24 16:15 Analyzed 07/29/24 12:50 Analyzed 07/29/24 12:50	

7/30/2024

Dil Fac

Analyzed

07/25/24 19:34

07/25/24 19:34

RL

0.1

0.1

**RL** Unit

0.1 %

0.1 %

Prepared

Result Qualifier

83.1

16.9

Client: ERM-West Job ID: 580-142311-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-465950/1-A

**Matrix: Solid** 

**Analysis Batch: 465981** 

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 465950

Analysis Buton: 400001	MB	МВ						Trop Daton.	400000
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		0.040	0.012	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
1,1-Dichloroethane	ND		0.040	0.0092	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
1,1,1-Trichloroethane	ND		0.040	0.0046	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
1,1-Dichloropropene	ND		0.040	0.0053	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
1,2-Dichloroethane	ND		0.020	0.0055	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
1,2-Dichloropropane	ND		0.020	0.0066	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
2,2-Dichloropropane	ND		0.040	0.012	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
Benzene	ND		0.020	0.0038	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
1,1,2-Trichloroethane	ND		0.020	0.0074	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
Bromochloromethane	ND		0.040	0.0062	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
1,3-Dichloropropane	ND		0.060	0.0056	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
Bromodichloromethane	ND		0.040	0.0055	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
1,2-Dibromoethane	ND		0.020	0.0038	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
Carbon tetrachloride	ND		0.020	0.0044	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
Chlorobenzene	ND		0.040	0.0048	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
Chloroethane	ND		0.080	0.021	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
Chloroform	ND		0.020	0.0042	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
Chloromethane	ND		0.060	0.010	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
cis-1,2-Dichloroethene	ND		0.060	0.013	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
cis-1,3-Dichloropropene	ND		0.020	0.0040	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
Bromoform	ND		0.040	0.0045	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
Dibromochloromethane	ND		0.020	0.0049	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
Bromobenzene	ND		0.040	0.0042	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
Dibromomethane	ND		0.040	0.0074	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
Dichlorodifluoromethane	ND		0.25	0.046	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
1,2,3-Trichloropropane	ND		0.040	0.012	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
Ethylbenzene	ND		0.040	0.0091	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
2-Chlorotoluene	ND		0.040	0.0088	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
1,3,5-Trimethylbenzene	ND		0.040	0.0076	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
Isopropylbenzene	ND		0.040	0.0086	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
4-Chlorotoluene	ND		0.040	0.0098	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
Methylene Chloride	0.0607	J	0.25	0.026	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
1,2,4-Trimethylbenzene	ND		0.040	0.014	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
m-Xylene & p-Xylene	ND		0.040	0.0071	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
1,3-Dichlorobenzene	ND		0.060	0.013	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
4-Isopropyltoluene	ND		0.040	0.010	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
N-Propylbenzene	ND		0.040	0.015	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
1,4-Dichlorobenzene	ND		0.060	0.011	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
o-Xylene	ND		0.040	0.0050	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
n-Butylbenzene	ND		0.040	0.019	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
1,2-Dichlorobenzene	ND		0.040	0.0087	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
Styrene	ND		0.040	0.013	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
1,2-Dibromo-3-Chloropropane	ND		0.060	0.015	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		07/24/24 12:50	07/24/24 14:31	1

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Client: ERM-West Job ID: 580-142311-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-465950/1-A

Lab Sample ID: LCS 580-465950/2-A

Matrix: Solid

**Matrix: Solid** 

Analysis Batch: 465981

**Client Sample ID: Method Blank** 

**Prep Type: Total/NA** 

**Prep Batch: 465950** 

MB	MB	DI					•	
Analyte Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene ND		0.060	0.014	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
Hexachlorobutadiene 0.0834	J	0.10	0.024	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
trans-1,2-Dichloroethene ND		0.060	0.015	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
trans-1,3-Dichloropropene ND		0.040	0.0070	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
Trichloroethene ND		0.040	0.010	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
Trichlorofluoromethane ND		0.080	0.026	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
Methyl tert-butyl ether ND		0.040	0.0060	mg/Kg		07/24/24 12:50	07/24/24 14:31	1
Vinyl chloride ND		0.10	0.019	mg/Kg		07/24/24 12:50	07/24/24 14:31	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		80 - 120	07/24/24 12:50	07/24/24 14:31	1
4-Bromofluorobenzene (Surr)	98		80 - 120	07/24/24 12:50	07/24/24 14:31	1
Dibromofluoromethane (Surr)	105		80 - 120	07/24/24 12:50	07/24/24 14:31	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 121	07/24/24 12:50	07/24/24 14:31	1

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 465950

Analysis Batch: 465981	Spike	LCS	LCS				Prep Batch: 465950 %Rec
Analyte	Added		Qualifier	Unit	D	%Rec	Limits
1,1-Dichloroethene	0.800	0.756		mg/Kg		94	73 - 134
1,1-Dichloroethane	0.800	0.772		mg/Kg		97	78 - 126
1,1,1-Trichloroethane	0.800	0.781		mg/Kg		98	78 - 135
1,1-Dichloropropene	0.800	0.772		mg/Kg		96	76 - 140
1,2-Dichloroethane	0.800	0.741		mg/Kg		93	76 - 124
1,2-Dichloropropane	0.800	0.780		mg/Kg		97	73 - 130
2,2-Dichloropropane	0.800	0.785		mg/Kg		98	75 - 134
Benzene	0.800	0.747		mg/Kg		93	79 - 135
1,1,2-Trichloroethane	0.800	0.764		mg/Kg		95	80 - 123
Bromochloromethane	0.800	0.758		mg/Kg		95	76 - 131
1,3-Dichloropropane	0.800	0.790		mg/Kg		99	80 - 120
Bromodichloromethane	0.800	0.794		mg/Kg		99	78 - 125
1,2-Dibromoethane	0.800	0.762		mg/Kg		95	77 - 123
Carbon tetrachloride	0.800	0.789		mg/Kg		99	76 - 140
Chlorobenzene	0.800	0.767		mg/Kg		96	80 - 125
1,1,1,2-Tetrachloroethane	0.800	0.793		mg/Kg		99	79 - 128
Chloroethane	0.800	0.807		mg/Kg		101	26 - 150
1,1,2,2-Tetrachloroethane	0.800	0.771		mg/Kg		96	77 - 122
Chloroform	0.800	0.755		mg/Kg		94	74 - 133
Chloromethane	0.800	0.845		mg/Kg		106	52 - 142
cis-1,2-Dichloroethene	0.800	0.759		mg/Kg		95	80 - 125
cis-1,3-Dichloropropene	0.800	0.723		mg/Kg		90	80 - 122
Bromoform	0.800	0.767		mg/Kg		96	71 - 130
Dibromochloromethane	0.800	0.764		mg/Kg		95	75 - 125
Bromobenzene	0.800	0.769		mg/Kg		96	78 - 126
Dibromomethane	0.800	0.794		mg/Kg		99	72 - 130
Dichlorodifluoromethane	0.800	0.957		mg/Kg		120	33 - 150
1,2,3-Trichloropropane	0.800	0.763		mg/Kg		95	77 - 127

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7/30/2024

Spike

Client: ERM-West Job ID: 580-142311-1

LCS LCS

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-465950/2-A

**Matrix: Solid** 

Analysis Batch: 465981

**Client Sample ID: Lab Control Sample** 

%Rec

**Prep Type: Total/NA** 

**Prep Batch: 465950** 

	~ p				,	
Analyte	Added	Result	Qualifier Unit	D %Rec	Limits	
Ethylbenzene	0.800	0.762	mg/Kg	95	80 - 135	
2-Chlorotoluene	0.800	0.789	mg/Kg	99	77 - 134	
1,3,5-Trimethylbenzene	0.800	0.801	mg/Kg	100	72 - 134	
Isopropylbenzene	0.800	0.885	mg/Kg	111	80 - 131	
4-Chlorotoluene	0.800	0.779	mg/Kg	97	71 - 137	
Methylene Chloride	0.800	0.736	mg/Kg	92	56 - 140	
1,2,4-Trimethylbenzene	0.800	0.758	mg/Kg	95	73 - 138	
m-Xylene & p-Xylene	0.800	0.759	mg/Kg	95	80 - 132	
1,3-Dichlorobenzene	0.800	0.782	mg/Kg	98	78 - 132	
4-Isopropyltoluene	0.800	0.785	mg/Kg	98	71 - 142	
N-Propylbenzene	0.800	0.774	mg/Kg	97	78 - 133	
1,4-Dichlorobenzene	0.800	0.734	mg/Kg	92	77 - 123	
o-Xylene	0.800	0.756	mg/Kg	94	80 - 132	
n-Butylbenzene	0.800	0.822	mg/Kg	103	69 - 143	
sec-Butylbenzene	0.800	0.800	mg/Kg	100	71 - 143	
1,2-Dichlorobenzene	0.800	0.785	mg/Kg	98	78 - 126	
Styrene	0.800	0.778	mg/Kg	97	79 - 129	
1,2-Dibromo-3-Chloropropane	0.800	0.801	mg/Kg	100	64 - 129	
t-Butylbenzene	0.800	0.801	mg/Kg	100	72 - 144	
Tetrachloroethene	0.800	0.756	mg/Kg	94	75 - 141	
Toluene	0.800	0.749	mg/Kg	94	75 - 125	
Hexachlorobutadiene	0.800	0.970	mg/Kg	121	65 - 145	
trans-1,2-Dichloroethene	0.800	0.754	mg/Kg	94	77 - 134	
trans-1,3-Dichloropropene	0.800	0.809	mg/Kg	101	80 - 121	
Trichloroethene	0.800	0.756	mg/Kg	95	80 - 134	

0.800

0.800

0.800

0.854

0.760

0.840

mg/Kg

mg/Kg

mg/Kg

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
1.2-Dichloroethane-d4 (Surr)	100		80 - 121

Lab Sample ID: LCSD 580-465950/3-A

**Matrix: Solid** 

Trichlorofluoromethane

Methyl tert-butyl ether

Vinyl chloride

Analysis Batch: 465981

**Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA** 

107

95

105

71 - 150

71 - 126

62 - 144

**Prep Batch: 465950** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	0.800	0.779		mg/Kg		97	73 - 134	3	25
1,1-Dichloroethane	0.800	0.786		mg/Kg		98	78 - 126	2	20
1,1,1-Trichloroethane	0.800	0.808		mg/Kg		101	78 - 135	3	20
1,1-Dichloropropene	0.800	0.790		mg/Kg		99	76 - 140	2	20
1,2-Dichloroethane	0.800	0.765		mg/Kg		96	76 - 124	3	20
1,2-Dichloropropane	0.800	0.800		mg/Kg		100	73 - 130	3	20
2,2-Dichloropropane	0.800	0.816		mg/Kg		102	75 - 134	4	20
Benzene	0.800	0.773		mg/Kg		97	79 - 135	3	20

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Client: ERM-West Job ID: 580-142311-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-465950/3-A

Matrix: Solid

Analysis Batch: 465981

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA **Prep Batch: 465950** 

%Rec Limits 80 - 123 76 - 131 80 - 120 78 - 125 77 - 123 76 - 140 80 - 125 79 - 128 26 - 150	8PD 4 5 3 5 2 1	20 20 20 20 20
80 - 123 76 - 131 80 - 120 78 - 125 77 - 123 76 - 140 80 - 125 79 - 128	4 5 3 5 5 2	20 20 20
76 - 131 80 - 120 78 - 125 77 - 123 76 - 140 80 - 125 79 - 128	5 3 5 5 2	20 20
80 - 120 78 - 125 77 - 123 76 - 140 80 - 125 79 - 128	3 5 5 2	20
78 - 125 77 - 123 76 - 140 80 - 125 79 - 128	5 5 2	
77 - 123 76 - 140 80 - 125 79 - 128	5 2	
76 - 140 80 - 125 79 - 128	2	20
80 - 125 79 - 128		20
79 - 128		20
	<u>.</u> . 2	20
	5	40
77 - 122	4	20
74 - 133	3	20
52 - 142	3	40
80 - 125	4	20
80 - 122	6	20
71 - 130	7	20
75 - 125	6	20
78 - 126	6	20
		40
33 - 150	1	31
77 - 127	5	20
80 - 135	6	20
77 - 134	10	21
72 - 134	6	24
80 - 131	4	20
71 - 137	6	21
56 - 140	5	20
73 - 138	8	22
80 - 132	5	20
78 - 132	6	20
71 - 142	6	29
78 - 133	6	24
77 - 123	7	20
80 - 132	5	20
		31
	7	29
	5	20
		20
		40
		27
		20
		20
		36
		20
		20
		20
		30
71-126	3	20
62 - 144	4	20
	72 - 130 33 - 150 77 - 127 80 - 135 77 - 134 72 - 134 80 - 131 71 - 137 56 - 140 73 - 138 80 - 132 78 - 132 71 - 142 78 - 133	72-130 2 33-150 1 77-127 5 80-135 6 77-134 10 72-134 6 80-131 4 71-137 6 56-140 5 73-138 8 80-132 5 78-132 6 71-142 6 78-133 7 80-132 5 69-143 7 71-143 7 78-126 5 79-129 5 64-129 17 72-144 5 75-141 8 75-125 3 65-145 8 77-134 3 80-121 5 80-134 5

Client: ERM-West Job ID: 580-142311-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-465950/3-A

Matrix: Solid

**Matrix: Water** 

Analysis Batch: 465981

**Client Sample ID: Lab Control Sample Dup** 

**Prep Type: Total/NA Prep Batch: 465950** 

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	102		80 - 120
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
1,2-Dichloroethane-d4 (Surr)	99		80 - 121

Client Sample ID: Method Blank

Prep Type: Total/NA

**Analysis Batch: 466053** 

Lab Sample ID: MB 580-466053/11

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.0	0.28	ug/L			07/25/24 15:57	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			07/25/24 15:57	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			07/25/24 15:57	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			07/25/24 15:57	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			07/25/24 15:57	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			07/25/24 15:57	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			07/25/24 15:57	1
Benzene	ND		1.0	0.24	ug/L			07/25/24 15:57	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			07/25/24 15:57	1
Bromochloromethane	ND		1.0	0.29	ug/L			07/25/24 15:57	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			07/25/24 15:57	1
Bromodichloromethane	ND		1.0	0.29	ug/L			07/25/24 15:57	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			07/25/24 15:57	1
Bromomethane	ND		1.0	0.21	ug/L			07/25/24 15:57	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			07/25/24 15:57	1
Chlorobenzene	ND		1.0	0.44	ug/L			07/25/24 15:57	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			07/25/24 15:57	1
Chloroethane	ND		1.0	0.35	ug/L			07/25/24 15:57	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			07/25/24 15:57	1
Chloroform	ND		1.0	0.26	ug/L			07/25/24 15:57	1
Chloromethane	ND		1.0	0.28	ug/L			07/25/24 15:57	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			07/25/24 15:57	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			07/25/24 15:57	1
Bromoform	ND		1.0	0.51	ug/L			07/25/24 15:57	1
Dibromochloromethane	ND		1.0	0.43	ug/L			07/25/24 15:57	1
Bromobenzene	ND		1.0	0.43	ug/L			07/25/24 15:57	1
Dibromomethane	ND		1.0	0.34	ug/L			07/25/24 15:57	1
Dichlorodifluoromethane	ND		1.0	0.53	ug/L			07/25/24 15:57	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			07/25/24 15:57	1
Ethylbenzene	ND		1.0	0.50	ug/L			07/25/24 15:57	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			07/25/24 15:57	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			07/25/24 15:57	1
Isopropylbenzene	ND		1.0	0.44	ug/L			07/25/24 15:57	1
4-Chlorotoluene	ND		1.0	0.38	ug/L			07/25/24 15:57	1
Methylene Chloride	ND		5.0	1.4	ug/L			07/25/24 15:57	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			07/25/24 15:57	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			07/25/24 15:57	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			07/25/24 15:57	1

Client: ERM-West Job ID: 580-142311-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-466053/11

**Matrix: Water** 

**Analysis Batch: 466053** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Isopropyltoluene	ND		1.0	0.28	ug/L			07/25/24 15:57	1
N-Propylbenzene	ND		1.0	0.50	ug/L			07/25/24 15:57	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			07/25/24 15:57	1
o-Xylene	ND		1.0	0.39	ug/L			07/25/24 15:57	1
n-Butylbenzene	ND		1.0	0.44	ug/L			07/25/24 15:57	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			07/25/24 15:57	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			07/25/24 15:57	1
Styrene	ND		1.0	0.53	ug/L			07/25/24 15:57	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			07/25/24 15:57	1
t-Butylbenzene	ND		2.0	0.58	ug/L			07/25/24 15:57	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			07/25/24 15:57	1
Tetrachloroethene	ND		1.0	0.41	ug/L			07/25/24 15:57	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			07/25/24 15:57	1
Toluene	ND		1.0	0.39	ug/L			07/25/24 15:57	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			07/25/24 15:57	1
Naphthalene	ND		3.0	0.93	ug/L			07/25/24 15:57	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			07/25/24 15:57	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			07/25/24 15:57	1
Trichloroethene	ND		1.0	0.26	ug/L			07/25/24 15:57	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			07/25/24 15:57	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			07/25/24 15:57	1
Vinyl chloride	ND		1.0	0.22	ug/L			07/25/24 15:57	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		07/25/24 15:57	1
4-Bromofluorobenzene (Surr)	96		80 - 120		07/25/24 15:57	1
Dibromofluoromethane (Surr)	109		80 - 120		07/25/24 15:57	1
1,2-Dichloroethane-d4 (Surr)	108		80 - 120		07/25/24 15:57	1

Lab Sample ID: LCS 580-466053/6

**Matrix: Water** 

**Analysis Batch: 466053** 

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

ualifier Unit ug/L ug/L ug/L	D %Rec 97 96 99	%Rec Limits 70 - 129 80 - 120
ug/L ug/L	97	70 - 129
ug/L	96	
-		80 - 120
ug/L	00	
	99	74 - 130
ug/L	93	74 - 120
ug/L	93	69 - 126
ug/L	95	80 - 120
ug/L	96	66 - 126
ug/L	95	80 - 122
ug/L	91	80 - 121
ug/L	93	78 - 120
ug/L	87	79 - 120
ug/L	100	75 - 124
ug/L	96	79 - 126
ug/L	93	36 - 150
	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	ug/L 93 ug/L 95 ug/L 96 ug/L 95 ug/L 91 ug/L 93 ug/L 93 ug/L 100 ug/L 96

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Spike

5.00

Added

Client: ERM-West Job ID: 580-142311-1

LCS LCS

4.85

Result Qualifier

Unit

ug/L

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-466053/6

**Matrix: Water** 

Carbon tetrachloride

Hexachlorobutadiene

trans-1,2-Dichloroethene

Trichlorofluoromethane

Methyl tert-butyl ether

trans-1,3-Dichloropropene

Naphthalene

Trichloroethene

Vinyl chloride

**Analysis Batch: 466053** 

Client Sample ID: Lab Control Sample Prep Type: Total/NA

%Rec

97

%Rec

Limits

72 - 129

Carbon tetrachionide	5.00	4.00	ug/L	97	12 - 129	
Chlorobenzene	5.00	4.50	ug/L	90	80 - 120	
1,1,1,2-Tetrachloroethane	5.00	4.65	ug/L	93	79 - 120	
Chloroethane	5.00	4.60	ug/L	92	38 - 150	
1,1,2,2-Tetrachloroethane	5.00	5.23	ug/L	105	74 - 124	
Chloroform	5.00	4.80	ug/L	96	78 - 127	
Chloromethane	5.00	4.71	ug/L	94	25 - 150	
cis-1,2-Dichloroethene	5.00	4.83	ug/L	97	76 - 120	
cis-1,3-Dichloropropene	5.00	4.51	ug/L	90	77 - 120	
Bromoform	5.00	4.60	ug/L	92	56 - 139	
Dibromochloromethane	5.00	4.98	ug/L	100	73 - 125	
Bromobenzene	5.00	4.74	ug/L	95	80 - 120	
Dibromomethane	5.00	4.87	ug/L	97	80 - 120	
Dichlorodifluoromethane	5.00	4.31	ug/L	86	20 - 150	
1,2,3-Trichloropropane	5.00	5.12	ug/L	102	76 - 124	
Ethylbenzene	5.00	4.34	ug/L	87	80 - 120	
2-Chlorotoluene	5.00	4.42	ug/L	88	80 - 120	
1,3,5-Trimethylbenzene	5.00	4.08	ug/L	82	80 - 122	
Isopropylbenzene	5.00	4.79	ug/L	96	80 - 123	
4-Chlorotoluene	5.00	4.50	ug/L	90	73 - 129	
Methylene Chloride	5.00	5.41	ug/L	108	77 - 125	
1,2,4-Trimethylbenzene	5.00	4.13	ug/L	83	80 - 120	
m-Xylene & p-Xylene	5.00	4.37	ug/L	87	80 - 120	
1,3-Dichlorobenzene	5.00	4.73	ug/L	95	77 - 127	
4-Isopropyltoluene	5.00	4.43	ug/L	89	77 - 126	
N-Propylbenzene	5.00	4.53	ug/L	91	80 - 122	
1,4-Dichlorobenzene	5.00	4.55	ug/L	91	80 - 120	
o-Xylene	5.00	4.24	ug/L	85	80 - 120	
n-Butylbenzene	5.00	4.34	ug/L	87	57 - 133	
sec-Butylbenzene	5.00	4.55	ug/L	91	78 - 122	
1,2-Dichlorobenzene	5.00	4.65	ug/L	93	80 - 120	
Styrene	5.00	4.31	ug/L	86	76 - 122	
1,2-Dibromo-3-Chloropropane	5.00	5.47	ug/L	109	65 - 133	
t-Butylbenzene	5.00	4.46	ug/L	89	75 - 123	
1,2,4-Trichlorobenzene	5.00	4.97	ug/L	99	61 - 148	
Tetrachloroethene	5.00	4.48	ug/L	90	76 - 125	
1,2,3-Trichlorobenzene	5.00	5.05	ug/L	101	65 - 150	
Toluene	5.00	4.52	ug/L	90	80 - 120	

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7/30/2024

5.00

5.00

5.00

5.00

5.00

5.00

5.00

5.00

4.56

5.03

4.74

4.90

4.61

4.58

5.11

4.52

ug/L

ug/L

ug/L

ug/L

ug/L

ug/L

ug/L

ug/L

91

101

95

98

92

92

102

90

74 - 131

63 - 150

75 - 120

76 - 122

80 - 125

45 - 148

72 - 120

31 - 150

3

6

8

9

## **QC Sample Results**

Client: ERM-West Job ID: 580-142311-1

Project/Site: Arkema PDI Sampling

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-466053/6

Lab Sample ID: LCSD 580-466053/7

**Matrix: Water** 

**Analysis Batch: 466053** 

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 120
4-Bromofluorobenzene (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	104		80 - 120
1,2-Dichloroethane-d4 (Surr)	105		80 - 120

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

**Matrix: Water** Analysis Batch: 466053

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	5.00	5.07		ug/L		101	70 - 129	5	23
1,1-Dichloroethane	5.00	4.93		ug/L		99	80 - 120	3	15
1,1,1-Trichloroethane	5.00	5.10		ug/L		102	74 - 130	3	19
1,1-Dichloropropene	5.00	4.80		ug/L		96	74 - 120	3	14
1,2-Dichloroethane	5.00	4.82		ug/L		96	69 - 126	3	11
1,2-Dichloropropane	5.00	4.70		ug/L		94	80 - 120	1	14
2,2-Dichloropropane	5.00	4.99		ug/L		100	66 - 126	4	22
Benzene	5.00	4.79		ug/L		96	80 - 122	1	14
1,1,2-Trichloroethane	5.00	4.60		ug/L		92	80 - 121	1	14
Bromochloromethane	5.00	4.78		ug/L		96	78 - 120	3	13
1,3-Dichloropropane	5.00	4.33		ug/L		87	79 - 120	1	19
Bromodichloromethane	5.00	5.09		ug/L		102	75 - 124	1	13
1,2-Dibromoethane	5.00	4.77		ug/L		95	79 - 126	0	12
Bromomethane	5.00	4.81		ug/L		96	36 - 150	3	33
Carbon tetrachloride	5.00	4.95		ug/L		99	72 - 129	2	19
Chlorobenzene	5.00	4.50		ug/L		90	80 - 120	0	10
1,1,1,2-Tetrachloroethane	5.00	4.56		ug/L		91	79 - 120	2	16
Chloroethane	5.00	4.73		ug/L		95	38 - 150	3	28
1,1,2,2-Tetrachloroethane	5.00	5.18		ug/L		104	74 - 124	1	25
Chloroform	5.00	4.96		ug/L		99	78 - 127	3	14
Chloromethane	5.00	4.90		ug/L		98	25 - 150	4	26
cis-1,2-Dichloroethene	5.00	4.97		ug/L		99	76 - 120	3	20
cis-1,3-Dichloropropene	5.00	4.50		ug/L		90	77 - 120	0	35
Bromoform	5.00	4.52		ug/L		90	56 - 139	2	21
Dibromochloromethane	5.00	4.90		ug/L		98	73 - 125	2	13
Bromobenzene	5.00	4.66		ug/L		93	80 - 120	2	24
Dibromomethane	5.00	4.97		ug/L		99	80 - 120	2	11
Dichlorodifluoromethane	5.00	4.47		ug/L		89	20 - 150	4	33
1,2,3-Trichloropropane	5.00	5.29		ug/L		106	76 - 124	3	26
Ethylbenzene	5.00	4.48		ug/L		90	80 - 120	3	14
2-Chlorotoluene	5.00	4.53		ug/L		91	80 - 120	2	20
1,3,5-Trimethylbenzene	5.00	4.01		ug/L		80	80 - 122	2	21
Isopropylbenzene	5.00	4.84		ug/L		97	80 - 123	1	19
4-Chlorotoluene	5.00	4.58		ug/L		92	73 - 129	2	29
Methylene Chloride	5.00	5.66		ug/L		113	77 - 125	5	18
1,2,4-Trimethylbenzene	5.00	4.07		ug/L		81	80 - 120	1	16
m-Xylene & p-Xylene	5.00	4.43		ug/L		89	80 - 120	1	14
1,3-Dichlorobenzene	5.00	4.70		ug/L		94	77 - 127	1	35

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## **QC Sample Results**

Client: ERM-West Job ID: 580-142311-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-466053/7

**Matrix: Water** 

**Analysis Batch: 466053** 

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

	Spike		LCSD			%Rec		RPD	
Analyte	Added	Result	Qualifier U	nit D	%Rec	Limits	RPD	Limit	
4-Isopropyltoluene	5.00	4.45	u	g/L	89	77 - 126	1	20	
N-Propylbenzene	5.00	4.57	u	g/L	91	80 - 122	1	22	
1,4-Dichlorobenzene	5.00	4.54	u	g/L	91	80 - 120	0	17	
o-Xylene	5.00	4.35	u	g/L	87	80 - 120	3	16	
n-Butylbenzene	5.00	4.24	u	g/L	85	57 - 133	2	14	
sec-Butylbenzene	5.00	4.63	u	g/L	93	78 - 122	2	15	
1,2-Dichlorobenzene	5.00	4.58	u	g/L	92	80 - 120	2	15	
Styrene	5.00	4.34	u	g/L	87	76 - 122	1	16	
1,2-Dibromo-3-Chloropropane	5.00	5.09	u	g/L	102	65 - 133	7	25	
t-Butylbenzene	5.00	4.53	u	g/L	91	75 - 123	2	21	
1,2,4-Trichlorobenzene	5.00	4.98	u	g/L	100	61 - 148	0	27	
Tetrachloroethene	5.00	4.59	u	g/L	92	76 - 125	2	13	
1,2,3-Trichlorobenzene	5.00	5.09	u	g/L	102	65 - 150	1	33	
Toluene	5.00	4.62	u	g/L	92	80 - 120	2	13	
Hexachlorobutadiene	5.00	4.55	u	g/L	91	74 - 131	0	22	
Naphthalene	5.00	4.92	u	g/L	98	63 - 150	2	33	
trans-1,2-Dichloroethene	5.00	4.94	u	g/L	99	75 - 120	4	21	
trans-1,3-Dichloropropene	5.00	4.77	u	g/L	95	76 - 122	3	20	
Trichloroethene	5.00	4.62	u	g/L	92	80 - 125	0	13	
Trichlorofluoromethane	5.00	4.73	u	g/L	95	45 - 148	3	35	
Methyl tert-butyl ether	5.00	5.10	u	g/L	102	72 - 120	0	18	
Vinyl chloride	5.00	4.68	u	g/L	94	31 - 150	4	26	

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 120
4-Bromofluorobenzene (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	106		80 - 120
1,2-Dichloroethane-d4 (Surr)	107		80 - 120

Lab Sample ID: MB 580-466321/5-A

**Matrix: Solid** 

**Analysis Batch: 466343** 

Client Sample ID: Method Blank Prep Type: Total/NA **Prep Batch: 466321** 

	MB	MR							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.080	0.043	mg/Kg		07/29/24 08:45	07/29/24 11:30	1
1,2,3-Trichlorobenzene	ND		0.080	0.040	mg/Kg		07/29/24 08:45	07/29/24 11:30	1
Naphthalene	ND		0.15	0.039	mg/Kg		07/29/24 08:45	07/29/24 11:30	1

	MB	MB				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 120	07/29/24 08:45	07/29/24 11:30	1
4-Bromofluorobenzene (Surr)	99		80 - 120	07/29/24 08:45	07/29/24 11:30	1
Dibromofluoromethane (Surr)	100		80 - 120	07/29/24 08:45	07/29/24 11:30	1
1.2-Dichloroethane-d4 (Surr)	96		80 - 121	07/29/24 08:45	07/29/24 11:30	1

**Eurofins Seattle** 

7/30/2024

## Client: ERM-West

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-466321/1-A

**Matrix: Solid** 

Analysis Batch: 466343

**Client Sample ID: Lab Control Sample** 

Job ID: 580-142311-1

Prep Type: Total/NA **Prep Batch: 466321** 

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,2,4-Trichlorobenzene	0.800	0.886		mg/Kg		111	74 - 131	
1,2,3-Trichlorobenzene	0.800	0.836		mg/Kg		105	58 - 146	
Naphthalene	0.800	0.797		mg/Kg		100	56 - 145	

Spike

Added

0.800

0.800

0.800

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	98		80 - 120
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	105		80 - 121

Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** 

1,2,4-Trichlorobenzene

1,2,3-Trichlorobenzene

Analyte

Naphthalene

**Analysis Batch: 466343** 

Lab Sample ID: LCSD 580-466321/2-A

Prep Type: Total/NA

					Prep Batch: 46632				
LCSD	LCSD				%Rec		RPD		
Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit		
0.823		mg/Kg		103	74 - 131	7	26		
0.746		mg/Kg		93	58 - 146	11	28		
0.698		mg/Kg		87	56 - 145	13	25		

LCSD LCSD

MB MB Result Qualifier

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 120
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	92		80 - 120
1,2-Dichloroethane-d4 (Surr)	89		80 - 121

Lab Sample ID: MB 580-466323/3-A **Client Sample ID: Method Blank** 

**Matrix: Solid** 

Analyte

**Analysis Batch: 466331** 

Prep Type: Total/NA **Prep Batch: 466323** 

Prepared

Analyzed

Dil Fac

Bromomethane	ND		0.10	0.038 mg/Kg	07/29/24 08:46	07/29/24 10:26	1
	MB M	В					
Surrogate	%Recovery Qu	ualifier Lin	nits		Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)		80	. 120		07/29/24 08:46	07/29/24 10:26	1
4-Bromofluorobenzene (Surr)	102	80	. 120		07/29/24 08:46	07/29/24 10:26	1
Dibromofluoromethane (Surr)	101	80	. 120		07/29/24 08:46	07/29/24 10:26	1
1,2-Dichloroethane-d4 (Surr)	100	80	121		07/29/24 08:46	07/29/24 10:26	1

RL

MDL Unit

Lab Sample ID: LCS 580-466323/1-A

**Matrix: Solid** 

Analysis Batch: 466331

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

**Prep Batch: 466323** 

7 maryolo Batom 400001							op <b>D</b> .	400020
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Bromomethane	0.800	0.874		mg/Kg		109	55 - 150	

LCS LCS

Surrogate %Recovery Qualifier Limits Toluene-d8 (Surr) 80 - 120 101

**Eurofins Seattle** 

Job ID: 580-142311-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

LCS LCS

Lab Sample ID: LCS 580-466323/1-A

**Matrix: Solid** 

**Matrix: Solid** 

Bromomethane

Analyte

Client: ERM-West

**Analysis Batch: 466331** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 466323** 

%Recovery Qualifier Surrogate

Lab Sample ID: LCSD 580-466323/2-A

Limits 4-Bromofluorobenzene (Surr) 95 80 - 120 Dibromofluoromethane (Surr) 104 80 - 120 1,2-Dichloroethane-d4 (Surr) 104 80 - 121

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

**Prep Batch: 466323** 

**Analysis Batch: 466331** 

Spike LCSD LCSD %Rec **RPD** Added Result Qualifier Unit %Rec Limits RPD

mg/Kg

Limit 55 - 150 26 119 9

LCSD LCSD

Surrogate %Recovery Qualifier Limits Toluene-d8 (Surr) 103 80 - 120 4-Bromofluorobenzene (Surr) 98 80 - 120 Dibromofluoromethane (Surr) 103 80 - 120 80 - 121 1,2-Dichloroethane-d4 (Surr) 108

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

**Prep Batch: 466542** 

**Matrix: Solid** 

**Analysis Batch: 466537** 

Lab Sample ID: MB 580-466542/3-A

мв мв

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Bromomethane ND 0.10 0.038 mg/Kg 07/30/24 08:00 07/30/24 10:21 ND 0.040 07/30/24 08:00 07/30/24 10:21 Chlorobenzene 0.0048 mg/Kg

0.800

0.953

MB MB

Surrogate	%Recovery Q	ualifier Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99	80 - 120	07/30/24 08:00	07/30/24 10:21	1
4-Bromofluorobenzene (Surr)	90	80 - 120	07/30/24 08:00	07/30/24 10:21	1
Dibromofluoromethane (Surr)	76 S1	1- 80 - 120	07/30/24 08:00	07/30/24 10:21	1
1,2-Dichloroethane-d4 (Surr)	79 S1	1- 80 - 121	07/30/24 08:00	07/30/24 10:21	1

Lab Sample ID: LCS 580-466542/1-A

**Matrix: Solid** 

**Analysis Batch: 466537** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 466542** 

LCS LCS %Rec Spike Analyte Added Result Qualifier Unit D %Rec Limits 0.800 1.03 55 - 150 Bromomethane 129 mg/Kg Chlorobenzene 0.800 0.815 102 80 - 125 mg/Kg

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	102		80 - 120
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	103		80 - 120
1,2-Dichloroethane-d4 (Surr)	103		80 - 121

**Eurofins Seattle** 

7/30/2024

## **QC Sample Results**

Client: ERM-West Job ID: 580-142311-1

Project/Site: Arkema PDI Sampling

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-466542/2-A	Client Sample ID: Lab Control Sample Dup
Matrix: Solid	Prop Type: Total/N/

**Matrix: Solid Analysis Batch: 466537**  **Prep Batch: 466542** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Bromomethane	0.800	0.838		mg/Kg		105	55 - 150	20	26
Chlorobenzene	0.800	0.771		mg/Kg		96	80 - 125	6	20

			_							
		Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
e		0.800	0.838		mg/Kg		105	55 - 150	20	26
е		0.800	0.771		mg/Kg		96	80 - 125	6	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	102		80 - 120
4-Bromofluorobenzene (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	109		80 - 120
1,2-Dichloroethane-d4 (Surr)	111		80 - 121

Project/Site: Arkema PDI Sampling

Client Sample ID: RB-01-WQ-20240719

Date Collected: 07/19/24 15:22 Date Received: 07/23/24 12:29

Lab Sample ID: 580-142311-1

**Matrix: Water** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	466053	AA	EET SEA	07/25/24 17:38

**Client Sample ID: TB-01-WQ-20240719** 

Date Collected: 07/19/24 15:22 Date Received: 07/23/24 12:29

Lab Sample ID: 580-142311-2

**Matrix: Water** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	466053	AA	EET SEA	07/25/24 16:52

Client Sample ID: PDI-09-SO-38.6-20240719

Date Collected: 07/19/24 16:00 Date Received: 07/23/24 12:29

Lab Sample ID: 580-142311-3

**Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	466183	FCG	EET SEA	07/25/24 19:34

Client Sample ID: PDI-09-SO-38.6-20240719

Date Collected: 07/19/24 16:00 Date Received: 07/23/24 12:29

Lab Sample ID: 580-142311-3

**Matrix: Solid** Percent Solids: 83.9

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	RA2		466323	BYM	EET SEA	07/29/24 08:46
Total/NA	Analysis	8260D	RA2	1	466331	AC	EET SEA	07/29/24 12:09
Total/NA	Prep	5035			465950	AC	EET SEA	07/24/24 13:53
Total/NA	Analysis	8260D		1	465981	BYM	EET SEA	07/24/24 19:29
Total/NA	Prep	5035	RA		466321	BYM	EET SEA	07/29/24 08:45
Total/NA	Analysis	8260D	RA	1	466343	BYM	EET SEA	07/29/24 15:29

Client Sample ID: TB-02-SO-20240719

Date Collected: 07/19/24 16:00

Date Received: 07/23/24 12:29

Lab Sample ID: 580-142311-4

Lab Sample ID: 580-142311-5

**Matrix: Solid** 

_	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	RA2		466323	BYM	EET SEA	07/29/24 08:46
Total/NA	Analysis	8260D	RA2	1	466331	AC	EET SEA	07/29/24 11:48
Total/NA	Prep	5035			465950	AC	EET SEA	07/24/24 13:53
Total/NA	Analysis	8260D		1	465981	BYM	EET SEA	07/24/24 19:07
Total/NA	Prep	5035	RA		466321	BYM	EET SEA	07/29/24 08:45
Total/NA	Analysis	8260D	RA	1	466343	BYM	EET SEA	07/29/24 15:06

Client Sample ID: PDI-09-SO-39.5-20240719

Date Collected	d: 07/19/24	Matrix: S				
Date Received	d: 07/23/24	12:29				
Г	Datah	Datah	Dilution	Datab	Dunnanad	

	Batch	Batch		Dilution	Batch		Prepared
Prep Type	Type	Method	Run	Factor	Number An	alyst Lab	or Analyzed
Total/NA	Analysis	2540G			466183 FC	G EET SE	Q 07/25/24 19:34

**Eurofins Seattle** 

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#### **Lab Chronicle**

Client: ERM-West Job ID: 580-142311-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-09-SO-39.5-20240719

Lab Sample ID: 580-142311-5 Date Collected: 07/19/24 16:15 **Matrix: Solid** Date Received: 07/23/24 12:29

Percent Solids: 91.3

Batch Batch Dilution Batch Prepared Method Factor Number Analyst or Analyzed **Prep Type** Type Run Lab Total/NA 5035 DL 466542 BYM EET SEA 07/30/24 08:00 Prep DL Total/NA 8260D 466537 BYM **EET SEA** 07/30/24 15:06 Analysis 1 Total/NA Prep 5035 465950 AC **EET SEA** 07/24/24 13:53 Total/NA 07/24/24 19:50 Analysis 8260D 1 465981 BYM **EET SEA** Total/NA 5035 RA 466321 BYM **EET SEA** 07/29/24 08:45 Prep Total/NA Analysis 8260D RA 1 466343 BYM **EET SEA** 07/29/24 15:52

Client Sample ID: PDI-09-SO-40.5-20240722

Lab Sample ID: 580-142311-6

**Matrix: Solid** 

Date Collected: 07/22/24 09:00 Date Received: 07/23/24 12:29

Batch Batch Dilution Batch **Prepared** Method **Prep Type** Type Run **Factor** Number Analyst Lab or Analyzed 07/25/24 19:34 Total/NA Analysis 2540G 466183 FCG **EET SEA** 

Client Sample ID: PDI-09-SO-40.5-20240722 Lab Sample ID: 580-142311-6

Date Collected: 07/22/24 09:00 **Matrix: Solid** Date Received: 07/23/24 12:29 Percent Solids: 83.1

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	RA2		466323	BYM	EET SEA	07/29/24 08:46
Total/NA	Analysis	8260D	RA2	1	466331	AC	EET SEA	07/29/24 12:50
Total/NA	Prep	5035			465950	AC	EET SEA	07/24/24 13:53
Total/NA	Analysis	8260D		1	465981	BYM	EET SEA	07/24/24 20:11
Total/NA	Prep	5035	RA		466321	BYM	EET SEA	07/29/24 08:45
Total/NA	Analysis	8260D	RA	1	466343	BYM	EET SEA	07/29/24 16:15

#### **Laboratory References:**

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

**Eurofins Seattle** 

7/30/2024

## **Accreditation/Certification Summary**

Client: ERM-West Job ID: 580-142311-1

Project/Site: Arkema PDI Sampling

### **Laboratory: Eurofins Seattle**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Progra	am	Identification Number	Expiration Date
Oregon	NELAF	ס	4167	07-07-25
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## **Sample Summary**

Client: ERM-West

Project/Site: Arkema PDI Sampling

Job ID: 580-142311-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-142311-1	RB-01-WQ-20240719	Water	07/19/24 15:22	07/23/24 12:29
580-142311-2	TB-01-WQ-20240719	Water	07/19/24 15:22	07/23/24 12:29
580-142311-3	PDI-09-SO-38.6-20240719	Solid	07/19/24 16:00	07/23/24 12:29
580-142311-4	TB-02-SO-20240719	Solid	07/19/24 16:00	07/23/24 12:29
580-142311-5	PDI-09-SO-39.5-20240719	Solid	07/19/24 16:15	07/23/24 12:29
580-142311-6	PDI-09-SO-40.5-20240722	Solid	07/22/24 09:00	07/23/24 12:29

eurofins Environment Testing	No: 52780-1926	State of Origin: Page: Page-50To 1 US 1	Job #:	Preservation Codes:	E - NaHSO4	) L			SIG	enist	of con	nmpet c	হ ফু ১ ১ ১ ১ ১ ১ ১			7			7	2				580-142311 Chain of Custody	in a month in a fact than a month	Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)  Return To Client Disposal By Lab Archive For Months	Method of Shipment:	DateTinge: Company	123/py 1229	Date/Time: Company	or Remarks: Ullize ora Co The
dy Record	Lab PM:  Cruz. Sheri L	E-Mail: Sheri, Cruz@et. eurofinsus. com	sisyle	N COOKING TO THE COOK				E	45 MeO 84 MeO	srd lis	eY) Gā bnsta , bnsta ,	ered Sa MS/MS olatiles,	(Wirwater, Strong of Comparater)   Wirwater, Strong of Comparate   William   William	XX F E /	N Solid	X Solid	Solid	Solid Y	Solid	Solid	Solid	Solid	Solid	Solid	Solid	Sample Disposal ( A fee may be asse		pany Received by:	Company Received by:	pany Received by:	Cooler Temperature(s) °C and Other Remarks:
Chain of Custody Record	Sampler A. S. C. Cool 3 to	Phone: Ph	4	Due Date Requested:		TAT Requested (days):	Compliance Project: A Yes A No	PO#:	1000	Project #:	\$80Z0/43 \$SOW#:	Sample	Sample (C=comp,	Preserva	7/19/24 1522 G INS	_	1/9/201 1/000 G		ibis C							Poison B 🔲 Unknown 🔲 Radiological		3	1225	Date/Time: Compan	
Eurofins Seattle 5755 8th Street East Tacoma, WA 98424	Phone: 253-922-2310	Client Information Client Contact:	Avery Soplata Company:	ERM-West	1050 SW 6th Avenue Suite 1650	City: Portland	State, Zip: OR 97204	Phone:	Email:	avery.sopiata@em.com Project Name:	Arkema - PDI Investigation Site:		The second second	Sample Identification	PH-11-140-10119	MOM	1-50-28	TR-12-51-10240719	-11-30	PDI-199-10-40-5-20140722						Possible Hazard Identification  Non-Hazard Hagmable Skin Irritant P	Deliverable Requested: I, [] III, IV, Other (specify)	Empty Kit Relinquished by: Relinquished by:	Relinquished by:	Relinquished by:	O CALLES

#### **Eurofins Seattle**

5755 8th Street East Tacoma, WA 98424 Phone: 253-922-2310

## Chain of Custody Record

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Environment Testing

Phone: 253-922-2310	Sampler:			II at	PM:							Carrier T	racking	No(s):		Icoc	No:			
Client Information	Avers	Son	iata	Cr	uz, She	eri L				,		Jamer	racking	140(3).			62780-19	268.3		
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TB-02-50- 20240719	7/19/2024			Solid	$\dagger \dagger$	X										i	-			
PD1-09-30-395-20240719	7/19/2024 11	015	G	Solid	T	X			1,0					20 m	1	2		tyriky Seletyte		
PD1-09-50-40.5-20240722	7/22/2024 0	900	G	Solid	П	X										2				
				Solid	П							1388				<b> </b>				
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				Solid								11 <b>11</b> 580	  -1423	<b>                                   </b>		I IIIII IIIII ustody				
				Solid							Ŀ,				-	-				
Possible Hazard Identification					S					e may	be as	sesse	d if sa	mples			nger thai	n 1 mon	th)	
Non-Hazard Flammable Skin Irritant Po	ison B Unknov	wn 🗀 I	Radiological		_			n To C				isposa	l By L	ab		Archive	For		Months	
Deliverable Requested: I, 🕡 III, IV, Other (specify)					18	Specia	Instr	uctions	s/QC	Requi	iremen	ts:								
Empty Kit Relinquished by:	D	ate:			Time	9:				1		Me	hod of	Shipment	t:					
Relinquished by:	Date/Time: 7/23/	24 1	08:55 c	ompany		Rec	eived b	y:	6					Date/Tin	ne:  23  z	4 6	)92J	Com	pany M. E.	
Relinquished by:	Date/Time: 7/23/2	¥ 1	225 0	mpapy	√ <del>6</del> .	Reci	eived b	у:	2	>-	7		)	Date/Tin			1/22	7 Com	pany Z	ET
Relinquished by:	Date/Time:		sur co	ompany	290	7	elyed b	lý:	$\leq$	5				Date/Tin	ne: /	4	1016	Com	pany	7
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No						Cos	er Ten	perater		C and Of	ther Rer	narks:		- 1 1 6	~	13.8		34.50	JU	C
								41	, –	1					, ,			Ver	04/02/29	024

Client: ERM-West Job Number: 580-142311-1

Login Number: 142311 List Source: Eurofins Seattle

List Number: 1

Creator: Silva, Shawn 1

Question	Answer	Comment
		Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

## PREPARED FOR

**ANALYTICAL REPORT** 

Attn: Avery Soplata ERM-West 1050 SW 6th Avenue Suite 1650 Portland, Oregon 97204

Generated 8/9/2024 5:08:18 PM

## **JOB DESCRIPTION**

Arkema PDI Sampling

## **JOB NUMBER**

580-142413-1

Eurofins Seattle 5755 8th Street East Tacoma WA 98424

## **Eurofins Seattle**

#### **Job Notes**

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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#### **Authorization**

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Authorized for release by Sheri Cruz, Project Manager I Sheri.Cruz@et.eurofinsus.com (253)922-2310

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Client: ERM-West

Project/Site: Arkema PDI Sampling

Laboratory Job ID: 580-142413-1

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#### **Case Narrative**

Client: ERM-West Job ID: 580-142413-1

Project: Arkema PDI Sampling

Job Narrative 580-142413-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these
  situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise
  specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 7/26/2024 12:15 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.8°C.

#### GC/MS VOA

Job ID: 580-142413-1

Method 8260D: The following sample was provided to the laboratory with a significantly different initial weight than that required by the reference method: PDI-15-SO-48-20240725 (580-142413-12). Deviations in the weight by more than 20% may affect reporting limits and potentially method performance. The method specifies 10g. The amount provided was above this range.

Method 8260D: The method blank for preparation batch 580-466320 and analytical batch 580-466329 contained Methylene Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8260D: The method blank for preparation batch 580-466866 and analytical batch 580-466867 contained 1,2,4-Trichlorobenzene, Hexachlorobutadiene and Naphthalene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-467136 recovered outside acceptance criteria, low biased, for 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, Bromomethane and Naphthalene. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analytes, the data are reported.

Method 8260D: The method blank for preparation batch 580-467132 and analytical batch 580-467136 contained Tetrachloroethene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8260D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-467417 and analytical batch 580-467421 recovered outside control limits for the following analytes: 1,2,3-Trichlorobenzene and Naphthalene.

Method 8260D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-467132 and analytical batch 580-467136 recovered outside control limits for the following analyte: 1,2,3-Trichlorobenzene.

Method 8260D: Surrogate recovery for the following samples was outside the upper control limit: PDI-07-SO-36.5-20240723 (580-142413-2). Chemically associated target analytes with detections are not reported.

Method 8260D: Reanalysis of the following samples was performed outside of the analytical holding time due to instrument failures: PDI-07-SO-36.5-20240723 (580-142413-2), PDI-07-SO-38.3-20240723 (580-142413-3), PDI-07-SO-39.5-20240723 (580-142413-4), PDI-07-SO-41-20240723 (580-142413-5) and PDI-07-SO-45.5-20240723 (580-142413-6).

Method 8260D: The following samples were diluted to bring the concentration of target analytes within the calibration range: PDI-07-SO-36.5-20240723 (580-142413-2) and PDI-07-SO-38.3-20240723 (580-142413-3). Elevated reporting limits (RLs) are provided.

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#### **Case Narrative**

Client: ERM-West Job ID: 580-142413-1

Project: Arkema PDI Sampling

#### Job ID: 580-142413-1 (Continued)

**Eurofins Seattle** 

Method 8260D: The following samples were analyzed at reduced volume due to high concentrations of target analytes: PDI-08-SO-35.8-20240724 (580-142413-8) and PDI-15-SO-38-20240725 (580-142413-10). The calculation was performed using an initial volume adjustment rather than a dilution factor. The reporting limits have been elevated by the appropriate factor.

Method 8260D: The result for Carbon tetrachloride was above the upper calibration range and is reported as an Estimated ("E") value in sample: PDI-15-SO-38-20240725 (580-142413-10) Sample was diluted and reported from the 1000x dilution. Sample was analyzed 4 times at different dilutions. Determination is the best analytical result achievable.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **General Chemistry**

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**Eurofins Seattle** 

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#### **Definitions/Glossary**

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

#### **Qualifiers**

G			

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
В	Compound was found in the blank and sample.
E	Result exceeded calibration range.
Н	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.

#### **Glossary**

DL, RA, RE, IN

DLC

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)

Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

EDL Estimated Detection Limit (Dioxin)
LOD Limit of Detection (DoD/DOE)
LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

Decision Level Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent
POS Positive / Present
PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Client Sample ID: TB-01-SO-20240723

Lab Sample ID: 580-142413-1 Date Collected: 07/23/24 00:01 Matrix: Solid

Date Received: 07/26/24 12:15

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Result Qualifier **MDL** Unit Dil Fac Analyte D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.020 0.0050 mg/Kg 07/29/24 13:01 07/29/24 16:01 ND 1,1,1-Trichloroethane 0.040 0.0046 mg/Kg 07/29/24 13:01 07/29/24 16:01 1,1,2,2-Tetrachloroethane ND 0.020 0.0076 mg/Kg 07/29/24 13:01 07/29/24 16:01 ND 0.0074 mg/Kg 07/29/24 13:01 07/29/24 16:01 1,1,2-Trichloroethane 0.020 1.1-Dichloroethane ND 0.040 0.0092 mg/Kg 07/29/24 13:01 07/29/24 16:01 ND 1,1-Dichloroethene 0.040 0.012 mg/Kg 07/29/24 13:01 07/29/24 16:01 1,1-Dichloropropene ND 0.040 0.0053 mg/Kg 07/29/24 13:01 07/29/24 16:01 ND 0.040 0.012 mg/Kg 07/29/24 13:01 07/29/24 16:01 1,2,3-Trichloropropane 1,2,4-Trimethylbenzene ND 0.040 0.014 mg/Kg 07/29/24 13:01 07/29/24 16:01 1,2-Dibromo-3-Chloropropane ND 0.060 0.015 mg/Kg 07/29/24 13:01 07/29/24 16:01 1,2-Dibromoethane ND 0.020 0.0038 mg/Kg 07/29/24 13:01 07/29/24 16:01 1.2-Dichlorobenzene ND 0.040 0.0087 mg/Kg 07/29/24 13:01 07/29/24 16:01 1 1,2-Dichloroethane ND 0.020 0.0055 mg/Kg 07/29/24 13:01 07/29/24 16:01 1,2-Dichloropropane ND 0.020 0.0066 mg/Kg 07/29/24 13:01 07/29/24 16:01 0.0076 mg/Kg ND 0.040 07/29/24 13:01 07/29/24 16:01 1,3,5-Trimethylbenzene 1,3-Dichlorobenzene ND 0.060 0.013 mg/Kg 07/29/24 13:01 07/29/24 16:01 ND 0.0056 1,3-Dichloropropane 0.060 mg/Kg 07/29/24 13:01 07/29/24 16:01 1,4-Dichlorobenzene ND 0.060 0.011 mg/Kg 07/29/24 13:01 07/29/24 16:01 2,2-Dichloropropane ND 0.040 0.012 mg/Kg 07/29/24 13:01 07/29/24 16:01 2-Chlorotoluene ND 0.040 0.0088 mg/Kg 07/29/24 13:01 07/29/24 16:01 4-Chlorotoluene ND 0.040 0.0098 mg/Kg 07/29/24 13:01 07/29/24 16:01 4-Isopropyltoluene ND 0.040 0.010 mg/Kg 07/29/24 13:01 07/29/24 16:01 Benzene ND 0.020 0.0038 mg/Kg 07/29/24 13:01 07/29/24 16:01 Bromobenzene ND 0.040 0.0042 mg/Kg 07/29/24 13:01 07/29/24 16:01 Bromochloromethane ND 0.040 0.0062 mg/Kg 07/29/24 13:01 07/29/24 16:01 Bromodichloromethane 0.0055 07/29/24 13:01 07/29/24 16:01 ND 0.040 mg/Kg **Bromoform** ND 0.040 0.0045 mg/Kg 07/29/24 13:01 07/29/24 16:01 Carbon tetrachloride 0.0044 mg/Kg 07/29/24 13:01 07/29/24 16:01 ND 0.020 0.0048 Chlorobenzene ND 0.040 mg/Kg 07/29/24 13:01 07/29/24 16:01 Chloroethane ND 0.080 0.021 mg/Kg 07/29/24 13:01 07/29/24 16:01 Chloroform ND 0.020 0.0042 mg/Kg 07/29/24 13:01 07/29/24 16:01 Chloromethane ND 0.060 0.010 mg/Kg 07/29/24 13:01 07/29/24 16:01 cis-1,2-Dichloroethene ND 0.060 0.013 mg/Kg 07/29/24 13:01 07/29/24 16:01 ND 07/29/24 13:01 07/29/24 16:01 cis-1,3-Dichloropropene 0.020 0.0040 mg/Kg Dibromochloromethane ND 0.020 0.0049 mg/Kg 07/29/24 13:01 07/29/24 16:01 Dibromomethane ND 0.040 0.0074 mg/Kg 07/29/24 13:01 07/29/24 16:01 Dichlorodifluoromethane ND 0.25 0.046 mg/Kg 07/29/24 13:01 07/29/24 16:01 Ethylbenzene ND 0.040 0.0091 mg/Kg 07/29/24 13:01 07/29/24 16:01 ND 0.040 0.0086 mg/Kg 07/29/24 13:01 07/29/24 16:01 Isopropylbenzene 0.0060 Methyl tert-butyl ether ND 0.040 mg/Kg 07/29/24 13:01 07/29/24 16:01 **Methylene Chloride** 0.060 0.25 0.026 mg/Kg 07/29/24 13:01 07/29/24 16:01 m-Xylene & p-Xylene ND 0.040 0.0071 mg/Kg 07/29/24 13:01 07/29/24 16:01 0.019 ND 0.040 07/29/24 13:01 07/29/24 16:01 n-Butylbenzene mg/Kg N-Propylbenzene 0.040 0.015 07/29/24 13:01 07/29/24 16:01 ND mg/Kg ND 07/29/24 13:01 07/29/24 16:01 o-Xylene 0.040 0.0050 mg/Kg sec-Butylbenzene ND 0.040 0.0086 mg/Kg 07/29/24 13:01 07/29/24 16:01 Styrene ND 0.040 07/29/24 13:01 07/29/24 16:01 0.013 mg/Kg t-Butylbenzene ND 0.040 0.0077 mg/Kg 07/29/24 13:01 07/29/24 16:01 07/29/24 13:01 07/29/24 16:01 Tetrachloroethene ND 0.040 0.0053 mg/Kg

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

**Client Sample ID: TB-01-SO-20240723** 

Lab Sample ID: 580-142413-1 Date Collected: 07/23/24 00:01 **Matrix: Solid** 

Date Received: 07/26/24 12:15

Method: SW846 8260D - Vo	latile Organic	Compound	ds by GC/MS	(Conti	nued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		0.060	0.014	mg/Kg		07/29/24 13:01	07/29/24 16:01	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		07/29/24 13:01	07/29/24 16:01	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		07/29/24 13:01	07/29/24 16:01	1
Trichloroethene	ND		0.040	0.010	mg/Kg		07/29/24 13:01	07/29/24 16:01	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		07/29/24 13:01	07/29/24 16:01	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		07/29/24 13:01	07/29/24 16:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				07/29/24 13:01	07/29/24 16:01	1
4-Bromofluorobenzene (Surr)	101		80 - 120				07/29/24 13:01	07/29/24 16:01	1
Dibromofluoromethane (Surr)	99		80 - 120				07/29/24 13:01	07/29/24 16:01	1
Toluene-d8 (Surr)	101		80 - 120				07/29/24 13:01	07/29/24 16:01	1

Method: SW846 8260D - Vo		-	•			_			
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND	*1	0.080	0.040	mg/Kg		08/05/24 00:16	08/05/24 16:29	1
1,2,4-Trichlorobenzene	ND		0.080	0.043	mg/Kg		08/05/24 00:16	08/05/24 16:29	1
Bromomethane	ND		0.10	0.038	mg/Kg		08/05/24 00:16	08/05/24 16:29	1
Hexachlorobutadiene	ND		0.10	0.024	mg/Kg		08/05/24 00:16	08/05/24 16:29	1
Naphthalene	ND		0.15	0.039	mg/Kg		08/05/24 00:16	08/05/24 16:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		80 - 121				08/05/24 00:16	08/05/24 16:29	1
4-Bromofluorobenzene (Surr)	100		80 - 120				08/05/24 00:16	08/05/24 16:29	1
Dibromofluoromethane (Surr)	118		80 - 120				08/05/24 00:16	08/05/24 16:29	1
Toluene-d8 (Surr)	91		80 - 120				08/05/24 00:16	08/05/24 16:29	1

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-07-SO-36.5-20240723

Lab Sample ID: 580-142413-2 Date Collected: 07/23/24 10:15 Matrix: Solid Date Received: 07/26/24 12:15 Percent Solids: 90.8

Method: SW846 8260D - Volatile Organic Compounds by GC/MS **MDL** Unit Dil Fac Analyte Result Qualifier D Prepared Analyzed mg/Kg 1,1,1,2-Tetrachloroethane ND 0.022 0.0055 07/29/24 13:01 07/29/24 16:22 07/29/24 16:22 1,1,1-Trichloroethane 0.011 0.044 0.0050 mg/Kg 07/29/24 13:01 1,1,2,2-Tetrachloroethane ND 0.022 0.0083 mg/Kg 07/29/24 13:01 07/29/24 16:22 ND 0.0081 07/29/24 13:01 07/29/24 16:22 1,1,2-Trichloroethane 0.022 mg/Kg 1.1-Dichloroethane ND 0.044 0.010 mg/Kg 07/29/24 13:01 07/29/24 16:22 1,1-Dichloroethene NΠ 0.044 0.013 mg/Kg 07/29/24 13:01 07/29/24 16:22 1,1-Dichloropropene ND 0.044 0.0058 07/29/24 13:01 07/29/24 16:22 mg/Kg ND 0.044 0.013 07/29/24 13:01 07/29/24 16:22 1,2,3-Trichloropropane mg/Kg 1,2,4-Trimethylbenzene ND 0.044 0.015 mg/Kg 07/29/24 13:01 07/29/24 16:22 1,2-Dibromo-3-Chloropropane ND 0.066 0.017 mg/Kg 07/29/24 13:01 07/29/24 16:22 1,2-Dibromoethane ND 0.022 0.0042 mg/Kg 07/29/24 13:01 07/29/24 16:22 0.044 0.0095 ma/Ka 07/29/24 13:01 07/29/24 16:22 1 1,2-Dichlorobenzene 0.76 1,2-Dichloroethane ND 0.022 0.0060 mg/Kg 07/29/24 13:01 07/29/24 16:22 1,2-Dichloropropane ND 0.022 0.0072 mg/Kg 07/29/24 13:01 07/29/24 16:22 ND 0.0083 mg/Kg 0.044 07/29/24 13:01 07/29/24 16:22 1,3,5-Trimethylbenzene 07/29/24 13:01 07/29/24 16:22 1,3-Dichlorobenzene 0.076 0.066 0.015 mg/Kg 1,3-Dichloropropane ND 0.066 0.0061 mg/Kg 07/29/24 13:01 07/29/24 16:22 0.066 0.012 mg/Kg 07/29/24 13:01 07/29/24 16:22 1.4-Dichlorobenzene 2.7 07/29/24 13:01 07/29/24 16:22 NΩ 0.044 0.013 mg/Kg 2,2-Dichloropropane 2-Chlorotoluene ND 0.044 0.0096 mg/Kg 07/29/24 13:01 07/29/24 16:22 07/29/24 13:01 07/29/24 16:22 4-Chlorotoluene NΠ 0.044 0.011 mg/Kg 0.043 0.044 0.011 mg/Kg 07/29/24 13:01 07/29/24 16:22 4-Isopropyltoluene 0.022 0.0042 mg/Kg 07/29/24 13:01 07/29/24 16:22 **Benzene** 0.0059 0.040 0.044 0.0046 mg/Kg 07/29/24 13:01 07/29/24 16:22 **Bromobenzene** Bromochloromethane ND 0.044 0.0068 mg/Kg 07/29/24 13:01 07/29/24 16:22 Bromodichloromethane 0.0060 07/29/24 13:01 07/29/24 16:22 ND 0.044 mg/Kg **Bromoform** ND 0.044 0.0049 mg/Kg 07/29/24 13:01 07/29/24 16:22 Carbon tetrachloride 0.0048 mg/Kg 07/29/24 13:01 07/29/24 16:22 0.020 0.022 0.023 07/29/24 13:01 07/29/24 16:22 Chloroethane ND 0.087 mg/Kg 0.0046 07/29/24 13:01 07/29/24 16:22 Chloroform 0.17 0.022 mg/Kg Chloromethane ND 0.066 0.011 mg/Kg 07/29/24 13:01 07/29/24 16:22 ND 0.066 0.014 mg/Kg 07/29/24 13:01 07/29/24 16:22 cis-1.2-Dichloroethene cis-1,3-Dichloropropene ND 0.022 0.0044 mg/Kg 07/29/24 13:01 07/29/24 16:22 ND 0.0054 07/29/24 13:01 07/29/24 16:22 Dibromochloromethane 0.022 mg/Kg Dibromomethane ND 0.044 0.0081 mg/Kg 07/29/24 13:01 07/29/24 16:22 Dichlorodifluoromethane ND 0.27 0.050 mg/Kg 07/29/24 13:01 07/29/24 16:22 0.0094 07/29/24 13:01 07/29/24 16:22 Isopropylbenzene ND 0.044 mg/Kg Methyl tert-butyl ether ND 0.044 0.0066 mg/Kg 07/29/24 13:01 07/29/24 16:22 0.27 0.028 mg/Kg 07/29/24 13:01 07/29/24 16:22 **Methylene Chloride** 0.073 m-Xylene & p-Xylene ND 0.044 0.0078 mg/Kg 07/29/24 13:01 07/29/24 16:22 n-Butylbenzene ND 0.044 0.020 mg/Kg 07/29/24 13:01 07/29/24 16:22 N-Propylbenzene ND 0.044 0.016 mg/Kg 07/29/24 13:01 07/29/24 16:22 sec-Butylbenzene ND 0.0094 07/29/24 13:01 07/29/24 16:22 0.044 mg/Kg Styrene 0.044 0.014 07/29/24 13:01 07/29/24 16:22 ND mg/Kg ND 07/29/24 13:01 07/29/24 16:22 t-Butylbenzene 0.044 0.0084 mg/Kg 0.066 0.015 mg/Kg 07/29/24 13:01 07/29/24 16:22 **Toluene** 0.019 ND 07/29/24 13:01 07/29/24 16:22 trans-1,2-Dichloroethene 0.066 0.016 mg/Kg trans-1,3-Dichloropropene ND 0.044 0.0077 mg/Kg 07/29/24 13:01 07/29/24 16:22 Trichloroethene ND 0.044 0.011 mg/Kg 07/29/24 13:01 07/29/24 16:22

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-07-SO-36.5-20240723

Lab Sample ID: 580-142413-2 Date Collected: 07/23/24 10:15

**Matrix: Solid** Date Received: 07/26/24 12:15 Percent Solids: 90.8

0.028 r	0.087			Analyte
0.000 *	0.007		ND	Trichlorofluoromethane
0.020 r	0.11		ND	Vinyl chloride
	Limits	Qualifier	%Recovery	Surrogate
	80 - 121		99	1,2-Dichloroethane-d4 (Surr)
	80 - 120		111	4-Bromofluorobenzene (Surr)
	80 - 120		97	Dibromofluoromethane (Surr)
	80 - 120	S1+	127	Toluene-d8 (Surr)
	80 - 120		127	Toluene-d8 (Surr)
	- DI	80 - 121 80 - 120 80 - 120 80 - 120	80 - 121 80 - 120 80 - 120 S1+ 80 - 120	99 80 - 121 111 80 - 120 97 80 - 120 127 S1+ 80 - 120

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND	H *1	9.4	4.7	mg/Kg	<u></u>	08/07/24 07:53	08/07/24 17:53	1
1,2,4-Trichlorobenzene	ND	Н	9.4	5.0	mg/Kg	₩	08/07/24 07:53	08/07/24 17:53	1
Bromomethane	ND	Н	12	4.4	mg/Kg	₩	08/07/24 07:53	08/07/24 17:53	1
Chlorobenzene	830	Н	4.7	0.56	mg/Kg	₩	08/07/24 07:53	08/07/24 17:53	1
Ethylbenzene	ND	Н	4.7	1.1	mg/Kg	₩	08/07/24 07:53	08/07/24 17:53	1
Hexachlorobutadiene	ND	Н	12	2.8	mg/Kg	₩	08/07/24 07:53	08/07/24 17:53	1
Naphthalene	ND	H *1	18	4.6	mg/Kg	₩	08/07/24 07:53	08/07/24 17:53	1
o-Xylene	ND	Н	4.7	0.59	mg/Kg	₩	08/07/24 07:53	08/07/24 17:53	1
Tetrachloroethene	ND	Н	4.7	0.62	mg/Kg	₩	08/07/24 07:53	08/07/24 17:53	1

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104	80 - 121	08/07/24 07:53	08/07/24 17:53	1
4-Bromofluorobenzene (Surr)	98	80 - 120	08/07/24 07:53	08/07/24 17:53	1
Dibromofluoromethane (Surr)	105	80 - 120	08/07/24 07:53	08/07/24 17:53	1
Toluene-d8 (Surr)	96	80 - 120	08/07/24 07:53	08/07/24 17:53	1

General Chemistry Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	90.8		0.1	0.1	%			07/30/24 11:39	1
Percent Moisture (SM22 2540G)	9.2		0.1	0.1	%			07/30/24 11:39	1

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-07-SO-38.3-20240723

Lab Sample ID: 580-142413-3 Date Collected: 07/23/24 10:17 Matrix: Solid Date Received: 07/26/24 12:15 Percent Solids: 91.5

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed mg/Kg 1,1,1,2-Tetrachloroethane ND 0.024 0.0061 07/29/24 13:10 07/29/24 16:44 ND 1.1.1-Trichloroethane 0.048 0.0056 mg/Kg 07/29/24 13:10 07/29/24 16:44 1,1,2,2-Tetrachloroethane ND 0.024 0.0092 mg/Kg 07/29/24 13:10 07/29/24 16:44 ND 0.0090 07/29/24 13:10 07/29/24 16:44 1,1,2-Trichloroethane 0.024 mg/Kg ND 0.048 0.011 mg/Kg 07/29/24 13:10 07/29/24 16:44 1 1-Dichloroethane 1,1-Dichloroethene NΠ 0.048 0.015 mg/Kg 07/29/24 13:10 07/29/24 16:44 1,1-Dichloropropene ND 0.048 0.0064 07/29/24 13:10 07/29/24 16:44 mg/Kg ND 0.048 0.014 07/29/24 13:10 07/29/24 16:44 1,2,3-Trichloropropane mg/Kg 1,2,4-Trimethylbenzene ND 0.048 0.016 mg/Kg 07/29/24 13:10 07/29/24 16:44 0.018 1,2-Dibromo-3-Chloropropane ND 0.073 mg/Kg 07/29/24 13:10 07/29/24 16:44 1,2-Dibromoethane ND 0.024 0.0046 mg/Kg 07/29/24 13:10 07/29/24 16:44 0.048 0.011 mg/Kg 07/29/24 13:10 07/29/24 16:44 1 1,2-Dichlorobenzene 0.057 1,2-Dichloroethane ND 0.024 0.0067 mg/Kg 07/29/24 13:10 07/29/24 16:44 ND 0.024 0.0080 mg/Kg 07/29/24 13:10 07/29/24 16:44 1.2-Dichloropropane ND 0.048 0.0092 mg/Kg 07/29/24 13:10 07/29/24 16:44 1,3,5-Trimethylbenzene 1,3-Dichlorobenzene ND 0.073 0.016 mg/Kg 07/29/24 13:10 07/29/24 16:44 0.0068 1,3-Dichloropropane ND 0.073 mg/Kg 07/29/24 13:10 07/29/24 16:44 0.073 0.013 mg/Kg 07/29/24 13:10 07/29/24 16:44 1.4-Dichlorobenzene 0.13 ND 0.048 0.015 mg/Kg 07/29/24 13:10 07/29/24 16:44 2,2-Dichloropropane 2-Chlorotoluene ND 0.048 0.011 mg/Kg 07/29/24 13:10 07/29/24 16:44 4-Chlorotoluene ND 0.048 0.012 mg/Kg ť. 07/29/24 13:10 07/29/24 16:44 4-Isopropyltoluene ND 0.048 0.012 mg/Kg 07/29/24 13:10 07/29/24 16:44 Benzene ND 0.0046 mg/Kg 07/29/24 13:10 07/29/24 16:44 0.024 Bromobenzene ND 0.048 0.0051 mg/Kg 07/29/24 13:10 07/29/24 16:44 Bromochloromethane ND 0.048 0.0075 mg/Kg 07/29/24 13:10 07/29/24 16:44 Bromodichloromethane 0.0067 07/29/24 13:10 07/29/24 16:44 ND 0.048 mg/Kg **Bromoform** ND 0.048 0.0055 mg/Kg 07/29/24 13:10 07/29/24 16:44 Carbon tetrachloride ND 0.0053 07/29/24 13:10 07/29/24 16:44 0.024 mg/Kg Chloroethane ND 0.097 0.025 mg/Kg 07/29/24 13:10 07/29/24 16:44 0.0051 07/29/24 13:10 07/29/24 16:44 **Chloroform** 0.048 0.024 mg/Kg Chloromethane ND 0.073 0.012 mg/Kg 07/29/24 13:10 07/29/24 16:44 ND 0.073 0.015 mg/Kg 07/29/24 13:10 07/29/24 16:44 cis-1.2-Dichloroethene cis-1,3-Dichloropropene ND 0.024 0.0048 07/29/24 13:10 07/29/24 16:44 mg/Kg 0.0059 ND 07/29/24 13:10 07/29/24 16:44 Dibromochloromethane 0.024 mg/Kg Dibromomethane ND 0.048 0.0090 mg/Kg 07/29/24 13:10 07/29/24 16:44 Dichlorodifluoromethane ND 0.056 mg/Kg 07/29/24 13:10 07/29/24 16:44 0.30 Ethylbenzene 0.026 0.048 0.011 mg/Kg 07/29/24 13:10 07/29/24 16:44 Isopropylbenzene ND 0.048 0.010 mg/Kg 07/29/24 13:10 07/29/24 16:44 ND 0.048 0.0073 mg/Kg 07/29/24 13:10 07/29/24 16:44 Methyl tert-butyl ether **Methylene Chloride** 0.11 J<sub>B</sub> 0.30 0.032 mg/Kg 07/29/24 13:10 07/29/24 16:44 m-Xylene & p-Xylene 0.15 0.048 0.0086 mg/Kg 07/29/24 13:10 07/29/24 16:44 n-Butylbenzene ND 0.048 0.022 mg/Kg 07/29/24 13:10 07/29/24 16:44 ND 0.018 mg/Kg 07/29/24 13:10 07/29/24 16:44 N-Propylbenzene 0.048 0.0061 07/29/24 13:10 07/29/24 16:44 o-Xylene 0.028 0.048 mg/Kg ND 07/29/24 13:10 07/29/24 16:44 sec-Butylbenzene 0.048 0.010 mg/Kg Styrene ND 0.048 0.015 mg/Kg 07/29/24 13:10 07/29/24 16:44 ND 0.0093 mg/Kg 07/29/24 13:10 07/29/24 16:44 t-Butylbenzene 0.048 **Tetrachloroethene** 0.032 J 0.048 0.0064 mg/Kg 07/29/24 13:10 07/29/24 16:44 Toluene 07/29/24 13:10 07/29/24 16:44 ND 0.073 0.016 mg/Kg

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-07-SO-38.3-20240723

Date Collected: 07/23/24 10:17 Date Received: 07/26/24 12:15

Lab Sample ID: 580-142413-3 **Matrix: Solid** 

Percent Solids: 91.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		0.073	0.018	mg/Kg	— <u></u>	07/29/24 13:10	07/29/24 16:44	1
trans-1,3-Dichloropropene	ND		0.048	0.0085	mg/Kg	₩	07/29/24 13:10	07/29/24 16:44	1
Trichloroethene	ND		0.048	0.012	mg/Kg	₩	07/29/24 13:10	07/29/24 16:44	1
Trichlorofluoromethane	ND		0.097	0.032	mg/Kg	₩	07/29/24 13:10	07/29/24 16:44	1
Vinyl chloride	ND		0.12	0.023	mg/Kg	₽	07/29/24 13:10	07/29/24 16:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				07/29/24 13:10	07/29/24 16:44	1
4-Bromofluorobenzene (Surr)	106		80 - 120				07/29/24 13:10	07/29/24 16:44	1
Dibromofluoromethane (Surr)	96		80 - 120				07/29/24 13:10	07/29/24 16:44	1
Toluene-d8 (Surr)	95		80 - 120				07/29/24 13:10	07/29/24 16:44	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND	H *1	10	5.2	mg/Kg	☼	08/07/24 07:53	08/07/24 18:15	1
1,2,4-Trichlorobenzene	ND	Н	10	5.6	mg/Kg	☼	08/07/24 07:53	08/07/24 18:15	1
Bromomethane	ND	Н	13	4.9	mg/Kg	☼	08/07/24 07:53	08/07/24 18:15	1
Chlorobenzene	97	Н	5.2	0.63	mg/Kg	₩	08/07/24 07:53	08/07/24 18:15	1
Hexachlorobutadiene	ND	Н	13	3.1	mg/Kg	☼	08/07/24 07:53	08/07/24 18:15	1
Naphthalene	ND	H *1	20	5.1	mg/Kg	₩	08/07/24 07:53	08/07/24 18:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		80 - 121	08/07/24 07:53	08/07/24 18:15	1
4-Bromofluorobenzene (Surr)	97		80 - 120	08/07/24 07:53	08/07/24 18:15	1
Dibromofluoromethane (Surr)	104		80 - 120	08/07/24 07:53	08/07/24 18:15	1
Toluene-d8 (Surr)	98		80 - 120	08/07/24 07:53	08/07/24 18:15	1

General Chemistry								
Analyte	Result Qual	lifier RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	91.5	0.1	0.1	%			07/30/24 11:39	1
Percent Moisture (SM22 2540G)	8.5	0.1	0.1	%			07/30/24 11:39	1

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-07-SO-39.5-20240723

Lab Sample ID: 580-142413-4 Date Collected: 07/23/24 10:19 Matrix: Solid Date Received: 07/26/24 12:15 Percent Solids: 82.4

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed mg/Kg 1,1,1,2-Tetrachloroethane ND 0.027 0.0066 07/29/24 13:10 07/29/24 17:05 ND 0.053 1.1.1-Trichloroethane 0.0061 mg/Kg 07/29/24 13:10 07/29/24 17:05 1,1,2,2-Tetrachloroethane ND 0.027 0.010 mg/Kg 07/29/24 13:10 07/29/24 17:05 ND 0.0098 mg/Kg 07/29/24 13:10 07/29/24 17:05 1,1,2-Trichloroethane 0.027 1.1-Dichloroethane ND 0.053 0.012 mg/Kg 07/29/24 13:10 07/29/24 17:05 1,1-Dichloroethene NΠ 0.053 0.016 mg/Kg 07/29/24 13:10 07/29/24 17:05 1,1-Dichloropropene ND 0.053 0.0070 mg/Kg 07/29/24 13:10 07/29/24 17:05 ND 0.053 0.015 07/29/24 13:10 07/29/24 17:05 1,2,3-Trichloropropane mg/Kg 1,2,4-Trimethylbenzene ND 0.053 0.018 mg/Kg 07/29/24 13:10 07/29/24 17:05 1,2-Dibromo-3-Chloropropane ND 0.080 0.020 mg/Kg 07/29/24 13:10 07/29/24 17:05 1,2-Dibromoethane ND 0.027 0.0050 mg/Kg 07/29/24 13:10 07/29/24 17:05 0.053 0.012 mg/Kg 07/29/24 13:10 07/29/24 17:05 1 1,2-Dichlorobenzene 0.016 J 1,2-Dichloroethane ND 0.027 0.0073 mg/Kg 07/29/24 13:10 07/29/24 17:05 ND 0.027 0.0088 mg/Kg 07/29/24 13:10 07/29/24 17:05 1.2-Dichloropropane ND 0.010 0.053 mg/Kg 07/29/24 13:10 07/29/24 17:05 1,3,5-Trimethylbenzene 07/29/24 13:10 07/29/24 17:05 1,3-Dichlorobenzene NΩ 0.080 0.018 mg/Kg 1,3-Dichloropropane ND 0.080 0.0074 mg/Kg 07/29/24 13:10 07/29/24 17:05 0.080 0.014 mg/Kg 07/29/24 13:10 07/29/24 17:05 1.4-Dichlorobenzene 0.052 2,2-Dichloropropane ND 0.053 0.016 mg/Kg 07/29/24 13:10 07/29/24 17:05 2-Chlorotoluene ND 0.053 0.012 mg/Kg 07/29/24 13:10 07/29/24 17:05 4-Chlorotoluene ND 0.053 0.013 mg/Kg ť. 07/29/24 13:10 07/29/24 17:05 4-Isopropyltoluene ND 0.053 0.014 mg/Kg 07/29/24 13:10 07/29/24 17:05 Benzene ND 0.0050 mg/Kg 07/29/24 13:10 07/29/24 17:05 0.027 Bromobenzene ND 0.053 0.0056 mg/Kg 07/29/24 13:10 07/29/24 17:05 Bromochloromethane ND 0.053 0.0082 mg/Kg 07/29/24 13:10 07/29/24 17:05 Bromodichloromethane 0.0073 07/29/24 13:10 07/29/24 17:05 ND 0.053 mg/Kg **Bromoform** ND 0.053 0.0060 mg/Kg 07/29/24 13:10 07/29/24 17:05 Carbon tetrachloride 0.0058 mg/Kg 07/29/24 13:10 07/29/24 17:05 ND 0.027 Chloroethane ND 0.11 0.028 mg/Kg 07/29/24 13:10 07/29/24 17:05 Chloroform ND 0.027 0.0056 07/29/24 13:10 07/29/24 17:05 mg/Kg Chloromethane ND 0.080 0.013 mg/Kg 07/29/24 13:10 07/29/24 17:05 ND 0.080 0.017 mg/Kg 07/29/24 13:10 07/29/24 17:05 cis-1.2-Dichloroethene mg/Kg cis-1,3-Dichloropropene ND 0.027 0.0053 07/29/24 13:10 07/29/24 17:05 ND 07/29/24 13:10 07/29/24 17:05 Dibromochloromethane 0.027 0.0065 mg/Kg Dibromomethane ND 0.053 0.0098 mg/Kg 07/29/24 13:10 07/29/24 17:05 Dichlorodifluoromethane ND 0.061 mg/Kg 07/29/24 13:10 07/29/24 17:05 0.33 Ethylbenzene 0.020 0.053 0.012 mg/Kg 07/29/24 13:10 07/29/24 17:05 Isopropylbenzene ND 0.053 0.011 mg/Kg 07/29/24 13:10 07/29/24 17:05 ND 0.053 0.0080 mg/Kg 07/29/24 13:10 07/29/24 17:05 Methyl tert-butyl ether **Methylene Chloride** 0.12 JB 0.33 0.034 mg/Kg 07/29/24 13:10 07/29/24 17:05 m-Xylene & p-Xylene 0.14 0.053 0.0094 mg/Kg 07/29/24 13:10 07/29/24 17:05 n-Butylbenzene ND 0.053 0.025 mg/Kg 07/29/24 13:10 07/29/24 17:05 ND 0.020 07/29/24 13:10 07/29/24 17:05 N-Propylbenzene 0.053 mg/Kg 0.053 0.0066 07/29/24 13:10 07/29/24 17:05 o-Xylene 0.029 mg/Kg 07/29/24 13:10 07/29/24 17:05 sec-Butylbenzene ND 0.053 0.011 mg/Kg Styrene ND 0.053 0.017 mg/Kg 07/29/24 13:10 07/29/24 17:05 t-Butylbenzene ND 07/29/24 13:10 07/29/24 17:05 0.053 0.010 mg/Kg Tetrachloroethene ND 0.053 0.0070 mg/Kg 07/29/24 13:10 07/29/24 17:05 Toluene ND 0.080 0.018 mg/Kg 07/29/24 13:10 07/29/24 17:05

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-07-SO-39.5-20240723

Lab Sample ID: 580-142413-4 Date Collected: 07/23/24 10:19 Date Received: 07/26/24 12:15

**Matrix: Solid** Percent Solids: 82.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		0.080	0.019	mg/Kg	<u></u>	07/29/24 13:10	07/29/24 17:05	1
trans-1,3-Dichloropropene	ND		0.053	0.0093	mg/Kg	☆	07/29/24 13:10	07/29/24 17:05	1
Trichloroethene	ND		0.053	0.014	mg/Kg	⊅	07/29/24 13:10	07/29/24 17:05	1
Trichlorofluoromethane	ND		0.11	0.034	mg/Kg	☼	07/29/24 13:10	07/29/24 17:05	1
Vinyl chloride	ND		0.13	0.025	mg/Kg	☼	07/29/24 13:10	07/29/24 17:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 121				07/29/24 13:10	07/29/24 17:05	1
4-Bromofluorobenzene (Surr)	104		80 - 120				07/29/24 13:10	07/29/24 17:05	1
Dibromofluoromethane (Surr)	96		80 - 120				07/29/24 13:10	07/29/24 17:05	1
Toluene-d8 (Surr)	101		80 - 120				07/29/24 13:10	07/29/24 17:05	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND	H *1	1.1	0.57	mg/Kg	☆	08/07/24 07:53	08/07/24 15:19	1
1,2,4-Trichlorobenzene	ND	Н	1.1	0.61	mg/Kg	₩	08/07/24 07:53	08/07/24 15:19	1
Bromomethane	ND	Н	1.4	0.54	mg/Kg	₩	08/07/24 07:53	08/07/24 15:19	1
Chlorobenzene	11	Н	0.57	0.068	mg/Kg	₩	08/07/24 07:53	08/07/24 15:19	1
Hexachlorobutadiene	ND	Н	1.4	0.34	mg/Kg	₩	08/07/24 07:53	08/07/24 15:19	1
Naphthalene	ND	H *1	2.1	0.56	mg/Kg	₩	08/07/24 07:53	08/07/24 15:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		80 - 121	08/07/24 07:53	08/07/24 15:19	1
4-Bromofluorobenzene (Surr)	96		80 - 120	08/07/24 07:53	08/07/24 15:19	1
Dibromofluoromethane (Surr)	102		80 - 120	08/07/24 07:53	08/07/24 15:19	1
Toluene-d8 (Surr)	99		80 - 120	08/07/24 07:53	08/07/24 15:19	1

General Chemistry Analyte	Result Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	82.4	0.1	0.1	%			07/30/24 12:38	1
Percent Moisture (SM22 2540G)	17.6	0.1	0.1	%			07/30/24 12:38	1

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-07-SO-41-20240723

Lab Sample ID: 580-142413-5 Date Collected: 07/23/24 12:22 Matrix: Solid Date Received: 07/26/24 12:15 Percent Solids: 89.8

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.023 0.0058 mg/Kg 07/29/24 13:10 07/29/24 17:27 ND 1.1.1-Trichloroethane 0.046 0.0053 mg/Kg 07/29/24 13:10 07/29/24 17:27 1,1,2,2-Tetrachloroethane ND 0.023 0.0088 mg/Kg 07/29/24 13:10 07/29/24 17:27 ND 07/29/24 13:10 07/29/24 17:27 1,1,2-Trichloroethane 0.023 0.0085 mg/Kg ND 0.046 0.011 mg/Kg 07/29/24 13:10 07/29/24 17:27 1 1-Dichloroethane ND 1,1-Dichloroethene 0.046 0.014 mg/Kg 07/29/24 13:10 07/29/24 17:27 1,1-Dichloropropene ND 0.046 0.0061 07/29/24 13:10 07/29/24 17:27 mg/Kg ND 0.046 0.013 07/29/24 13:10 07/29/24 17:27 1,2,3-Trichloropropane mg/Kg 1,2,4-Trimethylbenzene ND 0.046 0.016 mg/Kg 07/29/24 13:10 07/29/24 17:27 0.018 1,2-Dibromo-3-Chloropropane ND 0.069 mg/Kg 07/29/24 13:10 07/29/24 17:27 1,2-Dibromoethane ND 0.023 0.0044 mg/Kg 07/29/24 13:10 07/29/24 17:27 0.075 mg/Kg 0.046 0.010 07/29/24 13:10 07/29/24 17:27 1 1,2-Dichlorobenzene 1,2-Dichloroethane ND 0.023 0.0063 mg/Kg 07/29/24 13:10 07/29/24 17:27 1,2-Dichloropropane ND 0.023 0.0076 mg/Kg 07/29/24 13:10 07/29/24 17:27 ND 8800.0 0.046 mg/Kg 07/29/24 13:10 07/29/24 17:27 1,3,5-Trimethylbenzene 0.015 07/29/24 13:10 07/29/24 17:27 1,3-Dichlorobenzene 0.25 0.069 mg/Kg 0.0065 ND 0.069 mg/Kg 07/29/24 13:10 07/29/24 17:27 1,3-Dichloropropane 0.069 0.012 mg/Kg 07/29/24 13:10 07/29/24 17:27 1.4-Dichlorobenzene 0.24 ND 0.046 0.014 mg/Kg 07/29/24 13:10 07/29/24 17:27 2,2-Dichloropropane 2-Chlorotoluene ND 0.046 0.010 mg/Kg 07/29/24 13:10 07/29/24 17:27 4-Chlorotoluene ND 0.046 0.011 mg/Kg ť. 07/29/24 13:10 07/29/24 17:27 4-Isopropyltoluene ND 0.046 0.012 mg/Kg 07/29/24 13:10 07/29/24 17:27 Benzene ND 0.023 0.0044 mg/Kg 07/29/24 13:10 07/29/24 17:27 Bromobenzene ND 0.046 0.0048 mg/Kg 07/29/24 13:10 07/29/24 17:27 Bromochloromethane ND 0.046 0.0072 mg/Kg 07/29/24 13:10 07/29/24 17:27 Bromodichloromethane 0.0063 07/29/24 13:10 07/29/24 17:27 ND 0.046 mg/Kg **Bromoform** ND 0.046 0.0052 mg/Kg 07/29/24 13:10 07/29/24 17:27 Carbon tetrachloride ND 0.0051 mg/Kg 07/29/24 13:10 07/29/24 17:27 0.023 Chloroethane ND 0.092 0.024 mg/Kg 07/29/24 13:10 07/29/24 17:27 0.0048 mg/Kg 07/29/24 13:10 07/29/24 17:27 **Chloroform** 0.025 0.023 Chloromethane ND 0.069 0.012 mg/Kg 07/29/24 13:10 07/29/24 17:27 cis-1,2-Dichloroethene ND 0.069 0.015 mg/Kg 07/29/24 13:10 07/29/24 17:27 cis-1,3-Dichloropropene ND 0.023 0.0046 mg/Kg 07/29/24 13:10 07/29/24 17:27 0.0057 ND 07/29/24 13:10 07/29/24 17:27 Dibromochloromethane 0.023 mg/Kg Dibromomethane ND 0.046 0.0085 mg/Kg 07/29/24 13:10 07/29/24 17:27 Dichlorodifluoromethane ND 0.053 mg/Kg 07/29/24 13:10 07/29/24 17:27 0.29 Ethylbenzene 0.023 0.046 0.011 mg/Kg 07/29/24 13:10 07/29/24 17:27 Isopropylbenzene ND 0.046 0.0099 mg/Kg 07/29/24 13:10 07/29/24 17:27 ND 0.046 0.0069 mg/Kg 07/29/24 13:10 07/29/24 17:27 Methyl tert-butyl ether **Methylene Chloride** 0.10 JB 0.29 0.030 mg/Kg 07/29/24 13:10 07/29/24 17:27 m-Xylene & p-Xylene 0.15 0.046 0.0082 mg/Kg 07/29/24 13:10 07/29/24 17:27 n-Butylbenzene ND 0.046 0.021 mg/Kg 07/29/24 13:10 07/29/24 17:27 ND 0.017 07/29/24 13:10 07/29/24 17:27 N-Propylbenzene 0.046 mg/Kg 0.0058 07/29/24 13:10 07/29/24 17:27 o-Xylene 0.032 0.046 mg/Kg 0.0099 ND 07/29/24 13:10 07/29/24 17:27 sec-Butylbenzene 0.046 mg/Kg Styrene ND 0.046 0.015 mg/Kg 07/29/24 13:10 07/29/24 17:27 ND 0.0089 07/29/24 13:10 07/29/24 17:27 t-Butylbenzene 0.046 mg/Kg **Tetrachloroethene** 0.098 0.046 0.0061 mg/Kg 07/29/24 13:10 07/29/24 17:27 Toluene 0.016 mg/Kg ND 0.069 07/29/24 13:10 07/29/24 17:27

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-07-SO-41-20240723

Date Collected: 07/23/24 12:22 Date Received: 07/26/24 12:15

Lab Sample ID: 580-142413-5

**Matrix: Solid** Percent Solids: 89.8

Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	(Conti	inued)				
Analyte	_	Qualifier	RL	•	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		0.069	0.017	mg/Kg	— <u>—</u>	07/29/24 13:10	07/29/24 17:27	1
trans-1,3-Dichloropropene	ND		0.046	0.0081	mg/Kg	₩	07/29/24 13:10	07/29/24 17:27	1
Trichloroethene	ND		0.046	0.012	mg/Kg	₩	07/29/24 13:10	07/29/24 17:27	1
Trichlorofluoromethane	ND		0.092	0.030	mg/Kg	₩	07/29/24 13:10	07/29/24 17:27	1
Vinyl chloride	ND		0.12	0.022	mg/Kg	₩	07/29/24 13:10	07/29/24 17:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				07/29/24 13:10	07/29/24 17:27	1
4-Bromofluorobenzene (Surr)	105		80 - 120				07/29/24 13:10	07/29/24 17:27	1
Dibromofluoromethane (Surr)	95		80 - 120				07/29/24 13:10	07/29/24 17:27	1
Toluene-d8 (Surr)	95		80 - 120				07/29/24 13:10	07/29/24 17:27	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND	H *1	0.99	0.49	mg/Kg	☆	08/07/24 07:53	08/07/24 15:41	1
1,2,4-Trichlorobenzene	ND	Н	0.99	0.53	mg/Kg	₩	08/07/24 07:53	08/07/24 15:41	1
Bromomethane	ND	Н	1.2	0.47	mg/Kg	₩	08/07/24 07:53	08/07/24 15:41	1
Chlorobenzene	53	Н	0.50	0.060	mg/Kg	₩	08/07/24 07:53	08/07/24 15:41	1
Hexachlorobutadiene	ND	Н	1.2	0.30	mg/Kg	☼	08/07/24 07:53	08/07/24 15:41	1
Naphthalene	ND	H *1	1.9	0.49	mg/Kg	₽	08/07/24 07:53	08/07/24 15:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		80 - 121	08/07/24 07:53	08/07/24 15:41	1
4-Bromofluorobenzene (Surr)	100		80 - 120	08/07/24 07:53	08/07/24 15:41	1
Dibromofluoromethane (Surr)	101		80 - 120	08/07/24 07:53	08/07/24 15:41	1
Toluene-d8 (Surr)	100		80 - 120	08/07/24 07:53	08/07/24 15:41	1

General Chemistry							
Analyte	Result Qualifier	RL	RL Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	89.8	0.1	0.1 %			07/30/24 12:38	1
Percent Moisture (SM22 2540G)	10.2	0.1	0.1 %			07/30/24 12:38	1

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-07-SO-45.5-20240723

Lab Sample ID: 580-142413-6 Date Collected: 07/23/24 12:35 Matrix: Solid Date Received: 07/26/24 12:15 Percent Solids: 78.3

Method: SW846 8260D - Volatile Organic Compounds by GC/MS **MDL** Unit Dil Fac Analyte Result Qualifier D Prepared Analyzed mg/Kg 1,1,1,2-Tetrachloroethane ND 0.028 0.0071 07/29/24 13:10 07/29/24 17:48 ND 0.057 1,1,1-Trichloroethane 0.0065 mg/Kg 07/29/24 13:10 07/29/24 17:48 1,1,2,2-Tetrachloroethane ND 0.028 0.011 mg/Kg 07/29/24 13:10 07/29/24 17:48 ND 07/29/24 13:10 07/29/24 17:48 1,1,2-Trichloroethane 0.028 0.010 mg/Kg 1.1-Dichloroethane ND 0.013 mg/Kg 07/29/24 13:10 07/29/24 17:48 0.057 0.017 1,1-Dichloroethene NΠ 0.057 mg/Kg 07/29/24 13:10 07/29/24 17:48 1,1-Dichloropropene ND 0.057 0.0075 07/29/24 13:10 07/29/24 17:48 mg/Kg ND 0.057 0.016 07/29/24 13:10 07/29/24 17:48 1,2,3-Trichloropropane mg/Kg 1,2,4-Trimethylbenzene ND 0.057 0.019 mg/Kg 07/29/24 13:10 07/29/24 17:48 1,2-Dibromo-3-Chloropropane ND 0.085 0.022 mg/Kg 07/29/24 13:10 07/29/24 17:48 1,2-Dibromoethane ND 0.028 0.0054 mg/Kg 07/29/24 13:10 07/29/24 17:48 0.023 0.057 0.012 mg/Kg 07/29/24 13:10 07/29/24 17:48 1 1,2-Dichlorobenzene 1,2-Dichloroethane ND 0.028 0.0078 mg/Kg 07/29/24 13:10 07/29/24 17:48 1,2-Dichloropropane ND 0.028 0.0093 mg/Kg 07/29/24 13:10 07/29/24 17:48 ND 0.057 0.011 mg/Kg 07/29/24 13:10 07/29/24 17:48 1,3,5-Trimethylbenzene 07/29/24 13:10 07/29/24 17:48 1,3-Dichlorobenzene NΩ 0.085 0.019 mg/Kg 1,3-Dichloropropane ND 0.085 0.0079 mg/Kg 07/29/24 13:10 07/29/24 17:48 0.085 0.015 mg/Kg 07/29/24 13:10 07/29/24 17:48 1.4-Dichlorobenzene 0.074 2,2-Dichloropropane ND 0.057 0.017 mg/Kg 07/29/24 13:10 07/29/24 17:48 mg/Kg 2-Chlorotoluene ND 0.057 0.012 07/29/24 13:10 07/29/24 17:48 4-Chlorotoluene ND 0.057 0.014 mg/Kg ť. 07/29/24 13:10 07/29/24 17:48 4-Isopropyltoluene ND 0.057 0.014 mg/Kg 07/29/24 13:10 07/29/24 17:48 Benzene ND 0.0054 mg/Kg 07/29/24 13:10 07/29/24 17:48 0.028 Bromobenzene ND 0.057 0.0059 mg/Kg 07/29/24 13:10 07/29/24 17:48 Bromochloromethane ND 0.057 8800.0 mg/Kg 07/29/24 13:10 07/29/24 17:48 Bromodichloromethane 0.0078 07/29/24 13:10 07/29/24 17:48 ND 0.057 mg/Kg **Bromoform** ND 0.057 0.0064 mg/Kg 07/29/24 13:10 07/29/24 17:48 Carbon tetrachloride ND 0.0062 07/29/24 13:10 07/29/24 17:48 0.028 mg/Kg Chloroethane 0.030 NΩ 0.11 mg/Kg 07/29/24 13:10 07/29/24 17:48 0.0059 07/29/24 13:10 07/29/24 17:48 **Chloroform** 0.0081 0.028 mg/Kg Chloromethane ND 0.085 0.014 mg/Kg 07/29/24 13:10 07/29/24 17:48 cis-1,2-Dichloroethene ND 0.085 0.018 mg/Kg 07/29/24 13:10 07/29/24 17:48 cis-1,3-Dichloropropene ND 0.028 0.0057 mg/Kg 07/29/24 13:10 07/29/24 17:48 ND 07/29/24 13:10 07/29/24 17:48 Dibromochloromethane 0.028 0.0069 mg/Kg Dibromomethane ND 0.057 0.010 mg/Kg 07/29/24 13:10 07/29/24 17:48 Dichlorodifluoromethane ND 0.065 mg/Kg 07/29/24 13:10 07/29/24 17:48 0.35 Ethylbenzene 0.026 0.057 0.013 mg/Kg 07/29/24 13:10 07/29/24 17:48 Isopropylbenzene ND 0.057 0.012 mg/Kg 07/29/24 13:10 07/29/24 17:48 ND 0.057 0.0085 mg/Kg 07/29/24 13:10 07/29/24 17:48 Methyl tert-butyl ether **Methylene Chloride** 0.13 J<sub>B</sub> 0.35 0.037 mg/Kg 07/29/24 13:10 07/29/24 17:48 m-Xylene & p-Xylene 0.17 0.057 0.010 mg/Kg 07/29/24 13:10 07/29/24 17:48 n-Butylbenzene ND 0.057 0.026 mg/Kg 07/29/24 13:10 07/29/24 17:48 ND 0.021 07/29/24 13:10 07/29/24 17:48 N-Propylbenzene 0.057 mg/Kg 0.0071 mg/Kg 07/29/24 13:10 07/29/24 17:48 o-Xylene 0.032 0.057 ND 07/29/24 13:10 07/29/24 17:48 sec-Butylbenzene 0.057 0.012 mg/Kg Styrene ND 0.057 0.018 mg/Kg 07/29/24 13:10 07/29/24 17:48 ND 07/29/24 13:10 07/29/24 17:48 t-Butylbenzene 0.057 0.011 mg/Kg **Tetrachloroethene** 0.013 J 0.057 0.0075 mg/Kg 07/29/24 13:10 07/29/24 17:48 Toluene ND 0.085 0.019 mg/Kg 07/29/24 13:10 07/29/24 17:48

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-07-SO-45.5-20240723

Date Collected: 07/23/24 12:35 Date Received: 07/26/24 12:15

Lab Sample ID: 580-142413-6 **Matrix: Solid** 

Percent Solids: 78.3

Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	(Conti	inued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		0.085	0.021	mg/Kg	₽	07/29/24 13:10	07/29/24 17:48	1
trans-1,3-Dichloropropene	ND		0.057	0.0099	mg/Kg	₽	07/29/24 13:10	07/29/24 17:48	1
Trichloroethene	ND		0.057	0.015	mg/Kg	⊅	07/29/24 13:10	07/29/24 17:48	1
Trichlorofluoromethane	ND		0.11	0.037	mg/Kg	☼	07/29/24 13:10	07/29/24 17:48	1
Vinyl chloride	ND		0.14	0.026	mg/Kg	≎	07/29/24 13:10	07/29/24 17:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 121				07/29/24 13:10	07/29/24 17:48	1
4-Bromofluorobenzene (Surr)	105		80 - 120				07/29/24 13:10	07/29/24 17:48	1
Dibromofluoromethane (Surr)	97		80 - 120				07/29/24 13:10	07/29/24 17:48	1
Toluene-d8 (Surr)	99		80 - 120				07/29/24 13:10	07/29/24 17:48	1

Method: SW846 8260D -	<b>Volatile Organic</b>	Compoun	ds by GC/MS	- DL					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND	H *1	1.2	0.60	mg/Kg	☆	08/07/24 07:53	08/07/24 16:03	1
1,2,4-Trichlorobenzene	ND	Н	1.2	0.65	mg/Kg	₩	08/07/24 07:53	08/07/24 16:03	1
Bromomethane	ND	Н	1.5	0.57	mg/Kg	₩	08/07/24 07:53	08/07/24 16:03	1
Chlorobenzene	45	Н	0.61	0.073	mg/Kg	₩	08/07/24 07:53	08/07/24 16:03	1
Hexachlorobutadiene	ND	Н	1.5	0.36	mg/Kg	₩	08/07/24 07:53	08/07/24 16:03	1
Naphthalene	ND	H *1	2.3	0.59	mg/Kg	₽	08/07/24 07:53	08/07/24 16:03	1
	0/5								5=

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		80 - 121	08/07/24 07:53	08/07/24 16:03	1
4-Bromofluorobenzene (Surr)	97		80 - 120	08/07/24 07:53	08/07/24 16:03	1
Dibromofluoromethane (Surr)	103		80 - 120	08/07/24 07:53	08/07/24 16:03	1
Toluene-d8 (Surr)	98		80 - 120	08/07/24 07:53	08/07/24 16:03	1

General Chemistry								
Analyte	Result Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	78.3	0.1	0.1	%			07/30/24 12:38	1
Percent Moisture (SM22 2540G)	21.7	0.1	0.1	%			07/30/24 12:38	1

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-07-SO-52.7-20240723 Lab Sample ID: 580-142413-7

Date Collected: 07/24/24 14:15

Date Received: 07/26/24 12:15

Matrix: Solid
Percent Solids: 79.6

Method: SW846 8260D - Vola Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.026	0.0066		— <u>-</u>	07/29/24 13:10		1
1,1,1-Trichloroethane	ND		0.053	0.0060		₩	07/29/24 13:10	07/29/24 18:10	1
1,1,2,2-Tetrachloroethane	ND		0.026		mg/Kg	₩	07/29/24 13:10	07/29/24 18:10	1
1,1,2-Trichloroethane	ND		0.026	0.0097			07/29/24 13:10	07/29/24 18:10	1
1,1-Dichloroethane	ND		0.053		mg/Kg	₩	07/29/24 13:10		1
1,1-Dichloroethene	ND		0.053		mg/Kg	₩	07/29/24 13:10		1
1,1-Dichloropropene	ND		0.053	0.0070		" ₩	07/29/24 13:10		
1,2,3-Trichloropropane	ND		0.053		mg/Kg			07/29/24 18:10	1
1,2,4-Trimethylbenzene	ND		0.053		mg/Kg	₩	07/29/24 13:10		1
1,2-Dibromo-3-Chloropropane	ND		0.079		mg/Kg		07/29/24 13:10		
1,2-Dibromoethane	ND		0.026	0.0050		₩.	07/29/24 13:10		1
1,2-Dichlorobenzene	ND		0.053		mg/Kg		07/29/24 13:10		1
1,2-Dichloroethane	ND		0.026	0.0072			07/29/24 13:10		
1,2-Dichloropropane	ND		0.026	0.0072		Ď.	07/29/24 13:10		1
1,3,5-Trimethylbenzene	ND ND		0.020		mg/Kg	₩	07/29/24 13:10		1
1,3-Dichlorobenzene	ND		0.079		mg/Kg		07/29/24 13:10		
1,3-Dichloropropane	ND ND		0.079	0.0074		₩	07/29/24 13:10		1
1,4-Dichlorobenzene	ND ND		0.079		mg/Kg	**	07/29/24 13:10		1
	ND								
2,2-Dichloropropane			0.053		mg/Kg mg/Kg	ψ.	07/29/24 13:10 07/29/24 13:10		1
2-Chlorotoluene	ND		0.053		0 0	₩			1
4-Chlorotoluene	ND		0.053		mg/Kg			07/29/24 18:10	
4-Isopropyltoluene	ND		0.053		mg/Kg	₩	07/29/24 13:10		1
Benzene	0.0062	J	0.026	0.0050	0 0	<b>*</b>		07/29/24 18:10	1
Bromobenzene	ND		0.053	0.0055		<u>.</u>		07/29/24 18:10	
Bromochloromethane	ND		0.053	0.0082		<del>.</del>	07/29/24 13:10		1
Bromodichloromethane	ND		0.053	0.0072		₩	07/29/24 13:10		1
Bromoform	ND		0.053	0.0059		<del>.</del>	07/29/24 13:10		
Carbon tetrachloride	ND		0.026	0.0058		₩	07/29/24 13:10		1
Chloroethane	ND		0.11		mg/Kg	₩	07/29/24 13:10		1
Chloroform	ND		0.026	0.0055			07/29/24 13:10		1
Chloromethane	ND		0.079		mg/Kg	₩	07/29/24 13:10		1
cis-1,2-Dichloroethene	ND		0.079		mg/Kg	₩	07/29/24 13:10		1
cis-1,3-Dichloropropene	ND		0.026	0.0053			07/29/24 13:10		1
Dibromochloromethane	ND		0.026	0.0064		₩	07/29/24 13:10		1
Dibromomethane	ND		0.053	0.0097		₩	07/29/24 13:10	07/29/24 18:10	1
Dichlorodifluoromethane	ND		0.33		mg/Kg	₩	07/29/24 13:10		1
Ethylbenzene	0.026	J	0.053	0.012	mg/Kg	₩	07/29/24 13:10	07/29/24 18:10	1
Isopropylbenzene	ND		0.053	0.011	mg/Kg	₩	07/29/24 13:10	07/29/24 18:10	1
Methyl tert-butyl ether	ND		0.053	0.0079		₩	07/29/24 13:10	07/29/24 18:10	1
Methylene Chloride	0.12	JB	0.33	0.034	mg/Kg	₩	07/29/24 13:10	07/29/24 18:10	1
m-Xylene & p-Xylene	0.16		0.053	0.0093	mg/Kg	₩	07/29/24 13:10	07/29/24 18:10	1
n-Butylbenzene	ND		0.053	0.024	mg/Kg	₩	07/29/24 13:10	07/29/24 18:10	1
N-Propylbenzene	ND		0.053	0.020	mg/Kg	₩	07/29/24 13:10	07/29/24 18:10	1
o-Xylene	0.033	J	0.053	0.0066	mg/Kg	₩	07/29/24 13:10	07/29/24 18:10	1
sec-Butylbenzene	ND		0.053	0.011	mg/Kg	₩	07/29/24 13:10	07/29/24 18:10	1
Styrene	ND		0.053	0.017	mg/Kg	₩	07/29/24 13:10	07/29/24 18:10	1
t-Butylbenzene	ND		0.053		mg/Kg	₽	07/29/24 13:10	07/29/24 18:10	1
Tetrachloroethene	ND		0.053	0.0070	mg/Kg	₩	07/29/24 13:10	07/29/24 18:10	1
Toluene	ND		0.079	0.018	mg/Kg		07/29/24 13:10	07/20/24 18:10	1

**Eurofins Seattle** 

8/9/2024

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Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Percent Moisture (SM22 2540G)

20.4

Client Sample ID: PDI-07-SO-52.7-20240723

Lab Sample ID: 580-142413-7 Date Collected: 07/24/24 14:15

**Matrix: Solid** Date Received: 07/26/24 12:15 Percent Solids: 79.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND	-	0.079	0.019	mg/Kg	— <u></u>	07/29/24 13:10	07/29/24 18:10	
trans-1,3-Dichloropropene	ND		0.053	0.0092	mg/Kg	₩	07/29/24 13:10	07/29/24 18:10	
Trichloroethene	ND		0.053	0.014	mg/Kg	₩	07/29/24 13:10	07/29/24 18:10	· · · · · · · · ·
Trichlorofluoromethane	ND		0.11	0.034	mg/Kg	₩	07/29/24 13:10	07/29/24 18:10	
Vinyl chloride	ND		0.13	0.025	mg/Kg	☼	07/29/24 13:10	07/29/24 18:10	•
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				07/29/24 13:10	07/29/24 18:10	
4-Bromofluorobenzene (Surr)	106		80 - 120				07/29/24 13:10	07/29/24 18:10	
Dibromofluoromethane (Surr)	96		80 - 120				07/29/24 13:10	07/29/24 18:10	
Toluene-d8 (Surr)	99		80 - 120				07/29/24 13:10	07/29/24 18:10	
Analyte 1,2,3-Trichlorobenzene	- Result ND	*1	RL		mg/Kg	— <del>"</del>	08/07/24 07:53	Analyzed 08/07/24 16:25	-
Method: SW846 8260D - Vola	_	Qualifier	RL	- DL MDL	Unit	D	Prepared	Analyzed	Dil Fac
, ,		*1				-11			1
1,2,4-Trichlorobenzene	ND		1.1		mg/Kg	☼	08/07/24 07:53	08/07/24 16:25	•
Bromomethane	ND		1.4		mg/Kg	<del>.</del>	08/07/24 07:53	08/07/24 16:25	·
Chlorobenzene	18		0.57		mg/Kg	₩	08/07/24 07:53	08/07/24 16:25	•
Hexachlorobutadiene	ND		1.4		mg/Kg	☼	08/07/24 07:53	08/07/24 16:25	•
Naphthalene	ND	*1	2.1	0.55	mg/Kg	₩	08/07/24 07:53	08/07/24 16:25	•
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	104		80 - 121				08/07/24 07:53	08/07/24 16:25	•
4-Bromofluorobenzene (Surr)	97		80 - 120				08/07/24 07:53	08/07/24 16:25	1
Dibromofluoromethane (Surr)	105		80 - 120				08/07/24 07:53	08/07/24 16:25	
Toluene-d8 (Surr)	98		80 - 120				08/07/24 07:53	08/07/24 16:25	
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	79.6		0.1	0.1	%			07/30/24 12:38	1

0.1

0.1 %

07/30/24 12:38

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-08-SO-35.8-20240724

Lab Sample ID: 580-142413-8 Date Collected: 07/24/24 11:28 Matrix: Solid Date Received: 07/26/24 12:15 Percent Solids: 86.7

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane 0.27 0.068 mg/Kg 07/29/24 13:10 07/29/24 19:58 0.14 ND 0.54 1,1,1-Trichloroethane 0.063 mg/Kg 07/29/24 13:10 07/29/24 19:58 1,1,2,2-Tetrachloroethane ND 0.27 0.10 mg/Kg 07/29/24 13:10 07/29/24 19:58 ND 0.27 07/29/24 13:10 07/29/24 19:58 1,1,2-Trichloroethane 0.10 mg/Kg 1.1-Dichloroethane ND 0.54 mg/Kg 07/29/24 13:10 07/29/24 19:58 0.13 ND 1,1-Dichloroethene 0.54 0.17 mg/Kg 07/29/24 13:10 07/29/24 19:58 1,1-Dichloropropene ND 0.54 0.072 07/29/24 13:10 07/29/24 19:58 mg/Kg ND 0.54 07/29/24 13:10 07/29/24 19:58 1,2,3-Trichloropropane 0.16 mg/Kg 1,2,4-Trimethylbenzene ND 0.54 0.18 mg/Kg 07/29/24 13:10 07/29/24 19:58 1,2-Dibromo-3-Chloropropane ND 0.82 0.21 mg/Kg 07/29/24 13:10 07/29/24 19:58 1,2-Dibromoethane ND 0.27 0.052 mg/Kg 07/29/24 13:10 07/29/24 19:58 0.54 0.12 mg/Kg 07/29/24 13:10 07/29/24 19:58 1 1,2-Dichlorobenzene 1.1 1,2-Dichloroethane ND 0.27 0.075 mg/Kg 07/29/24 13:10 07/29/24 19:58 ND 0.27 0.090 mg/Kg 07/29/24 13:10 07/29/24 19:58 1.2-Dichloropropane ND 0.54 0.10 mg/Kg 07/29/24 13:10 07/29/24 19:58 1,3,5-Trimethylbenzene 07/29/24 13:10 07/29/24 19:58 1,3-Dichlorobenzene ND 0.82 0.18 mg/Kg ND 1,3-Dichloropropane 0.82 0.076 mg/Kg 07/29/24 13:10 07/29/24 19:58 0.82 0.15 mg/Kg 07/29/24 13:10 07/29/24 19:58 1.4-Dichlorobenzene 2.1 ND 0.54 mg/Kg 07/29/24 13:10 07/29/24 19:58 2,2-Dichloropropane 0.16 0.12 2-Chlorotoluene ND 0.54 mg/Kg 07/29/24 13:10 07/29/24 19:58 4-Chlorotoluene ND 0.54 0.13 mg/Kg 07/29/24 13:10 07/29/24 19:58 4-Isopropyltoluene ND 0.54 0.14 mg/Kg 07/29/24 13:10 07/29/24 19:58 Benzene ND 0.27 0.052 07/29/24 13:10 07/29/24 19:58 mg/Kg Bromobenzene ND 0.54 0.057 mg/Kg 07/29/24 13:10 07/29/24 19:58 Bromochloromethane ND 0.54 0.084 mg/Kg 07/29/24 13:10 07/29/24 19:58 Bromodichloromethane ND 07/29/24 13:10 07/29/24 19:58 0.54 0.075 mg/Kg **Bromoform** ND 0.54 0.061 mg/Kg 07/29/24 13:10 07/29/24 19:58 Carbon tetrachloride 0.060 07/29/24 13:10 07/29/24 19:58 8.7 0.27 mg/Kg Chloroethane ND 1.1 0.28 mg/Kg 07/29/24 13:10 07/29/24 19:58 0.27 0.057 07/29/24 13:10 07/29/24 19:58 **Chloroform** 0.69 mg/Kg Chloromethane ND 0.82 0.14 mg/Kg 07/29/24 13:10 07/29/24 19:58 ND 0.82 0.17 mg/Kg 07/29/24 13:10 07/29/24 19:58 cis-1.2-Dichloroethene cis-1,3-Dichloropropene ND 0.27 0.054 07/29/24 13:10 07/29/24 19:58 mg/Kg ND 07/29/24 13:10 07/29/24 19:58 Dibromochloromethane 0.27 0.067 mg/Kg Dibromomethane ND 0.54 0.10 mg/Kg 07/29/24 13:10 07/29/24 19:58 Dichlorodifluoromethane ND mg/Kg 07/29/24 13:10 07/29/24 19:58 34 0.62 Ethylbenzene ND 0.54 0.12 mg/Kg 07/29/24 13:10 07/29/24 19:58 Isopropylbenzene ND 0.54 0.12 mg/Kg 07/29/24 13:10 07/29/24 19:58 ND 0.54 0.082 mg/Kg 07/29/24 13:10 07/29/24 19:58 Methyl tert-butyl ether **Methylene Chloride** 1.8 JB 3.4 0.35 mg/Kg 07/29/24 13:10 07/29/24 19:58 07/29/24 13:10 07/29/24 19:58 m-Xylene & p-Xylene 0.23 0.54 0.097 mg/Kg n-Butylbenzene ND 0.54 0.25 mg/Kg 07/29/24 13:10 07/29/24 19:58 ND 07/29/24 13:10 07/29/24 19:58 N-Propylbenzene 0.54 0.20 mg/Kg o-Xylene 0.068 07/29/24 13:10 07/29/24 19:58 ND 0.54 mg/Kg ND 07/29/24 13:10 07/29/24 19:58 sec-Butylbenzene 0.54 0.12 mg/Kg Styrene ND 0.54 mg/Kg 07/29/24 13:10 07/29/24 19:58 0.54 07/29/24 13:10 07/29/24 19:58 0.10 mg/Kg t-Butylbenzene 1.5 **Tetrachloroethene** 150 0.54 0.072 mg/Kg 07/29/24 13:10 07/29/24 19:58 Toluene 07/29/24 13:10 07/29/24 19:58 ND 0.82 0.18 mg/Kg

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-08-SO-35.8-20240724

Date Collected: 07/24/24 11:28

Date Received: 07/26/24 12:15

Lab Sample ID: 580-142413-8

Matrix: Solid Percent Solids: 86.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		0.82	0.20	mg/Kg	≎	07/29/24 13:10	07/29/24 19:58	1
trans-1,3-Dichloropropene	ND		0.54	0.095	mg/Kg	≎	07/29/24 13:10	07/29/24 19:58	1
Trichloroethene	0.41	J	0.54	0.14	mg/Kg	₽	07/29/24 13:10	07/29/24 19:58	1
Trichlorofluoromethane	ND		1.1	0.35	mg/Kg	≎	07/29/24 13:10	07/29/24 19:58	1
Vinyl chloride	ND		1.4	0.25	mg/Kg	≎	07/29/24 13:10	07/29/24 19:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				07/29/24 13:10	07/29/24 19:58	1
4-Bromofluorobenzene (Surr)	105		80 - 120				07/29/24 13:10	07/29/24 19:58	1
Dibromofluoromethane (Surr)	99		80 - 120				07/29/24 13:10	07/29/24 19:58	1
Toluene-d8 (Surr)	94		80 - 120				07/29/24 13:10	07/29/24 19:58	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND	*1	11	5.4	mg/Kg	<u></u>	08/07/24 07:53	08/07/24 18:37	1
Bromomethane	ND		14	5.1	mg/Kg	₩	08/07/24 07:53	08/07/24 18:37	1
Chlorobenzene	570		5.4	0.65	mg/Kg	☼	08/07/24 07:53	08/07/24 18:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		80 - 121				08/07/24 07:53	08/07/24 18:37	1
4-Bromofluorobenzene (Surr)	100		80 - 120				08/07/24 07:53	08/07/24 18:37	1
Dibromofluoromethane (Surr)	105		80 - 120				08/07/24 07:53	08/07/24 18:37	1
Dibioinionaoronicanane (Garr)									

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.1	0.58	mg/Kg	☆	08/01/24 15:20	08/01/24 22:19	1
Hexachlorobutadiene	32	В	1.4	0.33	mg/Kg	≎	08/01/24 15:20	08/01/24 22:19	1
Naphthalene	ND		2.0	0.53	mg/Kg	₩	08/01/24 15:20	08/01/24 22:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	66	S1-	80 - 121				08/01/24 15:20	08/01/24 22:19	1
4-Bromofluorobenzene (Surr)	89		80 - 120				08/01/24 15:20	08/01/24 22:19	1
Dibromofluoromethane (Surr)	64	S1-	80 - 120				08/01/24 15:20	08/01/24 22:19	1

General Chemistry Analyte	Result Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	86.7	0.1	0.1	%			07/30/24 12:38	1
Percent Moisture (SM22 2540G)	13.3	0.1	0.1	%			07/30/24 12:38	1

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Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-08-SO-38-20240724

Lab Sample ID: 580-142413-9 Date Collected: 07/24/24 12:15 **Matrix: Solid** Date Received: 07/26/24 12:15 Percent Solids: 86.1

Result Qualifier	RL	MDL	Ollit	D	Prepared	Analyzed	Dil Fa
ND -	0.026	0.0064	mg/Kg	— <u></u>	07/29/24 13:10	07/29/24 18:31	
ND	0.051	0.0059	mg/Kg	☼	07/29/24 13:10	07/29/24 18:31	
ND	0.026	0.0097	mg/Kg	☼	07/29/24 13:10	07/29/24 18:31	
ND	0.026	0.0095	mg/Kg	₩	07/29/24 13:10	07/29/24 18:31	
ND	0.051	0.012	mg/Kg	☆	07/29/24 13:10	07/29/24 18:31	
ND	0.051			₩	07/29/24 13:10	07/29/24 18:31	
ND	0.051				07/29/24 13:10	07/29/24 18:31	
ND	0.051			☼	07/29/24 13:10	07/29/24 18:31	
ND	0.051		0 0	₩	07/29/24 13:10	07/29/24 18:31	
ND	0.077				07/29/24 13:10	07/29/24 18:31	
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ND	0.051			₩			
ND	0.051			₩			
ND	0.051						
ND	0.051			☼	07/29/24 13:10	07/29/24 18:31	
ND	0.051			☼	07/29/24 13:10	07/29/24 18:31	
3.6	0.051			☼	07/29/24 13:10	07/29/24 18:31	
0.023 J	0.077	0.017	mg/Kg		07/29/24 13:10	07/29/24 18:31	
	ND N	ND 0.051 ND 0.026 ND 0.026 ND 0.051 ND 0.077 ND 0.026 ND 0.077 ND 0.077 ND 0.077 ND 0.051	ND 0.051 0.0059 ND 0.026 0.0097 ND 0.026 0.0095 ND 0.051 0.012 ND 0.051 0.016 ND 0.051 0.016 ND 0.051 0.0068 ND 0.051 0.051 0.0068 ND 0.051 0.051 ND 0.051 0.017 ND 0.051 0.017 ND 0.051 0.019 ND 0.026 0.0049 0.014 J 0.051 0.0051 ND 0.056 0.0064 ND 0.051 0.0077 0.017 ND 0.077 0.017 ND 0.077 0.017 ND 0.077 0.017 ND 0.077 0.014 ND 0.051 0.015 ND 0.051 0.0054 ND 0.051 0.0056 0.057 0.026 0.0056 ND 0.051 0.0058 0.057 0.026 0.0056 ND 0.051 0.0058 0.057 0.026 0.0056 ND 0.051 0.0077 ND 0.051 0.0058 0.057 0.026 0.0056 ND 0.051 0.0058 0.057 0.026 0.0056 ND 0.051 0.0058 ND 0.051 0.0058 ND 0.051 0.0059 ND 0.051 0.0056 ND 0.051 0.0056 ND 0.051 0.0056 ND 0.051 0.0051 ND 0.051 0.0077 0.12 JB 0.32 0.033 ND 0.051 0.0091 ND 0.051 0.0091 ND 0.051 0.0091 ND 0.051 0.0091 ND 0.051 0.0099 ND 0.051 0.0099 ND 0.051 0.0099 ND 0.051 0.0064 ND 0.051 0.0068	ND	ND         0.051         0.0059         mg/Kg         ☆           ND         0.026         0.0097         mg/Kg         ☆           ND         0.026         0.0095         mg/Kg         ☆           ND         0.051         0.012         mg/Kg         ☆           ND         0.051         0.0068         mg/Kg         ☆           ND         0.051         0.0068         mg/Kg         ☆           ND         0.051         0.015         mg/Kg         ☆           ND         0.051         0.017         mg/Kg         ☆           ND         0.051         0.017         mg/Kg         ☆           ND         0.077         0.019         mg/Kg         ☆           ND         0.026         0.0049         mg/Kg         ☆           ND         0.077         0.017         mg/Kg         ☆	ND	ND

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-08-SO-38-20240724

Date Collected: 07/24/24 12:15 Date Received: 07/26/24 12:15 Lab Sample ID: 580-142413-9

**Matrix: Solid** 

**Percent Solids: 86.1** 

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND	<u> </u>	0.077	0.019	mg/Kg	<u></u>	07/29/24 13:10	07/29/24 18:31	1
trans-1,3-Dichloropropene	ND		0.051	0.0090		₽	07/29/24 13:10	07/29/24 18:31	1
Trichloroethene	0.090		0.051	0.013	mg/Kg	₩	07/29/24 13:10	07/29/24 18:31	1
Trichlorofluoromethane	ND		0.10	0.033	mg/Kg	☼	07/29/24 13:10	07/29/24 18:31	1
Vinyl chloride	ND		0.13	0.024	mg/Kg	≎	07/29/24 13:10	07/29/24 18:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		80 - 121				07/29/24 13:10	07/29/24 18:31	1
4-Bromofluorobenzene (Surr)	103		80 - 120				07/29/24 13:10	07/29/24 18:31	1
Dibromofluoromethane (Surr)	97		80 - 120				07/29/24 13:10	07/29/24 18:31	1
Toluene-d8 (Surr)	98		80 - 120				07/29/24 13:10	07/29/24 18:31	1
Method: SW846 8260D - Vo	olatile Organic	Compoun	ds by GC/MS	- DL					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND	*1	1.1	0.55	mg/Kg	<del>-</del>	08/07/24 07:53	08/07/24 16:47	1
Chlorobenzene	28		0.55	0.066	mg/Kg	≎	08/07/24 07:53	08/07/24 16:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		80 - 121				08/07/24 07:53	08/07/24 16:47	1
1 Dramaficarahanzana (Curr)	97		80 - 120				08/07/24 07:53	08/07/24 16:47	1
4-Bromofluorobenzene (Surr)	• .								
Dibromofluoromethane (Surr)	105		80 - 120				08/07/24 07:53	08/07/24 16:47	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.10	0.055	mg/Kg	<u></u>	08/01/24 15:20	08/01/24 20:56	1
Bromomethane	ND		0.13	0.048	mg/Kg	☼	08/01/24 15:20	08/01/24 20:56	1
Hexachlorobutadiene	0.68	В	0.13	0.031	mg/Kg	☼	08/01/24 15:20	08/01/24 20:56	1
Naphthalene	0.073	JB	0.19	0.050	mg/Kg	≎	08/01/24 15:20	08/01/24 20:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	88		80 - 121				08/01/24 15:20	08/01/24 20:56	1
4-Bromofluorobenzene (Surr)	93		80 - 120				08/01/24 15:20	08/01/24 20:56	1
Dibromofluoromethane (Surr)	91		80 - 120				08/01/24 15:20	08/01/24 20:56	1
Toluene-d8 (Surr)	99		80 - 120				08/01/24 15:20	08/01/24 20:56	1

General Chemistry							
Analyte	Result Qualifier	RL	RL Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	86.1	0.1	0.1 %			07/30/24 12:38	1
Percent Moisture (SM22 2540G)	13.9	0.1	0.1 %			07/30/24 12:38	1

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Date Collected: 07/25/24 12:20

Matrix: Solid

Date Received: 07/26/24 12:15

Percent Solids: 83.9

Method: SW846 8260D - Vola Analyte	_	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.0045		0.00062	0.000071		— <u>-</u>	07/29/24 13:10		1
1,1,2,2-Tetrachloroethane	0.012		0.00031	0.00012		₩	07/29/24 13:10	07/29/24 20:19	1
1.1.2-Trichloroethane	0.0025		0.00031	0.00011	mg/Kg	₩	07/29/24 13:10	07/29/24 20:19	1
1,1-Dichloroethane	ND		0.00062	0.00014		∴	07/29/24 13:10	07/29/24 20:19	1
1,1-Dichloroethene	ND		0.00062	0.00019		₩	07/29/24 13:10	07/29/24 20:19	1
1,1-Dichloropropene	ND		0.00062	0.000082		Ď.	07/29/24 13:10		1
1,2,3-Trichloropropane	0.0064		0.00062	0.00018			07/29/24 13:10		· · · · · · · · · · · · · · · · · · ·
1,2,4-Trimethylbenzene	ND		0.00062	0.00021	mg/Kg		07/29/24 13:10		1
1,2-Dibromo-3-Chloropropane	ND		0.00092	0.00023	0 0	₩.	07/29/24 13:10		1
1,2-Dibromoethane	ND		0.00031	0.000059			07/29/24 13:10		1
1,2-Dichlorobenzene	0.0068		0.00062	0.00013	0 0	Ď.	07/29/24 13:10		
1,2-Dichloroethane	0.0088 ND		0.00031	0.00013	0 0	×	07/29/24 13:10		1
	0.00050		0.00031	0.00010			07/29/24 13:10		
<b>1,2-Dichloropropane</b> 1,3,5-Trimethylbenzene	0.00030 ND		0.00031	0.00010	0 0	₩		07/29/24 20:19	1
1,3-Dichlorobenzene	ND ND		0.00002	0.00012		₩	07/29/24 13:10		1
							07/29/24 13:10		
1,3-Dichloropropane	ND		0.00092	0.000086		<b>☆</b>			1
1,4-Dichlorobenzene	0.011		0.00092	0.00017		₩.		07/29/24 20:19	1
2,2-Dichloropropane	ND		0.00062	0.00019			07/29/24 13:10		
2-Chlorotoluene	ND		0.00062	0.00014	0 0	<b>*</b>	07/29/24 13:10		1
4-Chlorotoluene	ND		0.00062	0.00015	0 0	☼	07/29/24 13:10		Ź
4-Isopropyltoluene	0.00023		0.00062	0.00016			07/29/24 13:10		1
Benzene	0.00015	J	0.00031	0.000059	0 0	₩	07/29/24 13:10		1
Bromobenzene	ND		0.00062	0.000065	0 0	₩	07/29/24 13:10		1
Bromochloromethane	ND		0.00062	0.000095		<del></del>	07/29/24 13:10		1
Bromodichloromethane	0.022		0.00062	0.000085		₩	07/29/24 13:10		1
Bromoform	0.0026		0.00062	0.000069	0 0	₩	07/29/24 13:10		•
Chloroethane	ND		0.0012	0.00032		₩	07/29/24 13:10	07/29/24 20:19	
Chloromethane	ND		0.00092	0.00016		₩	07/29/24 13:10	07/29/24 20:19	1
cis-1,2-Dichloroethene	ND		0.00092	0.00019		₩	07/29/24 13:10	07/29/24 20:19	•
cis-1,3-Dichloropropene	ND		0.00031	0.000062	mg/Kg	₩	07/29/24 13:10	07/29/24 20:19	1
Dibromochloromethane	0.0063		0.00031	0.000075	mg/Kg	☼	07/29/24 13:10	07/29/24 20:19	1
Dibromomethane	ND		0.00062	0.00011	mg/Kg	☼	07/29/24 13:10	07/29/24 20:19	1
Dichlorodifluoromethane	ND		0.0039	0.00071	mg/Kg	☼	07/29/24 13:10	07/29/24 20:19	1
Ethylbenzene	ND		0.00062	0.00014	mg/Kg	₽	07/29/24 13:10	07/29/24 20:19	1
Isopropylbenzene	ND		0.00062	0.00013	mg/Kg	₩	07/29/24 13:10	07/29/24 20:19	1
Methyl tert-butyl ether	ND		0.00062	0.000092	mg/Kg	₩	07/29/24 13:10	07/29/24 20:19	1
Methylene Chloride	0.0021	JB	0.0039	0.00040	mg/Kg	₩	07/29/24 13:10	07/29/24 20:19	1
m-Xylene & p-Xylene	ND		0.00062	0.00011	mg/Kg	₩	07/29/24 13:10	07/29/24 20:19	•
n-Butylbenzene	ND		0.00062	0.00028	mg/Kg	₩	07/29/24 13:10	07/29/24 20:19	1
N-Propylbenzene	ND		0.00062	0.00023	mg/Kg	₽	07/29/24 13:10	07/29/24 20:19	1
o-Xylene	0.00027	J	0.00062	0.000077	mg/Kg	₩	07/29/24 13:10	07/29/24 20:19	1
sec-Butylbenzene	ND		0.00062	0.00013		₩	07/29/24 13:10	07/29/24 20:19	1
Styrene	ND		0.00062	0.00020		₩	07/29/24 13:10	07/29/24 20:19	
:-Butylbenzene	ND		0.00062	0.00012		₽	07/29/24 13:10		
Toluene	0.0040		0.00092	0.00021		₩	07/29/24 13:10	07/29/24 20:19	
trans-1,2-Dichloroethene	ND		0.00092	0.00022			07/29/24 13:10		
trans-1,3-Dichloropropene	ND		0.00062	0.00011		~ ☆	07/29/24 13:10		
Trichloroethene	0.031		0.00062	0.00011		₩	07/29/24 13:10		1
Trichlorofluoromethane	ND		0.0002	0.00040			07/29/24 13:10		

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Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-15-SO-38-20240725

Lab Sample ID: 580-142413-10 Date Collected: 07/25/24 12:20

**Matrix: Solid** Date Received: 07/26/24 12:15 Percent Solids: 83.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.0015	0.00029	mg/Kg	<u></u>	07/29/24 13:10	07/29/24 20:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				07/29/24 13:10	07/29/24 20:19	1
4-Bromofluorobenzene (Surr)	115		80 - 120				07/29/24 13:10	07/29/24 20:19	1
Dibromofluoromethane (Surr)	96		80 - 120				07/29/24 13:10	07/29/24 20:19	1
Toluene-d8 (Surr)	115		80 - 120				07/29/24 13:10	07/29/24 20:19	1
Method: SW846 8260D - Vola	tile Organic	Compoun	ds by GC/MS	- DL					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	140		31	7.7	mg/Kg	<u></u>	08/07/24 07:53	08/07/24 19:20	1
1,2,3-Trichlorobenzene	ND	*1	120	61	mg/Kg	₩	08/07/24 07:53	08/07/24 19:20	1
1,2,4-Trichlorobenzene	ND		120	66	mg/Kg	₩	08/07/24 07:53	08/07/24 19:20	1
Bromomethane	ND		150	58	mg/Kg	₩	08/07/24 07:53	08/07/24 19:20	1
Carbon tetrachloride	13000	E	31	6.8	mg/Kg	₩	08/07/24 07:53	08/07/24 19:20	1
Chlorobenzene	7100		62	7.4	mg/Kg	₩	08/07/24 07:53	08/07/24 19:20	1
Chloroform	550		31	6.5	mg/Kg	₩	08/07/24 07:53	08/07/24 19:20	1
Hexachlorobutadiene	620		150	37	mg/Kg	₩	08/07/24 07:53	08/07/24 19:20	1
Naphthalene	ND	*1	230	60	mg/Kg	₩	08/07/24 07:53	08/07/24 19:20	1
Tetrachloroethene	7100		62	8.2	mg/Kg	≎	08/07/24 07:53	08/07/24 19:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				08/07/24 07:53	08/07/24 19:20	1
4-Bromofluorobenzene (Surr)	96		80 - 120				08/07/24 07:53	08/07/24 19:20	1
Dibromofluoromethane (Surr)	103		80 - 120				08/07/24 07:53	08/07/24 19:20	1
Toluene-d8 (Surr)	99		80 - 120				08/07/24 07:53	08/07/24 19:20	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	83.9		0.1	0.1	%			07/30/24 12:38	1
Percent Moisture (SM22 2540G)	16.1		0.1	0.1	%			07/30/24 12:38	1

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Date Collected: 07/25/24 12:35

Date Received: 07/26/24 12:15

Matrix: Solid
Percent Solids: 83.1

Method: SW846 8260D	- Volatile Organic	Compound	Is by GC/MS						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
,1,1,2-Tetrachloroethane	1.4		0.026	0.0066	mg/Kg	<del>*</del>	07/29/24 13:10	07/29/24 18:52	
1,1,1-Trichloroethane	0.047	J	0.053	0.0060	mg/Kg	≎	07/29/24 13:10	07/29/24 18:52	
,1,2,2-Tetrachloroethane	0.34		0.026	0.010	mg/Kg	☆	07/29/24 13:10	07/29/24 18:52	
,1,2-Trichloroethane	0.068		0.026	0.0097	mg/Kg	≎	07/29/24 13:10	07/29/24 18:52	
,1-Dichloroethane	ND		0.053	0.012	mg/Kg	≎	07/29/24 13:10	07/29/24 18:52	
,1-Dichloroethene	0.026	J	0.053	0.016	mg/Kg	≎	07/29/24 13:10	07/29/24 18:52	
,1-Dichloropropene	ND		0.053	0.0070	mg/Kg	₩	07/29/24 13:10	07/29/24 18:52	
,2,3-Trichloropropane	ND		0.053	0.015	mg/Kg	≎	07/29/24 13:10	07/29/24 18:52	
,2,4-Trimethylbenzene	ND		0.053	0.018	mg/Kg	≎	07/29/24 13:10	07/29/24 18:52	
,2-Dibromo-3-Chloropropane	ND		0.079	0.020	mg/Kg	₩	07/29/24 13:10	07/29/24 18:52	
,2-Dibromoethane	ND		0.026	0.0050	mg/Kg	☆	07/29/24 13:10	07/29/24 18:52	
,2-Dichlorobenzene	0.14		0.053	0.011	mg/Kg	☆	07/29/24 13:10	07/29/24 18:52	
,2-Dichloroethane	ND		0.026	0.0072	mg/Kg	☆	07/29/24 13:10	07/29/24 18:52	
,2-Dichloropropane	0.0094	J	0.026	0.0087	mg/Kg	≎	07/29/24 13:10	07/29/24 18:52	
,3,5-Trimethylbenzene	0.013	J	0.053	0.010	mg/Kg	≎	07/29/24 13:10	07/29/24 18:52	
,3-Dichlorobenzene	ND		0.079	0.017	mg/Kg	₩	07/29/24 13:10	07/29/24 18:52	
,3-Dichloropropane	ND		0.079	0.0074	mg/Kg	₩	07/29/24 13:10	07/29/24 18:52	
,4-Dichlorobenzene	0.23		0.079	0.014	mg/Kg	₩	07/29/24 13:10	07/29/24 18:52	
2,2-Dichloropropane	ND		0.053	0.016	mg/Kg	₩	07/29/24 13:10	07/29/24 18:52	
P-Chlorotoluene	ND		0.053	0.012	mg/Kg	₩	07/29/24 13:10	07/29/24 18:52	
-Chlorotoluene	ND		0.053	0.013	mg/Kg	₩	07/29/24 13:10	07/29/24 18:52	
-lsopropyltoluene	0.040		0.053		mg/Kg	₩	07/29/24 13:10	07/29/24 18:52	
Benzene	0.0086		0.026	0.0050	0 0	₩	07/29/24 13:10	07/29/24 18:52	
Bromobenzene	ND	_	0.053	0.0055		☆		07/29/24 18:52	
Bromochloromethane	ND		0.053	0.0081		₩	07/29/24 13:10	07/29/24 18:52	
Bromodichloromethane	0.63		0.053	0.0072		₩		07/29/24 18:52	
Bromoform	ND		0.053	0.0059		₩		07/29/24 18:52	
Chloroethane	ND		0.11		mg/Kg			07/29/24 18:52	
Chloromethane	ND		0.079		mg/Kg	₩		07/29/24 18:52	
is-1,2-Dichloroethene	ND		0.079		mg/Kg	☆		07/29/24 18:52	
sis-1,3-Dichloropropene	ND		0.026	0.0053		∷		07/29/24 18:52	
Dibromochloromethane	0.086		0.026	0.0064	0 0	₩		07/29/24 18:52	
Dibromomethane	ND		0.053	0.0097		₩		07/29/24 18:52	
Dichlorodifluoromethane	ND		0.33		mg/Kg	∷. ☆		07/29/24 18:52	
Ethylbenzene	ND		0.053		mg/Kg	☆		07/29/24 18:52	
sopropylbenzene	ND		0.053		mg/Kg			07/29/24 18:52	
Methyl tert-butyl ether	ND		0.053	0.0079				07/29/24 18:52	
Methylene Chloride	0.13	I B	0.33		mg/Kg	~ ☆		07/29/24 18:52	
<del>-</del>	0.15	3 6	0.053	0.0093				07/29/24 18:52	
n-Xylene & p-Xylene n-Butylbenzene	ND		0.053		mg/Kg			07/29/24 18:52	
I-Propylbenzene	ND ND		0.053		mg/Kg	₩		07/29/24 18:52	
. ,			0.053			*		07/29/24 18:52	
o-Xylene	0.033			0.0066					
ec-Butylbenzene	ND		0.053		mg/Kg	*		07/29/24 18:52	
Styrene	ND		0.053		mg/Kg	<b>☆</b>		07/29/24 18:52	
-Butylbenzene	1.7		0.053		mg/Kg			07/29/24 18:52	
oluene	0.045	J	0.079		mg/Kg	<b>*</b>		07/29/24 18:52	
rans-1,2-Dichloroethene	ND		0.079		mg/Kg	<b>*</b>		07/29/24 18:52	
rans-1,3-Dichloropropene	ND		0.053	0.0092	mg/Kg	₩	07/29/24 13:10	07/29/24 18:52	

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Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-15-SO-38.5-20240725

Lab Sample ID: 580-142413-11 Date Collected: 07/25/24 12:35 Date Received: 07/26/24 12:15

**Matrix: Solid** 

Percent Solids: 83.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		0.11	0.034	mg/Kg	<u></u>	07/29/24 13:10	07/29/24 18:52	1
Vinyl chloride	ND		0.13	0.025	mg/Kg	₩	07/29/24 13:10	07/29/24 18:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 121				07/29/24 13:10	07/29/24 18:52	1
4-Bromofluorobenzene (Surr)	109		80 - 120				07/29/24 13:10	07/29/24 18:52	1
Dibromofluoromethane (Surr)	95		80 - 120				07/29/24 13:10	07/29/24 18:52	1
Toluene-d8 (Surr)	96		80 - 120				07/29/24 13:10	07/29/24 18:52	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND	*1	11	5.6	mg/Kg	<del>-</del>	08/07/24 07:53	08/07/24 18:59	1
Carbon tetrachloride	31		2.8	0.62	mg/Kg	☼	08/07/24 07:53	08/07/24 18:59	1
Chlorobenzene	240		5.7	0.68	mg/Kg	₩	08/07/24 07:53	08/07/24 18:59	1
Chloroform	43		2.8	0.59	mg/Kg	₽	08/07/24 07:53	08/07/24 18:59	1
Tetrachloroethene	51		5.7	0.75	mg/Kg	☼	08/07/24 07:53	08/07/24 18:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		80 - 121				08/07/24 07:53	08/07/24 18:59	1
4-Bromofluorobenzene (Surr)	97		80 - 120				08/07/24 07:53	08/07/24 18:59	1
Dibromofluoromethane (Surr)	103		80 - 120				08/07/24 07:53	08/07/24 18:59	1
Toluene-d8 (Surr)	99		80 - 120				08/07/24 07:53	08/07/24 18:59	1

Method: SW846 8260D - Vo Analyte	_	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.11	0.056	mg/Kg	<u></u>	08/01/24 15:20	08/01/24 21:17	1
Bromomethane	ND		0.13	0.050	mg/Kg	≎	08/01/24 15:20	08/01/24 21:17	1
Hexachlorobutadiene	0.30	В	0.13	0.031	mg/Kg	≎	08/01/24 15:20	08/01/24 21:17	1
Naphthalene	0.49	В	0.20	0.051	mg/Kg	₩	08/01/24 15:20	08/01/24 21:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		80 - 121				08/01/24 15:20	08/01/24 21:17	1
4-Bromofluorohenzene (Surr)	92		80 120				08/01/24 15:20	08/01/24 21:17	1

General Chemistry			
Toluene-d8 (Surr)	91	80 - 120	08/01/24 15:20 08/01/24 21:17 1
Dibromofluoromethane (Surr)	89	80 - 120	08/01/24 15:20 08/01/24 21:17 1
4-Bromofluorobenzene (Surr)	92	80 - 120	08/01/24 15:20 08/01/24 21:17 1

General Oneillistry						
Analyte	Result Qualifier	RL	RL Unit	D Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	83.1	0.1	0.1 %		07/30/24 12:38	1
Percent Moisture (SM22 2540G)	16.9	0.1	0.1 %		07/30/24 12:38	1

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-15-SO-48-20240725

Lab Sample ID: 580-142413-12 Date Collected: 07/25/24 14:35 Matrix: Solid Date Received: 07/26/24 12:15 Percent Solids: 84.1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.024 0.0059 mg/Kg 07/29/24 13:10 07/29/24 19:14 ND 1,1,1-Trichloroethane 0.047 0.0054 mg/Kg 07/29/24 13:10 07/29/24 19:14 1,1,2,2-Tetrachloroethane ND 0.024 0.0090 mg/Kg 07/29/24 13:10 07/29/24 19:14 ND 0.0087 07/29/24 13:10 07/29/24 19:14 1,1,2-Trichloroethane 0.024 mg/Kg 1.1-Dichloroethane ND 0.047 0.011 mg/Kg 07/29/24 13:10 07/29/24 19:14 ND 1,1-Dichloroethene 0.047 0.014 mg/Kg 07/29/24 13:10 07/29/24 19:14 1,1-Dichloropropene ND 0.047 0.0062 07/29/24 13:10 07/29/24 19:14 mg/Kg ND 0.047 0.014 07/29/24 13:10 07/29/24 19:14 1,2,3-Trichloropropane mg/Kg 1,2,4-Trimethylbenzene ND 0.047 0.016 mg/Kg 07/29/24 13:10 07/29/24 19:14 0.018 1,2-Dibromo-3-Chloropropane ND 0.071 mg/Kg 07/29/24 13:10 07/29/24 19:14 1,2-Dibromoethane ND 0.024 0.0045 mg/Kg 07/29/24 13:10 07/29/24 19:14 0.047 0.010 ma/Ka 07/29/24 13:10 07/29/24 19:14 1 1,2-Dichlorobenzene 0.018 J 07/29/24 13:10 1,2-Dichloroethane ND 0.024 0.0065 mg/Kg 07/29/24 19:14 1,2-Dichloropropane ND 0.024 0.0078 mg/Kg 07/29/24 13:10 07/29/24 19:14 ND 0.0090 0.047 mg/Kg 07/29/24 13:10 07/29/24 19:14 1,3,5-Trimethylbenzene 0.016 07/29/24 13:10 07/29/24 19:14 1,3-Dichlorobenzene NΩ 0.071 mg/Kg 1,3-Dichloropropane ND 0.071 0.0066 mg/Kg 07/29/24 13:10 07/29/24 19:14 0.071 0.013 mg/Kg 07/29/24 13:10 07/29/24 19:14 1.4-Dichlorobenzene 0.056 2,2-Dichloropropane ND 0.047 0.014 mg/Kg 07/29/24 13:10 07/29/24 19:14 2-Chlorotoluene ND 0.047 0.010 mg/Kg 07/29/24 13:10 07/29/24 19:14 4-Chlorotoluene ND 0.047 0.012 mg/Kg 07/29/24 13:10 07/29/24 19:14 4-Isopropyltoluene ND 0.047 0.012 mg/Kg 07/29/24 13:10 07/29/24 19:14 Benzene ND 0.0045 mg/Kg 07/29/24 13:10 07/29/24 19:14 0.024 Bromobenzene ND 0.047 0.0049 mg/Kg 07/29/24 13:10 07/29/24 19:14 Bromochloromethane ND 0.047 0.0073 mg/Kg 07/29/24 13:10 07/29/24 19:14 Bromodichloromethane 0.0065 07/29/24 13:10 07/29/24 19:14 ND 0.047 mg/Kg **Bromoform** ND 0.047 0.0053 mg/Kg 07/29/24 13:10 07/29/24 19:14 Chloroethane 0.025 07/29/24 13:10 07/29/24 19:14 ND 0.094 mg/Kg 0.012 Chloromethane ND 0.071 mg/Kg 07/29/24 13:10 07/29/24 19:14 0.015 ND 0.071 07/29/24 13:10 07/29/24 19:14 cis-1,2-Dichloroethene mg/Kg cis-1,3-Dichloropropene ND 0.024 0.0047 mg/Kg 07/29/24 13:10 07/29/24 19:14 Dibromochloromethane ND 0.024 0.0058 mg/Kg 07/29/24 13:10 07/29/24 19:14 Dibromomethane ND 0.047 0.0087 mg/Kg 07/29/24 13:10 07/29/24 19:14 Dichlorodifluoromethane ND 0.054 07/29/24 13:10 07/29/24 19:14 0.29mg/Kg Ethylbenzene ND 0.047 0.011 mg/Kg 07/29/24 13:10 07/29/24 19:14 Isopropylbenzene ND 0.047 0.010 mg/Kg 07/29/24 13:10 07/29/24 19:14 Methyl tert-butyl ether ND 0.047 0.0071 mg/Kg 07/29/24 13:10 07/29/24 19:14 **Methylene Chloride** 0.12 JB 0.29 0.031 mg/Kg 07/29/24 13:10 07/29/24 19:14 ND 0.047 0.0084 mg/Kg 07/29/24 13:10 07/29/24 19:14 m-Xylene & p-Xylene n-Butylbenzene ND 0.047 0.022 mg/Kg 07/29/24 13:10 07/29/24 19:14 N-Propylbenzene ND 0.047 0.018 mg/Kg 07/29/24 13:10 07/29/24 19:14 o-Xylene ND 0.047 0.0059 mg/Kg 07/29/24 13:10 07/29/24 19:14 0.010 ND 07/29/24 13:10 07/29/24 19:14 sec-Butylbenzene 0.047 mg/Kg Styrene 0.015 07/29/24 13:10 07/29/24 19:14 ND 0.047 mg/Kg ND 07/29/24 13:10 07/29/24 19:14 t-Butylbenzene 0.047 0.0091 mg/Kg Toluene ND 0.071 0.016 mg/Kg 07/29/24 13:10 07/29/24 19:14 trans-1,2-Dichloroethene ND 0.071 07/29/24 13:10 07/29/24 19:14 0.017 mg/Kg trans-1,3-Dichloropropene ND 0.047 0.0082 mg/Kg 07/29/24 13:10 07/29/24 19:14 Trichloroethene ND 0.047 0.012 mg/Kg 07/29/24 13:10 07/29/24 19:14

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Date Received: 07/26/24 12:15

**General Chemistry** 

Percent Solids (SM22 2540G)

Percent Moisture (SM22 2540G)

Analyte

Client Sample ID: PDI-15-SO-48-20240725

Date Collected: 07/25/24 14:35

Lab Sample ID: 580-142413-12

Matrix: Solid

Percent Solids: 84.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Trichlorofluoromethane	ND		0.094	0.031	mg/Kg	<u></u>	07/29/24 13:10	07/29/24 19:14	
Vinyl chloride	ND		0.12	0.022	mg/Kg	₩	07/29/24 13:10	07/29/24 19:14	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	97		80 - 121				07/29/24 13:10	07/29/24 19:14	
4-Bromofluorobenzene (Surr)	104		80 - 120				07/29/24 13:10	07/29/24 19:14	
Dibromofluoromethane (Surr)	96		80 - 120				07/29/24 13:10	07/29/24 19:14	
Toluene-d8 (Surr)	96		80 - 120				07/29/24 13:10	07/29/24 19:14	
Method: SW846 8260D - Vo			ds by GC/MS	- DL					
Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fa
1,2,3-Trichlorobenzene	ND	*1	1.0	0.50	mg/Kg	₩	08/07/24 07:53	08/07/24 17:09	
Carbon tetrachloride	ND		0.25	0.056	mg/Kg	☼	08/07/24 07:53	08/07/24 17:09	
Chlorobenzene	48		0.51	0.061	mg/Kg	☼	08/07/24 07:53	08/07/24 17:09	
Chloroform	ND		0.25	0.053	mg/Kg	☼	08/07/24 07:53	08/07/24 17:09	
Tetrachloroethene	ND		0.51	0.067	mg/Kg	₽	08/07/24 07:53	08/07/24 17:09	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	104		80 - 121				08/07/24 07:53	08/07/24 17:09	
4-Bromofluorobenzene (Surr)	96		80 - 120				08/07/24 07:53	08/07/24 17:09	
Dibromofluoromethane (Surr)	103		80 - 120				08/07/24 07:53	08/07/24 17:09	
Toluene-d8 (Surr)	100		80 - 120				08/07/24 07:53	08/07/24 17:09	
Method: SW846 8260D - Vo	_	•	ds by GC/MS	- RA					
Analyte		Qualifier	RL		Unit	_ D	Prepared	Analyzed	Dil Fa
1,2,4-Trichlorobenzene	ND		0.094		0 0	₩	08/01/24 15:20	08/01/24 21:38	
Bromomethane	ND		0.12	0.045	mg/Kg	₩	08/01/24 15:20	08/01/24 21:38	
Hexachlorobutadiene	ND		0.12		mg/Kg	☼	08/01/24 15:20	08/01/24 21:38	
Naphthalene	ND		0.18	0.046	mg/Kg	₩	08/01/24 15:20	08/01/24 21:38	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
1,2-Dichloroethane-d4 (Surr)	81		80 - 121				08/01/24 15:20	08/01/24 21:38	
4-Bromofluorobenzene (Surr)	95		80 - 120				08/01/24 15:20	08/01/24 21:38	
Dibromofluoromethane (Surr)	89		80 - 120				08/01/24 15:20	08/01/24 21:38	
Dibromonaoromethane (Garr)									

RL

0.1

0.1

**RL** Unit

0.1 %

0.1 %

Prepared

Analyzed

07/30/24 12:38

07/30/24 12:38

Result Qualifier

84.1

15.9

Dil Fac

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-15-SO-53-20240725

Lab Sample ID: 580-142413-13 Date Collected: 07/25/24 15:52 **Matrix: Solid** Date Received: 07/26/24 12:15 Percent Solids: 89.2

Method: SW846 8260D - Volati Analyte  1,1,1,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloropropene	_	Qualifier	RL 0.023 0.046	<b>MDL</b> 0.0057	Unit mg/Kg	<u>D</u>	Prepared 07/29/24 13:10	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane 1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloropthane	ND ND ND ND		0.023 0.046	0.0057			<u>.</u>		
1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethene 1,1-Dichloropropene	ND ND ND ND		0.046				VIII/21/4 13 11	07/29/24 19:36	1
1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethene 1,1-Dichloropropene	ND ND ND			0 0053	mg/Kg	₩		07/29/24 19:36	1
1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethene 1,1-Dichloropropene	ND ND		0.023	0.0087				07/29/24 19:36	1
1,1-Dichloroethane 1,1-Dichloroethene 1,1-Dichloropropene	ND		0.023	0.0085				07/29/24 19:36	· · · · · · · 1
1,1-Dichloroethene 1,1-Dichloropropene			0.046		mg/Kg	~ ☆		07/29/24 19:36	1
1,1-Dichloropropene			0.046		mg/Kg	~ ☆		07/29/24 19:36	1
• •	ND		0.046	0.0061				07/29/24 19:36	
1,2,3-Trichloropropane	ND		0.046		mg/Kg	₩		07/29/24 19:36	1
1,2,4-Trimethylbenzene	ND		0.046		mg/Kg	₩		07/29/24 19:36	1
1,2-Dibromo-3-Chloropropane	ND		0.040		mg/Kg	¥ \$		07/29/24 19:36	
• •	ND		0.009	0.0043	0 0			07/29/24 19:36	1
1,2-Dibromoethane	0.012		0.023	0.0043		₽		07/29/24 19:36	1
1,2-Dichlorobenzene 1,2-Dichloroethane	0.012 ND	J	0.040	0.0099				07/29/24 19:36	
	ND ND		0.023	0.0003		₩		07/29/24 19:36	1
1,2-Dichloropropane					0 0	*		07/29/24 19:36	
1,3,5-Trimethylbenzene	ND		0.046	0.0087		<u></u>			
1,3-Dichlorobenzene	ND		0.069		mg/Kg			07/29/24 19:36	1
1,3-Dichloropropane	ND		0.069	0.0064	0 0	<b>*</b>		07/29/24 19:36	1
1,4-Dichlorobenzene	ND		0.069		mg/Kg	<b>☆</b>		07/29/24 19:36	1
2,2-Dichloropropane	ND		0.046		mg/Kg	<b>*</b>		07/29/24 19:36	1
2-Chlorotoluene	ND		0.046		mg/Kg	<b>‡</b>		07/29/24 19:36	1
4-Chlorotoluene	ND		0.046		mg/Kg			07/29/24 19:36	1
4-Isopropyltoluene	ND		0.046		mg/Kg	☼		07/29/24 19:36	1
Benzene	ND		0.023	0.0043		₩		07/29/24 19:36	1
Bromobenzene	ND		0.046	0.0048				07/29/24 19:36	1
Bromochloromethane	ND		0.046	0.0071		₩		07/29/24 19:36	1
Bromodichloromethane	ND		0.046	0.0063		₩		07/29/24 19:36	1
Bromoform	ND		0.046	0.0051		₩	07/29/24 13:10	07/29/24 19:36	1
Carbon tetrachloride	0.044		0.023	0.0050	mg/Kg	₩	07/29/24 13:10	07/29/24 19:36	1
Chloroethane	ND		0.091		mg/Kg	☼	07/29/24 13:10	07/29/24 19:36	1
Chloroform	0.041		0.023	0.0048		₩	07/29/24 13:10	07/29/24 19:36	1
Chloromethane	ND		0.069		mg/Kg	₩	07/29/24 13:10	07/29/24 19:36	1
cis-1,2-Dichloroethene	ND		0.069	0.014	mg/Kg	₩	07/29/24 13:10	07/29/24 19:36	1
cis-1,3-Dichloropropene	ND		0.023	0.0046	mg/Kg	☼	07/29/24 13:10	07/29/24 19:36	1
Dibromochloromethane	ND		0.023	0.0056	mg/Kg	₩	07/29/24 13:10	07/29/24 19:36	1
Dibromomethane	ND		0.046	0.0085	mg/Kg	☼	07/29/24 13:10	07/29/24 19:36	1
Dichlorodifluoromethane	ND		0.29	0.052	mg/Kg	₩	07/29/24 13:10	07/29/24 19:36	1
Ethylbenzene	0.022	J	0.046	0.010	mg/Kg	₩	07/29/24 13:10	07/29/24 19:36	1
Isopropylbenzene	ND		0.046	0.0098	mg/Kg	₩	07/29/24 13:10	07/29/24 19:36	1
Methyl tert-butyl ether	ND		0.046	0.0069	mg/Kg	₩	07/29/24 13:10	07/29/24 19:36	1
Methylene Chloride	0.12	JB	0.29	0.030	mg/Kg	₩	07/29/24 13:10	07/29/24 19:36	1
m-Xylene & p-Xylene	0.14		0.046	0.0081		₩	07/29/24 13:10	07/29/24 19:36	1
n-Butylbenzene	ND		0.046		mg/Kg	₽	07/29/24 13:10	07/29/24 19:36	1
N-Propylbenzene	ND		0.046		mg/Kg	₩	07/29/24 13:10	07/29/24 19:36	1
o-Xylene	0.028	J	0.046	0.0057		₩		07/29/24 19:36	1
sec-Butylbenzene	ND		0.046	0.0098		₩		07/29/24 19:36	1
Styrene	ND		0.046		mg/Kg			07/29/24 19:36	1
t-Butylbenzene	ND		0.046	0.0088		₩		07/29/24 19:36	1
Tetrachloroethene	0.077		0.046	0.0061		₩.		07/29/24 19:36	1
Toluene	ND		0.069		mg/Kg	∴		07/29/24 19:36	

**Eurofins Seattle** 

Job ID: 580-142413-1 Client: ERM-West

Project/Site: Arkema PDI Sampling

Dibromofluoromethane (Surr)

Toluene-d8 (Surr)

Client Sample ID: PDI-15-SO-53-20240725

Date Collected: 07/25/24 15:52 Date Received: 07/26/24 12:15 Lab Sample ID: 580-142413-13

08/07/24 07:53 08/07/24 17:31

08/07/24 07:53 08/07/24 17:31

**Matrix: Solid** 

Percent Solids: 89.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		0.069	0.017	mg/Kg	<u></u>	07/29/24 13:10	07/29/24 19:36	1
trans-1,3-Dichloropropene	ND		0.046	0.0080	mg/Kg	₩	07/29/24 13:10	07/29/24 19:36	1
Trichloroethene	ND		0.046	0.012	mg/Kg	₩	07/29/24 13:10	07/29/24 19:36	1
Trichlorofluoromethane	ND		0.091	0.030	mg/Kg	₩	07/29/24 13:10	07/29/24 19:36	1
Vinyl chloride	ND		0.11	0.021	mg/Kg	☼	07/29/24 13:10	07/29/24 19:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				07/29/24 13:10	07/29/24 19:36	1
4-Bromofluorobenzene (Surr)	106		80 - 120				07/29/24 13:10	07/29/24 19:36	1
Dibromofluoromethane (Surr)	98		80 - 120				07/29/24 13:10	07/29/24 19:36	1
Toluene-d8 (Surr)	97		80 - 120				07/29/24 13:10	07/29/24 19:36	1
Method: SW846 8260D - Vo	olatile Organic	Compound	ds by GC/MS	- DL					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND	*1	0.98	0.49	mg/Kg	<u></u>	08/07/24 07:53	08/07/24 17:31	1
Chlorobenzene	33		0.49	0.059	mg/Kg	☼	08/07/24 07:53	08/07/24 17:31	1
	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Surrogate 1,2-Dichloroethane-d4 (Surr)	%Recovery	Qualifier	Limits 80 - 121				Prepared 08/07/24 07:53	Analyzed 08/07/24 17:31	Dil Fac

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.091	0.049	mg/Kg	<u></u>	08/01/24 15:20	08/01/24 21:58	1
Bromomethane	ND		0.11	0.043	mg/Kg	≎	08/01/24 15:20	08/01/24 21:58	1
Hexachlorobutadiene	ND		0.11	0.027	mg/Kg	≎	08/01/24 15:20	08/01/24 21:58	1
Naphthalene	ND		0.17	0.045	mg/Kg	≎	08/01/24 15:20	08/01/24 21:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	84		80 - 121				08/01/24 15:20	08/01/24 21:58	1
4-Bromofluorobenzene (Surr)	93		80 - 120				08/01/24 15:20	08/01/24 21:58	1
Dibromofluoromethane (Surr)	90		80 - 120				08/01/24 15:20	08/01/24 21:58	1
	97		80 - 120				09/01/24 15:20	08/01/24 21:58	

80 - 120

80 - 120

102

100

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - RA

General Chemistry							
Analyte	Result Qualifier	RL	RL Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	89.2	0.1	0.1 %			07/30/24 12:39	1
Percent Moisture (SM22 2540G)	10.8	0.1	0.1 %			07/30/24 12:39	1

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

# Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-466320/5-A

**Matrix: Solid** 

t-Butylbenzene

Analysis Batch: 466329

Client Sample ID: Method Blank **Prep Type: Total/NA** 

Alialysis Dalcii. 400329								Prep Batch.	400320
	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
1,1,1-Trichloroethane	ND		0.040	0.0046	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
4.4.0.0 Tatus alalana atlana	ND		0.000	0.0070			07/00/04 00:40	07/00/04 44:00	

,	МВ	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
1,1,1-Trichloroethane	ND		0.040	0.0046	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
1,1,2-Trichloroethane	ND		0.020	0.0074	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
1,1-Dichloroethane	ND		0.040	0.0092	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
1,1-Dichloroethene	ND		0.040	0.012	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
1,1-Dichloropropene	ND		0.040	0.0053	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
1,2,3-Trichloropropane	ND		0.040	0.012	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
1,2,4-Trimethylbenzene	ND		0.040	0.014	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
1,2-Dibromo-3-Chloropropane	ND		0.060	0.015	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
1,2-Dibromoethane	ND		0.020	0.0038	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
1,2-Dichlorobenzene	ND		0.040	0.0087	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
1,2-Dichloroethane	ND		0.020	0.0055	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
1,2-Dichloropropane	ND		0.020	0.0066	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
1,3,5-Trimethylbenzene	ND		0.040	0.0076	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
1,3-Dichlorobenzene	ND		0.060	0.013	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
1,3-Dichloropropane	ND		0.060	0.0056	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
1,4-Dichlorobenzene	ND		0.060	0.011	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
2,2-Dichloropropane	ND		0.040	0.012	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
2-Chlorotoluene	ND		0.040	0.0088	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
4-Chlorotoluene	ND		0.040	0.0098	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
4-Isopropyltoluene	ND		0.040	0.010	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
Benzene	ND		0.020	0.0038	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
Bromobenzene	ND		0.040	0.0042	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
Bromochloromethane	ND		0.040	0.0062	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
Bromodichloromethane	ND		0.040	0.0055	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
Bromoform	ND		0.040	0.0045	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
Carbon tetrachloride	ND		0.020	0.0044	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
Chlorobenzene	ND		0.040	0.0048	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
Chloroethane	ND		0.080	0.021	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
Chloroform	ND		0.020	0.0042	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
Chloromethane	ND		0.060	0.010	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
cis-1,2-Dichloroethene	ND		0.060	0.013	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
cis-1,3-Dichloropropene	ND		0.020	0.0040	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
Dibromochloromethane	ND		0.020	0.0049	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
Dibromomethane	ND		0.040	0.0074	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
Dichlorodifluoromethane	ND		0.25	0.046	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
Ethylbenzene	ND		0.040	0.0091	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
Isopropylbenzene	ND		0.040		mg/Kg		07/29/24 08:43	07/29/24 11:08	1
Methyl tert-butyl ether	ND		0.040	0.0060	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
Methylene Chloride	0.0599	J	0.25	0.026	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
m-Xylene & p-Xylene	ND		0.040	0.0071	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
n-Butylbenzene	ND		0.040	0.019	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
N-Propylbenzene	ND		0.040	0.015	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
o-Xylene	ND		0.040	0.0050	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
Styrene	ND		0.040		mg/Kg		07/29/24 08:43	07/29/24 11:08	1
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07/29/24 08:43 07/29/24 11:08

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0.0077 mg/Kg

0.040

ND

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

MB MB

Lab Sample ID: MB 580-466320/5-A

Matrix: Solid

**Analysis Batch: 466329** 

Client Sample ID: Method Blank

Prep Type: Total/NA
Prep Batch: 466320

Prep Batch: 466320

ed Analyzed Dil Fac 07/29/24 11:08 1

Analyte	Result Quali	fier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND ND	0.040	0.0053	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
Toluene	ND	0.060	0.014	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
trans-1,2-Dichloroethene	ND	0.060	0.015	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
trans-1,3-Dichloropropene	ND	0.040	0.0070	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
Trichloroethene	ND	0.040	0.010	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
Trichlorofluoromethane	ND	0.080	0.026	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
Vinyl chloride	ND	0.10	0.019	mg/Kg		07/29/24 08:43	07/29/24 11:08	1
Trichlorofluoromethane	ND	0.080	0.026	mg/Kg		07/29/24 08:43	07/29/24 11:08	1 1 1

MB MB %Recovery Qualifier Limits Prepared Dil Fac Surrogate Analyzed 1,2-Dichloroethane-d4 (Surr) 07/29/24 08:43 07/29/24 11:08 101 80 - 121 4-Bromofluorobenzene (Surr) 105 80 - 120 07/29/24 08:43 07/29/24 11:08 Dibromofluoromethane (Surr) 98 80 - 120 07/29/24 08:43 07/29/24 11:08 Toluene-d8 (Surr) 102 80 - 120 07/29/24 08:43 07/29/24 11:08

Lab Sample ID: LCS 580-466320/1-A

**Matrix: Solid** 

Analysis Batch: 466329

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 466320

Analysis Batch: 466329	Spike	LCS	LCS				Prep Batch: 466320 %Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1,1,2-Tetrachloroethane	0.800	0.773		mg/Kg		97	79 - 128
1,1,1-Trichloroethane	0.800	0.796		mg/Kg		100	78 - 135
1,1,2,2-Tetrachloroethane	0.800	0.775		mg/Kg		97	77 - 122
1,1,2-Trichloroethane	0.800	0.779		mg/Kg		97	80 - 123
1,1-Dichloroethane	0.800	0.816		mg/Kg		102	78 - 126
1,1-Dichloroethene	0.800	0.772		mg/Kg		96	73 - 134
1,1-Dichloropropene	0.800	0.787		mg/Kg		98	76 - 140
1,2,3-Trichloropropane	0.800	0.772		mg/Kg		97	77 - 127
1,2,4-Trimethylbenzene	0.800	0.791		mg/Kg		99	73 - 138
1,2-Dibromo-3-Chloropropane	0.800	0.597		mg/Kg		75	64 - 129
1,2-Dibromoethane	0.800	0.772		mg/Kg		97	77 - 123
1,2-Dichlorobenzene	0.800	0.784		mg/Kg		98	78 - 126
1,2-Dichloroethane	0.800	0.760		mg/Kg		95	76 - 124
1,2-Dichloropropane	0.800	0.827		mg/Kg		103	73 - 130
1,3,5-Trimethylbenzene	0.800	0.820		mg/Kg		102	72 - 134
1,3-Dichlorobenzene	0.800	0.791		mg/Kg		99	78 - 132
1,3-Dichloropropane	0.800	0.814		mg/Kg		102	80 - 120
1,4-Dichlorobenzene	0.800	0.753		mg/Kg		94	77 - 123
2,2-Dichloropropane	0.800	0.791		mg/Kg		99	75 - 134
2-Chlorotoluene	0.800	0.797		mg/Kg		100	77 - 134
4-Chlorotoluene	0.800	0.809		mg/Kg		101	71 - 137
4-Isopropyltoluene	0.800	0.802		mg/Kg		100	71 - 142
Benzene	0.800	0.780		mg/Kg		98	79 - 135
Bromobenzene	0.800	0.802		mg/Kg		100	78 - 126
Bromochloromethane	0.800	0.770		mg/Kg		96	76 - 131
Bromodichloromethane	0.800	0.814		mg/Kg		102	78 - 125
Bromoform	0.800	0.775		mg/Kg		97	71 - 130
Carbon tetrachloride	0.800	0.780		mg/Kg		98	76 - 140
Chlorobenzene	0.800	0.748		mg/Kg		93	80 - 125

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Job ID: 580-142413-1 Client: ERM-West

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-466320/1-A

Matrix: Solid

**Analysis Batch: 466329** 

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

**Prep Batch: 466320** 

	Spike	LCS LC	CS		%Rec	
Analyte	Added	Result Q	ualifier Unit	D %Rec	Limits	
Chloroethane	0.800	0.880	mg/Kg	110	26 - 150	
Chloroform	0.800	0.777	mg/Kg	97	74 - 133	
Chloromethane	0.800	0.902	mg/Kg	113	52 - 142	
cis-1,2-Dichloroethene	0.800	0.782	mg/Kg	98	80 - 125	
cis-1,3-Dichloropropene	0.800	0.752	mg/Kg	94	80 - 122	
Dibromochloromethane	0.800	0.767	mg/Kg	96	75 - 125	
Dibromomethane	0.800	0.777	mg/Kg	97	72 - 130	
Dichlorodifluoromethane	0.800	0.881	mg/Kg	110	33 - 150	
Ethylbenzene	0.800	0.808	mg/Kg	101	80 - 135	
Isopropylbenzene	0.800	0.886	mg/Kg	111	80 - 131	
Methyl tert-butyl ether	0.800	0.775	mg/Kg	97	71 - 126	
Methylene Chloride	0.800	0.787	mg/Kg	98	56 - 140	
m-Xylene & p-Xylene	0.800	0.788	mg/Kg	99	80 - 132	
n-Butylbenzene	0.800	0.817	mg/Kg	102	69 - 143	
N-Propylbenzene	0.800	0.832	mg/Kg	104	78 - 133	
o-Xylene	0.800	0.789	mg/Kg	99	80 - 132	
sec-Butylbenzene	0.800	0.808	mg/Kg	101	71 - 143	
Styrene	0.800	0.802	mg/Kg	100	79 - 129	
t-Butylbenzene	0.800	0.816	mg/Kg	102	72 - 144	
Tetrachloroethene	0.800	0.796	mg/Kg	99	75 - 141	
Toluene	0.800	0.771	mg/Kg	96	75 - 125	
trans-1,2-Dichloroethene	0.800	0.769	mg/Kg	96	77 - 134	
trans-1,3-Dichloropropene	0.800	0.844	mg/Kg	106	80 - 121	
Trichloroethene	0.800	0.781	mg/Kg	98	80 - 134	
Trichlorofluoromethane	0.800	0.856	mg/Kg	107	71 - 150	
Vinyl chloride	0.800	0.913	mg/Kg	114	62 - 144	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96		80 - 121
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	96		80 - 120
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: LCSD 580-466320/2-A

Matrix: Solid

**Analysis Batch: 466329** 

Client Sample	ID: Lab	Control	Sample	Dup
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Prep Type: Total/NA

**Prep Batch: 466320** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	0.800	0.756		mg/Kg		95	79 - 128	2	20
1,1,1-Trichloroethane	0.800	0.780		mg/Kg		97	78 - 135	2	20
1,1,2,2-Tetrachloroethane	0.800	0.754		mg/Kg		94	77 - 122	3	20
1,1,2-Trichloroethane	0.800	0.762		mg/Kg		95	80 - 123	2	20
1,1-Dichloroethane	0.800	0.800		mg/Kg		100	78 - 126	2	20
1,1-Dichloroethene	0.800	0.727		mg/Kg		91	73 - 134	6	25
1,1-Dichloropropene	0.800	0.771		mg/Kg		96	76 - 140	2	20
1,2,3-Trichloropropane	0.800	0.803		mg/Kg		100	77 - 127	4	20
1,2,4-Trimethylbenzene	0.800	0.777		mg/Kg		97	73 - 138	2	22
1,2-Dibromo-3-Chloropropane	0.800	0.804		mg/Kg		100	64 - 129	30	40

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Job ID: 580-142413-1 Client: ERM-West

Project/Site: Arkema PDI Sampling

# Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-466320/2-A

**Matrix: Solid** 

**Analysis Batch: 466329** 

**Client Sample ID: Lab Control Sample Dup** 

**Prep Type: Total/NA** 

**Prep Batch: 466320** 

•	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,2-Dibromoethane	0.800	0.747		mg/Kg		93	77 - 123	3	20
1,2-Dichlorobenzene	0.800	0.782		mg/Kg		98	78 - 126	0	20
1,2-Dichloroethane	0.800	0.765		mg/Kg		96	76 - 124	1	20
1,2-Dichloropropane	0.800	0.802		mg/Kg		100	73 - 130	3	20
1,3,5-Trimethylbenzene	0.800	0.821		mg/Kg		103	72 - 134	0	24
1,3-Dichlorobenzene	0.800	0.792		mg/Kg		99	78 - 132	0	20
1,3-Dichloropropane	0.800	0.820		mg/Kg		102	80 - 120	1	20
1,4-Dichlorobenzene	0.800	0.744		mg/Kg		93	77 - 123	1	20
2,2-Dichloropropane	0.800	0.756		mg/Kg		95	75 - 134	4	20
2-Chlorotoluene	0.800	0.825		mg/Kg		103	77 - 134	3	21
4-Chlorotoluene	0.800	0.805		mg/Kg		101	71 - 137	0	21
4-Isopropyltoluene	0.800	0.795		mg/Kg		99	71 - 142	1	29
Benzene	0.800	0.768		mg/Kg		96	79 - 135	2	20
Bromobenzene	0.800	0.803		mg/Kg		100	78 - 126	0	20
Bromochloromethane	0.800	0.751		mg/Kg		94	76 - 131	2	20
Bromodichloromethane	0.800	0.824		mg/Kg		103	78 - 125	1	20
Bromoform	0.800	0.799		mg/Kg		100	71 - 130	3	20
Carbon tetrachloride	0.800	0.754		mg/Kg		94	76 - 140	3	20
Chlorobenzene	0.800	0.750		mg/Kg		94	80 - 125	0	20
Chloroethane	0.800	0.876		mg/Kg		110	26 - 150	0	40
Chloroform	0.800	0.759		mg/Kg		95	74 - 133	2	20
Chloromethane	0.800	0.908		mg/Kg		113	52 - 142	1	40
cis-1,2-Dichloroethene	0.800	0.746		mg/Kg		93	80 - 125	5	20
cis-1,3-Dichloropropene	0.800	0.749		mg/Kg		94	80 - 122		20
Dibromochloromethane	0.800	0.772		mg/Kg		97	75 - 125	1	20
Dibromomethane	0.800	0.763		mg/Kg		95	73 - 123	2	40
Dichlorodifluoromethane	0.800	0.765		mg/Kg		108	33 - 150	2	31
	0.800	0.767				96	80 - 135	5	20
Ethylbenzene	0.800	0.767		mg/Kg		109	80 - 133	2	20
Isopropylbenzene				mg/Kg				1	
Methylene Chleride	0.800	0.786		mg/Kg		98	71 <sub>-</sub> 126		20
Methylene Chloride	0.800	0.766		mg/Kg		96	56 - 140	3	20
m-Xylene & p-Xylene	0.800	0.756		mg/Kg		95	80 - 132	4	20
n-Butylbenzene	0.800	0.819		mg/Kg		102	69 - 143	0	31
N-Propylbenzene	0.800	0.783		mg/Kg		98	78 - 133	6	24
o-Xylene	0.800	0.773		mg/Kg		97	80 - 132	2	20
sec-Butylbenzene	0.800	0.817		mg/Kg		102	71 - 143	1	29
Styrene	0.800	0.793		mg/Kg		99	79 - 129	1	20
t-Butylbenzene	0.800	0.802		mg/Kg		100	72 - 144	2	27
Tetrachloroethene	0.800	0.765		mg/Kg		96	75 - 141	4	20
Toluene	0.800	0.764		mg/Kg		95	75 - 125	1	20
trans-1,2-Dichloroethene	0.800	0.751		mg/Kg		94	77 - 134	2	20
trans-1,3-Dichloropropene	0.800	0.826		mg/Kg		103	80 - 121	2	20
Trichloroethene	0.800	0.778		mg/Kg		97	80 - 134	0	20
Trichlorofluoromethane	0.800	0.852		mg/Kg		106	71 - 150	0	30
Vinyl chloride	0.800	0.880		mg/Kg		110	62 - 144	4	20

LCSD LCSD

Surrogate %Recovery Qualifier Limits 1,2-Dichloroethane-d4 (Surr) 95 80 - 121

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Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-466320/2-A

**Matrix: Solid** 

Analysis Batch: 466329

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

**Prep Batch: 466320** 

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	96		80 - 120
Toluene-d8 (Surr)	100		80 - 120

Lab Sample ID: MB 580-466866/1-A **Client Sample ID: Method Blank** 

**Matrix: Solid** 

Analysis Batch: 466867

Prep Type: Total/NA

**Prep Batch: 466866** 

MB MB Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac 1,2,4-Trichlorobenzene 0.0020 0.0011 mg/Kg 08/01/24 15:20 08/01/24 20:15 0.00157 J Bromomethane ND 0.0025 0.00095 mg/Kg 08/01/24 15:20 08/01/24 20:15 Hexachlorobutadiene 0.00195 J 0.0025 0.00060 mg/Kg 08/01/24 15:20 08/01/24 20:15 Naphthalene 0.00130 J 0.0038 0.00098 mg/Kg 08/01/24 15:20 08/01/24 20:15 0.00013 mg/Kg Tetrachloroethene ND 0.0010 08/01/24 15:20 08/01/24 20:15

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109	80 - 121	08/01/24 15:20	08/01/24 20:15	1
4-Bromofluorobenzene (Surr)	99	80 - 120	08/01/24 15:20	08/01/24 20:15	1
Dibromofluoromethane (Surr)	112	80 - 120	08/01/24 15:20	08/01/24 20:15	1
Toluene-d8 (Surr)	101	80 - 120	08/01/24 15:20	08/01/24 20:15	1

Lab Sample ID: LCS 580-466866/2-A

**Matrix: Solid** 

Analysis Batch: 466867

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 466866** 

	Spike	LUS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,2,4-Trichlorobenzene	0.800	0.913		mg/Kg		114	74 - 131	
Bromomethane	0.800	0.932		mg/Kg		116	55 - 150	
Hexachlorobutadiene	0.800	0.774		mg/Kg		97	65 - 145	
Naphthalene	0.800	0.810		mg/Kg		101	56 - 145	
Tetrachloroethene	0.800	0.892		mg/Kg		111	75 - 141	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	110		80 - 121
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	108		80 - 120
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: LCSD 580-466866/3-A

**Matrix: Solid** 

Analysis Batch: 466867

Client Sam	ple ID:	Lab Control	Sample	Dup

Prep Type: Total/NA **Prep Batch: 466866** 

•	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,2,4-Trichlorobenzene	0.800	0.987		mg/Kg		123	74 - 131	8	26
Bromomethane	0.800	0.782		mg/Kg		98	55 - 150	17	26
Hexachlorobutadiene	0.800	0.838		mg/Kg		105	65 - 145	8	36
Naphthalene	0.800	0.842		mg/Kg		105	56 - 145	4	25
Tetrachloroethene	0.800	0.944		mg/Kg		118	75 - 141	6	20

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# Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		80 - 121
4-Bromofluorobenzene (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
Toluene-d8 (Surr)	101		80 - 120

Lab Sample ID: MB 580-467132/1-A

**Matrix: Solid** 

Client: ERM-West

**Analysis Batch: 467136** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

**Prep Batch: 467132** 

MB MB Result Qualifier RL MDL Unit Prepared Dil Fac Analyte Analyzed 08/05/24 00:16 08/05/24 11:10 1,1,1,2-Tetrachloroethane ND 0.020 0.0050 mg/Kg 1,2,3-Trichlorobenzene ND 0.080 0.040 mg/Kg 08/05/24 00:16 08/05/24 11:10 0.043 mg/Kg 08/05/24 00:16 08/05/24 11:10 1,2,4-Trichlorobenzene ND 0.080 Bromomethane ND 0.038 mg/Kg 08/05/24 00:16 08/05/24 11:10 0.10 Carbon tetrachloride ND 0.020 0.0044 mg/Kg 08/05/24 00:16 08/05/24 11:10 Chlorobenzene ND 0.040 0.0048 mg/Kg 08/05/24 00:16 08/05/24 11:10 Chloroform ND 0.0042 mg/Kg 08/05/24 00:16 08/05/24 11:10 0.020 Ethylbenzene ND 0.0091 mg/Kg 08/05/24 00:16 08/05/24 11:10 0.040 Hexachlorobutadiene ND 0.10 0.024 mg/Kg 08/05/24 00:16 08/05/24 11:10 Naphthalene ND 0.15 0.039 mg/Kg 08/05/24 00:16 08/05/24 11:10 o-Xylene ND 0.040 0.0050 mg/Kg 08/05/24 00:16 08/05/24 11:10 Tetrachloroethene 0.00597 J 0.040 0.0053 mg/Kg 08/05/24 00:16 08/05/24 11:10

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared A	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96	80 - 121	08/05/24 00:16 08/	05/24 11:10	1
4-Bromofluorobenzene (Surr)	97	80 - 120	08/05/24 00:16 08/	05/24 11:10	1
Dibromofluoromethane (Surr)	101	80 - 120	08/05/24 00:16 08/	05/24 11:10	1
Toluene-d8 (Surr)	100	80 - 120	08/05/24 00:16 08/	05/24 11:10	1

Lab Sample ID: LCS 580-467132/2-A

**Matrix: Solid** 

Analysis Batch: 467136

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

**Prep Batch: 467132** 

	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1,1,2-Tetrachloroethane	0.800	0.810		mg/Kg		101	79 - 128
1,2,3-Trichlorobenzene	0.800	0.469		mg/Kg		59	58 - 146
1,2,4-Trichlorobenzene	0.800	0.601		mg/Kg		75	74 - 131
Bromomethane	0.800	0.586		mg/Kg		73	55 - 150
Carbon tetrachloride	0.800	0.891		mg/Kg		111	76 - 140
Chlorobenzene	0.800	0.701		mg/Kg		88	80 - 125
Chloroform	0.800	0.775		mg/Kg		97	74 - 133
Ethylbenzene	0.800	0.758		mg/Kg		95	80 - 135
Hexachlorobutadiene	0.800	0.773		mg/Kg		97	65 - 145
Naphthalene	0.800	0.475		mg/Kg		59	56 - 145
o-Xylene	0.800	0.794		mg/Kg		99	80 - 132
Tetrachloroethene	0.800	0.703		mg/Kg		88	75 - 141

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		80 - 121
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-467132/2-A **Matrix: Solid** 

**Analysis Batch: 467136** 

**Client Sample ID: Lab Control Sample** 

mq/Kq

mg/Kg

mg/Kg

Prep Type: Total/NA

**Prep Batch: 467132** 

25

3

5

25

20

20

LCS LCS

%Recovery Qualifier Limits Surrogate Toluene-d8 (Surr) 80 - 120

Lab Sample ID: LCSD 580-467132/3-A Client Sample ID: Lab Control Sample Dup

LCSD LCSD

0.835

0.694

0.587

0.910

0.713

0.792

0.778

0.851

0.612

0.814

0.739

0.633 \*1

Result Qualifier

Spike

Added

0.800

0.800

0.800

0.800

0.800

0.800

0.800

0.800

0.800

0.800

0.800

0.800

**Matrix: Solid** 

Analyte

**Analysis Batch: 467136** 

1,1,1,2-Tetrachloroethane

1.2.3-Trichlorobenzene

1,2,4-Trichlorobenzene

Carbon tetrachloride

Hexachlorobutadiene

Tetrachloroethene

Bromomethane

Chlorobenzene

Chloroform

Ethylbenzene

Naphthalene

o-Xylene

Prep Type: Total/NA **Prep Batch: 467132** 

%Rec **RPD** RPD Limit Unit %Rec Limits mg/Kg 104 79 - 128 3 20 mg/Kg 79 58 - 146 30 28 mg/Kg 87 74 - 131 14 26 73 55 - 150 26 mg/Kg 0 mg/Kg 114 76 - 140 2 20 mg/Kg 89 80 - 125 2 20 2 mg/Kg 99 74 - 133 20 97 mg/Kg 80 - 135 20 106 65 - 145 10 36 mg/Kg

56 - 145

80 - 132

75 - 141

76

92

102

LCSD LCSD

Qualifier Limits Surrogate %Recovery 80 - 121 1,2-Dichloroethane-d4 (Surr) 94 4-Bromofluorobenzene (Surr) 101 80 - 120 80 - 120 Dibromofluoromethane (Surr) 99 Toluene-d8 (Surr) 99 80 - 120

Lab Sample ID: MB 580-467417/1-A

**Matrix: Solid** 

**Analysis Batch: 467421** 

**Client Sample ID: Method Blank** Prep Type: Total/NA **Prep Batch: 467417** 

MB MB Analyte Result Qualifier RL **MDL** Unit D Prepared Analyzed Dil Fac 1,1,1,2-Tetrachloroethane ND 0.020 0.0050 mg/Kg 08/07/24 07:53 08/07/24 12:04 ND 1,2,3-Trichlorobenzene 0.080 0.040 mg/Kg 08/07/24 07:53 08/07/24 12:04 08/07/24 12:04 1,2,4-Trichlorobenzene ND 0.080 0.043 mg/Kg 08/07/24 07:53 Bromomethane ND 0.038 mg/Kg 08/07/24 07:53 08/07/24 12:04 0.10 Carbon tetrachloride ND 0.020 0.0044 mg/Kg 08/07/24 07:53 08/07/24 12:04 Chlorobenzene ND 0.040 0.0048 mg/Kg 08/07/24 07:53 08/07/24 12:04 Chloroethane ND 0.080 0.021 mg/Kg 08/07/24 07:53 08/07/24 12:04 Chloroform ND 0.020 0.0042 mg/Kg 08/07/24 07:53 08/07/24 12:04 Hexachlorobutadiene ND 0.10 0.024 mg/Kg 08/07/24 07:53 08/07/24 12:04 Naphthalene ND 0.15 0.039 mg/Kg 08/07/24 07:53 08/07/24 12:04 Tetrachloroethene 0.040 0.0053 mg/Kg 08/07/24 07:53 08/07/24 12:04 ND

MB MB Surrogate Limits %Recovery Qualifier 103 80 - 121

1,2-Dichloroethane-d4 (Surr) 08/07/24 07:53 08/07/24 12:04 4-Bromofluorobenzene (Surr) 99 80 - 120 08/07/24 07:53 08/07/24 12:04 Dibromofluoromethane (Surr) 102 80 - 120 08/07/24 07:53 08/07/24 12:04 Toluene-d8 (Surr) 99 80 - 120 08/07/24 07:53 08/07/24 12:04

**Eurofins Seattle** 

8/9/2024

Analyzed

Dil Fac

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Prepared

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

# Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: LCS 580-467417/2-A

**Matrix: Solid** 

Matrix: Solid

Analysis Batch: 467421

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA Prep Batch: 467417** 

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1,1,2-Tetrachloroethane	0.800	0.711		mg/Kg		89	79 - 128	
1,2,3-Trichlorobenzene	0.800	0.785		mg/Kg		98	58 - 146	
1,2,4-Trichlorobenzene	0.800	0.786		mg/Kg		98	74 - 131	
Bromomethane	0.800	0.751		mg/Kg		94	55 - 150	
Carbon tetrachloride	0.800	0.743		mg/Kg		93	76 - 140	
Chlorobenzene	0.800	0.792		mg/Kg		99	80 - 125	
Chloroethane	0.800	0.845		mg/Kg		106	26 - 150	
Chloroform	0.800	0.716		mg/Kg		89	74 - 133	
Hexachlorobutadiene	0.800	0.749		mg/Kg		94	65 - 145	
Naphthalene	0.800	0.764		mg/Kg		96	56 - 145	
Tetrachloroethene	0.800	0.806		mg/Kg		101	75 - 141	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	103		80 - 121
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
Toluene-d8 (Surr)	101		80 - 120

Lab Sample ID: LCSD 580-467417/3-A

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

Analysis Batch: 467421							Prep Ba	atch: 40	67417
•	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	0.800	0.743		mg/Kg		93	79 - 128	4	20
1,2,3-Trichlorobenzene	0.800	1.13	*1	mg/Kg		141	58 - 146	36	28
1,2,4-Trichlorobenzene	0.800	0.904		mg/Kg		113	74 - 131	14	26
Bromomethane	0.800	0.720		mg/Kg		90	55 - 150	4	26
Carbon tetrachloride	0.800	0.742		mg/Kg		93	76 - 140	0	20
Chlorobenzene	0.800	0.800		mg/Kg		100	80 - 125	1	20
Chloroethane	0.800	0.773		mg/Kg		97	26 - 150	9	40
Chloroform	0.800	0.720		mg/Kg		90	74 - 133	1	20
Hexachlorobutadiene	0.800	0.812		mg/Kg		101	65 - 145	8	36
Naphthalene	0.800	0.990	*1	mg/Kg		124	56 - 145	26	25
Tetrachloroethene	0.800	0.829		mg/Kg		104	75 - 141	3	20

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		80 - 121
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
Toluene-d8 (Surr)	101		80 - 120

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Method: 2540G - SM 2540G

Lab Sample ID: 580-142413-4 DU

Lab Sample ID: 580-142413-13 DU

**Matrix: Solid Analysis Batch: 466558**  Client Sample ID: PDI-07-SO-39.5-20240723

**Prep Type: Total/NA** 

DU DU RPD Sample Sample Result Qualifier Result Qualifier RPD Analyte Unit D Limit % Percent Solids 82.4 82.8 0.5 20 Percent Moisture 17.6 17.2 % 2 20

Client Sample ID: PDI-15-SO-53-20240725

Prep Type: Total/NA

**Matrix: Solid Analysis Batch: 466559** 

DU DU Sample Sample **RPD** RPD **Analyte** Result Qualifier Result Qualifier Unit Limit 87.8 % Percent Solids 89.2 2 20 12.2 Percent Moisture 10.8 % 12 20

Client: ERM-West

Project/Site: Arkema PDI Sampling

**Client Sample ID: TB-01-SO-20240723** 

Date Collected: 07/23/24 00:01

Lab Sample ID: 580-142413-1

**Matrix: Solid** 

Job ID: 580-142413-1

Date Received: 07/26/24 12:15

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			466320	BYM	EET SEA	07/29/24 13:01
Total/NA	Analysis	8260D		1	466329	AC	EET SEA	07/29/24 16:01
Total/NA	Prep	5035	RA		467132	AC	EET SEA	08/05/24 00:16
Total/NA	Analysis	8260D	RA	1	467136	AC	EET SEA	08/05/24 16:29

Client Sample ID: PDI-07-SO-36.5-20240723

Date Collected: 07/23/24 10:15 Date Received: 07/26/24 12:15

Lab Sample ID: 580-142413-2

**Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	466552	AUA	EET SEA	07/30/24 11:39

Client Sample ID: PDI-07-SO-36.5-20240723

Date Collected: 07/23/24 10:15 Date Received: 07/26/24 12:15

Lab Sample ID: 580-142413-2 **Matrix: Solid** Percent Solids: 90.8

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			466320	BYM	EET SEA	07/29/24 13:01
Total/NA	Analysis	8260D		1	466329	AC	EET SEA	07/29/24 16:22
Total/NA	Prep	5035	DL		467417	AC	EET SEA	08/07/24 07:53
Total/NA	Analysis	8260D	DL	1	467421	BYM	EET SEA	08/07/24 17:53

Client Sample ID: PDI-07-SO-38.3-20240723

Date Collected: 07/23/24 10:17

Date Received: 07/26/24 12:15

_ab	Sample	ID:	580-142413-3	
	_		Matrix: Solid	

Lab Sample ID: 580-142413-3

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	466552	AUA	EET SEA	07/30/24 11:39

Client Sample ID: PDI-07-SO-38.3-20240723

Date Collected: 07/23/24 10:17

**Matrix: Solid** Date Received: 07/26/24 12:15 **Percent Solids: 91.5** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			466320	BYM	EET SEA	07/29/24 13:10
Total/NA	Analysis	8260D		1	466329	AC	EET SEA	07/29/24 16:44
Total/NA	Prep	5035	DL		467417	AC	EET SEA	08/07/24 07:53
Total/NA	Analysis	8260D	DL	1	467421	BYM	EET SEA	08/07/24 18:15

Client Sample ID: PDI-07-SO-39.5-20240723

Lab Sample ID: 580-142413-4 Date Collected: 07/23/24 10:19 **Matrix: Solid** Date Received: 07/26/24 12:15

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G			466558	AUA	EET SEA	07/30/24 12:38

**Eurofins Seattle** 

# Client: ERM-West

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-07-SO-39.5-20240723

Date Collected: 07/23/24 10:19 Date Received: 07/26/24 12:15 Lab Sample ID: 580-142413-4

Matrix: Solid Percent Solids: 82.4

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			466320	BYM	EET SEA	07/29/24 13:10
Total/NA	Analysis	8260D		1	466329	AC	EET SEA	07/29/24 17:05
Total/NA	Prep	5035	DL		467417	AC	EET SEA	08/07/24 07:53
Total/NA	Analysis	8260D	DL	1	467421	BYM	EET SEA	08/07/24 15:19

Client Sample ID: PDI-07-SO-41-20240723

Date Collected: 07/23/24 12:22 Date Received: 07/26/24 12:15 Lab Sample ID: 580-142413-5

**Matrix: Solid** 

l		Batch	Batch		Dilution	Batch			Prepared
	Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
	Total/NA	Analysis	2540G		1	466558	AUA	EET SEA	07/30/24 12:38

Client Sample ID: PDI-07-SO-41-20240723

Date Collected: 07/23/24 12:22 Date Received: 07/26/24 12:15 Lab Sample ID: 580-142413-5

Matrix: Solid
Percent Solids: 89.8

Batch Batch Dilution Batch **Prepared Prep Type** Method Number Analyst or Analyzed Type Run **Factor** Lab 07/29/24 13:10 Total/NA Prep 5035 466320 BYM EET SEA Total/NA Analysis 8260D 466329 AC **EET SEA** 07/29/24 17:27 467417 AC Total/NA Prep 5035 DL **EET SEA** 08/07/24 07:53 Total/NA Analysis 8260D DL 467421 BYM **EET SEA** 08/07/24 15:41

Client Sample ID: PDI-07-SO-45.5-20240723

Date Collected: 07/23/24 12:35

Date Received: 07/26/24 12:15

Lab	Sample	ID:	580-142413-6	
			Matrix: Solid	

Batch **Batch** Dilution Batch **Prepared Prep Type** Type Method Run Factor **Number Analyst** or Analyzed Lab 07/30/24 12:38 Total/NA Analysis 2540G 466558 AUA EET SEA

Client Sample ID: PDI-07-SO-45.5-20240723

Date Collected: 07/23/24 12:35 Date Received: 07/26/24 12:15 Lab Sample ID: 580-142413-6

Matrix: Solid Percent Solids: 78.3

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			466320	BYM	EET SEA	07/29/24 13:10
Total/NA	Analysis	8260D		1	466329	AC	EET SEA	07/29/24 17:48
Total/NA	Prep	5035	DL		467417	AC	EET SEA	08/07/24 07:53
Total/NA	Analysis	8260D	DL	1	467421	BYM	EET SEA	08/07/24 16:03

Client Sample ID: PDI-07-SO-52.7-20240723

Date Collected: 07/24/24 14:15 Date Received: 07/26/24 12:15 Lab Sample ID: 580-142413-7

Matrix: Solid

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	466558	AUA	EET SEA	07/30/24 12:38

**Eurofins Seattle** 

Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Client: ERM-West

Client Sample ID: PDI-07-SO-52.7-20240723

Date Collected: 07/24/24 14:15 Date Received: 07/26/24 12:15 Lab Sample ID: 580-142413-7

**Matrix: Solid** 

Percent Solids: 79.6

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			466320	BYM	EET SEA	07/29/24 13:10
Total/NA	Analysis	8260D		1	466329	AC	EET SEA	07/29/24 18:10
Total/NA	Prep	5035	DL		467417	AC	EET SEA	08/07/24 07:53
Total/NA	Analysis	8260D	DL	1	467421	BYM	EET SEA	08/07/24 16:25

Lab Sample ID: 580-142413-8 Client Sample ID: PDI-08-SO-35.8-20240724

Date Collected: 07/24/24 11:28 Date Received: 07/26/24 12:15 Matrix: Solid

l		Batch	Batch		Dilution	Batch			Prepared
	Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
	Total/NA	Analysis	2540G		1	466558	AUA	EET SEA	07/30/24 12:38

Client Sample ID: PDI-08-SO-35.8-20240724 Lab Sample ID: 580-142413-8 Date Collected: 07/24/24 11:28 **Matrix: Solid** Date Received: 07/26/24 12:15 Percent Solids: 86.7

_	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	RA		466866	AC	EET SEA	08/01/24 15:20
Total/NA	Analysis	8260D	RA	1	466867	AC	EET SEA	08/01/24 22:19
Total/NA	Prep	5035			466320	BYM	EET SEA	07/29/24 13:10
Total/NA	Analysis	8260D		1	466329	AC	EET SEA	07/29/24 19:58
Total/NA	Prep	5035	DL		467417	AC	EET SEA	08/07/24 07:53
Total/NA	Analysis	8260D	DL	1	467421	BYM	EET SEA	08/07/24 18:37

Client Sample ID: PDI-08-SO-38-20240724 Lab Sample ID: 580-142413-9

Date Collected: 07/24/24 12:15 Date Received: 07/26/24 12:15

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	466558	AUA	EET SEA	07/30/24 12:38

Client Sample ID: PDI-08-SO-38-20240724 Lab Sample ID: 580-142413-9

Date Collected: 07/24/24 12:15 **Matrix: Solid** Date Received: 07/26/24 12:15 Percent Solids: 86.1

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	RA		466866	AC	EET SEA	08/01/24 15:20
Total/NA	Analysis	8260D	RA	1	466867	AC	EET SEA	08/01/24 20:56
Total/NA	Prep	5035			466320	BYM	EET SEA	07/29/24 13:10
Total/NA	Analysis	8260D		1	466329	AC	EET SEA	07/29/24 18:31
Total/NA	Prep	5035	DL		467417	AC	EET SEA	08/07/24 07:53
Total/NA	Analysis	8260D	DL	1	467421	BYM	EET SEA	08/07/24 16:47

Matrix: Solid

Project/Site: Arkema PDI Sampling

Client: ERM-West

Client Sample ID: PDI-15-SO-38-20240725

Date Collected: 07/25/24 12:20

Lab Sample ID: 580-142413-10

**Matrix: Solid** 

Date Received: 07/26/24 12:15

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	466558	AUA	EET SEA	07/30/24 12:38

Client Sample ID: PDI-15-SO-38-20240725

Lab Sample ID: 580-142413-10 Date Collected: 07/25/24 12:20 **Matrix: Solid** 

Date Received: 07/26/24 12:15 Percent Solids: 83.9

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	<del></del>		466320	BYM	EET SEA	07/29/24 13:10
Total/NA	Analysis	8260D		1	466329	AC	EET SEA	07/29/24 20:19
Total/NA	Prep	5035	DL		467417	AC	EET SEA	08/07/24 07:53
Total/NA	Analysis	8260D	DL	1	467421	BYM	EET SEA	08/07/24 19:20

Client Sample ID: PDI-15-SO-38.5-20240725

Lab Sample ID: 580-142413-11 Date Collected: 07/25/24 12:35 **Matrix: Solid** 

Date Received: 07/26/24 12:15

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	466558	AUA	EET SEA	07/30/24 12:38

Client Sample ID: PDI-15-SO-38.5-20240725 Lab Sample ID: 580-142413-11

Date Collected: 07/25/24 12:35 **Matrix: Solid** Date Received: 07/26/24 12:15 Percent Solids: 83.1

_	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	RA		466866	AC	EET SEA	08/01/24 15:20
Total/NA	Analysis	8260D	RA	1	466867	AC	EET SEA	08/01/24 21:17
Total/NA	Prep	5035			466320	BYM	EET SEA	07/29/24 13:10
Total/NA	Analysis	8260D		1	466329	AC	EET SEA	07/29/24 18:52
Total/NA	Prep	5035	DL		467417	AC	EET SEA	08/07/24 07:53
Total/NA	Analysis	8260D	DL	1	467421	BYM	EET SEA	08/07/24 18:59

Client Sample ID: PDI-15-SO-48-20240725 Lab Sample ID: 580-142413-12

Date Collected: 07/25/24 14:35 **Matrix: Solid** 

Date Received: 07/26/24 12:15

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number A	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G			466558	AUA	EET SEA	07/30/24 12:38

Client Sample ID: PDI-15-SO-48-20240725 Lab Sample ID: 580-142413-12

Date Collected: 07/25/24 14:35 **Matrix: Solid** Date Received: 07/26/24 12:15 Percent Solids: 84.1

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	RA		466866	AC	EET SEA	08/01/24 15:20
Total/NA	Analysis	8260D	RA	1	466867	AC	EET SEA	08/01/24 21:38

**Eurofins Seattle** 

### **Lab Chronicle**

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-15-SO-48-20240725

Lab Sample ID: 580-142413-12 Date Collected: 07/25/24 14:35 Matrix: Solid Date Received: 07/26/24 12:15

Percent Solids: 84.1

Batch Batch Dilution Batch Prepared **Prep Type** Method Number Analyst or Analyzed Type Run **Factor** Lab Total/NA 5035 466320 BYM EET SEA 07/29/24 13:10 Prep Total/NA 8260D 466329 AC **EET SEA** 07/29/24 19:14 Analysis 1 Total/NA Prep 5035 DL 467417 AC **EET SEA** 08/07/24 07:53 Total/NA Analysis 8260D DL 467421 BYM **EET SEA** 08/07/24 17:09 1

Client Sample ID: PDI-15-SO-53-20240725

Lab Sample ID: 580-142413-13

**Matrix: Solid** 

Date Collected: 07/25/24 15:52 Date Received: 07/26/24 12:15

Batch Batch Dilution **Prepared** Batch Method or Analyzed **Prep Type** Run **Factor** Number Analyst Type Lab 07/30/24 12:39 Total/NA Analysis 2540G 466559 AUA **EET SEA** 

Client Sample ID: PDI-15-SO-53-20240725

Lab Sample ID: 580-142413-13 **Matrix: Solid** 

Percent Solids: 89.2

Date Collected: 07/25/24 15:52 Date Received: 07/26/24 12:15

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	RA		466866	AC	EET SEA	08/01/24 15:20
Total/NA	Analysis	8260D	RA	1	466867	AC	EET SEA	08/01/24 21:58
Total/NA	Prep	5035			466320	BYM	EET SEA	07/29/24 13:10
Total/NA	Analysis	8260D		1	466329	AC	EET SEA	07/29/24 19:36
Total/NA	Prep	5035	DL		467417	AC	EET SEA	08/07/24 07:53
Total/NA	Analysis	8260D	DL	1	467421	BYM	EET SEA	08/07/24 17:31

**Laboratory References:** 

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

# **Accreditation/Certification Summary**

Client: ERM-West Job ID: 580-142413-1

Project/Site: Arkema PDI Sampling

# **Laboratory: Eurofins Seattle**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Progra	am	Identification Number	<b>Expiration Date</b>
Oregon	NELAF	)	4167	07-07-25
-9				
The following analyte	s are included in this repo	rt, but the laboratory is r	not certified by the governing authori	ity. This list may inc
,	s are included in this repo does not offer certification	•	not certified by the governing authori	ity. This list may inc
,	•	•	not certified by the governing authori Analyte	ity. This list may inc

**Eurofins Seattle** 

8/9/2024

Page 47 of 53

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# **Sample Summary**

Client: ERM-West

580-142413-13

Project/Site: Arkema PDI Sampling

PDI-15-SO-53-20240725

Lab Sample ID **Client Sample ID** Matrix Collected Received 580-142413-1 TB-01-SO-20240723 07/23/24 00:01 07/26/24 12:15 Solid PDI-07-SO-36.5-20240723 580-142413-2 Solid 07/23/24 10:15 07/26/24 12:15 07/23/24 10:17 07/26/24 12:15 PDI-07-SO-38.3-20240723 580-142413-3 Solid 580-142413-4 PDI-07-SO-39.5-20240723 Solid 07/23/24 10:19 07/26/24 12:15 580-142413-5 PDI-07-SO-41-20240723 Solid 07/23/24 12:22 07/26/24 12:15 580-142413-6 PDI-07-SO-45.5-20240723 Solid 07/23/24 12:35 07/26/24 12:15 580-142413-7 PDI-07-SO-52.7-20240723 Solid 07/24/24 14:15 07/26/24 12:15 580-142413-8 PDI-08-SO-35.8-20240724 Solid 07/24/24 11:28 07/26/24 12:15 580-142413-9 PDI-08-SO-38-20240724 Solid 07/24/24 12:15 07/26/24 12:15 PDI-15-SO-38-20240725 Solid 07/25/24 12:20 07/26/24 12:15 580-142413-10 580-142413-11 PDI-15-SO-38.5-20240725 Solid 07/25/24 12:35 07/26/24 12:15 580-142413-12 PDI-15-SO-48-20240725 Solid 07/25/24 14:35 07/26/24 12:15

Solid

07/25/24 15:52 07/26/24 12:15

Job ID: 580-142413-1

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Chain of Custody Record

Special Instructions/Note: Ver: 04/02/2024 Months Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)

Return To Client Disposal By Lab Archive For Month COC No: 580-62781-19269.12 Preservation Codes: F - MeOH E - NaHSO4 A - HCL Page: Page of 12/2 Total Number of containers CB1 Date/Time lethod of Shipment: State of Origin: **Analysis Requested** 10 Cooler Temperature(s) °C and Other Remarks: Special Instructions/QC Requirements: Lab PM: Cruz, Sheri L E-Mail: Sheri,Cruz@et.eurofinsus.com Return To Client 8260D - Volatiles, standard list equipment blanks Received by: Received by: Perform MS/MSD (Yes of No) Field Filtered Sample (Yes or No) Company BT=Tissue, A=Air) Company (W=water, S=solid, O=waste/oll, Preservation Code: Matrix M (C=comp, G=grab) Radiological Due Date Requested: -2017 Avery Soplata Sample Type 5121 7,0000 Compliance Project: A Yes A No Date/Time: 120 122 Sample 07/25/4 1552 07/25/24/1435 Time 7/24/24 Date/Time: Date: Unknown AT Requested (days): Sample Date Phone: 901 PO #: 0732436.301 WO #: Project #: 58020754 SSOW#: Poison B POI-15-50-48-202407.85 Skin Irritant PP1-15-50-53-20240725 Deliverable Requested: I,∭III, IV, Other (specify) Custody Seal No.: Non-Hazard Flammable 050 SW 6th Avenue Suite 1650 Possible Hazard Identification Arkema - PDI Investigation Empty Kit Relinquished by: avery.soplata@erm.com Custody Seals Intact: △ Yes △ No Client Information Sample Identification Client Contact: Avery Soplata inquished by: inquished by: nquished by State, Zip: OR, 97204 **ERM-West** Portland

### **Eurofins Seattle**

5755 8th Street East Tacoma, WA 98424

# **Chain of Custody Record**



Environment Testing

hone (253) 922-2310				Lab F	264				<u> panennin romanu</u>	Т	Carrier Trac	king No/s	.1.		COC No:		
Client Information	Sampler:	y Sop	lata		-м: z, Sheri	L					Jamei mad	King No(s	·)·		580-62781-19	269.12	
lient Contact:				E-Ma		<u> </u>			_		State of Ori	gin:			Page: Page of <b>2</b>		
very Soplata	701-	-828-	PWSID:	Sne	ri.Cruz(	gjet.e	uronn	sus.cor	[]						Job#:		
ompany: RM-West			WOID.					Α	nalysi	is Req	uested						
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DR, 97204	Compliance Project	Ct: A res	Δ NO		4			t p									
hone:	0732436.301				6	Ĭ		md l									
mail:	WO #:				Z 5 6	MeC	=,	nbə									1/8
very.soplata@erm.com	Project #:				Sele	list	list	list						-	580-142413	Chain of Cust	tody
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Sample Identification	Sample Date	Time	G=grab)	BT=Tissue, A=Air	P Fig	8260D	8260D	8260D						Total	Special	Instructions/	/Note:
		$\searrow$		tion Code:		F	E /	Α						$\perp$ X			
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PDI-07-50-38.3-20240723	07/23/24	10:27	66	S		X								2			
POI-07-50-39.5-20240723	07/23/24	1	6	S		X								a			
PDI-07-SO-41-20240723	07/23/24	1222	6	S	Ш	X								1			
PDI-07-50-45.5-20240723	07/23/24	1235	G	S		X								2			
POI-87-50-52-7-20240723	07/23/24	1415	6	S		X								2			
PDI-08-50-35.8-20240724	07/24/24	1128	G	S		X								2	Dilute		
PDI-08-50-38-20240724	37/24/24	1	6	S		$\chi$								2			
POI-15-50-38-20240725	07/25/24		G	S		X								2	Diluti		
PDI-15-50-38,5-20240725	07/25/29		G	S		X								2			
Possible Hazard Identification					Sa					ay be a	ssessed	if samp	les are r	1	d longer thar		
Non-Hazard Flammable Skin Irritant P Deliverable Requested: I,(II) III, IV, Other (specify)	oison B 💆 Unkn	own 🗀	Radiological		ــــــــــــــــــــــــــــــــــــــ			To Clie		-AD	isposal B	y Lab		Archi	ve For	Months	
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PD+SCZL 4.6/4.8

### **Eurofins Seattle**

5755 8th Street East Tacoma, WA 98424

# **Chain of Custody Record**



Environment Testing

Phone (253) 922-2310							energy water to								0001:	-		
Client Information	Sampler: A PA	y Son	lata	E	z, Sher	iL					Carrier 1	racking N	lo(s):		COC No: 580-62781-		12	
ilient Contact: vvery Soplata	Phone: 901-0	328-	2017	E-Ma She	ail: eri.Cruz	:@et.e	urofin	nsus.co	om		State of	Origin:			Page: Page <b>2</b> of 2	2		
ompany: ERM-West	Charles and the control of the contr		PWSID:						Analys	is Red	queste	d			Job #:			
ddress: 050 SW 6th Avenue Suite 1650	Due Date Requeste	ed:	eet												Preservation F - MeOH E - NaHSO4	n Codes	:	
eity: Portland	TAT Requested (da	ays): Wll													A - HCL			
itate, Zip:	Compliance Project				41			blanks										
DR, 97204 hone:	PO #: 0732436.301							ment										
imail:	WO #:	atronici de superendante				t MeOH	3	list equipment						w				
very.soplata@erm.com	Project #: 58020754				(Yes	standard list								tainer				
krkema - PDI Investigation ite:	SSOW#:					stand	stand	standard						of contain	Other:			
			Samula	Matrix	red Si	atiles,	- Volatiles,	Volatiles,						per				
		0	Sample Type	(W=water,	orm N	8260D - Volatiles								N. I.				
Sample Identification	Sample Date	Sample Time	(C=comp, G=grab)	O=waste/oil, BT=Tissue, A=Air				8260D						Total	Spec	ial Inst	ructions/l	Note:
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Possible Hazard Identification					I Si	ample	Disn	osal (	A fee m	ay be a	assesse	ed if sa	mples are	e retain	ed longer th	nan 1 m	onth)	***************************************
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Pois	on B 🕏 Unkn	own $\Box_F$	Radiological			$\square_{R}$	eturn	To Cli	ent	$\varphi_{i}$	Disposa	l By Lai	, [		nive For		Months	
Deliverable Requested: I,(II) III, IV, Other (specify)					S	pecial	Instru	uctions	/QC Red	quireme								
Empty Kit Relinquished by:		Date:			Time						M	ethod of	Shipment:			1/2		
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2 103 A 140				Page	52 of	53										,	Ver: 04/02/	2024 8/9/

Client: ERM-West Job Number: 580-142413-1

Login Number: 142413 List Source: Eurofins Seattle

List Number: 1

Creator: Silva, Shawn 1

Creator: Silva, Snawn 1		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	Preservation labels on samples match COC
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

**Eurofins Seattle** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Avery Soplata ERM-West 1050 SW 6th Avenue Suite 1650 Portland, Oregon 97204

Generated 8/13/2024 5:38:42 PM

# **JOB DESCRIPTION**

Arkema PDI Sampling

# **JOB NUMBER**

580-142513-1

Eurofins Seattle 5755 8th Street East Tacoma WA 98424



# **Eurofins Seattle**

### **Job Notes**

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

### **Authorization**

Generated 8/13/2024 5:38:42 PM

Authorized for release by Sheri Cruz, Project Manager I Sheri.Cruz@et.eurofinsus.com (253)922-2310

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Client: ERM-West

Project/Site: Arkema PDI Sampling

Laboratory Job ID: 580-142513-1

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### **Case Narrative**

Client: ERM-West Job ID: 580-142513-1

Project: Arkema PDI Sampling

Job ID: 580-142513-1 Eurofins Seattle

# Job Narrative 580-142513-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these
  situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise
  specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

### Receipt

The samples were received on 7/30/2024 1:20 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.6°C.

#### GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-467012 recovered above the upper control limit for Dichlorodifluoromethane and 2,2-Dichloropropane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: RB-02-WQ-20240729 (580-142513-9), TB-02-WQ-20240729 (580-142513-10) and (CCVIS 580-467012/3).

Method 8260D: The LCS/LCSD associated with analytical batch 580-467012 was outside of control limits low for Methylene Chloride. No more volume remains for re-analysis, therefore, results are reported. The following samples are affected: TB-02-WQ-20240729 (580-142513-10), (LCS 580-467012/4) and (LCSD 580-467012/5)

Method 8260D: The method blank for preparation batch 580-467094 and analytical batch 580-467098 contained 1,2,3-Trichlorobenzene, Benzene, Chlorobenzene and Hexachlorobutadiene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8260D: Due to the high concentration of Chlorobenzene, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 580-467094 and analytical batch 580-467098 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-467098 recovered outside acceptance criteria, low biased, for Bromomethane. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analytes, the data are reported.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-467136 recovered above the upper control limit for Chloroethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: PDI-16-SO-44.6-20240726 (580-142513-4), DUP-02-SO-20240726 (580-142513-5), PDI-16-SO-39.5-20240726 (580-142513-6), PDI-16-SO-46-20240726 (580-142513-7), PDI-16-SO-52.5-20240726 (580-142513-8), PDI-17-SO-39-20240729 (580-142513-11), PDI-17-SO-33-20240729 (580-142513-13), PDI-17-SO-52.5-20240729 (580-142513-14) and (CCVIS 580-467136/3).

Method 8260D: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-467132 and analytical batch 580-467136 recovered outside control limits for the following analytes: Chloroethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-467248 recovered above the upper control limit for Methylene Chloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: RB-02-WQ-20240729 (580-142513-9) and (CCVIS 580-467248/3).

Method 8260D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 580-467248 recovered outside control limits for the following analytes: Methylene Chloride. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

**Eurofins Seattle** 

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### **Case Narrative**

Client: ERM-West Job ID: 580-142513-1

Project: Arkema PDI Sampling

### Job ID: 580-142513-1 (Continued)

**Eurofins Seattle** 

Method 8260D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 580-467132 and analytical batch 580-467136 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8260D: The following samples were provided to the laboratory with a significantly different initial weight than that required by the reference method: PDI-16-SO-46-20240726 (580-142513-7) and PDI-16-SO-52.5-20240726 (580-142513-8). Deviations in the weight by more than 20% may affect reporting limits and potentially method performance. The method specifies 10g. The amount provided was above this range.

Method 8260D: The following sample was provided to the laboratory with a significantly different initial weight than that required by the reference method: PDI-17-SO-52.5-20240729 (580-142513-14). Deviations in the weight by more than 20% may affect reporting limits and potentially method performance. The method specifies 10g. The amount provided was below this range.

Method 8260D: The following samples were diluted to bring the concentration of target analytes within the calibration range: PDI-16-SO-44.6-20240726 (580-142513-4), DUP-02-SO-20240726 (580-142513-5), PDI-16-SO-39.5-20240726 (580-142513-6), PDI-16-SO-46-20240726 (580-142513-7), PDI-16-SO-52.5-20240726 (580-142513-8), PDI-17-SO-39-20240729 (580-142513-11), PDI-17-SO-33-20240729 (580-142513-13), PDI-17-SO-52.5-20240729 (580-142513-14), PDI-17-SO-52.5-20240729 (580-142513-14], PDI-17-SO-

Method 8260D: The following sample was diluted to bring the concentration of target analytes within the calibration range: PDI-16-SO-39.5-20240726 (580-142513-6). Elevated reporting limits (RLs) are provided.

Method 8260D: The following sample was diluted to bring the concentration of target analytes within the calibration range: PDI-17-SO-33-20240729 (580-142513-13). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### GC/MS Semi VOA

Method 8270E: The continuing calibration verification (CCV) associated with batch 580-467450 recovered above the upper control limit for 2,4-Dinitrophenol, 4-Nitrophenol, Bis(2-ethylhexyl) phthalate, Di-n-octyl phthalate and Benzo[b]fluoranthene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: PDI-15-SO-38-20240725 (580-142513-12) and (CCVIS 580-467450/3).

Method 8270E: Internal standard responses were outside of acceptance limits for the following sample: PDI-15-SO-38-20240725 (580-142513-12). The sample(s) shows evidence of matrix interference. The low internal standard recovery for Perylene-d12 creates a high-bias for analytes associated with the internal standard. The affected samples are non-detect for the associated analytes, therefore, the data has been reported.

Method 8270E: Surrogate recovery for the following sample was outside control limits: PDI-15-SO-38-20240725 (580-142513-12). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8270E: The following sample was diluted to bring the concentration of target analytes within the calibration range: PDI-15-SO-38-20240725 (580-142513-12). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **General Chemistry**

Method Moisture: The sample duplicate (DUP) precision for analytical batch 580-467083 was outside control limits. Sample matrix interference is suspected.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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### **Definitions/Glossary**

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

### **Qualifiers**

0	~ /B	40	110	<b>^</b>
G	١١/اد	<b>IS</b>	V	JΑ

Qualifier

	·
*_	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.

B Compound was found in the blank and sample.F1 MS and/or MSD recovery exceeds control limits.

F2 MS/MSD RPD exceeds control limits

**Qualifier Description** 

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### GC/MS Semi VOA

Qualifier	Qualifier Description

\*3 ISTD response or retention time outside acceptable limits.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

S1- Surrogate recovery exceeds control limits, low biased.
 S1+ Surrogate recovery exceeds control limits, high biased.

#### **General Chemistry**

#### Qualifier Qualifier Description

F3 Duplicate RPD exceeds the control limit

### **Glossary**

Abbreviation	These commonly	/ used abbreviations ma	y or may not be	present in this report.
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Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery
CFL Contains Free Liquid
CFU Colony Forming Unit
CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent
POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Date Collected: 07/26/24 10:00 Matrix: Solid
Date Received: 07/30/24 13:20 Percent Solids: 90.2

Method: SW846 8260D	- Volatile Organic	Compounds	by GC/MS						
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050	mg/Kg	— <u></u>	08/02/24 11:41	08/03/24 00:11	1
1,1,1-Trichloroethane	ND		0.040	0.0046	mg/Kg	☼	08/02/24 11:41	08/03/24 00:11	1
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076	mg/Kg	☼	08/02/24 11:41	08/03/24 00:11	1
1,1,2-Trichloroethane	ND		0.020	0.0074	mg/Kg	₩	08/02/24 11:41	08/03/24 00:11	1
1,1-Dichloroethane	ND		0.040	0.0092	mg/Kg	₩	08/02/24 11:41	08/03/24 00:11	1
1,1-Dichloroethene	ND		0.040	0.012	mg/Kg	₩	08/02/24 11:41	08/03/24 00:11	1
1,1-Dichloropropene	ND		0.040	0.0053	mg/Kg	₩	08/02/24 11:41	08/03/24 00:11	1
1,2,3-Trichlorobenzene	0.075	JB	0.080		mg/Kg	₩	08/02/24 11:41	08/03/24 00:11	1
1,2,3-Trichloropropane	ND		0.040	0.012	mg/Kg	₩	08/02/24 11:41	08/03/24 00:11	1
1,2,4-Trichlorobenzene	ND		0.080	0.043	mg/Kg		08/02/24 11:41	08/03/24 00:11	1
1,2,4-Trimethylbenzene	ND		0.040	0.014	mg/Kg	₩	08/02/24 11:41	08/03/24 00:11	1
1,2-Dibromo-3-Chloropropane	ND		0.060		mg/Kg	☆	08/02/24 11:41	08/03/24 00:11	1
1,2-Dibromoethane	ND		0.020	0.0038			08/02/24 11:41	08/03/24 00:11	1
1,2-Dichlorobenzene	ND		0.040	0.0087		₩	08/02/24 11:41	08/03/24 00:11	1
1,2-Dichloroethane	ND		0.020	0.0055		₩	08/02/24 11:41	08/03/24 00:11	1
1,2-Dichloropropane	ND		0.020	0.0066			08/02/24 11:41	08/03/24 00:11	 1
1,3,5-Trimethylbenzene	ND		0.040	0.0076			08/02/24 11:41		1
1,3-Dichlorobenzene	ND		0.060		mg/Kg		08/02/24 11:41	08/03/24 00:11	1
1,3-Dichloropropane	ND		0.060	0.0056			08/02/24 11:41	08/03/24 00:11	· · · · · · · · · · · · · · · · · · ·
1,4-Dichlorobenzene	ND		0.060	0.011		**	08/02/24 11:41	08/03/24 00:11	1
2,2-Dichloropropane	ND		0.040		mg/Kg	γ. γ.	08/02/24 11:41	08/03/24 00:11	
2-Chlorotoluene	ND		0.040	0.0012		 	08/02/24 11:41	08/03/24 00:11	
4-Chlorotoluene	ND		0.040	0.0008		₩	08/02/24 11:41	08/03/24 00:11	1
4-Isopropyltoluene	ND ND		0.040		mg/Kg	~ ☆	08/02/24 11:41	08/03/24 00:11	1
Benzene	ND		0.040	0.0038		¥ 	08/02/24 11:41	08/03/24 00:11	
Bromobenzene	ND		0.020	0.0030		₩	08/02/24 11:41	08/03/24 00:11	1
Bromochloromethane	ND ND		0.040			**	08/02/24 11:41	08/03/24 00:11	1
Bromodichloromethane				0.0062 0.0055		127			1
	ND ND		0.040			;;; ∴	08/02/24 11:41		-
Bromoform Bromomethane	ND ND		0.040	0.0045		<b>☆</b>	08/02/24 11:41		1
			0.10		mg/Kg	· · · · · · · · · · · · · · · · · · ·	08/02/24 11:41		1
Carbon tetrachloride	0.020		0.020	0.0044		₩.	08/02/24 11:41		1
Chlorobenzene	0.028		0.040	0.0048		₩.	08/02/24 11:41	08/03/24 00:11	1
Chloroform	0.011	. <b>.</b>	0.020	0.0042			08/02/24 11:41	08/03/24 00:11	
Chloromethane	ND		0.060		mg/Kg	<b>\$</b>	08/02/24 11:41	08/03/24 00:11	1
cis-1,2-Dichloroethene	ND		0.060		mg/Kg	₽	08/02/24 11:41		1
cis-1,3-Dichloropropene	ND		0.020	0.0040		<u>.</u> .	08/02/24 11:41	08/03/24 00:11	1
Dibromochloromethane	ND		0.020	0.0049		☼	08/02/24 11:41		1
Dibromomethane	ND		0.040	0.0074	0 0	☼	08/02/24 11:41		1
Dichlorodifluoromethane	ND		0.25		mg/Kg	<del>.</del>	08/02/24 11:41	08/03/24 00:11	1
Ethylbenzene	0.018		0.040	0.0091		₩	08/02/24 11:41	08/03/24 00:11	1
Hexachlorobutadiene	0.038	JB	0.10		mg/Kg	₩	08/02/24 11:41	08/03/24 00:11	1
Isopropylbenzene	ND		0.040	0.0086		<del>.</del>	08/02/24 11:41	08/03/24 00:11	1
Methyl tert-butyl ether	ND		0.040	0.0060		₩	08/02/24 11:41	08/03/24 00:11	1
Methylene Chloride	ND		0.25		mg/Kg	₩	08/02/24 11:41	08/03/24 00:11	1
m-Xylene & p-Xylene	0.11		0.040	0.0071		☼	08/02/24 11:41	08/03/24 00:11	1
Naphthalene	0.041	J	0.15	0.039	mg/Kg	₩	08/02/24 11:41	08/03/24 00:11	1
n-Butylbenzene	ND		0.040	0.019	mg/Kg	☼	08/02/24 11:41	08/03/24 00:11	1
N-Propylbenzene	ND		0.040	0.015	mg/Kg	₩	08/02/24 11:41	08/03/24 00:11	1
o-Xylene	0.025	J	0.040	0.0050	mg/Kg	₽	08/02/24 11:41	08/03/24 00:11	1

**Eurofins Seattle** 

8/13/2024

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-16-SO-23-20240726 Lab Sample ID: 580-142513-1

Date Collected: 07/26/24 10:00 **Matrix: Solid** Date Received: 07/30/24 13:20 Percent Solids: 90.2

Method: SW846 8260D - Vo	olatile Organic	Compound	ds by GC/MS	(Conti	nued)				
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg	<u></u>	08/02/24 11:41	08/03/24 00:11	1
Styrene	ND		0.040	0.013	mg/Kg	₩	08/02/24 11:41	08/03/24 00:11	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg	₽	08/02/24 11:41	08/03/24 00:11	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg	₩	08/02/24 11:41	08/03/24 00:11	1
Toluene	ND		0.060	0.014	mg/Kg	≎	08/02/24 11:41	08/03/24 00:11	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg	₩	08/02/24 11:41	08/03/24 00:11	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg	≎	08/02/24 11:41	08/03/24 00:11	1
Trichloroethene	ND		0.040	0.010	mg/Kg	≎	08/02/24 11:41	08/03/24 00:11	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg	₩	08/02/24 11:41	08/03/24 00:11	1
Vinyl chloride	ND		0.10	0.019	mg/Kg	₩	08/02/24 11:41	08/03/24 00:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				08/02/24 11:41	08/03/24 00:11	1
4-Bromofluorobenzene (Surr)	99		80 - 120				08/02/24 11:41	08/03/24 00:11	1
Dibromofluoromethane (Surr)	101		80 - 120				08/02/24 11:41	08/03/24 00:11	1
Toluene-d8 (Surr)	99		80 - 120				08/02/24 11:41	08/03/24 00:11	1
- Method: SW846 8260D - Vo	olatile Organic	Compoun	ds by GC/MS	- RA					
Analyte	_	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		0.080	0.021	mg/Kg	☆	08/07/24 07:53	08/07/24 14:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		0.080	0.021	mg/Kg	<del>*</del>	08/07/24 07:53	08/07/24 14:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				08/07/24 07:53	08/07/24 14:36	1
4-Bromofluorobenzene (Surr)	97		80 - 120				08/07/24 07:53	08/07/24 14:36	1
Dibromofluoromethane (Surr)	99		80 - 120				08/07/24 07:53	08/07/24 14:36	1
Toluene-d8 (Surr)	100		80 - 120				08/07/24 07:53	08/07/24 14:36	1

General Chemistry							
Analyte	Result Qualifier	RL	RL Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	90.2	0.1	0.1 %			08/03/24 16:25	1
Percent Moisture (SM22 2540G)	9.8	0.1	0.1 %			08/03/24 16:25	1

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

**Client Sample ID: TB-01-SO-20240726** 

Lab Sample ID: 580-142513-2 Date Collected: 07/26/24 00:01 **Matrix: Solid** 

Date Received: 07/30/24 13:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050	mg/Kg		08/02/24 11:41	08/02/24 22:23	
1,1,1-Trichloroethane	ND		0.040	0.0046	mg/Kg		08/02/24 11:41	08/02/24 22:23	
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076	mg/Kg		08/02/24 11:41	08/02/24 22:23	
1,1,2-Trichloroethane	ND		0.020	0.0074	mg/Kg		08/02/24 11:41	08/02/24 22:23	
1,1-Dichloroethane	ND		0.040	0.0092	mg/Kg		08/02/24 11:41	08/02/24 22:23	
1,1-Dichloroethene	ND		0.040	0.012	mg/Kg		08/02/24 11:41	08/02/24 22:23	
1,1-Dichloropropene	ND		0.040	0.0053	mg/Kg		08/02/24 11:41	08/02/24 22:23	
1,2,3-Trichlorobenzene	ND		0.080	0.040	mg/Kg		08/02/24 11:41	08/02/24 22:23	
1,2,3-Trichloropropane	ND		0.040	0.012	mg/Kg		08/02/24 11:41	08/02/24 22:23	
1,2,4-Trichlorobenzene	ND		0.080		mg/Kg		08/02/24 11:41	08/02/24 22:23	
1,2,4-Trimethylbenzene	ND		0.040		mg/Kg		08/02/24 11:41	08/02/24 22:23	
1,2-Dibromo-3-Chloropropane	ND		0.060		mg/Kg		08/02/24 11:41	08/02/24 22:23	
1,2-Dibromoethane	ND		0.020	0.0038			08/02/24 11:41	08/02/24 22:23	
1,2-Dichlorobenzene	ND		0.020	0.0087			08/02/24 11:41	08/02/24 22:23	
1,2-Dichloroethane	ND		0.020	0.0055			08/02/24 11:41	08/02/24 22:23	
1,2-Dichloropropane	ND		0.020	0.0066			08/02/24 11:41		
1,3,5-Trimethylbenzene	ND		0.020	0.0076			08/02/24 11:41	08/02/24 22:23	
1,3-Dichlorobenzene	ND ND		0.040		mg/Kg		08/02/24 11:41	08/02/24 22:23	
1,3-Dichloropropane	ND		0.060	0.0056			08/02/24 11:41	08/02/24 22:23	
1,4-Dichlorobenzene	ND		0.060	0.011	mg/Kg		08/02/24 11:41	08/02/24 22:23	
2,2-Dichloropropane	ND		0.040		mg/Kg		08/02/24 11:41	08/02/24 22:23	
2-Chlorotoluene	ND		0.040	0.0088			08/02/24 11:41	08/02/24 22:23	
4-Chlorotoluene	ND		0.040	0.0098			08/02/24 11:41	08/02/24 22:23	
4-Isopropyltoluene	ND		0.040		mg/Kg		08/02/24 11:41	08/02/24 22:23	
Benzene	0.0058	JB	0.020	0.0038				08/02/24 22:23	
Bromobenzene	ND		0.040	0.0042			08/02/24 11:41	08/02/24 22:23	
Bromochloromethane	ND		0.040	0.0062			08/02/24 11:41	08/02/24 22:23	
Bromodichloromethane	ND		0.040	0.0055			08/02/24 11:41	08/02/24 22:23	
Bromoform	ND		0.040	0.0045			08/02/24 11:41	08/02/24 22:23	
Bromomethane	ND		0.10		mg/Kg		08/02/24 11:41	08/02/24 22:23	
Carbon tetrachloride	0.15		0.020	0.0044	mg/Kg		08/02/24 11:41	08/02/24 22:23	
Chlorobenzene	0.033	JB	0.040	0.0048	mg/Kg		08/02/24 11:41	08/02/24 22:23	
Chloroform	0.029		0.020	0.0042	mg/Kg		08/02/24 11:41	08/02/24 22:23	
Chloromethane	ND		0.060	0.010	mg/Kg		08/02/24 11:41	08/02/24 22:23	
cis-1,2-Dichloroethene	ND		0.060	0.013	mg/Kg		08/02/24 11:41	08/02/24 22:23	
cis-1,3-Dichloropropene	ND		0.020	0.0040	mg/Kg		08/02/24 11:41	08/02/24 22:23	
Dibromochloromethane	ND		0.020	0.0049	mg/Kg		08/02/24 11:41	08/02/24 22:23	
Dibromomethane	ND		0.040	0.0074	mg/Kg		08/02/24 11:41	08/02/24 22:23	
Dichlorodifluoromethane	ND		0.25	0.046	mg/Kg		08/02/24 11:41	08/02/24 22:23	
Ethylbenzene	ND		0.040	0.0091			08/02/24 11:41	08/02/24 22:23	
Hexachlorobutadiene	ND		0.10		mg/Kg		08/02/24 11:41	08/02/24 22:23	
Isopropylbenzene	ND		0.040	0.0086			08/02/24 11:41	08/02/24 22:23	
Methyl tert-butyl ether	ND		0.040	0.0060			08/02/24 11:41	08/02/24 22:23	
Methylene Chloride	ND		0.25		mg/Kg		08/02/24 11:41	08/02/24 22:23	
m-Xylene & p-Xylene	ND		0.040	0.0071	mg/Kg		08/02/24 11:41	08/02/24 22:23	
Naphthalene	ND		0.15		mg/Kg		08/02/24 11:41	08/02/24 22:23	
napritrialerie n-Butylbenzene	ND ND		0.13		mg/Kg		08/02/24 11:41	08/02/24 22:23	
•									
N-Propylbenzene o-Xylene	ND ND		0.040	0.015	mg/Kg		08/02/24 11:41 08/02/24 11:41	08/02/24 22:23 08/02/24 22:23	

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

**Client Sample ID: TB-01-SO-20240726** 

Date Collected: 07/26/24 00:01

Date Received: 07/30/24 13:20

Lab Sample ID: 580-142513-2 **Matrix: Solid** 

Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	(Conti	nued)				
Analyte	_	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		08/02/24 11:41	08/02/24 22:23	1
Styrene	ND		0.040	0.013	mg/Kg		08/02/24 11:41	08/02/24 22:23	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		08/02/24 11:41	08/02/24 22:23	1
Tetrachloroethene	0.013	J	0.040	0.0053	mg/Kg		08/02/24 11:41	08/02/24 22:23	1
Toluene	ND		0.060	0.014	mg/Kg		08/02/24 11:41	08/02/24 22:23	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		08/02/24 11:41	08/02/24 22:23	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		08/02/24 11:41	08/02/24 22:23	1
Trichloroethene	ND		0.040	0.010	mg/Kg		08/02/24 11:41	08/02/24 22:23	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		08/02/24 11:41	08/02/24 22:23	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		08/02/24 11:41	08/02/24 22:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				08/02/24 11:41	08/02/24 22:23	1
4-Bromofluorobenzene (Surr)	100		80 - 120				08/02/24 11:41	08/02/24 22:23	1
Dibromofluoromethane (Surr)	100		80 - 120				08/02/24 11:41	08/02/24 22:23	1
Toluene-d8 (Surr)	100		80 - 120				08/02/24 11:41	08/02/24 22:23	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		0.080	0.021	mg/Kg		08/07/24 07:53	08/07/24 14:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		80 - 121				08/07/24 07:53	08/07/24 14:15	1
4-Bromofluorobenzene (Surr)	98		80 - 120				08/07/24 07:53	08/07/24 14:15	1
Dibromofluoromethane (Surr)	101		80 - 120				08/07/24 07:53	08/07/24 14:15	1
Toluene-d8 (Surr)	100		80 - 120				08/07/24 07:53	08/07/24 14:15	1

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Method: SW846 8260D - Vola	_	-	•						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND		0.020	0.0049	mg/Kg	☆	08/02/24 11:41	08/03/24 00:33	
1,1,1-Trichloroethane	ND		0.039	0.0045	mg/Kg	☼	08/02/24 11:41	08/03/24 00:33	
1,1,2,2-Tetrachloroethane	ND		0.020	0.0074	mg/Kg	☼	08/02/24 11:41	08/03/24 00:33	
1,1,2-Trichloroethane	ND		0.020	0.0072	mg/Kg	₩	08/02/24 11:41	08/03/24 00:33	
1,1-Dichloroethane	ND		0.039	0.0090	mg/Kg	₩	08/02/24 11:41	08/03/24 00:33	
1,1-Dichloroethene	ND		0.039	0.012	mg/Kg	₩	08/02/24 11:41	08/03/24 00:33	
1,1-Dichloropropene	ND		0.039	0.0052	mg/Kg	₩	08/02/24 11:41	08/03/24 00:33	
1,2,3-Trichlorobenzene	ND		0.078	0.039	mg/Kg	₩	08/02/24 11:41	08/03/24 00:33	
1,2,3-Trichloropropane	ND		0.039	0.011	mg/Kg	₩	08/02/24 11:41	08/03/24 00:33	
1,2,4-Trichlorobenzene	ND		0.078	0.042	mg/Kg	₽	08/02/24 11:41	08/03/24 00:33	
1,2,4-Trimethylbenzene	ND		0.039	0.013	mg/Kg	₩	08/02/24 11:41	08/03/24 00:33	
1,2-Dibromo-3-Chloropropane	ND		0.059	0.015	mg/Kg	₩	08/02/24 11:41	08/03/24 00:33	
1,2-Dibromoethane	ND		0.020	0.0037	mg/Kg	₩	08/02/24 11:41	08/03/24 00:33	
1,2-Dichlorobenzene	0.016	J	0.039	0.0085	mg/Kg	₩	08/02/24 11:41	08/03/24 00:33	
1,2-Dichloroethane	ND		0.020	0.0054	0 0	₩	08/02/24 11:41	08/03/24 00:33	
1,2-Dichloropropane	ND		0.020	0.0065		₩	08/02/24 11:41	08/03/24 00:33	
1,3,5-Trimethylbenzene	ND		0.039	0.0074	0 0	₩	08/02/24 11:41	08/03/24 00:33	
1,3-Dichlorobenzene	ND		0.059		mg/Kg	₩		08/03/24 00:33	
1,3-Dichloropropane	ND		0.059	0.0055		∷. ∰		08/03/24 00:33	
1,4-Dichlorobenzene	0.048	4	0.059		mg/Kg		08/02/24 11:41		
2,2-Dichloropropane	ND.		0.039		mg/Kg	₩.	08/02/24 11:41		
2-Chlorotoluene	ND		0.039	0.0086				08/03/24 00:33	
4-Chlorotoluene	ND		0.039	0.0096		₩.		08/03/24 00:33	
4-Isopropyltoluene	ND		0.039		mg/Kg	₩	08/02/24 11:41		
Benzene	0.0048	 ЈВ	0.039	0.0037				08/03/24 00:33	
Bromobenzene	0.0046 ND	JB	0.020	0.0037	mg/Kg	₩	08/02/24 11:41		
Bromochloromethane	ND ND		0.039		0 0		08/02/24 11:41		
Bromodichloromethane						· · <del>*</del>			
	ND		0.039	0.0054	0 0	φ.		08/03/24 00:33	
Bromoform	ND		0.039	0.0044		₩.		08/03/24 00:33	
Bromomethane	ND		0.098		mg/Kg	<del></del>		08/03/24 00:33	
Carbon tetrachloride	ND	_	0.020	0.0043		<b>*</b>		08/03/24 00:33	
Chlorobenzene	6.4	В	0.039	0.0047	0 0	<b>*</b>		08/03/24 00:33	
Chloroform	0.039		0.020	0.0041		<del>.</del> .		08/03/24 00:33	
Chloromethane	ND		0.059	0.0099	0 0	☼		08/03/24 00:33	
cis-1,2-Dichloroethene	ND		0.059		mg/Kg	₩	08/02/24 11:41		
cis-1,3-Dichloropropene	ND		0.020	0.0039			08/02/24 11:41		
Dibromochloromethane	ND		0.020	0.0048		₩	08/02/24 11:41		
Dibromomethane	ND		0.039	0.0072		₩		08/03/24 00:33	
Dichlorodifluoromethane	ND		0.24	0.045	mg/Kg	₩	08/02/24 11:41	08/03/24 00:33	
Ethylbenzene	0.010	J	0.039	0.0089	mg/Kg	₩	08/02/24 11:41	08/03/24 00:33	
Hexachlorobutadiene	ND		0.098		mg/Kg	₩	08/02/24 11:41	08/03/24 00:33	
Isopropylbenzene	ND		0.039	0.0084	mg/Kg	₩	08/02/24 11:41	08/03/24 00:33	
Methyl tert-butyl ether	ND		0.039	0.0059	mg/Kg	₩	08/02/24 11:41	08/03/24 00:33	
Methylene Chloride	ND		0.24	0.025	mg/Kg	☼	08/02/24 11:41	08/03/24 00:33	
m-Xylene & p-Xylene	0.068		0.039	0.0069	mg/Kg	₩	08/02/24 11:41	08/03/24 00:33	
Naphthalene	ND		0.15	0.038	mg/Kg	₩	08/02/24 11:41	08/03/24 00:33	
n-Butylbenzene	ND		0.039	0.018	mg/Kg	₩	08/02/24 11:41	08/03/24 00:33	
N-Propylbenzene	ND		0.039	0.015	mg/Kg	₽	08/02/24 11:41	08/03/24 00:33	
o-Xylene	0.014		0.039	0.0049		₩	08/02/24 11:41	08/03/24 00:33	

**Eurofins Seattle** 

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10

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Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Percent Solids (SM22 2540G)

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-16-SO-37.7-20240726

94.7

**5.4** 

Lab Sample ID: 580-142513-3 Date Collected: 07/26/24 11:00 **Matrix: Solid** Date Received: 07/30/24 13:20 Percent Solids: 94.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.039	0.0084	mg/Kg	— <u></u>	08/02/24 11:41	08/03/24 00:33	
Styrene	ND		0.039	0.012	mg/Kg	☼	08/02/24 11:41	08/03/24 00:33	1
t-Butylbenzene	ND		0.039	0.0075	mg/Kg		08/02/24 11:41	08/03/24 00:33	1
Tetrachloroethene	0.011	J	0.039	0.0052	mg/Kg	₩	08/02/24 11:41	08/03/24 00:33	1
Toluene	ND		0.059	0.013	mg/Kg	☼	08/02/24 11:41	08/03/24 00:33	1
trans-1,2-Dichloroethene	ND		0.059	0.014	mg/Kg	₩	08/02/24 11:41	08/03/24 00:33	1
trans-1,3-Dichloropropene	ND		0.039	0.0068	mg/Kg	☼	08/02/24 11:41	08/03/24 00:33	1
Trichloroethene	ND		0.039	0.010	mg/Kg	☼	08/02/24 11:41	08/03/24 00:33	1
Trichlorofluoromethane	ND		0.078	0.025	mg/Kg	₩	08/02/24 11:41	08/03/24 00:33	1
Vinyl chloride	ND		0.098	0.018	mg/Kg	₩	08/02/24 11:41	08/03/24 00:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				08/02/24 11:41	08/03/24 00:33	-
4-Bromofluorobenzene (Surr)	97		80 - 120				08/02/24 11:41	08/03/24 00:33	1
Dibromofluoromethane (Surr)	101		80 - 120				08/02/24 11:41	08/03/24 00:33	1
Toluene-d8 (Surr)	97		80 - 120				08/02/24 11:41	08/03/24 00:33	
Method: SW846 8260D - Vo	olatile Organic	Compound	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		0.078	0.020	mg/Kg	₩	08/07/24 07:53	08/07/24 14:58	,
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				08/07/24 07:53	08/07/24 14:58	
4-Bromofluorobenzene (Surr)	99		80 - 120				08/07/24 07:53	08/07/24 14:58	
Dibromofluoromethane (Surr)	102		80 - 120				08/07/24 07:53	08/07/24 14:58	
Toluene-d8 (Surr)	99		80 - 120				08/07/24 07:53	08/07/24 14:58	
General Chemistry									
Analyte		Qualifier	RL	ъ.	Unit	D	Prepared	Analyzed	Dil Fac

0.1

0.1

0.1 %

0.1 %

8/13/2024

08/03/24 16:25

08/03/24 16:25

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-16-SO-44.6-20240726

Lab Sample ID: 580-142513-4 Date Collected: 07/26/24 12:30 Matrix: Solid Date Received: 07/30/24 13:20 Percent Solids: 95.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed mg/Kg 1,1,1,2-Tetrachloroethane ND 0.020 0.0049 08/02/24 11:41 08/03/24 00:54 0.039 ND 1.1.1-Trichloroethane 0.0045 mg/Kg 08/02/24 11:41 08/03/24 00:54 1,1,2,2-Tetrachloroethane ND 0.020 0.0075 mg/Kg 08/02/24 11:41 08/03/24 00:54 ND 0.0073 1,1,2-Trichloroethane 0.020 mg/Kg 08/02/24 11:41 08/03/24 00:54 0.0090 mg/Kg 08/02/24 11:41 08/03/24 00:54 1.1-Dichloroethane ND 0.039 1,1-Dichloroethene ND 0.039 0.012 mg/Kg 08/02/24 11:41 08/03/24 00:54 1,1-Dichloropropene ND 0.039 0.0052 08/02/24 11:41 08/03/24 00:54 mg/Kg ND 0.078 0.039 08/02/24 11:41 08/03/24 00:54 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.039 0.011 mg/Kg 08/02/24 11:41 08/03/24 00:54 1,2,4-Trichlorobenzene ND 0.078 0.042 mg/Kg 08/02/24 11:41 08/03/24 00:54 1,2,4-Trimethylbenzene ND 0.039 0.013 mg/Kg 08/02/24 11:41 08/03/24 00:54 mg/Kg 1.2-Dibromo-3-Chloropropane ND 0.059 0.015 08/02/24 11:41 08/03/24 00:54 1 1,2-Dibromoethane ND 0.020 0.0037 mg/Kg 08/02/24 11:41 08/03/24 00:54 1,2-Dichlorobenzene ND 0.039 0.0085 mg/Kg 08/02/24 11:41 08/03/24 00:54 ND 0.020 0.0054 mg/Kg 08/02/24 11:41 08/03/24 00:54 1.2-Dichloroethane 1,2-Dichloropropane NΩ 0.020 0.0065 mg/Kg 08/02/24 11:41 08/03/24 00:54 ND 0.0075 1,3,5-Trimethylbenzene 0.039 mg/Kg 08/02/24 11:41 08/03/24 00:54 1,3-Dichlorobenzene ND 0.059 0.013 mg/Kg 08/02/24 11:41 08/03/24 00:54 0.0055 1,3-Dichloropropane NΩ 0.059 mg/Kg 08/02/24 11:41 08/03/24 00:54 mg/Kg 1,4-Dichlorobenzene 0.027 0.059 0.011 08/02/24 11:41 08/03/24 00:54 2,2-Dichloropropane ND 0.039 0.012 mg/Kg ÷ 08/02/24 11:41 08/03/24 00:54 2-Chlorotoluene ND 0.039 0.0086 mg/Kg 08/02/24 11:41 08/03/24 00:54 4-Chlorotoluene ND 0.0096 mg/Kg 08/02/24 11:41 08/03/24 00:54 0.039 4-Isopropyltoluene ND 0.039 0.010 mg/Kg 08/02/24 11:41 08/03/24 00:54 0.0058 0.020 0.0037 mg/Kg 08/02/24 11:41 08/03/24 00:54 Benzene J<sub>B</sub> 0.0041 Bromobenzene ND 0.039 mg/Kg 08/02/24 11:41 08/03/24 00:54 Bromochloromethane ND 0.039 0.0061 mg/Kg 08/02/24 11:41 08/03/24 00:54 Bromodichloromethane 0.0054 ND 0.039 mg/Kg 08/02/24 11:41 08/03/24 00:54 0.0044 Bromoform ND 0.039 mg/Kg 08/02/24 11:41 08/03/24 00:54 ND 0.037 Bromomethane 0.098 mg/Kg 08/02/24 11:41 08/03/24 00:54 Carbon tetrachloride ND 0.020 0.0043 mg/Kg 08/02/24 11:41 08/03/24 00:54 Chloroform ND 0.020 0.0041 mg/Kg 08/02/24 11:41 08/03/24 00:54 mg/Kg Chloromethane ND 0.059 0.0099 08/02/24 11:41 08/03/24 00:54 0.012 cis-1.2-Dichloroethene ND 08/03/24 00:54 0.059 mg/Kg 08/02/24 11:41 cis-1,3-Dichloropropene ND 0.020 0.0039 mg/Kg 08/02/24 11:41 08/03/24 00:54 Dibromochloromethane ND 0.020 0.0048 mg/Kg 08/02/24 11:41 08/03/24 00:54 Dibromomethane ND 0.039 0.0073 mg/Kg 08/02/24 11:41 08/03/24 00:54 Dichlorodifluoromethane ND 0.25 0.045 mg/Kg 08/02/24 11:41 08/03/24 00:54 ND 0.0089 mg/Kg Ethylbenzene 0.039 Ö 08/02/24 11:41 08/03/24 00:54 Hexachlorobutadiene ND 0.098 0.023 mg/Kg 08/02/24 11:41 08/03/24 00:54 Isopropylbenzene ND 0.039 0.0084 mg/Kg 08/02/24 11:41 08/03/24 00:54 Methyl tert-butyl ether ND 0.039 0.0059 mg/Kg 08/02/24 11:41 08/03/24 00:54 ND 0.025 08/03/24 00:54 Methylene Chloride 0.25 mg/Kg 08/02/24 11:41 m-Xylene & p-Xylene 0.039 0.0070 08/02/24 11:41 08/03/24 00:54 ND mg/Kg Naphthalene ND 0.15 0.038 mg/Kg 08/02/24 11:41 08/03/24 00:54 n-Butylbenzene ND 0.039 0.018 mg/Kg 08/02/24 11:41 08/03/24 00:54 N-Propylbenzene ND 08/03/24 00:54 0.039 0.015 mg/Kg 08/02/24 11:41 o-Xylene ND 0.039 0.0049 mg/Kg ₩ 08/02/24 11:41 08/03/24 00:54 sec-Butylbenzene ND 0.039 0.0084 mg/Kg 08/02/24 11:41 08/03/24 00:54

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-16-SO-44.6-20240726

Date Collected: 07/26/24 12:30

**Matrix: Solid** Date Received: 07/30/24 13:20 Percent Solids: 95.2

Method: SW846 8260D - Vola Analyte	_	Qualifier	RL		i <mark>nued)</mark> Unit	D	Prepared	Analyzed	Dil Fac
Styrene	- ND	- Guuiiiici	0.039		mg/Kg	— <u>-</u>	08/02/24 11:41	08/03/24 00:54	1
t-Butylbenzene	ND		0.039	0.0075	0 0	Ť Ŭ	08/02/24 11:41	08/03/24 00:54	1
Tetrachloroethene	ND		0.039	0.0052		T.	08/02/24 11:41	08/03/24 00:54	
Toluene	ND		0.059		mg/Kg	Ť	08/02/24 11:41	08/03/24 00:54	
trans-1,2-Dichloroethene	ND		0.059		mg/Kg	Tr.	08/02/24 11:41	08/03/24 00:54	
trans-1,3-Dichloropropene	ND		0.039	0.0069		T #	08/02/24 11:41	08/03/24 00:54	
Trichloroethene	ND		0.039		mg/Kg	Ť	08/02/24 11:41	08/03/24 00:54	
Trichlorofluoromethane	ND		0.078		mg/Kg	Ť	08/02/24 11:41	08/03/24 00:54	1
Vinyl chloride	ND		0.098		mg/Kg		08/02/24 11:41		· · · · · · · · · · · · · · · · · · ·
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				08/02/24 11:41	08/03/24 00:54	
4-Bromofluorobenzene (Surr)	99		80 - 120				08/02/24 11:41	08/03/24 00:54	1
Dibromofluoromethane (Surr)	101		80 - 120				08/02/24 11:41	08/03/24 00:54	1
Toluene-d8 (Surr)	98		80 - 120				08/02/24 11:41	08/03/24 00:54	1
Method: SW846 8260D - Vol	atile Organic	Compoun	ds by GC/MS	- DL					
Analyte	•	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	40		0.42	0.051	mg/Kg	<u></u>	08/05/24 00:16	08/05/24 13:55	1
Chloroethane	ND	*+	0.84	0.22	mg/Kg	₩	08/05/24 00:16	08/05/24 13:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 121				08/05/24 00:16	08/05/24 13:55	
4-Bromofluorobenzene (Surr)	101		80 - 120				08/05/24 00:16	08/05/24 13:55	1
Dibromofluoromethane (Surr)	105		80 - 120				08/05/24 00:16	08/05/24 13:55	1
Toluene-d8 (Surr)	97		80 - 120				08/05/24 00:16	08/05/24 13:55	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	95.3		0.1	0.1	%			08/03/24 16:25	1

0.1

4.8

0.1 %

08/03/24 16:25

Lab Sample ID: 580-142513-4

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Client Sample ID: DUP-02-SO-20240726

Lab Sample ID: 580-142513-5 Date Collected: 07/26/24 12:40 **Matrix: Solid** Date Received: 07/30/24 13:20 Percent Solids: 92.2

Method: SW846 8260D - Vola	_	•	•		1114	_	B	A	D.: -
Analyte		Qualifier	RL _	MDL		D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND		0.021	0.0053	mg/Kg	₽	08/02/24 11:41	08/03/24 01:16	
1,1,1-Trichloroethane	ND		0.043	0.0049	mg/Kg	₽	08/02/24 11:41	08/03/24 01:16	
1,1,2,2-Tetrachloroethane	ND		0.021	0.0081	mg/Kg	<del>.</del>	08/02/24 11:41	08/03/24 01:16	
1,1,2-Trichloroethane	ND		0.021	0.0079		₩	08/02/24 11:41	08/03/24 01:16	
1,1-Dichloroethane	ND		0.043	0.0098	mg/Kg	₩	08/02/24 11:41	08/03/24 01:16	
1,1-Dichloroethene	ND		0.043		mg/Kg		08/02/24 11:41	08/03/24 01:16	
1,1-Dichloropropene	ND		0.043	0.0056		☼	08/02/24 11:41	08/03/24 01:16	
1,2,3-Trichlorobenzene	ND		0.085	0.042	mg/Kg	₩	08/02/24 11:41	08/03/24 01:16	
1,2,3-Trichloropropane	ND		0.043	0.012	mg/Kg	₩	08/02/24 11:41	08/03/24 01:16	
1,2,4-Trichlorobenzene	ND		0.085	0.045	mg/Kg	☼	08/02/24 11:41	08/03/24 01:16	
1,2,4-Trimethylbenzene	ND		0.043	0.014	mg/Kg	☼	08/02/24 11:41	08/03/24 01:16	
1,2-Dibromo-3-Chloropropane	ND		0.064	0.016	mg/Kg	☼	08/02/24 11:41	08/03/24 01:16	
1,2-Dibromoethane	ND		0.021	0.0040	mg/Kg	₽	08/02/24 11:41	08/03/24 01:16	
1,2-Dichlorobenzene	0.0097	J	0.043	0.0093	mg/Kg	☼	08/02/24 11:41	08/03/24 01:16	
1,2-Dichloroethane	ND		0.021	0.0059	mg/Kg	₽	08/02/24 11:41	08/03/24 01:16	
1,2-Dichloropropane	ND		0.021	0.0070	mg/Kg	⊅	08/02/24 11:41	08/03/24 01:16	
1,3,5-Trimethylbenzene	ND		0.043	0.0081	mg/Kg	☼	08/02/24 11:41	08/03/24 01:16	
1,3-Dichlorobenzene	ND		0.064	0.014	mg/Kg	☼	08/02/24 11:41	08/03/24 01:16	
1,3-Dichloropropane	ND		0.064	0.0060	mg/Kg	₩	08/02/24 11:41	08/03/24 01:16	
1,4-Dichlorobenzene	0.028	J	0.064	0.011	mg/Kg	☼	08/02/24 11:41	08/03/24 01:16	
2,2-Dichloropropane	ND		0.043		mg/Kg	☼	08/02/24 11:41	08/03/24 01:16	
2-Chlorotoluene	ND		0.043	0.0094			08/02/24 11:41	08/03/24 01:16	
4-Chlorotoluene	ND		0.043		mg/Kg	₩	08/02/24 11:41	08/03/24 01:16	
4-Isopropyltoluene	ND		0.043	0.011	mg/Kg	₩	08/02/24 11:41	08/03/24 01:16	
Benzene	ND		0.021	0.0040	mg/Kg		08/02/24 11:41	08/03/24 01:16	
Bromobenzene	ND		0.043	0.0045	mg/Kg	₩	08/02/24 11:41	08/03/24 01:16	
Bromochloromethane	ND		0.043		mg/Kg	☆	08/02/24 11:41	08/03/24 01:16	
Bromodichloromethane	ND		0.043	0.0059	mg/Kg		08/02/24 11:41	08/03/24 01:16	
Bromoform	ND		0.043	0.0048	mg/Kg		08/02/24 11:41	08/03/24 01:16	
Bromomethane	ND		0.11	0.040	mg/Kg		08/02/24 11:41	08/03/24 01:16	
Carbon tetrachloride	ND		0.021	0.0047			08/02/24 11:41	08/03/24 01:16	
Chloroform	ND		0.021	0.0047	0 0	₩	08/02/24 11:41	08/03/24 01:16	
Chloromethane	ND		0.064		mg/Kg	₩	08/02/24 11:41	08/03/24 01:16	
cis-1,2-Dichloroethene	ND		0.064	0.011	mg/Kg		08/02/24 11:41	08/03/24 01:16	
·	ND ND		0.004	0.013			08/02/24 11:41	08/03/24 01:16	
cis-1,3-Dichloropropene									
Dibromochloromethane Dibromomethane	ND		0.021	0.0052		· · · · · · · · · · · · · · · · · · ·	08/02/24 11:41	08/03/24 01:16	
	ND		0.043	0.0079	mg/Kg	<b>*</b>	08/02/24 11:41	08/03/24 01:16	
Dichlorodifluoromethane	ND		0.27		mg/Kg	<b>*</b>	08/02/24 11:41	08/03/24 01:16	
Ethylbenzene	ND		0.043	0.0097		<del>.</del>	08/02/24 11:41	08/03/24 01:16	
Hexachlorobutadiene	ND		0.11		mg/Kg	☼	08/02/24 11:41	08/03/24 01:16	
Isopropylbenzene	ND		0.043	0.0091	0 0	₩	08/02/24 11:41	08/03/24 01:16	
Methyl tert-butyl ether	ND		0.043	0.0064		<del>.</del>	08/02/24 11:41	08/03/24 01:16	
Methylene Chloride	ND		0.27		mg/Kg	☼	08/02/24 11:41	08/03/24 01:16	
m-Xylene & p-Xylene	ND		0.043	0.0076	0 0	₩	08/02/24 11:41	08/03/24 01:16	
Naphthalene	ND		0.16		mg/Kg		08/02/24 11:41	08/03/24 01:16	
n-Butylbenzene	ND		0.043		mg/Kg	☼	08/02/24 11:41	08/03/24 01:16	
N-Propylbenzene	ND		0.043	0.016	mg/Kg	☼	08/02/24 11:41	08/03/24 01:16	
o-Xylene	ND		0.043	0.0053		₩	08/02/24 11:41	08/03/24 01:16	
sec-Butylbenzene	ND		0.043	0.0091	mg/Kg	₩	08/02/24 11:41	08/03/24 01:16	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Percent Moisture (SM22 2540G)

Client Sample ID: DUP-02-SO-20240726

7.8

Lab Sample ID: 580-142513-5 Date Collected: 07/26/24 12:40 **Matrix: Solid** 

Percent Solids: 92.2 Date Received: 07/30/24 13:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.043		mg/Kg	— <u>-</u>	08/02/24 11:41	08/03/24 01:16	1
t-Butylbenzene	ND		0.043	0.0082	0 0	₩	08/02/24 11:41	08/03/24 01:16	1
Tetrachloroethene	ND		0.043	0.0056			08/02/24 11:41	08/03/24 01:16	1
Toluene	ND		0.064		mg/Kg	₩	08/02/24 11:41	08/03/24 01:16	1
trans-1,2-Dichloroethene	ND		0.064		mg/Kg	₩	08/02/24 11:41	08/03/24 01:16	1
trans-1,3-Dichloropropene	ND		0.043	0.0074			08/02/24 11:41	08/03/24 01:16	1
Trichloroethene	ND		0.043		mg/Kg	₩	08/02/24 11:41	08/03/24 01:16	1
Trichlorofluoromethane	ND		0.085		mg/Kg	₩	08/02/24 11:41	08/03/24 01:16	1
Vinyl chloride	ND		0.11		mg/Kg	₽	08/02/24 11:41	08/03/24 01:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				08/02/24 11:41	08/03/24 01:16	1
4-Bromofluorobenzene (Surr)	96		80 - 120				08/02/24 11:41	08/03/24 01:16	1
Dibromofluoromethane (Surr)	99		80 - 120				08/02/24 11:41	08/03/24 01:16	1
Toluene-d8 (Surr)	97		80 - 120				08/02/24 11:41	08/03/24 01:16	1
- -									
Method: SW846 8260D - Vola	_	•	•	- DL					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	40		0.46	0.055	mg/Kg	≎	08/05/24 00:16	08/05/24 14:17	1
Chloroethane	ND	*+	0.91	0.24	mg/Kg	₽	08/05/24 00:16	08/05/24 14:17	1
		Qualifier	Limits				Prepared	Analyzed	Dil Fac
Surrogate	%Recovery	Qualifiei	Lillies						DII Fac
Surrogate 1,2-Dichloroethane-d4 (Surr)		Qualifier	80 - 121				08/05/24 00:16	08/05/24 14:17	DII Fac
		Quainter						08/05/24 14:17 08/05/24 14:17	
1,2-Dichloroethane-d4 (Surr)	97	Quainiei	80 - 121				08/05/24 00:16		1
1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr)	97 99	Qualifier	80 - 121 80 - 120				08/05/24 00:16 08/05/24 00:16	08/05/24 14:17	1 1
1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)	97 99 103	Qualifier	80 - 121 80 - 120 80 - 120				08/05/24 00:16 08/05/24 00:16	08/05/24 14:17 08/05/24 14:17	1
1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr)	99 103 99	Qualifier	80 - 121 80 - 120 80 - 120	RL	Unit	D	08/05/24 00:16 08/05/24 00:16	08/05/24 14:17 08/05/24 14:17	1 1

0.1

0.1 %

08/03/24 16:25

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-16-SO-39.5-20240726

Lab Sample ID: 580-142513-6 Date Collected: 07/26/24 12:50 Matrix: Solid Date Received: 07/30/24 13:20 Percent Solids: 91.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Result Qualifier **MDL** Unit Dil Fac Analyte D Prepared Analyzed mg/Kg 1,1,1,2-Tetrachloroethane ND 0.021 0.0053 08/02/24 11:41 08/03/24 01:37 1,1,1-Trichloroethane 0.0086 J 0.043 0.0049 mg/Kg 08/02/24 11:41 08/03/24 01:37 1,1,2,2-Tetrachloroethane ND 0.021 0.0081 mg/Kg 08/02/24 11:41 08/03/24 01:37 ND 0.0079 1,1,2-Trichloroethane 0.021 mg/Kg 08/02/24 11:41 08/03/24 01:37 1.1-Dichloroethane ND 0.043 0.0098 mg/Kg 08/02/24 11:41 08/03/24 01:37 08/02/24 11:41 1,1-Dichloroethene NΠ 0.043 0.013 mg/Kg 08/03/24 01:37 1,1-Dichloropropene ND 0.043 0.0056 mg/Kg 08/02/24 11:41 08/03/24 01:37 ND 0.085 0.042 mg/Kg 08/02/24 11:41 08/03/24 01:37 1,2,3-Trichlorobenzene 1,2,3-Trichloropropane ND 0.043 0.012 mg/Kg 08/02/24 11:41 08/03/24 01:37 1,2,4-Trichlorobenzene ND 0.085 0.045 mg/Kg 08/02/24 11:41 08/03/24 01:37 1,2,4-Trimethylbenzene ND 0.043 0.014 mg/Kg 08/02/24 11:41 08/03/24 01:37 1.2-Dibromo-3-Chloropropane ND 0.064 0.016 ma/Ka 08/02/24 11:41 08/03/24 01:37 1 1,2-Dibromoethane ND 0.021 0.0040 mg/Kg 08/02/24 11:41 08/03/24 01:37 0.89 0.043 0.0093 mg/Kg 08/02/24 11:41 08/03/24 01:37 1,2-Dichlorobenzene 0.0059 ND 0.021 mg/Kg 08/02/24 11:41 08/03/24 01:37 1.2-Dichloroethane 0.0070 1,2-Dichloropropane ND 0.021 mg/Kg 08/02/24 11:41 08/03/24 01:37 1,3,5-Trimethylbenzene ND 0.043 0.0081 mg/Kg 08/02/24 11:41 08/03/24 01:37 0.064 0.014 mg/Kg 08/02/24 11:41 08/03/24 01:37 1.3-Dichlorobenzene 0.014 ND 0.064 0.0060 mg/Kg 08/02/24 11:41 08/03/24 01:37 1,3-Dichloropropane mg/Kg 1,4-Dichlorobenzene 1.4 0.064 0.012 08/02/24 11:41 08/03/24 01:37 2,2-Dichloropropane ND 0.043 0.013 mg/Kg ÷ 08/02/24 11:41 08/03/24 01:37 2-Chlorotoluene ND 0.043 0.0094 mg/Kg 08/02/24 11:41 08/03/24 01:37 0.010 4-Chlorotoluene ND mg/Kg 08/02/24 11:41 08/03/24 01:37 0.043 4-Isopropyltoluene 0.048 0.043 0.011 mg/Kg 08/02/24 11:41 08/03/24 01:37 0.0078 0.021 0.0040 mg/Kg 08/02/24 11:41 08/03/24 01:37 Benzene J<sub>B</sub> 0.0045 **Bromobenzene** 0.0064 0.043 mg/Kg 08/02/24 11:41 08/03/24 01:37 Bromochloromethane ND 0.043 0.0066 mg/Kg 08/02/24 11:41 08/03/24 01:37 Bromodichloromethane ND 0.0059 mg/Kg 0.043 08/02/24 11:41 08/03/24 01:37 0.0048 Bromoform NΩ 0.043 mg/Kg 08/02/24 11:41 08/03/24 01:37 ND 0.040 Bromomethane 0.11 mg/Kg 08/02/24 11:41 08/03/24 01:37 Carbon tetrachloride ND 0.021 0.0047 mg/Kg 08/02/24 11:41 08/03/24 01:37 0.021 0.0045 mg/Kg 08/02/24 11:41 08/03/24 01:37 0.077 Chloroform Chloromethane ND 0.064 0.011 mg/Kg 08/02/24 11:41 08/03/24 01:37 cis-1,2-Dichloroethene ND 08/02/24 11:41 08/03/24 01:37 0.064 0.013 mg/Kg cis-1,3-Dichloropropene ND 0.021 0.0043 mg/Kg 08/02/24 11:41 08/03/24 01:37 Dibromochloromethane ND 0.021 0.0052 mg/Kg 08/02/24 11:41 08/03/24 01:37 0.0079 Dibromomethane ND 0.043 mg/Kg 08/02/24 11:41 08/03/24 01:37 mg/Kg Dichlorodifluoromethane ND 0.27 0.049 08/02/24 11:41 08/03/24 01:37 0.043 0.0097 mg/Kg Ethylbenzene 0.021 08/02/24 11:41 08/03/24 01:37 Hexachlorobutadiene ND 0.11 0.025 mg/Kg 08/02/24 11:41 08/03/24 01:37 Isopropylbenzene ND 0.043 0.0092 mg/Kg 08/02/24 11:41 08/03/24 01:37 Methyl tert-butyl ether ND 0.043 0.0064 mg/Kg 08/02/24 11:41 08/03/24 01:37 ND 0.028 08/03/24 01:37 Methylene Chloride 0.27 mg/Kg 08/02/24 11:41 0.043 0.0076 mg/Kg 08/02/24 11:41 08/03/24 01:37 m-Xylene & p-Xylene 0.14 08/03/24 01:37 **Naphthalene** 0.27 0.16 0.042 mg/Kg 08/02/24 11:41 n-Butylbenzene ND 0.043 0.020 mg/Kg 08/02/24 11:41 08/03/24 01:37 N-Propylbenzene ND 0.043 0.016 mg/Kg 08/03/24 01:37 08/02/24 11:41 o-Xylene 0.029 0.043 0.0053 mg/Kg 08/02/24 11:41 08/03/24 01:37 0.0092 mg/Kg sec-Butylbenzene ND 0.043 08/02/24 11:41 08/03/24 01:37

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-16-SO-39.5-20240726

Lab Sample ID: 580-142513-6 Date Collected: 07/26/24 12:50 **Matrix: Solid** Date Received: 07/30/24 13:20 Percent Solids: 91.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.043	0.014	mg/Kg	<u></u>	08/02/24 11:41	08/03/24 01:37	1
t-Butylbenzene	ND		0.043	0.0082	mg/Kg	₩	08/02/24 11:41	08/03/24 01:37	1
Tetrachloroethene	0.079		0.043	0.0056	mg/Kg	₩	08/02/24 11:41	08/03/24 01:37	1
Toluene	0.015	J	0.064	0.014	mg/Kg	₩	08/02/24 11:41	08/03/24 01:37	1
trans-1,2-Dichloroethene	ND		0.064	0.016	mg/Kg	₩	08/02/24 11:41	08/03/24 01:37	1
trans-1,3-Dichloropropene	ND		0.043	0.0075	mg/Kg	₩	08/02/24 11:41	08/03/24 01:37	1
Trichloroethene	ND		0.043	0.011	mg/Kg	₽	08/02/24 11:41	08/03/24 01:37	1
Trichlorofluoromethane	ND		0.085	0.028	mg/Kg	₽	08/02/24 11:41	08/03/24 01:37	1
Vinyl chloride	ND		0.11	0.020	mg/Kg	≎	08/02/24 11:41	08/03/24 01:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				08/02/24 11:41	08/03/24 01:37	1
4-Bromofluorobenzene (Surr)	102		80 - 120				08/02/24 11:41	08/03/24 01:37	1
Dibromofluoromethane (Surr)	99		80 - 120				08/02/24 11:41	08/03/24 01:37	1
Toluene-d8 (Surr)	95		80 - 120				08/02/24 11:41	08/03/24 01:37	1
- Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	- DL					
Analyte	_	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	*+	0.92	0.24	mg/Kg	— <u>—</u>	08/05/24 00:16	08/05/24 14:39	

Method: SW846 8260D - Vo	olatile Organic	Compoun	ds by GC/MS	- DL					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	*+	0.92	0.24	mg/Kg	<del>-</del>	08/05/24 00:16	08/05/24 14:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				08/05/24 00:16	08/05/24 14:39	1
4-Bromofluorobenzene (Surr)	98		80 - 120				08/05/24 00:16	08/05/24 14:39	1
Dibromofluoromethane (Surr)	103		80 - 120				08/05/24 00:16	08/05/24 14:39	1
Toluene-d8 (Surr)	98		80 - 120				08/05/24 00:16	08/05/24 14:39	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	130		4.6	0.55	mg/Kg	<del>-</del>	08/06/24 08:14	08/06/24 15:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 121				08/06/24 08:14	08/06/24 15:27	1
4-Bromofluorobenzene (Surr)	102		80 - 120				08/06/24 08:14	08/06/24 15:27	1
Dibromofluoromethane (Surr)	109		80 - 120				08/06/24 08:14	08/06/24 15:27	1
Toluene-d8 (Surr)	100		80 - 120				08/06/24 08:14	08/06/24 15:27	1

General Chemistry							
Analyte	Result Qualifier	RL	RL Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	91.2	0.1	0.1 %			08/03/24 16:25	1
Percent Moisture (SM22 2540G)	8.8	0.1	0.1 %			08/03/24 16:25	1

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-16-SO-46-20240726

Lab Sample ID: 580-142513-7 Date Collected: 07/26/24 15:00 **Matrix: Solid** Percent Solids: 90.4 Date Received: 07/30/24 13:20

Method: SW846 8260D - Vola	_	Qualifier	•		l Init		Dronered	Analysed	Dit E-
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND		0.021	0.0051	mg/Kg	₩.	08/02/24 11:41	08/03/24 01:59	
1,1,1-Trichloroethane	ND		0.041	0.0047		±	08/02/24 11:41	08/03/24 01:59	
1,1,2,2-Tetrachloroethane	ND		0.021	0.0078		<del>.</del>	08/02/24 11:41	08/03/24 01:59	
1,1,2-Trichloroethane	ND		0.021	0.0076		<b>*</b>	08/02/24 11:41	08/03/24 01:59	
1,1-Dichloroethane	ND		0.041	0.0094		<b>*</b>	08/02/24 11:41	08/03/24 01:59	
1,1-Dichloroethene	ND		0.041		mg/Kg	<del>.</del> .	08/02/24 11:41	08/03/24 01:59	
1,1-Dichloropropene	ND		0.041	0.0054		☼	08/02/24 11:41		
1,2,3-Trichlorobenzene	ND		0.082		mg/Kg	☼	08/02/24 11:41		
1,2,3-Trichloropropane	ND		0.041		mg/Kg		08/02/24 11:41		
1,2,4-Trichlorobenzene	ND		0.082		mg/Kg	☼	08/02/24 11:41	08/03/24 01:59	
1,2,4-Trimethylbenzene	ND		0.041		mg/Kg	₩	08/02/24 11:41	08/03/24 01:59	
1,2-Dibromo-3-Chloropropane	ND		0.062	0.016	mg/Kg	₩	08/02/24 11:41	08/03/24 01:59	
1,2-Dibromoethane	ND		0.021	0.0039	mg/Kg	☼	08/02/24 11:41	08/03/24 01:59	
1,2-Dichlorobenzene	0.025	J	0.041	0.0089	mg/Kg	☼	08/02/24 11:41	08/03/24 01:59	
1,2-Dichloroethane	ND		0.021	0.0056	mg/Kg	☼	08/02/24 11:41	08/03/24 01:59	
1,2-Dichloropropane	ND		0.021	0.0068	mg/Kg	☼	08/02/24 11:41	08/03/24 01:59	
1,3,5-Trimethylbenzene	ND		0.041	0.0078	mg/Kg	☼	08/02/24 11:41	08/03/24 01:59	
I,3-Dichlorobenzene	ND		0.062	0.014	mg/Kg	☼	08/02/24 11:41	08/03/24 01:59	
1,3-Dichloropropane	ND		0.062	0.0057	mg/Kg	₩	08/02/24 11:41	08/03/24 01:59	
,4-Dichlorobenzene	0.037	J	0.062	0.011	mg/Kg	₩	08/02/24 11:41	08/03/24 01:59	
2,2-Dichloropropane	ND		0.041	0.012	mg/Kg	☼	08/02/24 11:41	08/03/24 01:59	
-Chlorotoluene	ND		0.041	0.0090			08/02/24 11:41	08/03/24 01:59	
l-Chlorotoluene	ND		0.041		mg/Kg	☆	08/02/24 11:41	08/03/24 01:59	
I-Isopropyltoluene	ND		0.041	0.010	mg/Kg	₩	08/02/24 11:41	08/03/24 01:59	
Benzene	0.0055	JB	0.021			ф	08/02/24 11:41	08/03/24 01:59	
Bromobenzene	ND	-	0.041	0.0043	mg/Kg	₩	08/02/24 11:41	08/03/24 01:59	
Bromochloromethane	ND		0.041	0.0064		☆	08/02/24 11:41	08/03/24 01:59	
Bromodichloromethane	ND		0.041	0.0056			08/02/24 11:41	08/03/24 01:59	
Bromoform	ND		0.041	0.0046			08/02/24 11:41	08/03/24 01:59	
Bromomethane	ND		0.10		mg/Kg		08/02/24 11:41	08/03/24 01:59	
Carbon tetrachloride	ND		0.021	0.0045			08/02/24 11:41	08/03/24 01:59	
Chloroform	0.013		0.021	0.0043		₩	08/02/24 11:41	08/03/24 01:59	
Chloromethane	0.013 ND	3	0.021		mg/Kg	₩	08/02/24 11:41	08/03/24 01:59	
	ND		0.062				08/02/24 11:41	08/03/24 01:59	
cis-1,2-Dichloroethene	ND ND		0.002	0.013	mg/Kg	*	08/02/24 11:41		
cis-1,3-Dichloropropene						±			
Dibromochloromethane	ND		0.021	0.0050		· · · · · · · · · · · · · · · · · · ·	08/02/24 11:41	08/03/24 01:59	
Dibromomethane	ND		0.041	0.0076		<b>*</b>	08/02/24 11:41	08/03/24 01:59	
Dichlorodifluoromethane	ND		0.26		mg/Kg	<b>*</b>	08/02/24 11:41	08/03/24 01:59	
Ethylbenzene	0.014	. <b>J</b>	0.041	0.0093		<del>.</del>	08/02/24 11:41	08/03/24 01:59	
lexachlorobutadiene 	ND		0.10		mg/Kg	☼	08/02/24 11:41	08/03/24 01:59	
sopropylbenzene	ND		0.041	0.0088	0 0	₩	08/02/24 11:41	08/03/24 01:59	
Methyl tert-butyl ether	ND		0.041	0.0062		<del>.</del>	08/02/24 11:41	08/03/24 01:59	
Methylene Chloride	ND		0.26		mg/Kg	☼	08/02/24 11:41	08/03/24 01:59	
n-Xylene & p-Xylene	0.092		0.041		mg/Kg	₩	08/02/24 11:41	08/03/24 01:59	
laphthalene	0.087	J	0.15		mg/Kg		08/02/24 11:41	08/03/24 01:59	
-Butylbenzene	ND		0.041	0.019	mg/Kg	₽	08/02/24 11:41	08/03/24 01:59	
N-Propylbenzene	ND		0.041	0.015	mg/Kg	₽	08/02/24 11:41	08/03/24 01:59	
o-Xylene	0.021	J	0.041	0.0051	mg/Kg	☼	08/02/24 11:41	08/03/24 01:59	
sec-Butylbenzene	ND		0.041	0.0088	ma/Ka		08/02/24 11:41	08/03/24 01:59	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-16-SO-46-20240726

Lab Sample ID: 580-142513-7 Date Collected: 07/26/24 15:00 **Matrix: Solid** 

Date Received: 07/30/24 13:20 Percent Solids: 90.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.041	0.013	mg/Kg	— <u></u>	08/02/24 11:41	08/03/24 01:59	1
t-Butylbenzene	ND		0.041	0.0079	mg/Kg	☼	08/02/24 11:41	08/03/24 01:59	1
Tetrachloroethene	0.0086	J	0.041	0.0054	mg/Kg	₩	08/02/24 11:41	08/03/24 01:59	1
Toluene	ND		0.062	0.014	mg/Kg	☼	08/02/24 11:41	08/03/24 01:59	1
trans-1,2-Dichloroethene	ND		0.062	0.015	mg/Kg	☼	08/02/24 11:41	08/03/24 01:59	1
trans-1,3-Dichloropropene	ND		0.041	0.0072	mg/Kg	₩	08/02/24 11:41	08/03/24 01:59	1
Trichloroethene	ND		0.041	0.011	mg/Kg	☼	08/02/24 11:41	08/03/24 01:59	1
Trichlorofluoromethane	ND		0.082	0.027	mg/Kg	☼	08/02/24 11:41	08/03/24 01:59	1
Vinyl chloride	ND		0.10	0.019	mg/Kg	₩	08/02/24 11:41	08/03/24 01:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				08/02/24 11:41	08/03/24 01:59	1
4-Bromofluorobenzene (Surr)	99		80 - 120				08/02/24 11:41	08/03/24 01:59	1
Dibromofluoromethane (Surr)	100		80 - 120				08/02/24 11:41	08/03/24 01:59	1
Toluene-d8 (Surr)	98		80 - 120				08/02/24 11:41	08/03/24 01:59	1
Method: SW846 8260D - Vol.	atile Organic	Compound	de by GC/MS	- DI					
Analyte	_	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	33		0.44		mg/Kg	— <u>-</u>	08/05/24 00:16	08/05/24 15:01	1
Chloroethane	ND	*+	0.88		mg/Kg	₩	08/05/24 00:16	08/05/24 15:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				08/05/24 00:16	08/05/24 15:01	1
	101		80 - 120				08/05/24 00:16	08/05/24 15:01	1
4-Bromofluorobenzene (Surr)	101						08/05/24 00:16	00/05/04 45:04	
	103		80 - 120				00/03/24 00.10	08/05/24 15:01	1
4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)			80 - 120 80 - 120					08/05/24 15:01 08/05/24 15:01	1
Dibromofluoromethane (Surr)	103								
Dibromofluoromethane (Surr) Toluene-d8 (Surr)	103 98	Qualifier		RL	Unit	D			

0.1

0.1 %

9.6

08/03/24 16:25

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-16-SO-52.5-20240726

Lab Sample ID: 580-142513-8 Date Collected: 07/26/24 15:05 **Matrix: Solid** Date Received: 07/30/24 13:20 Percent Solids: 92.6

Method: SW846 8260D - Vola Analyte	_	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND	Qualifier	0.018	0.0046		— <del>"</del>	08/02/24 11:41	08/03/24 02:21	- Біі Га
1,1,1-Trichloroethane	ND ND		0.010	0.0040		₩	08/02/24 11:41	08/03/24 02:21	
1,1,2,2-Tetrachloroethane	ND ND		0.037	0.0042		₩	08/02/24 11:41	08/03/24 02:21	
1,1,2-Trichloroethane	ND		0.018	0.0076		· · · · · · · · · · · · · · · · · · ·	08/02/24 11:41	08/03/24 02:21	
1,1,2-menioroethane 1,1-Dichloroethane	ND ND		0.018	0.0085		₩	08/02/24 11:41	08/03/24 02:21	
1,1-Dichloroethene	ND ND		0.037	0.0003		Ψ Φ	08/02/24 11:41	08/03/24 02:21	
	ND		0.037	0.0049		12	08/02/24 11:41	08/03/24 02:21	
1,1-Dichloropropene 1,2,3-Trichlorobenzene	ND ND		0.037		mg/Kg	1,2	08/02/24 11:41	08/03/24 02:21	
, ,	ND ND		0.074			₩.			
1,2,3-Trichloropropane				0.011		<del></del>	08/02/24 11:41	08/03/24 02:21	
1,2,4-Trichlorobenzene	ND		0.074		mg/Kg	<b>*</b>	08/02/24 11:41	08/03/24 02:21	
1,2,4-Trimethylbenzene	ND		0.037		mg/Kg	<b>*</b>	08/02/24 11:41	08/03/24 02:21	
1,2-Dibromo-3-Chloropropane	ND		0.055		mg/Kg	<del></del>	08/02/24 11:41	08/03/24 02:21	
1,2-Dibromoethane	ND		0.018	0.0035		<b>*</b>	08/02/24 11:41	08/03/24 02:21	
1,2-Dichlorobenzene	0.0085	J	0.037	0.0080	0 0	<b>\$</b>	08/02/24 11:41	08/03/24 02:21	
1,2-Dichloroethane	ND		0.018	0.0051		<del>.</del>	08/02/24 11:41	08/03/24 02:21	
1,2-Dichloropropane	ND		0.018	0.0061		₩	08/02/24 11:41	08/03/24 02:21	
1,3,5-Trimethylbenzene	ND		0.037	0.0070	0 0	₩	08/02/24 11:41	08/03/24 02:21	
1,3-Dichlorobenzene	ND		0.055		mg/Kg	<u></u>	08/02/24 11:41	08/03/24 02:21	
1,3-Dichloropropane	ND		0.055	0.0052		₩	08/02/24 11:41	08/03/24 02:21	
I,4-Dichlorobenzene	0.018	J	0.055		mg/Kg	₩	08/02/24 11:41	08/03/24 02:21	
2,2-Dichloropropane	ND		0.037		mg/Kg		08/02/24 11:41	08/03/24 02:21	
2-Chlorotoluene	ND		0.037	0.0081		₩	08/02/24 11:41	08/03/24 02:21	
I-Chlorotoluene	ND		0.037	0.0091		₩	08/02/24 11:41	08/03/24 02:21	
I-Isopropyltoluene	ND		0.037	0.0094	7 7	≎	08/02/24 11:41	08/03/24 02:21	
Benzene	0.0048	JB	0.018	0.0035	mg/Kg	₩	08/02/24 11:41	08/03/24 02:21	
Bromobenzene	ND		0.037	0.0039	mg/Kg	☼	08/02/24 11:41	08/03/24 02:21	
Bromochloromethane	ND		0.037	0.0057	mg/Kg	₩	08/02/24 11:41	08/03/24 02:21	
Bromodichloromethane	ND		0.037	0.0051	mg/Kg	₩	08/02/24 11:41	08/03/24 02:21	
Bromoform	ND		0.037	0.0042	mg/Kg	☼	08/02/24 11:41	08/03/24 02:21	
Bromomethane	ND		0.092	0.035	mg/Kg	☼	08/02/24 11:41	08/03/24 02:21	
Carbon tetrachloride	0.0091	J	0.018	0.0041	mg/Kg	₩	08/02/24 11:41	08/03/24 02:21	
Chloroform	0.0071	J	0.018	0.0039	mg/Kg	₩	08/02/24 11:41	08/03/24 02:21	
Chloromethane	ND		0.055	0.0093	mg/Kg	₩	08/02/24 11:41	08/03/24 02:21	
cis-1,2-Dichloroethene	ND		0.055	0.012	mg/Kg	₩	08/02/24 11:41	08/03/24 02:21	
cis-1,3-Dichloropropene	ND		0.018	0.0037	mg/Kg	₩	08/02/24 11:41	08/03/24 02:21	
Dibromochloromethane	ND		0.018	0.0045	mg/Kg	₩	08/02/24 11:41	08/03/24 02:21	
Dibromomethane	ND		0.037	0.0068			08/02/24 11:41	08/03/24 02:21	
Dichlorodifluoromethane	ND		0.23		mg/Kg	₩	08/02/24 11:41	08/03/24 02:21	
Ethylbenzene	0.013	J	0.037	0.0084	mg/Kg	₩	08/02/24 11:41	08/03/24 02:21	
	ND		0.092		mg/Kg		08/02/24 11:41	08/03/24 02:21	
sopropylbenzene	ND		0.037	0.0079		₩	08/02/24 11:41	08/03/24 02:21	
Methyl tert-butyl ether	ND		0.037	0.0055			08/02/24 11:41	08/03/24 02:21	
Methylene Chloride	ND		0.23		mg/Kg	∴	08/02/24 11:41	08/03/24 02:21	
n-Xylene & p-Xylene	0.091		0.037	0.0066		₩.	08/02/24 11:41	08/03/24 02:21	
Naphthalene	ND		0.14		mg/Kg		08/02/24 11:41	08/03/24 02:21	
i-Butylbenzene	ND		0.037		mg/Kg		08/02/24 11:41	08/03/24 02:21	
N-Propylbenzene	ND ND		0.037		mg/Kg	₩	08/02/24 11:41	08/03/24 02:21	
o-Xylene	0.020	1	0.037	0.0046		₩	08/02/24 11:41	08/03/24 02:21	
sec-Butylbenzene	0.020 ND		0.037	0.0048		¥	08/02/24 11:41	08/03/24 02:21	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Toluene-d8 (Surr)

Client Sample ID: PDI-16-SO-52.5-20240726

Date Collected: 07/26/24 15:05 Date Received: 07/30/24 13:20

Lab Sample ID: 580-142513-8

08/02/24 11:41 08/03/24 02:21

**Matrix: Solid** Percent Solids: 92.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.037	0.012	mg/Kg	<u></u>	08/02/24 11:41	08/03/24 02:21	1
t-Butylbenzene	ND		0.037	0.0071	mg/Kg	₩	08/02/24 11:41	08/03/24 02:21	1
Tetrachloroethene	0.0070	J	0.037	0.0049	mg/Kg	₩	08/02/24 11:41	08/03/24 02:21	1
Toluene	ND		0.055	0.012	mg/Kg	₩	08/02/24 11:41	08/03/24 02:21	1
trans-1,2-Dichloroethene	ND		0.055	0.013	mg/Kg	₩	08/02/24 11:41	08/03/24 02:21	1
trans-1,3-Dichloropropene	ND		0.037	0.0065	mg/Kg	₩	08/02/24 11:41	08/03/24 02:21	1
Trichloroethene	ND		0.037	0.0095	mg/Kg	₩	08/02/24 11:41	08/03/24 02:21	1
Trichlorofluoromethane	ND		0.074	0.024	mg/Kg	₩	08/02/24 11:41	08/03/24 02:21	1
Vinyl chloride	ND		0.092	0.017	mg/Kg	₩	08/02/24 11:41	08/03/24 02:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				08/02/24 11:41	08/03/24 02:21	1
4-Bromofluorobenzene (Surr)	100		80 - 120				08/02/24 11:41	08/03/24 02:21	1
Dibromofluoromethane (Surr)	100		80 - 120				08/02/24 11:41	08/03/24 02:21	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	15		0.40	0.048	mg/Kg	<u></u>	08/05/24 00:16	08/05/24 15:23	1
Chloroethane	ND	*+	0.79	0.21	mg/Kg	₩	08/05/24 00:16	08/05/24 15:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				08/05/24 00:16	08/05/24 15:23	1
4-Bromofluorobenzene (Surr)	98		80 - 120				08/05/24 00:16	08/05/24 15:23	1
Dibromofluoromethane (Surr)	107		80 - 120				08/05/24 00:16	08/05/24 15:23	1
Toluene-d8 (Surr)	98		80 - 120				08/05/24 00:16	08/05/24 15:23	1

80 - 120

General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	92.6		0.1	0.1	%			08/03/24 16:27	1
Percent Moisture (SM22 2540G)	7.4		0.1	0.1	%			08/03/24 16:27	1

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Client Sample ID: RB-02-WQ-20240729

Date Collected: 07/29/24 10:40 Date Received: 07/30/24 13:20 Lab Sample ID: 580-142513-9

**Matrix: Water** 

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Dichlorodifluoromethane	ND		1.0	0.53	ug/L		<u> </u>	08/02/24 19:28	
Chloromethane	ND		1.0	0.28	ug/L			08/02/24 19:28	
Vinyl chloride	ND		1.0	0.22	-			08/02/24 19:28	
Bromomethane	ND		1.0	0.21	ug/L			08/02/24 19:28	
Chloroethane	ND		1.0	0.35	-			08/02/24 19:28	
Trichlorofluoromethane	ND		1.0	0.36	_			08/02/24 19:28	
1,1-Dichloroethene	ND		1.0	0.28				08/02/24 19:28	
trans-1,2-Dichloroethene	ND		1.0	0.39	-			08/02/24 19:28	
1,1-Dichloroethane	ND		1.0	0.22	-			08/02/24 19:28	
2,2-Dichloropropane	ND		1.0	0.32				08/02/24 19:28	
cis-1,2-Dichloroethene	ND		1.0	0.35	-			08/02/24 19:28	
Bromochloromethane	ND		1.0	0.29	-			08/02/24 19:28	
Chloroform	ND		1.0	0.26				08/02/24 19:28	
1,1,1-Trichloroethane	ND		1.0	0.39	-			08/02/24 19:28	
Carbon tetrachloride	ND		1.0	0.30	-			08/02/24 19:28	
1,1-Dichloropropene	ND		1.0	0.29				08/02/24 19:28	
Benzene	ND		1.0	0.24	-			08/02/24 19:28	
1,2-Dichloroethane	ND		1.0	0.42	-			08/02/24 19:28	
, Trichloroethene	ND		1.0	0.26				08/02/24 19:28	
1,2-Dichloropropane	ND		1.0	0.18	-			08/02/24 19:28	
Dibromomethane	ND		1.0	0.34	_			08/02/24 19:28	
Bromodichloromethane	ND		1.0	0.29				08/02/24 19:28	
cis-1,3-Dichloropropene	ND		1.0	0.42	-			08/02/24 19:28	
Toluene	ND		1.0	0.39	-			08/02/24 19:28	
trans-1,3-Dichloropropene	ND		1.0	0.41				08/02/24 19:28	
1,1,2-Trichloroethane	ND		1.0	0.24	_			08/02/24 19:28	
Tetrachloroethene	ND		1.0	0.41	-			08/02/24 19:28	
1,3-Dichloropropane	ND		1.0	0.35				08/02/24 19:28	
Dibromochloromethane	ND		1.0	0.43	-			08/02/24 19:28	
1,2-Dibromoethane	ND		1.0	0.40	-			08/02/24 19:28	
Chlorobenzene	ND		1.0		ug/L			08/02/24 19:28	
Ethylbenzene	ND		1.0	0.50	-			08/02/24 19:28	
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	-			08/02/24 19:28	
1,1,2,2-Tetrachloroethane	ND		1.0	0.52				08/02/24 19:28	
m-Xylene & p-Xylene	ND		2.0	0.53	-			08/02/24 19:28	
o-Xylene	ND		1.0		ug/L			08/02/24 19:28	
Styrene	ND		1.0		ug/L			08/02/24 19:28	
Bromoform	ND		1.0		ug/L			08/02/24 19:28	
Isopropylbenzene	ND		1.0		ug/L			08/02/24 19:28	
Bromobenzene	ND ND		1.0		ug/L			08/02/24 19:28	
N-Propylbenzene	ND		1.0		ug/L			08/02/24 19:28	
1,2,3-Trichloropropane	ND ND		1.0		ug/L ug/L			08/02/24 19:28	
2-Chlorotoluene	ND		1.0		ug/L ug/L			08/02/24 19:28	
1,3,5-Trimethylbenzene	ND ND		1.0		ug/L ug/L			08/02/24 19:28	
1,3,5-11memyibenzene 4-Chlorotoluene	ND ND		1.0		ug/L ug/L				
								08/02/24 19:28	
t-Butylbenzene	ND ND		2.0		ug/L			08/02/24 19:28	
1,2,4-Trimethylbenzene	ND		3.0	0.61	-			08/02/24 19:28	
sec-Butylbenzene 1,3-Dichlorobenzene	ND ND		1.0		ug/L ug/L			08/02/24 19:28 08/02/24 19:28	

**Eurofins Seattle** 

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1

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Client Sample ID: RB-02-WQ-20240729

Date Collected: 07/29/24 10:40 Date Received: 07/30/24 13:20 Lab Sample ID: 580-142513-9

**Matrix: Water** 

Method: SW846 8260D - Vo	latile Organic (	Compound	ds by GC/MS	(Conti	nued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Isopropyltoluene	ND		1.0	0.28	ug/L			08/02/24 19:28	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			08/02/24 19:28	1
n-Butylbenzene	ND		1.0	0.44	ug/L			08/02/24 19:28	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			08/02/24 19:28	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			08/02/24 19:28	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			08/02/24 19:28	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			08/02/24 19:28	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			08/02/24 19:28	1
Naphthalene	ND		3.0	0.93	ug/L			08/02/24 19:28	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			08/02/24 19:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120			-		08/02/24 19:28	1
4-Bromofluorobenzene (Surr)	99		80 - 120					08/02/24 19:28	1
Dibromofluoromethane (Surr)	101		80 - 120					08/02/24 19:28	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 120					08/02/24 19:28	1

Method: SW846 8260D - Vol	atile Organic	Compoun	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND	*+	5.0	1.4	ug/L			08/06/24 03:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120					08/06/24 03:43	1
4-Bromofluorobenzene (Surr)	108		80 - 120					08/06/24 03:43	1
Dibromofluoromethane (Surr)	118		80 - 120					08/06/24 03:43	1
1,2-Dichloroethane-d4 (Surr)	113		80 - 120					08/06/24 03:43	1

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Client Sample ID: TB-02-WQ-20240729

Lab Sample ID: 580-142513-10

Date Collected: 07/29/24 00:01 **Matrix: Water** Date Received: 07/30/24 13:20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0	0.53	ug/L			08/02/24 19:51	1
Chloromethane	ND		1.0	0.28	ug/L			08/02/24 19:51	1
Vinyl chloride	ND		1.0	0.22	ug/L			08/02/24 19:51	1
Bromomethane	ND		1.0	0.21	ug/L			08/02/24 19:51	1
Chloroethane	ND		1.0		ug/L			08/02/24 19:51	1
Trichlorofluoromethane	ND		1.0		ug/L			08/02/24 19:51	1
1,1-Dichloroethene	ND		1.0		ug/L			08/02/24 19:51	1
Methylene Chloride	ND	*_	5.0		ug/L			08/02/24 19:51	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			08/02/24 19:51	1
1,1-Dichloroethane	ND		1.0		ug/L			08/02/24 19:51	1
2,2-Dichloropropane	ND		1.0		ug/L			08/02/24 19:51	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			08/02/24 19:51	
Bromochloromethane	ND		1.0		ug/L			08/02/24 19:51	
Chloroform	ND		1.0		ug/L			08/02/24 19:51	,
1,1,1-Trichloroethane	ND ND		1.0		ug/L ug/L			08/02/24 19:51	,
Carbon tetrachloride	ND		1.0		ug/L ug/L			08/02/24 19:51	
	ND ND		1.0		ug/L ug/L			08/02/24 19:51	
1,1-Dichloropropene	ND ND				-			08/02/24 19:51	
Benzene			1.0		ug/L				
1,2-Dichloroethane	ND		1.0		ug/L			08/02/24 19:51	1
Trichloroethene	ND		1.0		ug/L			08/02/24 19:51	
1,2-Dichloropropane	ND		1.0		ug/L			08/02/24 19:51	
Dibromomethane	ND		1.0		ug/L			08/02/24 19:51	1
Bromodichloromethane	ND		1.0		ug/L			08/02/24 19:51	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			08/02/24 19:51	1
Toluene	ND		1.0		ug/L			08/02/24 19:51	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			08/02/24 19:51	•
1,1,2-Trichloroethane	ND		1.0		ug/L			08/02/24 19:51	
Tetrachloroethene	ND		1.0	0.41	ug/L			08/02/24 19:51	•
1,3-Dichloropropane	ND		1.0	0.35	ug/L			08/02/24 19:51	•
Dibromochloromethane	ND		1.0	0.43	ug/L			08/02/24 19:51	•
1,2-Dibromoethane	ND		1.0	0.40	ug/L			08/02/24 19:51	· · · · · · · · ·
Chlorobenzene	ND		1.0	0.44	ug/L			08/02/24 19:51	•
Ethylbenzene	ND		1.0	0.50	ug/L			08/02/24 19:51	•
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			08/02/24 19:51	
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			08/02/24 19:51	•
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			08/02/24 19:51	1
o-Xylene	ND		1.0		ug/L			08/02/24 19:51	1
Styrene	ND		1.0		ug/L			08/02/24 19:51	1
Bromoform	ND		1.0		ug/L			08/02/24 19:51	1
Isopropylbenzene	ND		1.0		ug/L			08/02/24 19:51	1
Bromobenzene	ND		1.0		ug/L			08/02/24 19:51	1
N-Propylbenzene	ND		1.0		ug/L			08/02/24 19:51	1
1,2,3-Trichloropropane	ND		1.0		ug/L			08/02/24 19:51	
2-Chlorotoluene	ND		1.0		ug/L			08/02/24 19:51	4
1,3,5-Trimethylbenzene	ND		1.0		ug/L			08/02/24 19:51	1
4-Chlorotoluene	ND		1.0		ug/L			08/02/24 19:51	
	ND ND		2.0						
t-Butylbenzene					ug/L			08/02/24 19:51	1
1,2,4-Trimethylbenzene	ND		3.0	0.01	ug/L			08/02/24 19:51	1

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Client Sample ID: TB-02-WQ-20240729

Date Collected: 07/29/24 00:01

105

Date Received: 07/30/24 13:20

1,2-Dichloroethane-d4 (Surr)

Lab Sample ID: 580-142513-10

08/02/24 19:51

**Matrix: Water** 

Method: SW846 8260D - Vo	latile Organic Co	mpounds by GC/MS	(Continued	d)			
Analyte	Result Qu	ualifier RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND ND	1.0	0.48 ug/L			08/02/24 19:51	1
4-Isopropyltoluene	ND	1.0	0.28 ug/L			08/02/24 19:51	1
1,4-Dichlorobenzene	ND	1.0	0.46 ug/L			08/02/24 19:51	1
n-Butylbenzene	ND	1.0	0.44 ug/L			08/02/24 19:51	1
1,2-Dichlorobenzene	ND	1.0	0.46 ug/L			08/02/24 19:51	1
1,2-Dibromo-3-Chloropropane	ND	3.0	0.57 ug/L			08/02/24 19:51	1
1,2,4-Trichlorobenzene	ND	1.0	0.33 ug/L			08/02/24 19:51	1
1,2,3-Trichlorobenzene	ND	2.0	0.43 ug/L			08/02/24 19:51	1
Hexachlorobutadiene	ND	3.0	0.79 ug/L			08/02/24 19:51	1
Naphthalene	ND	3.0	0.93 ug/L			08/02/24 19:51	1
Methyl tert-butyl ether	ND	1.0	0.44 ug/L			08/02/24 19:51	1
Surrogate	%Recovery Qu	ualifier Limits			Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99	80 - 120		-		08/02/24 19:51	1
4-Bromofluorobenzene (Surr)	99	80 - 120				08/02/24 19:51	1
Dibromofluoromethane (Surr)	103	80 - 120				08/02/24 19:51	1

80 - 120

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-17-SO-39-20240729

Lab Sample ID: 580-142513-11 Date Collected: 07/29/24 12:10 Matrix: Solid Date Received: 07/30/24 13:20 Percent Solids: 94.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed mg/Kg 1,1,1,2-Tetrachloroethane ND 0.020 0.0051 08/02/24 11:41 08/03/24 02:42 ND 08/03/24 02:42 1.1.1-Trichloroethane 0.041 0.0047 mg/Kg 08/02/24 11:41 1,1,2,2-Tetrachloroethane ND 0.020 0.0078 mg/Kg 08/02/24 11:41 08/03/24 02:42 ND 0.0076 08/03/24 02:42 1,1,2-Trichloroethane 0.020 mg/Kg 08/02/24 11:41 1.1-Dichloroethane ND 0.041 0.0094 mg/Kg 08/02/24 11:41 08/03/24 02:42 ND 08/02/24 11:41 1,1-Dichloroethene 0.041 0.013 mg/Kg 08/03/24 02:42 1,1-Dichloropropene ND 0.041 0.0054 08/02/24 11:41 08/03/24 02:42 mg/Kg ND 0.082 0.041 08/02/24 11:41 08/03/24 02:42 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.041 0.012 mg/Kg 08/02/24 11:41 08/03/24 02:42 1,2,4-Trichlorobenzene ND 0.082 0.044 mg/Kg 08/02/24 11:41 08/03/24 02:42 1,2,4-Trimethylbenzene ND 0.041 0.014 mg/Kg 08/02/24 11:41 08/03/24 02:42 1.2-Dibromo-3-Chloropropane ND 0.061 0.016 ma/Ka 08/02/24 11:41 08/03/24 02:42 1 1,2-Dibromoethane ND 0.020 0.0039 mg/Kg 08/02/24 11:41 08/03/24 02:42 0.0090 0.041 0.0089 mg/Kg 08/02/24 11:41 08/03/24 02:42 1,2-Dichlorobenzene ND 0.020 0.0056 mg/Kg 08/02/24 11:41 08/03/24 02:42 1.2-Dichloroethane 0.0068 08/03/24 02:42 1,2-Dichloropropane ND 0.020 mg/Kg 08/02/24 11:41 ND 0.0078 1,3,5-Trimethylbenzene 0.041 mg/Kg 08/02/24 11:41 08/03/24 02:42 1,3-Dichlorobenzene ND 0.061 0.014 mg/Kg 08/02/24 11:41 08/03/24 02:42 08/03/24 02:42 1,3-Dichloropropane ND 0.061 0.0057 mg/Kg 08/02/24 11:41 mg/Kg 1,4-Dichlorobenzene ND 0.061 0.011 08/02/24 11:41 08/03/24 02:42 2,2-Dichloropropane ND 0.041 0.012 mg/Kg ÷ 08/02/24 11:41 08/03/24 02:42 2-Chlorotoluene ND 0.041 0.0090 mg/Kg 08/02/24 11:41 08/03/24 02:42 0.010 4-Chlorotoluene ND mg/Kg 08/02/24 11:41 08/03/24 02:42 0.041 4-Isopropyltoluene ND 0.041 0.010 mg/Kg 08/02/24 11:41 08/03/24 02:42 0.0049 0.020 0.0039 mg/Kg 08/02/24 11:41 08/03/24 02:42 Benzene J<sub>B</sub> 0.0043 08/03/24 02:42 Bromobenzene ND 0.041 mg/Kg 08/02/24 11:41 Bromochloromethane ND 0.041 0.0064 mg/Kg 08/02/24 11:41 08/03/24 02:42 Bromodichloromethane 0.0056 08/03/24 02:42 ND 0.041 mg/Kg 08/02/24 11:41 0.0046 Bromoform ND 0.041 mg/Kg 08/02/24 11:41 08/03/24 02:42 0.039 Bromomethane ND 08/03/24 02:42 0.10 mg/Kg 08/02/24 11:41 Carbon tetrachloride ND 0.020 0.0045 mg/Kg 08/02/24 11:41 08/03/24 02:42 Chloroform ND 0.020 0.0043 mg/Kg 08/02/24 11:41 08/03/24 02:42 Chloromethane ND 0.061 0.010 mg/Kg 08/02/24 11:41 08/03/24 02:42 0.013 cis-1.2-Dichloroethene ND 08/02/24 11:41 08/03/24 02:42 0.061 mg/Kg cis-1,3-Dichloropropene ND 0.020 0.0041 mg/Kg 08/02/24 11:41 08/03/24 02:42 Dibromochloromethane ND 0.020 0.0050 mg/Kg 08/02/24 11:41 08/03/24 02:42 0.0076 Dibromomethane ND 0.041 mg/Kg 08/02/24 11:41 08/03/24 02:42 Dichlorodifluoromethane ND 0.26 0.047 mg/Kg 08/02/24 11:41 08/03/24 02:42 0.041 0.0093 mg/Kg 08/03/24 02:42 Ethylbenzene 0.013 08/02/24 11:41 Hexachlorobutadiene ND 0.10 0.024 mg/Kg 08/02/24 11:41 08/03/24 02:42 Isopropylbenzene ND 0.041 0.0088 mg/Kg 08/02/24 11:41 08/03/24 02:42 Methyl tert-butyl ether ND 0.041 0.0061 mg/Kg 08/02/24 11:41 08/03/24 02:42 ND 0.027 08/03/24 02:42 Methylene Chloride 0.26 mg/Kg 08/02/24 11:41 0.041 0.0073 08/02/24 11:41 08/03/24 02:42 m-Xylene & p-Xylene 0.094 mg/Kg Naphthalene ND 08/03/24 02:42 0.15 0.040 mg/Kg 08/02/24 11:41 n-Butylbenzene ND 0.041 0.019 mg/Kg 08/02/24 11:41 08/03/24 02:42 N-Propylbenzene ND 0.015 08/03/24 02:42 0.041 mg/Kg 08/02/24 11:41 o-Xylene 0.019 0.041 0.0051 mg/Kg ť 08/02/24 11:41 08/03/24 02:42 0.0088 mg/Kg sec-Butylbenzene ND 0.041 08/02/24 11:41 08/03/24 02:42

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-17-SO-39-20240729

Date Collected: 07/29/24 12:10

Date Received: 07/30/24 13:20

Lab Sample ID: 580-142513-11

**Matrix: Solid** Percent Solids: 94.2

Method: SW846 8260D -	Volatile Organic	Compoun	ds by GC/MS	(Conti	inued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.041	0.013	mg/Kg	₽	08/02/24 11:41	08/03/24 02:42	1
t-Butylbenzene	ND		0.041	0.0079	mg/Kg	₽	08/02/24 11:41	08/03/24 02:42	1
Tetrachloroethene	ND		0.041	0.0054	mg/Kg	₽	08/02/24 11:41	08/03/24 02:42	1
Toluene	ND		0.061	0.014	mg/Kg	₽	08/02/24 11:41	08/03/24 02:42	1
trans-1,2-Dichloroethene	ND		0.061	0.015	mg/Kg	₽	08/02/24 11:41	08/03/24 02:42	1
trans-1,3-Dichloropropene	ND		0.041	0.0072	mg/Kg	≎	08/02/24 11:41	08/03/24 02:42	1
Trichloroethene	ND		0.041	0.011	mg/Kg	₽	08/02/24 11:41	08/03/24 02:42	1
Trichlorofluoromethane	ND		0.082	0.027	mg/Kg	☼	08/02/24 11:41	08/03/24 02:42	1
Vinyl chloride	ND		0.10	0.019	mg/Kg	☼	08/02/24 11:41	08/03/24 02:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				08/02/24 11:41	08/03/24 02:42	1
4-Bromofluorobenzene (Surr)	100		80 - 120				08/02/24 11:41	08/03/24 02:42	1
Dibromofluoromethane (Surr)	102		80 - 120				08/02/24 11:41	08/03/24 02:42	1
Toluene-d8 (Surr)	98		80 - 120				08/02/24 11:41	08/03/24 02:42	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	15		0.44	0.053	mg/Kg	<u></u>	08/05/24 00:16	08/05/24 15:45	1
Chloroethane	ND	*+	0.88	0.23	mg/Kg	☼	08/05/24 00:16	08/05/24 15:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		80 - 121				08/05/24 00:16	08/05/24 15:45	1
4-Bromofluorobenzene (Surr)	99		80 - 120				08/05/24 00:16	08/05/24 15:45	1
Dibromofluoromethane (Surr)	103		80 - 120				08/05/24 00:16	08/05/24 15:45	1
Toluene-d8 (Surr)	99		80 - 120				08/05/24 00:16	08/05/24 15:45	1

General Chemistry Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	94.2		0.1	0.1	%			08/03/24 16:27	1
Percent Moisture (SM22 2540G)	5.8		0.1	0.1	%			08/03/24 16:27	1

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-15-SO-38-20240725

Lab Sample ID: 580-142513-12 Date Collected: 07/25/24 12:20 **Matrix: Solid** Date Received: 07/30/24 13:20

Percent Solids: 95.2

Method: SW846 8270E - Sem Analyte	_	Qualifier	RL	•	Unit	D	Prepared	Analyzed	Dil Fa
Phenol	ND		3000	450	ug/Kg	— <u>-</u>	08/05/24 13:37	08/07/24 22:07	
Bis(2-chloroethyl)ether	ND		2000	150			08/05/24 13:37	08/07/24 22:07	2
2-Chlorophenol	210	J	3900	79		₩.	08/05/24 13:37	08/07/24 22:07	2
1,3-Dichlorobenzene	ND		990		ug/Kg		08/05/24 13:37		2
1,4-Dichlorobenzene	1400		990	160	ug/Kg	₩	08/05/24 13:37	08/07/24 22:07	2
Benzyl alcohol	ND		20000	5100	ug/Kg	₩	08/05/24 13:37	08/07/24 22:07	2
1,2-Dichlorobenzene	720		990		ug/Kg		08/05/24 13:37		2
2-Methylphenol	ND	J	3000	190	0 0	₩ ₩	08/05/24 13:37		2
• •	ND ND								
3 & 4 Methylphenol			3900		ug/Kg	· · · · ·	08/05/24 13:37		2
N-Nitrosodi-n-propylamine	ND		3900		ug/Kg	<b>*</b>		08/07/24 22:07	2
Nitrobenzene	ND		3900		ug/Kg	<b>‡</b>	08/05/24 13:37		2
sophorone	ND		3000		ug/Kg	<u>.</u> .	08/05/24 13:37		
2-Nitrophenol	13000		3900		ug/Kg	₩	08/05/24 13:37		2
2,4-Dimethylphenol	ND		4000	1200	ug/Kg	☼	08/05/24 13:37		2
Benzoic acid	ND		79000	24000	ug/Kg	<del>.</del>	08/05/24 13:37	08/07/24 22:07	
Bis(2-chloroethoxy)methane	ND		3900	360	0 0	≎	08/05/24 13:37		2
2,4-Dichlorophenol	ND		4000	550	ug/Kg	₽	08/05/24 13:37		2
,2,4-Trichlorobenzene	ND		990	120	ug/Kg		08/05/24 13:37	08/07/24 22:07	
laphthalene	1200		490	99	ug/Kg	≎	08/05/24 13:37	08/07/24 22:07	:
-Chloroaniline	ND		30000	2600	ug/Kg	≎	08/05/24 13:37	08/07/24 22:07	2
lexachlorobutadiene	160000		990	300	ug/Kg	₩	08/05/24 13:37	08/07/24 22:07	:
-Chloro-3-methylphenol	ND		3000	650	ug/Kg	₩	08/05/24 13:37	08/07/24 22:07	
-Methylnaphthalene	280	J	990	170	ug/Kg	₩	08/05/24 13:37	08/07/24 22:07	2
łexachlorocyclopentadiene	340	J	2000	150	ug/Kg	≎	08/05/24 13:37	08/07/24 22:07	2
2,4,6-Trichlorophenol	ND		3000	650	ug/Kg	≎	08/05/24 13:37	08/07/24 22:07	
,4,5-Trichlorophenol	ND		3900	160	ug/Kg	≎	08/05/24 13:37	08/07/24 22:07	:
-Chloronaphthalene	ND		490	99	ug/Kg	☆	08/05/24 13:37	08/07/24 22:07	:
?-Nitroaniline	ND		2000	300	ug/Kg	₩	08/05/24 13:37	08/07/24 22:07	:
Dimethyl phthalate	ND		3000	99	ug/Kg	≎	08/05/24 13:37	08/07/24 22:07	2
Acenaphthylene	ND		490	99	ug/Kg	≎	08/05/24 13:37	08/07/24 22:07	2
2,6-Dinitrotoluene	ND		3000		ug/Kg	₩	08/05/24 13:37	08/07/24 22:07	
3-Nitroaniline	ND		5900	2000	ug/Kg	₩	08/05/24 13:37	08/07/24 22:07	2
Acenaphthene	320	J	790	91		₩	08/05/24 13:37	08/07/24 22:07	:
2,4-Dinitrophenol	ND		39000	12000				08/07/24 22:07	
4-Nitrophenol	ND		39000		ug/Kg	₩		08/07/24 22:07	2
Dibenzofuran	600	.1	3000		ug/Kg	₩		08/07/24 22:07	
2,4-Dinitrotoluene	ND		3900		ug/Kg		08/05/24 13:37		
Diethyl phthalate	ND		7900		ug/Kg			08/07/24 22:07	
-Chlorophenyl phenyl ether	ND		3900		ug/Kg	~ ☆		08/07/24 22:07	:
			490		ug/Kg ug/Kg			08/07/24 22:07	
Fluorene I-Nitroaniline	<b>910</b> ND							08/07/24 22:07	·
			3000		ug/Kg	φ.			
I,6-Dinitro-2-methylphenol	ND		20000		ug/Kg	<del>.</del>		08/07/24 22:07	
N-Nitrosodiphenylamine	ND		1200		ug/Kg	φ.		08/07/24 22:07	2
-Bromophenyl phenyl ether	ND		3900		ug/Kg	<b>‡</b>		08/07/24 22:07	
	8800		990		ug/Kg	<u>.</u> .		08/07/24 22:07	
Pentachlorophenol	8500	J	11000		ug/Kg	☼		08/07/24 22:07	2
Phenanthrene	19000		1200		ug/Kg	₩		08/07/24 22:07	2
Anthracene	610	J	1200	320	ug/Kg	₩		08/07/24 22:07	
Di-n-butyl phthalate	ND		9900	930	ug/Kg	₩	08/05/24 13:37	08/07/24 22:07	:

**Eurofins Seattle** 

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-15-SO-38-20240725

Date Collected: 07/25/24 12:20

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Date Received: 07/30/24 13:20

	s: 95.2	Matrix Percent Solid	l	
5	Dil Fac	Analyzed	Prepared	D
	20	08/07/24 22:07	08/05/24 13:37	₩
6	20	08/07/24 22:07	08/05/24 13:37	₩
	20	08/07/24 22:07	08/05/24 13:37	₽
	20	08/07/24 22:07	08/05/24 13:37	₩
	20	08/07/24 22:07	08/05/24 13:37	₩

Lab Sample ID: 580-142513-12

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	26000		790	240	ug/Kg	₽	08/05/24 13:37	08/07/24 22:07	20
Pyrene	11000		1200	260	ug/Kg	₩	08/05/24 13:37	08/07/24 22:07	20
Butyl benzyl phthalate	ND		3900	1000	ug/Kg	₽	08/05/24 13:37	08/07/24 22:07	20
3,3'-Dichlorobenzidine	ND		11000	5600	ug/Kg	₩	08/05/24 13:37	08/07/24 22:07	20
Benzo[a]anthracene	5700		790	220	ug/Kg	₩	08/05/24 13:37	08/07/24 22:07	20
Chrysene	10000		1200	260	ug/Kg	₽	08/05/24 13:37	08/07/24 22:07	20
Di-n-octyl phthalate	ND	*3	3900	1800	ug/Kg	₩	08/05/24 13:37	08/07/24 22:07	20
Benzo[a]pyrene	ND	*3	2100	770	ug/Kg	₩	08/05/24 13:37	08/07/24 22:07	20
Dibenz(a,h)anthracene	ND	*3	2100	930	ug/Kg	₩	08/05/24 13:37	08/07/24 22:07	20
Carbazole	380	J	3000	140	ug/Kg	₩	08/05/24 13:37	08/07/24 22:07	20
1-Methylnaphthalene	160	J	590	99	ug/Kg	₩	08/05/24 13:37	08/07/24 22:07	20
Benzo[k]fluoranthene	ND	*3	1200	280	ug/Kg	₽	08/05/24 13:37	08/07/24 22:07	20
bis(chloroisopropyl) ether	ND		3900	120	ug/Kg	₽	08/05/24 13:37	08/07/24 22:07	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	94		58 - 120	08/05/24 13:37	08/07/24 22:07	20
Phenol-d5 (Surr)	113		59 - 120	08/05/24 13:37	08/07/24 22:07	20
Nitrobenzene-d5 (Surr)	0	S1-	63 - 120	08/05/24 13:37	08/07/24 22:07	20
2-Fluorobiphenyl	101		64 - 120	08/05/24 13:37	08/07/24 22:07	20
2,4,6-Tribromophenol (Surr)	214	S1+	62 - 122	08/05/24 13:37	08/07/24 22:07	20
Terphenyl-d14 (Surr)	105		73 - 125	08/05/24 13:37	08/07/24 22:07	20

#### Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) - DL

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)		S1-	58 - 120	08/05/24 13:37	08/13/24 13:41	500
Phenol-d5 (Surr)	0	S1-	59 - 120	08/05/24 13:37	08/13/24 13:41	500
Nitrobenzene-d5 (Surr)	0	S1-	63 - 120	08/05/24 13:37	08/13/24 13:41	500
2-Fluorobiphenyl	92		64 - 120	08/05/24 13:37	08/13/24 13:41	500
2,4,6-Tribromophenol (Surr)	0	S1-	62 - 122	08/05/24 13:37	08/13/24 13:41	500
Terphenyl-d14 (Surr)	0	S1-	73 - 125	08/05/24 13:37	08/13/24 13:41	500

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) - DL2										
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Hexachloroethane	5800000		150000	4200	ug/Kg	<del>-</del>	08/05/24 13:37	08/13/24 14:26	1000	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
2-Fluorophenol (Surr)	0	S1-	58 - 120				08/05/24 13:37	08/13/24 14:26	1000	
Phenol-d5 (Surr)	0	S1-	59 - 120				08/05/24 13:37	08/13/24 14:26	1000	
Nitrobenzene-d5 (Surr)	0	S1-	63 - 120				08/05/24 13:37	08/13/24 14:26	1000	
2-Fluorobiphenvl	0	S1-	64 - 120				08/05/24 13:37	08/13/24 14:26	1000	

	Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
	Method: SW846 8270E - Semivolat	ile Organic Compo	ounds (GC/MS	S) - RA				
Ĺ	Terphenyl-d14 (Surr)	0 S1-	73 - 125		(	08/05/24 13:37	08/13/24 14:26	1000
	2,4,6-Tribromophenol (Surr)	0 S1-	62 - 122		(	08/05/24 13:37	08/13/24 14:26	1000
	2-Fluorobiphenyl	0 S1-	64 - 120			08/05/24 13:37	08/13/24 14:26	1000

Analyte	Result Qualifi	ier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND ND	12000	1400	ug/Kg	— <u></u>	08/05/24 13:37	08/13/24 13:17	20
Indeno[1,2,3-cd]pyrene	1700	790	240	ug/Kg	₩	08/05/24 13:37	08/13/24 13:17	20
Benzo[g,h,i]perylene	2000	1200	360	ug/Kg	₩	08/05/24 13:37	08/13/24 13:17	20
Benzo[b]fluoranthene	13000	790	200	ug/Kg	₽	08/05/24 13:37	08/13/24 13:17	20

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Date Collected: 07/25/24 12:20

Date Received: 07/30/24 13:20

Matrix: Solid
Percent Solids: 95.2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	57	S1-	58 - 120	08/05/24 13:37	08/13/24 13:17	20
Phenol-d5 (Surr)	29	S1-	59 - 120	08/05/24 13:37	08/13/24 13:17	20
Nitrobenzene-d5 (Surr)	0	S1-	63 - 120	08/05/24 13:37	08/13/24 13:17	20
2-Fluorobiphenyl	95		64 - 120	08/05/24 13:37	08/13/24 13:17	20
2,4,6-Tribromophenol (Surr)	76		62 - 122	08/05/24 13:37	08/13/24 13:17	20
Terphenyl-d14 (Surr)	90		73 - 125	08/05/24 13:37	08/13/24 13:17	20

General Chemistry Analyte	Result Qualifie	er RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	95.2	0.1	0.1	%			08/03/24 16:27	1
Percent Moisture (SM22 2540G)	4.8	0.1	0.1	%			08/03/24 16:27	1

8

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10

10

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-17-SO-33-20240729

Lab Sample ID: 580-142513-13 Date Collected: 07/29/24 13:10 **Matrix: Solid** Date Received: 07/30/24 13:20 Percent Solids: 94.5

Method: SW846 8260D - Vola		-	•	5					
Analyte	Result	Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND		0.026	0.0065	mg/Kg	☆	08/02/24 11:41	08/03/24 03:04	
1,1,1-Trichloroethane	ND		0.052	0.0060	mg/Kg	☼	08/02/24 11:41	08/03/24 03:04	
1,1,2,2-Tetrachloroethane	ND		0.026	0.0099	mg/Kg	☼	08/02/24 11:41	08/03/24 03:04	
1,1,2-Trichloroethane	ND		0.026	0.0096	mg/Kg	₩	08/02/24 11:41	08/03/24 03:04	
1,1-Dichloroethane	ND		0.052	0.012	mg/Kg	☼	08/02/24 11:41	08/03/24 03:04	
1,1-Dichloroethene	ND		0.052	0.016	mg/Kg	₩	08/02/24 11:41	08/03/24 03:04	
1,1-Dichloropropene	ND		0.052	0.0069	mg/Kg	₩	08/02/24 11:41	08/03/24 03:04	
1,2,3-Trichlorobenzene	ND		0.10	0.051	mg/Kg	₩	08/02/24 11:41	08/03/24 03:04	
1,2,3-Trichloropropane	ND		0.052	0.015	mg/Kg	₩	08/02/24 11:41	08/03/24 03:04	
1,2,4-Trichlorobenzene	ND		0.10	0.055	mg/Kg	₩	08/02/24 11:41	08/03/24 03:04	
1,2,4-Trimethylbenzene	ND		0.052	0.018	mg/Kg	₩	08/02/24 11:41	08/03/24 03:04	
1,2-Dibromo-3-Chloropropane	ND		0.078	0.020	mg/Kg	₩	08/02/24 11:41	08/03/24 03:04	
1,2-Dibromoethane	ND		0.026	0.0049	mg/Kg	₩	08/02/24 11:41	08/03/24 03:04	
1,2-Dichlorobenzene	0.15		0.052	0.011	mg/Kg	₩	08/02/24 11:41	08/03/24 03:04	
1,2-Dichloroethane	ND		0.026	0.0071	mg/Kg	₩	08/02/24 11:41	08/03/24 03:04	
1,2-Dichloropropane	ND		0.026	0.0086	mg/Kg	₩	08/02/24 11:41	08/03/24 03:04	
1,3,5-Trimethylbenzene	ND		0.052	0.0099	mg/Kg	₩	08/02/24 11:41	08/03/24 03:04	
1,3-Dichlorobenzene	ND		0.078	0.017	mg/Kg	₩	08/02/24 11:41	08/03/24 03:04	
1,3-Dichloropropane	ND		0.078	0.0073		∴	08/02/24 11:41	08/03/24 03:04	
1,4-Dichlorobenzene	0.37		0.078		mg/Kg	₩	08/02/24 11:41	08/03/24 03:04	
2,2-Dichloropropane	ND		0.052		mg/Kg	₩	08/02/24 11:41		
2-Chlorotoluene	ND		0.052		mg/Kg	∷. ₩		08/03/24 03:04	
4-Chlorotoluene	ND		0.052		mg/Kg			08/03/24 03:04	
4-Isopropyltoluene	ND		0.052		mg/Kg	₩.	08/02/24 11:41		
Benzene		JB	0.026	0.0049				08/03/24 03:04	
Bromobenzene	ND	0 B	0.052	0.0054			08/02/24 11:41		
Bromochloromethane	ND		0.052	0.0080	0 0	~ ☆	08/02/24 11:41		
Bromodichloromethane	ND		0.052		mg/Kg			08/03/24 03:04	
Bromoform	ND		0.052	0.0058	0 0	₩		08/03/24 03:04	
Bromomethane	ND		0.032		mg/Kg	₩		08/03/24 03:04	
Carbon tetrachloride			0.026	0.0057				08/03/24 03:04	
	0.013 0.019	J	0.026	0.0054		₩		08/03/24 03:04	
Chloroform Chloromethane	0.019 ND	J	0.020		0 0			08/03/24 03:04	
					mg/Kg	· · · · · · · · · · · · · · · · · · ·		08/03/24 03:04	
cis-1,2-Dichloroethene	ND ND		0.078		mg/Kg	φ.		08/03/24 03:04	
cis-1,3-Dichloropropene			0.026	0.0052		₩.			
Dibromochloromethane	ND		0.026	0.0064		<u>.</u>	08/02/24 11:41		
Dibromomethane	ND		0.052	0.0096		₽	08/02/24 11:41		
Dichlorodifluoromethane	ND		0.32		mg/Kg	₩		08/03/24 03:04	
Ethylbenzene	0.021	J	0.052		mg/Kg	<del>.</del>	08/02/24 11:41		
Hexachlorobutadiene	ND		0.13		mg/Kg	☼		08/03/24 03:04	
Isopropylbenzene	ND		0.052		mg/Kg	₩	08/02/24 11:41		
Methyl tert-butyl ether	ND		0.052	0.0078		₩	08/02/24 11:41		
Methylene Chloride	ND		0.32		mg/Kg	₩		08/03/24 03:04	
m-Xylene & p-Xylene	0.14		0.052	0.0092		₩	08/02/24 11:41		
Naphthalene	ND		0.19		mg/Kg			08/03/24 03:04	
n-Butylbenzene	ND		0.052		mg/Kg	₽	08/02/24 11:41	08/03/24 03:04	
N-Propylbenzene	ND		0.052	0.019	mg/Kg	₩	08/02/24 11:41	08/03/24 03:04	
o-Xylene	0.032	J	0.052	0.0065	mg/Kg	₩	08/02/24 11:41	08/03/24 03:04	
sec-Butylbenzene	ND		0.052	0.011	mg/Kg	₩	08/02/24 11:41	08/03/24 03:04	

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Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-17-SO-33-20240729

Date Collected: 07/29/24 13:10

Date Received: 07/30/24 13:20

Lab Sample ID: 580-142513-13

**Matrix: Solid** 

Percent Solids: 94.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.052	0.016	mg/Kg	— <u></u>	08/02/24 11:41	08/03/24 03:04	1
t-Butylbenzene	ND		0.052	0.010	mg/Kg	₩	08/02/24 11:41	08/03/24 03:04	1
Tetrachloroethene	0.013		0.052	0.0069	mg/Kg		08/02/24 11:41	08/03/24 03:04	1
Toluene	ND		0.078		mg/Kg	₩	08/02/24 11:41	08/03/24 03:04	1
trans-1,2-Dichloroethene	ND		0.078		mg/Kg	₩	08/02/24 11:41	08/03/24 03:04	1
trans-1,3-Dichloropropene	ND		0.052	0.0091			08/02/24 11:41	08/03/24 03:04	1
Trichloroethene	0.016	J	0.052	0.013	mg/Kg	₩	08/02/24 11:41	08/03/24 03:04	1
Trichlorofluoromethane	ND		0.10		mg/Kg	₩	08/02/24 11:41	08/03/24 03:04	1
Vinyl chloride	ND		0.13	0.024	mg/Kg	₩	08/02/24 11:41	08/03/24 03:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				08/02/24 11:41	08/03/24 03:04	1
4-Bromofluorobenzene (Surr)	99		80 - 120				08/02/24 11:41	08/03/24 03:04	1
Dibromofluoromethane (Surr)	100		80 - 120				08/02/24 11:41	08/03/24 03:04	1
Toluene-d8 (Surr)	98		80 - 120				08/02/24 11:41	08/03/24 03:04	1
Method: SW846 8260D - Vo	latile Organic	Compound	ds by GC/MS	- DL					
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	25		0.56	0.067	mg/Kg	<del>-</del>	08/09/24 11:13	08/09/24 15:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		80 - 121				08/09/24 11:13	08/09/24 15:27	1
4-Bromofluorobenzene (Surr)	98		80 - 120				08/09/24 11:13	08/09/24 15:27	1
Dibromofluoromethane (Surr)	104		80 - 120				08/09/24 11:13	08/09/24 15:27	1
Toluene-d8 (Surr)	97		80 - 120				08/09/24 11:13	08/09/24 15:27	1
Method: SW846 8260D - Vo	latile Organic	Compound	ds by GC/MS	- RA					
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	0.17		0.10	0.027	mg/Kg	<u></u>	08/09/24 11:13	08/09/24 15:48	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	0.17		0.10	0.027	mg/Kg	☆	08/09/24 11:13	08/09/24 15:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				08/09/24 11:13	08/09/24 15:48	1
4-Bromofluorobenzene (Surr)	101		80 - 120				08/09/24 11:13	08/09/24 15:48	1
Dibromofluoromethane (Surr)	100		80 - 120				08/09/24 11:13	08/09/24 15:48	1
Toluene-d8 (Surr)	100		80 - 120				08/09/24 11:13	08/09/24 15:48	1

General Chemistry							
Analyte	Result Qualifier	RL	RL Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	94.5	0.1	0.1 %			08/03/24 16:27	1
Percent Moisture (SM22 2540G)	5.5	0.1	0.1 %			08/03/24 16:27	1

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-17-SO-52.5-20240729

Lab Sample ID: 580-142513-14 Date Collected: 07/29/24 15:30 **Matrix: Solid** Date Received: 07/30/24 13:20 Percent Solids: 90.4

Method: SW846 8260D	- Volatile Organic	Compounds by	y GC/M	S					
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.036	0.0090	mg/Kg		08/02/24 11:41	08/02/24 22:45	1
1,1,1-Trichloroethane	ND		0.072	0.0083	mg/Kg	₩	08/02/24 11:41	08/02/24 22:45	1
1,1,2,2-Tetrachloroethane	ND		0.036	0.014	mg/Kg	☼	08/02/24 11:41	08/02/24 22:45	1
1,1,2-Trichloroethane	ND		0.036	0.013	mg/Kg		08/02/24 11:41	08/02/24 22:45	1
1,1-Dichloroethane	ND		0.072	0.017	mg/Kg	₩	08/02/24 11:41	08/02/24 22:45	1
1,1-Dichloroethene	ND		0.072	0.022	mg/Kg	₩	08/02/24 11:41	08/02/24 22:45	1
1,1-Dichloropropene	ND		0.072	0.0095			08/02/24 11:41	08/02/24 22:45	1
1,2,3-Trichlorobenzene	ND	F2	0.14	0.071	mg/Kg	₩	08/02/24 11:41	08/02/24 22:45	1
1,2,3-Trichloropropane	ND		0.072	0.021	mg/Kg	☼	08/02/24 11:41	08/02/24 22:45	1
1,2,4-Trichlorobenzene	ND		0.14	0.076	mg/Kg		08/02/24 11:41	08/02/24 22:45	1
1,2,4-Trimethylbenzene	ND		0.072	0.024	mg/Kg	☼	08/02/24 11:41	08/02/24 22:45	1
1,2-Dibromo-3-Chloropropane	ND		0.11		mg/Kg	÷	08/02/24 11:41		1
1,2-Dibromoethane	ND		0.036	0.0068			08/02/24 11:41		1
1,2-Dichlorobenzene	ND		0.072		mg/Kg	÷.	08/02/24 11:41		1
1,2-Dichloroethane	ND		0.036	0.0099	0 0	±	08/02/24 11:41		1
1,2-Dichloropropane	ND		0.036		mg/Kg		08/02/24 11:41		
1,3,5-Trimethylbenzene	ND		0.072		mg/Kg		08/02/24 11:41		1
1,3-Dichlorobenzene	ND		0.11		mg/Kg		08/02/24 11:41		1
1,3-Dichloropropane	ND		0.11		mg/Kg		08/02/24 11:41		·
1,4-Dichlorobenzene	ND		0.11		mg/Kg	**	08/02/24 11:41		1
2,2-Dichloropropane	ND		0.072		mg/Kg	**	08/02/24 11:41		1
2-Chlorotoluene	ND		0.072		mg/Kg	×	08/02/24 11:41		
4-Chlorotoluene	ND		0.072		mg/Kg	₩	08/02/24 11:41		1
4-Isopropyltoluene	ND ND		0.072		mg/Kg	₩	08/02/24 11:41		1
Benzene	0.011		0.072	0.0068			08/02/24 11:41		
Bromobenzene	ND	JB	0.030	0.0005		₩	08/02/24 11:41		1
Bromochloromethane	ND ND		0.072			**	08/02/24 11:41		1
Bromodichloromethane				0.0099	mg/Kg	14r			
Bromoform	ND ND		0.072 0.072			14:	08/02/24 11:41		1
	ND ND			0.0081	0 0	<b>*</b>	08/02/24 11:41		1
Bromomethane			0.18		mg/Kg		08/02/24 11:41		
Carbon tetrachloride	0.13	_	0.036	0.0079		<b>*</b>	08/02/24 11:41		1
Chlorobenzene	17	В	0.072	0.0086		<b>*</b>	08/02/24 11:41		1
Chloroform	0.059		0.036	0.0075		<del>.</del> .	08/02/24 11:41		
Chloromethane	ND		0.11		mg/Kg	<b>‡</b>	08/02/24 11:41		1
cis-1,2-Dichloroethene	ND		0.11		mg/Kg	☼	08/02/24 11:41		1
cis-1,3-Dichloropropene	ND		0.036	0.0072			08/02/24 11:41		1
Dibromochloromethane	ND		0.036	0.0088		☼	08/02/24 11:41		1
Dibromomethane	ND		0.072		mg/Kg	☼	08/02/24 11:41		1
Dichlorodifluoromethane	ND		0.45		mg/Kg		08/02/24 11:41		1
Ethylbenzene	0.039	J	0.072		mg/Kg	₩	08/02/24 11:41		1
Hexachlorobutadiene	ND		0.18		mg/Kg	☼	08/02/24 11:41		1
Isopropylbenzene	ND		0.072		mg/Kg		08/02/24 11:41		1
Methyl tert-butyl ether	ND		0.072	0.011	mg/Kg	☼	08/02/24 11:41	08/02/24 22:45	1
Methylene Chloride	ND		0.45	0.047	mg/Kg	₩	08/02/24 11:41	08/02/24 22:45	1
m-Xylene & p-Xylene	0.26		0.072	0.013	mg/Kg	₩	08/02/24 11:41	08/02/24 22:45	1
Naphthalene	ND	F2	0.27	0.070	mg/Kg	₩	08/02/24 11:41	08/02/24 22:45	1
n-Butylbenzene	ND		0.072	0.033	mg/Kg	₩	08/02/24 11:41	08/02/24 22:45	1
N-Propylbenzene	ND		0.072	0.027	mg/Kg	₩	08/02/24 11:41	08/02/24 22:45	1
o-Xylene	0.057	J	0.072	0.0090	mg/Kg	₩	08/02/24 11:41	08/02/24 22:45	1

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-17-SO-52.5-20240729

Lab Sample ID: 580-142513-14 Date Collected: 07/29/24 15:30 **Matrix: Solid** Date Received: 07/30/24 13:20 Percent Solids: 90.4

Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	(Conti	inued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.072	0.015	mg/Kg	≎	08/02/24 11:41	08/02/24 22:45	1
Styrene	ND		0.072	0.023	mg/Kg	☼	08/02/24 11:41	08/02/24 22:45	1
t-Butylbenzene	ND		0.072	0.014	mg/Kg	₩	08/02/24 11:41	08/02/24 22:45	1
Tetrachloroethene	0.015	J	0.072	0.0095	mg/Kg	☼	08/02/24 11:41	08/02/24 22:45	1
Toluene	ND		0.11	0.024	mg/Kg	☼	08/02/24 11:41	08/02/24 22:45	1
trans-1,2-Dichloroethene	ND		0.11	0.026	mg/Kg	₩	08/02/24 11:41	08/02/24 22:45	1
trans-1,3-Dichloropropene	ND		0.072	0.013	mg/Kg	₩	08/02/24 11:41	08/02/24 22:45	1
Trichloroethene	ND		0.072	0.018	mg/Kg	₩	08/02/24 11:41	08/02/24 22:45	1
Trichlorofluoromethane	ND		0.14	0.047	mg/Kg	₩	08/02/24 11:41	08/02/24 22:45	1
Vinyl chloride	ND		0.18	0.034	mg/Kg	≎	08/02/24 11:41	08/02/24 22:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				08/02/24 11:41	08/02/24 22:45	1
4-Bromofluorobenzene (Surr)	99		80 - 120				08/02/24 11:41	08/02/24 22:45	1
Dibromofluoromethane (Surr)	99		80 - 120				08/02/24 11:41	08/02/24 22:45	1
Toluene-d8 (Surr)	99		80 - 120				08/02/24 11:41	08/02/24 22:45	1
- Method: SW846 8260D - Vo	olatile Organic	Compoun	ds by GC/MS	- DL					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND	F1 *+	1.5	0.40	mg/Kg	☼	08/05/24 00:16	08/05/24 12:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		80 - 121				08/05/24 00:16	08/05/24 12:26	1
4-Bromofluorobenzene (Surr)	100		80 - 120				08/05/24 00:16	08/05/24 12:26	1
Dibromofluoromethane (Surr)	102		80 - 120				08/05/24 00:16	08/05/24 12:26	1

General Chemistry Analyte	Result Qualif	ier RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	90.4	0.1	0.1	%			08/03/24 16:27	1
Percent Moisture (SM22 2540G)	9.6	0.1	0.1	%			08/03/24 16:27	1

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-467012/7

**Matrix: Water** 

**Analysis Batch: 467012** 

Client Sample ID: Method Blank

**Prep Type: Total/NA** 

Ameliate	MB				1114	_	B	A	D:: -
Analyte		Qualifier	RL		Unit	<u>D</u> .	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.0	0.28	-			08/02/24 17:08	1
1,1-Dichloroethane	ND		1.0		ug/L			08/02/24 17:08	1
1,1,1-Trichloroethane	ND		1.0		ug/L			08/02/24 17:08	1
1,1-Dichloropropene	ND		1.0		ug/L			08/02/24 17:08	1
1,2-Dichloroethane	ND		1.0		ug/L			08/02/24 17:08	1
1,2-Dichloropropane	ND		1.0		ug/L			08/02/24 17:08	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			08/02/24 17:08	1
Benzene	ND		1.0	0.24	ug/L			08/02/24 17:08	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			08/02/24 17:08	1
Bromochloromethane	ND		1.0	0.29	ug/L			08/02/24 17:08	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			08/02/24 17:08	1
Bromodichloromethane	ND		1.0	0.29	ug/L			08/02/24 17:08	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			08/02/24 17:08	1
Bromomethane	ND		1.0	0.21	ug/L			08/02/24 17:08	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			08/02/24 17:08	1
Chlorobenzene	ND		1.0	0.44	ug/L			08/02/24 17:08	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			08/02/24 17:08	1
Chloroethane	ND		1.0		ug/L			08/02/24 17:08	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			08/02/24 17:08	1
Chloroform	ND		1.0		ug/L			08/02/24 17:08	1
Chloromethane	ND		1.0		ug/L			08/02/24 17:08	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			08/02/24 17:08	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			08/02/24 17:08	1
Bromoform	ND		1.0		ug/L			08/02/24 17:08	1
Dibromochloromethane	ND		1.0		ug/L			08/02/24 17:08	·
Bromobenzene	ND		1.0		ug/L			08/02/24 17:08	1
Dibromomethane	ND		1.0		ug/L			08/02/24 17:08	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/02/24 17:08	
1,2,3-Trichloropropane	ND		1.0		ug/L			08/02/24 17:08	1
Ethylbenzene	ND		1.0		ug/L			08/02/24 17:08	1
2-Chlorotoluene	ND		1.0		ug/L			08/02/24 17:08	
1,3,5-Trimethylbenzene	ND		1.0		ug/L			08/02/24 17:08	1
Isopropylbenzene	ND		1.0		ug/L			08/02/24 17:08	1
4-Chlorotoluene	ND		1.0		ug/L ug/L			08/02/24 17:08	
Methylene Chloride	ND ND		5.0		-			08/02/24 17:08	1
•					ug/L				1
1,2,4-Trimethylbenzene	ND		3.0		ug/L			08/02/24 17:08	
m-Xylene & p-Xylene	ND		2.0		ug/L			08/02/24 17:08	1
1,3-Dichlorobenzene	ND		1.0		ug/L			08/02/24 17:08	1
4-Isopropyltoluene	ND		1.0		ug/L			08/02/24 17:08	
N-Propylbenzene	ND		1.0		ug/L			08/02/24 17:08	1
1,4-Dichlorobenzene	ND		1.0		ug/L			08/02/24 17:08	1
o-Xylene	ND		1.0		ug/L			08/02/24 17:08	1
n-Butylbenzene	ND		1.0		ug/L			08/02/24 17:08	1
sec-Butylbenzene	ND		1.0		ug/L			08/02/24 17:08	1
1,2-Dichlorobenzene	ND		1.0		ug/L			08/02/24 17:08	1
Styrene	ND		1.0		ug/L			08/02/24 17:08	1
1,2-Dibromo-3-Chloropropane	ND		3.0		ug/L			08/02/24 17:08	1
t-Butylbenzene	ND		2.0	0.58	ug/L			08/02/24 17:08	1

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Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-467012/7

**Matrix: Water** 

**Analysis Batch: 467012** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

	MB MB							
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND —	1.0	0.33	ug/L			08/02/24 17:08	1
Tetrachloroethene	ND	1.0	0.41	ug/L			08/02/24 17:08	1
1,2,3-Trichlorobenzene	ND	2.0	0.43	ug/L			08/02/24 17:08	1
Toluene	ND	1.0	0.39	ug/L			08/02/24 17:08	1
Hexachlorobutadiene	ND	3.0	0.79	ug/L			08/02/24 17:08	1
Naphthalene	ND	3.0	0.93	ug/L			08/02/24 17:08	1
trans-1,2-Dichloroethene	ND	1.0	0.39	ug/L			08/02/24 17:08	1
trans-1,3-Dichloropropene	ND	1.0	0.41	ug/L			08/02/24 17:08	1
Trichloroethene	ND	1.0	0.26	ug/L			08/02/24 17:08	1
Trichlorofluoromethane	ND	1.0	0.36	ug/L			08/02/24 17:08	1
Methyl tert-butyl ether	ND	1.0	0.44	ug/L			08/02/24 17:08	1
Vinyl chloride	ND	1.0	0.22	ug/L			08/02/24 17:08	1

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99	80 - 120		08/02/24 17:08	1
4-Bromofluorobenzene (Surr)	101	80 - 120		08/02/24 17:08	1
Dibromofluoromethane (Surr)	102	80 - 120		08/02/24 17:08	1
1,2-Dichloroethane-d4 (Surr)	105	80 - 120		08/02/24 17:08	1

Lab Sample ID: LCS 580-467012/4

**Matrix: Water** 

Analysis Ratch: 467012

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Analysis Batch: 467012								
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethene	5.00	4.98		ug/L		100	70 - 129	
1,1-Dichloroethane	5.00	5.12		ug/L		102	80 - 120	
1,1,1-Trichloroethane	5.00	5.15		ug/L		103	74 - 130	
1,1-Dichloropropene	5.00	5.25		ug/L		105	74 - 120	
1,2-Dichloroethane	5.00	5.38		ug/L		108	69 - 126	
1,2-Dichloropropane	5.00	5.12		ug/L		102	80 - 120	
2,2-Dichloropropane	5.00	5.84		ug/L		117	66 - 126	
Benzene	5.00	4.98		ug/L		100	80 - 122	
1,1,2-Trichloroethane	5.00	4.90		ug/L		98	80 - 121	
Bromochloromethane	5.00	5.17		ug/L		103	78 - 120	
1,3-Dichloropropane	5.00	5.15		ug/L		103	79 - 120	
Bromodichloromethane	5.00	5.19		ug/L		104	75 - 124	
1,2-Dibromoethane	5.00	5.12		ug/L		102	79 - 126	
Bromomethane	5.00	5.36		ug/L		107	36 - 150	
Carbon tetrachloride	5.00	5.29		ug/L		106	72 - 129	
Chlorobenzene	5.00	4.89		ug/L		98	80 - 120	
1,1,1,2-Tetrachloroethane	5.00	5.09		ug/L		102	79 - 120	
Chloroethane	5.00	5.49		ug/L		110	38 - 150	
1,1,2,2-Tetrachloroethane	5.00	4.88		ug/L		98	74 - 124	
Chloroform	5.00	5.09		ug/L		102	78 - 127	
Chloromethane	5.00	5.27		ug/L		105	25 - 150	
cis-1,2-Dichloroethene	5.00	5.21		ug/L		104	76 - 120	
cis-1,3-Dichloropropene	5.00	4.78		ug/L		96	77 - 120	
Bromoform	5.00	5.18		ug/L		104	56 - 139	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-467012/4

**Matrix: Water** 

**Analysis Batch: 467012** 

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

LCS LCS Spike %Rec

	Spike	LUS	LUS				70ReC	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Dibromochloromethane	5.00	4.88		ug/L		98	73 - 125	
Bromobenzene	5.00	4.78		ug/L		96	80 - 120	
Dibromomethane	5.00	5.39		ug/L		108	80 - 120	
Dichlorodifluoromethane	5.00	5.29		ug/L		106	20 - 150	
1,2,3-Trichloropropane	5.00	5.02		ug/L		100	76 - 124	
Ethylbenzene	5.00	5.14		ug/L		103	80 - 120	
2-Chlorotoluene	5.00	5.01		ug/L		100	80 - 120	
1,3,5-Trimethylbenzene	5.00	5.11		ug/L		102	80 - 122	
Isopropylbenzene	5.00	5.48		ug/L		110	80 - 123	
4-Chlorotoluene	5.00	5.28		ug/L		106	73 - 129	
Methylene Chloride	5.00	3.54	J *-	ug/L		71	77 - 125	
1,2,4-Trimethylbenzene	5.00	4.81		ug/L		96	80 - 120	
m-Xylene & p-Xylene	5.00	5.17		ug/L		103	80 - 120	
1,3-Dichlorobenzene	5.00	5.09		ug/L		102	77 - 127	
4-Isopropyltoluene	5.00	4.59		ug/L		92	77 - 126	
N-Propylbenzene	5.00	5.08		ug/L		102	80 - 122	
1,4-Dichlorobenzene	5.00	4.79		ug/L		96	80 - 120	
o-Xylene	5.00	5.23		ug/L		105	80 - 120	
n-Butylbenzene	5.00	4.62		ug/L		92	57 - 133	
sec-Butylbenzene	5.00	4.79		ug/L		96	78 - 122	
1,2-Dichlorobenzene	5.00	4.94		ug/L		99	80 - 120	
Styrene	5.00	4.87		ug/L		97	76 - 122	
1,2-Dibromo-3-Chloropropane	5.00	4.79		ug/L		96	65 - 133	
t-Butylbenzene	5.00	4.52		ug/L		90	75 - 123	
1,2,4-Trichlorobenzene	5.00	5.01		ug/L		100	61 - 148	
Tetrachloroethene	5.00	4.65		ug/L		93	76 - 125	
1,2,3-Trichlorobenzene	5.00	5.19		ug/L		104	65 - 150	
Toluene	5.00	4.85		ug/L		97	80 - 120	
Hexachlorobutadiene	5.00	4.71		ug/L		94	74 - 131	
Naphthalene	5.00	5.06		ug/L		101	63 - 150	
trans-1,2-Dichloroethene	5.00	4.99		ug/L		100	75 - 120	
trans-1,3-Dichloropropene	5.00	5.29		ug/L		106	76 - 122	
Trichloroethene	5.00	4.99		ug/L		100	80 - 125	
Trichlorofluoromethane	5.00	5.40		ug/L		108	45 - 148	
Methyl tert-butyl ether	5.00	5.66		ug/L		113	72 - 120	
Vinyl chloride	5.00	5.49		ug/L		110	31 - 150	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 120
4-Bromofluorobenzene (Surr)	104		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	102		80 - 120

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-467012/5

**Matrix: Water** 

Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA

Analysis Batch: 467012							i iep iy	pe. Tot	airiva
•	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	5.00	5.14		ug/L		103	70 - 129	3	23
1,1-Dichloroethane	5.00	5.23		ug/L		105	80 - 120	2	15
1,1,1-Trichloroethane	5.00	5.25		ug/L		105	74 - 130	2	19
1,1-Dichloropropene	5.00	5.30		ug/L		106	74 - 120	1	14
1,2-Dichloroethane	5.00	5.52		ug/L		110	69 - 126	2	11
1,2-Dichloropropane	5.00	5.22		ug/L		104	80 - 120	2	14
2,2-Dichloropropane	5.00	5.85		ug/L		117	66 - 126	0	22
Benzene	5.00	5.04		ug/L		101	80 - 122	1	14
1,1,2-Trichloroethane	5.00	4.91		ug/L		98	80 - 121	0	14
Bromochloromethane	5.00	5.37		ug/L		107	78 - 120	4	13
1,3-Dichloropropane	5.00	5.27		ug/L		105	79 - 120	2	19
Bromodichloromethane	5.00	5.33		ug/L		107	75 - 124	3	13
1,2-Dibromoethane	5.00	5.31		ug/L		106	79 - 126	4	12
Bromomethane	5.00	5.43		ug/L		109	36 - 150	1	33
Carbon tetrachloride	5.00	5.41		ug/L		108	72 - 129	2	19
Chlorobenzene	5.00	4.99		ug/L		100	80 - 120	2	10
1,1,1,2-Tetrachloroethane	5.00	5.19		ug/L		104	79 - 120	2	16
Chloroethane	5.00	5.35		ug/L		107	38 - 150	3	28
1,1,2,2-Tetrachloroethane	5.00	5.14		ug/L		103	74 - 124	5	25
Chloroform	5.00	5.18		ug/L		104	78 - 127	2	14
Chloromethane	5.00	5.36		ug/L		107	25 - 150	2	26
cis-1,2-Dichloroethene	5.00	5.26		ug/L		105	76 - 120	1	20
cis-1,3-Dichloropropene	5.00	4.92		ug/L		98	77 - 120	3	35
Bromoform	5.00	5.19		ug/L ug/L		104	56 - 139	0	21
Dibromochloromethane	5.00	5.02		ug/L		100	73 - 125	3	13
Bromobenzene	5.00	5.00		ug/L ug/L		100	80 - 120	5	24
Dibromomethane	5.00	5.42		ug/L ug/L		108	80 - 120	1	11
Dichlorodifluoromethane	5.00	5.40		ug/L		108	20 - 150	2	33
	5.00	5.18				104	76 <sub>-</sub> 124	3	26
1,2,3-Trichloropropane	5.00	5.16		ug/L		104	80 - 120	3	14
Ethylbenzene				ug/L			80 - 120		
2-Chlorotoluene	5.00	5.14		ug/L		103		2	20
1,3,5-Trimethylbenzene	5.00	5.25		ug/L		105	80 - 122	3	21
Isopropylbenzene	5.00	5.48		ug/L		110	80 - 123	0	19
4-Chlorotoluene	5.00	5.41		ug/L		108	73 - 129	2	29
Methylene Chloride	5.00	3.50		ug/L		70	77 - 125	1	18
1,2,4-Trimethylbenzene	5.00	4.86		ug/L		97	80 - 120	1	16
m-Xylene & p-Xylene	5.00	5.32		ug/L		106	80 - 120	3	14
1,3-Dichlorobenzene	5.00	5.14		ug/L		103	77 - 127	1	35
4-Isopropyltoluene	5.00	4.64		ug/L		93	77 - 126	1	20
N-Propylbenzene	5.00	5.22		ug/L		104	80 - 122	3	22
1,4-Dichlorobenzene	5.00	4.91		ug/L		98	80 - 120	3	17
o-Xylene	5.00	5.34		ug/L		107	80 - 120	2	16
n-Butylbenzene	5.00	4.60		ug/L		92	57 - 133	0	14
sec-Butylbenzene	5.00	4.89		ug/L		98	78 - 122	2	15
1,2-Dichlorobenzene	5.00	5.14		ug/L		103	80 - 120	4	15
Styrene	5.00	5.01		ug/L		100	76 - 122	3	16
1,2-Dibromo-3-Chloropropane	5.00	5.02		ug/L		100	65 - 133	5	25
t-Butylbenzene	5.00	4.60		ug/L		92	75 - 123	2	21

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8/13/2024

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Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-467012/5

**Matrix: Water** 

**Analysis Batch: 467012** 

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,2,4-Trichlorobenzene	5.00	5.11		ug/L		102	61 - 148	2	27
Tetrachloroethene	5.00	4.75		ug/L		95	76 - 125	2	13
1,2,3-Trichlorobenzene	5.00	5.38		ug/L		108	65 - 150	4	33
Toluene	5.00	4.97		ug/L		99	80 - 120	2	13
Hexachlorobutadiene	5.00	4.73		ug/L		95	74 - 131	0	22
Naphthalene	5.00	5.19		ug/L		104	63 - 150	3	33
trans-1,2-Dichloroethene	5.00	5.08		ug/L		102	75 - 120	2	21
trans-1,3-Dichloropropene	5.00	5.38		ug/L		108	76 - 122	2	20
Trichloroethene	5.00	5.14		ug/L		103	80 - 125	3	13
Trichlorofluoromethane	5.00	5.60		ug/L		112	45 - 148	4	35
Methyl tert-butyl ether	5.00	5.69		ug/L		114	72 - 120	1	18
Vinyl chloride	5.00	5.53		ug/L		111	31 - 150	1	26

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 120
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	103		80 - 120

Lab Sample ID: MB 580-467094/3-A

**Matrix: Solid** 

**Analysis Batch: 467098** 

Client Sample ID: Method Blank

**Prep Type: Total/NA** 

Prep Batch: 467094

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		0.040	0.012	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
1,1-Dichloroethane	ND		0.040	0.0092	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
1,1,1-Trichloroethane	ND		0.040	0.0046	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
1,1-Dichloropropene	ND		0.040	0.0053	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
1,2-Dichloroethane	ND		0.020	0.0055	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
1,2-Dichloropropane	ND		0.020	0.0066	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
2,2-Dichloropropane	ND		0.040	0.012	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
Benzene	0.00539	J	0.020	0.0038	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
1,1,2-Trichloroethane	ND		0.020	0.0074	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
Bromochloromethane	ND		0.040	0.0062	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
1,3-Dichloropropane	ND		0.060	0.0056	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
Bromodichloromethane	ND		0.040	0.0055	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
1,2-Dibromoethane	ND		0.020	0.0038	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
Bromomethane	ND		0.10	0.038	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
Carbon tetrachloride	ND		0.020	0.0044	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
Chlorobenzene	0.00747	J	0.040	0.0048	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
Chloroform	ND		0.020	0.0042	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
Chloromethane	ND		0.060	0.010	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
cis-1,2-Dichloroethene	ND		0.060	0.013	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
cis-1,3-Dichloropropene	ND		0.020	0.0040	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
Bromoform	ND		0.040	0.0045	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
Dibromochloromethane	ND		0.020	0.0049	mg/Kg		08/02/24 08:00	08/02/24 22:01	1

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

MB MB

Lab Sample ID: MB 580-467094/3-A

**Matrix: Solid** 

**Analysis Batch: 467098** 

Client Sample ID: Method Blank

**Prep Type: Total/NA** 

Prep Batch: 467094

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromobenzene	ND		0.040	0.0042	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
Dibromomethane	ND		0.040	0.0074	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
Dichlorodifluoromethane	ND		0.25	0.046	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
1,2,3-Trichloropropane	ND		0.040	0.012	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
Ethylbenzene	ND		0.040	0.0091	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
2-Chlorotoluene	ND		0.040	0.0088	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
1,3,5-Trimethylbenzene	ND		0.040	0.0076	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
Isopropylbenzene	ND		0.040	0.0086	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
4-Chlorotoluene	ND		0.040	0.0098	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
Methylene Chloride	ND		0.25	0.026	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
1,2,4-Trimethylbenzene	ND		0.040	0.014	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
m-Xylene & p-Xylene	ND		0.040	0.0071	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
1,3-Dichlorobenzene	ND		0.060	0.013	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
4-Isopropyltoluene	ND		0.040	0.010	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
N-Propylbenzene	ND		0.040	0.015	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
1,4-Dichlorobenzene	ND		0.060	0.011	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
o-Xylene	ND		0.040	0.0050	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
n-Butylbenzene	ND		0.040	0.019	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
1,2-Dichlorobenzene	ND		0.040	0.0087	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
Styrene	ND		0.040	0.013	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
1,2-Dibromo-3-Chloropropane	ND		0.060	0.015	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
1,2,4-Trichlorobenzene	ND		0.080	0.043	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
1,2,3-Trichlorobenzene	0.0603	J	0.080	0.040	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
Toluene	ND		0.060	0.014	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
Hexachlorobutadiene	0.0440	J	0.10	0.024	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
Naphthalene	ND		0.15	0.039	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
Trichloroethene	ND		0.040	0.010	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
Methyl tert-butyl ether	ND		0.040	0.0060	mg/Kg		08/02/24 08:00	08/02/24 22:01	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		08/02/24 08:00	08/02/24 22:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120	08/02/24 08:00	08/02/24 22:01	1
4-Bromofluorobenzene (Surr)	100		80 - 120	08/02/24 08:00	08/02/24 22:01	1
Dibromofluoromethane (Surr)	99		80 - 120	08/02/24 08:00	08/02/24 22:01	1
1,2-Dichloroethane-d4 (Surr)	99		80 - 121	08/02/24 08:00	08/02/24 22:01	1

Lab Sample ID: LCS 580-467094/1-A

**Matrix: Solid** 

**Analysis Batch: 467098** 

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA **Prep Batch: 467094** %Rec D %Rec Limits

Spike LCS LCS Analyte Added Result Qualifier Unit 1,1-Dichloroethene 0.800 0.784 98 73 - 134 mg/Kg

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-467094/1-A

Matrix: Solid

**Analysis Batch: 467098** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 467094** 

Analysis Batch: 467098	Spike Added		LCS Qualifier Unit	D %Rec	%Rec Limits
1,1-Dichloroethane	0.800	0.842	mg/Kg	105	78 - 126
1,1,1-Trichloroethane	0.800	0.838	mg/Kg	105	78 - 135
1,1-Dichloropropene	0.800	0.796	mg/Kg	99	76 - 140
1,2-Dichloroethane	0.800	0.751	mg/Kg	94	76 - 124
1,2-Dichloropropane	0.800	0.825	mg/Kg	103	73 - 130
2,2-Dichloropropane	0.800	0.840	mg/Kg	105	75 - 134
Benzene	0.800	0.777	mg/Kg	97	79 - 135
1,1,2-Trichloroethane	0.800	0.769	mg/Kg	96	80 - 123
Bromochloromethane	0.800	0.800	mg/Kg	100	76 - 131
1,3-Dichloropropane	0.800	0.798	mg/Kg	100	80 - 120
Bromodichloromethane	0.800	0.807	mg/Kg	101	78 - 125
1,2-Dibromoethane	0.800	0.761	mg/Kg	95	77 - 123
Bromomethane	0.800	0.546	mg/Kg	68	55 - 150
Carbon tetrachloride	0.800	0.915	mg/Kg	114	76 - 140
Chlorobenzene	0.800	0.725	mg/Kg	91	80 - 125
1,1,1,2-Tetrachloroethane	0.800	0.824	mg/Kg	103	79 - 128
1,1,2,2-Tetrachloroethane	0.800	0.766	mg/Kg	96	77 - 122
Chloroform	0.800	0.807	mg/Kg	101	74 - 133
Chloromethane	0.800	0.903	mg/Kg	113	52 - 142
cis-1,2-Dichloroethene	0.800	0.787	mg/Kg	98	80 - 125
cis-1,3-Dichloropropene	0.800	0.768	mg/Kg	96	80 - 122
Bromoform	0.800	0.719	mg/Kg	90	71 - 130
Dibromochloromethane	0.800	0.807	mg/Kg	101	75 - 125
Bromobenzene	0.800	0.765	mg/Kg	96	78 - 126
Dibromomethane	0.800	0.785	mg/Kg	98	72 - 130
Dichlorodifluoromethane	0.800	0.916	mg/Kg	115	33 - 150
1,2,3-Trichloropropane	0.800	0.730	mg/Kg	91	77 - 127
Ethylbenzene	0.800	0.789	mg/Kg	99	80 - 135
2-Chlorotoluene	0.800	0.799	mg/Kg	100	77 - 134
1,3,5-Trimethylbenzene	0.800	0.805	mg/Kg	101	72 - 134
Isopropylbenzene	0.800	0.899	mg/Kg	112	80 - 131
4-Chlorotoluene	0.800	0.765	mg/Kg	96	71 - 137
Methylene Chloride	0.800	0.672	mg/Kg	84	56 - 140
1,2,4-Trimethylbenzene	0.800	0.795	mg/Kg	99	73 - 138
m-Xylene & p-Xylene	0.800	0.780	mg/Kg	97	80 - 132
1,3-Dichlorobenzene	0.800	0.754	mg/Kg	94	78 - 132
4-Isopropyltoluene	0.800	0.790	mg/Kg	99	71 - 142
N-Propylbenzene	0.800	0.806	mg/Kg	101	78 - 133
1,4-Dichlorobenzene	0.800	0.749	mg/Kg	94	77 - 123
o-Xylene	0.800	0.837	mg/Kg	105	80 - 132
n-Butylbenzene	0.800	0.808	mg/Kg	101	69 - 143
sec-Butylbenzene	0.800	0.815	mg/Kg	102	71 - 143
1,2-Dichlorobenzene	0.800	0.764	mg/Kg	96	78 - 126
Styrene	0.800	0.805	mg/Kg	101	79 - 129
1,2-Dibromo-3-Chloropropane	0.800	0.788	mg/Kg	98	64 - 129
t-Butylbenzene	0.800	0.803	mg/Kg	100	72 - 144
1,2,4-Trichlorobenzene	0.800	0.784	mg/Kg	98	74 - 131
Tetrachloroethene	0.800	0.751	mg/Kg	94	75 - 141
1,2,3-Trichlorobenzene	0.800	0.779	mg/Kg	97	58 - 146

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-467094/1-A

Lab Sample ID: LCSD 580-467094/2-A

**Matrix: Solid** 

**Matrix: Solid** 

**Analysis Batch: 467098** 

**Client Sample ID: Lab Control Sample** 

Prep	Type: Total/NA
Prep	Batch: 467094
%Rec	

Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Toluene	0.800	0.780		mg/Kg		97	75 - 125	
Hexachlorobutadiene	0.800	0.832		mg/Kg		104	65 - 145	
Naphthalene	0.800	0.801		mg/Kg		100	56 - 145	
trans-1,2-Dichloroethene	0.800	0.811		mg/Kg		101	77 - 134	
trans-1,3-Dichloropropene	0.800	0.804		mg/Kg		100	80 - 121	
Trichloroethene	0.800	0.762		mg/Kg		95	80 - 134	
Trichlorofluoromethane	0.800	0.947		mg/Kg		118	71 - 150	
Methyl tert-butyl ether	0.800	0.808		mg/Kg		101	71 - 126	
Vinyl chloride	0.800	0.912		mg/Kg		114	62 - 144	

Spike

LCS LCS

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 120
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
1,2-Dichloroethane-d4 (Surr)	99		80 - 121

**Client Sample ID: Lab Control Sample Dup** 

**Prep Type: Total/NA** 

Analysis Batch: 467098							Prep Batch: 46		7094
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	0.800	0.792		mg/Kg		99	73 - 134	1	25
1,1-Dichloroethane	0.800	0.820		mg/Kg		103	78 - 126	3	20
1,1,1-Trichloroethane	0.800	0.829		mg/Kg		104	78 - 135	1	20
1,1-Dichloropropene	0.800	0.793		mg/Kg		99	76 - 140	0	20
1,2-Dichloroethane	0.800	0.754		mg/Kg		94	76 - 124	0	20
1,2-Dichloropropane	0.800	0.820		mg/Kg		103	73 - 130	1	20
2,2-Dichloropropane	0.800	0.851		mg/Kg		106	75 - 134	1	20
Benzene	0.800	0.776		mg/Kg		97	79 - 135	0	20
1,1,2-Trichloroethane	0.800	0.763		mg/Kg		95	80 - 123	1	20
Bromochloromethane	0.800	0.784		mg/Kg		98	76 - 131	2	20
1,3-Dichloropropane	0.800	0.770		mg/Kg		96	80 - 120	4	20
Bromodichloromethane	0.800	0.804		mg/Kg		101	78 - 125	0	20
1,2-Dibromoethane	0.800	0.764		mg/Kg		95	77 - 123	0	20
Bromomethane	0.800	0.532		mg/Kg		67	55 - 150	3	26
Carbon tetrachloride	0.800	0.900		mg/Kg		112	76 - 140	2	20
Chlorobenzene	0.800	0.718		mg/Kg		90	80 - 125	1	20
1,1,1,2-Tetrachloroethane	0.800	0.808		mg/Kg		101	79 - 128	2	20
1,1,2,2-Tetrachloroethane	0.800	0.757		mg/Kg		95	77 - 122	1	20
Chloroform	0.800	0.791		mg/Kg		99	74 - 133	2	20
Chloromethane	0.800	0.896		mg/Kg		112	52 - 142	1	40
cis-1,2-Dichloroethene	0.800	0.786		mg/Kg		98	80 - 125	0	20
cis-1,3-Dichloropropene	0.800	0.764		mg/Kg		96	80 - 122	0	20
Bromoform	0.800	0.724		mg/Kg		91	71 - 130	1	20
Dibromochloromethane	0.800	0.795		mg/Kg		99	75 - 125	2	20
Bromobenzene	0.800	0.759		mg/Kg		95	78 - 126	1	20
Dibromomethane	0.800	0.771		mg/Kg		96	72 - 130	2	40
Dichlorodifluoromethane	0.800	0.912		mg/Kg		114	33 - 150	0	31

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-467094/2-A

**Matrix: Solid** 

**Analysis Batch: 467098** 

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA Prep Batch: 467094

1,2,3-Trichloropropane         0.800         0.704         mg/Kg         88         77.127         4         20           Ethylbenzene         0.800         0.773         mg/Kg         98         80.135         0         20           2-Chlorotoluene         0.800         0.773         mg/Kg         97         77.134         3         21           1,3,5-Trimethylbenzene         0.800         0.803         mg/Kg         110         80.131         2         20           4-Chlorotoluene         0.800         0.883         mg/Kg         94         71.137         2         21           Methylene Chloride         0.800         0.663         mg/Kg         94         71.137         2         21           Methylene Chloride         0.800         0.766         mg/Kg         93         56.140         1         20           1,2,4-Trimethylbenzene         0.800         0.766         mg/Kg         96         80.132         2         20           1,2,4-Trimethylbenzene         0.800         0.761         mg/Kg         96         80.132         2         20           1,2-Dichlorobenzene         0.800         0.763         mg/Kg         98         71.142         1 <th></th> <th>Spike</th> <th>LCSD</th> <th>LCSD</th> <th></th> <th></th> <th></th> <th>%Rec</th> <th></th> <th>RPD</th>		Spike	LCSD	LCSD				%Rec		RPD
Ethylbenzene 0.800 0.786 mg/kg 98 80.135 0 20 2-Chlorotoluene 0.800 0.773 mg/kg 97 77.134 3 21 3.5-Timethylbenzene 0.800 0.803 mg/kg 100 72.134 0 24 Isopropylbenzene 0.800 0.883 mg/kg 110 80.131 2 20 4-Chlorotoluene 0.800 0.883 mg/kg 110 80.131 2 20 4-Chlorotoluene 0.800 0.754 mg/kg 94 71.137 2 21 4-Chlorotoluene 0.800 0.754 mg/kg 94 71.137 2 21 4-Chlorotoluene 0.800 0.7564 mg/kg 83 56.140 1 20 1.2-4-Trimethylbenzene 0.800 0.796 mg/kg 100 73.138 0 22 m-Xylene & p-Xylene & p-Xylen	Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2-Chlorotoluene	1,2,3-Trichloropropane	0.800	0.704		mg/Kg		88	77 - 127	4	20
1,3,5-Trimethylbenzene       0.800       0.803       mg/Kg       100       72 - 134       0       24         Isopropylbenzene       0.800       0.883       mg/Kg       110       80 - 131       2       20         4-Chlorotoluene       0.800       0.754       mg/Kg       94       71 - 137       2       21         Methylene Chloride       0.800       0.663       mg/Kg       83       56 - 140       1       20         1,2,4-Trimethylbenzene       0.800       0.768       mg/Kg       96       80 - 132       2       20         1,3-Dicklorobenzene       0.800       0.761       mg/Kg       95       78 - 132       1       20         4-Isopropyltoluene       0.800       0.763       mg/Kg       98       71 - 142       1       29         N-Propylbenzene       0.800       0.779       mg/Kg       93       77 - 123       0       20         A-I-Dichlorobenzene       0.800       0.747       mg/Kg       93       77 - 123       0       20         N-Putylbenzene       0.800       0.796       mg/Kg       99       71 - 143       3       29         N-Butylbenzene       0.800       0.796       mg/Kg	Ethylbenzene	0.800	0.786		mg/Kg		98	80 - 135	0	20
Sopropylbenzene   0.800   0.883   mg/Kg   110   80 - 131   2   20   20   4-Chlorotoluene   0.800   0.754   mg/Kg   94   71 - 137   2   21   21   21   22   21   22   23   23	2-Chlorotoluene	0.800	0.773		mg/Kg		97	77 - 134	3	21
4-Chlorotoluene	1,3,5-Trimethylbenzene	0.800	0.803		mg/Kg		100	72 - 134	0	24
Methylene Chloride         0.800         0.663         mg/Kg         83         56 - 140         1         20           1,2,4-Trimethylbenzene         0.800         0.796         mg/Kg         100         73 . 138         0         22           m-Xylene & p-Xylene         0.800         0.768         mg/Kg         96         80 . 132         2         2           1,3-Dichlorobenzene         0.800         0.761         mg/Kg         95         78 . 132         1         20           4-Isopropyltoluene         0.800         0.783         mg/Kg         97         78 . 133         3         24           N-Propylbenzene         0.800         0.779         mg/Kg         97         78 . 133         3         24           N-Propylbenzene         0.800         0.747         mg/Kg         93         77 . 123         0         20           o-Xylene         0.800         0.747         mg/Kg         93         77 . 123         0         20           o-Xylene         0.800         0.796         mg/Kg         99         69 . 143         1         31         3         29           n-Butylbenzene         0.800         0.796         mg/Kg         99         71	Isopropylbenzene	0.800	0.883		mg/Kg		110	80 - 131	2	20
1,2,4-Trimethylbenzene       0.800       0.796       mg/Kg       100       73.138       0       22         m-Xylene & p-Xylene       0.800       0.768       mg/Kg       96       80.132       2       20         1,3-Dichlorobenzene       0.800       0.761       mg/Kg       95       78.132       1       20         4-Isopropyltoluene       0.800       0.779       mg/Kg       97       78.133       3       24         N-Propylbenzene       0.800       0.779       mg/Kg       97       78.133       3       24         1,4-Dichlorobenzene       0.800       0.747       mg/Kg       93       77.123       0       20         0-Xylene       0.800       0.812       mg/Kg       93       77.123       0       20         0-Xylene       0.800       0.812       mg/Kg       99       99.143       1       3       29         n-Butylbenzene       0.800       0.796       mg/Kg       99       71.143       3       29         1,2-Dichlorobenzene       0.800       0.797       mg/Kg       99       72.143       3       29         1,2-Dichlorobenzene       0.800       0.774       mg/Kg       97	4-Chlorotoluene	0.800	0.754		mg/Kg		94	71 - 137	2	21
m. Xylene & p. Xylene         0.800         0.768         mg/Kg         96         80 - 132         2         20           1,3-Dichlorobenzene         0.800         0.761         mg/Kg         95         78 - 132         1         20           4-Isopropyltoluene         0.800         0.783         mg/Kg         98         71 - 142         1         29           N-Propylbenzene         0.800         0.779         mg/Kg         97         78 - 133         3         24           1,4-Dichlorobenzene         0.800         0.774         mg/Kg         93         77 - 123         0         20           o-Xylene         0.800         0.812         mg/Kg         93         77 - 123         0         20           n-Butylbenzene         0.800         0.796         mg/Kg         99         69 - 143         1         31         31         sec-Butylbenzene         0.800         0.796         mg/Kg         99         71 - 143         3         29         1,2-Dichlorobenzene         0.800         0.763         mg/Kg         95         78 - 126         0         20         Styrene         0.800         0.774         mg/Kg         100         79 - 129         1         20         1,2-Dichroro	Methylene Chloride	0.800	0.663		mg/Kg		83	56 - 140	1	20
1,3-Dichlorobenzene       0.800       0.761       mg/Kg       95       78 - 132       1       20         4-Isopropyltoluene       0.800       0.783       mg/Kg       98       71 - 142       1       29         N-Propylbenzene       0.800       0.779       mg/Kg       97       78 - 133       3       24         1,4-Dichlorobenzene       0.800       0.774       mg/Kg       93       77 - 123       0       20         0-Xylene       0.800       0.812       mg/Kg       99       69 - 143       1       31       32         n-Butylbenzene       0.800       0.796       mg/Kg       99       69 - 143       1       31       32       29         n-Butylbenzene       0.800       0.791       mg/Kg       99       71 - 143       3       29         1,2-Dichlorobenzene       0.800       0.763       mg/Kg       95       78 - 126       0       20         Styrene       0.800       0.774       mg/Kg       95       78 - 126       0       20         1,2-Dibromo-3-Chloropropane       0.800       0.774       mg/Kg       97       72 - 144       1       27         1,2-Bitylbenzene       0.800 <t< td=""><td>1,2,4-Trimethylbenzene</td><td>0.800</td><td>0.796</td><td></td><td>mg/Kg</td><td></td><td>100</td><td>73 - 138</td><td>0</td><td>22</td></t<>	1,2,4-Trimethylbenzene	0.800	0.796		mg/Kg		100	73 - 138	0	22
4-Isopropyltoluene       0.800       0.783       mg/kg       98       71 - 142       1       29         N-Propylbenzene       0.800       0.779       mg/kg       97       78 - 133       3       24         1,4-Dichlorobenzene       0.800       0.747       mg/kg       93       77 - 123       0       20         o-Xylene       0.800       0.812       mg/kg       93       77 - 123       0       20         n-Butylbenzene       0.800       0.796       mg/kg       99       69 - 143       1       31       3       29         n-Butylbenzene       0.800       0.791       mg/kg       99       71 - 143       3       29         1,2-Dichlorobenzene       0.800       0.791       mg/kg       99       71 - 143       3       29         1,2-Dibromo-3-Chloropropane       0.800       0.797       mg/kg       95       78 - 126       0       20         Styrene       0.800       0.797       mg/kg       97       64 - 129       2       40         t-Butylbenzene       0.800       0.796       mg/kg       97       72 - 144       1       27         t-Etaurshoroethene       0.800       0.796 <td< td=""><td>m-Xylene &amp; p-Xylene</td><td>0.800</td><td>0.768</td><td></td><td>mg/Kg</td><td></td><td>96</td><td>80 - 132</td><td>2</td><td>20</td></td<>	m-Xylene & p-Xylene	0.800	0.768		mg/Kg		96	80 - 132	2	20
N-Propylbenzene 0.800 0.779 mg/Kg 97 78 - 133 3 24 1,4-Dichlorobenzene 0.800 0.747 mg/Kg 93 77 - 123 0 20 0-Xylene 0.800 0.812 mg/Kg 101 80 - 132 3 20 n-Butylbenzene 0.800 0.796 mg/Kg 99 69 - 143 1 31 sec-Butylbenzene 0.800 0.791 mg/Kg 99 71 - 143 3 29 1,2-Dichlorobenzene 0.800 0.791 mg/Kg 99 71 - 143 3 29 1,2-Dichlorobenzene 0.800 0.791 mg/Kg 99 71 - 143 3 29 1,2-Dichlorobenzene 0.800 0.797 mg/Kg 95 78 - 126 0 20 1,2-Dichlorobenzene 0.800 0.797 mg/Kg 97 64 - 129 1 20 1,2-Dibromo-3-Chloropropane 0.800 0.774 mg/Kg 97 64 - 129 2 40 1-Butylbenzene 0.800 0.796 mg/Kg 99 72 - 144 1 27 1,2-4-Trichlorobenzene 0.800 0.824 mg/Kg 99 72 - 144 1 27 1,2-3-Trichlorobenzene 0.800 0.824 mg/Kg 99 72 - 144 1 27 1,2-3-Trichlorobenzene 0.800 0.824 mg/Kg 99 75 - 141 2 20 1,2-3-Trichlorobenzene 0.800 0.774 mg/Kg 97 75 - 125 1 20 Hexachloroethene 0.800 0.774 mg/Kg 97 75 - 125 1 20 Hexachloroethene 0.800 0.820 mg/Kg 100 56 - 145 3 36 Naphthalene 0.800 0.827 mg/Kg 101 65 - 145 3 25 trans-1,2-Dichloroethene 0.800 0.827 mg/Kg 101 65 - 145 3 25 trans-1,2-Dichloroethene 0.800 0.801 mg/Kg 101 77 - 134 0 20 trans-1,3-Dichloroptopene 0.800 0.801 mg/Kg 101 77 - 134 0 20 Trichloroethene 0.800 0.801 mg/Kg 100 80 - 121 0 20 Trichloroethene 0.800 0.801 mg/Kg 100 80 - 121 0 20 Trichloroethene 0.800 0.801 mg/Kg 100 80 - 121 0 20 Trichloroethene 0.800 0.803 mg/Kg 117 77 - 150 1 30 Methyl tert-butyl ether 0.800 0.801 mg/Kg 117 71 - 150 1 30 Methyl tert-butyl ether 0.800 0.801 mg/Kg 101 71 - 126 0 20	1,3-Dichlorobenzene	0.800	0.761		mg/Kg		95	78 - 132	1	20
1,4-Dichlorobenzene       0.800       0.747       mg/Kg       93       77 - 123       0       20         o-Xylene       0.800       0.812       mg/Kg       101       80 - 132       3       20         n-Butylbenzene       0.800       0.796       mg/Kg       99       69 - 143       1       31         sec-Butylbenzene       0.800       0.791       mg/Kg       99       71 - 143       3       29         1,2-Dichlorobenzene       0.800       0.763       mg/Kg       95       78 - 126       0       20         Styrene       0.800       0.797       mg/Kg       100       79 - 129       1       20         1,2-Dibromo-3-Chloropropane       0.800       0.774       mg/Kg       97       64 - 129       2       40         t-Butylbenzene       0.800       0.774       mg/Kg       97       72 - 144       1       27         1,2,4-Trichlorobenzene       0.800       0.824       mg/Kg       99       72 - 144       1       27         1,2,3-Trichlorobenzene       0.800       0.738       mg/Kg       92       75 - 141       2       20         1,2,3-Trichlorobenzene       0.800       0.820       mg/Kg	4-Isopropyltoluene	0.800	0.783		mg/Kg		98	71 - 142	1	29
o-Xylene         0.800         0.812         mg/Kg         101         80 - 132         3         20           n-Butylbenzene         0.800         0.796         mg/Kg         99         69 - 143         1         31           sec-Butylbenzene         0.800         0.791         mg/Kg         99         71 - 143         3         29           1,2-Dichlorobenzene         0.800         0.763         mg/Kg         95         78 - 126         0         20           Styrene         0.800         0.797         mg/Kg         100         79 - 129         1         20           1,2-Dibromo-3-Chloropropane         0.800         0.774         mg/Kg         97         64 - 129         2         40           t-Butylbenzene         0.800         0.796         mg/Kg         99         72 - 144         1         27           1,2-Trichlorobenzene         0.800         0.824         mg/Kg         93         74 - 131         5         26           Tetrachloroethene         0.800         0.738         mg/Kg         92         75 - 141         2         20           Toluene         0.800         0.774         mg/Kg         102         58 - 146         5	N-Propylbenzene	0.800	0.779		mg/Kg		97	78 - 133	3	24
n-Butylbenzene       0.800       0.796       mg/Kg       99       69 - 143       1       31         sec-Butylbenzene       0.800       0.791       mg/Kg       99       71 - 143       3       29         1,2-Dichlorobenzene       0.800       0.763       mg/Kg       95       78 - 126       0       20         Styrene       0.800       0.797       mg/Kg       100       79 - 129       1       20         1,2-Dibromo-3-Chloropropane       0.800       0.774       mg/Kg       97       64 - 129       2       40         t-Butylbenzene       0.800       0.796       mg/Kg       99       72 - 144       1       27         1,2-4-Trichlorobenzene       0.800       0.824       mg/Kg       103       74 - 131       5       26         Tetrachloroethene       0.800       0.738       mg/Kg       92       75 - 141       2       20         1,2,3-Trichlorobenzene       0.800       0.820       mg/Kg       97       75 - 125       1       20         Toluene       0.800       0.810       mg/Kg       97       75 - 125       1       20         Naphthalene       0.800       0.810       mg/Kg       101	1,4-Dichlorobenzene	0.800	0.747		mg/Kg		93	77 - 123	0	20
sec-Butylbenzene         0.800         0.791         mg/Kg         99         71 - 143         3         29           1,2-Dichlorobenzene         0.800         0.763         mg/Kg         95         78 - 126         0         20           Styrene         0.800         0.797         mg/Kg         100         79 - 129         1         20           1,2-Dibromo-3-Chloropropane         0.800         0.774         mg/Kg         97         64 - 129         2         40           t-Butylbenzene         0.800         0.796         mg/Kg         99         72 - 144         1         27           1,2,4-Trichlorobenzene         0.800         0.824         mg/Kg         103         74 - 131         5         26           Tetrachloroethene         0.800         0.738         mg/Kg         92         75 - 141         2         20           1,2,3-Trichlorobenzene         0.800         0.820         mg/Kg         97         75 - 125         1         20           Toluene         0.800         0.820         mg/Kg         97         75 - 125         1         20           Hexachlorobutadiene         0.800         0.810         mg/Kg         101         65 - 145 <t< td=""><td>o-Xylene</td><td>0.800</td><td>0.812</td><td></td><td>mg/Kg</td><td></td><td>101</td><td>80 - 132</td><td>3</td><td>20</td></t<>	o-Xylene	0.800	0.812		mg/Kg		101	80 - 132	3	20
1,2-Dichlorobenzene       0.800       0.763       mg/Kg       95       78 - 126       0       20         Styrene       0.800       0.797       mg/Kg       100       79 - 129       1       20         1,2-Dibromo-3-Chloropropane       0.800       0.774       mg/Kg       97       64 - 129       2       40         t-Butylbenzene       0.800       0.796       mg/Kg       99       72 - 144       1       27         1,2,4-Trichlorobenzene       0.800       0.824       mg/Kg       103       74 - 131       5       26         Tetrachloroethene       0.800       0.738       mg/Kg       92       75 - 141       2       20         1,2,3-Trichlorobenzene       0.800       0.820       mg/Kg       102       58 - 146       5       28         Toluene       0.800       0.820       mg/Kg       97       75 - 125       1       20         Hexachlorobutadiene       0.800       0.810       mg/Kg       101       65 - 145       3       36         Naphthalene       0.800       0.827       mg/Kg       103       56 - 145       3       25         trans-1,2-Dichloroethene       0.800       0.801       mg/Kg	n-Butylbenzene	0.800	0.796		mg/Kg		99	69 - 143	1	31
Styrene         0.800         0.797         mg/Kg         100         79-129         1         20           1,2-Dibromo-3-Chloropropane         0.800         0.774         mg/Kg         97         64-129         2         40           t-Butylbenzene         0.800         0.796         mg/Kg         99         72-144         1         27           1,2,4-Trichlorobenzene         0.800         0.824         mg/Kg         103         74-131         5         26           Tetrachloroethene         0.800         0.738         mg/Kg         92         75-141         2         20           1,2,3-Trichlorobenzene         0.800         0.820         mg/Kg         102         58-146         5         28           Toluene         0.800         0.774         mg/Kg         97         75-125         1         20           Hexachlorobutadiene         0.800         0.810         mg/Kg         101         65-145         3         36           Naphthalene         0.800         0.827         mg/Kg         103         56-145         3         25           trans-1,2-Dichloroethene         0.800         0.810         mg/Kg         101         77-134         0	sec-Butylbenzene	0.800	0.791		mg/Kg		99	71 - 143	3	29
1,2-Dibromo-3-Chloropropane       0.800       0.774       mg/Kg       97       64 - 129       2       40         t-Butylbenzene       0.800       0.796       mg/Kg       99       72 - 144       1       27         1,2,4-Trichlorobenzene       0.800       0.824       mg/Kg       103       74 - 131       5       26         Tetrachloroethene       0.800       0.738       mg/Kg       92       75 - 141       2       20         1,2,3-Trichlorobenzene       0.800       0.820       mg/Kg       102       58 - 146       5       28         Toluene       0.800       0.774       mg/Kg       97       75 - 125       1       20         Hexachlorobutadiene       0.800       0.810       mg/Kg       101       65 - 145       3       36         Naphthalene       0.800       0.827       mg/Kg       103       56 - 145       3       25         trans-1,2-Dichloroethene       0.800       0.810       mg/Kg       101       77 - 134       0       20         Trichloroethene       0.800       0.801       mg/Kg       100       80 - 121       0       20         Trichlorofluoromethane       0.800       0.800       0	1,2-Dichlorobenzene	0.800	0.763		mg/Kg		95	78 - 126	0	20
t-Butylbenzene 0.800 0.796 mg/Kg 99 72 - 144 1 27 1,2,4-Trichlorobenzene 0.800 0.824 mg/Kg 103 74 - 131 5 26 Tetrachloroethene 0.800 0.738 mg/Kg 92 75 - 141 2 20 1,2,3-Trichlorobenzene 0.800 0.820 mg/Kg 102 58 - 146 5 28 Toluene 0.800 0.774 mg/Kg 97 75 - 125 1 20 Hexachlorobutadiene 0.800 0.810 mg/Kg 101 65 - 145 3 36 Naphthalene 0.800 0.827 mg/Kg 103 56 - 145 3 25 trans-1,2-Dichloroethene 0.800 0.810 mg/Kg 101 77 - 134 0 20 trans-1,3-Dichloropropene 0.800 0.801 mg/Kg 100 80 - 121 0 20 Trichloroethene 0.800 0.768 mg/Kg 96 80 - 134 1 20 Trichlorofluoromethane 0.800 0.937 mg/Kg 107 71 - 150 1 30 Methyl tert-butyl ether 0.800 0.810 mg/Kg 101 71 - 126 0 20	Styrene	0.800	0.797		mg/Kg		100	79 - 129	1	20
1,2,4-Trichlorobenzene       0.800       0.824       mg/Kg       103       74 - 131       5       26         Tetrachloroethene       0.800       0.738       mg/Kg       92       75 - 141       2       20         1,2,3-Trichlorobenzene       0.800       0.820       mg/Kg       102       58 - 146       5       28         Toluene       0.800       0.774       mg/Kg       97       75 - 125       1       20         Hexachlorobutadiene       0.800       0.810       mg/Kg       101       65 - 145       3       36         Naphthalene       0.800       0.827       mg/Kg       103       56 - 145       3       25         trans-1,2-Dichloroethene       0.800       0.810       mg/Kg       101       77 - 134       0       20         trans-1,3-Dichloropropene       0.800       0.801       mg/Kg       100       80 - 121       0       20         Trichloroethene       0.800       0.768       mg/Kg       96       80 - 134       1       20         Trichlorofluoromethane       0.800       0.937       mg/Kg       101       71 - 150       1       30         Methyl tert-butyl ether       0.800       0.810	1,2-Dibromo-3-Chloropropane	0.800	0.774		mg/Kg		97	64 - 129	2	40
Tetrachloroethene         0.800         0.738         mg/Kg         92         75 - 141         2         20           1,2,3-Trichlorobenzene         0.800         0.820         mg/Kg         102         58 - 146         5         28           Toluene         0.800         0.774         mg/Kg         97         75 - 125         1         20           Hexachlorobutadiene         0.800         0.810         mg/Kg         101         65 - 145         3         36           Naphthalene         0.800         0.827         mg/Kg         103         56 - 145         3         25           trans-1,2-Dichloroethene         0.800         0.810         mg/Kg         101         77 - 134         0         20           trans-1,3-Dichloropropene         0.800         0.801         mg/Kg         100         80 - 121         0         20           Trichloroethene         0.800         0.768         mg/Kg         96         80 - 134         1         20           Trichlorofluoromethane         0.800         0.937         mg/Kg         117         71 - 150         1         30           Methyl tert-butyl ether         0.800         0.810         mg/Kg         101         71 -	t-Butylbenzene	0.800	0.796		mg/Kg		99	72 - 144	1	27
1,2,3-Trichlorobenzene       0.800       0.820       mg/Kg       102       58 - 146       5       28         Toluene       0.800       0.774       mg/Kg       97       75 - 125       1       20         Hexachlorobutadiene       0.800       0.810       mg/Kg       101       65 - 145       3       36         Naphthalene       0.800       0.827       mg/Kg       103       56 - 145       3       25         trans-1,2-Dichloroethene       0.800       0.810       mg/Kg       101       77 - 134       0       20         trans-1,3-Dichloropropene       0.800       0.801       mg/Kg       100       80 - 121       0       20         Trichloroethene       0.800       0.768       mg/Kg       96       80 - 134       1       20         Trichlorofluoromethane       0.800       0.937       mg/Kg       117       71 - 150       1       30         Methyl tert-butyl ether       0.800       0.810       mg/Kg       101       71 - 126       0       20	1,2,4-Trichlorobenzene	0.800	0.824		mg/Kg		103	74 - 131	5	26
Toluene         0.800         0.774         mg/Kg         97         75 - 125         1         20           Hexachlorobutadiene         0.800         0.810         mg/Kg         101         65 - 145         3         36           Naphthalene         0.800         0.827         mg/Kg         103         56 - 145         3         25           trans-1,2-Dichloroethene         0.800         0.810         mg/Kg         101         77 - 134         0         20           trans-1,3-Dichloropropene         0.800         0.801         mg/Kg         100         80 - 121         0         20           Trichloroethene         0.800         0.768         mg/Kg         96         80 - 134         1         20           Trichlorofluoromethane         0.800         0.937         mg/Kg         117         71 - 150         1         30           Methyl tert-butyl ether         0.800         0.810         mg/Kg         101         71 - 126         0         20	Tetrachloroethene	0.800	0.738		mg/Kg		92	75 - 141	2	20
Hexachlorobutadiene         0.800         0.810         mg/Kg         101         65 - 145         3         36           Naphthalene         0.800         0.827         mg/Kg         103         56 - 145         3         25           trans-1,2-Dichloroethene         0.800         0.810         mg/Kg         101         77 - 134         0         20           trans-1,3-Dichloropropene         0.800         0.801         mg/Kg         100         80 - 121         0         20           Trichloroethene         0.800         0.768         mg/Kg         96         80 - 134         1         20           Trichlorofluoromethane         0.800         0.937         mg/Kg         117         71 - 150         1         30           Methyl tert-butyl ether         0.800         0.810         mg/Kg         101         71 - 126         0         20	1,2,3-Trichlorobenzene	0.800	0.820		mg/Kg		102	58 - 146	5	28
Naphthalene         0.800         0.827         mg/Kg         103         56 - 145         3         25           trans-1,2-Dichloroethene         0.800         0.810         mg/Kg         101         77 - 134         0         20           trans-1,3-Dichloropropene         0.800         0.801         mg/Kg         100         80 - 121         0         20           Trichloroethene         0.800         0.768         mg/Kg         96         80 - 134         1         20           Trichlorofluoromethane         0.800         0.937         mg/Kg         117         71 - 150         1         30           Methyl tert-butyl ether         0.800         0.810         mg/Kg         101         71 - 126         0         20	Toluene	0.800	0.774		mg/Kg		97	75 - 125	1	20
trans-1,2-Dichloroethene     0.800     0.810     mg/Kg     101     77 - 134     0     20       trans-1,3-Dichloropropene     0.800     0.801     mg/Kg     100     80 - 121     0     20       Trichloroethene     0.800     0.768     mg/Kg     96     80 - 134     1     20       Trichlorofluoromethane     0.800     0.937     mg/Kg     117     71 - 150     1     30       Methyl tert-butyl ether     0.800     0.810     mg/Kg     101     71 - 126     0     20	Hexachlorobutadiene	0.800	0.810		mg/Kg		101	65 - 145	3	36
trans-1,3-Dichloropropene     0.800     0.801     mg/Kg     100     80 - 121     0     20       Trichloroethene     0.800     0.768     mg/Kg     96     80 - 134     1     20       Trichlorofluoromethane     0.800     0.937     mg/Kg     117     71 - 150     1     30       Methyl tert-butyl ether     0.800     0.810     mg/Kg     101     71 - 126     0     20	Naphthalene	0.800	0.827		mg/Kg		103	56 - 145	3	25
Trichloroethene         0.800         0.768         mg/Kg         96         80 - 134         1         20           Trichlorofluoromethane         0.800         0.937         mg/Kg         117         71 - 150         1         30           Methyl tert-butyl ether         0.800         0.810         mg/Kg         101         71 - 126         0         20	trans-1,2-Dichloroethene	0.800	0.810		mg/Kg		101	77 - 134	0	20
Trichlorofluoromethane         0.800         0.937         mg/Kg         117         71 - 150         1         30           Methyl tert-butyl ether         0.800         0.810         mg/Kg         101         71 - 126         0         20	trans-1,3-Dichloropropene	0.800	0.801		mg/Kg		100	80 - 121	0	20
Methyl tert-butyl ether 0.800 0.810 mg/Kg 101 71 - 126 0 20	Trichloroethene	0.800	0.768		mg/Kg		96	80 - 134	1	20
	Trichlorofluoromethane	0.800	0.937		mg/Kg		117	71 - 150	1	30
Vinyl chloride 0.800 0.908 mg/Kg 114 62 - 144 0 20	Methyl tert-butyl ether	0.800	0.810		mg/Kg		101	71 - 126	0	20
	Vinyl chloride	0.800	0.908		mg/Kg		114	62 - 144	0	20

LCSD LCSD

ND

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 120
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
1,2-Dichloroethane-d4 (Surr)	97		80 - 121

Lab Sample ID: 580-142513-14 MS

**Matrix: Solid** 

1,1,2-Trichloroethane

**Analysis Batch: 467098** 

Client Sample ID: PDI-17-SO-52.5-20240729

Prep Type: Total/NA Prep Batch: 467094

Sample Sample Spike MS MS %Rec Result Qualifier Limits Analyte Added Result Qualifier Unit D %Rec 1,1,1,2-Tetrachloroethane ND 0.840 0.836 mg/Kg ☼ 99 79 - 128 ND 0.840 0.858 mg/Kg 102 78 - 135 1,1,1-Trichloroethane ₩ 1,1,2,2-Tetrachloroethane ND 0.840 0.782 mg/Kg 93 77 - 122

0.794

mg/Kg

₩

94

80 - 123

0.840

**Eurofins Seattle** 

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3

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8

10

## **QC Sample Results**

Spike

Added

Client: ERM-West Job ID: 580-142513-1

MS MS

Result Qualifier Unit

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Sample Sample

Result Qualifier

Lab Sample ID: 580-142513-14 MS

**Matrix: Solid** 

Analyte

**Analysis Batch: 467098** 

Client Sample ID: PDI-17-SO-52.5-20240729

Limits

D %Rec

**Prep Type: Total/NA Prep Batch: 467094** %Rec

1,1-Dichloroethane	ND	0.840	0.864	mg/Kg	☼	103	78 - 126	
1,1-Dichloroethene	ND	0.840	0.832	mg/Kg	₩	99	73 - 134	
1,1-Dichloropropene	ND	0.840	0.834	mg/Kg	☼	99	76 - 140	
1,2,3-Trichlorobenzene	ND F2	0.840	0.594	mg/Kg	☼	71	58 - 146	
1,2,3-Trichloropropane	ND	0.840	0.711	mg/Kg	₩	85	77 - 127	
1,2,4-Trichlorobenzene	ND	0.840	0.696	mg/Kg	₽	83	74 - 131	
1,2,4-Trimethylbenzene	ND	0.840	0.801	mg/Kg	₩	95	73 - 138	
1,2-Dibromo-3-Chloropropane	ND	0.840	0.729	mg/Kg	☼	87	64 - 129	
1,2-Dibromoethane	ND	0.840	0.791	mg/Kg	₽	94	77 - 123	
1,2-Dichlorobenzene	ND	0.840	0.768	mg/Kg	☼	91	78 - 126	
1,2-Dichloroethane	ND	0.840	0.784	mg/Kg	☼	93	76 - 124	
1,2-Dichloropropane	ND	0.840	0.863	mg/Kg	₩	103	73 - 130	
1,3,5-Trimethylbenzene	ND	0.840	0.816	mg/Kg	☼	97	72 - 134	
1,3-Dichlorobenzene	ND	0.840	0.764	mg/Kg	☼	91	78 - 132	
1,3-Dichloropropane	ND	0.840	0.801	mg/Kg	₩	95	80 - 120	
1.4 Dichlorohonzono	ND	0.840	0.760	malka	**	00	77 122	

ND	0.640	0.634	mg/kg	14:	99	76 - 140	
ND F2	0.840	0.594	mg/Kg	₩	71	58 - 146	
ND	0.840	0.711	mg/Kg	₩	85	77 - 127	
ND	0.840	0.696	mg/Kg	₩	83	74 - 131	
ND	0.840	0.801	mg/Kg	☼	95	73 - 138	
ND	0.840	0.729	mg/Kg	☼	87	64 - 129	
ND	0.840	0.791	mg/Kg	₩	94	77 - 123	
ND	0.840	0.768	mg/Kg	₩	91	78 - 126	
ND	0.840	0.784	mg/Kg	₩	93	76 - 124	
ND	0.840	0.863	mg/Kg	☆	103	73 - 130	
ND	0.840	0.816	mg/Kg	≎	97	72 - 134	
ND	0.840	0.764	mg/Kg	☼	91	78 - 132	
ND	0.840	0.801	mg/Kg	₽	95	80 - 120	
ND	0.840	0.760	mg/Kg	₩	90	77 - 123	
ND	0.840	0.911	mg/Kg	₩	108	75 - 134	
ND	0.840	0.801	mg/Kg	₩	95	77 - 134	
ND	0.840	0.772	mg/Kg	₩	92	71 - 137	
ND	0.840	0.761	mg/Kg	₩	91	71 - 142	
0.011 JB	0.840	0.807	mg/Kg		95	79 - 135	
ND	0.840	0.786		₩	94	78 - 126	
ND	0.840	0.823	mg/Kg	₩	98	76 - 131	
ND	0.840	0.826			98	78 - 125	
ND	0.840	0.732		₩	87	71 - 130	
				₩	75		
0.13		0.959			99		
0.059		0.851		₩	94	74 - 133	
		0.954		₩	114	52 - 142	
ND		0.838			100	80 - 125	
ND	0.840	0.769		₩	92	80 - 122	
				₩	98		
	0.840	0.820			98	72 - 130	
ND	0.840	0.938		☼	112	33 - 150	
0.039 J	0.840	0.826		₩	94	80 - 135	
ND	0.840	0.748			89	65 - 145	
ND	0.840	0.925		₩	110	80 - 131	
ND	0.840			₩	102		
					83	56 - 140	
				₩			
	0.840			₽			
	0.840						
	3.0-0			· · · · · · ·			
0.015 J	0.840	0.771	mg/Kg	₩	90	75 - 141	
	ND F2 ND	ND       F2       0.840         ND       0.840 </td <td>ND F2</td> <td>ND         F2         0.840         0.594         mg/Kg           ND         0.840         0.711         mg/Kg           ND         0.840         0.696         mg/Kg           ND         0.840         0.801         mg/Kg           ND         0.840         0.729         mg/Kg           ND         0.840         0.791         mg/Kg           ND         0.840         0.768         mg/Kg           ND         0.840         0.768         mg/Kg           ND         0.840         0.768         mg/Kg           ND         0.840         0.863         mg/Kg           ND         0.840         0.863         mg/Kg           ND         0.840         0.816         mg/Kg           ND         0.840         0.861         mg/Kg           ND         0.840         0.801         mg/Kg           ND         0.840         0.801         mg/Kg           ND         0.840         0.801         mg/Kg           ND         0.840         0.801         mg/Kg           ND         0.840         0.807         mg/Kg           ND         0.840         0.823</td> <td>ND         F2         0.840         0.594         mg/kg         □           ND         0.840         0.711         mg/kg         □           ND         0.840         0.696         mg/kg         □           ND         0.840         0.801         mg/kg         □           ND         0.840         0.729         mg/kg         □           ND         0.840         0.768         mg/kg         □           ND         0.840         0.768         mg/kg         □           ND         0.840         0.784         mg/kg         □           ND         0.840         0.784         mg/kg         □           ND         0.840         0.863         mg/kg         □           ND         0.840         0.863         mg/kg         □           ND         0.840         0.861         mg/kg         □           ND         0.840         0.764         mg/kg         □           ND         0.840         0.760         mg/kg         □           ND         0.840         0.801         mg/kg         □           ND         0.840         0.807         mg/kg         □</td> <td>ND         F2         0.840         0.594         mg/Kg         0         71           ND         0.840         0.711         mg/Kg         0         85           ND         0.840         0.696         mg/Kg         0         83           ND         0.840         0.801         mg/Kg         0         95           ND         0.840         0.729         mg/Kg         0         94           ND         0.840         0.761         mg/Kg         0         94           ND         0.840         0.784         mg/Kg         0         91           ND         0.840         0.784         mg/Kg         0         91           ND         0.840         0.863         mg/Kg         0         97           ND         0.840         0.861         mg/Kg         0         97           ND         0.840         0.764         mg/Kg         0         91           ND         0.840         0.760         mg/Kg         0         95           ND         0.840         0.772         mg/Kg         0         95           ND         0.840         0.761         mg/Kg         0<!--</td--><td>ND F2</td></td>	ND F2	ND         F2         0.840         0.594         mg/Kg           ND         0.840         0.711         mg/Kg           ND         0.840         0.696         mg/Kg           ND         0.840         0.801         mg/Kg           ND         0.840         0.729         mg/Kg           ND         0.840         0.791         mg/Kg           ND         0.840         0.768         mg/Kg           ND         0.840         0.768         mg/Kg           ND         0.840         0.768         mg/Kg           ND         0.840         0.863         mg/Kg           ND         0.840         0.863         mg/Kg           ND         0.840         0.816         mg/Kg           ND         0.840         0.861         mg/Kg           ND         0.840         0.801         mg/Kg           ND         0.840         0.801         mg/Kg           ND         0.840         0.801         mg/Kg           ND         0.840         0.801         mg/Kg           ND         0.840         0.807         mg/Kg           ND         0.840         0.823	ND         F2         0.840         0.594         mg/kg         □           ND         0.840         0.711         mg/kg         □           ND         0.840         0.696         mg/kg         □           ND         0.840         0.801         mg/kg         □           ND         0.840         0.729         mg/kg         □           ND         0.840         0.768         mg/kg         □           ND         0.840         0.768         mg/kg         □           ND         0.840         0.784         mg/kg         □           ND         0.840         0.784         mg/kg         □           ND         0.840         0.863         mg/kg         □           ND         0.840         0.863         mg/kg         □           ND         0.840         0.861         mg/kg         □           ND         0.840         0.764         mg/kg         □           ND         0.840         0.760         mg/kg         □           ND         0.840         0.801         mg/kg         □           ND         0.840         0.807         mg/kg         □	ND         F2         0.840         0.594         mg/Kg         0         71           ND         0.840         0.711         mg/Kg         0         85           ND         0.840         0.696         mg/Kg         0         83           ND         0.840         0.801         mg/Kg         0         95           ND         0.840         0.729         mg/Kg         0         94           ND         0.840         0.761         mg/Kg         0         94           ND         0.840         0.784         mg/Kg         0         91           ND         0.840         0.784         mg/Kg         0         91           ND         0.840         0.863         mg/Kg         0         97           ND         0.840         0.861         mg/Kg         0         97           ND         0.840         0.764         mg/Kg         0         91           ND         0.840         0.760         mg/Kg         0         95           ND         0.840         0.772         mg/Kg         0         95           ND         0.840         0.761         mg/Kg         0 </td <td>ND F2</td>	ND F2

## **QC Sample Results**

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 580-142513-14 MS

Lab Sample ID: 580-142513-14 MSD

**Matrix: Solid** 

**Matrix: Solid** 

**Analysis Batch: 467098** 

Client Sample ID: PDI-17-SO-52.5-20240729

**Prep Type: Total/NA** 

**Prep Batch: 467094** 

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
trans-1,2-Dichloroethene	ND		0.840	0.846		mg/Kg	₩	101	77 - 134	
trans-1,3-Dichloropropene	ND		0.840	0.838		mg/Kg	₩	100	80 - 121	
Trichloroethene	ND		0.840	0.803		mg/Kg	≎	96	80 - 134	
Trichlorofluoromethane	ND		0.840	0.996		mg/Kg	≎	119	71 - 150	
Vinyl chloride	ND		0.840	0.981		mg/Kg	₩	117	62 - 144	

MS MS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96		80 - 121
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	98		80 - 120
Toluene-d8 (Surr)	98		80 - 120

Client Sample ID: PDI-17-SO-52.5-20240729

Prep Type: Total/NA

Analysis Batch: 467098	0		Spike						Prep Ba	atch: 40	
	•	Sample	•		MSD				%Rec		RPD
Analyte		Qualifier	Added		Qualifier	Unit	_ D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	ND		0.900	0.941		mg/Kg	☼	105	79 - 128	12	20
1,1,1-Trichloroethane	ND		0.900	0.960		mg/Kg	☼	107	78 - 135	11	20
1,1,2,2-Tetrachloroethane	ND		0.900	0.881		mg/Kg		98	77 - 122	12	20
1,1,2-Trichloroethane	ND		0.900	0.876		mg/Kg	☼	97	80 - 123	10	20
1,1-Dichloroethane	ND		0.900	0.972		mg/Kg	☼	108	78 - 126	12	20
1,1-Dichloroethene	ND		0.900	0.906		mg/Kg	☼	101	73 - 134	8	25
1,1-Dichloropropene	ND		0.900	0.914		mg/Kg	₩	102	76 - 140	9	20
1,2,3-Trichlorobenzene	ND	F2	0.900	0.844	F2	mg/Kg	☼	94	58 - 146	35	28
1,2,3-Trichloropropane	ND		0.900	0.836		mg/Kg	☼	93	77 - 127	16	20
1,2,4-Trichlorobenzene	ND		0.900	0.888		mg/Kg	☼	99	74 - 131	24	26
1,2,4-Trimethylbenzene	ND		0.900	0.937		mg/Kg	☼	104	73 - 138	16	22
1,2-Dibromo-3-Chloropropane	ND		0.900	0.924		mg/Kg	☼	103	64 - 129	24	40
1,2-Dibromoethane	ND		0.900	0.852		mg/Kg	⊅	95	77 - 123	8	20
1,2-Dichlorobenzene	ND		0.900	0.896		mg/Kg	₩	100	78 - 126	15	20
1,2-Dichloroethane	ND		0.900	0.885		mg/Kg	₩	98	76 - 124	12	20
1,2-Dichloropropane	ND		0.900	0.945		mg/Kg	☼	105	73 - 130	9	20
1,3,5-Trimethylbenzene	ND		0.900	0.942		mg/Kg	☼	105	72 - 134	14	24
1,3-Dichlorobenzene	ND		0.900	0.880		mg/Kg	₩	98	78 - 132	14	20
1,3-Dichloropropane	ND		0.900	0.867		mg/Kg	₩	96	80 - 120	8	20
1,4-Dichlorobenzene	ND		0.900	0.887		mg/Kg	☼	99	77 - 123	15	20
2,2-Dichloropropane	ND		0.900	0.993		mg/Kg	₩	110	75 - 134	9	20
2-Chlorotoluene	ND		0.900	0.909		mg/Kg	₩	101	77 - 134	13	21
4-Chlorotoluene	ND		0.900	0.906		mg/Kg	☼	101	71 - 137	16	21
4-Isopropyltoluene	ND		0.900	0.925		mg/Kg	₩	103	71 - 142	19	29
Benzene	0.011	JВ	0.900	0.897		mg/Kg	₩	98	79 - 135	11	20
Bromobenzene	ND		0.900	0.906		mg/Kg	₩	101	78 - 126	14	20
Bromochloromethane	ND		0.900	0.911		mg/Kg	₩	101	76 - 131	10	20
Bromodichloromethane	ND		0.900	0.924		mg/Kg		103	78 - 125	11	20
Bromoform	ND		0.900	0.851		mg/Kg	₩	95	71 - 130	15	20
Bromomethane	ND		0.900	0.710		mg/Kg	₩	79	55 - 150	12	26
Carbon tetrachloride	0.13		0.900	1.06		mg/Kg		103	76 - 140	10	20

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 580-142513-14 MSD

**Matrix: Solid** 

**Analysis Batch: 467098** 

Client Sample ID: PDI-17-SO-52.5-20240729

**Prep Type: Total/NA** 

**Prep Batch: 467094** 

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloroform	0.059		0.900	0.925		mg/Kg	<del>-</del>	96	74 - 133	8	20
Chloromethane	ND		0.900	1.07		mg/Kg	₩	118	52 - 142	11	40
cis-1,2-Dichloroethene	ND		0.900	0.910		mg/Kg	₩	101	80 - 125	8	20
cis-1,3-Dichloropropene	ND		0.900	0.857		mg/Kg	₩	95	80 - 122	11	20
Dibromochloromethane	ND		0.900	0.914		mg/Kg	₩	102	75 - 125	10	20
Dibromomethane	ND		0.900	0.888		mg/Kg	₩	99	72 - 130	8	40
Dichlorodifluoromethane	ND		0.900	1.02		mg/Kg	₩	113	33 - 150	8	31
Ethylbenzene	0.039	J	0.900	0.915		mg/Kg	₩	97	80 - 135	10	20
Hexachlorobutadiene	ND		0.900	0.930		mg/Kg	₩	103	65 - 145	22	36
Isopropylbenzene	ND		0.900	1.00		mg/Kg	₩	111	80 - 131	8	20
Methyl tert-butyl ether	ND		0.900	0.932		mg/Kg	₩	104	71 - 126	9	20
Methylene Chloride	ND		0.900	0.779		mg/Kg	₩	87	56 - 140	11	20
m-Xylene & p-Xylene	0.26		0.900	1.03		mg/Kg	₩	85	80 - 132	9	20
Naphthalene	ND	F2	0.900	0.894	F2	mg/Kg	₩	99	56 - 145	35	25
n-Butylbenzene	ND		0.900	0.927		mg/Kg	₩	103	69 - 143	18	31
N-Propylbenzene	ND		0.900	0.930		mg/Kg	₩	103	78 - 133	15	24
o-Xylene	0.057	J	0.900	0.938		mg/Kg	₩	98	80 - 132	7	20
sec-Butylbenzene	ND		0.900	0.934		mg/Kg	₩	104	71 - 143	15	29
Styrene	ND		0.900	0.916		mg/Kg	₩	102	79 - 129	8	20
t-Butylbenzene	ND		0.900	0.923		mg/Kg	₩	103	72 - 144	12	27
Tetrachloroethene	0.015	J	0.900	0.835		mg/Kg	₩	91	75 - 141	8	20
Toluene	ND		0.900	0.878		mg/Kg	₩	98	75 - 125	8	20
trans-1,2-Dichloroethene	ND		0.900	0.914		mg/Kg	₩	102	77 - 134	8	20
trans-1,3-Dichloropropene	ND		0.900	0.922		mg/Kg	₩	102	80 - 121	9	20
Trichloroethene	ND		0.900	0.889		mg/Kg	₩	99	80 - 134	10	20
Trichlorofluoromethane	ND		0.900	1.08		mg/Kg	₩	120	71 - 150	8	30
Vinyl chloride	ND		0.900	1.05		mg/Kg	₽	116	62 - 144	7	20

MSD MSD

MB MB

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		80 - 121
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
Toluene-d8 (Surr)	98		80 - 120

Lab Sample ID: MB 580-467132/1-A

**Matrix: Solid** 

**Analysis Batch: 467136** 

**Client Sample ID: Method Blank** Prep Type: Total/NA

**Prep Batch: 467132** 

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		0.040	0.0048	mg/Kg		08/05/24 00:16	08/05/24 11:10	1
Chloroethane	ND		0.080	0.021	mg/Kg		08/05/24 00:16	08/05/24 11:10	1
	MD	MD							

	MB MB				
Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100	80 - 120	08/05/24 00:16	08/05/24 11:10	1
4-Bromofluorobenzene (Surr)	97	80 - 120	08/05/24 00:16	08/05/24 11:10	1
Dibromofluoromethane (Surr)	101	80 - 120	08/05/24 00:16	08/05/24 11:10	1
1,2-Dichloroethane-d4 (Surr)	96	80 - 121	08/05/24 00:16	08/05/24 11:10	1

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Client: ERM-West

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-467132/2-A

**Matrix: Solid** 

Analysis Batch: 467136

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 467132** 

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chlorobenzene	0.800	0.701		mg/Kg	_	88	80 - 125	
Chloroethane	0.800	1.80	*+	mg/Kg		224	26 - 150	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 120
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
1,2-Dichloroethane-d4 (Surr)	94		80 - 121

Client Sample ID: Lab Control Sample Dup

201

**Matrix: Solid** 

Chlorobenzene

Chloroethane

Analyte

Analysis Batch: 467136

Lab Sample ID: LCSD 580-467132/3-A

Prep Type: Total/NA **Prep Batch: 467132** 

%Rec **RPD** D %Rec Limits RPD Limit 89 80 - 125 2 20

11

40

0.800 1.61 \*+ mg/Kg LCSD LCSD

Spike

Added

80 - 121

0.800

LCSD LCSD

0.713

Result Qualifier

Unit

mg/Kg

Surrogate %Recovery Qualifier Limits Toluene-d8 (Surr) 80 - 120 99 4-Bromofluorobenzene (Surr) 101 80 - 120 Dibromofluoromethane (Surr) 99 80 - 120

94

MB MB

Lab Sample ID: MB 580-467248/10

**Matrix: Water** 

**Analysis Batch: 467248** 

1,2-Dichloroethane-d4 (Surr)

Client Sample ID: Method Blank

26 - 150

Prep Type: Total/NA

	MB M	ИB							
Analyte	Result Q	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		5.0	1.4	ug/L			08/05/24 23:22	1

Surrogate	%Recovery (	Qualifier Limits	Prepared	Analyzed	Dil Fac	
Toluene-d8 (Surr)	99	80 - 120		08/05/24 23:22	1	
4-Bromofluorobenzene (Surr)	107	80 - 120		08/05/24 23:22	1	
Dibromofluoromethane (Surr)	117	80 - 120		08/05/24 23:22	1	
1,2-Dichloroethane-d4 (Surr)	113	80 - 120		08/05/24 23:22	1	

Lab Sample ID: LCS 580-467248/5

**Matrix: Water** 

**Analysis Batch: 467248** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

		Spike	LCS	LCS				%Rec	
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	
Methylene Chloride	 	10.0	13.4	*+	ug/L	_	134	77 - 125	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 120
4-Bromofluorobenzene (Surr)	108		80 - 120
Dibromofluoromethane (Surr)	113		80 - 120

Client: ERM-West

Project/Site: Arkema PDI Sampling

Job ID: 580-142513-1

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-467248/5

Lab Sample ID: LCSD 580-467248/6

**Matrix: Water** 

Analysis Batch: 467248

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

LCS LCS

Limits Surrogate %Recovery Qualifier 80 - 120 1,2-Dichloroethane-d4 (Surr) 109

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

**Matrix: Water** 

**Analysis Batch: 467248** 

Spike LCSD LCSD %Rec **RPD** Added RPD Result Qualifier D %Rec Limits Limit Analyte Unit 12.9 \*+ 77 - 125 Methylene Chloride 10.0 129 ug/L

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	98		80 - 120
4-Bromofluorobenzene (Surr)	108		80 - 120
Dibromofluoromethane (Surr)	116		80 - 120
1,2-Dichloroethane-d4 (Surr)	110		80 - 120

Lab Sample ID: MB 580-467277/1-A

**Matrix: Solid** 

**Analysis Batch: 467280** 

Client Sample ID: Method Blank

**Prep Type: Total/NA Prep Batch: 467277** 

MB MB Result Qualifier

Analyte RL **MDL** Unit D Prepared Analyzed Dil Fac Chlorobenzene ND 0.040 0.0048 mg/Kg 08/06/24 08:14 08/06/24 11:58

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120	<del>08/06/24 08:14</del>	08/06/24 11:58	1
4-Bromofluorobenzene (Surr)	108		80 - 120	08/06/24 08:14	08/06/24 11:58	1
Dibromofluoromethane (Surr)	115		80 - 120	08/06/24 08:14	08/06/24 11:58	1
1,2-Dichloroethane-d4 (Surr)	108		80 - 121	08/06/24 08:14	08/06/24 11:58	1

Lab Sample ID: LCS 580-467277/2-A

**Matrix: Solid** 

Chlorobenzene

**Analysis Batch: 467280** 

**Client Sample ID: Lab Control Sample** 

80 - 125

Prep Type: Total/NA

**Prep Batch: 467277** 

Spike LCS LCS %Rec

Added Result Qualifier Unit %Rec Limits 0.800

0.757

mg/Kg

LCS LCS

Surrogate	%Recovery	Qualifier	Limits	
Toluene-d8 (Surr)	98		80 - 120	
4-Bromofluorobenzene (Surr)	106		80 - 120	
Dibromofluoromethane (Surr)	104		80 - 120	
1,2-Dichloroethane-d4 (Surr)	113		80 - 121	

Lab Sample ID: LCSD 580-467277/3-A

**Matrix: Solid** 

Analysis Batch: 467280

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 467277

LCSD LCSD Spike %Rec **RPD** Analyte Added Result Qualifier Unit %Rec Limits RPD Limit mg/Kg Chlorobenzene 0.800 0.775 97 80 - 125

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

MB MB

Lab Sample ID: LCSD 580-467277/3-A

**Matrix: Solid** 

**Analysis Batch: 467280** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 467277

LCSD LCSD %Recovery Qualifier Limits Surrogate Toluene-d8 (Surr) 100 80 - 120 4-Bromofluorobenzene (Surr) 104 80 - 120 103 80 - 120 Dibromofluoromethane (Surr) 1,2-Dichloroethane-d4 (Surr) 103 80 - 121

Client Sample ID: Method Blank Lab Sample ID: MB 580-467417/1-A

**Matrix: Solid** 

**Analysis Batch: 467421** 

Prep Type: Total/NA

**Prep Batch: 467417** 

Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac Chloroethane ND 0.080 0.021 mg/Kg 08/07/24 07:53 08/07/24 12:04

MB MB Qualifier Limits Dil Fac Surrogate Prepared Analyzed %Recovery Toluene-d8 (Surr) 99 80 - 120 08/07/24 07:53 08/07/24 12:04 4-Bromofluorobenzene (Surr) 99 80 - 120 08/07/24 07:53 08/07/24 12:04 80 - 120 Dibromofluoromethane (Surr) 102 08/07/24 07:53 08/07/24 12:04 1,2-Dichloroethane-d4 (Surr) 103 80 - 121 08/07/24 07:53 08/07/24 12:04

Lab Sample ID: LCS 580-467417/2-A

**Matrix: Solid** 

**Analysis Batch: 467421** 

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 467417

Spike LCS LCS %Rec Analyte Added Result Qualifier %Rec Limits Unit Chloroethane 0.800 106 26 - 150 0.845 mg/Kg

LCS LCS Surrogate %Recovery Qualifier Limits Toluene-d8 (Surr) 101 80 - 120 4-Bromofluorobenzene (Surr) 102 80 - 120 Dibromofluoromethane (Surr) 99 80 - 120 80 - 121 1,2-Dichloroethane-d4 (Surr) 103

Lab Sample ID: LCSD 580-467417/3-A

**Matrix: Solid** 

Analysis Batch: 467421

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 467417

LCSD LCSD Spike %Rec **RPD** Analyte Added Result Qualifier Unit %Rec Limits RPD Limit 0.800 Chloroethane 0.773 97 26 - 150 mg/Kg

LCSD LCSD Surrogate %Recovery Qualifier Limits Toluene-d8 (Surr) 101 80 - 120 101 4-Bromofluorobenzene (Surr) 80 - 120 100 80 - 120 Dibromofluoromethane (Surr) 1,2-Dichloroethane-d4 (Surr) 100 80 - 121

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-467733/5-A

**Matrix: Solid** 

**Analysis Batch: 467737** 

**Client Sample ID: Method Blank** 

**Prep Type: Total/NA** 

**Prep Batch: 467733** 

•	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		0.040	0.0048	mg/Kg		08/09/24 08:00	08/09/24 11:36	1
Chloroethane	ND		0.080	0.021	mg/Kg		08/09/24 08:00	08/09/24 11:36	1

MB MB

Analyzed	Dil Fac
08/09/24 11:36	1
08/09/24 11:36	1
08/09/24 11:36	1
08/09/24 11:36	1
	Analyzed 08/09/24 11:36 08/09/24 11:36 08/09/24 11:36 08/09/24 11:36

Lab Sample ID: LCS 580-467733/1-A

**Matrix: Solid** 

**Analysis Batch: 467737** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 467733** 

	<b>Spike</b>	LCS	LUS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chlorobenzene	0.800	0.805		mg/Kg		101	80 - 125	
Chloroethane	0.800	0.822		mg/Kg		103	26 - 150	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120
1,2-Dichloroethane-d4 (Surr)	101		80 - 121

**Client Sample ID: Lab Control Sample Dup** 

**Matrix: Solid** 

**Analysis Batch: 467737** 

Lab Sample ID: LCSD 580-467733/2-A

Prep Type: Total/NA

**Prep Batch: 467733** 

	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Chlorobenzene	0.800	0.830		mg/Kg		104	80 - 125	3	20	
Chloroethane	0.800	0.852		mg/Kg		107	26 - 150	4	40	

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 120
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	100		80 - 121

Method: 8260D - Volatile Organic Compounds by GC/MS - DL

Lab Sample ID: 580-142513-14 MS

Matrix: Solid

Analysis Batch: 467136

Client Sample ID: PDI-17-SO-52.5-20240729

Prep Type: Total/NA **Prep Batch: 467132** 

, , , , , , , , , , , , , , , , , , , ,	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chlorobenzene - DL	18	F1	9.03	20.4	F1	mg/Kg	₩	31	80 - 125	
Chloroethane - DL	ND	F1 *+	9.03	28.5	F1	mg/Kg	≎	315	26 - 150	

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS - DL (Continued)

Lab Sample ID: 580-142513-14 MS

Matrix: Solid

**Analysis Batch: 467136** 

Client Sample ID: PDI-17-SO-52.5-20240729

Prep Type: Total/NA

**Prep Batch: 467132** 

MS MS %Recovery Qualifier Limits Surrogate 1,2-Dichloroethane-d4 (Surr) -96 80 - 121 DL 101 80 - 120 4-Bromofluorobenzene (Surr) -DL 101 80 - 120 Dibromofluoromethane (Surr) -DL Toluene-d8 (Surr) - DL 80 - 120

Lab Sample ID: 580-142513-14 MSD

**Matrix: Solid** 

**Analysis Batch: 467136** 

Client Sample ID: PDI-17-SO-52.5-20240729

Prep Type: Total/NA

**Prep Batch: 467132** 

Spike MSD MSD %Rec RPD Sample Sample Result Qualifier Added Result Qualifier Unit D %Rec Limits **RPD** Limit Chlorobenzene - DL 18 F1 9.67 22.1 F1 mg/Kg ₩ 47 80 - 125 8 20 Chloroethane - DL ND F1\*+ 9.67 31.1 F1 mg/Kg 322 26 - 150 40 9

MSD MSD %Recovery Limits Surrogate Qualifier 1,2-Dichloroethane-d4 (Surr) 96 80 - 121 4-Bromofluorobenzene (Surr) -98 80 - 120 103 80 - 120 Dibromofluoromethane (Surr) -DL Toluene-d8 (Surr) - DL 100 80 - 120

#### Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-467206/1-A

**Matrix: Solid** 

Analysis Batch: 467450

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 467206

MB MB Result Qualifier **MDL** Unit Analyte RL D Prepared Analyzed Dil Fac 150 08/05/24 13:36 08/07/24 14:04 Phenol ND 23 ug/Kg Bis(2-chloroethyl)ether ND 100 7.7 ug/Kg 08/05/24 13:36 08/07/24 14:04 2-Chlorophenol ND 200 4.0 ug/Kg 08/05/24 13:36 08/07/24 14:04 1,3-Dichlorobenzene ND 50 4.8 ug/Kg 08/05/24 13:36 08/07/24 14:04 ND 50 8.3 08/05/24 13:36 08/07/24 14:04 1,4-Dichlorobenzene ug/Kg ND 1000 08/07/24 14:04 Benzyl alcohol ug/Kg 08/05/24 13:36 08/07/24 14:04 1,2-Dichlorobenzene ND 50 08/05/24 13:36 5.0 ug/Kg 2-Methylphenol 150 08/05/24 13:36 08/07/24 14:04 ND 9.8 ug/Kg 200 3 & 4 Methylphenol ND 15 ug/Kg 08/05/24 13:36 08/07/24 14:04 N-Nitrosodi-n-propylamine ND 200 ug/Kg 08/05/24 13:36 08/07/24 14:04 Hexachloroethane ND 150 4.3 ug/Kg 08/05/24 13:36 08/07/24 14:04 Nitrobenzene ND 200 20 ug/Kg 08/05/24 13:36 08/07/24 14:04 Isophorone ND 150 08/05/24 13:36 08/07/24 14:04 8.4 ug/Kg 2-Nitrophenol ND 200 ug/Kg 08/05/24 13:36 08/07/24 14:04 2.4-Dimethylphenol ND 210 60 ug/Kg 08/05/24 13:36 08/07/24 14:04 08/05/24 13:36 08/07/24 14:04 Benzoic acid ND 4000 1200 ug/Kg Bis(2-chloroethoxy)methane ND 200 18 ug/Kg 08/05/24 13:36 08/07/24 14:04 2,4-Dichlorophenol ND 210 08/05/24 13:36 08/07/24 14:04 28 ug/Kg

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## **QC Sample Results**

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

## Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-467206/1-A

Matrix: Solid

**Analysis Batch: 467450** 

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 467206

•	МВ	МВ						•	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		50	6.0	ug/Kg		08/05/24 13:36	08/07/24 14:04	1
Naphthalene	ND		25	5.0	ug/Kg		08/05/24 13:36	08/07/24 14:04	1
4-Chloroaniline	ND		1500	130	ug/Kg		08/05/24 13:36	08/07/24 14:04	1
Hexachlorobutadiene	ND		50	15	ug/Kg		08/05/24 13:36	08/07/24 14:04	1
4-Chloro-3-methylphenol	ND		150	33	ug/Kg		08/05/24 13:36	08/07/24 14:04	1
2-Methylnaphthalene	ND		50	8.8	ug/Kg		08/05/24 13:36	08/07/24 14:04	1
Hexachlorocyclopentadiene	ND		100	7.7	ug/Kg		08/05/24 13:36	08/07/24 14:04	1
2,4,6-Trichlorophenol	ND		150	33	ug/Kg		08/05/24 13:36	08/07/24 14:04	1
2,4,5-Trichlorophenol	ND		200	8.1	ug/Kg		08/05/24 13:36	08/07/24 14:04	1
2-Chloronaphthalene	ND		25	5.0	ug/Kg		08/05/24 13:36	08/07/24 14:04	1
2-Nitroaniline	ND		100	15	ug/Kg		08/05/24 13:36	08/07/24 14:04	1
Dimethyl phthalate	ND		150	5.0	ug/Kg		08/05/24 13:36	08/07/24 14:04	1
Acenaphthylene	ND		25	5.0	ug/Kg		08/05/24 13:36	08/07/24 14:04	1
2,6-Dinitrotoluene	ND		150	15	ug/Kg		08/05/24 13:36	08/07/24 14:04	1
3-Nitroaniline	ND		300	100	ug/Kg		08/05/24 13:36	08/07/24 14:04	1
Acenaphthene	ND		40	4.6	ug/Kg		08/05/24 13:36	08/07/24 14:04	1
2,4-Dinitrophenol	ND		2000	590	ug/Kg		08/05/24 13:36	08/07/24 14:04	1
4-Nitrophenol	ND		2000	250	ug/Kg		08/05/24 13:36	08/07/24 14:04	1
Dibenzofuran	ND		150		ug/Kg		08/05/24 13:36	08/07/24 14:04	1
2,4-Dinitrotoluene	ND		200		ug/Kg			08/07/24 14:04	1
Diethyl phthalate	ND		400		ug/Kg			08/07/24 14:04	1
4-Chlorophenyl phenyl ether	ND		200		ug/Kg			08/07/24 14:04	1
Fluorene	ND		25	5.0	ug/Kg			08/07/24 14:04	1
4-Nitroaniline	ND		150	50	ug/Kg			08/07/24 14:04	1
4,6-Dinitro-2-methylphenol	ND		1000	100	ug/Kg			08/07/24 14:04	
N-Nitrosodiphenylamine	ND		60	8.0	ug/Kg			08/07/24 14:04	1
4-Bromophenyl phenyl ether	ND		200	9.1	ug/Kg			08/07/24 14:04	1
Hexachlorobenzene	ND		50		ug/Kg			08/07/24 14:04	······································
Pentachlorophenol	ND		550	270	ug/Kg			08/07/24 14:04	1
Phenanthrene	ND		60		ug/Kg			08/07/24 14:04	1
Anthracene	ND		60		ug/Kg			08/07/24 14:04	· · · · · · · · · · · · · · · · · · ·
Di-n-butyl phthalate	ND		500					08/07/24 14:04	1
Fluoranthene	ND		40		ug/Kg			08/07/24 14:04	1
Pyrene	ND		60		ug/Kg			08/07/24 14:04	· · · · · · · · · · · · · · · · · · ·
Butyl benzyl phthalate	ND		200		ug/Kg			08/07/24 14:04	1
3,3'-Dichlorobenzidine	ND		570		ug/Kg			08/07/24 14:04	1
Benzo[a]anthracene	ND		40		ug/Kg			08/07/24 14:04	· · · · · · · · · · · · · · · · · · ·
Chrysene	ND		60		ug/Kg			08/07/24 14:04	1
Bis(2-ethylhexyl) phthalate	ND		600	71	ug/Kg			08/07/24 14:04	1
Di-n-octyl phthalate	ND		200					08/07/24 14:04	······່
Benzo[a]pyrene	ND		110		ug/Kg			08/07/24 14:04	1
Indeno[1,2,3-cd]pyrene	ND		40		ug/Kg			08/07/24 14:04	1
Dibenz(a,h)anthracene	ND ND		110		ug/Kg ug/Kg			08/07/24 14:04	
, ,	ND ND		60					08/07/24 14:04	
Benzo[g,h,i]perylene					ug/Kg				1
Carbazole	ND		150		ug/Kg			08/07/24 14:04	1
1-Methylnaphthalene	ND		30 40		ug/Kg			08/07/24 14:04	1
Benzo[b]fluoranthene	ND		40 60		ug/Kg			08/07/24 14:04	1
Benzo[k]fluoranthene bis(chloroisopropyl) ether	ND ND		200		ug/Kg ug/Kg			08/07/24 14:04 08/07/24 14:04	1

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## **QC Sample Results**

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

## Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

	MB	MB				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	81		58 - 120	08/05/24 13:36	08/07/24 14:04	1
Phenol-d5 (Surr)	76		59 - 120	08/05/24 13:36 0	08/07/24 14:04	1
Nitrobenzene-d5 (Surr)	82		63 - 120	08/05/24 13:36 0	08/07/24 14:04	1
2-Fluorobiphenyl	94		64 - 120	08/05/24 13:36 0	08/07/24 14:04	1
2,4,6-Tribromophenol (Surr)	78		62 - 122	08/05/24 13:36 0	08/07/24 14:04	1
Terphenyl-d14 (Surr)	111		73 - 125	08/05/24 13:36 (	08/07/24 14:04	1

Lab Sample ID: LCS 580-467206/2-A

**Matrix: Solid** 

Client Sample ID:	Lab C	Control Sample
	Prep	Type: Total/NA
	D	D-4-1- 407000

Analysis Batch: 467450	Spike	LCS	LCS				Prep Batch: 467206 %Rec
Analyte	Added		Qualifier	Unit	D	%Rec	Limits
Phenol	2000	1750		ug/Kg	_ =	88	59 - 120
Bis(2-chloroethyl)ether	2000	1730		ug/Kg		86	61 - 120
2-Chlorophenol	2000	1840		ug/Kg		92	66 - 120
1,3-Dichlorobenzene	2000	1670		ug/Kg		84	65 - 120
1,4-Dichlorobenzene	2000	1690		ug/Kg		84	68 - 120
Benzyl alcohol	2000	1870		ug/Kg		94	10 - 134
1,2-Dichlorobenzene	2000	1710		ug/Kg		86	68 - 120
2-Methylphenol	2000	1880		ug/Kg		94	53 - 120
3 & 4 Methylphenol	2000	1980		ug/Kg		99	54 <sub>-</sub> 120
N-Nitrosodi-n-propylamine	2000	1840		ug/Kg		92	63 - 120
Hexachloroethane	2000	1700		ug/Kg		85	68 - 120
Nitrobenzene	2000	1820		ug/Kg		91	57 - 128
Isophorone	2000	1900		ug/Kg		95	61 - 123
2-Nitrophenol	2000	1770		ug/Kg		89	67 <sub>-</sub> 131
2,4-Dimethylphenol	2000	2030		ug/Kg		102	55 <sub>-</sub> 120
Benzoic acid	4000	2130	J	ug/Kg		53	10 - 120
Bis(2-chloroethoxy)methane	2000	1920		ug/Kg		96	60 - 120
2,4-Dichlorophenol	2000	1860		ug/Kg		93	63 - 120
1,2,4-Trichlorobenzene	2000	1780		ug/Kg		89	66 - 125
Naphthalene	2000	1730		ug/Kg		87	68 - 120
4-Chloroaniline	2000	1380	J	ug/Kg		69	10 - 120
Hexachlorobutadiene	2000	1720		ug/Kg		86	56 - 146
4-Chloro-3-methylphenol	2000	2050		ug/Kg		103	55 - 120
2-Methylnaphthalene	2000	1880		ug/Kg		94	75 - 120
Hexachlorocyclopentadiene	2000	1740		ug/Kg		87	36 - 124
2,4,6-Trichlorophenol	2000	2030		ug/Kg		101	68 - 120
2,4,5-Trichlorophenol	2000	2000		ug/Kg		100	60 - 120
2-Chloronaphthalene	2000	1770		ug/Kg		88	65 - 120
2-Nitroaniline	2000	1780		ug/Kg		89	65 - 120
Dimethyl phthalate	2000	2080		ug/Kg		104	71 - 120
Acenaphthylene	2000	1900		ug/Kg		95	72 - 120
2,6-Dinitrotoluene	2000	1880		ug/Kg		94	70 - 126
3-Nitroaniline	2000	1570		ug/Kg		78	28 - 120
Acenaphthene	2000	1920		ug/Kg		96	64 - 120
2,4-Dinitrophenol	4000	4600		ug/Kg		115	10 - 139
4-Nitrophenol	4000	4520		ug/Kg		113	26 - 140
Dibenzofuran	2000	1970		ug/Kg		99	68 - 120
2,4-Dinitrotoluene	2000	1880		ug/Kg		94	63 - 120
Diethyl phthalate	2000	2070		ug/Kg		103	71 - 120

**Eurofins Seattle** 

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Spike

Job ID: 580-142513-1

LCS LCS

Project/Site: Arkema PDI Sampling

#### Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-467206/2-A

**Matrix: Solid** 

Client: ERM-West

**Analysis Batch: 467450** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA Prep Batch: 467206 %Rec

Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
4-Chlorophenyl phenyl ether	2000	1830		ug/Kg		91	70 - 120
Fluorene	2000	1900		ug/Kg		95	68 - 121
4-Nitroaniline	2000	1820		ug/Kg		91	53 - 123
4,6-Dinitro-2-methylphenol	4000	4460		ug/Kg		111	10 - 141
N-Nitrosodiphenylamine	2000	1940		ug/Kg		97	67 - 120
4-Bromophenyl phenyl ether	2000	1900		ug/Kg		95	65 - 127
Hexachlorobenzene	2000	1800		ug/Kg		90	65 - 126
Pentachlorophenol	4000	3920		ug/Kg		98	18 - 133
Phenanthrene	2000	1920		ug/Kg		96	74 - 120
Anthracene	2000	1850		ug/Kg		92	67 - 120
Di-n-butyl phthalate	2000	2080		ug/Kg		104	66 - 135
Fluoranthene	2000	1950		ug/Kg		97	69 - 133
Pyrene	2000	2060		ug/Kg		103	68 - 126
Butyl benzyl phthalate	2000	1970		ug/Kg		99	58 - 150
3,3'-Dichlorobenzidine	4000	2880		ug/Kg		72	41 - 137
Benzo[a]anthracene	2000	2220		ug/Kg		111	60 - 135
Chrysene	2000	1700		ug/Kg		85	69 - 127
Bis(2-ethylhexyl) phthalate	2000	2250		ug/Kg		112	56 - 150
Di-n-octyl phthalate	2000	2400		ug/Kg		120	53 - 150
Benzo[a]pyrene	2000	1960		ug/Kg		98	70 - 129
Indeno[1,2,3-cd]pyrene	2000	2010		ug/Kg		100	43 - 133
Dibenz(a,h)anthracene	2000	1990		ug/Kg		99	51 - 139
Benzo[g,h,i]perylene	2000	1880		ug/Kg		94	50 - 130
Carbazole	2000	1880		ug/Kg		94	76 - 150
1-Methylnaphthalene	2000	1870		ug/Kg		93	69 - 120
Benzo[b]fluoranthene	2000	2110		ug/Kg		105	58 - 136
Benzo[k]fluoranthene	2000	1920		ug/Kg		96	57 - 142

2000

1530

ug/Kg

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
2-Fluorophenol (Surr)	85		58 - 120
Phenol-d5 (Surr)	81		59 - 120
Nitrobenzene-d5 (Surr)	87		63 - 120
2-Fluorobiphenyl	85		64 - 120
2,4,6-Tribromophenol (Surr)	107		62 - 122
Terphenyl-d14 (Surr)	97		73 - 125

Lab Sample ID: LCSD 580-467206/3-A

**Matrix: Solid** 

**Analysis Batch: 467450** 

bis(chloroisopropyl) ether

<b>Client Sample</b>	ID: Lab	<b>Control</b>	<b>Sample</b>	Dup
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77

39 - 129

Prep Type: Total/NA Prep Batch: 467206

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Phenol	2000	1830		ug/Kg		92	59 - 120	5	30
Bis(2-chloroethyl)ether	2000	1770		ug/Kg		88	61 - 120	2	30
2-Chlorophenol	2000	1880		ug/Kg		94	66 - 120	2	32
1,3-Dichlorobenzene	2000	1700		ug/Kg		85	65 - 120	2	29
1,4-Dichlorobenzene	2000	1720		ug/Kg		86	68 - 120	2	35
Benzyl alcohol	2000	1920		ug/Kg		96	10 - 134	2	40

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## **QC Sample Results**

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

## Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-467206/3-A

Matrix: Solid

**Analysis Batch: 467450** 

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA **Prep Batch: 467206** 

Analysis Batch: 46/450  Analyte 1,2-Dichlorobenzene 2-Methylphenol 3 & 4 Methylphenol N-Nitrosodi-n-propylamine	Cmiles	LCCD	LCCD			Prep B	atcn: 40	
	Spike Added		LCSD Qualifier	Unit	D %Rec	%Rec Limits	RPD	RPD Limit
	2000	1740		ug/Kg	$-\frac{2}{87}$	68 - 120	1	30
	2000	1910		ug/Kg	96	53 - 120	2	40
* *	2000	2010		ug/Kg	101	54 - 120	2	36
N-Nitrosodi-n-propylamine	2000	1870		ug/Kg	94	63 - 120	2	35
Hexachloroethane	2000	1680		ug/Kg	84	68 - 120	1	34
Nitrobenzene	2000	1840		ug/Kg	92	57 - 128	1	33
Isophorone	2000	1960		ug/Kg	98	61 - 123	3	31
2-Nitrophenol	2000	1820		ug/Kg	91	67 - 131	3	30
2,4-Dimethylphenol	2000	2060		ug/Kg	103	55 - 120	1	40
Benzoic acid	4000	2570	J	ug/Kg	64	10 - 120	19	40
Bis(2-chloroethoxy)methane	2000	1960		ug/Kg	98	60 - 120	3	33
2,4-Dichlorophenol	2000	1920		ug/Kg	96	63 - 120	3	19
1,2,4-Trichlorobenzene	2000	1830		ug/Kg	92	66 - 125	3	18
Naphthalene	2000	1790		ug/Kg	90	68 - 120	3	15
4-Chloroaniline	2000	1550		ug/Kg	77	10 - 120	12	40
Hexachlorobutadiene	2000	1810		ug/Kg	91	56 - 146	5	19
4-Chloro-3-methylphenol	2000	2120		ug/Kg	106	55 - 120	3	25
2-Methylnaphthalene	2000	1970		ug/Kg	98	75 - 120	4	21
Hexachlorocyclopentadiene	2000	1880		ug/Kg	94	36 - 124	8	21
2,4,6-Trichlorophenol	2000	2200		ug/Kg	110	68 - 120	8	20
2,4,5-Trichlorophenol	2000	1980		ug/Kg	99	60 - 120	1	23
2-Chloronaphthalene	2000	1860		ug/Kg	93	65 - 120	5	21
2-Nitroaniline	2000	1900		ug/Kg	95	65 - 120	6	16
Dimethyl phthalate	2000	2180		ug/Kg	109	71 - 120	5	21
Acenaphthylene	2000	2000		ug/Kg	100	72 - 120	5	18
2,6-Dinitrotoluene	2000	2010		ug/Kg	101	70 - 126	7	18
3-Nitroaniline	2000	1700		ug/Kg	85	28 - 120	8	25
Acenaphthene	2000	2030		ug/Kg	102	64 - 120	5	19
2,4-Dinitrophenol	4000	5420		ug/Kg	136	10 - 139	16	40
4-Nitrophenol	4000	4920		ug/Kg	123	26 - 140	8	31
Dibenzofuran	2000	2080		ug/Kg	104	68 - 120	5	18
2,4-Dinitrotoluene	2000	1940		ug/Kg	97	63 - 120	3	23
Diethyl phthalate	2000	2160		ug/Kg	108	71 - 120	4	22
4-Chlorophenyl phenyl ether	2000	1950		ug/Kg	98	70 - 120	7	21
Fluorene	2000	2010		ug/Kg	101	68 - 121	6	17
4-Nitroaniline	2000	1960		ug/Kg	98	53 - 123	7	23
4,6-Dinitro-2-methylphenol	4000	4700		ug/Kg	117	10 - 141	5	40
N-Nitrosodiphenylamine	2000	1960		ug/Kg	98	67 - 120	1	30
4-Bromophenyl phenyl ether	2000	2030		ug/Kg	101	65 - 127	7	32
Hexachlorobenzene	2000	1870		ug/Kg	94	65 - 126	4	32
Pentachlorophenol	4000	4260		ug/Kg	107	18 - 133	8	40
Phenanthrene	2000	2000		ug/Kg	100	74 - 120	4	27
Anthracene	2000	1870		ug/Kg	93	67 - 120	1	28
Di-n-butyl phthalate	2000	2140		ug/Kg	107	66 - 135	3	26
Fluoranthene	2000	1980		ug/Kg	99	69 - 133	2	21
Pyrene	2000	2110		ug/Kg	106	68 - 126	3	24
Butyl benzyl phthalate	2000	2030		ug/Kg	102	58 - 150	3	27
3,3'-Dichlorobenzidine	4000	3000		ug/Kg	75	41 - 137	4	40
Benzo[a]anthracene	2000	2270		ug/Kg	114	60 - 135	2	21

## **QC Sample Results**

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

#### Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-467206/3-A

**Matrix: Solid** 

Analysis Batch: 467450

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

**Prep Batch: 467206** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chrysene	2000	1720		ug/Kg		86	69 - 127	1	27
Bis(2-ethylhexyl) phthalate	2000	2270		ug/Kg		114	56 - 150	1	25
Di-n-octyl phthalate	2000	2550		ug/Kg		127	53 - 150	6	18
Benzo[a]pyrene	2000	2020		ug/Kg		101	70 - 129	3	27
Indeno[1,2,3-cd]pyrene	2000	2160		ug/Kg		108	43 - 133	7	30
Dibenz(a,h)anthracene	2000	2100		ug/Kg		105	51 - 139	6	29
Benzo[g,h,i]perylene	2000	1990		ug/Kg		100	50 - 130	6	26
Carbazole	2000	1950		ug/Kg		98	76 - 150	3	24
1-Methylnaphthalene	2000	1930		ug/Kg		96	69 - 120	3	24
Benzo[b]fluoranthene	2000	2250		ug/Kg		113	58 - 136	7	25
Benzo[k]fluoranthene	2000	2050		ug/Kg		103	57 - 142	7	18
bis(chloroisopropyl) ether	2000	1570		ug/Kg		78	39 - 129	2	33

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
2-Fluorophenol (Surr)	91		58 - 120
Phenol-d5 (Surr)	82		59 - 120
Nitrobenzene-d5 (Surr)	89		63 - 120
2-Fluorobiphenyl	89		64 - 120
2,4,6-Tribromophenol (Surr)	109		62 - 122
Terphenyl-d14 (Surr)	98		73 - 125

Method: 2540G - SM 2540G

Lab Sample ID: 580-142513-1 DU

**Matrix: Solid** 

**Analysis Batch: 467082** 

<b>Client Sample</b>	ID:	<b>PDI-16</b>	-SO-2	3-202	40726
		_	_	_	

Client Sample ID: PDI-16-SO-52.5-20240726

**Prep Type: Total/NA** 

Prep Type: Total/NA

**RPD** Sample Sample DU DU Analyte Result Qualifier Result Qualifier Unit RPD Limit Percent Solids 90.2 88.6 % 2 20 Percent Moisture 9.8 11.4 15

Lab Sample ID: 580-142513-8 DU

**Matrix: Solid** 

Analysis Batch: 467083

Allalysis Datell. 407000									
	Sample	Sample	DU	DU				RPD	
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit	
Percent Solids	92.6		90.6		%		2	20	
Percent Moisture	7.4		9.4	F3	%		24	20	

8/13/2024

Client: ERM-West Project/Site: Arkema PDI Sampling

Date Received: 07/30/24 13:20

Client Sample ID: PDI-16-SO-23-20240726

Date Collected: 07/26/24 10:00

Lab Sample ID: 580-142513-1 **Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	467082	FCG	EET SEA	08/03/24 16:25

Client Sample ID: PDI-16-SO-23-20240726

Lab Sample ID: 580-142513-1

**Matrix: Solid** 

Date Collected: 07/26/24 10:00 Date Received: 07/30/24 13:20 Percent Solids: 90.2

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	<del></del>		467094	BYM	EET SEA	08/02/24 11:41
Total/NA	Analysis	8260D		1	467098	TL1	EET SEA	08/03/24 00:11
Total/NA	Prep	5035	RA		467417	AC	EET SEA	08/07/24 07:53
Total/NA	Analysis	8260D	RA	1	467421	BYM	EET SEA	08/07/24 14:36

Client Sample ID: TB-01-SO-20240726

Lab Sample ID: 580-142513-2

Matrix: Solid

Date Collected: 07/26/24 00:01 Date Received: 07/30/24 13:20

Γ	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467094	BYM	EET SEA	08/02/24 11:41
Total/NA	Analysis	8260D		1	467098	TL1	EET SEA	08/02/24 22:23
Total/NA	Prep	5035	RA		467417	AC	EET SEA	08/07/24 07:53
Total/NA	Analysis	8260D	RA	1	467421	BYM	EET SEA	08/07/24 14:15

Client Sample ID: PDI-16-SO-37.7-20240726

Lab Sample ID: 580-142513-3 Date Collected: 07/26/24 11:00

**Matrix: Solid** 

Date Received: 07/30/24 13:20

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G			467082	FCG	EET SEA	08/03/24 16:25

Client Sample ID: PDI-16-SO-37.7-20240726

Lab Sample ID: 580-142513-3

**Matrix: Solid** 

Date Collected: 07/26/24 11:00 Date Received: 07/30/24 13:20 Percent Solids: 94.6

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467094	BYM	EET SEA	08/02/24 11:41
Total/NA	Analysis	8260D		1	467098	TL1	EET SEA	08/03/24 00:33
Total/NA	Prep	5035	RA		467417	AC	EET SEA	08/07/24 07:53
Total/NA	Analysis	8260D	RA	1	467421	BYM	EET SEA	08/07/24 14:58

Client Sample ID: PDI-16-SO-44.6-20240726

Lab Sample ID: 580-142513-4 Date Collected: 07/26/24 12:30

**Matrix: Solid** 

Date Received: 07/30/24 13:20

	Batch	Batch		Dilution	Batch		Prepared
Prep Type	Туре	Method	Run	Factor	Number Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G			467082 FCG	EET SEA	08/03/24 16:25

Project/Site: Arkema PDI Sampling

Client: ERM-West

Client Sample ID: PDI-16-SO-44.6-20240726

Date Collected: 07/26/24 12:30 Date Received: 07/30/24 13:20

Lab Sample ID: 580-142513-4

**Matrix: Solid** 

Percent Solids: 95.2

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467094	BYM	EET SEA	08/02/24 11:41
Total/NA	Analysis	8260D		1	467098	TL1	EET SEA	08/03/24 00:54
Total/NA	Prep	5035	DL		467132	AC	EET SEA	08/05/24 00:16
Total/NA	Analysis	8260D	DL	1	467136	AC	EET SEA	08/05/24 13:55

Client Sample ID: DUP-02-SO-20240726

Date Collected: 07/26/24 12:40 Date Received: 07/30/24 13:20

Total/NA

Lab Sample ID: 580-142513-5 **Matrix: Solid** 

Batch Batch Dilution Batch **Prepared** Method Factor Number Analyst or Analyzed **Prep Type** Type Run Lab

Client Sample ID: DUP-02-SO-20240726

2540G

Analysis

Date Collected: 07/26/24 12:40 Date Received: 07/30/24 13:20

Lab Sample ID: 580-142513-5 Matrix: Solid

Lab Sample ID: 580-142513-6

08/03/24 16:25

Percent Solids: 92.2

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467094	BYM	EET SEA	08/02/24 11:41
Total/NA	Analysis	8260D		1	467098	TL1	EET SEA	08/03/24 01:16
Total/NA	Prep	5035	DL		467132	AC	EET SEA	08/05/24 00:16
Total/NA	Analysis	8260D	DL	1	467136	AC	EET SEA	08/05/24 14:17

Client Sample ID: PDI-16-SO-39.5-20240726

Date Collected: 07/26/24 12:50	Matrix: Solid
Date Received: 07/30/24 13:20	

467082 FCG

EET SEA

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G			467082	FCG	EET SEA	08/03/24 16:25

Client Sample ID: PDI-16-SO-39.5-20240726

Date Collected: 07/26/24 12:50 Date Received: 07/30/24 13:20

Lab Sample ID: 580-142513-6 **Matrix: Solid** Percent Solids: 91.2

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467094	BYM	EET SEA	08/02/24 11:41
Total/NA	Analysis	8260D		1	467098	TL1	EET SEA	08/03/24 01:37
Total/NA	Prep	5035	DL		467132	AC	EET SEA	08/05/24 00:16
Total/NA	Analysis	8260D	DL	1	467136	AC	EET SEA	08/05/24 14:39
Total/NA	Prep	5035	DL2		467277	AC	EET SEA	08/06/24 08:14
Total/NA	Analysis	8260D	DL2	1	467280	AC	EET SEA	08/06/24 15:27

Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Date Received: 07/30/24 13:20

Client: ERM-West

Client Sample ID: PDI-16-SO-46-20240726

Lab Sample ID: 580-142513-7 Date Collected: 07/26/24 15:00

**Matrix: Solid** 

Batch Batch Dilution Batch Prepared Method **Factor** Number Analyst or Analyzed **Prep Type** Type Run Lab 08/03/24 16:25 Total/NA Analysis 2540G 467082 FCG EET SEA

Client Sample ID: PDI-16-SO-46-20240726

Lab Sample ID: 580-142513-7

Matrix: Solid

Date Collected: 07/26/24 15:00 Date Received: 07/30/24 13:20 Percent Solids: 90.4

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467094	BYM	EET SEA	08/02/24 11:41
Total/NA	Analysis	8260D		1	467098	TL1	EET SEA	08/03/24 01:59
Total/NA	Prep	5035	DL		467132	AC	EET SEA	08/05/24 00:16
Total/NA	Analysis	8260D	DL	1	467136	AC	EET SEA	08/05/24 15:01

Client Sample ID: PDI-16-SO-52.5-20240726

Lab Sample ID: 580-142513-8

**Matrix: Solid** 

Date Collected: 07/26/24 15:05 Date Received: 07/30/24 13:20

	Batch	Batch		Dilution	Batch		Prepared
Prep Type	Type	Method	Run	Factor	Number Analy	yst Lab	or Analyzed
Total/NA	Analysis	2540G		1	467083 FCG	EET SEA	08/03/24 16:27

Client Sample ID: PDI-16-SO-52.5-20240726

Lab Sample ID: 580-142513-8

**Matrix: Solid** 

Date Collected: 07/26/24 15:05 Date Received: 07/30/24 13:20 Percent Solids: 92.6

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467094	BYM	EET SEA	08/02/24 11:41
Total/NA	Analysis	8260D		1	467098	TL1	EET SEA	08/03/24 02:21
Total/NA	Prep	5035	DL		467132	AC	EET SEA	08/05/24 00:16
Total/NA	Analysis	8260D	DL	1	467136	AC	EET SEA	08/05/24 15:23

Client Sample ID: RB-02-WQ-20240729

Lab Sample ID: 580-142513-9 Date Collected: 07/29/24 10:40 **Matrix: Water** 

Date Received: 07/30/24 13:20

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D	RA	1	467248	K1K	EET SEA	08/06/24 03:43
Total/NA	Analysis	8260D		1	467012	K1K	EET SEA	08/02/24 19:28

Client Sample ID: TB-02-WQ-20240729

Lab Sample ID: 580-142513-10

**Matrix: Water** 

Date Collected: 07/29/24 00:01 Date Received: 07/30/24 13:20

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	467012	K1K	EET SEA	08/02/24 19:51

Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Client: ERM-West

Client Sample ID: PDI-17-SO-39-20240729

Lab Sample ID: 580-142513-11 Date Collected: 07/29/24 12:10

**Matrix: Solid** 

Date Received: 07/30/24 13:20

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	467083	FCG	EET SEA	08/03/24 16:27

Client Sample ID: PDI-17-SO-39-20240729

Lab Sample ID: 580-142513-11

Date Collected: 07/29/24 12:10 **Matrix: Solid** Date Received: 07/30/24 13:20 Percent Solids: 94.2

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467094	BYM	EET SEA	08/02/24 11:41
Total/NA	Analysis	8260D		1	467098	TL1	EET SEA	08/03/24 02:42
Total/NA	Prep	5035	DL		467132	AC	EET SEA	08/05/24 00:16
Total/NA	Analysis	8260D	DL	1	467136	AC	EET SEA	08/05/24 15:45

Client Sample ID: PDI-15-SO-38-20240725

Lab Sample ID: 580-142513-12

**Matrix: Solid** 

Date Collected: 07/25/24 12:20 Date Received: 07/30/24 13:20

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	467083	FCG	EET SEA	08/03/24 16:27

Client Sample ID: PDI-15-SO-38-20240725

Lab Sample ID: 580-142513-12

**Matrix: Solid** 

Date Collected: 07/25/24 12:20 Date Received: 07/30/24 13:20

Percent Solids: 95.2

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	3546	RA		467206	ER	EET SEA	08/05/24 13:37
Total/NA	Analysis	8270E	RA	20	468054	T1L	EET SEA	08/13/24 13:17
Total/NA	Prep	3546	DL		467206	ER	EET SEA	08/05/24 13:37
Total/NA	Analysis	8270E	DL	500	468054	T1L	EET SEA	08/13/24 13:41
Total/NA	Prep	3546	DL2		467206	ER	EET SEA	08/05/24 13:37
Total/NA	Analysis	8270E	DL2	1000	468054	T1L	EET SEA	08/13/24 14:26
Total/NA	Prep	3546			467206	ER	EET SEA	08/05/24 13:37
Total/NA	Analysis	8270E		20	467450	K1K	EET SEA	08/07/24 22:07

Client Sample ID: PDI-17-SO-33-20240729

Lab Sample ID: 580-142513-13

Matrix: Solid

Date Collected: 07/29/24 13:10 Date Received: 07/30/24 13:20

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	467083	FCG	EET SEA	08/03/24 16:27

#### **Lab Chronicle**

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-17-SO-33-20240729

Lab Sample ID: 580-142513-13 Date Collected: 07/29/24 13:10 **Matrix: Solid** Date Received: 07/30/24 13:20

Percent Solids: 94.5

Batch Batch Dilution Batch Prepared Method Number Analyst or Analyzed **Prep Type** Type Run **Factor** Lab Total/NA 5035 467094 BYM EET SEA 08/02/24 11:41 Prep 8260D Total/NA 467098 TL1 08/03/24 03:04 Analysis 1 **EET SEA** Total/NA Prep 5035 DL 467733 BYM **EET SEA** 08/09/24 11:13 Total/NA 08/09/24 15:27 Analysis 8260D DL 1 467737 K1K **EET SEA** Total/NA 5035 **EET SEA** 08/09/24 11:13 Prep RA 467733 BYM Total/NA Analysis 8260D RA 1 467737 K1K **EET SEA** 08/09/24 15:48

Client Sample ID: PDI-17-SO-52.5-20240729

Lab Sample ID: 580-142513-14 Date Collected: 07/29/24 15:30 Matrix: Solid

Date Received: 07/30/24 13:20

Batch Batch Dilution Batch **Prepared** Method **Prep Type** Type Run **Factor Number Analyst** Lab or Analyzed 08/03/24 16:27 Total/NA Analysis 2540G 467083 FCG **EET SEA** 

Client Sample ID: PDI-17-SO-52.5-20240729 Lab Sample ID: 580-142513-14

Date Collected: 07/29/24 15:30 Matrix: Solid Date Received: 07/30/24 13:20 Percent Solids: 90.4

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	<del></del>		467094	BYM	EET SEA	08/02/24 11:41
Total/NA	Analysis	8260D		1	467098	TL1	EET SEA	08/02/24 22:45
Total/NA	Prep	5035	DL		467132	AC	EET SEA	08/05/24 00:16
Total/NA	Analysis	8260D	DL	1	467136	AC	EET SEA	08/05/24 12:26

#### **Laboratory References:**

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

8/13/2024

## **Accreditation/Certification Summary**

Client: ERM-West Job ID: 580-142513-1

Project/Site: Arkema PDI Sampling

#### **Laboratory: Eurofins Seattle**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	<b>Expiration Date</b>
Oregon	NELAP	4167	07-07-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
2540G		Solid	Percent Solids
8270E	3546	Solid	2,4,6-Trichlorophenol
8270E	3546	Solid	2-Nitrophenol
8270E	3546	Solid	Bis(2-ethylhexyl) phthalate
8270E	3546	Solid	Butyl benzyl phthalate
8270E	3546	Solid	Hexachlorobutadiene
8270E	3546	Solid	Isophorone

8/13/2024

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## **Sample Summary**

Client: ERM-West

580-142513-13

580-142513-14

Project/Site: Arkema PDI Sampling

PDI-17-SO-33-20240729

PDI-17-SO-52.5-20240729

Lab Sample ID **Client Sample ID** Matrix Collected Received 580-142513-1 PDI-16-SO-23-20240726 07/26/24 10:00 07/30/24 13:20 Solid 580-142513-2 TB-01-SO-20240726 Solid 07/26/24 00:01 07/30/24 13:20 PDI-16-SO-37.7-20240726 580-142513-3 Solid 07/26/24 11:00 07/30/24 13:20 580-142513-4 PDI-16-SO-44.6-20240726 Solid 07/26/24 12:30 07/30/24 13:20 580-142513-5 DUP-02-SO-20240726 Solid 07/26/24 12:40 07/30/24 13:20 580-142513-6 PDI-16-SO-39.5-20240726 Solid 07/26/24 12:50 07/30/24 13:20 580-142513-7 PDI-16-SO-46-20240726 Solid 07/26/24 15:00 07/30/24 13:20 580-142513-8 PDI-16-SO-52.5-20240726 Solid 07/26/24 15:05 07/30/24 13:20 580-142513-9 RB-02-WQ-20240729 Water 07/29/24 10:40 07/30/24 13:20 TB-02-WQ-20240729 07/29/24 00:01 07/30/24 13:20 580-142513-10 Water 580-142513-11 PDI-17-SO-39-20240729 Solid 07/29/24 12:10 07/30/24 13:20 580-142513-12 PDI-15-SO-38-20240725 Solid 07/25/24 12:20 07/30/24 13:20

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Job ID: 580-142513-1

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#### **Eurofins Seattle**

5755 8th Street East Tacoma, WA 98424 Phone (253) 922-2310

## **Chain of Custody Record**



**Environment Testing** 

Phone (253) 922-2310														
Client Information	Sampler:				PM: uz, She	eri L				С	arrier Trackir	ng No(s):		COC No: 580-62781-19269.12
Client Contact: Avery Soplata	Phone:			E-N			eurof	finsus	com	S	tate of Origin	:		Page: Page of
Company: ERM-West			PWSID:	13			J. 31		Analysis	Regu	ested			Job#:
ddress: 050 SW 6th Avenue Suite 1650	Due Date Request	ed:					T		Allarysis	T	CStCG			Preservation Codes: F - MeOH
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PDI-16-SO-39,5-20246726	1 .	1250	G	5		X							2	
POI-16.50-46-20240726	7/26/2024	1500	G	S		X							2	
201-16-50-52.5-20240726	7/26/2024		G	S		X							2	
8-02-WD-70240729	7/29/2024		6		П	X							3	
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Environment Testing

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Chain of Custody Record

Phone (263) 922-2310
5755 8th Street East
5755 8th Street East
78010310

#### **Eurofins Seattle**

5755 8th Street East Tacoma, WA 98424 Phone (253) 922-2310

## **Chain of Custody Record**



Environment Testing

facoma, WA 98424				_													
Phone (253) 922-2310	Sampler:				b PM:						Carrier Tra	cking No(s	s):	COC			
Client Information	Phone:				ruz, She Mail:	ri L					State of Or	iain:		Page	62781-19269.12		
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#### **Eurofins Seattle**

5755 8th Street East

## **Chain of Custody Record**



acoma, WA 98424																		
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Ver: 04/02/20248/13/2024

Client: ERM-West Job Number: 580-142513-1

Login Number: 142513 List Source: Eurofins Seattle

List Number: 1

Creator: O'Connell, Jason I

Answer	Comment
True	
False	
True	
N/A	
	True True True True True True True True

## 4 4

# ANALYTICAL REPORT

## PREPARED FOR

Attn: Avery Soplata ERM-West 1050 SW 6th Avenue Suite 1650 Portland, Oregon 97204 Generated 9/17/2024 3:04:05 PM

## **JOB DESCRIPTION**

Arkema PDI Sampling

## **JOB NUMBER**

580-142513-2

Eurofins Seattle 5755 8th Street East Tacoma WA 98424



## **Eurofins Seattle**

#### **Job Notes**

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

#### **Authorization**

Generated 9/17/2024 3:04:05 PM

Authorized for release by Sheri Cruz, Project Manager I Sheri.Cruz@et.eurofinsus.com (253)922-2310

Shuid any

Client: ERM-West

Project/Site: Arkema PDI Sampling

Laboratory Job ID: 580-142513-2

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#### **Case Narrative**

Client: ERM-West Job ID: 580-142513-2

Project: Arkema PDI Sampling

**Eurofins Seattle** Job ID: 580-142513-2

> Job Narrative 580-142513-2

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 7/30/2024 1:20 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.6°C.

#### **Hydrocarbons**

Method NWTPH\_Dx: The following samples contained a hydrocarbon pattern in the diesel range; however, the elution pattern is not the typical diesel fuel pattern used by the laboratory for quantitative purposes: PDI-15-SO-38-20240725 (580-142513-12) and (580-142513-A-12-C DU).

Method NWTPH Dx: The following sample was prepared outside of preparation holding time due to analysis requested after the hold time had expired. Client added analysis on 9/10/24: PDI-15-SO-38-20240725 (580-142513-12).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**Eurofins Seattle** 

#### **Definitions/Glossary**

Client: ERM-West Job ID: 580-142513-2

Project/Site: Arkema PDI Sampling

#### **Qualifiers**

#### **GC Semi VOA**

Qualifier **Qualifier Description** 

Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.

#### **Glossary**

Abbreviation These commonly used abbreviations may or may not be present in this report. Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery **CFL** Contains Free Liquid CFU Colony Forming Unit CNF Contains No Free Liquid

Duplicate Error Ratio (normalized absolute difference) **DER** 

Dil Fac **Dilution Factor** 

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

Estimated Detection Limit (Dioxin) **EDL** LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level" MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit MLMinimum Level (Dioxin) MPN Most Probable Number Method Quantitation Limit MQL

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present

**PQL Practical Quantitation Limit** 

**PRES** Presumptive QC **Quality Control** 

Relative Error Ratio (Radiochemistry) **RER** 

Reporting Limit or Requested Limit (Radiochemistry) RL

**RPD** Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin) **TEQ** Toxicity Equivalent Quotient (Dioxin)

Too Numerous To Count **TNTC** 

**Eurofins Seattle** 

Page 5 of 15 9/17/2024

## **Client Sample Results**

Client: ERM-West Job ID: 580-142513-2

Project/Site: Arkema PDI Sampling

Date Collected: 07/25/24 12:20

Date Received: 07/30/24 13:20

Matrix: Solid
Percent Solids: 95.2

Method: NWTPH-Dx - No				•	•	_	_		
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	970	H	51	13	mg/Kg	<u></u>	09/13/24 15:33	09/15/24 06:42	1
Motor Oil (>C24-C36)	760	Н	51	18	mg/Kg	₩	09/13/24 15:33	09/15/24 06:42	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	77		50 - 150				09/13/24 15:33	09/15/24 06:42	1

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## **QC Sample Results**

Client: ERM-West Job ID: 580-142513-2

Project/Site: Arkema PDI Sampling

#### Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-471423/1-A

Lab Sample ID: LCS 580-471423/2-A

**Matrix: Solid** 

**Matrix: Solid** 

**Matrix: Solid** 

Analysis Batch: 471520

Analysis Batch: 471520

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

**Prep Batch: 471423** 

ı		1410	1410							
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	#2 Diesel (C10-C24)	ND		50	12	mg/Kg		09/13/24 15:33	09/14/24 23:02	1
	Motor Oil (>C24-C36)	ND		50	18	mg/Kg		09/13/24 15:33	09/14/24 23:02	1
ı										

MB MB

MD MD

%Recovery Qualifier Surrogate Limits Prepared Analyzed Dil Fac o-Terphenyl 55 50 - 150 09/13/24 15:33 09/14/24 23:02

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 471423** 

%Rec

LCS LCS Spike Added Result Qualifier Limits **Analyte** Unit D %Rec #2 Diesel (C10-C24) 500 70 - 125 479 mg/Kg 96 Motor Oil (>C24-C36) 500 505 mg/Kg 101 70 - 129

LCS LCS

Surrogate %Recovery Qualifier Limits o-Terphenyl 79 50 - 150

Lab Sample ID: 580-142513-12 DU Client Sample ID: PDI-15-SO-38-20240725

**Prep Type: Total/NA** 

Analysis Batch: 471520							Prep Batch: 47	71423
	Sample	Sample	DU	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
#2 Diesel (C10-C24)	970	H	 860		mg/Kg	≎		35
Motor Oil (>C24-C36)	760	Н	658		mg/Kg	₽	15	35

DU DU

Surrogate %Recovery Qualifier Limits 50 - 150 o-Terphenyl 75

#### **Lab Chronicle**

Client: ERM-West Job ID: 580-142513-2

Project/Site: Arkema PDI Sampling

Date Collected: 07/25/24 12:20

Matrix: Solid
Date Received: 07/30/24 13:20

Percent Solids: 95.2

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	3546			471423	ER	EET SEA	09/13/24 15:33
Total/NA	Analysis	NWTPH-Dx		1	471520	SW	EET SEA	09/15/24 06:42

#### **Laboratory References:**

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

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## **Accreditation/Certification Summary**

Client: ERM-West Job ID: 580-142513-2

Project/Site: Arkema PDI Sampling

## **Laboratory: Eurofins Seattle**

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	<b>Expiration Date</b>
Oregon	NELAP	4167	07-07-25

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## **Sample Summary**

Client: ERM-West

Project/Site: Arkema PDI Sampling

Job ID: 580-142513-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-142513-12	PDI-15-SO-38-20240725	Solid	07/25/24 12:20	07/30/24 13:20

### **Eurofins Seattle**

5755 8th Street East Tacoma, WA 98424 Phone (253) 922-2310

## **Chain of Custody Record**



**Environment Testing** 

Phone (253) 922-2310	Sample				- DM						0		- (-)		(acc v
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Client Contact: Avery Soplata	Phone:				Mail: neri.Cru:	z@et	eurof	insus o	com		State of C	rigin:			Page: Page of 2
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201-16-50-52.5-20240726	7/26/2024		G	S	П	X								2	
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**Environment Testing** 

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Chain of Custody Record

Phone (253) 922-2310 Tacoma, WA 98424 5755 8th Street East appeas supplin#2024

### **Eurofins Seattle**

5755 8th Street East Tacoma, WA 98424 Phone (253) 922-231

## **Chain of Custody Record**



Environment Testing

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### **Eurofins Seattle**

5755 8th Street East Tacoma, WA 98424 Phone (253) 922-231

## **Chain of Custody Record**



ne (253) 922-2310	Sampler:			Lab	PM:					Ca	arrier Trac	king No(s)			COC No:
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Client: ERM-West Job Number: 580-142513-2

Login Number: 142513 List Source: Eurofins Seattle

List Number: 1

Creator: O'Connell, Jason I

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# **ANALYTICAL REPORT**

## PREPARED FOR

Attn: Avery Soplata ERM-West 1050 SW 6th Avenue Suite 1650 Portland, Oregon 97204

Generated 8/13/2024 8:35:00 PM

## **JOB DESCRIPTION**

Arkema PDI Sampling

## **JOB NUMBER**

580-142621-1

Eurofins Seattle 5755 8th Street East Tacoma WA 98424



## **Eurofins Seattle**

### **Job Notes**

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

### **Authorization**

Generated 8/13/2024 8:35:00 PM

Authorized for release by Sheri Cruz, Project Manager I Sheri.Cruz@et.eurofinsus.com (253)922-2310

Shuid any

Client: ERM-West

Project/Site: Arkema PDI Sampling

Laboratory Job ID: 580-142621-1

# **Table of Contents**

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Table of Contents	3
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QC Sample Results	9
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Client: ERM-West Job ID: 580-142621-1

Project: Arkema PDI Sampling

**Eurofins Seattle** Job ID: 580-142621-1

> Job Narrative 580-142621-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 8/2/2024 1:05 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.2°C.

#### **General Chemistry**

Client DI leached the soil and field filtered it. Sample is reported as DOC in soil. We do not have this setup and client approved to proceed in this manner as a water and run TOC to get DOC result.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

### **Definitions/Glossary**

Client: ERM-West Job ID: 580-142621-1

Project/Site: Arkema PDI Sampling

### Glossary

DLC

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Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

**EDL** Estimated Detection Limit (Dioxin) LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level" MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

Decision Level Concentration (Radiochemistry)

MDL Method Detection Limit ML Minimum Level (Dioxin) Most Probable Number MPN MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present

PQL **Practical Quantitation Limit** 

**PRES** Presumptive QC **Quality Control** 

Relative Error Ratio (Radiochemistry) RER

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin) Toxicity Equivalent Quotient (Dioxin) TEQ

**TNTC** Too Numerous To Count

**Eurofins Seattle** 

Page 5 of 15

Client: ERM-West Job ID: 580-142621-1

Project/Site: Arkema PDI Sampling

Lab Sample ID: 580-142621-1 Client Sample ID: EB-080224 Date Collected: 08/02/24 07:30

**Matrix: Water** 

Date Received: 08/02/24 13:05

1	General Chemistry							
	Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
	Total Organic Carbon (SM 5310C)	2.0	1.5	0.38 mg/L			08/09/24 05:03	1

Client: ERM-West Job ID: 580-142621-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-13-50-21-20240731 Lab Sample ID: 580-142621-2

Date Collected: 07/31/24 12:50

**Matrix: Water** Date Received: 08/02/24 13:05

General Chemistry									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310C)	4.8		1.5	0.38	mg/L			08/09/24 05:39	1

Client: ERM-West Job ID: 580-142621-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-10-50-20.8-20240730 Lab Sample ID: 580-142621-3

Date Collected: 07/30/24 11:40
Date Received: 08/02/24 13:05

**Matrix: Water** 

General ChemistryAnalyteResult Total Organic Carbon (SM 5310C)QualifierRL State Sta

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### **QC Sample Results**

Client: ERM-West Job ID: 580-142621-1

Project/Site: Arkema PDI Sampling

Method: SM 5310C - Dissolved Organic Carbon

Lab Sample ID: MB 580-467954/4

**Matrix: Water** Analysis Batch: 467954

	MB	MB
A I4	Danult	<b>^</b>

Result Qualifier MDL Unit RL Prepared Analyzed Dil Fac Analyte 08/08/24 21:26 1.5 0.38 mg/L Total Organic Carbon ND

Lab Sample ID: LCS 580-467954/5

**Matrix: Water** 

Analysis Batch: 467954

	Spike	LCS	LCS		%Rec
Analyte	Added	Result	Qualifier Unit	D %Re	c Limits
Total Organic Carbon	25.0	25.5	ma/L		

Lab Sample ID: LCSD 580-467954/6

**Matrix: Water** 

Analysis Batch: 467954									
	Spik	e LCSD	LCSD				%Rec		RPD
Analyte	Adde	d Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Total Organic Carbon	25.	23.8		mg/L		95	85 - 115	7	20

**Prep Type: Total/NA** 

Prep Type: Total/NA

Prep Type: Total/NA

**Client Sample ID: Method Blank** 

**Client Sample ID: Lab Control Sample** 

**Client Sample ID: Lab Control Sample Dup** 

### **Lab Chronicle**

Client: ERM-West Job ID: 580-142621-1

Project/Site: Arkema PDI Sampling

Client Sample ID: EB-080224 Lab Sample ID: 580-142621-1

Date Collected: 08/02/24 07:30 **Matrix: Water** Date Received: 08/02/24 13:05

Batch Dilution Batch Batch Prepared Method **Factor** or Analyzed **Prep Type** Type Run **Number Analyst** Lab 08/09/24 05:03 Total/NA Analysis SM 5310C 467954 MJ EET SEA

Client Sample ID: PDI-13-50-21-20240731 Lab Sample ID: 580-142621-2

Date Collected: 07/31/24 12:50 **Matrix: Water** 

Date Received: 08/02/24 13:05

Batch Batch Dilution Batch Prepared **Prep Type** Type Method Run Factor **Number Analyst** Lab or Analyzed Total/NA Analysis SM 5310C 467954 MJ EET SEA 08/09/24 05:39

Client Sample ID: PDI-10-50-20.8-20240730 Lab Sample ID: 580-142621-3

Date Collected: 07/30/24 11:40 **Matrix: Water** 

Date Received: 08/02/24 13:05

Batch **Batch** Dilution Batch Prepared or Analyzed Method **Prep Type** Type **Factor Number Analyst** Run Lab SM 5310C 08/09/24 06:14 Total/NA Analysis 467954 MJ **EET SEA** 

**Laboratory References:** 

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

## **Accreditation/Certification Summary**

Client: ERM-West Job ID: 580-142621-1

Project/Site: Arkema PDI Sampling

## **Laboratory: Eurofins Seattle**

The accreditations/certifications listed below are applicable to this report.

Authority	Program	<b>Identification Number</b>	<b>Expiration Date</b>
Oregon	NELAP	4167	07-07-25

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## **Sample Summary**

Client: ERM-West

Project/Site: Arkema PDI Sampling

Lab Sample ID Client Sample ID Matrix Collected Received 580-142621-1 EB-080224 Water 08/02/24 07:30 08/02/24 13:05 580-142621-2 PDI-13-50-21-20240731 07/31/24 12:50 08/02/24 13:05 Water 580-142621-3 PDI-10-50-20.8-20240730 Water 07/30/24 11:40 08/02/24 13:05 1

Job ID: 580-142621-1

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### **Eurofins Seattle**

5755 8th Street East Tacoma, WA 98424

## **Chain of Custody Record**



Invironment Testing

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lient Contact: very Soplata	Phone:				-Mail: Sheri.Cru	ız@et	euro	finsus	s com			State of	Origin:			Page:	209.12
ompany: RM-West			PWSID:							- b	- D-					Page of Job#:	
ldress: 050 SW 6th Avenue Suite 1650	Due Date Reques	ted:							An	alysi	s Rec	queste	d T	1		Preservation C	odos:
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### **Eurofins Seattle**

5755 8th Street East Tacoma, WA 98424

## **Chain of Custody Record**



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Client: ERM-West Job Number: 580-142621-1

Login Number: 142621 List Source: Eurofins Seattle

List Number: 1

Creator: O'Connell, Jason I

Graden: G Common, Gucon I		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# **ANALYTICAL REPORT**

## PREPARED FOR

Attn: Avery Soplata ERM-West 1050 SW 6th Avenue Suite 1650 Portland, Oregon 97204

Generated 9/8/2024 9:59:26 AM Revision 1

## **JOB DESCRIPTION**

Arkema PDI Sampling

## **JOB NUMBER**

580-142622-1

Eurofins Seattle 5755 8th Street East Tacoma WA 98424



## **Eurofins Seattle**

### **Job Notes**

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

### **Authorization**

Generated 9/8/2024 9:59:26 AM Revision 1

Authorized for release by Sheri Cruz, Project Manager I Sheri.Cruz@et.eurofinsus.com (253)922-2310

Shuid ony

Client: ERM-West

Project/Site: Arkema PDI Sampling

Laboratory Job ID: 580-142622-1

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Client: ERM-West Job ID: 580-142622-1
Project: Arkema PDI Sampling

Job ID: 580-142622-1 Eurofins Seattle

Job Narrative 580-142622-1

There will be a revision of this report to re-extract 8081 for 2,4-DDx only that was not spiked in LCS/LCSD for this report.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these
  situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise
  specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed
  unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 8/2/2024 1:05 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.2°C.

#### **Receipt Exceptions**

Client DI leached the soil and field filtered it. Sample is reported as DOC in soil. We do not have this setup and client approved to proceed in this manner as a water and run TOC to get DOC result. PDI-13-SO-11.2-20240731 (580-142622-11).

#### GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-467543 recovered above the upper control limit for Bromomethane and Chloroethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: PDI-10-SO-21-20240730 (580-142622-1), PDI-10-SO-55.5-20240730 (580-142622-3), PDI-13-SO-28-20240731 (580-142622-5), PDI-13-SO-83.5-20240731 (580-142622-6), PDI-19-SO-39-20240801 (580-142622-7), PDI-14-SO-53.5-20240801 (580-142622-10), TB-01-SO-20240802 (580-142622-12) and (CCVIS 580-467543/3).

Method 8260D: The method blank for preparation batch 580-467541 and analytical batch 580-467543 contained Hexachlorobutadiene and n-Butylbenzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-467721 recovered outside acceptance criteria, low biased, for Chloromethane, 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 1,2-Dibromo-3-Chloropropane and Hexachlorobutadiene. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analytes, the data are reported.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-467721 recovered above the upper control limit for Chloroethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: PDI-13-SO-11.2-20240731 (580-142622-4), PDI-19-SO-39-20240801 (580-142622-7), PDI-19-SO-42.4-20240801 (580-142622-8) and (CCVIS 580-467721/3).

Method 8260D: The method blank for preparation batch 580-467720 and analytical batch 580-467721 contained Hexachlorobutadiene above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL) in the method blank; therefore, re-extraction and re-analysis of samples was not performed.

Method 8260D: The [QC] associated with 580-467721 is compliant under 8260D criteria for 1,2-Dibromo-3-Chloropropane. The software does not display the data to the whole number as is listed in the method (i.e. limit of 20%). When applying the evaluation to a whole number, the QC passes the criteria.

Method 8260D: The continuing calibration verification (CCV) and laboratory control sample duplicate (LCSD) associated with batch 580-468166 recovered outside acceptance criteria, low biased, for Methylene Chloride. Data reported as primary for preserved soil and methanol. Both runs result in ND for the sample. The following sample is associated PDI-10-SO-37-20240730 (580-142622-2).

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Client: ERM-West Job ID: 580-142622-1

Project: Arkema PDI Sampling

### Job ID: 580-142622-1 (Continued)

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Method 8260D: The following sample was provided to the laboratory with a significantly different initial weight than that required by the reference method: PDI-10-SO-37-20240730 (580-142622-2). Deviations in the weight by more than 20% may affect reporting limits and potentially method performance. The method specifies 5g. The amount provided was above this range.

Method 8260D: The following sample was analyzed outside of analytical holding time for MeOH run due to change in login, sample ran for methanol 8260D within hold time. Only Chlorobenzene is reported from the in hold MeOH run. The rest of the analytes are reported from the 8/14/24 low level run passed holding time. PDI-10-SO-37-20240730 (580-142622-2).

Method 8260D: The following analyte, Chlorobenzene, is reported outside calibration range. The following sample was re-analyzed by methanol soil to report as dilution: PDI-10-SO-37-20240730 (580-142622-2)

Method 8260D: The following analyte was outside of control limits high in the initial preserved solid analysis: Chlorobenzene. Reanalysis was performed as a methanol soil. The data have been reported. The following sample is affected: PDI-10-SO-37-20240730 (580-142622-2)

Method 8260D: The following sample was analyzed at reduced volume due to high concentrations of target analytes: PDI-10-SO-37-20240730 (580-142622-2). The calculation was performed using an initial volume adjustment rather than a dilution factor. The reporting limits have been elevated by the appropriate factor.

Method 8260D: The result for Chlorobenzene was above the upper calibration range and is reported as an Estimated ("E") value in sample: PDI-19-SO-39-20240801 (580-142622-7) The result reported is from the lowest dilution level. Determination is the best analytical result achievable.

Method 8260D: The following samples were analyzed at reduced volume due to high concentrations of target analytes: PDI-19-SO-39-20240801 (580-142622-7) and PDI-19-SO-42.4-20240801 (580-142622-8). The calculation was performed using an initial volume adjustment rather than a dilution factor. The reporting limits have been elevated by the appropriate factor.

Method 8260D: The following sample was diluted to bring the concentration of target analytes within the calibration range: PDI-14-SO-53.5-20240801 (580-142622-10). Elevated reporting limits (RLs) are provided.

Method 8260D: The following samples were diluted to bring the concentration of target analytes within the calibration range: PDI-13-SO-11.2-20240731 (580-142622-4) and PDI-19-SO-42.4-20240801 (580-142622-8). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **Herbicides**

Method 8151A: An incorrect volume of surrogate spiking solution was inadvertently added the following samples: PDI-15-SO-38-20240725 (580-142622-9). Percent recoveries are based on the amount spiked. 8151A SP

Method 8151A: The continuing calibration verification (CCV) associated with 570-471336 recovered high and outside the control limits for MCPP on one column. Results are confirmed on both columns and reported from the passing column.

Method 8151A: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 570-468000 and analytical batch 570-471336 recovered outside control limits for the following analytes: MCPA. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8151A: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 570-468000 and analytical batch 570-471336 recovered outside control limits for the following analytes: Dichlorprop.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **PCBs**

Method 8082A: The following samples required TBA clean-up, via EPA Method 3660B, to reduce matrix interferences TBA\_00048: PDI-15-SO-38-20240725 (580-142622-9), (580-142622-C-9-B MS) and (580-142622-C-9-C MSD).

Method 8082A: Internal standard responses were outside of acceptance limits for the following samples: PDI-15-SO-38-20240725 (580-142622-9), (580-142622-C-9-B MS) and (580-142622-C-9-C MSD). The sample(s) shows evidence of matrix interference.

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Client: ERM-West Job ID: 580-142622-1

Project: Arkema PDI Sampling

### Job ID: 580-142622-1 (Continued)

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Method 8082A: The following samples were diluted due to the nature of the sample matrix: PDI-15-SO-38-20240725 (580-142622-9), (580-142622-C-9-B MS) and (580-142622-C-9-C MSD). Elevated reporting limits (RLs) are provided.

Method 8082A: The following samples required a dilution due to the nature of the sample matrix: PDI-15-SO-38-20240725 (580-142622-9), (580-142622-C-9-B MS) and (580-142622-C-9-C MSD). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8082A: The following samples were diluted due to the nature of the sample matrix: (580-142622-C-9-B MS) and (580-142622-C-9-C MSD). Because of this dilution, the surrogate spike and matrix spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8082A: Surrogate recovery for the following samples were outside control limits: PDI-15-SO-38-20240725 (580-142622-9), (580-142622-C-9-B MS) and (580-142622-C-9-C MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8082A: The continuing calibration verification (CCV) associated with 580-468863 recovered outside the control limits for DCB Decachlorobiphenyl on one column. The software does not display the data to the whole number as is listed in the method (i.e. limit of 20%). When applying the evaluation to a whole number, the QC passes the criteria. Results are confirmed on both columns and reported from the passing column when possible. The associated sample is: (CCV 580-468863/21).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### Pesticides

Method 8081B: A Laboratory Control Sample (LCS) and Duplicate (LCSD) was not spiked for 2,4'-DDX in Prep Batch 580-467487 for 2,4'-DDD, 2,4'-DDE and 2,4'-DDT. Client was notified and the lab was instructed to re-extract out of hold and report. This is the revised report from with the 2,4-DDx spikes. LCS/LCSD 467487

Method 8081B: The continuing calibration verification (CCV) associated with 580-469118 recovered outside the control limits 4,4'-DDT and DCB Decachlorobiphenyl on one column. Results are confirmed on both columns and reported from the passing column. The associated sample is: (CCVIS 580-469118/2).

Method 8081B: The continuing calibration blank (CCB) for analytical batch 580-469118 contained 4,4'-DDT above the reporting limit (RL). All reported samples associated with this CCB were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

Method 8081B: The method blank for preparation batch 580-467487 and analytical batch 580-469118 contained 4,4'-DDT above the reporting limit (RL). Associated sample were not re-extracted and/or re-analyzed because results were greater than 10X the value found in the method blank.

Method 8081B: The following sample required a copper clean-up, via EPA Method 3660B, to reduce matrix interferences: PDI-15-SO-38-20240725 (580-142622-9).

Method 8081B: The following sample was diluted to bring the concentration of target analytes within the calibration range: PDI-15-SO-38-20240725 (580-142622-9). Elevated reporting limits (RLs) are provided.

Method 8081B: Surrogate recovery for the following sample was outside control limits: PDI-15-SO-38-20240725 (580-142622-9). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8081B: The following sample required a dilution due to the nature of the sample matrix: PDI-15-SO-38-20240725 (580-142622-9). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

DCB Decachlorobiphenyl is reported from a column that recovered outside of control in the CCVIS, due to matrix interference with the ISTD on the passing column. The other surrogate is in control in the CCVIS for the reported column, and the associated method only requires one passing surrogate.PDI-15-SO-38-20240725 (580-142622-9)

The following sample was re-prepared outside of preparation holding time due to failures in the original extraction batch QC: PDI-15-SO-38-20240725 (580-142622-9).

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Client: ERM-West Job ID: 580-142622-1

Project: Arkema PDI Sampling

### Job ID: 580-142622-1 (Continued)

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Surrogate recovery for the following sample was outside control limits: PDI-15-SO-38-20240725 (580-142622-9). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.PDI-15-SO-38-20240725 (580-142622-9).

The continuing calibration verification (CCV) associated with 580-470437 recovered outside the control limits for DCB Decachlorobiphenyl on one column. Results are confirmed on both columns and reported from the passing column. The associated samples are: PDI-15-SO-38-20240725 (580-142622-9) and (CCVIS 580-470437/2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **General Chemistry**

Method 5310C: Client DI leached the soil and field filtered it. Sample is reported as DOC in soil. We do not have this setup and client approved to proceed in this manner as a water and run TOC to get DOC result. PDI-13-SO-11.2-20240731 (580-142622-11).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

### **Definitions/Glossary**

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

### **Qualifiers**

### **GC/MS VOA**

Qualifier Qualifier Description

\*- LCS and/or LCSD is outside acceptance limits, low biased.

E Result exceeded calibration range.

H Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### GC Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
^2	Calibration Blank (ICB and/or CCB) is outside acceptance limits.
В	Compound was found in the blank and sample.
Н	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
р	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.

### **Glossary**

Abbreviation	These commonly used abbreviations may or may not be present in this report.
~	Listed under the "D" column to decignete that the requit is reported an admissible than

Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery
CFL Contains Free Liquid
CFU Colony Forming Unit
CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

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**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-10-SO-21-20240730

Lab Sample ID: 580-142622-1 Date Collected: 07/30/24 11:40 Matrix: Solid Date Received: 08/02/24 13:05 Percent Solids: 84.5

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.027 0.0068 mg/Kg 08/08/24 10:00 08/08/24 14:00 ND 0.054 1.1.1-Trichloroethane 0.0063 mg/Kg 08/08/24 10:00 08/08/24 14:00 1,1,2,2-Tetrachloroethane ND 0.027 0.010 mg/Kg 08/08/24 10:00 08/08/24 14:00 1,1,2-Trichloroethane ND 0.027 0.010 mg/Kg 08/08/24 10:00 08/08/24 14:00 0.054 0.013 mg/Kg 08/08/24 10:00 08/08/24 14:00 1.1-Dichloroethane ND 1,1-Dichloroethene ND 0.054 0.017 mg/Kg 08/08/24 10:00 08/08/24 14:00 1,1-Dichloropropene ND 0.054 0.0072 08/08/24 10:00 08/08/24 14:00 mg/Kg ND 0.054 08/08/24 10:00 08/08/24 14:00 1,2,3-Trichlorobenzene 0 11 mg/Kg 1,2,3-Trichloropropane ND 0.054 0.016 mg/Kg 08/08/24 10:00 08/08/24 14:00 1,2,4-Trichlorobenzene ND 0.11 0.058 mg/Kg ġ 08/08/24 10:00 08/08/24 14:00 1,2,4-Trimethylbenzene ND 0.054 0.018 mg/Kg 08/08/24 10:00 08/08/24 14:00 0.021 mg/Kg 1.2-Dibromo-3-Chloropropane ND 0.082 08/08/24 10:00 08/08/24 14:00 1 1,2-Dibromoethane ND 0.027 0.0052 mg/Kg 08/08/24 10:00 08/08/24 14:00 1,2-Dichlorobenzene ND 0.054 0.012 mg/Kg 08/08/24 10:00 08/08/24 14:00 ND 0.027 0.0075 mg/Kg 08/08/24 10:00 08/08/24 14:00 1.2-Dichloroethane 0.0090 08/08/24 14:00 1,2-Dichloropropane NΩ 0.027 mg/Kg 08/08/24 10:00 08/08/24 14:00 1,3,5-Trimethylbenzene ND 0.054 0.010 mg/Kg 08/08/24 10:00 1,3-Dichlorobenzene ND 0.082 0.018 mg/Kg 08/08/24 10:00 08/08/24 14:00 0.0076 ND 0.082 mg/Kg 08/08/24 10:00 08/08/24 14:00 1,3-Dichloropropane 1,4-Dichlorobenzene ND 0.082 0.015 mg/Kg 08/08/24 10:00 08/08/24 14:00 2,2-Dichloropropane ND 0.054 0.016 mg/Kg 08/08/24 10:00 08/08/24 14:00 ť 2-Chlorotoluene ND 0.054 0.012 mg/Kg 08/08/24 10:00 08/08/24 14:00 4-Chlorotoluene ND 08/08/24 10:00 08/08/24 14:00 0.054 0.013 mg/Kg 4-Isopropyltoluene ND 0.054 0.014 mg/Kg 08/08/24 10:00 08/08/24 14:00 Benzene ND 0.027 0.0052 mg/Kg 08/08/24 10:00 08/08/24 14:00 0.0057 Bromobenzene ND 0.054 mg/Kg 08/08/24 10:00 08/08/24 14:00 Bromochloromethane ND 0.054 0.0084 mg/Kg 08/08/24 10:00 08/08/24 14:00 Bromodichloromethane 0.0075 ND 0.054 mg/Kg 08/08/24 10:00 08/08/24 14:00 0.0061 Bromoform NΩ 0.054 mg/Kg 08/08/24 10:00 08/08/24 14:00 0.051 ND Bromomethane 0.14 mg/Kg 08/08/24 10:00 08/08/24 14:00 Carbon tetrachloride ND 0.027 0.0060 mg/Kg 08/08/24 10:00 08/08/24 14:00 0.054 0.0065 mg/Kg 08/08/24 10:00 08/08/24 14:00 Chlorobenzene 0.12 Chloroethane 0.028 08/08/24 10:00 08/08/24 14:00 ND 0.11 mg/Kg 08/08/24 10:00 08/08/24 14:00 Chloroform 0.030 0.027 0.0057 mg/Kg Chloromethane ND 0.082 0.014 mg/Kg 08/08/24 10:00 08/08/24 14:00 cis-1.2-Dichloroethene ND 0.082 0.017 08/08/24 10:00 08/08/24 14:00 mg/Kg cis-1,3-Dichloropropene ND 0.027 0.0054 mg/Kg 08/08/24 10:00 08/08/24 14:00 Dibromochloromethane ND 0.027 0.0067 mg/Kg 08/08/24 10:00 08/08/24 14:00 ND 0.010 Dibromomethane 0.054 mg/Kg ₩ 08/08/24 10:00 08/08/24 14:00 Dichlorodifluoromethane ND 0.34 0.062 mg/Kg 08/08/24 10:00 08/08/24 14:00 Ethylbenzene 0.029 0.054 0.012 mg/Kg 08/08/24 10:00 08/08/24 14:00 Hexachlorobutadiene ND 0 14 0.033 mg/Kg 08/08/24 10:00 08/08/24 14:00 0.012 mg/Kg 08/08/24 14:00 Isopropylbenzene ND 0.054 08/08/24 10:00 Methyl tert-butyl ether 0.054 0.0082 08/08/24 10:00 08/08/24 14:00 ND mg/Kg 08/08/24 14:00 Methylene Chloride ND 0.34 0.035 mg/Kg 08/08/24 10:00 0.054 0.0097 mg/Kg 08/08/24 10:00 08/08/24 14:00 m-Xylene & p-Xylene 0.18 Naphthalene 08/08/24 14:00 ND 0.20 0.053 mg/Kg 08/08/24 10:00 n-Butylbenzene ND 0.054 0.025 mg/Kg 08/08/24 10:00 08/08/24 14:00 N-Propylbenzene ND 0.054 0.020 mg/Kg 08/08/24 10:00 08/08/24 14:00

**Eurofins Seattle** 

9/8/2024 (Rev. 1)

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-10-SO-21-20240730 Lab Sample ID: 580-142622-1

15.5

Date Collected: 07/30/24 11:40

Matrix: Solid

Date Received: 08/02/24 13:05

Percent Solids: 84.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	0.036	J	0.054	0.0068	mg/Kg	<u></u>	08/08/24 10:00	08/08/24 14:00	1
sec-Butylbenzene	ND		0.054	0.012	mg/Kg	₩	08/08/24 10:00	08/08/24 14:00	1
Styrene	ND		0.054	0.017	mg/Kg	₩	08/08/24 10:00	08/08/24 14:00	1
t-Butylbenzene	ND		0.054	0.010	mg/Kg	₩	08/08/24 10:00	08/08/24 14:00	1
Tetrachloroethene	0.032	J	0.054	0.0072	mg/Kg	☼	08/08/24 10:00	08/08/24 14:00	1
Toluene	ND		0.082	0.018	mg/Kg	₩	08/08/24 10:00	08/08/24 14:00	1
trans-1,2-Dichloroethene	ND		0.082	0.020	mg/Kg	₩	08/08/24 10:00	08/08/24 14:00	1
trans-1,3-Dichloropropene	ND		0.054	0.0095	mg/Kg	₩	08/08/24 10:00	08/08/24 14:00	1
Trichloroethene	ND		0.054	0.014	mg/Kg	₩	08/08/24 10:00	08/08/24 14:00	1
Trichlorofluoromethane	ND		0.11	0.035	mg/Kg	₩	08/08/24 10:00	08/08/24 14:00	1
Vinyl chloride	ND		0.14	0.025	mg/Kg	₩	08/08/24 10:00	08/08/24 14:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				08/08/24 10:00	08/08/24 14:00	1
4-Bromofluorobenzene (Surr)	98		80 - 120				08/08/24 10:00	08/08/24 14:00	1
Dibromofluoromethane (Surr)	100		80 - 120				08/08/24 10:00	08/08/24 14:00	1
Toluene-d8 (Surr)	99		80 - 120				08/08/24 10:00	08/08/24 14:00	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	84.5		0.1	0.1	%			08/06/24 09:45	

0.1

0.1 %

08/06/24 09:45

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

n-Butylbenzene

N-Propylbenzene

Client Sample ID: PDI-10-SO-37-20240730

Lab Sample ID: 580-142622-2 Date Collected: 07/30/24 15:20 Matrix: Solid Date Received: 08/02/24 13:05 Percent Solids: 84.1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.0016 0.00032 mg/Kg 08/14/24 12:10 08/14/24 13:36 1.1.1-Trichloroethane ND H 0.0011 0.00052 mg/Kg 08/14/24 12:10 08/14/24 13:36 1,1,2,2-Tetrachloroethane ND H 0.0016 0.00012 mg/Kg 08/14/24 12:10 08/14/24 13:36 1,1,2-Trichloroethane ND Н 0.0011 0.00028 mg/Kg 08/14/24 12:10 08/14/24 13:36 0.0011 0.00050 mg/Kg 08/14/24 12:10 08/14/24 13:36 1.1-Dichloroethane ND 1,1-Dichloroethene ND Н 0.0027 0.0011 mg/Kg 08/14/24 12:10 08/14/24 13:36 1,1-Dichloropropene 0.0016 0.00058 08/14/24 12:10 08/14/24 13:36 ND Н mg/Kg ND 0.0054 0.00032 08/14/24 12:10 08/14/24 13:36 1,2,3-Trichlorobenzene Н mg/Kg 1,2,3-Trichloropropane ND Н 0.0027 0.00054 mg/Kg 08/14/24 12:10 08/14/24 13:36 1,2,4-Trichlorobenzene ND Н 0.0016 0.00065 mg/Kg 08/14/24 12:10 08/14/24 13:36 1,2,4-Trimethylbenzene ND Н 0.0027 0.00064 mg/Kg 08/14/24 12:10 08/14/24 13:36 1.2-Dibromo-3-Chloropropane ND H 0.0054 0.00086 ma/Ka 08/14/24 12:10 08/14/24 13:36 1 1,2-Dibromoethane ND Н 0.00054 0.00011 mg/Kg 08/14/24 12:10 08/14/24 13:36 1,2-Dichlorobenzene ND H 0.0054 0.00070 mg/Kg 08/14/24 12:10 08/14/24 13:36 0.0011 0.00033 mg/Kg 08/14/24 12:10 08/14/24 13:36 1.2-Dichloroethane ND Н 1,2-Dichloropropane ND Н 0.0011 0.00027 mg/Kg 08/14/24 12:10 08/14/24 13:36 1,3,5-Trimethylbenzene ND 0.0027 0.00043 08/14/24 12:10 08/14/24 13:36 Н mg/Kg 1,3-Dichlorobenzene ND 0.0027 0.00059 mg/Kg 08/14/24 12:10 08/14/24 13:36 Н 0.00012 08/14/24 12:10 0.0011 08/14/24 13:36 1,3-Dichloropropane ND Н mg/Kg 1,4-Dichlorobenzene ND Н 0.0027 0.00052 mg/Kg 08/14/24 12:10 08/14/24 13:36 2,2-Dichloropropane ND H 0.0027 0.00041 mg/Kg ÷ 08/14/24 12:10 08/14/24 13:36 2-Chlorotoluene ND Н 0.0027 0.00050 mg/Kg 08/14/24 12:10 08/14/24 13:36 4-Chlorotoluene 08/14/24 12:10 08/14/24 13:36 ND H 0.0027 0.00054 mg/Kg 4-Isopropyltoluene ND Н 0.0011 0.00021 mg/Kg 08/14/24 12:10 08/14/24 13:36 Benzene ND H 0.0011 0.00021 mg/Kg 08/14/24 12:10 08/14/24 13:36 Bromobenzene ND Н 0.0054 0.00054 mg/Kg 08/14/24 12:10 08/14/24 13:36 Bromochloromethane ND Н 0.0011 0.00050 mg/Kg 08/14/24 12:10 08/14/24 13:36 Bromodichloromethane ND Н 0.0011 0.00048 mg/Kg 08/14/24 12:10 08/14/24 13:36 Bromoform ND 0.0027 0.00045 mg/Kg 08/14/24 12:10 08/14/24 13:36 ND Bromomethane Н 0.0011 0.00047 mg/Kg 08/14/24 12:10 08/14/24 13:36 Carbon tetrachloride ND H 0.0011 0.00046 mg/Kg 08/14/24 12:10 08/14/24 13:36 0.050 0.0060 mg/Kg 08/09/24 13:47 08/09/24 15:48 Chlorobenzene 0.099 Chloroethane 0.0054 0.00040 08/14/24 12:10 08/14/24 13:36 ND mg/Kg 08/14/24 12:10 Chloroform NΠ Н 0.0016 0.00069 mg/Kg 08/14/24 13:36 Chloromethane ND Н 0.0027 0.00050 mg/Kg 08/14/24 12:10 08/14/24 13:36 cis-1,2-Dichloroethene 0.0016 0.00012 08/14/24 12:10 08/14/24 13:36 mg/Kg 0.0016 H cis-1,3-Dichloropropene ND Н 0.00054 0.00011 mg/Kg 08/14/24 12:10 08/14/24 13:36 Dibromochloromethane ND H 0.0011 0.00030 mg/Kg 08/14/24 12:10 08/14/24 13:36 0.00022 Dibromomethane ND Н 0.0011 mg/Kg 08/14/24 12:10 08/14/24 13:36 Dichlorodifluoromethane ND Н 0.0016 0.00071 mg/Kg 08/14/24 12:10 08/14/24 13:36 Ethylbenzene ND H 0.0011 0.00051 mg/Kg 08/14/24 12:10 08/14/24 13:36 Hexachlorobutadiene ND 0.0016 0.00078 mg/Kg 08/14/24 12:10 08/14/24 13:36 Isopropylbenzene ND 0.0016 0.00057 08/14/24 12:10 08/14/24 13:36 Н mg/Kg Methyl tert-butyl ether 0.0011 0.00016 08/14/24 13:36 ND mg/Kg 08/14/24 12:10 Methylene Chloride ND H \*-0.021 0.0053 mg/Kg 08/14/24 12:10 08/14/24 13:36 m-Xylene & p-Xylene ND 0.0054 0.00063 08/14/24 12:10 08/14/24 13:36 mg/Kg 0.0054 08/14/24 12:10 Naphthalene ND H 0.00096 mg/Kg 08/14/24 13:36

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08/14/24 13:36

0.0016

0.0027

0.00034

0.00041 mg/Kg

mg/Kg

08/14/24 12:10

08/14/24 12:10 08/14/24 13:36

ND Н

ND H

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-10-SO-37-20240730

Lab Sample ID: 580-142622-2 Date Collected: 07/30/24 15:20 **Matrix: Solid** Date Received: 08/02/24 13:05

Percent Solids: 84.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND	Н	0.0027	0.00049	mg/Kg	₽	08/14/24 12:10	08/14/24 13:36	1
sec-Butylbenzene	ND	Н	0.0016	0.00036	mg/Kg	₽	08/14/24 12:10	08/14/24 13:36	1
Styrene	ND	Н	0.0016	0.00040	mg/Kg	₽	08/14/24 12:10	08/14/24 13:36	1
t-Butylbenzene	ND	Н	0.0016	0.00035	mg/Kg	₽	08/14/24 12:10	08/14/24 13:36	1
Tetrachloroethene	0.00030	JH	0.0011	0.00021	mg/Kg	₩	08/14/24 12:10	08/14/24 13:36	1
Toluene	ND	Н	0.0054	0.00070	mg/Kg	₽	08/14/24 12:10	08/14/24 13:36	1
trans-1,2-Dichloroethene	ND	Н	0.0019	0.00078	mg/Kg	₩	08/14/24 12:10	08/14/24 13:36	1
trans-1,3-Dichloropropene	ND	Н	0.0054	0.00032	mg/Kg	₩	08/14/24 12:10	08/14/24 13:36	1
Trichloroethene	ND	Н	0.0011	0.00016	mg/Kg	₩	08/14/24 12:10	08/14/24 13:36	1
Trichlorofluoromethane	ND	Н	0.0046	0.0021	mg/Kg	₩	08/14/24 12:10	08/14/24 13:36	1
Vinyl chloride	ND	Н	0.0011	0.00047	mg/Kg	≎	08/14/24 12:10	08/14/24 13:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				08/09/24 13:47	08/09/24 15:48	1
1,2-Dichloroethane-d4 (Surr)	116		80 - 121				08/14/24 12:10	08/14/24 13:36	1
4-Bromofluorobenzene (Surr)	99		80 - 120				08/09/24 13:47	08/09/24 15:48	1
4-Bromofluorobenzene (Surr)	105		80 - 120				08/14/24 12:10	08/14/24 13:36	1
Dibromofluoromethane (Surr)	104		80 - 120				08/09/24 13:47	08/09/24 15:48	1
Dibromofluoromethane (Surr)	107		80 - 120				08/14/24 12:10	08/14/24 13:36	1
Toluene-d8 (Surr)	97		80 - 120				08/09/24 13:47	08/09/24 15:48	1
Toluene-d8 (Surr)	93		80 - 120				08/14/24 12:10	08/14/24 13:36	1
•									
General Chemistry	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
General Chemistry Analyte Percent Solids (SM22 2540G)	Result 84.1	Qualifier	RL 0.1	<b>RL</b> 0.1		<u>D</u>	Prepared	Analyzed 08/06/24 09:45	Dil Fac

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-10-SO-55.5-20240730

Lab Sample ID: 580-142622-3 Date Collected: 07/30/24 16:30 Matrix: Solid Date Received: 08/02/24 13:05 Percent Solids: 88.7

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.020 0.0051 mg/Kg 08/08/24 10:00 08/08/24 14:21 ND 1.1.1-Trichloroethane 0.041 0.0047 mg/Kg 08/08/24 10:00 08/08/24 14:21 1,1,2,2-Tetrachloroethane ND 0.020 0.0077 mg/Kg 08/08/24 10:00 08/08/24 14:21 0.0075 1,1,2-Trichloroethane ND 0.020 mg/Kg 08/08/24 10:00 08/08/24 14:21 0.041 0.0094 mg/Kg 08/08/24 10:00 08/08/24 14:21 1.1-Dichloroethane ND 08/08/24 14:21 1,1-Dichloroethene ND 0.041 0.013 mg/Kg 08/08/24 10:00 1,1-Dichloropropene ND 0.041 0.0054 08/08/24 10:00 08/08/24 14:21 mg/Kg ND 0.081 0.040 08/08/24 10:00 08/08/24 14:21 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.041 0.012 mg/Kg 08/08/24 10:00 08/08/24 14:21 1,2,4-Trichlorobenzene ND 0.081 0.043 mg/Kg 08/08/24 10:00 08/08/24 14:21 1,2,4-Trimethylbenzene ND 0.041 0.014 mg/Kg 08/08/24 10:00 08/08/24 14:21 mg/Kg 1.2-Dibromo-3-Chloropropane ND 0.061 0.015 08/08/24 10:00 08/08/24 14:21 1 1,2-Dibromoethane ND 0.020 0.0039 mg/Kg 08/08/24 10:00 08/08/24 14:21 1,2-Dichlorobenzene ND 0.041 0.0088 mg/Kg 08/08/24 10:00 08/08/24 14:21 ND 0.020 0.0056 mg/Kg 08/08/24 10:00 08/08/24 14:21 1.2-Dichloroethane 1,2-Dichloropropane NΩ 0.020 0.0067 mg/Kg 08/08/24 10:00 08/08/24 14:21 08/08/24 14:21 1,3,5-Trimethylbenzene ND 0.041 0.0077 mg/Kg 08/08/24 10:00 1,3-Dichlorobenzene ND 0.061 0.014 mg/Kg 08/08/24 10:00 08/08/24 14:21 ND 0.061 0.0057 08/08/24 10:00 08/08/24 14:21 1,3-Dichloropropane mg/Kg 1,4-Dichlorobenzene ND 0.061 0.011 mg/Kg 08/08/24 10:00 08/08/24 14:21 2,2-Dichloropropane ND 0.041 0.012 mg/Kg 08/08/24 10:00 08/08/24 14:21 ť 2-Chlorotoluene ND 0.041 0.0090 mg/Kg 08/08/24 10:00 08/08/24 14:21 4-Chlorotoluene ND 0.010 08/08/24 10:00 08/08/24 14:21 0.041 mg/Kg 4-Isopropyltoluene ND 0.041 0.010 mg/Kg 08/08/24 10:00 08/08/24 14:21 Benzene ND 0.020 0.0039 mg/Kg 08/08/24 10:00 08/08/24 14:21 0.0043 Bromobenzene ND 0.041 mg/Kg 08/08/24 10:00 08/08/24 14:21 Bromochloromethane ND 0.041 0.0063 mg/Kg 08/08/24 10:00 08/08/24 14:21 Bromodichloromethane 0.0056 ND 0.041 mg/Kg 08/08/24 10:00 08/08/24 14:21 0.0046 Bromoform ND 0.041 mg/Kg 08/08/24 10:00 08/08/24 14:21 ND 0.038 Bromomethane 0.10 mg/Kg 08/08/24 10:00 08/08/24 14:21 Carbon tetrachloride ND 0.020 0.0045 mg/Kg 08/08/24 10:00 08/08/24 14:21 ND 0.041 0.0049 mg/Kg 08/08/24 10:00 08/08/24 14:21 Chlorobenzene Chloroethane 0.081 0.021 08/08/24 10:00 08/08/24 14:21 ND mg/Kg ND 08/08/24 10:00 08/08/24 14:21 Chloroform 0.020 0.0043 mg/Kg Chloromethane ND 0.061 0.010 mg/Kg 08/08/24 10:00 08/08/24 14:21 cis-1.2-Dichloroethene ND 0.061 0.013 mg/Kg 08/08/24 10:00 08/08/24 14:21 cis-1,3-Dichloropropene ND 0.020 0.0041 mg/Kg 08/08/24 10:00 08/08/24 14:21 Dibromochloromethane ND 0.020 0.0050 mg/Kg 08/08/24 10:00 08/08/24 14:21 Dibromomethane ND 0.0075 0.041 mg/Kg 08/08/24 10:00 08/08/24 14:21 Dichlorodifluoromethane ND 0.25 0.047 mg/Kg 08/08/24 10:00 08/08/24 14:21 Ethylbenzene ND 0.041 0.0093 mg/Kg 08/08/24 10:00 08/08/24 14:21 Hexachlorobutadiene ND 0.10 0.024 mg/Kg 08/08/24 10:00 08/08/24 14:21 0.0087 08/08/24 14:21 Isopropylbenzene ND 0.041 mg/Kg 08/08/24 10:00 Methyl tert-butyl ether 0.041 0.0061 08/08/24 10:00 08/08/24 14:21 ND mg/Kg ND 08/08/24 14:21 Methylene Chloride 0.25 0.026 mg/Kg 08/08/24 10:00 0.041 0.0072 mg/Kg 08/08/24 10:00 08/08/24 14:21 m-Xylene & p-Xylene 0.14 Naphthalene 08/08/24 14:21 ND 0.15 0.040 mg/Kg 08/08/24 10:00 n-Butylbenzene ND 0.041 0.019 mg/Kg 08/08/24 10:00 08/08/24 14:21 08/08/24 10:00 08/08/24 14:21 N-Propylbenzene ND 0.041 0.015 mg/Kg

**Eurofins Seattle** 

9/8/2024 (Rev. 1)

Job ID: 580-142622-1 Client: ERM-West

Project/Site: Arkema PDI Sampling

Percent Solids (SM22 2540G)

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-10-SO-55.5-20240730

Date Collected: 07/30/24 16:30

88.7

11.3

Date Received: 08/02/24 13:05 Percent Solids: 88.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	0.030	J	0.041	0.0051	mg/Kg	<u></u>	08/08/24 10:00	08/08/24 14:21	1
sec-Butylbenzene	ND		0.041	0.0087	mg/Kg	₩	08/08/24 10:00	08/08/24 14:21	1
Styrene	ND		0.041	0.013	mg/Kg	₩	08/08/24 10:00	08/08/24 14:21	1
t-Butylbenzene	ND		0.041	0.0078	mg/Kg	☼	08/08/24 10:00	08/08/24 14:21	1
Tetrachloroethene	ND		0.041	0.0054	mg/Kg	☼	08/08/24 10:00	08/08/24 14:21	1
Toluene	ND		0.061	0.014	mg/Kg	₩	08/08/24 10:00	08/08/24 14:21	1
trans-1,2-Dichloroethene	ND		0.061	0.015	mg/Kg	☼	08/08/24 10:00	08/08/24 14:21	1
trans-1,3-Dichloropropene	ND		0.041	0.0071	mg/Kg	☼	08/08/24 10:00	08/08/24 14:21	1
Trichloroethene	ND		0.041	0.010	mg/Kg	₩	08/08/24 10:00	08/08/24 14:21	1
Trichlorofluoromethane	ND		0.081	0.026	mg/Kg	☼	08/08/24 10:00	08/08/24 14:21	1
Vinyl chloride	ND		0.10	0.019	mg/Kg	₽	08/08/24 10:00	08/08/24 14:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				08/08/24 10:00	08/08/24 14:21	1
4-Bromofluorobenzene (Surr)	99		80 - 120				08/08/24 10:00	08/08/24 14:21	1
Dibromofluoromethane (Surr)	104		80 - 120				08/08/24 10:00	08/08/24 14:21	1
Toluene-d8 (Surr)	102		80 - 120				08/08/24 10:00	08/08/24 14:21	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac

0.1

0.1

0.1 %

0.1 %

Lab Sample ID: 580-142622-3

08/06/24 09:45

08/06/24 09:45

**Matrix: Solid** 

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-13-SO-11.2-20240731

Lab Sample ID: 580-142622-4 Date Collected: 07/31/24 09:30 Matrix: Solid Date Received: 08/02/24 13:05 Percent Solids: 86.0

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Analyte Result Qualifier **MDL** Unit D Prepared Analyzed Dil Fac Dichlorodifluoromethane ND 3.7 0.68 mg/Kg 08/09/24 13:47 08/09/24 17:10 ND 0.88 Chloromethane 0.15 mg/Kg 08/09/24 13:47 08/09/24 17:10 Vinyl chloride ND 1.5 0.28 mg/Kg 08/09/24 13:47 08/09/24 17:10 ND Bromomethane 1.5 0.56 mg/Kg 08/09/24 13:47 08/09/24 17:10 ND 0.31 mg/Kg 08/09/24 13:47 08/09/24 17:10 Chloroethane 1.2 08/09/24 17:10 Trichlorofluoromethane ND 12 0.38 mg/Kg 08/09/24 13:47 1,1-Dichloroethene ND 0.59 0.18 08/09/24 13:47 08/09/24 17:10 mg/Kg 3.7 08/09/24 13:47 08/09/24 17:10 0.38 mg/Kg **Methylene Chloride** 1.4 Methyl tert-butyl ether ND 0.59 880.0 mg/Kg 08/09/24 13:47 08/09/24 17:10 trans-1,2-Dichloroethene ND 0.88 0.22 mg/Kg ġ 08/09/24 13:47 08/09/24 17:10 1,1-Dichloroethane ND 0.59 0.14 mg/Kg 08/09/24 13:47 08/09/24 17:10 2,2-Dichloropropane ND 0.59 0.18 mg/Kg 08/09/24 13:47 08/09/24 17:10 1 cis-1,2-Dichloroethene ND 0.88 0.19 mg/Kg 08/09/24 13:47 08/09/24 17:10 Bromochloromethane ND 0.59 0.091 mg/Kg 08/09/24 13:47 08/09/24 17:10 Chloroform ND 0.29 0.062 mg/Kg 08/09/24 13:47 08/09/24 17:10 1,1,1-Trichloroethane NΩ 0.59 0.068 mg/Kg 08/09/24 13:47 08/09/24 17:10 08/09/24 17:10 Carbon tetrachloride ND 0.29 0.065 mg/Kg 08/09/24 13:47 1,1-Dichloropropene ND 0.59 0.078 mg/Kg 08/09/24 13:47 08/09/24 17:10 0.056 ND 0.29 mg/Kg 08/09/24 13:47 08/09/24 17:10 Benzene 1,2-Dichloroethane ND 0.29 0.081 mg/Kg 08/09/24 13:47 08/09/24 17:10 Trichloroethene ND 0.59 0.15 mg/Kg 08/09/24 13:47 08/09/24 17:10 ť 1,2-Dichloropropane ND 0.29 0.097 mg/Kg 08/09/24 13:47 08/09/24 17:10 Dibromomethane ND 0.59 08/09/24 13:47 08/09/24 17:10 0.11 mg/Kg Bromodichloromethane ND 0.59 0.081 mg/Kg 08/09/24 13:47 08/09/24 17:10 cis-1,3-Dichloropropene ND 0.29 0.059 mg/Kg 08/09/24 13:47 08/09/24 17:10 Toluene ND 0.88 0.20 mg/Kg 08/09/24 13:47 08/09/24 17:10 trans-1,3-Dichloropropene ND 0.59 0.10 mg/Kg 08/09/24 13:47 08/09/24 17:10 1,1,2-Trichloroethane ND 0.29 0.11 mg/Kg 08/09/24 13:47 08/09/24 17:10 **Tetrachloroethene** 1.2 0.59 0.078 mg/Kg 08/09/24 13:47 08/09/24 17:10 ND 0.082 1,3-Dichloropropane 0.88 mg/Kg 08/09/24 13:47 08/09/24 17:10 Dibromochloromethane ND 0.29 0.072 mg/Kg 08/09/24 13:47 08/09/24 17:10 ND 0.29 0.056 mg/Kg 08/09/24 13:47 08/09/24 17:10 1.2-Dibromoethane 1,1,1,2-Tetrachloroethane ND 0.074 08/09/24 13:47 08/09/24 17:10 0.29 mg/Kg ND 0.13 08/09/24 17:10 Ethylbenzene 0.59mg/Kg 08/09/24 13:47 m-Xylene & p-Xylene ND 0.59 0.10 mg/Kg 08/09/24 13:47 08/09/24 17:10 o-Xylene ND 0.59 0.074 08/09/24 13:47 08/09/24 17:10 mg/Kg Styrene ND 0.59 0.19 mg/Kg 08/09/24 13:47 08/09/24 17:10 Bromoform ND 0.59 0.066 mg/Kg 08/09/24 13:47 08/09/24 17:10 ND Isopropylbenzene 0.59 0.13 mg/Kg ₩ 08/09/24 13:47 08/09/24 17:10 Bromobenzene ND 0.59 0.062 mg/Kg 08/09/24 13:47 08/09/24 17:10 1,1,2,2-Tetrachloroethane ND 0.29 0.11 mg/Kg 08/09/24 13:47 08/09/24 17:10 1,2,3-Trichloropropane ND 0.59 0.17 mg/Kg 08/09/24 13:47 08/09/24 17:10 08/09/24 17:10 N-Propylbenzene ND 0.59 0.22 mg/Kg 08/09/24 13:47 2-Chlorotoluene 08/09/24 17:10 ND 0.59 0.13 mg/Kg 08/09/24 13:47 ND 4-Chlorotoluene 0.59 0.14 mg/Kg 08/09/24 13:47 08/09/24 17:10 t-Butylbenzene ND 0.59 0.11 mg/Kg 08/09/24 13:47 08/09/24 17:10 1,2,4-Trimethylbenzene ND 0.59 0.20 mg/Kg 08/09/24 13:47 08/09/24 17:10 sec-Butylbenzene ND 0.59 0.13 mg/Kg 08/09/24 13:47 08/09/24 17:10 mg/Kg 4-Isopropyltoluene ND 0.59 0.15 08/09/24 13:47 08/09/24 17:10

**Eurofins Seattle** 

Job ID: 580-142622-1 Client: ERM-West

Project/Site: Arkema PDI Sampling

4-Bromofluorobenzene (Surr)

Dibromofluoromethane (Surr)

Client Sample ID: PDI-13-SO-11.2-20240731

Lab Sample ID: 580-142622-4 Date Collected: 07/31/24 09:30 **Matrix: Solid** 

Date Received: 08/02/24 13:05 Percent Solids: 86.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		0.88		mg/Kg	— <u>-</u>	08/09/24 13:47	08/09/24 17:10	1
1,4-Dichlorobenzene	4.0		0.88		mg/Kg	₽	08/09/24 13:47	08/09/24 17:10	1
n-Butylbenzene	ND		0.59	0.27	mg/Kg	₽	08/09/24 13:47	08/09/24 17:10	1
1,2-Dichlorobenzene	0.67		0.59	0.13	mg/Kg	₽	08/09/24 13:47	08/09/24 17:10	1
1,2-Dibromo-3-Chloropropane	ND		0.88	0.22	mg/Kg	☼	08/09/24 13:47	08/09/24 17:10	1
1,2,4-Trichlorobenzene	ND		1.2	0.63	mg/Kg	₽	08/09/24 13:47	08/09/24 17:10	1
Hexachlorobutadiene	ND		1.5	0.35	mg/Kg	₩	08/09/24 13:47	08/09/24 17:10	1
Naphthalene	ND		2.2	0.58	mg/Kg	₽	08/09/24 13:47	08/09/24 17:10	1
1,2,3-Trichlorobenzene	ND		1.2	0.58	mg/Kg	₩	08/09/24 13:47	08/09/24 17:10	1
1,3,5-Trimethylbenzene	ND		0.59	0.11	mg/Kg	₩	08/09/24 13:47	08/09/24 17:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 120				08/09/24 13:47	08/09/24 17:10	1
1,2-Dichloroethane-d4 (Surr)	94		80 - 121				08/09/24 13:47	08/00/24 17:10	1
1,2-Diciliolocularic-u+ (Sull)	37		00 - 121				00/03/24 13.41	00/03/24 17.10	,
4-Bromofluorobenzene (Surr)	97		80 - 120				08/09/24 13:47		1
• ,							08/09/24 13:47		1
4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr)	97 95	Compound	80 - 120 80 - 120	- DL			08/09/24 13:47	08/09/24 17:10	1 1
4-Bromofluorobenzene (Surr)	97 95 Platile Organic	Compound Qualifier	80 - 120 80 - 120		Unit	D	08/09/24 13:47	08/09/24 17:10	1 1 Dil Fac
4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr)  Method: SW846 8260D - Vo	97 95 Platile Organic	•	80 - 120 80 - 120 ds by GC/MS		Unit mg/Kg	<u>D</u>	08/09/24 13:47 08/09/24 13:47	08/09/24 17:10 08/09/24 17:10	1 1 1 Dil Fac
4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr)  Method: SW846 8260D - Vo Analyte	97 95 Platile Organic Result	Qualifier	80 - 120 80 - 120 ds by GC/MS RL	MDL			08/09/24 13:47 08/09/24 13:47 Prepared	08/09/24 17:10 08/09/24 17:10 Analyzed	Dil Fac
4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr)  Method: SW846 8260D - Vo Analyte Chlorobenzene	97 95 Platile Organic Result 1300	Qualifier	80 - 120 80 - 120 ds by GC/MS RL 59	MDL			08/09/24 13:47 08/09/24 13:47 Prepared 08/12/24 09:02	08/09/24 17:10 08/09/24 17:10 Analyzed 08/12/24 12:27	1

General Chemistry Analyte	Result Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	86.0	0.1	0.1	%			08/06/24 09:45	1
Percent Moisture (SM22 2540G)	14.0	0.1	0.1	%			08/06/24 09:45	1

80 - 120

80 - 120

99

105

08/12/24 09:02 08/12/24 12:27 08/12/24 09:02 08/12/24 12:27

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-13-SO-28-20240731

Lab Sample ID: 580-142622-5 Date Collected: 07/31/24 12:50 Matrix: Solid Date Received: 08/02/24 13:05 Percent Solids: 88.8

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.024 0.0060 mg/Kg 08/08/24 10:00 08/08/24 14:41 ND 1.1.1-Trichloroethane 0.048 0.0055 mg/Kg 08/08/24 10:00 08/08/24 14:41 1,1,2,2-Tetrachloroethane ND 0.024 0.0091 mg/Kg 08/08/24 10:00 08/08/24 14:41 1,1,2-Trichloroethane ND 0.024 0.0089 mg/Kg 08/08/24 10:00 08/08/24 14:41 0.011 mg/Kg 08/08/24 10:00 08/08/24 14:41 1.1-Dichloroethane ND 0.048 1,1-Dichloroethene ND 0.048 0.015 mg/Kg 08/08/24 10:00 08/08/24 14:41 1,1-Dichloropropene ND 0.048 0.0064 08/08/24 10:00 08/08/24 14:41 mg/Kg ND 0.096 0.048 08/08/24 10:00 08/08/24 14:41 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.048 0.014 mg/Kg 08/08/24 10:00 08/08/24 14:41 1,2,4-Trichlorobenzene ND 0.096 0.051 mg/Kg 08/08/24 10:00 08/08/24 14:41 1,2,4-Trimethylbenzene ND 0.048 0.016 mg/Kg 08/08/24 10:00 08/08/24 14:41 mg/Kg 1.2-Dibromo-3-Chloropropane ND 0.072 0.018 08/08/24 10:00 08/08/24 14:41 1 1,2-Dibromoethane ND 0.024 0.0046 mg/Kg 08/08/24 10:00 08/08/24 14:41 1,2-Dichlorobenzene ND 0.048 0.010 mg/Kg 08/08/24 10:00 08/08/24 14:41 ND 0.024 0.0066 mg/Kg 08/08/24 10:00 08/08/24 14:41 1.2-Dichloroethane 1,2-Dichloropropane NΩ 0.024 0.0079 mg/Kg 08/08/24 10:00 08/08/24 14:41 08/08/24 14:41 1,3,5-Trimethylbenzene ND 0.048 0.0091 mg/Kg 08/08/24 10:00 1,3-Dichlorobenzene ND 0.072 0.016 mg/Kg 08/08/24 10:00 08/08/24 14:41 ND 0.072 0.0067 08/08/24 10:00 08/08/24 14:41 1,3-Dichloropropane mg/Kg 1,4-Dichlorobenzene 0.015 J 0.072 0.013 mg/Kg 08/08/24 10:00 08/08/24 14:41 2,2-Dichloropropane ND 0.048 0.015 mg/Kg 08/08/24 10:00 08/08/24 14:41 ť 2-Chlorotoluene ND 0.048 0.011 mg/Kg 08/08/24 10:00 08/08/24 14:41 4-Chlorotoluene ND 08/08/24 10:00 08/08/24 14:41 0.048 0.012 mg/Kg 4-Isopropyltoluene ND 0.048 0.012 mg/Kg 08/08/24 10:00 08/08/24 14:41 Benzene ND 0.024 0.0046 mg/Kg 08/08/24 10:00 08/08/24 14:41 0.0051 Bromobenzene ND 0.048 mg/Kg 08/08/24 10:00 08/08/24 14:41 Bromochloromethane ND 0.048 0.0075 mg/Kg 08/08/24 10:00 08/08/24 14:41 Bromodichloromethane 0.0066 ND 0.048 mg/Kg 08/08/24 10:00 08/08/24 14:41 0.0054 Bromoform ND 0.048 mg/Kg 08/08/24 10:00 08/08/24 14:41 ND Bromomethane 0.12 0.045 mg/Kg 08/08/24 10:00 08/08/24 14:41 Carbon tetrachloride ND 0.024 0.0053 mg/Kg 08/08/24 10:00 08/08/24 14:41 0.048 0.0058 mg/Kg 08/08/24 10:00 08/08/24 14:41 Chlorobenzene 9.2 Chloroethane 0.096 0.025 08/08/24 10:00 08/08/24 14:41 ND mg/Kg ND 08/08/24 10:00 08/08/24 14:41 Chloroform 0.024 0.0051 mg/Kg Chloromethane ND 0.072 0.012 mg/Kg 08/08/24 10:00 08/08/24 14:41 cis-1.2-Dichloroethene ND 0.072 0.015 mg/Kg 08/08/24 10:00 08/08/24 14:41 cis-1,3-Dichloropropene ND 0.024 0.0048 mg/Kg 08/08/24 10:00 08/08/24 14:41 Dibromochloromethane ND 0.024 0.0059 mg/Kg 08/08/24 10:00 08/08/24 14:41 Dibromomethane ND 0.0089 0.048 mg/Kg 08/08/24 10:00 08/08/24 14:41 Dichlorodifluoromethane ND 0.30 0.055 mg/Kg 08/08/24 10:00 08/08/24 14:41 Ethylbenzene ND 0.048 0.011 mg/Kg 08/08/24 10:00 08/08/24 14:41 Hexachlorobutadiene ND 0.12 0.029 mg/Kg 08/08/24 10:00 08/08/24 14:41 0.010 08/08/24 14:41 Isopropylbenzene ND 0.048 mg/Kg 08/08/24 10:00 Methyl tert-butyl ether 0.048 0.0072 08/08/24 10:00 08/08/24 14:41 ND mg/Kg Methylene Chloride ND 0.30 0.031 mg/Kg 08/08/24 10:00 08/08/24 14:41 m-Xylene & p-Xylene ND 0.048 0.0085 mg/Kg 08/08/24 10:00 08/08/24 14:41 Naphthalene ND 08/08/24 14:41 0.18 0.047 mg/Kg 08/08/24 10:00 n-Butylbenzene ND 0.048 0.022 mg/Kg 08/08/24 10:00 08/08/24 14:41 08/08/24 14:41 N-Propylbenzene ND 0.048 0.018 mg/Kg 08/08/24 10:00

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

Analyte

Percent Solids (SM22 2540G)

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-13-SO-28-20240731

Date Collected: 07/31/24 12:50

Date Received: 08/02/24 13:05

Lab Sample ID: 580-142622-5

Matrix: Solid Percent Solids: 88.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.048	0.0060	mg/Kg	<del>-</del>	08/08/24 10:00	08/08/24 14:41	1
sec-Butylbenzene	ND		0.048	0.010	mg/Kg	☼	08/08/24 10:00	08/08/24 14:41	1
Styrene	ND		0.048	0.015	mg/Kg	₽	08/08/24 10:00	08/08/24 14:41	1
t-Butylbenzene	ND		0.048	0.0093	mg/Kg	☼	08/08/24 10:00	08/08/24 14:41	1
Tetrachloroethene	ND		0.048	0.0064	mg/Kg	☼	08/08/24 10:00	08/08/24 14:41	1
Toluene	ND		0.072	0.016	mg/Kg	☼	08/08/24 10:00	08/08/24 14:41	1
trans-1,2-Dichloroethene	ND		0.072	0.018	mg/Kg	☼	08/08/24 10:00	08/08/24 14:41	1
trans-1,3-Dichloropropene	ND		0.048	0.0084	mg/Kg	☼	08/08/24 10:00	08/08/24 14:41	1
Trichloroethene	ND		0.048	0.012	mg/Kg	☼	08/08/24 10:00	08/08/24 14:41	1
Trichlorofluoromethane	ND		0.096	0.031	mg/Kg	☼	08/08/24 10:00	08/08/24 14:41	1
Vinyl chloride	ND		0.12	0.022	mg/Kg	₩	08/08/24 10:00	08/08/24 14:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			80 - 121				08/08/24 10:00	08/08/24 14:41	1
4-Bromofluorobenzene (Surr)	99		80 - 120				08/08/24 10:00	08/08/24 14:41	1
Dibromofluoromethane (Surr)	101		80 - 120				08/08/24 10:00	08/08/24 14:41	1
Toluene-d8 (Surr)	102		80 - 120				08/08/24 10:00	08/08/24 14:41	1

RL

0.1

0.1

RL Unit

0.1 %

0.1 %

D

Prepared

Analyzed

08/06/24 09:45

08/06/24 09:45

Result Qualifier

88.8

11.2

7

ŏ

10

11

10

Dil Fac

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-13-SO-83.5-20240731 Lab Sample ID: 580-142622-6

Date Collected: 07/31/24 17:25

Date Received: 08/02/24 13:05

Matrix: Solid
Percent Solids: 87.0

Method: SW846 8260D - Vola	_	•	•		l Init		Dronered	Analyzad	Dil E-
Analyte		Qualifier	RL	MDL		_ <u>D</u>	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND		0.024	0.0059	mg/Kg	₩	08/08/24 10:00		
1,1,1-Trichloroethane	ND		0.047	0.0054		₩		08/08/24 15:02	
1,1,2,2-Tetrachloroethane	ND		0.024	0.0090		<del></del>		08/08/24 15:02	
1,1,2-Trichloroethane	ND		0.024	0.0087	0 0	<b>*</b>		08/08/24 15:02	
1,1-Dichloroethane	ND		0.047		mg/Kg	<b>*</b>		08/08/24 15:02	
1,1-Dichloroethene	ND		0.047		mg/Kg	<u>.</u> .		08/08/24 15:02	
1,1-Dichloropropene	ND		0.047	0.0063		₩		08/08/24 15:02	
1,2,3-Trichlorobenzene	ND		0.094		mg/Kg	₩		08/08/24 15:02	
1,2,3-Trichloropropane	ND		0.047		mg/Kg	<del>.</del>		08/08/24 15:02	
1,2,4-Trichlorobenzene	ND		0.094		mg/Kg	₩	08/08/24 10:00	08/08/24 15:02	
1,2,4-Trimethylbenzene	ND		0.047	0.016	mg/Kg	₩	08/08/24 10:00	08/08/24 15:02	
1,2-Dibromo-3-Chloropropane	ND		0.071	0.018	mg/Kg	₩	08/08/24 10:00	08/08/24 15:02	
1,2-Dibromoethane	ND		0.024	0.0045	mg/Kg	₩	08/08/24 10:00	08/08/24 15:02	
1,2-Dichlorobenzene	ND		0.047	0.010	mg/Kg	₩	08/08/24 10:00	08/08/24 15:02	
1,2-Dichloroethane	ND		0.024	0.0065	mg/Kg	₩	08/08/24 10:00	08/08/24 15:02	
1,2-Dichloropropane	ND		0.024	0.0078	mg/Kg	₩	08/08/24 10:00	08/08/24 15:02	
1,3,5-Trimethylbenzene	ND		0.047	0.0090	mg/Kg	₩	08/08/24 10:00	08/08/24 15:02	
1,3-Dichlorobenzene	ND		0.071	0.016	mg/Kg	₩	08/08/24 10:00	08/08/24 15:02	
1,3-Dichloropropane	ND		0.071	0.0066	mg/Kg	₩	08/08/24 10:00	08/08/24 15:02	
1,4-Dichlorobenzene	ND		0.071	0.013	mg/Kg	₽	08/08/24 10:00	08/08/24 15:02	
2,2-Dichloropropane	ND		0.047	0.014	mg/Kg	₩	08/08/24 10:00	08/08/24 15:02	
2-Chlorotoluene	ND		0.047	0.010	mg/Kg	₩	08/08/24 10:00	08/08/24 15:02	
1-Chlorotoluene	ND		0.047	0.012	mg/Kg	₩	08/08/24 10:00	08/08/24 15:02	
1-Isopropyltoluene	ND		0.047	0.012	mg/Kg	₩	08/08/24 10:00	08/08/24 15:02	
Benzene	ND		0.024	0.0045			08/08/24 10:00	08/08/24 15:02	
Bromobenzene	ND		0.047	0.0050	mg/Kg	₩	08/08/24 10:00	08/08/24 15:02	
Bromochloromethane	ND		0.047	0.0073	mg/Kg	₩	08/08/24 10:00	08/08/24 15:02	
Bromodichloromethane	ND		0.047	0.0065			08/08/24 10:00	08/08/24 15:02	
Bromoform	ND		0.047	0.0053		₩		08/08/24 15:02	
Bromomethane	ND		0.12		mg/Kg	₩		08/08/24 15:02	
Carbon tetrachloride	ND		0.024	0.0052				08/08/24 15:02	
Chlorobenzene	0.097		0.047	0.0057				08/08/24 15:02	
Chloroethane	ND		0.094		mg/Kg			08/08/24 15:02	
Chloroform	ND		0.024	0.0050				08/08/24 15:02	
Chloromethane	ND		0.024		mg/Kg	₩		08/08/24 15:02	
cis-1,2-Dichloroethene	ND		0.071		mg/Kg	~ ☆	08/08/24 10:00		
cis-1,3-Dichloropropene	ND		0.024	0.0047		<del></del> .	08/08/24 10:00		
Dibromochloromethane	ND ND		0.024					08/08/24 15:02	
Dibromomethane	ND ND		0.024	0.0058 0.0087		*		08/08/24 15:02	
						<u></u> .			
Dichlorodifluoromethane	ND		0.30		mg/Kg	₩		08/08/24 15:02	
Ethylbenzene	ND		0.047		mg/Kg	₩		08/08/24 15:02	
Hexachlorobutadiene	ND		0.12		mg/Kg	<u>.</u> .		08/08/24 15:02	
sopropylbenzene	ND		0.047		mg/Kg	<b>‡</b>		08/08/24 15:02	
Methyl tert-butyl ether	ND		0.047	0.0071		<b>*</b>		08/08/24 15:02	
Methylene Chloride	ND		0.30		mg/Kg			08/08/24 15:02	
n-Xylene & p-Xylene	ND		0.047	0.0084		₩		08/08/24 15:02	
Naphthalene	ND		0.18		mg/Kg	₩		08/08/24 15:02	
n-Butylbenzene	ND		0.047		mg/Kg	₩	08/08/24 10:00	08/08/24 15:02	
N-Propylbenzene	ND		0.047	0.018	mg/Kg	≎	08/08/24 10:00	08/08/24 15:02	

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Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-13-SO-83.5-20240731

13.0

Lab Sample ID: 580-142622-6 Date Collected: 07/31/24 17:25 **Matrix: Solid** 

Date Received: 08/02/24 13:05 Percent Solids: 87.0

Method: SW846 8260D - Vola	_	•	•	•	nued)	_			
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.047	0.0059	mg/Kg	₩	08/08/24 10:00	08/08/24 15:02	1
sec-Butylbenzene	ND		0.047	0.010	mg/Kg	☼	08/08/24 10:00	08/08/24 15:02	1
Styrene	ND		0.047	0.015	mg/Kg	₩	08/08/24 10:00	08/08/24 15:02	1
t-Butylbenzene	ND		0.047	0.0091	mg/Kg	☼	08/08/24 10:00	08/08/24 15:02	1
Tetrachloroethene	ND		0.047	0.0063	mg/Kg	☼	08/08/24 10:00	08/08/24 15:02	1
Toluene	ND		0.071	0.016	mg/Kg	₩	08/08/24 10:00	08/08/24 15:02	1
trans-1,2-Dichloroethene	ND		0.071	0.017	mg/Kg	☼	08/08/24 10:00	08/08/24 15:02	1
trans-1,3-Dichloropropene	ND		0.047	0.0083	mg/Kg	☼	08/08/24 10:00	08/08/24 15:02	1
Trichloroethene	ND		0.047	0.012	mg/Kg	⊅	08/08/24 10:00	08/08/24 15:02	1
Trichlorofluoromethane	ND		0.094	0.031	mg/Kg	₩	08/08/24 10:00	08/08/24 15:02	1
Vinyl chloride	ND		0.12	0.022	mg/Kg	≎	08/08/24 10:00	08/08/24 15:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				08/08/24 10:00	08/08/24 15:02	
4-Bromofluorobenzene (Surr)	99		80 - 120				08/08/24 10:00	08/08/24 15:02	1
Dibromofluoromethane (Surr)	101		80 - 120				08/08/24 10:00	08/08/24 15:02	1
Toluene-d8 (Surr)	101		80 - 120				08/08/24 10:00	08/08/24 15:02	
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	87.0		0.1	0.1	%			08/06/24 09:45	1

0.1

0.1 %

08/06/24 09:45

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-19-SO-39-20240801

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: 580-142622-7 Date Collected: 08/01/24 13:15 Matrix: Solid Date Received: 08/02/24 13:05 Percent Solids: 87.7

Dil Fac Analyte Result Qualifier MDL Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 35 8.8 mg/Kg 08/09/24 08:00 08/09/24 16:50 ND 70 1.1.1-Trichloroethane 8.1 mg/Kg 08/09/24 08:00 08/09/24 16:50 08/09/24 16:50 1,1,2,2-Tetrachloroethane ND 35 mg/Kg 08/09/24 08:00 ND 35 1,1,2-Trichloroethane mg/Kg 08/09/24 08:00 08/09/24 16:50 70 mg/Kg 08/09/24 08:00 08/09/24 16:50 1.1-Dichloroethane ND 16 mg/Kg 1,1-Dichloroethene ND 70 22 08/09/24 08:00 08/09/24 16:50 1,1-Dichloropropene ND 70 mg/Kg 08/09/24 08:00 08/09/24 16:50 ND 140 70 08/09/24 08:00 08/09/24 16:50 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 70 mg/Kg 08/09/24 08:00 08/09/24 16:50 1,2,4-Trichlorobenzene ND 140 75 mg/Kg ġ 08/09/24 08:00 08/09/24 16:50 1,2,4-Trimethylbenzene ND 70 mg/Kg 08/09/24 08:00 08/09/24 16:50 1.2-Dibromo-3-Chloropropane ND 110 27 mg/Kg 08/09/24 08:00 08/09/24 16:50 1 1,2-Dibromoethane ND 35 6.7 mg/Kg 08/09/24 08:00 08/09/24 16:50 70 15 mg/Kg 08/09/24 08:00 08/09/24 16:50 1,2-Dichlorobenzene 43 35 9.6 ND mg/Kg 08/09/24 08:00 08/09/24 16:50 1.2-Dichloroethane 35 1,2-Dichloropropane ND 12 mg/Kg 08/09/24 08:00 08/09/24 16:50 08/09/24 16:50 1,3,5-Trimethylbenzene ND 70 mg/Kg 08/09/24 08:00 1,3-Dichlorobenzene ND 110 mg/Kg 08/09/24 08:00 08/09/24 16:50 ND 110 9.8 08/09/24 08:00 08/09/24 16:50 1,3-Dichloropropane mg/Kg 1,4-Dichlorobenzene 170 110 mg/Kg 08/09/24 08:00 08/09/24 16:50 2,2-Dichloropropane ND 70 21 mg/Kg 08/09/24 08:00 08/09/24 16:50 ť 70 2-Chlorotoluene ND mg/Kg 08/09/24 08:00 08/09/24 16:50 4-Chlorotoluene ND 70 08/09/24 08:00 08/09/24 16:50 17 mg/Kg 4-Isopropyltoluene ND 70 mg/Kg 08/09/24 08:00 08/09/24 16:50 Benzene ND 35 mg/Kg 08/09/24 08:00 08/09/24 16:50 ND 70 Bromobenzene mg/Kg 08/09/24 08:00 08/09/24 16:50 Bromochloromethane ND 70 mg/Kg 08/09/24 08:00 08/09/24 16:50 Bromodichloromethane 70 9.6 ND mg/Kg 08/09/24 08:00 08/09/24 16:50 70 Bromoform NΩ mg/Kg 08/09/24 08:00 08/09/24 16:50 ND 180 66 Bromomethane mg/Kg 08/09/24 08:00 08/09/24 16:50 Carbon tetrachloride ND 35 7.7 mg/Kg 08/09/24 08:00 08/09/24 16:50 70 8.4 08/09/24 08:00 08/09/24 16:50 41000 mg/Kg Chlorobenzene Chloroethane 140 mg/Kg 08/09/24 08:00 08/09/24 16:50 ND ND 08/09/24 16:50 Chloroform 35 7.4 mg/Kg 08/09/24 08:00 Chloromethane ND 110 mg/Kg 08/09/24 08:00 08/09/24 16:50 cis-1.2-Dichloroethene ND 110 22 08/09/24 08:00 08/09/24 16:50 mg/Kg 7.0 cis-1,3-Dichloropropene ND 35 mg/Kg 08/09/24 08:00 08/09/24 16:50 Dibromochloromethane ND 35 8.6 mg/Kg 08/09/24 08:00 08/09/24 16:50 Dibromomethane ND 70 13 mg/Kg ₩ 08/09/24 08:00 08/09/24 16:50 440 Dichlorodifluoromethane ND 80 mg/Kg 08/09/24 08:00 08/09/24 16:50 Ethylbenzene ND 70 16 mg/Kg 08/09/24 08:00 08/09/24 16:50 Hexachlorobutadiene ND 180 mg/Kg 08/09/24 08:00 08/09/24 16:50

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mg/Kg

mg/Kg

mg/Kg

mg/Kg

46

69

26

ND

ND

ND

ND

ND

ND

ND

Isopropylbenzene

Methyl tert-butyl ether

Methylene Chloride

Naphthalene

n-Butylbenzene

N-Propylbenzene

m-Xylene & p-Xylene

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-19-SO-39-20240801

Lab Sample ID: 580-142622-7 Date Collected: 08/01/24 13:15 **Matrix: Solid** 

Date Received: 08/02/24 13:05 Percent Solids: 87.7

Method: SW846 8260D - Vola	_	•	•	(Conti	,				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		70	8.8	mg/Kg	☼	08/09/24 08:00	08/09/24 16:50	1
sec-Butylbenzene	ND		70	15	mg/Kg	☼	08/09/24 08:00	08/09/24 16:50	1
Styrene	ND		70	22	mg/Kg	₽	08/09/24 08:00	08/09/24 16:50	1
t-Butylbenzene	ND		70	13	mg/Kg	☼	08/09/24 08:00	08/09/24 16:50	1
Tetrachloroethene	39	J	70	9.3	mg/Kg	☼	08/09/24 08:00	08/09/24 16:50	1
Toluene	ND		110	24	mg/Kg	₩	08/09/24 08:00	08/09/24 16:50	1
trans-1,2-Dichloroethene	ND		110	26	mg/Kg	₩	08/09/24 08:00	08/09/24 16:50	1
trans-1,3-Dichloropropene	ND		70	12	mg/Kg	☼	08/09/24 08:00	08/09/24 16:50	1
Trichloroethene	ND		70	18	mg/Kg	₩	08/09/24 08:00	08/09/24 16:50	1
Trichlorofluoromethane	ND		140	46	mg/Kg	☼	08/09/24 08:00	08/09/24 16:50	1
Vinyl chloride	ND		180	33	mg/Kg	☼	08/09/24 08:00	08/09/24 16:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		80 - 121				08/09/24 08:00	08/09/24 16:50	1
4-Bromofluorobenzene (Surr)	97		80 - 120				08/09/24 08:00	08/09/24 16:50	1
Dibromofluoromethane (Surr)	97		80 - 120				08/09/24 08:00	08/09/24 16:50	1
Toluene-d8 (Surr)	102		80 - 120				08/09/24 08:00	08/09/24 16:50	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	87.7		0.1	0.1	%			08/06/24 09:45	

General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	87.7		0.1	0.1	%			08/06/24 09:45	1
Percent Moisture (SM22 2540G)	12.3		0.1	0.1	%			08/06/24 09:45	1

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-19-SO-42.4-20240801

Lab Sample ID: 580-142622-8 Date Collected: 08/01/24 13:55 Matrix: Solid Date Received: 08/02/24 13:05 Percent Solids: 86.1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Analyte Result Qualifier **MDL** Unit D Prepared Analyzed Dil Fac 1,1,1,2-Tetrachloroethane ND 0.25 0.063 mg/Kg 08/09/24 08:00 08/09/24 16:08 ND 0.51 1.1.1-Trichloroethane 0.058 mg/Kg 08/09/24 08:00 08/09/24 16:08 08/09/24 16:08 1,1,2,2-Tetrachloroethane ND 0.25 0.096 mg/Kg 08/09/24 08:00 0.25 1,1,2-Trichloroethane ND 0.094 mg/Kg 08/09/24 08:00 08/09/24 16:08 0.12 mg/Kg 08/09/24 08:00 08/09/24 16:08 1 1-Dichloroethane ND 0.51 08/09/24 16:08 1,1-Dichloroethene ND 0.51 0.16 mg/Kg 08/09/24 08:00 ND 0.51 0.067 08/09/24 08:00 08/09/24 16:08 1,1-Dichloropropene mg/Kg ND 08/09/24 08:00 08/09/24 16:08 1,2,3-Trichlorobenzene 1.0 0.50 mg/Kg 1,2,3-Trichloropropane ND 0.51 0.15 mg/Kg 08/09/24 08:00 08/09/24 16:08 1,2,4-Trichlorobenzene ND 1.0 0.54 mg/Kg ġ 08/09/24 08:00 08/09/24 16:08 1,2,4-Trimethylbenzene ND 0.51 0.17 mg/Kg 08/09/24 08:00 08/09/24 16:08 1.2-Dibromo-3-Chloropropane ND 0.76 0.19 mg/Kg 08/09/24 08:00 08/09/24 16:08 1 1,2-Dibromoethane ND 0.25 0.048 mg/Kg 08/09/24 08:00 08/09/24 16:08 0.51 0.11 mg/Kg 08/09/24 08:00 08/09/24 16:08 1,2-Dichlorobenzene 3.3 ND 0.25 0.070 mg/Kg 08/09/24 08:00 08/09/24 16:08 1.2-Dichloroethane 1,2-Dichloropropane ND 0.25 0.084 mg/Kg 08/09/24 08:00 08/09/24 16:08 08/09/24 16:08 ND 0.51 0.096 mg/Kg 08/09/24 08:00 1,3,5-Trimethylbenzene 0.76 0.17 mg/Kg 08/09/24 08:00 08/09/24 16:08 1.3-Dichlorobenzene 0.47 08/09/24 16:08 ND 0.76 08/09/24 08:00 1,3-Dichloropropane 0.071 mg/Kg 1,4-Dichlorobenzene 13 0.76 0.14 mg/Kg 08/09/24 08:00 08/09/24 16:08 ND 0.51 0.15 mg/Kg 08/09/24 08:00 08/09/24 16:08 2,2-Dichloropropane ť 2-Chlorotoluene ND 0.51 0.11 mg/Kg 08/09/24 08:00 08/09/24 16:08 4-Chlorotoluene ND 08/09/24 08:00 08/09/24 16:08 0.51 0.12 mg/Kg 4-Isopropyltoluene 0.25 0.51 0.13 mg/Kg 08/09/24 08:00 08/09/24 16:08 Benzene ND 0.25 0.048 mg/Kg 08/09/24 08:00 08/09/24 16:08 **Bromobenzene** 0.24 0.51 0.053 mg/Kg 08/09/24 08:00 08/09/24 16:08 Bromochloromethane ND 0.51 0.079 mg/Kg 08/09/24 08:00 08/09/24 16:08 Bromodichloromethane ND 0.51 0.070 mg/Kg 08/09/24 08:00 08/09/24 16:08 Bromoform ND 0.51 0.057 mg/Kg 08/09/24 08:00 08/09/24 16:08 ND Bromomethane 1.3 0.48 mg/Kg 08/09/24 08:00 08/09/24 16:08 Carbon tetrachloride ND 0.25 0.056 mg/Kg 08/09/24 08:00 08/09/24 16:08 Chloroethane ND 0.27 mg/Kg 08/09/24 08:00 08/09/24 16:08 1.0 Chloroform 0.25 0.053 08/09/24 08:00 08/09/24 16:08 ND mg/Kg Chloromethane 0.13 08/09/24 16:08 ND 0.76 mg/Kg 08/09/24 08:00 cis-1,2-Dichloroethene ND 0.76 0.16 mg/Kg 08/09/24 08:00 08/09/24 16:08 cis-1.3-Dichloropropene ND 0.25 08/09/24 08:00 08/09/24 16:08 0.051 mg/Kg Dibromochloromethane ND 0.25 0.062 mg/Kg 08/09/24 08:00 08/09/24 16:08 Dibromomethane ND 0.51 0.094 mg/Kg 08/09/24 08:00 08/09/24 16:08 Dichlorodifluoromethane ND 0.58 3.2 mg/Kg ₩ 08/09/24 08:00 08/09/24 16:08 Ethylbenzene ND 0.51 0.12 mg/Kg 08/09/24 08:00 08/09/24 16:08 Hexachlorobutadiene ND 1.3 0.30 mg/Kg 08/09/24 08:00 08/09/24 16:08 Isopropylbenzene ND 0.51 0.11 mg/Kg 08/09/24 08:00 08/09/24 16:08 08/09/24 16:08 Methyl tert-butyl ether ND 0.51 0.076 mg/Kg 08/09/24 08:00 Methylene Chloride 08/09/24 08:00 08/09/24 16:08 ND 3.2 0.33 mg/Kg ND m-Xylene & p-Xylene 0.51 0.090 mg/Kg 08/09/24 08:00 08/09/24 16:08 Naphthalene ND 1.9 0.50 mg/Kg 08/09/24 08:00 08/09/24 16:08 ND 0.51 n-Butylbenzene 0.23 mg/Kg 08/09/24 08:00 08/09/24 16:08 N-Propylbenzene ND 0.51 0.19 mg/Kg 08/09/24 08:00 08/09/24 16:08 mg/Kg 08/09/24 08:00 o-Xylene ND 0.51 0.063 08/09/24 16:08

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-19-SO-42.4-20240801

Lab Sample ID: 580-142622-8 Date Collected: 08/01/24 13:55

**Matrix: Solid** Date Received: 08/02/24 13:05 Percent Solids: 86.1

Method: SW846 8260D - Vo	olatile Organic	Compoun	ds by GC/MS	(Conti	nued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.51	0.11	mg/Kg	<del>-</del>	08/09/24 08:00	08/09/24 16:08	1
Styrene	ND		0.51	0.16	mg/Kg	☼	08/09/24 08:00	08/09/24 16:08	1
t-Butylbenzene	ND		0.51	0.098	mg/Kg	₽	08/09/24 08:00	08/09/24 16:08	1
Tetrachloroethene	3.7		0.51	0.067	mg/Kg	₽	08/09/24 08:00	08/09/24 16:08	1
Toluene	ND		0.76	0.17	mg/Kg	☼	08/09/24 08:00	08/09/24 16:08	1
trans-1,2-Dichloroethene	ND		0.76	0.19	mg/Kg	₽	08/09/24 08:00	08/09/24 16:08	1
trans-1,3-Dichloropropene	ND		0.51	0.089	mg/Kg	☼	08/09/24 08:00	08/09/24 16:08	1
Trichloroethene	ND		0.51	0.13	mg/Kg	☼	08/09/24 08:00	08/09/24 16:08	1
Trichlorofluoromethane	ND		1.0	0.33	mg/Kg	₽	08/09/24 08:00	08/09/24 16:08	1
Vinyl chloride	ND		1.3	0.24	mg/Kg	₩	08/09/24 08:00	08/09/24 16:08	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		80 - 121				08/09/24 08:00	08/09/24 16:08	1
4-Bromofluorobenzene (Surr)	106		80 - 120				08/09/24 08:00	08/09/24 16:08	1
Dibromofluoromethane (Surr)	93		80 - 120				08/09/24 08:00	08/09/24 16:08	1
Toluene-d8 (Surr)	114		80 - 120				08/09/24 08:00	08/09/24 16:08	1
- Method: SW846 8260D - Vo	olatile Organic	Compoun	ds by GC/MS	- DL					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	1400		51	6.1	mg/Kg	☆	08/12/24 09:02	08/12/24 12:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				08/12/24 09:02	08/12/24 12:47	1
4-Bromofluorobenzene (Surr)	101		80 - 120				08/12/24 09:02	08/12/24 12:47	1
Dibromofluoromethane (Surr)	102		80 - 120				08/12/24 09:02	08/12/24 12:47	1
Toluene-d8 (Surr)	99		80 - 120				08/12/24 09:02	08/12/24 12:47	1

General Chemistry								
Analyte	Result Qualifier	RL	RL Ur	nit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	86.1	0.1	0.1 %	)			08/06/24 09:45	1
Percent Moisture (SM22 2540G)	13.9	0.1	0.1 %				08/06/24 09:45	1

Job ID: 580-142622-1

Client Sample ID: PDI-15-SO-38-20240725 Lab Sample ID: 580-142622-9

Date Collected: 07/25/24 12:20 **Matrix: Solid** Date Received: 08/02/24 13:05 Percent Solids: 91.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	2.6		0.11	0.012	mg/Kg	<u></u>	08/07/24 16:00	08/21/24 14:35	50
4,4'-DDE	1.2		0.11	0.020	mg/Kg	₩	08/07/24 16:00	08/21/24 14:35	50
Aldrin	ND		0.16	0.020	mg/Kg	₩	08/07/24 16:00	08/21/24 14:35	50
alpha-BHC	ND		0.11	0.0086	mg/Kg	₩	08/07/24 16:00	08/21/24 14:35	50
beta-BHC	ND		0.27	0.013	mg/Kg	₩	08/07/24 16:00	08/21/24 14:35	50
cis-Chlordane	ND		0.11	0.040	mg/Kg	₩	08/07/24 16:00	08/21/24 14:35	50
delta-BHC	ND		0.16	0.015	mg/Kg	₩	08/07/24 16:00	08/21/24 14:35	50
Dieldrin	ND		0.11	0.019	mg/Kg	₩	08/07/24 16:00	08/21/24 14:35	50
Endosulfan I	ND		0.11	0.018	mg/Kg	₩	08/07/24 16:00	08/21/24 14:35	50
Endosulfan II	ND		0.11	0.014	mg/Kg	₩	08/07/24 16:00	08/21/24 14:35	50
Endosulfan sulfate	ND		0.11	0.015	mg/Kg	₩	08/07/24 16:00	08/21/24 14:35	50
Endrin	ND		0.11	0.025	mg/Kg	₩	08/07/24 16:00	08/21/24 14:35	50
Endrin aldehyde	ND		1.1	0.26	mg/Kg	₩	08/07/24 16:00	08/21/24 14:35	50
Endrin ketone	ND		0.11	0.022	mg/Kg	₩	08/07/24 16:00	08/21/24 14:35	50
gamma-BHC (Lindane)	ND		0.11	0.040	mg/Kg	₩	08/07/24 16:00	08/21/24 14:35	50
Heptachlor	ND		0.16	0.010	mg/Kg	₩	08/07/24 16:00	08/21/24 14:35	50
Heptachlor epoxide	ND		0.16	0.016	mg/Kg	₩	08/07/24 16:00	08/21/24 14:35	50
Methoxychlor	ND		0.54	0.020	mg/Kg	₩	08/07/24 16:00	08/21/24 14:35	50
Toxaphene	ND		6.7	1.3	mg/Kg	₩	08/07/24 16:00	08/21/24 14:35	50
trans-Chlordane	ND		0.16	0.017	mg/Kg	☼	08/07/24 16:00	08/21/24 14:35	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	14357	S1+	53 - 123				08/07/24 16:00	08/21/24 14:35	50
Tetrachloro-m-xylene	2555	S1+	48 - 123				08/07/24 16:00	08/21/24 14:35	50

Tetracilioro-III-xylene	2555	31+	40 - 123				00/07/24 10.00	00/21/24 14.33	30
Method: SW846 8081B - (	Organochlorine	Pesticides	(GC) - DL						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	0.34	H	0.26	0.048	mg/Kg	<u></u>	08/30/24 15:09	09/05/24 14:32	50
2,4'-DDE	0.088	JH	0.26	0.032	mg/Kg	₩	08/30/24 15:09	09/05/24 14:32	50
2,4'-DDT	6.7	Н	0.26	0.053	mg/Kg	☼	08/30/24 15:09	09/05/24 14:32	50
4,4'-DDT	180	B ^2	1.1	0.20	mg/Kg	☼	08/07/24 16:00	08/22/24 14:05	500
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	32489	S1+	53 - 123				08/07/24 16:00	08/22/24 14:05	500
DCB Decachlorobiphenyl	506	S1+	53 - 123				08/30/24 15:09	09/05/24 14:32	50
Tetrachloro-m-xylene	0	S1-	48 - 123				08/07/24 16:00	08/22/24 14:05	500
Tetrachloro-m-xylene	1602	S1+	48 - 123				08/30/24 15:09	09/05/24 14:32	50

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.43	0.16	mg/Kg	— <u>—</u>	08/07/24 16:00	08/21/24 15:06	20
PCB-1221	ND		0.43	0.26	mg/Kg	☼	08/07/24 16:00	08/21/24 15:06	20
PCB-1232	ND		0.43	0.10	mg/Kg	☼	08/07/24 16:00	08/21/24 15:06	20
PCB-1242	ND		0.43	0.17	mg/Kg	₩	08/07/24 16:00	08/21/24 15:06	20
PCB-1248	ND		0.43	0.15	mg/Kg	☼	08/07/24 16:00	08/21/24 15:06	20
PCB-1254	ND		0.43	0.19	mg/Kg	☼	08/07/24 16:00	08/21/24 15:06	20
PCB-1260	ND		0.43	0.16	mg/Kg	₽	08/07/24 16:00	08/21/24 15:06	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl		S1-	44 - 135				08/07/24 16:00	08/21/24 15:06	20
Tetrachloro-m-xylene	1887	S1+	48 - 150				08/07/24 16:00	08/21/24 15:06	20

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-15-SO-38-20240725

Date Collected: 07/25/24 12:20 **Matrix: Solid** Date Received: 08/02/24 13:05 Percent Solids: 91.0

Method: SW846 8151A - He	erbicides (GC)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		11	4.1	ug/Kg	<u></u>	08/06/24 13:16	08/16/24 09:56	1
2,4,5-TP (Silvex)	ND		11	8.3	ug/Kg	☼	08/06/24 13:16	08/16/24 09:56	1
2,4-D	ND	*+	110	53	ug/Kg	☼	08/06/24 13:16	08/16/24 09:56	1
2,4-DB	310		110	110	ug/Kg	₽	08/06/24 13:16	08/16/24 09:56	1
Dalapon	ND	*+	270	80	ug/Kg	₽	08/06/24 13:16	08/16/24 09:56	1
Dicamba	ND		11	5.2	ug/Kg	☼	08/06/24 13:16	08/16/24 09:56	1
Dichlorprop	ND	*1	110	54	ug/Kg	≎	08/06/24 13:16	08/16/24 09:56	1
Dinoseb	ND		110	65	ug/Kg	₽	08/06/24 13:16	08/16/24 09:56	1
MCPA	ND	*+	11000	5300	ug/Kg	≎	08/06/24 13:16	08/16/24 09:56	1
MCPP	15000		11000	7300	ug/Kg	☆	08/06/24 13:16	08/16/24 09:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	133		20 - 163				08/06/24 13:16	08/16/24 09:56	1

General Chemistry							
Analyte	Result Qualifier	RL	RL Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	91.0	0.1	0.1 %			08/06/24 09:45	1
Percent Moisture (SM22 2540G)	9.1	0.1	0.1 %			08/06/24 09:45	1

Lab Sample ID: 580-142622-9

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-19-SO-53.5-20240801

Lab Sample ID: 580-142622-10 Date Collected: 08/01/24 16:10 **Matrix: Solid** Date Received: 08/02/24 13:05 Percent Solids: 87.5

Method: SW846 8260D - Vola		•	-		l lni4	_	Dreneral	A malumad	DUE
Analyte	Result C	Qualifier	RL	MDL		<u>D</u>	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.026	0.0065		₩.	08/08/24 10:00	08/08/24 15:43	•
1,1,1-Trichloroethane	ND		0.052	0.0060	0 0	<b>‡</b>	08/08/24 10:00	08/08/24 15:43	
I,1,2,2-Tetrachloroethane	ND		0.026	0.0099		<u>.</u> .	08/08/24 10:00	08/08/24 15:43	
,1,2-Trichloroethane	ND		0.026	0.0097		₩	08/08/24 10:00		•
,1-Dichloroethane	ND		0.052		mg/Kg	₩	08/08/24 10:00	08/08/24 15:43	•
I,1-Dichloroethene	ND		0.052		mg/Kg		08/08/24 10:00	08/08/24 15:43	
1,1-Dichloropropene	ND		0.052	0.0069		₩	08/08/24 10:00	08/08/24 15:43	•
,2,3-Trichlorobenzene	ND		0.10		mg/Kg	₩	08/08/24 10:00	08/08/24 15:43	•
,2,3-Trichloropropane	ND		0.052		mg/Kg	₩	08/08/24 10:00	08/08/24 15:43	
,2,4-Trichlorobenzene	ND		0.10	0.056	mg/Kg	₩	08/08/24 10:00	08/08/24 15:43	•
,2,4-Trimethylbenzene	ND		0.052	0.018	mg/Kg	₩	08/08/24 10:00	08/08/24 15:43	•
I,2-Dibromo-3-Chloropropane	ND		0.078	0.020	mg/Kg	☼	08/08/24 10:00	08/08/24 15:43	•
l,2-Dibromoethane	ND		0.026	0.0050	mg/Kg	₩	08/08/24 10:00	08/08/24 15:43	•
I,2-Dichlorobenzene	0.097		0.052	0.011	mg/Kg	₩	08/08/24 10:00	08/08/24 15:43	•
1,2-Dichloroethane	ND		0.026	0.0072	mg/Kg	₩	08/08/24 10:00	08/08/24 15:43	
1,2-Dichloropropane	ND		0.026	0.0086	mg/Kg	₩	08/08/24 10:00	08/08/24 15:43	
1,3,5-Trimethylbenzene	ND		0.052	0.0099	mg/Kg	☼	08/08/24 10:00	08/08/24 15:43	
,3-Dichlorobenzene	ND		0.078	0.017	mg/Kg	₩	08/08/24 10:00	08/08/24 15:43	
,3-Dichloropropane	ND		0.078	0.0073	mg/Kg	₩	08/08/24 10:00	08/08/24 15:43	
,4-Dichlorobenzene	0.35		0.078	0.014	mg/Kg	☆	08/08/24 10:00	08/08/24 15:43	
2,2-Dichloropropane	ND		0.052		mg/Kg	₩	08/08/24 10:00	08/08/24 15:43	
-Chlorotoluene	ND		0.052		mg/Kg		08/08/24 10:00	08/08/24 15:43	
-Chlorotoluene	ND		0.052		mg/Kg	₩	08/08/24 10:00	08/08/24 15:43	
-Isopropyltoluene	ND		0.052		mg/Kg	₩	08/08/24 10:00	08/08/24 15:43	
enzene	ND		0.026				08/08/24 10:00	08/08/24 15:43	,
romobenzene	ND		0.052	0.0055		₩.	08/08/24 10:00	08/08/24 15:43	
Bromochloromethane	ND		0.052	0.0081		₩	08/08/24 10:00	08/08/24 15:43	
Bromodichloromethane	ND		0.052	0.0072			08/08/24 10:00	08/08/24 15:43	
Bromoform	ND		0.052	0.0072		~ ☆	08/08/24 10:00	08/08/24 15:43	
Bromomethane	ND		0.13		mg/Kg	~ ☆	08/08/24 10:00	08/08/24 15:43	
Carbon tetrachloride	ND		0.026	0.0058				08/08/24 15:43	
Chloroethane	ND ND		0.020		mg/Kg	<b>☆</b>	08/08/24 10:00	08/08/24 15:43	,
Chloroform			0.10						,
	ND			0.0055		· · · · · ·	08/08/24 10:00	08/08/24 15:43	
Chloromethane	ND		0.078		mg/Kg	ψ.	08/08/24 10:00		,
cis-1,2-Dichloroethene	ND		0.078		mg/Kg	₩		08/08/24 15:43	,
cis-1,3-Dichloropropene	ND		0.026	0.0052		<del>. Ω</del> .	08/08/24 10:00	08/08/24 15:43	
Dibromochloromethane	ND		0.026	0.0064		<b>*</b>	08/08/24 10:00	08/08/24 15:43	
Dibromomethane	ND		0.052	0.0097		<b>‡</b>	08/08/24 10:00	08/08/24 15:43	•
Dichlorodifluoromethane	ND		0.33		mg/Kg	<del></del>	08/08/24 10:00	08/08/24 15:43	
Ethylbenzene	ND		0.052		mg/Kg	₩	08/08/24 10:00	08/08/24 15:43	•
łexachlorobutadiene	ND		0.13		mg/Kg	₩	08/08/24 10:00	08/08/24 15:43	•
sopropylbenzene	ND		0.052		mg/Kg		08/08/24 10:00	08/08/24 15:43	
Methyl tert-butyl ether	ND		0.052	0.0078		₩	08/08/24 10:00	08/08/24 15:43	•
Methylene Chloride	ND		0.33	0.034	mg/Kg	₩	08/08/24 10:00	08/08/24 15:43	•
n-Xylene & p-Xylene	ND		0.052	0.0093		<b>*</b>	08/08/24 10:00	08/08/24 15:43	
laphthalene	ND		0.20	0.051	mg/Kg	☼	08/08/24 10:00	08/08/24 15:43	· · · · · · · ·
n-Butylbenzene	ND		0.052	0.024	mg/Kg	₩	08/08/24 10:00	08/08/24 15:43	,
N-Propylbenzene	ND		0.052	0.020	mg/Kg	☼	08/08/24 10:00	08/08/24 15:43	•
o-Xylene	ND		0.052	0.0065		*	08/08/24 10:00	08/08/24 15:43	

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-19-SO-53.5-20240801

Date Collected: 08/01/24 16:10

Lab Sample ID: 580-142622-10 **Matrix: Solid** Date Received: 08/02/24 13:05

Percent Solids: 87.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.052	0.011	mg/Kg	<u></u>	08/08/24 10:00	08/08/24 15:43	
Styrene	ND		0.052	0.017	mg/Kg	₩	08/08/24 10:00	08/08/24 15:43	•
t-Butylbenzene	ND		0.052	0.010	mg/Kg	₩	08/08/24 10:00	08/08/24 15:43	
Tetrachloroethene	0.046	J	0.052	0.0069	mg/Kg	☼	08/08/24 10:00	08/08/24 15:43	
Toluene	ND		0.078	0.018	mg/Kg	☼	08/08/24 10:00	08/08/24 15:43	
trans-1,2-Dichloroethene	ND		0.078	0.019	mg/Kg	₩	08/08/24 10:00	08/08/24 15:43	1
trans-1,3-Dichloropropene	ND		0.052	0.0092	mg/Kg	☼	08/08/24 10:00	08/08/24 15:43	1
Trichloroethene	ND		0.052	0.013	mg/Kg	☼	08/08/24 10:00	08/08/24 15:43	1
Trichlorofluoromethane	ND		0.10	0.034	mg/Kg	₩	08/08/24 10:00	08/08/24 15:43	1
Vinyl chloride	ND		0.13	0.024	mg/Kg	₩	08/08/24 10:00	08/08/24 15:43	•
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	96		80 - 121				08/08/24 10:00	08/08/24 15:43	-
4-Bromofluorobenzene (Surr)	97		80 - 120				08/08/24 10:00	08/08/24 15:43	1
Dibromofluoromethane (Surr)	95		80 - 120				08/08/24 10:00	08/08/24 15:43	
Toluene-d8 (Surr)	102		80 - 120				08/08/24 10:00	08/08/24 15:43	
Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	- DL					
Analyte	_	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	80	-	0.56	0.067	mg/Kg	— <u></u>	08/09/24 08:00	08/09/24 16:29	-

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	80		0.56	0.067	mg/Kg	₩	08/09/24 08:00	08/09/24 16:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 121				08/09/24 08:00	08/09/24 16:29	1
4-Bromofluorobenzene (Surr)	98		80 - 120				08/09/24 08:00	08/09/24 16:29	1
Dibromofluoromethane (Surr)	100		80 - 120				08/09/24 08:00	08/09/24 16:29	1
Toluene-d8 (Surr)	101		80 - 120				08/09/24 08:00	08/09/24 16:29	1

General Chemistry							
Analyte	Result Qualifier	RL	RL Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	87.5	0.1	0.1 %			08/06/24 09:45	1
Percent Moisture (SM22 2540G)	12.5	0.1	0.1 %			08/06/24 09:45	1

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-13-SO-11.2-20240731 Lab Sample ID: 580-142622-11

Date Collected: 07/31/24 11:30 Lab Sample 1D. 360-142622-11

Date Received: 08/02/24 13:05

General Chemistry								
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310C)	13	1.5	0.38	mg/L			08/09/24 07:26	1

5

6

8

9

11

12

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

**Client Sample ID: TB-01-SO-20240802** 

Lab Sample ID: 580-142622-12 Date Collected: 08/02/24 00:01 **Matrix: Solid** 

Date Received: 08/02/24 13:05

Analyte		Qualifier	RL _		Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050			08/08/24 10:00	08/08/24 13:39	
1,1,1-Trichloroethane	ND		0.040	0.0046			08/08/24 10:00		
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076			08/08/24 10:00	08/08/24 13:39	
1,1,2-Trichloroethane	ND		0.020	0.0074			08/08/24 10:00	08/08/24 13:39	
1,1-Dichloroethane	ND		0.040	0.0092	mg/Kg		08/08/24 10:00	08/08/24 13:39	
1,1-Dichloroethene	ND		0.040	0.012	mg/Kg		08/08/24 10:00	08/08/24 13:39	
1,1-Dichloropropene	ND		0.040	0.0053			08/08/24 10:00	08/08/24 13:39	
1,2,3-Trichlorobenzene	ND		0.080	0.040	mg/Kg		08/08/24 10:00	08/08/24 13:39	
1,2,3-Trichloropropane	ND		0.040	0.012	mg/Kg		08/08/24 10:00	08/08/24 13:39	
1,2,4-Trichlorobenzene	ND		0.080	0.043	mg/Kg		08/08/24 10:00	08/08/24 13:39	
1,2,4-Trimethylbenzene	ND		0.040	0.014	mg/Kg		08/08/24 10:00	08/08/24 13:39	
1,2-Dibromo-3-Chloropropane	ND		0.060	0.015	mg/Kg		08/08/24 10:00	08/08/24 13:39	
1,2-Dibromoethane	ND		0.020	0.0038	mg/Kg		08/08/24 10:00	08/08/24 13:39	
1,2-Dichlorobenzene	ND		0.040	0.0087	mg/Kg		08/08/24 10:00	08/08/24 13:39	
1,2-Dichloroethane	ND		0.020	0.0055	mg/Kg		08/08/24 10:00	08/08/24 13:39	
1,2-Dichloropropane	ND		0.020	0.0066	mg/Kg		08/08/24 10:00	08/08/24 13:39	
1,3,5-Trimethylbenzene	ND		0.040	0.0076	mg/Kg		08/08/24 10:00	08/08/24 13:39	
1,3-Dichlorobenzene	ND		0.060		mg/Kg		08/08/24 10:00	08/08/24 13:39	
1,3-Dichloropropane	ND		0.060	0.0056			08/08/24 10:00	08/08/24 13:39	
1,4-Dichlorobenzene	ND		0.060		mg/Kg		08/08/24 10:00	08/08/24 13:39	
2,2-Dichloropropane	ND		0.040		mg/Kg		08/08/24 10:00	08/08/24 13:39	
2-Chlorotoluene	ND		0.040	0.0088			08/08/24 10:00		
4-Chlorotoluene	ND		0.040	0.0098			08/08/24 10:00		
4-Isopropyltoluene	ND		0.040		mg/Kg		08/08/24 10:00	08/08/24 13:39	
Benzene	ND		0.020	0.0038				08/08/24 13:39	
Bromobenzene	ND		0.040	0.0042			08/08/24 10:00		
Bromochloromethane	ND		0.040	0.0062	0 0			08/08/24 13:39	
Bromodichloromethane	ND		0.040	0.0055				08/08/24 13:39	
Bromoform	ND		0.040	0.0035	0 0			08/08/24 13:39	
Bromomethane	ND		0.040		mg/Kg		08/08/24 10:00		
Carbon tetrachloride	ND		0.020	0.0044				08/08/24 13:39	
Carbon tetrachionde	ND ND		0.020						
				0.0048			08/08/24 10:00		
Chlarafarra	ND		0.080		mg/Kg		08/08/24 10:00		
Chlorogory	ND		0.020	0.0042			08/08/24 10:00	08/08/24 13:39	
Chloromethane	ND		0.060		mg/Kg			08/08/24 13:39	
cis-1,2-Dichloroethene	ND		0.060		mg/Kg		08/08/24 10:00	08/08/24 13:39	
cis-1,3-Dichloropropene	ND		0.020	0.0040			08/08/24 10:00		
Dibromochloromethane	ND		0.020	0.0049			08/08/24 10:00		
Dibromomethane	ND		0.040	0.0074				08/08/24 13:39	
Dichlorodifluoromethane	ND		0.25		mg/Kg			08/08/24 13:39	
Ethylbenzene	ND		0.040	0.0091				08/08/24 13:39	
Hexachlorobutadiene	ND		0.10		mg/Kg			08/08/24 13:39	
Isopropylbenzene	ND		0.040	0.0086				08/08/24 13:39	
Methyl tert-butyl ether	ND		0.040	0.0060				08/08/24 13:39	
Methylene Chloride	ND		0.25		mg/Kg			08/08/24 13:39	
m-Xylene & p-Xylene	ND		0.040	0.0071				08/08/24 13:39	
Naphthalene	ND		0.15		mg/Kg		08/08/24 10:00	08/08/24 13:39	
n-Butylbenzene	ND		0.040	0.019	mg/Kg		08/08/24 10:00	08/08/24 13:39	

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

**Client Sample ID: TB-01-SO-20240802** 

Lab Sample ID: 580-142622-12 Date Collected: 08/02/24 00:01 **Matrix: Solid** 

Date Received: 08/02/24 13:05

Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	(Conti	nued)				
Analyte	_	Qualifier	RL	•	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.040	0.0050	mg/Kg		08/08/24 10:00	08/08/24 13:39	1
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		08/08/24 10:00	08/08/24 13:39	1
Styrene	ND		0.040	0.013	mg/Kg		08/08/24 10:00	08/08/24 13:39	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		08/08/24 10:00	08/08/24 13:39	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		08/08/24 10:00	08/08/24 13:39	1
Toluene	ND		0.060	0.014	mg/Kg		08/08/24 10:00	08/08/24 13:39	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		08/08/24 10:00	08/08/24 13:39	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		08/08/24 10:00	08/08/24 13:39	1
Trichloroethene	ND		0.040	0.010	mg/Kg		08/08/24 10:00	08/08/24 13:39	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		08/08/24 10:00	08/08/24 13:39	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		08/08/24 10:00	08/08/24 13:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		80 - 121				08/08/24 10:00	08/08/24 13:39	1
4-Bromofluorobenzene (Surr)	103		80 - 120				08/08/24 10:00	08/08/24 13:39	1
Dibromofluoromethane (Surr)	104		80 - 120				08/08/24 10:00	08/08/24 13:39	1
Toluene-d8 (Surr)	101		80 - 120				08/08/24 10:00	08/08/24 13:39	1

9/8/2024 (Rev. 1)

Client: ERM-West Job ID: 580-142622-1

RL

0.040

**MDL** Unit

0.012 mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

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mg/Kg

0.013 mg/Kg

0.0077 mg/Kg

0.0053 mg/Kg

0.0091 mg/Kg

0.0074

0.046

0.0042

0.0076

0.0086

0.0060

0.0088

0.026

0.0098

0.0071

0.014

0.015

0.010

0.0050

0.013

0.0086

0.011

0.019

0.0087

0.012

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS

MB MB

Result

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

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ND

ND

ND

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ND

ND

ND

NΩ

ND

ND

ND

ND

0.0204

Qualifier

Lab Sample ID: MB 580-467541/3-A

**Matrix: Solid** 

1,1-Dichloroethene

Analyte

**Bromoform** 

Dibromomethane

Bromobenzene

Ethylbenzene

Dichlorodifluoromethane

1,1,2,2-Tetrachloroethane

1,2,3-Trichloropropane

Methyl tert-butyl ether

Methylene Chloride

m-Xylene & p-Xylene

1,2,4-Trimethylbenzene

Isopropylbenzene

2-Chlorotoluene

4-Chlorotoluene

N-Propylbenzene

4-Isopropyltoluene

1,3-Dichlorobenzene

1,4-Dichlorobenzene

1,2-Dichlorobenzene

Tetrachloroethene

sec-Butylbenzene

n-Butylbenzene

t-Butylbenzene

o-Xylene

Styrene

**Analysis Batch: 467543** 

Client Sample ID: Method Blank

08/08/24 08:54 08/08/24 10:23

Analyzed

Prepared

Dil Fac

6

Prep Type: Total/NA **Prep Batch: 467541** 

1,1-Dichloroethane ND 0.040 0.0092 mg/Kg 08/08/24 08:54 08/08/24 10:23 1,1,1-Trichloroethane ND 0.040 0.0046 mg/Kg 08/08/24 10:23 08/08/24 08:54 1,1-Dichloropropene ND 0.040 0.0053 mg/Kg 08/08/24 08:54 08/08/24 10:23 0.012 mg/Kg 2,2-Dichloropropane ND 0.040 08/08/24 08:54 08/08/24 10:23 0.0055 08/08/24 10:23 1,2-Dichloroethane ND 0.020 mg/Kg 08/08/24 08:54 ND 0.020 0.0066 08/08/24 10:23 1,2-Dichloropropane mg/Kg 08/08/24 08:54 Benzene ND 0.020 0.0038 mg/Kg 08/08/24 08:54 08/08/24 10:23 Bromochloromethane ND 0.040 0.0062 mg/Kg 08/08/24 08:54 08/08/24 10:23 Bromodichloromethane ND 0.040 0.0055 mg/Kg 08/08/24 08:54 08/08/24 10:23 1.1.2-Trichloroethane ND 0.020 0.0074 mg/Kg 08/08/24 08:54 08/08/24 10:23 Bromomethane ND 0.10 0.038 mg/Kg 08/08/24 08:54 08/08/24 10:23 1 ND 0.060 0.0056 mg/Kg 08/08/24 08:54 08/08/24 10:23 1,3-Dichloropropane 0.0044 Carbon tetrachloride ND 0.020 mg/Kg 08/08/24 08:54 08/08/24 10:23 1,2-Dibromoethane ND 0.020 0.0038 mg/Kg 08/08/24 08:54 08/08/24 10:23 ND 0.080 0.021 08/08/24 08:54 08/08/24 10:23 Chloroethane mg/Kg 08/08/24 10:23 Chlorobenzene ND 0.040 0.0048 mg/Kg 08/08/24 08:54 ND 0.020 0.0042 mg/Kg 08/08/24 08:54 08/08/24 10:23 Chloroform 1,1,1,2-Tetrachloroethane 08/08/24 08:54 08/08/24 10:23 ND 0.020 0.0050 mg/Kg Chloromethane ND 0.010 mg/Kg 08/08/24 08:54 08/08/24 10:23 0.060 0.060 0.013 08/08/24 08:54 08/08/24 10:23 cis-1,2-Dichloroethene ND mg/Kg ND cis-1,3-Dichloropropene 0.020 0.0040 mg/Kg 08/08/24 08:54 08/08/24 10:23 Dibromochloromethane ND 0.020 0.0049 mg/Kg 08/08/24 08:54 08/08/24 10:23 0.0045

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08/08/24 08:54 08/08/24 10:23 08/08/24 08:54 08/08/24 10:23

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-467541/3-A

Matrix: Solid

Analysis Batch: 467543

Client Sample ID: Method Blank

Prep Type: Total/NA

**Prep Batch: 467541** 

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		0.060	0.015	mg/Kg		08/08/24 08:54	08/08/24 10:23	1
Toluene	ND		0.060	0.014	mg/Kg		08/08/24 08:54	08/08/24 10:23	1
1,2,4-Trichlorobenzene	ND		0.080	0.043	mg/Kg		08/08/24 08:54	08/08/24 10:23	1
Hexachlorobutadiene	0.0545	J	0.10	0.024	mg/Kg		08/08/24 08:54	08/08/24 10:23	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		08/08/24 08:54	08/08/24 10:23	1
Naphthalene	ND		0.15	0.039	mg/Kg		08/08/24 08:54	08/08/24 10:23	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		08/08/24 08:54	08/08/24 10:23	1
1,2,3-Trichlorobenzene	ND		0.080	0.040	mg/Kg		08/08/24 08:54	08/08/24 10:23	1
Trichloroethene	ND		0.040	0.010	mg/Kg		08/08/24 08:54	08/08/24 10:23	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		08/08/24 08:54	08/08/24 10:23	1
1,3,5-Trimethylbenzene	ND		0.040	0.0076	mg/Kg		08/08/24 08:54	08/08/24 10:23	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		08/08/24 08:54	08/08/24 10:23	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121	08/08/24 08:54	08/08/24 10:23	1
4-Bromofluorobenzene (Surr)	97		80 - 120	08/08/24 08:54	08/08/24 10:23	1
Toluene-d8 (Surr)	100		80 - 120	08/08/24 08:54	08/08/24 10:23	1
Dibromofluoromethane (Surr)	103		80 - 120	08/08/24 08:54	08/08/24 10:23	1

Lab Sample ID: LCS 580-467541/1-A

**Matrix: Solid** 

Analysis Batch: 467543

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

**Prep Batch: 467541** 

7, C.O. 2	Spike	LCS	LCS				%Rec
Analyte	Added		Qualifier	Unit	D	%Rec	Limits
1,1-Dichloroethene	0.800	0.803		mg/Kg		100	73 - 134
1,1-Dichloroethane	0.800	0.772		mg/Kg		97	78 - 126
1,1,1-Trichloroethane	0.800	0.786		mg/Kg		98	78 - 135
1,1-Dichloropropene	0.800	0.806		mg/Kg		101	76 - 140
2,2-Dichloropropane	0.800	0.789		mg/Kg		99	75 - 134
1,2-Dichloroethane	0.800	0.731		mg/Kg		91	76 - 124
1,2-Dichloropropane	0.800	0.767		mg/Kg		96	73 - 130
Benzene	0.800	0.779		mg/Kg		97	79 - 135
Bromochloromethane	0.800	0.771		mg/Kg		96	76 - 131
Bromodichloromethane	0.800	0.776		mg/Kg		97	78 - 125
1,1,2-Trichloroethane	0.800	0.797		mg/Kg		100	80 - 123
Bromomethane	0.800	1.03		mg/Kg		129	55 - 150
1,3-Dichloropropane	0.800	0.794		mg/Kg		99	80 - 120
Carbon tetrachloride	0.800	0.827		mg/Kg		103	76 - 140
1,2-Dibromoethane	0.800	0.807		mg/Kg		101	77 - 123
Chloroethane	0.800	0.871		mg/Kg		109	26 - 150
Chlorobenzene	0.800	0.748		mg/Kg		94	80 - 125
Chloroform	0.800	0.779		mg/Kg		97	74 - 133
1,1,1,2-Tetrachloroethane	0.800	0.815		mg/Kg		102	79 - 128
Chloromethane	0.800	0.754		mg/Kg		94	52 - 142
cis-1,2-Dichloroethene	0.800	0.791		mg/Kg		99	80 - 125
cis-1,3-Dichloropropene	0.800	0.808		mg/Kg		101	80 - 122
Dibromochloromethane	0.800	0.800		mg/Kg		100	75 - 125
Bromoform	0.800	0.815		mg/Kg		102	71 - 130

Spike

0.800

Added

Client: ERM-West Job ID: 580-142622-1

LCS LCS

0.764

Result Qualifier

Unit

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-467541/1-A

**Matrix: Solid** 

Dibromomethane

Hexachlorobutadiene

Naphthalene

Trichloroethene

Vinyl chloride

trans-1,2-Dichloroethene

trans-1,3-Dichloropropene

1,2,3-Trichlorobenzene

Trichlorofluoromethane

1,3,5-Trimethylbenzene

Analysis Batch: 467543

**Client Sample ID: Lab Control Sample** 

Limits

72 - 130

%Rec

96

94

101

98

103

94

97

104

97

99

65 - 145

77 - 134

56 - 145

80 - 121

58 - 146

80 - 134

71 - 150

72 - 134

62 - 144

**Prep Type: Total/NA** 

**Prep Batch: 467541** 

%Rec

Dichlorodifluoromethane	0.800	0.882	mg/Kg	110	33 - 150	
Bromobenzene	0.800	0.727	mg/Kg	91	78 - 126	
Ethylbenzene	0.800	0.815	mg/Kg	102	80 - 135	
1,1,2,2-Tetrachloroethane	0.800	0.796	mg/Kg	100	77 - 122	
1,2,3-Trichloropropane	0.800	0.801	mg/Kg	100	77 - 127	
Isopropylbenzene	0.800	0.801	mg/Kg	100	80 - 131	
Methyl tert-butyl ether	0.800	0.810	mg/Kg	101	71 - 126	
2-Chlorotoluene	0.800	0.740	mg/Kg	93	77 - 134	
Methylene Chloride	0.800	0.758	mg/Kg	95	56 - 140	
4-Chlorotoluene	0.800	0.723	mg/Kg	90	71 - 137	
m-Xylene & p-Xylene	0.800	0.783	mg/Kg	98	80 - 132	
1,2,4-Trimethylbenzene	0.800	0.771	mg/Kg	96	73 - 138	
N-Propylbenzene	0.800	0.745	mg/Kg	93	78 - 133	
4-Isopropyltoluene	0.800	0.748	mg/Kg	93	71 - 142	
o-Xylene	0.800	0.801	mg/Kg	100	80 - 132	
1,3-Dichlorobenzene	0.800	0.773	mg/Kg	97	78 - 132	
sec-Butylbenzene	0.800	0.743	mg/Kg	93	71 - 143	
1,4-Dichlorobenzene	0.800	0.714	mg/Kg	89	77 - 123	
Styrene	0.800	0.797	mg/Kg	100	79 - 129	
n-Butylbenzene	0.800	0.757	mg/Kg	95	69 - 143	
t-Butylbenzene	0.800	0.751	mg/Kg	94	72 - 144	
1,2-Dichlorobenzene	0.800	0.738	mg/Kg	92	78 - 126	
Tetrachloroethene	0.800	0.807	mg/Kg	101	75 - 141	
1,2-Dibromo-3-Chloropropane	0.800	0.739	mg/Kg	92	64 - 129	
Toluene	0.800	0.766	mg/Kg	96	75 - 125	
1,2,4-Trichlorobenzene	0.800	0.778	mg/Kg	97	74 - 131	

0.800

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0.800

0.800

0.800

0.752

0.806

0.782

0.824

0.754

0.777

0.834

0.778

0.790

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		80 - 121
4-Bromofluorobenzene (Surr)	100		80 - 120
Toluene-d8 (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120

9/8/2024 (Rev. 1)

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-467541/2-A

**Matrix: Solid** 

**Analysis Batch: 467543** 

Client Sample ID: Lab Control Sample Dup

•	Prep Type: Total/NA
	<b>Prep Batch: 467541</b>

Alialysis Batch. 407545	Spike	I CCD	LCSD				%Rec	atcii. 40	RPD
Analyte	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	0.800	0.802	quaiiioi	mg/Kg		100	73 - 134	0	25
1,1-Dichloroethane	0.800	0.825		mg/Kg		103	78 - 126	7	20
1,1,1-Trichloroethane	0.800	0.848		mg/Kg		106	78 <sub>-</sub> 135	8	20
1,1-Dichloropropene	0.800	0.853		mg/Kg		107	76 - 140	6	20
2,2-Dichloropropane	0.800	0.842		mg/Kg		105	75 - 134	6	20
1,2-Dichloroethane	0.800	0.801		mg/Kg		100	76 - 124	9	20
1,2-Dichloropropane	0.800	0.804		mg/Kg		100	73 - 130	5	20
Benzene	0.800	0.831		mg/Kg		104	79 - 135	6	20
Bromochloromethane	0.800	0.832		mg/Kg		104	76 - 131	8	20
Bromodichloromethane	0.800	0.817		mg/Kg		102	78 - 125	5	20
1,1,2-Trichloroethane	0.800	0.849		mg/Kg		106	80 - 123	6	20
Bromomethane	0.800	0.996		mg/Kg		125	55 - 150	3	26
1,3-Dichloropropane	0.800	0.844		mg/Kg		105	80 - 120	6	20
Carbon tetrachloride	0.800	0.880		mg/Kg		110	76 - 140	6	20
1,2-Dibromoethane	0.800	0.874		mg/Kg		109	77 - 123	8	20
Chloroethane	0.800	0.808		mg/Kg		101	26 - 150	8	40
Chlorobenzene	0.800	0.800		mg/Kg		100	80 - 125	7	20
Chloroform	0.800	0.828		mg/Kg		103	74 - 133	6	20
1,1,1,2-Tetrachloroethane	0.800	0.865		mg/Kg		108	79 - 128	6	20
Chloromethane	0.800	0.760		mg/Kg		95	52 - 142	1	40
cis-1,2-Dichloroethene	0.800	0.834		mg/Kg		104	80 - 125	5	20
cis-1,3-Dichloropropene	0.800	0.865		mg/Kg		108	80 - 122	7	20
Dibromochloromethane	0.800	0.847		mg/Kg		106	75 - 125	6	20
Bromoform	0.800	0.856		mg/Kg		107	71 - 130	5	20
Dibromomethane	0.800	0.833		mg/Kg		104	72 - 130	9	40
Dichlorodifluoromethane	0.800	0.872		mg/Kg		109	33 - 150	1	31
Bromobenzene	0.800	0.798		mg/Kg		100	78 - 126	9	20
Ethylbenzene	0.800	0.848		mg/Kg		106	80 - 135	4	20
1,1,2,2-Tetrachloroethane	0.800	0.886		mg/Kg		111	77 - 122	11	20
1,2,3-Trichloropropane	0.800	0.866		mg/Kg		108	77 - 127	8	20
Isopropylbenzene	0.800	0.842		mg/Kg		105	80 - 131	5	20
Methyl tert-butyl ether	0.800	0.868		mg/Kg		108	71 - 126	7	20
2-Chlorotoluene	0.800	0.820		mg/Kg		103	77 - 134	10	21
Methylene Chloride	0.800	0.755		mg/Kg		94	56 - 140	0	20
4-Chlorotoluene	0.800	0.813		mg/Kg		102	71 - 137	12	21
m-Xylene & p-Xylene	0.800	0.822		mg/Kg		103	80 - 132	5	20
1,2,4-Trimethylbenzene	0.800	0.851		mg/Kg		106	73 - 138	10	22
N-Propylbenzene	0.800	0.810		mg/Kg		101	78 - 133	8	24
4-Isopropyltoluene	0.800	0.835		mg/Kg		104	71 - 142	11	29
o-Xylene	0.800	0.850		mg/Kg		106	80 - 132	6	20
1,3-Dichlorobenzene	0.800	0.776		mg/Kg		97	78 - 132	0	20
sec-Butylbenzene	0.800	0.820		mg/Kg		103	71 - 143	10	29
1,4-Dichlorobenzene	0.800	0.804		mg/Kg		100	77 - 123	12	20
Styrene	0.800	0.859		mg/Kg		107	79 - 129	7	20
n-Butylbenzene	0.800	0.857		mg/Kg		107	69 - 143	12	31
t-Butylbenzene	0.800	0.833		mg/Kg		104	72 - 144	10	27
1,2-Dichlorobenzene	0.800	0.806		mg/Kg		101	78 - 126	9	20
Tetrachloroethene	0.800	0.817		mg/Kg		102	75 - 141	1	20

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-467541/2-A

**Matrix: Solid** 

Analysis Batch: 467543

**Client Sample ID: Lab Control Sample Dup** 

**Prep Type: Total/NA** 

**Prep Batch: 467541** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,2-Dibromo-3-Chloropropane	0.800	0.816		mg/Kg		102	64 - 129	10	40
Toluene	0.800	0.815		mg/Kg		102	75 - 125	6	20
1,2,4-Trichlorobenzene	0.800	0.829		mg/Kg		104	74 - 131	6	26
Hexachlorobutadiene	0.800	0.804		mg/Kg		101	65 - 145	7	36
trans-1,2-Dichloroethene	0.800	0.795		mg/Kg		99	77 - 134	1	20
Naphthalene	0.800	0.869		mg/Kg		109	56 - 145	11	25
trans-1,3-Dichloropropene	0.800	0.881		mg/Kg		110	80 - 121	7	20
1,2,3-Trichlorobenzene	0.800	0.814		mg/Kg		102	58 - 146	8	28
Trichloroethene	0.800	0.840		mg/Kg		105	80 - 134	8	20
Trichlorofluoromethane	0.800	0.836		mg/Kg		104	71 - 150	0	30
1,3,5-Trimethylbenzene	0.800	0.855		mg/Kg		107	72 - 134	9	24
Vinyl chloride	0.800	0.812		mg/Kg		101	62 - 144	3	20

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		80 - 121
4-Bromofluorobenzene (Surr)	98		80 - 120
Toluene-d8 (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	98		80 - 120

Lab Sample ID: MB 580-467720/3-A

**Matrix: Solid** 

Analysis Batch: 467721

**Client Sample ID: Method Blank** 

**Prep Type: Total/NA** 

**Prep Batch: 467720** 

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		0.040	0.012	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
1,1-Dichloroethane	ND		0.040	0.0092	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
1,1,1-Trichloroethane	ND		0.040	0.0046	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
1,1-Dichloropropene	ND		0.040	0.0053	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
2,2-Dichloropropane	ND		0.040	0.012	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
1,2-Dichloroethane	ND		0.020	0.0055	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
1,2-Dichloropropane	ND		0.020	0.0066	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Benzene	ND		0.020	0.0038	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Bromochloromethane	ND		0.040	0.0062	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Bromodichloromethane	ND		0.040	0.0055	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
1,1,2-Trichloroethane	ND		0.020	0.0074	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Bromomethane	ND		0.10	0.038	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
1,3-Dichloropropane	ND		0.060	0.0056	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Carbon tetrachloride	ND		0.020	0.0044	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
1,2-Dibromoethane	ND		0.020	0.0038	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Chloroethane	ND		0.080	0.021	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Chlorobenzene	ND		0.040	0.0048	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Chloroform	ND		0.020	0.0042	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Chloromethane	ND		0.060	0.010	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
cis-1,2-Dichloroethene	ND		0.060	0.013	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
cis-1,3-Dichloropropene	ND		0.020	0.0040	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Dibromochloromethane	ND		0.020	0.0049	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Bromoform	ND		0.040	0.0045	mg/Kg		08/09/24 08:00	08/09/24 10:25	1

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-467720/3-A

Matrix: Solid

**Analysis Batch: 467721** 

**Client Sample ID: Method Blank** 

**Prep Type: Total/NA** 

**Prep Batch: 467720** 

Analysis Batch. 407721	МВ	MB						Prep Batch.	101120
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	ND		0.040	0.0074	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Dichlorodifluoromethane	ND		0.25	0.046	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Bromobenzene	ND		0.040	0.0042	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Ethylbenzene	ND		0.040	0.0091	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
1,2,3-Trichloropropane	ND		0.040	0.012	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Isopropylbenzene	ND		0.040	0.0086	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Methyl tert-butyl ether	ND		0.040	0.0060	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
2-Chlorotoluene	ND		0.040	0.0088	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Methylene Chloride	ND		0.25	0.026	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
4-Chlorotoluene	ND		0.040	0.0098	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
m-Xylene & p-Xylene	ND		0.040	0.0071	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
1,2,4-Trimethylbenzene	ND		0.040	0.014	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
N-Propylbenzene	ND		0.040	0.015	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
4-Isopropyltoluene	ND		0.040	0.010	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
o-Xylene	ND		0.040	0.0050	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
1,3-Dichlorobenzene	ND		0.060	0.013	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
1,4-Dichlorobenzene	ND		0.060	0.011	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Styrene	ND		0.040	0.013	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
n-Butylbenzene	ND		0.040	0.019	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
1,2-Dichlorobenzene	ND		0.040	0.0087	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
1,2-Dibromo-3-Chloropropane	ND		0.060	0.015	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Toluene	ND		0.060	0.014	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
1,2,4-Trichlorobenzene	ND		0.080	0.043	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Hexachlorobutadiene	0.0357	J	0.10	0.024	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Naphthalene	ND		0.15	0.039	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
1,2,3-Trichlorobenzene	ND		0.080	0.040	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Trichloroethene	ND		0.040	0.010	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
1,3,5-Trimethylbenzene	ND		0.040	0.0076	mg/Kg		08/09/24 08:00	08/09/24 10:25	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		08/09/24 08:00	08/09/24 10:25	1

//R	MB	

Surrogate	%Recovery	Qualifier Li	mits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101	80	) <u>- 121</u>	08/09/24 08:00	08/09/24 10:25	1
4-Bromofluorobenzene (Surr)	99	80	) <sub>-</sub> 120	08/09/24 08:00	08/09/24 10:25	1
Toluene-d8 (Surr)	104	80	) <sub>-</sub> 120	08/09/24 08:00	08/09/24 10:25	1
Dibromofluoromethane (Surr)	103	80	) <u>-</u> 120	08/09/24 08:00	08/09/24 10:25	1

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-467720/1-A

**Matrix: Solid** 

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 467720

Analysis Batch: 467721							Prep Batch: 46772
	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1-Dichloroethene	0.800	0.784		mg/Kg		98	73 - 134
1,1-Dichloroethane	0.800	0.793		mg/Kg		99	78 - 126
1,1,1-Trichloroethane	0.800	0.815		mg/Kg		102	78 - 135
1,1-Dichloropropene	0.800	0.792		mg/Kg		99	76 - 140
2,2-Dichloropropane	0.800	0.810		mg/Kg		101	75 - 134
1,2-Dichloroethane	0.800	0.754		mg/Kg		94	76 - 124
1,2-Dichloropropane	0.800	0.790		mg/Kg		99	73 - 130
Benzene	0.800	0.806		mg/Kg		101	79 - 135
Bromochloromethane	0.800	0.832		mg/Kg		104	76 - 131
Bromodichloromethane	0.800	0.817		mg/Kg		102	78 - 125
1,1,2-Trichloroethane	0.800	0.808		mg/Kg		101	80 - 123
Bromomethane	0.800	0.899		mg/Kg		112	55 - 150
1,3-Dichloropropane	0.800	0.775		mg/Kg		97	80 - 120
Carbon tetrachloride	0.800	0.848		mg/Kg		106	76 - 140
1,2-Dibromoethane	0.800	0.804		mg/Kg		101	77 - 123
Chloroethane	0.800	0.857		mg/Kg		107	26 - 150
Chlorobenzene	0.800	0.805		mg/Kg		101	80 - 125
Chloroform	0.800	0.806		mg/Kg		101	74 - 133
1,1,1,2-Tetrachloroethane	0.800	0.811		mg/Kg		101	79 - 128
Chloromethane	0.800	0.616		mg/Kg		77	52 - 142
cis-1,2-Dichloroethene	0.800	0.822		mg/Kg		103	80 - 125
cis-1,3-Dichloropropene	0.800	0.761		mg/Kg		95	80 - 122
Dibromochloromethane	0.800	0.791		mg/Kg		99	75 - 125
Bromoform	0.800	0.758		mg/Kg		95	71 - 130
Dibromomethane	0.800	0.803		mg/Kg		100	72 - 130
Dichlorodifluoromethane	0.800	0.726		mg/Kg		91	33 - 150
Bromobenzene	0.800	0.762		mg/Kg		95	78 <sub>-</sub> 126
Ethylbenzene	0.800	0.838		mg/Kg		105	80 - 135
1,1,2,2-Tetrachloroethane	0.800	0.757				95	77 <sub>-</sub> 122
1,2,3-Trichloropropane	0.800	0.737		mg/Kg mg/Kg		90	77 - 122 77 - 127
				mg/Kg		114	80 - 131
Isopropylbenzene Methyl tert but diether	0.800 0.800	0.915 0.782				98	71 - 126
Methyl tert-butyl ether				mg/Kg			
2-Chlorotoluene Methylene Chloride	0.800	0.782		mg/Kg		98	77 - 134
4-Chlorotoluene	0.800	0.782		mg/Kg		98 99	56 <sub>-</sub> 140 71 <sub>-</sub> 137
	0.800	0.795		mg/Kg			
m-Xylene & p-Xylene	0.800	0.839		mg/Kg		105	80 - 132
1,2,4-Trimethylbenzene	0.800	0.815		mg/Kg		102	73 - 138
N-Propylbenzene	0.800	0.809		mg/Kg		101	78 - 133
4-Isopropyltoluene	0.800	0.775		mg/Kg		97	71 - 142
o-Xylene	0.800	0.843		mg/Kg		105	80 - 132
1,3-Dichlorobenzene	0.800	0.768		mg/Kg		96	78 - 132
sec-Butylbenzene	0.800	0.783		mg/Kg		98	71 - 143
1,4-Dichlorobenzene	0.800	0.733		mg/Kg		92	77 - 123
Styrene	0.800	0.844		mg/Kg		106	79 - 129
n-Butylbenzene	0.800	0.782		mg/Kg		98	69 - 143
t-Butylbenzene	0.800	0.789		mg/Kg		99	72 - 144
1,2-Dichlorobenzene	0.800	0.762		mg/Kg		95	78 - 126
Tetrachloroethene	0.800	0.795		mg/Kg		99	75 - 141

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-467720/1-A

**Matrix: Solid** 

**Matrix: Solid** 

Analysis Batch: 467721

**Analysis Batch: 467721** 

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

**Prep Batch: 467720** 

Spike	LCS	LCS				%Rec	
Added	Result	Qualifier	Unit	D	%Rec	Limits	
0.800	0.629		mg/Kg		79	64 - 129	
0.800	0.789		mg/Kg		99	75 - 125	
0.800	0.702		mg/Kg		88	74 - 131	
0.800	0.641		mg/Kg		80	65 - 145	
0.800	0.784		mg/Kg		98	77 - 134	
0.800	0.668		mg/Kg		83	56 - 145	
0.800	0.832		mg/Kg		104	80 - 121	
0.800	0.619		mg/Kg		77	58 - 146	
0.800	0.818		mg/Kg		102	80 - 134	
0.800	0.816		mg/Kg		102	71 - 150	
0.800	0.839		mg/Kg		105	72 - 134	
0.800	0.800		mg/Kg		100	62 - 144	
	Added  0.800  0.800  0.800  0.800  0.800  0.800  0.800  0.800  0.800  0.800  0.800  0.800	Added         Result           0.800         0.629           0.800         0.789           0.800         0.702           0.800         0.641           0.800         0.784           0.800         0.668           0.800         0.832           0.800         0.619           0.800         0.818           0.800         0.816           0.800         0.839	Added         Result         Qualifier           0.800         0.629           0.800         0.789           0.800         0.702           0.800         0.641           0.800         0.784           0.800         0.668           0.800         0.832           0.800         0.619           0.800         0.818           0.800         0.816           0.800         0.839	Added         Result         Qualifier         Unit           0.800         0.629         mg/Kg           0.800         0.789         mg/Kg           0.800         0.702         mg/Kg           0.800         0.641         mg/Kg           0.800         0.784         mg/Kg           0.800         0.668         mg/Kg           0.800         0.832         mg/Kg           0.800         0.619         mg/Kg           0.800         0.818         mg/Kg           0.800         0.816         mg/Kg           0.800         0.839         mg/Kg	Added         Result         Qualifier         Unit         D           0.800         0.629         mg/Kg         mg/Kg           0.800         0.789         mg/Kg           0.800         0.702         mg/Kg           0.800         0.641         mg/Kg           0.800         0.784         mg/Kg           0.800         0.668         mg/Kg           0.800         0.832         mg/Kg           0.800         0.619         mg/Kg           0.800         0.818         mg/Kg           0.800         0.816         mg/Kg           0.800         0.839         mg/Kg	0.800         0.629         mg/Kg         79           0.800         0.789         mg/Kg         99           0.800         0.702         mg/Kg         88           0.800         0.641         mg/Kg         80           0.800         0.784         mg/Kg         98           0.800         0.668         mg/Kg         83           0.800         0.832         mg/Kg         104           0.800         0.619         mg/Kg         77           0.800         0.818         mg/Kg         102           0.800         0.816         mg/Kg         102           0.800         0.839         mg/Kg         105	Added         Result         Qualifier         Unit         D         %Rec         Limits           0.800         0.629         mg/Kg         79         64 - 129           0.800         0.789         mg/Kg         99         75 - 125           0.800         0.702         mg/Kg         88         74 - 131           0.800         0.641         mg/Kg         80         65 - 145           0.800         0.784         mg/Kg         98         77 - 134           0.800         0.668         mg/Kg         83         56 - 145           0.800         0.832         mg/Kg         104         80 - 121           0.800         0.619         mg/Kg         77         58 - 146           0.800         0.818         mg/Kg         102         80 - 134           0.800         0.816         mg/Kg         102         71 - 150           0.800         0.839         mg/Kg         105         72 - 134

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96		80 - 121
4-Bromofluorobenzene (Surr)	100		80 - 120
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120

Lab Sample ID: LCSD 580-467720/2-A

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA **Prep Batch: 467720** 

Analysis Batom 401121							op <b>D</b> e		0
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	0.800	0.782		mg/Kg		98	73 - 134	0	25
1,1-Dichloroethane	0.800	0.766		mg/Kg		96	78 - 126	3	20
1,1,1-Trichloroethane	0.800	0.774		mg/Kg		97	78 - 135	5	20
1,1-Dichloropropene	0.800	0.751		mg/Kg		94	76 - 140	5	20
2,2-Dichloropropane	0.800	0.764		mg/Kg		96	75 - 134	6	20
1,2-Dichloroethane	0.800	0.707		mg/Kg		88	76 - 124	6	20
1,2-Dichloropropane	0.800	0.740		mg/Kg		92	73 - 130	7	20
Benzene	0.800	0.768		mg/Kg		96	79 - 135	5	20
Bromochloromethane	0.800	0.752		mg/Kg		94	76 - 131	10	20
Bromodichloromethane	0.800	0.767		mg/Kg		96	78 - 125	6	20
1,1,2-Trichloroethane	0.800	0.758		mg/Kg		95	80 - 123	6	20
Bromomethane	0.800	0.856		mg/Kg		107	55 - 150	5	26
1,3-Dichloropropane	0.800	0.746		mg/Kg		93	80 - 120	4	20
Carbon tetrachloride	0.800	0.796		mg/Kg		100	76 - 140	6	20
1,2-Dibromoethane	0.800	0.745		mg/Kg		93	77 - 123	8	20
Chloroethane	0.800	0.813		mg/Kg		102	26 - 150	5	40
Chlorobenzene	0.800	0.755		mg/Kg		94	80 - 125	6	20
Chloroform	0.800	0.763		mg/Kg		95	74 - 133	6	20
1,1,1,2-Tetrachloroethane	0.800	0.770		mg/Kg		96	79 - 128	5	20
Chloromethane	0.800	0.600		mg/Kg		75	52 - 142	3	40
cis-1,2-Dichloroethene	0.800	0.775		mg/Kg		97	80 - 125	6	20
cis-1,3-Dichloropropene	0.800	0.715		mg/Kg		89	80 - 122	6	20
Dibromochloromethane	0.800	0.731		mg/Kg		91	75 - 125	8	20
Bromoform	0.800	0.701		mg/Kg		88	71 - 130	8	20

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-467720/2-A

Matrix: Solid

**Analysis Batch: 467721** 

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA Prep Batch: 467720

Analyte	Spike Added		LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dibromomethane	0.800	0.741		mg/Kg		93	72 - 130	8	40
Dichlorodifluoromethane	0.800	0.702		mg/Kg		88	33 - 150	3	31
Bromobenzene	0.800	0.744		mg/Kg		93	78 - 126	2	20
Ethylbenzene	0.800	0.791		mg/Kg		99	80 - 135	6	20
1,1,2,2-Tetrachloroethane	0.800	0.747		mg/Kg		93	77 - 122	1	20
1,2,3-Trichloropropane	0.800	0.724		mg/Kg		90	77 - 127	0	20
Isopropylbenzene	0.800	0.869		mg/Kg		109	80 - 131	5	20
Methyl tert-butyl ether	0.800	0.743		mg/Kg		93	71 - 126	5	20
2-Chlorotoluene	0.800	0.768		mg/Kg		96	77 - 134	2	21
Methylene Chloride	0.800	0.759		mg/Kg		95	56 - 140	3	20
4-Chlorotoluene	0.800	0.762		mg/Kg		95	71 - 137	4	21
m-Xylene & p-Xylene	0.800	0.787		mg/Kg		98	80 - 132	6	20
1,2,4-Trimethylbenzene	0.800	0.795		mg/Kg		99	73 - 138	3	22
N-Propylbenzene	0.800	0.790		mg/Kg		99	78 - 133	2	24
4-Isopropyltoluene	0.800	0.767		mg/Kg		96	71 - 142	1	29
o-Xylene	0.800	0.799		mg/Kg		100	80 - 132	5	20
1,3-Dichlorobenzene	0.800	0.739		mg/Kg		92	78 - 132	4	20
sec-Butylbenzene	0.800	0.767		mg/Kg		96	71 - 143	2	29
1,4-Dichlorobenzene	0.800	0.719		mg/Kg		90	77 - 123	2	20
Styrene	0.800	0.803		mg/Kg		100	79 - 129	5	20
n-Butylbenzene	0.800	0.763		mg/Kg		95	69 - 143	2	31
t-Butylbenzene	0.800	0.777		mg/Kg		97	72 - 144	2	27
1,2-Dichlorobenzene	0.800	0.747		mg/Kg		93	78 - 126	2	20
Tetrachloroethene	0.800	0.780		mg/Kg		98	75 - 141	2	20
1,2-Dibromo-3-Chloropropane	0.800	0.585		mg/Kg		73	64 - 129	7	40
Toluene	0.800	0.751		mg/Kg		94	75 - 125	5	20
1,2,4-Trichlorobenzene	0.800	0.687		mg/Kg		86	74 - 131	2	26
Hexachlorobutadiene	0.800	0.630		mg/Kg		79	65 - 145	2	36
trans-1,2-Dichloroethene	0.800	0.759		mg/Kg		95	77 - 134	3	20
Naphthalene	0.800	0.653		mg/Kg		82	56 - 145	2	25
trans-1,3-Dichloropropene	0.800	0.778		mg/Kg		97	80 - 121	7	20
1,2,3-Trichlorobenzene	0.800	0.600		mg/Kg		75	58 - 146	3	28
Trichloroethene	0.800	0.768		mg/Kg		96	80 - 134	6	20
Trichlorofluoromethane	0.800	0.798		mg/Kg		100	71 - 150	2	30
1,3,5-Trimethylbenzene	0.800	0.817		mg/Kg		102	72 - 134	3	24
Vinyl chloride	0.800	0.779		mg/Kg		97	62 - 144	3	20

LCSD	LCSD
------	------

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96		80 - 121
4-Bromofluorobenzene (Surr)	100		80 - 120
Toluene-d8 (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120

Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-467929/1-A

**Matrix: Solid** 

Analyte

Chlorobenzene

Client: ERM-West

Analysis Batch: 467888

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

**Prep Batch: 467929** 

RL **MDL** Unit Prepared Analyzed Dil Fac 0.040 08/12/24 09:02 08/12/24 11:54

MB MB

ND

MB MB

**Result Qualifier** 

Prepared	Analyzed	Dil Fac
08/12/24 09:02	08/12/24 11:54	1
08/12/24 09:02	08/12/24 11:54	1
08/12/24 09:02	08/12/24 11:54	1
08/12/24 09:02	08/12/24 11:54	1
)	8/12/24 09:02 8/12/24 09:02 8/12/24 09:02	Prepared         Analyzed           8/12/24 09:02         08/12/24 11:54           8/12/24 09:02         08/12/24 11:54           8/12/24 09:02         08/12/24 11:54           8/12/24 09:02         08/12/24 11:54

0.0048 mg/Kg

Lab Sample ID: LCS 580-467929/2-A

**Matrix: Solid** 

**Analysis Batch: 467888** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 467929** 

Spike LCS LCS %Rec Analyte Added Result Qualifier Limits Unit D %Rec 0.800 Chlorobenzene 0.815 mg/Kg 102 80 - 125

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		80 - 121
4-Bromofluorobenzene (Surr)	100		80 - 120
Toluene-d8 (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120

Lab Sample ID: LCSD 580-467929/3-A

**Matrix: Solid** 

**Analysis Batch: 467888** 

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

**Prep Batch: 467929** %Rec **RPD** 

Spike LCSD LCSD Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit Chlorobenzene 0.800 0.826 mg/Kg 103 80 - 125

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		80 - 121
4-Bromofluorobenzene (Surr)	99		80 - 120
Toluene-d8 (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120

Lab Sample ID: MB 580-468150/3-A

**Matrix: Solid** 

Analysis Batch: 468166

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

**Prep Batch: 468150** 

MB MB

Analyte	Result Q	Qualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND ND	0.0050	0.0021	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
1,1-Dichloroethane	ND	0.0020	0.00093	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
1,1,1-Trichloroethane	ND	0.0020	0.00097	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
1,1-Dichloropropene	ND	0.0030	0.0011	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
2,2-Dichloropropane	ND	0.0050	0.00077	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
1,2-Dichloroethane	ND	0.0020	0.00062	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
1,2-Dichloropropane	ND	0.0020	0.00050	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
Benzene	ND	0.0020	0.00039	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
Bromochloromethane	ND	0.0020	0.00093	mg/Kg		08/14/24 09:29	08/14/24 12:58	1

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-468150/3-A

**Matrix: Solid** 

**Analysis Batch: 468166** 

Client Sample ID: Method Blank

**Prep Type: Total/NA** 

**Prep Batch: 468150** 

		MB							
Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		0.0020	0.00089	mg/Kg		08/14/24 09:29		1
1,1,2-Trichloroethane	ND		0.0020	0.00053			08/14/24 09:29		1
Bromomethane	ND		0.0020	0.00088			08/14/24 09:29		1
1,3-Dichloropropane	ND		0.0020	0.00023	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
Carbon tetrachloride	ND		0.0020	0.00086	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
1,2-Dibromoethane	ND		0.0010	0.00020	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
Chloroethane	ND		0.010	0.00075	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
Chlorobenzene	ND		0.0020	0.00025	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
Chloroform	ND		0.0030	0.0013	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
1,1,1,2-Tetrachloroethane	ND		0.0030	0.00059	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
Chloromethane	ND		0.0050	0.00093	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
cis-1,2-Dichloroethene	ND		0.0030	0.00023	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
cis-1,3-Dichloropropene	ND		0.0010	0.00020	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
Dibromochloromethane	ND		0.0020	0.00056	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
Bromoform	ND		0.0050	0.00084	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
Dibromomethane	ND		0.0020	0.00042	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
Dichlorodifluoromethane	ND		0.0030	0.0013	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
Bromobenzene	ND		0.010	0.0010	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
Ethylbenzene	ND		0.0020	0.00096	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
1,1,2,2-Tetrachloroethane	ND		0.0030	0.00023	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
1,2,3-Trichloropropane	ND		0.0050	0.0010			08/14/24 09:29	08/14/24 12:58	1
Isopropylbenzene	ND		0.0030		mg/Kg		08/14/24 09:29	08/14/24 12:58	1
Methyl tert-butyl ether	ND		0.0020	0.00030			08/14/24 09:29	08/14/24 12:58	1
2-Chlorotoluene	ND		0.0050	0.00093			08/14/24 09:29	08/14/24 12:58	1
Methylene Chloride	ND		0.040	0.0099			08/14/24 09:29	08/14/24 12:58	1
4-Chlorotoluene	ND		0.0050	0.0010			08/14/24 09:29	08/14/24 12:58	1
m-Xylene & p-Xylene	ND		0.010	0.0012			08/14/24 09:29		1
1,2,4-Trimethylbenzene	ND		0.0050	0.0012			08/14/24 09:29		1
N-Propylbenzene	ND		0.0050	0.00076			08/14/24 09:29		1
4-Isopropyltoluene	ND		0.0020	0.00040			08/14/24 09:29		1
o-Xylene	ND		0.0050	0.00092				08/14/24 12:58	1
1,3-Dichlorobenzene	ND		0.0050		mg/Kg		08/14/24 09:29	08/14/24 12:58	1
sec-Butylbenzene	ND		0.0030	0.00067	0 0		08/14/24 09:29		1
1,4-Dichlorobenzene	ND		0.0050	0.00098				08/14/24 12:58	1
Styrene	ND		0.0030	0.00074				08/14/24 12:58	1
n-Butylbenzene	ND		0.0030	0.00063				08/14/24 12:58	1
t-Butylbenzene	ND		0.0030	0.00066				08/14/24 12:58	1
1,2-Dichlorobenzene	ND		0.010	0.0013			08/14/24 09:29		1
Tetrachloroethene	ND		0.0020	0.00040			08/14/24 09:29		1
1,2-Dibromo-3-Chloropropane	ND		0.010	0.0016				08/14/24 12:58	
Toluene	ND		0.010	0.0010			08/14/24 09:29		1
1,2,4-Trichlorobenzene	ND		0.0030	0.0013			08/14/24 09:29		1
Hexachlorobutadiene	ND		0.0030	0.0012			08/14/24 09:29		
trans-1,2-Dichloroethene	ND ND		0.0035	0.0015			08/14/24 09:29		1
Naphthalene	ND ND		0.0035	0.0018				08/14/24 12:58	1
<mark>.</mark>				0.00060				08/14/24 12:58	
trans-1,3-Dichloropropene	ND		0.010						ا م
1,2,3-Trichlorobenzene	ND		0.010	0.00060				08/14/24 12:58	1
Trichloroethene	ND		0.0020	0.00030				08/14/24 12:58	1
Trichlorofluoromethane	ND		0.0085	0.0039	mg/Kg		08/14/24 09:29	08/14/24 12:58	1

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

MB MB

Lab Sample ID: MB 580-468150/3-A

Matrix: Solid

**Analysis Batch: 468166** 

**Client Sample ID: Method Blank** 

**Prep Type: Total/NA** 

**Prep Batch: 468150** 

Analyte	Result Qualifi	ier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND ND	0.0050	0.00081	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
Vinyl chloride	ND	0.0020	0.00088	mg/Kg		08/14/24 09:29	08/14/24 12:58	1
	MB MB							

	IVID IVID				
Surrogate	%Recovery Qualit	ier Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103	80 - 121	08/14/24 09:29	08/14/24 12:58	1
4-Bromofluorobenzene (Surr)	103	80 - 120	08/14/24 09:29	08/14/24 12:58	1
Toluene-d8 (Surr)	99	80 - 120	08/14/24 09:29	08/14/24 12:58	1
Dibromofluoromethane (Surr)	106	80 - 120	08/14/24 09:29	08/14/24 12:58	1
• • •					

Lab Sample ID: LCS 580-468150/1-A

**Matrix: Solid** 

**Analysis Batch: 468166** 

**Prep Type: Total/NA** 

**Prep Batch: 468150** 

Analysis Batch: 466166	Spike	LCS LCS				%Rec
Analyte	Added	Result Qualifier	Unit	D	%Rec	Limits
1,1-Dichloroethene	0.0500	0.0494	mg/Kg	_ =	99	73 - 134
1,1-Dichloroethane	0.0500	0.0504	mg/Kg		101	78 - 126
1,1,1-Trichloroethane	0.0500	0.0514	mg/Kg		103	78 - 135
1,1-Dichloropropene	0.0500	0.0514	mg/Kg		103	76 - 140
2,2-Dichloropropane	0.0500	0.0510	mg/Kg		102	75 - 134
1,2-Dichloroethane	0.0500	0.0481	mg/Kg		96	76 - 124
1,2-Dichloropropane	0.0500	0.0490	mg/Kg		98	73 - 130
Benzene	0.0500	0.0501	mg/Kg		100	79 - 135
Bromochloromethane	0.0500	0.0499	mg/Kg		100	76 - 131
Bromodichloromethane	0.0500	0.0509	mg/Kg		102	78 - 125
1,1,2-Trichloroethane	0.0500	0.0512	mg/Kg		102	80 - 123
Bromomethane	0.0500	0.0540	mg/Kg		108	55 - 150
1,3-Dichloropropane	0.0500	0.0495	mg/Kg		99	80 - 120
Carbon tetrachloride	0.0500	0.0523	mg/Kg		105	76 - 140
1,2-Dibromoethane	0.0500	0.0515	mg/Kg		103	77 - 123
Chloroethane	0.0500	0.0494	mg/Kg		99	26 - 150
Chlorobenzene	0.0500	0.0509	mg/Kg		102	80 - 125
Chloroform	0.0500	0.0490	mg/Kg		98	74 - 133
1,1,1,2-Tetrachloroethane	0.0500	0.0515	mg/Kg		103	79 - 128
Chloromethane	0.0500	0.0526	mg/Kg		105	52 - 142
cis-1,2-Dichloroethene	0.0500	0.0480	mg/Kg		96	80 - 125
cis-1,3-Dichloropropene	0.0500	0.0530	mg/Kg		106	80 - 122
Dibromochloromethane	0.0500	0.0521	mg/Kg		104	75 - 125
Bromoform	0.0500	0.0529	mg/Kg		106	71 - 130
Dibromomethane	0.0500	0.0486	mg/Kg		97	72 - 130
Dichlorodifluoromethane	0.0500	0.0536	mg/Kg		107	33 - 150
Bromobenzene	0.0500	0.0486	mg/Kg		97	78 - 126
Ethylbenzene	0.0500	0.0497	mg/Kg		99	80 - 135
1,1,2,2-Tetrachloroethane	0.0500	0.0500	mg/Kg		100	77 - 122
1,2,3-Trichloropropane	0.0500	0.0489	mg/Kg		98	77 - 127
Isopropylbenzene	0.0500	0.0502	mg/Kg		100	80 - 131
Methyl tert-butyl ether	0.0500	0.0515	mg/Kg		103	71 - 126
2-Chlorotoluene	0.0500	0.0471	mg/Kg		94	77 - 134
Methylene Chloride	0.0500	0.0317 J	mg/Kg		63	56 - 140

Spike

Client: ERM-West Job ID: 580-142622-1

LCS LCS

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-468150/1-A

**Matrix: Solid** 

Vinyl chloride

**Matrix: Solid** 

**Analysis Batch: 468166** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Pr

Lieh	Type. Total/IVA
Prep	Batch: 468150
%Rec	

					,	
Analyte	Added	Result Qualifier	Unit	D %Rec	Limits	
4-Chlorotoluene	0.0500	0.0473	mg/Kg	95	71 - 137	
m-Xylene & p-Xylene	0.0500	0.0483	mg/Kg	97	80 - 132	
1,2,4-Trimethylbenzene	0.0500	0.0483	mg/Kg	97	73 - 138	
N-Propylbenzene	0.0500	0.0488	mg/Kg	98	78 - 133	
4-Isopropyltoluene	0.0500	0.0490	mg/Kg	98	71 - 142	
o-Xylene	0.0500	0.0483	mg/Kg	97	80 - 132	
1,3-Dichlorobenzene	0.0500	0.0477	mg/Kg	95	78 - 132	
sec-Butylbenzene	0.0500	0.0495	mg/Kg	99	71 - 143	
1,4-Dichlorobenzene	0.0500	0.0452	mg/Kg	90	77 - 123	
Styrene	0.0500	0.0491	mg/Kg	98	79 - 129	
n-Butylbenzene	0.0500	0.0482	mg/Kg	96	69 - 143	
t-Butylbenzene	0.0500	0.0488	mg/Kg	98	72 - 144	
1,2-Dichlorobenzene	0.0500	0.0460	mg/Kg	92	78 - 126	
Tetrachloroethene	0.0500	0.0492	mg/Kg	98	75 - 141	
1,2-Dibromo-3-Chloropropane	0.0500	0.0520	mg/Kg	104	64 - 129	
Toluene	0.0500	0.0480	mg/Kg	96	75 - 125	
1,2,4-Trichlorobenzene	0.0500	0.0456	mg/Kg	91	74 - 131	
Hexachlorobutadiene	0.0500	0.0465	mg/Kg	93	65 - 145	
trans-1,2-Dichloroethene	0.0500	0.0490	mg/Kg	98	77 - 134	
Naphthalene	0.0500	0.0477	mg/Kg	95	56 - 145	
trans-1,3-Dichloropropene	0.0500	0.0529	mg/Kg	106	80 - 121	
1,2,3-Trichlorobenzene	0.0500	0.0468	mg/Kg	94	58 - 146	
Trichloroethene	0.0500	0.0523	mg/Kg	105	80 - 134	
Trichlorofluoromethane	0.0500	0.0503	mg/Kg	101	71 - 150	
1,3,5-Trimethylbenzene	0.0500	0.0487	mg/Kg	97	72 - 134	

0.0500

0.0499

mg/Kg

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		80 - 121
4-Bromofluorobenzene (Surr)	100		80 - 120
Toluene-d8 (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	97		80 - 120

Lab Sample ID: LCSD 580-468150/2-A

**Client Sample ID: Lab Control Sample Dup** 

100

62 - 144

Prep Type: Total/NA Pren Batch: 468150

Analysis Batch: 468166							Prep Ba	tch: 40	68150
<b>,</b>	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	0.0500	0.0464		mg/Kg		93	73 - 134	6	25
1,1-Dichloroethane	0.0500	0.0455		mg/Kg		91	78 - 126	10	20
1,1,1-Trichloroethane	0.0500	0.0462		mg/Kg		92	78 - 135	11	20
1,1-Dichloropropene	0.0500	0.0455		mg/Kg		91	76 - 140	12	20
2,2-Dichloropropane	0.0500	0.0464		mg/Kg		93	75 - 134	9	20
1,2-Dichloroethane	0.0500	0.0434		mg/Kg		87	76 - 124	10	20
1,2-Dichloropropane	0.0500	0.0450		mg/Kg		90	73 - 130	8	20
Benzene	0.0500	0.0454		mg/Kg		91	79 - 135	10	20
Bromochloromethane	0.0500	0.0445		mg/Kg		89	76 - 131	12	20
Bromodichloromethane	0.0500	0.0464		mg/Kg		93	78 - 125	9	20

Spike

Added

0.0500

Client: ERM-West Job ID: 580-142622-1

LCSD LCSD

0.0467

Result Qualifier

Unit

mg/Kg

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-468150/2-A

**Matrix: Solid** 

1,1,2-Trichloroethane

Hexachlorobutadiene

Naphthalene

Trichloroethene

trans-1,2-Dichloroethene

trans-1,3-Dichloropropene

1,2,3-Trichlorobenzene

Trichlorofluoromethane

1,3,5-Trimethylbenzene

**Analysis Batch: 468166** 

**Client Sample ID: Lab Control Sample Dup** 

Limits

80 - 123

%Rec

93

90

91

88

97

92

94

92

91

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

65 - 145

77 - 134

56 - 145

80 - 121

58 - 146

80 - 134

71 - 150

72 - 134

Prep Type: Total/NA Prep Batch: 468150 %Rec RPD

RPD

9

Limit

20

1, 1,2- Melloroctilane	0.0500	0.0407	1119/119	55	00 - 120	9	20
Bromomethane	0.0500	0.0487	mg/Kg	97	55 - 150	10	26
1,3-Dichloropropane	0.0500	0.0454	mg/Kg	91	80 - 120	8	20
Carbon tetrachloride	0.0500	0.0465	mg/Kg	93	76 - 140	12	20
1,2-Dibromoethane	0.0500	0.0469	mg/Kg	94	77 - 123	9	20
Chloroethane	0.0500	0.0450	mg/Kg	90	26 - 150	9	40
Chlorobenzene	0.0500	0.0455	mg/Kg	91	80 - 125	11	20
Chloroform	0.0500	0.0441	mg/Kg	88	74 - 133	11	20
1,1,1,2-Tetrachloroethane	0.0500	0.0477	mg/Kg	95	79 - 128	8	20
Chloromethane	0.0500	0.0491	mg/Kg	98	52 - 142	7	40
cis-1,2-Dichloroethene	0.0500	0.0441	mg/Kg	88	80 - 125	9	20
cis-1,3-Dichloropropene	0.0500	0.0483	mg/Kg	97	80 - 122	9	20
Dibromochloromethane	0.0500	0.0475	mg/Kg	95	75 - 125	9	20
Bromoform	0.0500	0.0458	mg/Kg	92	71 - 130	14	20
Dibromomethane	0.0500	0.0451	mg/Kg	90	72 - 130	7	40
Dichlorodifluoromethane	0.0500	0.0489	mg/Kg	98	33 - 150	9	31
Bromobenzene	0.0500	0.0448	mg/Kg	90	78 - 126	8	20
Ethylbenzene	0.0500	0.0456	mg/Kg	91	80 - 135	9	20
1,1,2,2-Tetrachloroethane	0.0500	0.0463	mg/Kg	93	77 - 122	8	20
1,2,3-Trichloropropane	0.0500	0.0448	mg/Kg	90	77 - 127	9	20
Isopropylbenzene	0.0500	0.0459	mg/Kg	92	80 - 131	9	20
Methyl tert-butyl ether	0.0500	0.0472	mg/Kg	94	71 - 126	9	20
2-Chlorotoluene	0.0500	0.0446	mg/Kg	89	77 - 134	6	21
Methylene Chloride	0.0500	0.0270 J*-	mg/Kg	54	56 - 140	16	20
4-Chlorotoluene	0.0500	0.0448	mg/Kg	90	71 - 137	5	21
m-Xylene & p-Xylene	0.0500	0.0440	mg/Kg	88	80 - 132	9	20
1,2,4-Trimethylbenzene	0.0500	0.0450	mg/Kg	90	73 - 138	7	22
N-Propylbenzene	0.0500	0.0454	mg/Kg	91	78 - 133	7	24
4-Isopropyltoluene	0.0500	0.0462	mg/Kg	92	71 - 142	6	29
o-Xylene	0.0500	0.0447	mg/Kg	89	80 - 132	8	20
1,3-Dichlorobenzene	0.0500	0.0451	mg/Kg	90	78 - 132	6	20
sec-Butylbenzene	0.0500	0.0452	mg/Kg	90	71 - 143	9	29
1,4-Dichlorobenzene	0.0500	0.0434	mg/Kg	87	77 - 123	4	20
Styrene	0.0500	0.0459	mg/Kg	92	79 - 129	7	20
n-Butylbenzene	0.0500	0.0466	mg/Kg	93	69 - 143	3	31
t-Butylbenzene	0.0500	0.0452	mg/Kg	90	72 - 144	8	27
1,2-Dichlorobenzene	0.0500	0.0439	mg/Kg	88	78 - 126	5	20
Tetrachloroethene	0.0500	0.0453	mg/Kg	91	75 - 141	8	20
1,2-Dibromo-3-Chloropropane	0.0500	0.0446	mg/Kg	89	64 - 129	15	40
Toluene	0.0500	0.0440	mg/Kg	88	75 - 125	9	20
1,2,4-Trichlorobenzene	0.0500	0.0461	mg/Kg	92	74 - 131	1	26
			<del>.</del> <del>.</del>				

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0.0500

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0.0500

0.0500

0.0449

0.0455

0.0438

0.0487

0.0460

0.0469

0.0461

0.0453

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Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-468150/2-A

**Matrix: Solid** 

Analyte

Vinyl chloride

Analysis Batch: 468166

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA **Prep Batch: 468150** 

RPD %Rec Limits RPD Limit

LCSD LCSD Spike Added Result Qualifier Unit D %Rec 0.0500 0.0454 mg/Kg 91 62 - 144 9 20

LCSD LCSD Surrogate %Recovery Qualifier Limits 1,2-Dichloroethane-d4 (Surr) 97 80 - 121 4-Bromofluorobenzene (Surr) 99 80 - 120 Toluene-d8 (Surr) 98 80 - 120 Dibromofluoromethane (Surr) 98 80 - 120

#### Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-467487/1-A

**Matrix: Solid** 

Analysis Batch: 468690

**Client Sample ID: Method Blank** Prep Type: Total/NA

**Prep Batch: 467487** 

	MB	MB						•	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.0050	0.00090	mg/Kg		08/07/24 15:55	08/19/24 11:43	1
2,4'-DDE	ND		0.0050	0.00060	mg/Kg		08/07/24 15:55	08/19/24 11:43	1
2,4'-DDT	ND		0.0050	0.0010	mg/Kg		08/07/24 15:55	08/19/24 11:43	1
4,4'-DDD	ND		0.0020	0.00023	mg/Kg		08/07/24 15:55	08/19/24 11:43	1
4,4'-DDE	ND		0.0020	0.00037	mg/Kg		08/07/24 15:55	08/19/24 11:43	1
4,4'-DDT	ND		0.0020	0.00037	mg/Kg		08/07/24 15:55	08/19/24 11:43	1
Aldrin	ND		0.0030	0.00038	mg/Kg		08/07/24 15:55	08/19/24 11:43	1
alpha-BHC	ND		0.0020	0.00016	mg/Kg		08/07/24 15:55	08/19/24 11:43	1
beta-BHC	ND		0.0050	0.00025	mg/Kg		08/07/24 15:55	08/19/24 11:43	1
cis-Chlordane	ND		0.0020	0.00075	mg/Kg		08/07/24 15:55	08/19/24 11:43	1
delta-BHC	ND		0.0030	0.00028	mg/Kg		08/07/24 15:55	08/19/24 11:43	1
Dieldrin	ND		0.0020	0.00035	mg/Kg		08/07/24 15:55	08/19/24 11:43	1
Endosulfan I	ND		0.0020	0.00034	mg/Kg		08/07/24 15:55	08/19/24 11:43	1
Endosulfan II	ND		0.0020	0.00026	mg/Kg		08/07/24 15:55	08/19/24 11:43	1
Endosulfan sulfate	ND		0.0020	0.00028	mg/Kg		08/07/24 15:55	08/19/24 11:43	1
Endrin	ND		0.0020	0.00047	mg/Kg		08/07/24 15:55	08/19/24 11:43	1
Endrin aldehyde	ND		0.020	0.0048	mg/Kg		08/07/24 15:55	08/19/24 11:43	1
Endrin ketone	ND		0.0020	0.00042	mg/Kg		08/07/24 15:55	08/19/24 11:43	1
gamma-BHC (Lindane)	ND		0.0020	0.00075	mg/Kg		08/07/24 15:55	08/19/24 11:43	1
Heptachlor	ND		0.0030	0.00019	mg/Kg		08/07/24 15:55	08/19/24 11:43	1
Heptachlor epoxide	ND		0.0030	0.00030	mg/Kg		08/07/24 15:55	08/19/24 11:43	1
Methoxychlor	ND		0.010	0.00037	mg/Kg		08/07/24 15:55	08/19/24 11:43	1
Toxaphene	ND		0.13	0.025	mg/Kg		08/07/24 15:55	08/19/24 11:43	1
trans-Chlordane	ND		0.0030	0.00032	mg/Kg		08/07/24 15:55	08/19/24 11:43	1
	МВ	MB							

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	68		53 - 123	08/07/24 15:55	08/19/24 11:43	1
Tetrachloro-m-xylene	78		48 - 123	08/07/24 15:55	08/19/24 11:43	1

Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

#### Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 580-467487/2-A Clien Matrix: Solid

Analysis Batch: 468690

Client: ERM-West

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 467487

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	Spike	LCS LCS			%Rec
Analyte	Added	Result Qualifier	Unit	D %Rec	Limits
4,4'-DDD	0.0200	0.0143	mg/Kg		55 - 121
4,4'-DDE	0.0200	0.0158	mg/Kg	79	59 - 124
4,4'-DDT	0.0200	0.0148	mg/Kg	74	42 - 132
Aldrin	0.0200	0.0158	mg/Kg	79	56 - 121
alpha-BHC	0.0200	0.0153	mg/Kg	77	57 - 120
beta-BHC	0.0200	0.0159	mg/Kg	80	53 - 120
cis-Chlordane	0.0200	0.0154	mg/Kg	77	56 - 120
delta-BHC	0.0200	0.0128	mg/Kg	64	47 - 120
Dieldrin	0.0200	0.0149	mg/Kg	74	61 - 121
Endosulfan I	0.0200	0.0165	mg/Kg	82	48 - 121
Endosulfan II	0.0200	0.0156	mg/Kg	78	20 - 125
Endosulfan sulfate	0.0200	0.0142	mg/Kg	71	57 - 120
Endrin	0.0200	0.0166	mg/Kg	83	56 - 126
Endrin aldehyde	0.0200	0.0156 J	mg/Kg	78	24 - 136
Endrin ketone	0.0200	0.0146	mg/Kg	73	56 - 121
gamma-BHC (Lindane)	0.0200	0.0161	mg/Kg	81	55 - 120
Heptachlor	0.0200	0.0165	mg/Kg	83	57 - 124
Heptachlor epoxide	0.0200	0.0165	mg/Kg	82	54 - 125
Methoxychlor	0.0200	0.0139	mg/Kg	69	51 - 133
trans-Chlordane	0.0200	0.0136	mg/Kg	68	42 - 136

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl	72		53 - 123
Tetrachloro-m-xvlene	79		48 - 123

Lab Sample ID: LCS 580-467487/6-A

**Matrix: Solid** 

Analysis Batch: 468690

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 467487

 Analyte
 Added Toxaphene
 Result 0.500
 Qualifier 0.500
 Unit 0.289
 D mg/Kg
 MRec Limits 58 54 - 141

LCS LCS

Surrogate	%Recovery Qualified	r Limits
DCB Decachlorobiphenyl	70	53 - 123
Tetrachloro-m-xvlene	78	48 - 123

Lab Sample ID: LCSD 580-467487/3-A

**Matrix: Solid** 

Analysis Batch: 468690

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA Prep Batch: 467487

Spike LCSD LCSD %Rec RPD Analyte Added Result Qualifier D %Rec Limits RPD Limit Unit 4,4'-DDD 0.0200 0.0147 mg/Kg 74 55 - 121 33 4,4'-DDE 0.0200 0.0158 79 59 - 124 27 mg/Kg 0 4,4'-DDT 40 0.0200 0.0146 mg/Kg 73 42 - 132 Aldrin 0.0200 0.0159 mg/Kg 80 56 - 121 20 alpha-BHC 0.0200 0.0152 mg/Kg 76 57 - 120 22 beta-BHC 0.0200 0.0159 mg/Kg 79 53 - 120 40 cis-Chlordane 0.0200 0.0155 78 56 - 120 23 mg/Kg

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Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

#### Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 580-467487/3-A

**Matrix: Solid** 

Client: ERM-West

Analysis Batch: 468690

**Client Sample ID: Lab Control Sample Dup** 

**Prep Type: Total/NA** 

**Prep Batch: 467487** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
delta-BHC	0.0200	0.0127		mg/Kg		64	47 - 120	1	40
Dieldrin	0.0200	0.0148		mg/Kg		74	61 - 121	1	24
Endosulfan I	0.0200	0.0164		mg/Kg		82	48 - 121	0	25
Endosulfan II	0.0200	0.0154		mg/Kg		77	20 - 125	1	37
Endosulfan sulfate	0.0200	0.0139		mg/Kg		69	57 - 120	2	25
Endrin	0.0200	0.0165		mg/Kg		83	56 - 126	0	25
Endrin aldehyde	0.0200	0.0154	J	mg/Kg		77	24 - 136	1	40
Endrin ketone	0.0200	0.0142		mg/Kg		71	56 - 121	2	20
gamma-BHC (Lindane)	0.0200	0.0159		mg/Kg		80	55 - 120	1	18
Heptachlor	0.0200	0.0164		mg/Kg		82	57 - 124	0	22
Heptachlor epoxide	0.0200	0.0164		mg/Kg		82	54 - 125	0	34
Methoxychlor	0.0200	0.0136		mg/Kg		68	51 - 133	2	30
trans-Chlordane	0.0200	0.0136		mg/Kg		68	42 - 136	0	26

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
DCB Decachlorobiphenyl	69	53 - 123
Tetrachloro-m-xvlene	78	48 - 123

Lab Sample ID: LCSD 580-467487/7-A

**Matrix: Solid** 

**Analysis Batch: 468690** 

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

**Prep Batch: 467487** RPD %Rec

Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit 54 - 141 Toxaphene 0.500 0.312 mg/Kg 62

LCSD LCSD

Spike

LCSD LCSD

Surrogate	%Recovery Qualifier	Limits
DCB Decachlorobiphenyl	72	53 - 123
Tetrachloro-m-xylene	80	48 - 123

Lab Sample ID: MB 580-469961/1-A

**Matrix: Solid** 

**Analysis Batch: 470142** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

**Prep Batch: 469961** 

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.0050	0.00090	mg/Kg		08/30/24 15:09	09/03/24 14:07	1
2,4'-DDE	ND		0.0050	0.00060	mg/Kg		08/30/24 15:09	09/03/24 14:07	1
2,4'-DDT	ND		0.0050	0.0010	mg/Kg		08/30/24 15:09	09/03/24 14:07	1
4,4'-DDD	ND		0.0020	0.00023	mg/Kg		08/30/24 15:09	09/03/24 14:07	1
4,4'-DDE	ND		0.0020	0.00037	mg/Kg		08/30/24 15:09	09/03/24 14:07	1
4,4'-DDT	ND		0.0020	0.00037	mg/Kg		08/30/24 15:09	09/03/24 14:07	1
Aldrin	ND		0.0030	0.00038	mg/Kg		08/30/24 15:09	09/03/24 14:07	1
alpha-BHC	ND		0.0020	0.00016	mg/Kg		08/30/24 15:09	09/03/24 14:07	1
beta-BHC	ND		0.0050	0.00025	mg/Kg		08/30/24 15:09	09/03/24 14:07	1
cis-Chlordane	ND		0.0020	0.00075	mg/Kg		08/30/24 15:09	09/03/24 14:07	1
delta-BHC	ND		0.0030	0.00028	mg/Kg		08/30/24 15:09	09/03/24 14:07	1
Dieldrin	ND		0.0020	0.00035	mg/Kg		08/30/24 15:09	09/03/24 14:07	1
Endosulfan I	ND		0.0020	0.00034	mg/Kg		08/30/24 15:09	09/03/24 14:07	1
Endosulfan II	ND		0.0020	0.00026	mg/Kg		08/30/24 15:09	09/03/24 14:07	1

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

#### Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 580-469961/1-A

**Matrix: Solid** 

Analysis Batch: 470142

Client Sample ID: Method Blank

**Prep Type: Total/NA** 

**Prep Batch: 469961** 

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endosulfan sulfate	ND		0.0020	0.00028	mg/Kg		08/30/24 15:09	09/03/24 14:07	1
Endrin	ND		0.0020	0.00047	mg/Kg		08/30/24 15:09	09/03/24 14:07	1
Endrin aldehyde	ND		0.020	0.0048	mg/Kg		08/30/24 15:09	09/03/24 14:07	1
Endrin ketone	ND		0.0020	0.00042	mg/Kg		08/30/24 15:09	09/03/24 14:07	1
gamma-BHC (Lindane)	ND		0.0020	0.00075	mg/Kg		08/30/24 15:09	09/03/24 14:07	1
Heptachlor	ND		0.0030	0.00019	mg/Kg		08/30/24 15:09	09/03/24 14:07	1
Heptachlor epoxide	ND		0.0030	0.00030	mg/Kg		08/30/24 15:09	09/03/24 14:07	1
Methoxychlor	ND		0.010	0.00037	mg/Kg		08/30/24 15:09	09/03/24 14:07	1
Toxaphene	ND		0.13	0.025	mg/Kg		08/30/24 15:09	09/03/24 14:07	1
trans-Chlordane	ND		0.0030	0.00032	mg/Kg		08/30/24 15:09	09/03/24 14:07	1

Lab Sample ID: LCS 580-469961/2-A

**Matrix: Solid** 

Analysis Batch: 470142

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 469961** 

ı		<b>Бріке</b>	LCS	LUS			%Rec	
	Analyte	Added	Result	Qualifier Unit	D	%Rec	Limits	
	2,4'-DDD	0.0200	0.0181	mg/Kg		90	39 - 126	
	2,4'-DDE	0.0200	0.0179	mg/Kg		89	31 - 130	
	2,4'-DDT	0.0200	0.0186	mg/Kg		93	36 - 125	

Lab Sample ID: LCSD 580-469961/3-A

**Matrix: Solid** 

**Analysis Batch: 470142** 

**Client Sample ID: Lab Control Sample Dup** Prep Type: Total/NA

**Prep Batch: 469961** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2,4'-DDD	0.0200	0.0184		mg/Kg		92	39 - 126	2	35
2,4'-DDE	0.0200	0.0174		mg/Kg		87	31 - 130	3	40
2,4'-DDT	0.0200	0.0192		mg/Kg		96	36 - 125	3	32

#### Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 580-467487/1-A

**Matrix: Solid** 

**Analysis Batch: 468095** 

**Client Sample ID: Method Blank** Prep Type: Total/NA

**Prep Batch: 467487** 

	MB MB							
Analyte Res	ult Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	0.020	0.0074	mg/Kg		08/07/24 15:55	08/13/24 23:24	1
PCB-1221	ND	0.020	0.012	mg/Kg		08/07/24 15:55	08/13/24 23:24	1
PCB-1232	ND	0.020	0.0049	mg/Kg		08/07/24 15:55	08/13/24 23:24	1
PCB-1242	ND	0.020	0.0080	mg/Kg		08/07/24 15:55	08/13/24 23:24	1
PCB-1248	ND	0.020	0.0070	mg/Kg		08/07/24 15:55	08/13/24 23:24	1
PCB-1254	ND	0.020	0.0090	mg/Kg		08/07/24 15:55	08/13/24 23:24	1
PCB-1260	ND	0.020	0.0074	mg/Kg		08/07/24 15:55	08/13/24 23:24	1

	INIB	MB				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	64		44 - 135	08/07/24 15:55	08/13/24 23:24	1
Tetrachloro-m-xylene	58		48 - 150	08/07/24 15:55	08/13/24 23:24	1

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

## Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 580-467487/4-A Client Sample ID: Lab Control Sample

**Matrix: Solid** 

**Analysis Batch: 468095** 

Prep Type: Total/NA
Prep Batch: 467487

		Spike	LCS	LCS				%Rec	
Analyte		Added	Result	Qualifier	Unit	D	%Rec	Limits	
PCB-1016		0.100	0.0585		mg/Kg		58	42 - 150	
PCB-1260		0.100	0.0589		mg/Kg		59	43 - 145	

LCS LCS

Surrogate	%Recovery Q	ualifier	Limits
DCB Decachlorobiphenyl	68		44 - 135
Tetrachloro-m-xylene	62		48 - 150

Lab Sample ID: LCSD 580-467487/5-A Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** 

Analysis Batch: 468095

Prep Type: Total/NA

Prep Batch: 467487

-	:	Spike	LCSD	LCSD				%Rec		RPD
Analyte	A	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
PCB-1016		0.100	0.0604		mg/Kg		60	42 - 150	3	17
PCB-1260		0.100	0.0606		mg/Kg		61	43 - 145	3	13

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl	71		44 - 135
Tetrachloro-m-xylene	63		48 - 150

Lab Sample ID: 580-142622-9 MS Client Sample ID: PDI-15-SO-38-20240725

**Matrix: Solid** 

**Analysis Batch: 468863** 

Prep Type: Total/NA Prep Batch: 467487

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
PCB-1016	ND		0.108	ND		mg/Kg	<del>*</del>	NC	42 - 150	
PCB-1260	ND		0.108	ND		mg/Kg	☼	NC	43 - 145	

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl		S1-	44 - 135
Tetrachloro-m-xylene	953	S1+	48 - 150

Lab Sample ID: 580-142622-9 MSD Client Sample ID: PDI-15-SO-38-20240725

**Matrix: Solid** 

Analysis Batch: 468863

Prep Type: Total/NA

**Prep Batch: 467487** 

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
PCB-1016	ND		0.106	ND		mg/Kg	— <u></u>	NC	42 - 150	NC	17
PCB-1260	ND		0.106	ND		mg/Kg	₽	NC	43 - 145	NC	13

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl	0	S1-	44 - 135
Tetrachloro-m-xvlene	1237	S1+	48 - 150

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

#### Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 570-468000/1-A

**Matrix: Solid** 

**Analysis Batch: 471336** 

**Client Sample ID: Method Blank Prep Type: Total/NA** 

**Prep Batch: 468000** 

	IVID	IVID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		10	3.7	ug/Kg		08/06/24 13:16	08/16/24 01:46	1
2,4,5-TP (Silvex)	ND		10	7.5	ug/Kg		08/06/24 13:16	08/16/24 01:46	1
2,4-D	ND		100	49	ug/Kg		08/06/24 13:16	08/16/24 01:46	1
2,4-DB	ND		100	100	ug/Kg		08/06/24 13:16	08/16/24 01:46	1
Dalapon	ND		250	72	ug/Kg		08/06/24 13:16	08/16/24 01:46	1
Dicamba	ND		10	4.7	ug/Kg		08/06/24 13:16	08/16/24 01:46	1
Dichlorprop	ND		100	49	ug/Kg		08/06/24 13:16	08/16/24 01:46	1
Dinoseb	ND		100	59	ug/Kg		08/06/24 13:16	08/16/24 01:46	1
MCPA	ND		10000	4900	ug/Kg		08/06/24 13:16	08/16/24 01:46	1
MCPP	ND		10000	6600	ug/Kg		08/06/24 13:16	08/16/24 01:46	1

MB MB

MD MD

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 2,4-Dichlorophenylacetic acid 72 p 20 - 163 <u>08/06/24 13:16</u> <u>08/16/24 01:46</u>

Lab Sample ID: LCS 570-468000/2-A

**Matrix: Solid** 

Analysis Batch: 471336

**Client Sample ID: Lab Control Sample Prep Type: Total/NA** 

**Prep Batch: 468000** 

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
2,4,5-T	20.0	35.8		ug/Kg		179	26 - 180	
2,4,5-TP (Silvex)	20.0	25.2		ug/Kg		126	10 - 180	
2,4-D	200	331	p	ug/Kg		165	13 - 180	
2,4-DB	200	144	р	ug/Kg		72	10 - 180	
Dalapon	500	505	p	ug/Kg		101	10 - 176	
Dicamba	20.0	21.9		ug/Kg		110	21 - 164	
Dichlorprop	200	234		ug/Kg		117	10 - 175	
Dinoseb	100	128		ug/Kg		128	10 - 180	
MCPA	20000	43800	*+	ug/Kg		219	22 - 180	
MCPP	20000	20100	р	ug/Kg		101	18 - 180	

LCS LCS

Surrogate %Recovery Qualifier Limits 20 - 163 2,4-Dichlorophenylacetic acid 72 p

Lab Sample ID: LCSD 570-468000/3-A

**Matrix: Solid** 

Analysis Batch: 471336

**Client Sample ID: Lab Control Sample Dup** 

**Prep Batch: 468000** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2,4,5-T	20.0	34.4		ug/Kg		172	26 - 180	4	40
2,4,5-TP (Silvex)	20.0	29.3		ug/Kg		146	10 - 180	15	40
2,4-D	200	299	p	ug/Kg		149	13 - 180	10	40
2,4-DB	200	142	р	ug/Kg		71	10 - 180	2	40
Dalapon	500	563	p	ug/Kg		113	10 - 176	11	40
Dicamba	20.0	22.1		ug/Kg		111	21 - 164	1	40
Dichlorprop	200	151	p *1	ug/Kg		75	10 - 175	43	40
Dinoseb	100	130		ug/Kg		130	10 - 180	2	40
MCPA	20000	41600	*+	ug/Kg		208	22 - 180	5	40
MCPP	20000	22900	р	ug/Kg		114	18 - 180	13	40

**Eurofins Seattle** 

Prep Type: Total/NA

Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

Client: ERM-West

Method: 8151A - Herbicides (GC) (Continued)

LCSD LCSD

%Recovery Qualifier Limits Surrogate 2,4-Dichlorophenylacetic acid 20 - 163 58 p

Method: 2540G - SM 2540G

Lab Sample ID: 580-142622-8 DU

Client Sample ID: PDI-19-SO-42.4-20240801

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Type: Total/NA

Analysis Batch: 467296

DU DU RPD Sample Sample Analyte Result Qualifier Result Qualifier Unit D **RPD** Limit % Percent Solids 86.1 84.5 2 20 % Percent Moisture 13.9 15.5 11 20

Method: SM 5310C - Dissolved Organic Carbon

Lab Sample ID: MB 580-467954/4 **Client Sample ID: Method Blank** Prep Type: Total/NA

**Matrix: Water** 

**Matrix: Solid** 

**Analysis Batch: 467954** 

MB MB

**MDL** Unit Analyte Result Qualifier RL Dil Fac Prepared Analyzed Total Organic Carbon 1.5 0.38 mg/L 08/08/24 21:26 ND

Lab Sample ID: LCS 580-467954/5 **Client Sample ID: Lab Control Sample Matrix: Water** Prep Type: Total/NA

Analysis Batch: 467954

Spike LCS LCS %Rec Added Result Qualifier Limits Analyte Unit D %Rec **Total Organic Carbon** 25.0 25.5 102 85 - 115 mg/L

Lab Sample ID: LCSD 580-467954/6

**Matrix: Water** 

Analysis Batch: 467954

Spike LCSD LCSD %Rec **RPD Analyte** Added Result Qualifier Unit %Rec Limits **RPD** Limit Total Organic Carbon 25.0 23.8 mg/L 95 85 - 115

Job ID: 580-142622-1

Percent Solids: 84.5

**Matrix: Solid** 

Lab Sample ID: 580-142622-1

Client: ERM-West

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-10-SO-21-20240730

Date Collected: 07/30/24 11:40

Date Received: 08/02/24 13:05

	Batch	Batch		Dilution	Batch		Prepared
Prep Type	Type	Method	Run	Factor	Number Ana	alyst Lab	or Analyzed
Total/NA	Analysis	2540G			467295 AU	A EET SEA	08/06/24 09:45

Client Sample ID: PDI-10-SO-21-20240730

Date Collected: 07/30/24 11:40

Date Received: 08/02/24 13:05

EET SEA	00/00/24 09.43	
Lab	Sample ID: 580-142622-1	
	Matrix: Solid	ĺ

08/08/24 14:00

Batch Batch Dilution Batch Prepared **Prep Type** Type Method Run **Factor** Number Analyst Lab or Analyzed Total/NA Prep 5035 467541 BYM EET SEA 08/08/24 10:00

467543 K1K

**EET SEA** 

Client Sample ID: PDI-10-SO-37-20240730

8260D

Analysis

Date Collected: 07/30/24 15:20

Total/NA

Date Received: 08/02/24 13:05

Lab Sample ID: 580-142622-2 **Matrix: Solid** 

Dilution Batch **Batch** Batch **Prepared Prep Type** Method Run **Factor Number Analyst** or Analyzed Type Lab 08/06/24 09:45 Total/NA 2540G 467295 AUA EET SEA Analysis

Client Sample ID: PDI-10-SO-37-20240730

Date Collected: 07/30/24 15:20

Date Received: 08/02/24 13:05

Lab Sample ID: 580-142622-2 **Matrix: Solid** Percent Solids: 84.1

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467720	BYM	EET SEA	08/09/24 13:47
Total/NA	Analysis	8260D		1	467721	K1K	EET SEA	08/09/24 15:48
Total/NA	Prep	5035			468150	BYM	EET SEA	08/14/24 12:10
Total/NA	Analysis	8260D		1	468166	K1K	EET SEA	08/14/24 13:36

Date Received: 08/02/24 13:05

Client Sample ID: PDI-10-SO-55.5-20240730	Lab Sample ID: 580-142622-3
Date Collected: 07/30/24 16:30	Matrix: Solid

ı		Batch	Batch		Dilution	Batch			Prepared
	Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
	Total/NA	Analysis	2540G		1	467295	AUA	EET SEA	08/06/24 09:45

Lab Sample ID: 580-142622-3 Client Sample ID: PDI-10-SO-55.5-20240730 Date Collected: 07/30/24 16:30 Matrix: Solid Date Received: 08/02/24 13:05 Percent Solids: 88.7

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467541	BYM	EET SEA	08/08/24 10:00
Total/NA	Analysis	8260D		1	467543	K1K	EET SEA	08/08/24 14:21

Client: ERM-West

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-13-SO-11.2-20240731

Date Collected: 07/31/24 09:30

Lab Sample ID: 580-142622-4

**Matrix: Solid** 

Job ID: 580-142622-1

Date Received: 08/02/24 13:05

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	467295	AUA	EET SEA	08/06/24 09:45

Client Sample ID: PDI-13-SO-11.2-20240731

Lab Sample ID: 580-142622-4

**Matrix: Solid** 

Date Collected: 07/31/24 09:30 Date Received: 08/02/24 13:05

Percent Solids: 86.0

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467720	BYM	EET SEA	08/09/24 13:47
Total/NA	Analysis	8260D		1	467721	K1K	EET SEA	08/09/24 17:10
Total/NA	Prep	5035	DL		467929	AC	EET SEA	08/12/24 09:02
Total/NA	Analysis	8260D	DL	1	467888	K1K	EET SEA	08/12/24 12:27

Client Sample ID: PDI-13-SO-28-20240731

Lab Sample ID: 580-142622-5

**Matrix: Solid** 

Date Collected: 07/31/24 12:50 Date Received: 08/02/24 13:05

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1 -	467295	AUA	EET SEA	08/06/24 09:45

Client Sample ID: PDI-13-SO-28-20240731

Lab Sample ID: 580-142622-5

**Matrix: Solid** 

Date Collected: 07/31/24 12:50 Date Received: 08/02/24 13:05

Percent Solids: 88.8

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467541	BYM	EET SEA	08/08/24 10:00
Total/NA	Analysis	8260D		1	467543	K1K	EET SEA	08/08/24 14:41

Client Sample ID: PDI-13-SO-83.5-20240731

Lab Sample ID: 580-142622-6

**Matrix: Solid** 

Date Collected: 07/31/24 17:25 Date Received: 08/02/24 13:05

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	467295	AUA	EET SEA	08/06/24 09:45

Client Sample ID: PDI-13-SO-83.5-20240731

Lab Sample ID: 580-142622-6

**Matrix: Solid** 

Date Collected: 07/31/24 17:25 Date Received: 08/02/24 13:05 Percent Solids: 87.0

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467541	BYM	EET SEA	08/08/24 10:00
Total/NA	Analysis	8260D		1	467543	K1K	EET SEA	08/08/24 15:02

#### **Lab Chronicle**

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-19-SO-39-20240801

Lab Sample ID: 580-142622-7 Date Collected: 08/01/24 13:15 **Matrix: Solid** 

Date Received: 08/02/24 13:05

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	467295	AUA	EET SEA	08/06/24 09:45

Client Sample ID: PDI-19-SO-39-20240801

Lab Sample ID: 580-142622-7 Date Collected: 08/01/24 13:15 **Matrix: Solid** 

Date Received: 08/02/24 13:05 Percent Solids: 87.7

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467720	BYM	EET SEA	08/09/24 08:00
Total/NA	Analysis	8260D		1	467721	K1K	EET SEA	08/09/24 16:50

Client Sample ID: PDI-19-SO-42.4-20240801

Lab Sample ID: 580-142622-8

Date Collected: 08/01/24 13:55 **Matrix: Solid** Date Received: 08/02/24 13:05

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G			467296	AUA	EET SEA	08/06/24 09:45

Client Sample ID: PDI-19-SO-42.4-20240801 Lab Sample ID: 580-142622-8

Date Collected: 08/01/24 13:55 **Matrix: Solid** 

Date Received: 08/02/24 13:05 Percent Solids: 86.1

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number A	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467720 B	BYM	EET SEA	08/09/24 08:00
Total/NA	Analysis	8260D		1	467721 K	(1K	EET SEA	08/09/24 16:08
Total/NA	Prep	5035	DL		467929 A	AC .	EET SEA	08/12/24 09:02
Total/NA	Analysis	8260D	DL	1	467888 K	K1K	EET SEA	08/12/24 12:47

Client Sample ID: PDI-15-SO-38-20240725 Lab Sample ID: 580-142622-9

Date Collected: 07/25/24 12:20 **Matrix: Solid** Date Received: 08/02/24 13:05

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	467296	AUA	EET SEA	08/06/24 09:45

Client Sample ID: PDI-15-SO-38-20240725 Lab Sample ID: 580-142622-9

Date Collected: 07/25/24 12:20 **Matrix: Solid** 

Date Received: 08/02/24 13:05 Percent Solids: 91.0

	Batch	Batch		Dilution	Batch		Prepared
Prep Type	Туре	Method	Run	Factor	Number And	alyst Lab	or Analyzed
Total/NA	Prep	3546			467487 ER	EET SEA	08/07/24 16:00
Total/NA	Analysis	8081B		50	468956 VLF	EET SEA	08/21/24 14:35
Total/NA	Prep	3546	DL		467487 ER	EET SEA	08/07/24 16:00
Total/NA	Analysis	8081B	DL	500	469118 VLI	EET SEA	08/22/24 14:05
Total/NA	Prep	3546	DL		469961 ER	EET SEA	08/30/24 15:09
Total/NA	Analysis	8081B	DL	50	470437 CB	EET SEA	09/05/24 14:32

**Eurofins Seattle** 

Client: ERM-West

Client Sample ID: PDI-15-SO-38-20240725

Lab Sample ID: 580-142622-9 Date Collected: 07/25/24 12:20 **Matrix: Solid** Date Received: 08/02/24 13:05 Percent Solids: 91.0

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	3546			467487	ER	EET SEA	08/07/24 16:00
Total/NA	Analysis	8082A		20	468863	VLF	EET SEA	08/21/24 15:06
Total/NA	Prep	8151A			468000	DVE6	EET CAL 4	08/06/24 13:16
Total/NA	Analysis	8151A		1	471336	ZE2W	EET CAL 4	08/16/24 09:56

Client Sample ID: PDI-19-SO-53.5-20240801

Lab Sample ID: 580-142622-10 Date Collected: 08/01/24 16:10 **Matrix: Solid** Date Received: 08/02/24 13:05

	Batch	Batch		Dilution	Batch		Prepared
Prep Type	Туре	Method	Run	Factor	Number Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G			467296 ALIA	FFTSFA	08/06/24 09:45

Client Sample ID: PDI-19-SO-53.5-20240801

Lab Sample ID: 580-142622-10 Date Collected: 08/01/24 16:10 **Matrix: Solid** Date Received: 08/02/24 13:05 Percent Solids: 87.5

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	<del></del>		467541	BYM	EET SEA	08/08/24 10:00
Total/NA	Analysis	8260D		1	467543	K1K	EET SEA	08/08/24 15:43
Total/NA	Prep	5035	DL		467720	BYM	EET SEA	08/09/24 08:00
Total/NA	Analysis	8260D	DL	1	467721	K1K	EET SEA	08/09/24 16:29

Client Sample ID: PDI-13-SO-11.2-20240731

Lab Sample ID: 580-142622-11 Date Collected: 07/31/24 11:30 **Matrix: Water** Date Received: 08/02/24 13:05

_	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	SM 5310C		1	467954	MJ	EET SEA	08/09/24 07:26

**Client Sample ID: TB-01-SO-20240802** Lab Sample ID: 580-142622-12

Date Collected: 08/02/24 00:01 **Matrix: Solid** Date Received: 08/02/24 13:05

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467541	BYM	EET SEA	08/08/24 10:00
Total/NA	Analysis	8260D		1	467543	K1K	EET SEA	08/08/24 13:39

#### **Laboratory References:**

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494 EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

### **Accreditation/Certification Summary**

Client: ERM-West Job ID: 580-142622-1

Project/Site: Arkema PDI Sampling

### **Laboratory: Eurofins Seattle**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Nu	umber Expiration Date
Oregon	NELAP	4167	07-07-25
0 ,		aboratory is not certified by the governing	g authority. This list may include analyte
0 ,	s are included in this report, but the does not offer certification.	aboratory is not certified by the governing	g authority. This list may include analyte
0 ,		, , , , , ,	g authority. This list may include analyte

#### **Laboratory: Eurofins Calscience**

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	<b>Expiration Date</b>
Arizona	State	AZ0830	11-16-24
Arkansas DEQ	State	88-0161	07-02-25
California	Los Angeles County Sanitation Districts	9257304	08-01-24 *
California	State	3082	08-20-24
Kansas	NELAP	E-10420	07-31-25
Nevada	State	CA00111	10-31-24
Oregon	NELAP	4175	02-02-25
USDA	US Federal Programs	P330-22-00059	06-08-26
Washington	State	C916-18	10-11-24

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<sup>\*</sup> Accreditation/Certification renewal pending - accreditation/certification considered valid.

## **Sample Summary**

Client: ERM-West

Project/Site: Arkema PDI Sampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-142622-1	PDI-10-SO-21-20240730	Solid	07/30/24 11:40	08/02/24 13:05
580-142622-2	PDI-10-SO-37-20240730	Solid	07/30/24 15:20	08/02/24 13:05
580-142622-3	PDI-10-SO-55.5-20240730	Solid	07/30/24 16:30	08/02/24 13:05
580-142622-4	PDI-13-SO-11.2-20240731	Solid	07/31/24 09:30	08/02/24 13:05
580-142622-5	PDI-13-SO-28-20240731	Solid	07/31/24 12:50	08/02/24 13:05
580-142622-6	PDI-13-SO-83.5-20240731	Solid	07/31/24 17:25	08/02/24 13:05
580-142622-7	PDI-19-SO-39-20240801	Solid	08/01/24 13:15	08/02/24 13:05
580-142622-8	PDI-19-SO-42.4-20240801	Solid	08/01/24 13:55	08/02/24 13:05
580-142622-9	PDI-15-SO-38-20240725	Solid	07/25/24 12:20	08/02/24 13:05
580-142622-10	PDI-19-SO-53.5-20240801	Solid	08/01/24 16:10	08/02/24 13:05
580-142622-11	PDI-13-SO-11.2-20240731	Water	07/31/24 11:30	08/02/24 13:05
580-142622-12	TB-01-SO-20240802	Solid	08/02/24 00:01	08/02/24 13:05

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Job ID: 580-142622-1

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5755 8th Street East Tacoma, WA 98424 Phone (353) 933 334

# **Chain of Custody Record**



**Environment Testing** 

Phone (253) 922-2310												Camia	Tracking	No(e):		Ico	C No:			
Client Information	Sampler:				PM: ız, Shei	ri L						Carne	Tracking	140(5).		580	-62781-19269	).12		
Client Contact:	Phone:			E-M	ail:							State	of Origin:			Pag	e: ge of			
Avery Soplata Company:			PWSID:	Sne	eri.Cruz	@et.e	uroni	isus.				_				Job				
ERM-West					<u> </u>	*			Ana	alysi	s Re	ques	ed			Pre	servation Cod	es:		
oddress: 1050 SW 6th Avenue Suite 1650	Due Date Requeste	od:															MeOH			1
Sity: Portland	TAT Requested (da	ys):						5								Ш				
otate, Zip: DR, 97204	Compliance Projec	t: A Yes	\ No		ш			t blanks			ن	2								
Phone:	PO#: 0732436.301					ı.		bmen			1	67			580-142	622	Chain of Cus	tody		
mail:	WO#:				o S	ndard list MeOH	list_LL	t equi	5		9 t	7		1						1
avery.soplata@erm.com Project Name:	Project #:				- 8	rd list	rd list	rd lis	Prsneides	W	5									
Arkema - PDI Investigation	58020754 SSOW#:				용	anda	anda	tanda	7	00	Herr	DOC				g Ot	her: 10c - H25	በ ርቋ	FU FI	TEREC
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PDI-10-50-37-20240130	7/30/24	1520	G	S		X								1	-	2				$\dashv$
PDI-10-50-55.5-20240730	7/30/24		Ġ	8		X										2		4 4	1/1	ial
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5755 8th Street East Tacoma, WA 98424 Phone (253) 922-2310

## **Chain of Custody Record**



hone (253) 922-2310	Sampler:			Lab					proprinterminale		Carr	ier Tracking	No(s):		COC No:			
Client Information	Dhana			Cru E-M	z, Sher	i L					Stot	of Origin:			580-62781-1 Page:	9269.12		
lient Contact: very Soplata	Phone:				aii: eri.Cruz	@et.e	urofins	us.con	n		Siali	or origin.			Page of			
ompany:			PWSID:					Δ	nalv	sis R	eane	sted			Job #:			
RM-West ddress:	Due Date Requeste	ed:		nents annound no conjures to	$\dagger T$			T							Preservation	Codes:		
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ate, Zip: IR, 97204	Compliance Project	t: A Yes	\ No		41		standard list_LL				-							
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nail:	0732436.301 WO#:				- 2	정	_   i			5	7		5	80-1426	22 Chain of	Custody		
very.soplata@erm.com					200	standard list MeOH	list L	بق		abi	7		1	1 0				
roject Name: rkema - PDI Investigation	Project #: 58020754				S (%	lard I	land	10	124	_6	2			Itain				
ite:	SSOW#:					stanc	standard	3		E P	ž S			of containe	Other: POC - h	hson 1	TATELD F	エノナド
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ample Identification	Sample Date	Time	G=grab) вта Preservatio	and the second second second	K A	P. ADMINISTRATION	CONTRACTOR DESCRIPTION		$\infty$		_			<del>    </del>	Speci	al Instruc	tions/Not	9: 
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ossible Hazard Identification	2 54		<u> </u>	and a second	Sá	mple	Dispo	sal ( A	fee	may b	asse	ssed if sa	mples a	re retain	ed longer th	an 1 mon	th)	DALLIS CONTROL OF
Non-Hazard Flammable Skin Irritant Poisc	on B Unkno	own F	Radiological			THE RESIDENCE IN COLUMN	eturn T		OF REAL PROPERTY.			osal By La	b	L Arch	nive For	M	onths	
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mpty Kit Relinquished by:		Date:			Time							Method of						
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Hinquished by:	Date/Time:		_ Co	mpany		Poce	ived by	7	T				Date/Tim	5.		Con	nany -	NAME AND ADDRESS OF THE PARTY O
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elinquished by:	Date/Time:	1 17	w	mpany				#	W				Date/Time	3/24	092	5 E	ETM	
Custody Seals Intact: Custody Seal No.:						Cook	er Tempe	rature(s	s) °C ai	nd Other	Remark		1.3	14.2		0x	TC I	n
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ORIGIN ID:BNOA (503) 906-9200 SAMPLE RECEIVING EUROFINS PORTLAND 7959 SW CIRRUS DR BUILDING 22 BEAVERTON, OR 970087145 UNITED STATES US

SHIP DATE: 02AUG24 ACTWGT: 11.00 LB MAN CAD: 0893932/CAFE3808

BILL THIRD PARTY

SHIPPING/RECEIVING **EUROFINS ENVIRONMENT TESTING SOUTHW** 

2841 DOW AVENUE, SUITE 100

TUSTIN CA 92780 (714) 895 - 5494 REF: 8580 - 63343



SATURDAY 12:00P TRK# 7465 1631 1308 PRIORITY OVERNIGHT

92780 SNA





ORIGIN ID:BNOA (503) 906-9200 SAMPLE RECEIVING EUROFINS PORTLAND 7959 SW CIRRUS DR BUILDING 22 BEAVERTON, DR 970087145 UNITED STATES US

SHIP DATE: 02AUG24 ACTWGT: 11.00 LB MAN CAD: 0893932/CAFE3808

BILL THIRD PARTY

SHIPPING/RECEIVING EUROFINS ENVIRONMENT TESTING SOUTHW 2841 DOW AVENUE, SUITE 100

TUSTIN CA 92780 (714) 895 - 5494 REF: 8580 - 63343



TRK# 7465 1631 1308

PRIORITY OVERNIGHT

92780 CA-US SNA



BILL THIRD PARTY

SHIP DATE: 02AUG24 ACTWGT: 11.00 LB MAN CAD: 0893932/CAFE3808

ORIGIN ID:BNOA (503) 906-9200 SAMPLE RECEIVING EUROFINS PORTLAND 7959 SW CIRRUS DR BUILDING 22 BEAVERTON, OR 970087145 UNITED STATES US SHIPPING/RECEIVING **EUROFINS ENVIRONMENT TESTING SOUTHW** 2841 DOW AVENUE, SUITE 100

TUSTIN CA 92780 (714) 895 - 5494 REF: 8580 - 63343



TRK# 7465 1631 1308

SATURDAY 12:00P PRIORITY OVERNIGHT

92780 CA-US SNA



5755 8th Street East Tacoma, WA 98424 Phone: 253-922-2310

# Chain of Custody Record



& eurofins Loc: 580

LOC.		
14	26	22

1 Hone. 200 022 2010	Sampler:		***************************************	Lab F							Ca	rrier Trac	king N	o(s):			COC No		_		
Client Information (Sub Contract Lab)	Phone:			E-Ma	z, Sh	neri L	-				St	ate of Ori	ain:			-	580-135731.1 Page:				
Shipping/Receiving	r none.					uz@e	et.euro	ofinsus.c	om			regon	J				Page 1 of 1				
Company:								quired (Se	e note):								Job #:	0000.4			
Eurofins Environment Testing Southwest,  Address:	Due Date Requeste	-di			NEI	LAP .	- Oreg	ion							_		580-14	ation C	odes:		
2841 Dow Avenue, Suite 100, ,	8/15/2024				L				Anal	ysis	Requ	ested					-	ration 0	ouco.		
City: Tustin	TAT Requested (da	ıys):					pike)									150					
State, Zip: CA, 92780							Fulls									720					
Phone: 714-895-5494(Tel)	PO#:						List									132					
Email:	WO#:				or No	No)	oic de							- 1		(0					
Project Name: Arkema PDI Sampling	Project #: 58020754			1172	Sample (Yes or	s or N	ine Heri			1						containers					
Site:	SSOW#:	***	144 -000		Sampl	SD (Ye	P Rout				4.5			-	1	6	Other:			34	
The Article of the Control of the Co	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Sample	(C=Comp,	Matrix (W=water, S=solld, 0=waste/oil,	9red	Perform MS/MSD	8161A/8161A_SP Routine Herbicides List (Fuil Spike)		40		i and				100	Total Number		5.5			
Sample Identification - Client ID (Lab ID)	Sample Date	Time		Tissue, A=Air)	川		60	10 3037	0 100	0 (0.010		Out Clean	12.00	200	31 10 3	E		pecial	Instruct	ions/Note	A 1960
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and the later				T. A.	П				- 5					-							Щ
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- per	4, 44			-					- 111					580-	1426	322 C	hain of	Custo	dy		
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Note: Since laboratory accreditations are subject to change, Eurofins Environn laboratory does not currently maintain accreditation in the State of Origin listed accreditation status should be brought to Eurofins Environment Testing Northw	above for analysis/test	s/matrix being	analyzed, the sar	noles must	be sh	nipped ent to d	back to late, ret	the Eurof um the sig	ins Envi	ronme ain of (	nt Testing Custody	Northwe attesting t	est, LLC o said o	labora	nce to	other Eurofi	instruction	ns will be nment Te	provided. sting North	Any change west, LLC.	e s to
Possible Hazard Identification	24			- "11		Sam	ple Di	sposal	A fee	may	be ass	essed	if san	nples	are r				1 mont		
Unconfirmed  Deliverable Requested: I. III. IV. Other (specify)	Primary Deliver	able Pentr	2		-			irn To Ci				posal E	sy Lab	_		Arch	nive For		Mo	onths	+
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5755 8th Street East Tacoma, WA 98424 Phone: 253-922-2310

# Chain of Custody Record



eurofins Loc: 580 142622

Client Information (Sub-Contract Lab)	Sampler:		Lab PM: Cruz, S		ri I				Carrier	Tracking No	(s):		COC No: 580-13573	1 1
Client Information (Sub Contract Lab)	Phone:		E-Mail:							f Origin:			Page:	_
Shipping/Receiving					@et.euro			_	Orego	on			Page 1 of 1 Job #:	
Company: Eurofins Environment Testing Southwest,					ditations Re		e note):						580-14262	2-1
Address:	Due Date Requested:			_		-							Preservatio	
2841 Dow Avenue, Suite 100,	8/15/2024					, , ,	Analy	sis F	equest	ed			•	
City: Fustin	TAT Requested (days):		100	10	S S							100		
State, Zip:	-				S S						1 1	155		
CA, 92780			6		1							116		
Phone:	PO#:				List						$\perp$	53		
714-895-5494(Tel)	WO #:		<del></del>  ⊋		e e				1 1			70		
citiail.	WO #.		5	No.	힅							ဖွာ		
Project Name:	Project #:	- 1, -	, s	ò	옾		-	Ì			- 5_	containers		
Arkema PDI Sampling	58020754			e s								onta	Other:	
ite:	SSOW#:		Sample (Yes or No	) ası	8151A/8151A_SP Routine Herbioldes List (Full Spike)				- 1			0	Other.	
1444	1 - 151 - 15	Sample Mate	rix 9	MS/MSD	₹		25			7- 3	100	Number		\$ 14 THE LOSS AND
THE REAL WATER AND A STREET OF THE PARTY OF	712 1987- 389	Type (W=w	ater,	E	1816	-	100				100	N		Sylvenia and plant
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Note: Since laboratory accreditations are subject to change, Eurofins Environn aboratory does not currently maintain accreditation in the State of Origin listed accreditation status should be brought to Eurofins Environment Testing North	above for analysis/tests/matrix be	eing analyzed, the samples	must be s	shipp ment	ped back to to date, ret	the Eurofii um the sign	ns Enviro ned Chai	nment n of Cu	Testing Nor stody attest	thwest, LLC ing to said o	laboratory ompliance	or other to Eurofi	instructions wil ns Environmen	I be provided. Any chang t Testing Northwest, LLC.
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elinquished by:	Date/Time:	Compan	У		Receive					D	ate/Time:			Company
Custody Seals Intact: Custody Seal No.:					Cooler T	emperature	e(s) °C ar	nd Othe	r Remarks	18/2/3	5564			

5755 8th Street East Tacoma, WA 98424

# Chain of Custody Record



\$\text{curofins Loc: 580} \\ 142622

Phone: 253-922-2310																									
Client Information (Sub Contract Lab)	Sampler:			Cru		z, Sheri L								Carrier Tracking No(s):					COC No: 580-135731.1						
Client Contact Shipping/Receiving	Phone:			E-Ma She		ruz@	Det.ei	urofinsu	s.com	,			ite of Oi	rigin:				Page: Page	1 of 1						
Company: Eurofins Environment Testing Southwest,					Acc	credita	ations	Required egon										Job #:	42622-	1	·				
Address: 2841 Dow Avenue, Suite 100,	Due Date Request 8/15/2024	ed:							Δn	alve	is R	eane	sted					Preser	rvation	Codes:		~			
City:	TAT Requested (d	ays):					(e)			lary		- Cour	Stea				75.6								
Tustin State, Zip:	-						Spik																		
CA, 92780							Ē										- 63								
Phone: 714-895-5494(Tel)	PO#:						List										138								
Email:	WO #:				or No	(0)	bioldes										s								
Project Name: Arkema PDI Sampling	Project #: 58020754			-1274	(Yes	s or No)	ne Her			7						-	containers								
Site:	SSOW#:		100		Sample	SD (Ye	Routi									1	of con	Other:			-34				
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (w=water, s=solid, O=waste/oll, BT=Tissue, A=Air	Field Filtered S	Perform MS/MSD (Yes	8161A/8161A_SP Routine Herbioldes List (Full Spike)			一大学を		1		5 _ P		7 K 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Total Number		Specia	l Instru	ctions/N	Note:			
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Relinquished by:	Date/Time:			Company		- 1	Recel	0 -						ī	Date/Tir	me:				Co	mpany				
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No							Cooler	Tempera	ture(s)	°C and	d Other	Remar	ks , Q	12:	351	بي			7/17						

Client: ERM-West Job Number: 580-142622-1

Login Number: 142622 List Source: Eurofins Seattle

List Number: 1

Creator: O'Connell, Jason I

Creator: O'Connell, Jason I		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

**Eurofins Seattle** 

Client: ERM-West Job Number: 580-142622-1

List Source: Eurofins Calscience
List Number: 2
List Creation: 08/05/24 02:53 PM

Creator: Khana, Piyush

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	Seal present with no number.
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.3
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
s the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <a href="mailto:smaller">&lt;6mm (1/4").</a>	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# **Environment Testing**

Sacramento Sample Receiving Notes (SSRN)

Tracking # 4465 1631 1300

Job 580-142622 Field Sheet  Use this form to record Sample Custody Seal, C	_ so	Ing #	/ CDO / Courier
Therm. ID Corr. Factor: (  Ice Wet Gel  Cooler Custody Seal: Cooler ID:	Other	Notes:	
Temp Observed	red <u>1,1     °</u> C		
Opening/Processing The Shipment Cooler compromised/tampered with? Cooler Temperature is acceptable? Frozen samples show signs of thaw? Initials.  Date	Yes No NA  D D D  D D D		
Unpacking/Labeling The Samples Containers are not broken or leaking? Samples compromised/tampered with? COC is complete w/o discrepancies	Yes No NA  D D D  D D D	Trizma Lot #(s)·	
Sample custody seal? Sample containers have legible labels? Sample date/times are provided? Appropriate containers are used?		Ammonium Acetate Lot #(s)	
Sample bottles are completely filled? Sample preservatives verified? Is the Field Sampler's name on COC? Samples w/o discrepancies? Zero headspace?*			
Alkalinity has no headspace?  Perchlorate has headspace?  (Methods 314, 331, 6850)  Multiphasic samples are not present?		Login Completion Receipt Temperature on COC? NCM Filed? Samples received within hold time?	Yes No NA
Midiribudaic adulbica que not breaglit.	9 0 0	Log Release checked in TALS?	

\*Containers requiring ero headspace have no headspace, or bubble < 6 mm (1/4")

# **ANALYTICAL REPORT**

### PREPARED FOR

Attn: Avery Soplata ERM-West 1050 SW 6th Avenue Suite 1650 Portland, Oregon 97204

Generated 9/11/2024 11:57:05 AM

## **JOB DESCRIPTION**

Arkema PDI Sampling

### **JOB NUMBER**

580-142622-2

Eurofins Seattle 5755 8th Street East Tacoma WA 98424



#### **Job Notes**

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

### **Authorization**

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Authorized for release by Sheri Cruz, Project Manager I Sheri.Cruz@et.eurofinsus.com (253)922-2310

Shuid any

Client: ERM-West

Project/Site: Arkema PDI Sampling

Laboratory Job ID: 580-142622-2

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#### **Case Narrative**

Client: ERM-West Job ID: 580-142622-2

Project: Arkema PDI Sampling

Job ID: 580-142622-2 Eurofins Seattle

Job Narrative 580-142622-2

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these
  situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise
  specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 8/2/2024 1:05 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.2°C.

#### Dioxin

Method 1613B: The following sample exhibited elevated noise or matrix interferences for one or more analytes causing elevation of the detection limit (EDL): PDI-15-SO-38-20240725 (580-142622-9). The reporting limit (RL) for the affected analytes has been raised to be equal to the EDL, and a "G" qualifier applied.

Method 1613B: The concentration of one or more analytes associated with the following sample exceeded the instrument calibration range: PDI-15-SO-38-20240725 (580-142622-9). These analytes have been qualified; however, the peak did not saturate the instrument detector. Historical data indicate that for the isotope dilution method, dilution and re-analysis will not produce significantly different results from those reported above the calibration range.

Method 1613B: EPA Method 1613B specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). The 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument DFS 1 exceeded this criteria: PDI-15-SO-38-20240725 (580-142622-9) and (CCV 320-797506/2). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: The following sample was diluted due to suspected saturation of the instrument detector in the analysis of the undiluted extract: PDI-15-SO-38-20240725 (580-142622-9). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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### **Definitions/Glossary**

Client: ERM-West Job ID: 580-142622-2

Project/Site: Arkema PDI Sampling

#### **Qualifiers**

DIOXIN	
Qualifier	Qualifier Description
В	Compound was found in the blank and sample.
E	Result exceeded calibration range.
G	The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

#### **Glossary**

LOD

LOQ MCL

MDA

MDC

MDL

ML MPN

MQL NC

Glossary	
Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)

ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Limit of Detection (DoD/DOE)
Limit of Quantitation (DoD/DOE)

Method Detection Limit Minimum Level (Dioxin)

Most Probable Number Method Quantitation Limit

Not Calculated

EPA recommended "Maximum Contaminant Level"

Minimum Detectable Concentration (Radiochemistry)

Minimum Detectable Activity (Radiochemistry)

### **Client Sample Results**

Client: ERM-West Job ID: 580-142622-2

Project/Site: Arkema PDI Sampling

Method: EPA 1613B - Dio		(HRGC/H Qualifier	RMS) RL	EDI	Unit	D	Dronored	Anglyzod	Dil Fac
Analyte			8.5 —				Prepared	Analyzed	
2,3,7,8-TCDD	9.4					<b>\$</b>	08/20/24 12:46	08/24/24 11:21	1
1,2,3,7,8-PeCDD	4.8		43 51		pg/g	<b>☆</b>	08/20/24 12:46	08/24/24 11:21	1
1,2,3,7,8-PeCDF	23000			51		· · · · · ·		08/24/24 11:21	
2,3,4,7,8-PeCDF	10000		90		pg/g	₩.		08/24/24 11:21	1
1,2,3,4,7,8-HxCDD		JB	43	0.71	pg/g			08/24/24 11:21	1
1,2,3,6,7,8-HxCDD			43	0.77	pg/g	<del></del>		08/24/24 11:21	
1,2,3,7,8,9-HxCDD		JBq	43		pg/g	<b>\$</b>	08/20/24 12:46		1
1,2,3,6,7,8-HxCDF	8000		750	750		<b>*</b>		08/24/24 11:21	1
1,2,3,7,8,9-HxCDF	ND		650		pg/g	<del>.</del>		08/24/24 11:21	1
2,3,4,6,7,8-HxCDF	1400		770		pg/g		08/20/24 12:46		1
1,2,3,4,6,7,8-HpCDD		J B	43		pg/g	<b>*</b>		08/24/24 11:21	1
1,2,3,4,6,7,8-HpCDF	10000		43		pg/g	÷		08/24/24 11:21	1
1,2,3,4,7,8,9-HpCDF	3800		43	21	pg/g	☼			1
OCDD	93		85	1.1	pg/g	₩		08/24/24 11:21	1
OCDF	9900	В	85	7.0	pg/g	₩	08/20/24 12:46	08/24/24 11:21	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	69		25 - 164				08/20/24 12:46	08/24/24 11:21	
13C-2,3,7,8-TCDF	77		24 - 169				08/20/24 12:46	08/24/24 11:21	1
13C-1,2,3,7,8-PeCDD	74		25 - 181				08/20/24 12:46	08/24/24 11:21	1
13C-1,2,3,7,8-PeCDF	69		24 - 185				08/20/24 12:46	08/24/24 11:21	1
13C-2,3,4,7,8-PeCDF	73		21 - 178				08/20/24 12:46	08/24/24 11:21	1
13C-1,2,3,4,7,8-HxCDD	77		32 - 141				08/20/24 12:46	08/24/24 11:21	1
13C-1,2,3,6,7,8-HxCDD	74		28 - 130				08/20/24 12:46	08/24/24 11:21	
13C-1,2,3,4,7,8-HxCDF	77		26 - 152				08/20/24 12:46	08/24/24 11:21	1
13C-1,2,3,6,7,8-HxCDF	80		26 - 123				08/20/24 12:46	08/24/24 11:21	1
13C-2,3,4,6,7,8-HxCDF	58		28 - 136				08/20/24 12:46	08/24/24 11:21	
13C-1,2,3,7,8,9-HxCDF	75		29 - 147				08/20/24 12:46	08/24/24 11:21	1
13C-1,2,3,4,6,7,8-HpCDD	71		23 - 140				08/20/24 12:46	08/24/24 11:21	1
13C-1,2,3,4,6,7,8-HpCDF	66		28 - 143				08/20/24 12:46	08/24/24 11:21	
13C-1,2,3,4,7,8,9-HpCDF	77		26 - 138					08/24/24 11:21	1
13C-OCDD	71		17 - 157					08/24/24 11:21	1
13C-OCDF	76		17 - 157					08/24/24 11:21	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37CI4-2,3,7,8-TCDD	87		35 - 197					08/24/24 11:21	
-									
Method: EPA 1613B - Dio	xins and Furans	(HRGC/H	RMS) - DL						
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8-HxCDF	35000	В	850	150	pg/g	₩	08/20/24 12:46	09/09/24 08:07	20
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,7,8-HxCDF	76		26 - 152					09/09/24 08:07	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37CI4-2,3,7,8-TCDD	80		35 - 197				08/20/24 12:46	09/09/24 08:07	20
- Method: EPA 1613B - Dio	xins and Furans	(HRGC/H	RMS) - RA						
Analyte		Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	23000	GE	61	61	pg/g	<del>-</del>	08/20/24 12:46	09/06/24 09:30	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	66		24 - 169					09/06/24 09:30	

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### **Client Sample Results**

Client: ERM-West Job ID: 580-142622-2

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-15-SO-38-20240725 Lab Sample ID: 580-142622-9

Date Collected: 07/25/24 12:20 **Matrix: Solid** Date Received: 08/02/24 13:05

Percent Solids: 91.0

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 37CI4-2,3,7,8-TCDD 72 35 - 197 08/20/24 12:46 09/06/24 09:30

Client: ERM-West Job ID: 580-142622-2

Project/Site: Arkema PDI Sampling

Surrogate

#### Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-792800/1-A **Client Sample ID: Method Blank Matrix: Solid Prep Type: Total/NA Analysis Batch: 794277 Prep Batch: 792800** 

	MB	MB							
Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	0.0657	Jq	1.0	0.021	pg/g		08/20/24 12:46	08/24/24 20:27	1
2,3,7,8-TCDF	ND		1.0	0.0089	pg/g		08/20/24 12:46	08/24/24 20:27	1
1,2,3,7,8-PeCDD	ND		5.0	0.051	pg/g		08/20/24 12:46	08/24/24 20:27	1
1,2,3,7,8-PeCDF	0.156	J	5.0	0.030	pg/g		08/20/24 12:46	08/24/24 20:27	1
2,3,4,7,8-PeCDF	ND		5.0	0.033	pg/g		08/20/24 12:46	08/24/24 20:27	1
1,2,3,4,7,8-HxCDD	0.264	J	5.0	0.029	pg/g		08/20/24 12:46	08/24/24 20:27	1
1,2,3,6,7,8-HxCDD	0.0847	Jq	5.0	0.031	pg/g		08/20/24 12:46	08/24/24 20:27	1
1,2,3,7,8,9-HxCDD	0.140	Jq	5.0	0.026	pg/g		08/20/24 12:46	08/24/24 20:27	1
1,2,3,4,7,8-HxCDF	0.172	J	5.0	0.031	pg/g		08/20/24 12:46	08/24/24 20:27	1
1,2,3,6,7,8-HxCDF	0.126	Jq	5.0	0.030	pg/g		08/20/24 12:46	08/24/24 20:27	1
1,2,3,7,8,9-HxCDF	0.195	Jq	5.0	0.031	pg/g		08/20/24 12:46	08/24/24 20:27	1
2,3,4,6,7,8-HxCDF	0.0872	J	5.0	0.029	pg/g		08/20/24 12:46	08/24/24 20:27	1
1,2,3,4,6,7,8-HpCDD	0.314	J	5.0	0.017	pg/g		08/20/24 12:46	08/24/24 20:27	1
1,2,3,4,6,7,8-HpCDF	0.251	J	5.0	0.040	pg/g		08/20/24 12:46	08/24/24 20:27	1
1,2,3,4,7,8,9-HpCDF	0.236	J	5.0	0.043	pg/g		08/20/24 12:46	08/24/24 20:27	1
OCDD	1.20	J	10	0.045	pg/g		08/20/24 12:46	08/24/24 20:27	1
OCDF	0.545	J	10	0.043	pg/g		08/20/24 12:46	08/24/24 20:27	1
	MB	MB							
	0/5								

OCDF	0.545	J	10	0.043 pg/g	08/20/24 12:46	08/24/24 20:27	1
	MB	MB					
Isotope Dilution	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	69		25 - 164		08/20/24 12:46	08/24/24 20:27	1
13C-2,3,7,8-TCDF	68		24 - 169		08/20/24 12:46	08/24/24 20:27	1
13C-1,2,3,7,8-PeCDD	72		25 - 181		08/20/24 12:46	08/24/24 20:27	1
13C-1,2,3,7,8-PeCDF	67		24 - 185		08/20/24 12:46	08/24/24 20:27	1
13C-2,3,4,7,8-PeCDF	70		21 - 178		08/20/24 12:46	08/24/24 20:27	1
13C-1,2,3,4,7,8-HxCDD	75		32 - 141		08/20/24 12:46	08/24/24 20:27	1
13C-1,2,3,6,7,8-HxCDD	80		28 - 130		08/20/24 12:46	08/24/24 20:27	1
13C-1,2,3,4,7,8-HxCDF	75		26 - 152		08/20/24 12:46	08/24/24 20:27	1
13C-1,2,3,6,7,8-HxCDF	78		26 - 123		08/20/24 12:46	08/24/24 20:27	1
13C-2,3,4,6,7,8-HxCDF	77		28 - 136		08/20/24 12:46	08/24/24 20:27	1
13C-1,2,3,7,8,9-HxCDF	72		29 - 147		08/20/24 12:46	08/24/24 20:27	1
13C-1,2,3,4,6,7,8-HpCDD	86		23 - 140		08/20/24 12:46	08/24/24 20:27	1
13C-1,2,3,4,6,7,8-HpCDF	76		28 - 143		08/20/24 12:46	08/24/24 20:27	1
13C-1,2,3,4,7,8,9-HpCDF	83		26 - 138		08/20/24 12:46	08/24/24 20:27	1
13C-OCDD	83		17 - 157		08/20/24 12:46	08/24/24 20:27	1
13C-OCDF	82		17 - 157		08/20/24 12:46	08/24/24 20:27	1
	MB	МВ					

37CI4-2,3,7,8-TCDD	84	35 - 197	08/20/24 12:46 08/24/24 20:27	
 Lab Sample ID: LCS 320-7928	00/2-A		Client Sample ID: Lab Control Sample	ļ

Qualifier

%Recovery

**Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 794277** Prep Batch: 792800

Limits

Spike LCS LCS %Rec Added Result Qualifier **Analyte** Unit D %Rec Limits 2,3,7,8-TCDD 20.0 20.4 102 67 - 158 pg/g 20.0 2,3,7,8-TCDF 19.8 99 75 - 158 pg/g 1,2,3,7,8-PeCDD 100 98.7 99 70 - 142 pg/g 100 100 80 - 134 1,2,3,7,8-PeCDF 99.7 pg/g

**Eurofins Seattle** 

Dil Fac

Analyzed

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Prepared

### **QC Sample Results**

Client: ERM-West Job ID: 580-142622-2

Project/Site: Arkema PDI Sampling

#### Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-792800/2-A

**Matrix: Solid** 

**Analysis Batch: 794277** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 792800** 

	Spike	LCS LC	CS		%Rec	
Analyte	Added	Result Q	ualifier Unit	D %Rec	Limits	
2,3,4,7,8-PeCDF	100	99.0	pg/g	99	68 - 160	
1,2,3,4,7,8-HxCDD	100	94.8	pg/g	95	70 - 164	
1,2,3,6,7,8-HxCDD	100	93.5	pg/g	93	76 - 134	
1,2,3,7,8,9-HxCDD	100	89.6	pg/g	90	64 - 162	
1,2,3,4,7,8-HxCDF	100	97.2	pg/g	97	72 - 134	
1,2,3,6,7,8-HxCDF	100	95.8	pg/g	96	84 - 130	
1,2,3,7,8,9-HxCDF	100	96.1	pg/g	96	78 - 130	
2,3,4,6,7,8-HxCDF	100	96.4	pg/g	96	70 - 156	
1,2,3,4,6,7,8-HpCDD	100	93.3	pg/g	93	70 - 140	
1,2,3,4,6,7,8-HpCDF	100	96.3	pg/g	96	82 - 122	
1,2,3,4,7,8,9-HpCDF	100	93.5	pg/g	93	78 - 138	
OCDD	200	182	pg/g	91	78 - 144	
OCDF	200	185	pg/g	93	63 - 170	
	LCS LCS					

%Recovery	Qualifier	Limits
66		20 - 175
65		22 - 152
70		21 - 227
67		21 - 192
67		13 - 328
71		21 - 193
77		25 - 163
71		19 - 202
75		21 - 159
73		22 - 176
69		17 - 205
82		26 - 166
72		21 - 158
80		20 - 186
80		13 - 199
79		13 - 199
	66 65 70 67 67 71 77 71 75 73 69 82 72 80 80	65 70 67 67 71 77 71 75 73 69 82 72 80 80

LCS LCS

%Recovery Qualifier Limits Surrogate 37CI4-2,3,7,8-TCDD 84 31 - 191

Lab Sample ID: LCSD 320-792800/3-A

**Matrix: Solid** 

**Analysis Batch: 794277** 

Client	Sample	ID:	Lab	Control	Samp	le	Dup
--------	--------	-----	-----	---------	------	----	-----

Prep Type: Total/NA **Prep Batch: 792800** %Rec **RPD** 

Analyte Added Result Qualifier Unit D %Rec Limits **RPD** Limit 2,3,7,8-TCDD 20.0 20.1 pg/g 101 67 - 158 50 20.0 102 2,3,7,8-TCDF 20.3 75 - 158 50 3 pg/g 1,2,3,7,8-PeCDD 100 97.4 97 70 - 142 50 pg/g 1,2,3,7,8-PeCDF 100 100 100 80 - 134 0 50 pg/g 2,3,4,7,8-PeCDF 100 98.2 98 68 - 160 50 pg/g 1,2,3,4,7,8-HxCDD 100 91.1 91 70 - 164 50 pg/g 1,2,3,6,7,8-HxCDD 100 96.5 pg/g 96 76 - 134 50 64 - 162 1,2,3,7,8,9-HxCDD 100 94.6 50 pg/g

LCSD LCSD

Spike

**Eurofins Seattle** 

Page 9 of 21 9/11/2024

### **QC Sample Results**

Client: ERM-West Job ID: 580-142622-2

Project/Site: Arkema PDI Sampling

### Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-792800/3-A

Matrix: Solid

Surrogate

37CI4-2,3,7,8-TCDD

**Analysis Batch: 794277** 

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA Prep Batch: 792800

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,2,3,4,7,8-HxCDF	100	93.0		pg/g		93	72 - 134	4	50
1,2,3,6,7,8-HxCDF	100	93.6		pg/g		94	84 - 130	2	50
1,2,3,7,8,9-HxCDF	100	91.9		pg/g		92	78 - 130	4	50
2,3,4,6,7,8-HxCDF	100	93.4		pg/g		93	70 - 156	3	50
1,2,3,4,6,7,8-HpCDD	100	94.6		pg/g		95	70 - 140	1	50
1,2,3,4,6,7,8-HpCDF	100	94.8		pg/g		95	82 - 122	2	50
1,2,3,4,7,8,9-HpCDF	100	93.2		pg/g		93	78 - 138	0	50
OCDD	200	181		pg/g		90	78 - 144	1	50
OCDF	200	184		pa/a		92	63 - 170	1	50

002.			_00
	LCSD	LCSD	
Isotope Dilution	%Recovery	Qualifier	Limits
13C-2,3,7,8-TCDD	71		20 - 175
13C-2,3,7,8-TCDF	69		22 - 152
13C-1,2,3,7,8-PeCDD	74		21 - 227
13C-1,2,3,7,8-PeCDF	70		21 - 192
13C-2,3,4,7,8-PeCDF	68		13 - 328
13C-1,2,3,4,7,8-HxCDD	72		21 - 193
13C-1,2,3,6,7,8-HxCDD	77		25 - 163
13C-1,2,3,4,7,8-HxCDF	66		19 - 202
13C-1,2,3,6,7,8-HxCDF	71		21 - 159
13C-2,3,4,6,7,8-HxCDF	77		22 - 176
13C-1,2,3,7,8,9-HxCDF	72		17 - 205
13C-1,2,3,4,6,7,8-HpCDD	87		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	71		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	85		20 - 186
13C-OCDD	84		13 - 199
13C-OCDF	81		13 - 199
	LCSD	LCSD	

 %Recovery
 Qualifier
 Limits

 84
 31 - 191

**Eurofins Seattle** 

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#### **Lab Chronicle**

Client: ERM-West Job ID: 580-142622-2

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-15-SO-38-20240725

Lab Sample ID: 580-142622-9 Date Collected: 07/25/24 12:20 **Matrix: Solid** 

Percent Solids: 91.0 Date Received: 08/02/24 13:05

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	HRMS-Sox	RA		792800	BLR	EET SAC	08/20/24 12:46
Total/NA	Analysis	1613B	RA	1	797079	JBC	EET SAC	09/06/24 09:30
Total/NA	Prep	HRMS-Sox			792800	BLR	EET SAC	08/20/24 12:46
Total/NA	Analysis	1613B		1	794049	JBC	EET SAC	08/24/24 11:21
Total/NA	Prep	HRMS-Sox	DL		792800	BLR	EET SAC	08/20/24 12:46
Total/NA	Analysis	1613B	DL	20	797506	СВ	EET SAC	09/09/24 08:07

#### **Laboratory References:**

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

### **Accreditation/Certification Summary**

Client: ERM-West Job ID: 580-142622-2

Project/Site: Arkema PDI Sampling

### **Laboratory: Eurofins Sacramento**

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	<b>Expiration Date</b>
Alaska (UST)	State	17-020	02-20-27
ANAB	Dept. of Defense ELAP	L2468	01-20-27
ANAB	Dept. of Energy	L2468.01	01-20-27
ANAB	ISO/IEC 17025	L2468	01-20-27
Arizona	State	AZ0708	08-11-25
Arkansas DEQ	State	88-0691	05-18-25
California	State	2897	01-31-26
Colorado	State	CA00044	08-31-25
Florida	NELAP	E87570	06-30-25
Georgia	State	4040	01-29-25
Hawaii	State	<b>Eurofins Sacramento</b>	01-29-25
Illinois	NELAP	200060	03-31-25
Kansas	NELAP	E-10375	10-31-25
Louisiana	NELAP	01944	06-30-25
Louisiana (All)	NELAP	01944	06-30-25
Maine	State	CA00004	04-14-26
Michigan	State	9947	01-29-25
Nevada	State	CA00044	10-31-24
New Hampshire	NELAP	2997	04-19-25
New Jersey	NELAP	CA005	06-30-25
New York	NELAP	11666	04-01-25
Ohio	State	41252	01-29-25
Oregon	NELAP	4040	01-29-25
Texas	NELAP	T104704399-23-17	05-31-25
US Fish & Wildlife	US Federal Programs	A22139	04-30-25
USDA	US Federal Programs	P330-18-00239	02-28-26
Utah	NELAP	CA000442023-16	02-28-25
Virginia	NELAP	460278	03-14-25
Washington	State	C581	05-05-25
West Virginia (DW)	State	9930C	01-31-25
Wisconsin	State	998204680	08-31-25
Wyoming	State Program	8TMS-L	01-28-19 *

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 $<sup>^{\</sup>star}\,\text{Accreditation/Certification renewal pending - accreditation/certification considered valid}.$ 

# **Sample Summary**

Client: ERM-West

Project/Site: Arkema PDI Sampling

Job ID: 580-142622-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-142622-9	PDI-15-SO-38-20240725	Solid	07/25/24 12:20	08/02/24 13:05

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5755 8th Street East Tacoma, WA 98424 Phone (253) 922 2311

# **Chain of Custody Record**



**Environment Testing** 

Phone (253) 922-2310											Corrie	Tracking N	)(s):	Ic	OC No:			
Client Information	Sampler:			Lab PM Cruz,	∕l: Sheri	L					Carriel	Hacking IV		5	80-62781-19	269.12		
Client Contact:	Phone:			E-Mail			-6				State of	f Origin:			age: Page of			
Avery Soplata			PWSID:	Sheri	.Cruz@	get.eur	ofinsu	us.com	1						ob #:			
Company: ERM-West								A	nalys	is Re	ques	ed		-	reservation (	odes:		
Address:	Due Date Requeste	d:													- MeOH			
1050 SW 6th Avenue Suite 1650 City:	TAT Requested (da	ys):											1111					III .
Portland							2											
State, Zip: OR, 97204	Compliance Project	t: A Yes	∆ No				blanks			٤	2						/	
Phone:	PO #:						tue u						<b>   </b>	14262	2 Chain of C	uetody	// <b>                                    </b>	III
Email:	0732436.301 WO#:				Or No)	MeOH	standard list_LL		4	9 1	742		560	J-14202	2 Chair of C	usiouy		
avery.soplata@erm.com					0 86	lst N	standard list_LL	1			_		1 1	2				
Project Name: Arkema - PDI Investigation	Project #: 58020754				), (Ve	hard	Dard Pref		3/2/		CKINS			age				
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Sample Identification	Sample Date	Time	G=grab) BT=		T le	8260D	82600		80	œ :	=			X	Specia	Instruc	ctions/No	ile.
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PDS-10-80-37-20240130	7/30/24	1520	G	9		X								2				
PDT-10-80-55.5-20240730	7/30/24	1430	6	8		X								2				
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PPT-13-50-28-20240731	7/31/201	1350	17	5		X	_		_		_							
PDT-13-50-83,5-26240731	7/31/24	1725	6	5		X											20 1 3	1111
PDT-19-50-39-20240801	08/184	1315	6	S		X								2	! free pr	sduct/	high	dilu
	8/1/24	1355	G	S		X								2		1	J	
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PD1-15-50-38-20240725	1/25/2024	1220	6	7	$\vdash$		-	-	-	1	-			-				
PDI-14-50-535-20240801	8/1/24	1610	6 9	>	Ш	X									-			
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5755 8th Street East Tacoma, WA 98424 Phone (253) 922-2310

## **Chain of Custody Record**



hone (253) 922-2310	Sampler:			Lab	PM:				enquipment de la constante		Carrier	Tracking No	(s):	C	OC No:
lient Information		Management and anything to the con-		Cru	z, Sheri	i L									80-62781-19269.12
lient Contact: very Soplata	Phone:			E-Ma She	<sup>ail:</sup> eri.Cruz(	@et.e	urofins	us.con	n		State of	Origin:			age: Page of
ompany:	L		PWSID:		T	ation menunc		***************************************		ie Do	aucet.	ad		J	ob #:
RM-West	Due Date Requeste	ed:					T	$\frac{A}{\Box}$	lialys	is Red	quest	eu	<del>                                      </del>		reservation Codes:
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nail: /ery.soplata@erm.com	VVO #:				S ON	st Me	st_Ll	: 1 4		Cide /	_ 1		1 1		
oject Name: rkema - PDI Investigation	Project #: 58020754				2 5	ard	standard list_LL	10	No.	0 9	BOC			tain	
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ossible Hazard Identification	7*)	·	· · · · · · · · · · · · · · · · · · ·	Same and the same	Sa	mple	Dispo	sal ( A	fee n				1		l longer than 1 month)
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ORIGIN ID:BNOA (503) 906-9200 SAMPLE RECEIVING EUROFINS PORTLAND 7959 SW CIRRUS DR BUILDING 22 BEAVERTON, OR 970087145 UNITED STATES US

SHIP DATE: 02AUG24 ACTWGT: 11.00 LB MAN CAD: 0893932/CAFE3808

BILL THIRD PARTY

SHIPPING/RECEIVING **EUROFINS ENVIRONMENT TESTING SOUTHW** 2841 DOW AVENUE, SUITE 100

TUSTIN CA 92780 (714) 895 - 5494 REF: 8580 - 63343



TRK# 7465 1631 1308

SATURDAY 12:00P PRIORITY OVERNIGHT

92780 SNA





ORIGIN ID:BNOA (503) 906-9200 SAMPLE RECEIVING EUROFINS PORTLAND 7959 SW CIRRUS DR BUILDING 22 BEAVERTON, DR 970087145 UNITED STATES US

SHIP DATE: 02AUG24 ACTWGT: 11.00 LB MAN CAD: 0893932/CAFE3808 BILL THIRD PARTY

SHIPPING/RECEIVING **EUROFINS ENVIRONMENT TESTING SOUTHW** 2841 DOW AVENUE, SUITE 100

TUSTIN CA 92780 (714) 895 - 5494 REF: 8580 - 63343



FedEx

TRK# 7465 1631 1308

PRIORITY OVERNIGHT

92780 CA-US SNA



ORIGIN ID:BNOA (503) 906-9200 SAMPLE RECEIVING EUROFINS PORTLAND 7959 SW CIRRUS DR BUILDING 22 BEAVERTON, OR 970087145 UNITED STATES US

SHIP DATE: 02AUG24 ACTWGT: 11.00 LB MAN CAD: 0893932/CAFE3808

BILL THIRD PARTY

SHIPPING/RECEIVING **EUROFINS ENVIRONMENT TESTING SOUTHW** 2841 DOW AVENUE, SUITE 100

TUSTIN CA 92780 (714) 885 – 5484 REF: \$580 – 63343



TRK# 7465 1631 1308

SATURDAY 12:00P PRIORITY OVERNIGHT

92780 CA-US SNA



Client: ERM-West Job Number: 580-142622-2

Login Number: 142622 List Source: Eurofins Seattle

List Number: 1

Creator: O'Connell, Jason I

Creator. O Connell, Jason I		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

**Eurofins Seattle** 

Project/Site: Arkema PDI Sampling

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid Prep Type: Total/NA

			Perce	ent Isotope	Dilution Re	covery (Ac	ceptance L	imits)	
		TCDD	TCDF	PeCDD	PeCDF	PeCF	HxCDD	HxDD	HxCDF
Lab Sample ID	Client Sample ID	(25-164)	(24-169)	(25-181)	(24-185)	(21-178)	(32-141)	(28-130)	(26-152)
580-142622-9	PDI-15-SO-38-20240725	69	77	74	69	73	77	74	77
580-142622-9 - RA	PDI-15-SO-38-20240725		66						
580-142622-9 - DL	PDI-15-SO-38-20240725								76
MB 320-792800/1-A	Method Blank	69	68	72	67	70	75	80	75
			Perce	nt Isotope	Dilution Re	covery (Ac	ceptance L	imits)	
		HxDF	13CHxCF	HxCF	HpCDD	HpCDF	HpCDF2	OCDD	OCDF
Lab Sample ID	Client Sample ID	(26-123)	(28-136)	(29-147)	(23-140)	(28-143)	(26-138)	(17-157)	(17-157)
580-142622-9	PDI-15-SO-38-20240725	80	58	75	71	66	77	71	76
580-142622-9 - RA	PDI-15-SO-38-20240725								
580-142622-9 - DL	PDI-15-SO-38-20240725								
MB 320-792800/1-A	Method Blank	78	77	72	86	76	83	83	82

#### **Surrogate Legend**

TCDD = 13C-2,3,7,8-TCDD

TCDF = 13C-2,3,7,8-TCDF

PeCDD = 13C-1,2,3,7,8-PeCDD

PeCDF = 13C-1,2,3,7,8-PeCDF

PeCF = 13C-2,3,4,7,8-PeCDF

HxCDD = 13C-1,2,3,4,7,8-HxCDD

HxDD = 13C-1,2,3,6,7,8-HxCDD

HxCDF = 13C-1,2,3,4,7,8-HxCDF

HxDF = 13C-1,2,3,6,7,8-HxCDF

13CHxCF = 13C-2,3,4,6,7,8-HxCDF

HxCF = 13C-1,2,3,7,8,9-HxCDF

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD

HpCDF = 13C-1,2,3,4,6,7,8-HpCDF

HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF

OCDD = 13C-OCDD OCDF = 13C-OCDF

### Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

						• •	•	,	
		TCDD	TCDF	PeCDD	PeCDF	PeCF	HxCDD	HxDD	HxCDF
Lab Sample ID	Client Sample ID	(20-175)	(22-152)	(21-227)	(21-192)	(13-328)	(21-193)	(25-163)	(19-202)
LCS 320-792800/2-A	Lab Control Sample	66	65	70	67	67	71	77	71
LCSD 320-792800/3-A	Lab Control Sample Dup	71	69	74	70	68	72	77	66
			Perce	ent Isotope	Dilution Re	ecovery (Ac	ceptance L	imits)	
		HxDF	13CHxCF	HxCF	HpCDD	HpCDF	HpCDF2	OCDD	OCDF
Lab Sample ID	Client Sample ID	(21-159)	(22-176)	(17-205)	(26-166)	(21-158)	(20-186)	(13-199)	(13-199)
LCS 320-792800/2-A	Lab Control Sample	75	73	69	82	72	80	80	79
LCSD 320-792800/3-A	Lab Control Sample Dup	71	77	72	87	71	85	84	81
Surrogate Legend									

Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD

TCDF = 13C-2,3,7,8-TCDF

PeCDD = 13C-1,2,3,7,8-PeCDD

PeCDF = 13C-1,2,3,7,8-PeCDF

PeCF = 13C-2,3,4,7,8-PeCDF

**Eurofins Seattle** 

### **Isotope Dilution Summary**

Client: ERM-West

Project/Site: Arkema PDI Sampling

HxCDD = 13C-1,2,3,4,7,8-HxCDD HxDD = 13C-1,2,3,6,7,8-HxCDD HxCDF = 13C-1,2,3,4,7,8-HxCDF HxDF = 13C-1,2,3,6,7,8-HxCDF 13CHxCF = 13C-2,3,4,6,7,8-HxCDF HxCF = 13C-1,2,3,7,8,9-HxCDF HpCDD = 13C-1,2,3,4,6,7,8-HpCDD HpCDF = 13C-1,2,3,4,6,7,8-HpCDF

HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF

OCDD = 13C-OCDD OCDF = 13C-OCDF Job ID: 580-142622-2

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# PREPARED FOR

**ANALYTICAL REPORT** 

Attn: Avery Soplata ERM-West 1050 SW 6th Avenue Suite 1650 Portland, Oregon 97204 Generated 9/11/2024 6:04:24 PM

# **JOB DESCRIPTION**

Arkema PDI Sampling

## **JOB NUMBER**

580-142622-3

Eurofins Seattle 5755 8th Street East Tacoma WA 98424

# **Eurofins Seattle**

### **Job Notes**

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

### **Authorization**

Generated 9/11/2024 6:04:24 PM

Authorized for release by Sheri Cruz, Project Manager I Sheri.Cruz@et.eurofinsus.com (253)922-2310

Shuid any

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Page 2 of 15

9/11/2024

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Client: ERM-West

Project/Site: Arkema PDI Sampling

Laboratory Job ID: 580-142622-3

# **Table of Contents**

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#### Case Narrative

Client: ERM-West Job ID: 580-142622-3

Project: Arkema PDI Sampling

**Eurofins Seattle** Job ID: 580-142622-3

#### Job Narrative 580-142622-3

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 8/2/2024 1:05 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.2°C.

#### Receipt Exceptions

The following sample was activated for Method 1020A and 9045D analysis by the client on 9/5/2024: PDI-19-SO-39-20240801 (580-142622-7), PDI-19-SO-42.4-20240801 (580-142622-8) and PDI-15-SO-38-20240725 (580-142622-9). This analysis was not originally requested on the chain-of-custody (COC).

#### **General Chemistry**

Method 1020A: Method 1020A is applicable only to liquid matrices, however, this method has been modified to incorporate solid matrices. The method modification has been defined in the laboratories standard operating procedure (SOP). PDI-19-SO-39-20240801 (580-142622-7), PDI-19-SO-42.4-20240801 (580-142622-8), PDI-15-SO-38-20240725 (580-142622-9) and (580-142622-A-9 DU)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**Eurofins Seattle** 

Page 4 of 15

### **Definitions/Glossary**

Client: ERM-West Job ID: 580-142622-3

Project/Site: Arkema PDI Sampling

#### **Qualifiers**

#### **General Chemistry**

Qualifier **Qualifier Description** 

HF Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

### **Glossary**

Abbreviation These commonly used abbreviations may or may not be present in this report. Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery **CFL** Contains Free Liquid CFU Colony Forming Unit CNF Contains No Free Liquid

Duplicate Error Ratio (normalized absolute difference) **DER** 

Dil Fac **Dilution Factor** 

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

Estimated Detection Limit (Dioxin) **EDL** LOD Limit of Detection (DoD/DOE) LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level" MDA Minimum Detectable Activity (Radiochemistry) MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit MLMinimum Level (Dioxin) MPN Most Probable Number Method Quantitation Limit MQL

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present

**PQL Practical Quantitation Limit** 

**PRES** Presumptive QC **Quality Control** 

Relative Error Ratio (Radiochemistry) **RER** 

Reporting Limit or Requested Limit (Radiochemistry) RL

**RPD** Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin) **TEQ** Toxicity Equivalent Quotient (Dioxin)

**TNTC** Too Numerous To Count

**Eurofins Seattle** 

Page 5 of 15 9/11/2024

Client: ERM-West Job ID: 580-142622-3

Project/Site: Arkema PDI Sampling

Date Collected: 08/01/24 13:15

Matrix: Solid

Date Received: 08/02/24 13:05

General Chemistry									
Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 9045D)	6.1	HF			SU			09/09/24 13:16	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ignitability (SW846 1020A)	> 212				Degrees F			09/11/24 16:28	1

F

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Client: ERM-West Job ID: 580-142622-3

Project/Site: Arkema PDI Sampling

Date Collected: 08/01/24 13:55

Matrix: Solid

Date Received: 08/02/24 13:05

General Chemistry									
Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 9045D)	5.7	HF			SU			09/09/24 13:18	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ignitability (SW846 1020A)	> 212				Degrees F			09/11/24 16:28	1

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Client: ERM-West Job ID: 580-142622-3

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-15-SO-38-20240725 Lab Sample ID: 580-142622-9

Date Collected: 07/25/24 12:20

Lab Sample 1D. 560-142622-9

Matrix: Solid

Date Received: 08/02/24 13:05

General Chemistry									
Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 9045D)	4.4	HF			SU			09/09/24 13:20	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Ignitability (SW846 1020A)	> 212				Degrees F			09/11/24 16:28	1

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## **QC Sample Results**

Client: ERM-West Job ID: 580-142622-3

Project/Site: Arkema PDI Sampling

Lab Sample ID: 580-142622-9 DU

Method: 1020A - Ignitability, Setaflash Closed-Cup Method

Client Sample ID: PDI-15-SO-38-20240725

**Prep Type: Total/NA** 

**Analysis Batch: 471130** 

**Matrix: Solid** 

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### **Lab Chronicle**

Client: ERM-West Job ID: 580-142622-3

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-19-SO-39-20240801

Lab Sample ID: 580-142622-7 Date Collected: 08/01/24 13:15 **Matrix: Solid** 

Date Received: 08/02/24 13:05

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	1020A		1	471130	FCG	EET SEA	09/11/24 16:28
Total/NA	Analysis	9045D		1	470788	AUA	EET SEA	09/09/24 13:16

Client Sample ID: PDI-19-SO-42.4-20240801

Lab Sample ID: 580-142622-8

Matrix: Solid

Date Collected: 08/01/24 13:55 Date Received: 08/02/24 13:05

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	1020A		1	471130	FCG	EET SEA	09/11/24 16:28
Total/NA	Analysis	9045D		1	470788	AUA	EET SEA	09/09/24 13:18

Client Sample ID: PDI-15-SO-38-20240725 Lab Sample ID: 580-142622-9

Date Collected: 07/25/24 12:20 Matrix: Solid

Date Received: 08/02/24 13:05

Dilution Batch Batch Batch Prepared Method **Prep Type** Type **Factor** Number Analyst or Analyzed Run Lab 09/11/24 16:28 Total/NA Analysis 1020A 471130 FCG EET SEA 9045D 470788 AUA 09/09/24 13:20 Total/NA Analysis 1 **EET SEA** 

**Laboratory References:** 

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

# **Accreditation/Certification Summary**

Client: ERM-West Job ID: 580-142622-3

Project/Site: Arkema PDI Sampling

## **Laboratory: Eurofins Seattle**

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	<b>Expiration Date</b>
Oregon	NELAP	4167	07-07-25

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# **Sample Summary**

Client: ERM-West

Project/Site: Arkema PDI Sampling

Job ID: 580-142622-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-142622-7	PDI-19-SO-39-20240801	Solid	08/01/24 13:15	08/02/24 13:05
580-142622-8	PDI-19-SO-42.4-20240801	Solid	08/01/24 13:55	08/02/24 13:05
580-142622-9	PDI-15-SO-38-20240725	Solid	07/25/24 12:20	08/02/24 13:05

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#### **Eurofins Seattle**

5755 8th Street East Tacoma, WA 98424 Phone (253) 922-231

# **Chain of Custody Record**



**Environment Testing** 

Phone (253) 922-2310	Camples			Lab PI	M:		-				Car	ier Trackin	g No(s):		COC No				
Client Information	Sampler:			Cruz	, Sheri	L									580-62 Page:	781-19269	.12		-
Client Contact: Avery Soplata	Phone:			E-Mail Sheri		@et.eu	rofins	us.cor	n		Stat	e of Origin:			Page	of			-
Company:			PWSID:			<u></u>				sis R	oci ile	eted			Job #:				
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### **Eurofins Seattle**

5755 8th Street East Tacoma, WA 98424 Phone (253) 922-2310

# **Chain of Custody Record**



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Client: ERM-West Job Number: 580-142622-3

Login Number: 142622 List Source: Eurofins Seattle

List Number: 1

Creator: O'Connell, Jason I

Answer	Comment
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# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Avery Soplata ERM-West 1050 SW 6th Avenue Suite 1650 Portland, Oregon 97204 Generated 8/21/2024 7:40:23 PM

# **JOB DESCRIPTION**

Arkema PDI Sampling

# **JOB NUMBER**

580-142691-1

Eurofins Seattle 5755 8th Street East Tacoma WA 98424



# **Eurofins Seattle**

### **Job Notes**

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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### **Authorization**

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Client: ERM-West

Project/Site: Arkema PDI Sampling

Laboratory Job ID: 580-142691-1

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#### **Case Narrative**

Client: ERM-West Job ID: 580-142691-1
Project: Arkema PDI Sampling

Job ID: 580-142691-1 Eurofins Seattle

Job Narrative 580-142691-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these
  situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise
  specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 8/6/2024 2:10 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.5°C.

#### GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-467579 recovered above the upper control limit for Dichlorodifluoromethane, Chloromethane, Vinyl chloride, Chloroethane, Trichlorofluoromethane, 2,2-Dichloropropane and Methyl tert-butyl ether. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: TB-01-WQ-20240806 (580-142691-12) and (CCVIS 580-467579/3).

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-467579 recovered above the upper control limit for Dichlorodifluoromethane, Chloromethane, Vinyl chloride, Chloroethane, Trichlorofluoromethane, 2,2-Dichloropropane and Methyl tert-butyl ether. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: RB-03-WQ-20240806 (580-142691-10), TB-01-WQ-20240806 (580-142691-12) and (CCVIS 580-467579/3).

Method 8260D: The laboratory control sample (LCS) and/or laboratory control sample duplicate (LCSD) for analytical batch 580-467579 recovered outside the lower control limit for the following analytes: Methylene Chloride. Results are reported due to no volume left for re-analysis . The following samples are associated TB-01-WQ-20240806 (580-142691-12), (LCS 580-467579/4) and (LCSD 580-467579/5).

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-467786 recovered outside acceptance criteria, low biased, for 1,1-Dichloropropene, 1,2,3-Trichlorobenzene, 1,2,3-Trichloropropane, 1,2,4-Trimethylbenzene, 1,2-Dichloropropane, 1,3-Dichloropropane, 2,2-Dichloropropane, 4-Chlorotoluene, Bromoform, Carbon tetrachloride, Chloromethane, cis-1,3-Dichloropropene, Dibromochloromethane, Isopropylbenzene, Naphthalene, N-Propylbenzene, Styrene, t-Butylbenzene, trans-1,3-Dichloropropene, Trichloroethene and Vinyl chloride. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analytes, the data are reported.

Method 8260D: The method blank for preparation batch 580-467783 and analytical batch 580-467786 contained 1,2,3-Trichlorobenzene and Methylene Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8260D: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 580-467783 and analytical batch 580-467786 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8260D: Surrogate recovery for the following sample was outside the upper control limit: PDI-14-SO-38.6-20240802 (580-142691-1). Chemically associated target analytes with detections are not reported.

Method 8260D: The following sample was analyzed at reduced volume due to high concentrations of target analytes: PDI-14-SO-38.6-20240802 (580-142691-1). The calculation was performed using an initial volume adjustment rather than a dilution factor. The reporting limits have been elevated by the appropriate factor.

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#### **Case Narrative**

Client: ERM-West Job ID: 580-142691-1

Project: Arkema PDI Sampling

### Job ID: 580-142691-1 (Continued)

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Method 8260D: Sample was analyzed via serial dilution in order to obtain in range detection for chlorobenzene. PDI-14-SO-38.6-20240802 (580-142691-1)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **General Chemistry**

Method 5310C: Client DI leached the soil and field filtered it. Sample is reported as DOC in soil. We do not have this setup and client approved to proceed in this manner as a water and run TOC to get DOC result. EB-080524 (580-142691-9)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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### **Definitions/Glossary**

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

### Qualifiers

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G	G/	IV	IS	v	U	Α

Qualifier	Qualifier Description
*_	LCS and/or LCSD is outside acceptance limits, low biased.
В	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.

### Glossary

Glossary	
Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)

Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

MDA MDC MDL

DL, RA, RE, IN

DLC EDL

LOD

LOQ

MCL

Minimum Detectable Activity (Radiochemistry) Minimum Detectable Concentration (Radiochemistry) Method Detection Limit Minimum Level (Dioxin)

ML Most Probable Number MPN MQL Method Quantitation Limit NC Not Calculated

Not Detected at the reporting limit (or MDL or EDL if shown) ND

Decision Level Concentration (Radiochemistry)

EPA recommended "Maximum Contaminant Level"

Estimated Detection Limit (Dioxin)

Limit of Detection (DoD/DOE)

Limit of Quantitation (DoD/DOE)

NEG Negative / Absent POS Positive / Present

PQL **Practical Quantitation Limit** 

**PRES** Presumptive QC **Quality Control** 

**RER** Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

**TEF** Toxicity Equivalent Factor (Dioxin) **TEQ** Toxicity Equivalent Quotient (Dioxin)

**TNTC** Too Numerous To Count

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Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-14-SO-38.6-20240802

Lab Sample ID: 580-142691-1 Date Collected: 08/02/24 11:55 Matrix: Solid Date Received: 08/06/24 14:10 Percent Solids: 85.4

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane 0.68 0.17 mg/Kg 08/09/24 14:22 08/10/24 05:54 2.6 ND 1,1,1-Trichloroethane 1.4 0.16 mg/Kg 08/09/24 14:22 08/10/24 05:54 1,1,2,2-Tetrachloroethane 2.2 0.68 0.26 mg/Kg 08/09/24 14:22 08/10/24 05:54 ND 1,1,2-Trichloroethane 0.68 0.25 mg/Kg 08/09/24 14:22 08/10/24 05:54 1.1-Dichloroethane ND 0.31 mg/Kg 08/09/24 14:22 08/10/24 05:54 1.4 1,1-Dichloroethene NΠ 1.4 0.42 mg/Kg 08/09/24 14:22 08/10/24 05:54 1,1-Dichloropropene ND 0.18 08/09/24 14:22 08/10/24 05:54 1.4 mg/Kg ND 2.7 08/09/24 14:22 08/10/24 05:54 1,2,3-Trichlorobenzene 1.4 mg/Kg 1,2,3-Trichloropropane ND 1.4 0.39 mg/Kg 08/09/24 14:22 08/10/24 05:54 1,2,4-Trichlorobenzene ND 2.7 1.5 mg/Kg 08/09/24 14:22 08/10/24 05:54 1,2,4-Trimethylbenzene ND 1.4 0.46 mg/Kg 08/09/24 14:22 08/10/24 05:54 1 mg/Kg 1.2-Dibromo-3-Chloropropane ND 2.0 0.52 08/09/24 14:22 08/10/24 05:54 1 1,2-Dibromoethane ND 0.68 0.13 mg/Kg 08/09/24 14:22 08/10/24 05:54 28 1.4 0.30 mg/Kg 08/09/24 14:22 08/10/24 05:54 1,2-Dichlorobenzene 0.68 ND 0.19 mg/Kg 08/09/24 14:22 08/10/24 05:54 1.2-Dichloroethane ND 1,2-Dichloropropane 0.68 0.23 mg/Kg 08/09/24 14:22 08/10/24 05:54 08/10/24 05:54 1,3,5-Trimethylbenzene ND 1.4 0.26 mg/Kg 08/09/24 14:22 2.0 0.45 mg/Kg 08/09/24 14:22 08/10/24 05:54 1.3-Dichlorobenzene 3.2 0.19 ND 20 mg/Kg 08/09/24 14:22 08/10/24 05:54 1,3-Dichloropropane 1,4-Dichlorobenzene 98 2.0 0.37 mg/Kg 08/09/24 14:22 08/10/24 05:54 2,2-Dichloropropane ND 14 0.41 mg/Kg ÷ 08/09/24 14:22 08/10/24 05:54 2-Chlorotoluene ND 1.4 0.30 mg/Kg 08/09/24 14:22 08/10/24 05:54 08/09/24 14:22 08/10/24 05:54 4-Chlorotoluene 0.37 J 14 0.33 mg/Kg 4-Isopropyltoluene 0.50 1.4 0.35 mg/Kg 08/09/24 14:22 08/10/24 05:54 Benzene ND 0.68 0.13 mg/Kg 08/09/24 14:22 08/10/24 05:54 08/09/24 14:22 **Bromobenzene** 1.5 1.4 0.14 mg/Kg 08/10/24 05:54 Bromochloromethane ND 1.4 0.21 mg/Kg 08/09/24 14:22 08/10/24 05:54 Bromodichloromethane ND 08/09/24 14:22 1.4 0.19 mg/Kg 08/10/24 05:54 Bromoform ND 1.4 0.15 mg/Kg 08/09/24 14:22 08/10/24 05:54 08/09/24 14:22 Bromomethane ND 3.4 1.3 mg/Kg 08/10/24 05:54 Carbon tetrachloride 49 0.68 0.15 mg/Kg 08/09/24 14:22 08/10/24 05:54 Chloroethane ND 27 0.71 mg/Kg 08/09/24 14:22 08/10/24 05:54 0.68 08/09/24 14:22 08/10/24 05:54 Chloroform 15 mg/Kg 2.0 08/09/24 14:22 08/10/24 05:54 Chloromethane ND 0.34 mg/Kg cis-1,2-Dichloroethene ND 20 0.43 mg/Kg 08/09/24 14:22 08/10/24 05:54 cis-1.3-Dichloropropene ND 0.68 mg/Kg 08/09/24 14:22 08/10/24 05:54 0 14 Dibromochloromethane ND 0.68 0.17 mg/Kg 08/09/24 14:22 08/10/24 05:54 Dibromomethane ND 1.4 0.25 mg/Kg 08/09/24 14:22 08/10/24 05:54 ND 8.5 08/09/24 14:22 Dichlorodifluoromethane 1.6 mg/Kg Ö 08/10/24 05:54 Hexachlorobutadiene 76 3.4 0.82 mg/Kg 08/09/24 14:22 08/10/24 05:54 Isopropylbenzene ND 1.4 0.29 mg/Kg 08/09/24 14:22 08/10/24 05:54 Methyl tert-butyl ether ND 14 0.20 mg/Kg 08/09/24 14:22 08/10/24 05:54 8.5 08/09/24 14:22 **Methylene Chloride** 0.89 mg/Kg 08/10/24 05:54 4.8 J<sub>B</sub> m-Xylene & p-Xylene 08/09/24 14:22 08/10/24 05:54 ND 1.4 0.24 mg/Kg ND 08/09/24 14:22 08/10/24 05:54 Naphthalene 5 1 1.3 mg/Kg n-Butylbenzene ND 1.4 0.63 mg/Kg 08/09/24 14:22 08/10/24 05:54 N-Propylbenzene ND 1.4 08/09/24 14:22 0.51 mg/Kg 08/10/24 05:54 sec-Butylbenzene ND 1.4 0.29 mg/Kg ₩ 08/09/24 14:22 08/10/24 05:54 Styrene ND 1.4 0.43 mg/Kg 08/09/24 14:22 08/10/24 05:54

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Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-14-SO-38.6-20240802

Lab Sample ID: 580-142691-1 Date Collected: 08/02/24 11:55

**Matrix: Solid** Date Received: 08/06/24 14:10 Percent Solids: 85.4

Method: SW846 8260D - Vo	_	Qualifier	RL	(Conti	•	D	Prepared	Analyzed	Dil Fac
		Qualifier				_ =	<u> </u>		DII Fac
t-Butylbenzene	ND		1.4	0.26	mg/Kg	₩	08/09/24 14:22	08/10/24 05:54	1
Toluene	4.2		2.0	0.46	mg/Kg	₩	08/09/24 14:22	08/10/24 05:54	1
trans-1,2-Dichloroethene	ND		2.0	0.50	mg/Kg	₽	08/09/24 14:22	08/10/24 05:54	1
trans-1,3-Dichloropropene	ND		1.4	0.24	mg/Kg	₩	08/09/24 14:22	08/10/24 05:54	1
Trichloroethene	2.8		1.4	0.35	mg/Kg	₩	08/09/24 14:22	08/10/24 05:54	1
Vinyl chloride	ND		3.4	0.64	mg/Kg	☼	08/09/24 14:22	08/10/24 05:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				08/09/24 14:22	08/10/24 05:54	1
4-Bromofluorobenzene (Surr)	100		80 - 120				08/09/24 14:22	08/10/24 05:54	1
Dibromofluoromethane (Surr)	99		80 - 120				08/09/24 14:22	08/10/24 05:54	1
Toluene-d8 (Surr)	190	S1+	80 - 120				08/09/24 14:22	08/10/24 05:54	1
 Method: SW846 8260D - Vo	olatile Organic	Compoun	ds by GC/MS	- DL					
			•			_	_		
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

Michiga. Offoro ozoob	volutile organie comp	curius by corin	O DE					
Analyte	Result Qualifi	ier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND ND	68	16	mg/Kg	<u></u>	08/14/24 09:22	08/14/24 18:04	1
o-Xylene	ND	68	8.5	mg/Kg	₽	08/14/24 09:22	08/14/24 18:04	1
Tetrachloroethene	1000	68	9.0	mg/Kg	₩	08/14/24 09:22	08/14/24 18:04	1
Trichlorofluoromethane	ND	140	44	mg/Kg	₩	08/14/24 09:22	08/14/24 18:04	1
Surrogate	%Recovery Qualifi	ier Limits				Prepared	Analyzed	Dil Fac
	Analyte Ethylbenzene o-Xylene Tetrachloroethene Trichlorofluoromethane	Analyte     Result     Qualified       Ethylbenzene     ND       o-Xylene     ND       Tetrachloroethene     1000       Trichlorofluoromethane     ND	Analyte         Result         Qualifier         RL           Ethylbenzene         ND         68           o-Xylene         ND         68           Tetrachloroethene         1000         68           Trichlorofluoromethane         ND         140	Analyte         Result Qualifier         RL MDL           Ethylbenzene         ND         68         16           o-Xylene         ND         68         8.5           Tetrachloroethene         1000         68         9.0           Trichlorofluoromethane         ND         140         44	Analyte         Result         Qualifier         RL         MDL         Unit           Ethylbenzene         ND         68         16         mg/Kg           o-Xylene         ND         68         8.5         mg/Kg           Tetrachloroethene         1000         68         9.0         mg/Kg           Trichlorofluoromethane         ND         140         44         mg/Kg	Analyte         Result         Qualifier         RL         MDL         Unit         D           Ethylbenzene         ND         68         16         mg/Kg         ☆           o-Xylene         ND         68         8.5         mg/Kg         ☆           Tetrachloroethene         1000         68         9.0         mg/Kg         ☆           Trichlorofluoromethane         ND         140         44         mg/Kg         ☆	Analyte         Result Ethylbenzene         Qualifier         RL MDL mg/Kg         Unit mg/Kg         D mg/Kg         08/14/24 09:22 mg/Kg           o-Xylene         ND         68         8.5 mg/Kg         ∞ 08/14/24 09:22 mg/	Analyte         Result Ethylbenzene         Qualifier         RL MDL mg/Kg         Unit mg/Kg         D mg/Kg         Prepared molyzed os/14/24 09:22         Analyzed os/14/24 18:04           Ethylbenzene o-Xylene         ND         68         8.5 mg/Kg         08/14/24 09:22         08/14/24 18:04           Tetrachloroethene Trichlorofluoromethane         1000         68         9.0 mg/Kg         08/14/24 09:22         08/14/24 18:04           Trichlorofluoromethane         ND         140         44 mg/Kg         08/14/24 09:22         08/14/24 18:04

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121	08/14/24 09:22	08/14/24 18:04	1
4-Bromofluorobenzene (Surr)	100		80 - 120	08/14/24 09:22	08/14/24 18:04	1
Dibromofluoromethane (Surr)	104		80 - 120	08/14/24 09:22	08/14/24 18:04	1
Toluene-d8 (Surr)	100		80 - 120	08/14/24 09:22	08/14/24 18:04	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	820		640	76	mg/Kg	₩	08/15/24 08:47	08/15/24 19:17	10000
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99	-	80 - 121				08/15/24 08:47	08/15/24 19:17	10000
4-Bromofluorobenzene (Surr)	99		80 - 120				08/15/24 08:47	08/15/24 19:17	10000
Dibromofluoromethane (Surr)	104		80 - 120				08/15/24 08:47	08/15/24 19:17	10000
Toluene-d8 (Surr)	100		80 - 120				00/45/04 00:47	08/15/24 19:17	10000

General Chemistry Analyte	Result Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	85.4	0.1	0.1	%			08/12/24 10:30	1
Percent Moisture (SM22 2540G)	14.6	0.1	0.1	%			08/12/24 10:30	1

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-14-SO-33-20240802

Lab Sample ID: 580-142691-2 Date Collected: 08/02/24 13:05 Matrix: Solid Date Received: 08/06/24 14:10 Percent Solids: 91.4

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed mg/Kg 1,1,1,2-Tetrachloroethane ND 0.025 0.0062 08/09/24 14:22 08/10/24 03:43 ND 1.1.1-Trichloroethane 0.049 0.0057 mg/Kg 08/09/24 14:22 08/10/24 03:43 1,1,2,2-Tetrachloroethane ND 0.025 0.0094 mg/Kg 08/09/24 14:22 08/10/24 03:43 ND 0.0091 08/09/24 14:22 1,1,2-Trichloroethane 0.025 mg/Kg 08/10/24 03:43 ND 0.049 0.011 mg/Kg 08/09/24 14:22 08/10/24 03:43 1 1-Dichloroethane 1,1-Dichloroethene NΠ 0.049 0.015 mg/Kg 08/09/24 14:22 08/10/24 03:43 1,1-Dichloropropene ND 0.049 0.0065 08/09/24 14:22 08/10/24 03:43 mg/Kg 0.099 0.049 08/09/24 14:22 08/10/24 03:43 0.094 mg/Kg 1,2,3-Trichlorobenzene J<sub>B</sub> 1,2,3-Trichloropropane ND 0.049 0.014 mg/Kg 08/09/24 14:22 08/10/24 03:43 1,2,4-Trichlorobenzene ND 0.099 0.053 mg/Kg 08/09/24 14:22 08/10/24 03:43 1,2,4-Trimethylbenzene ND 0.049 0.017 mg/Kg 08/09/24 14:22 08/10/24 03:43 1.2-Dibromo-3-Chloropropane ND 0.074 0.019 ma/Ka 08/09/24 14:22 08/10/24 03:43 1 1,2-Dibromoethane ND 0.025 0.0047 mg/Kg 08/09/24 14:22 08/10/24 03:43 0.081 0.049 0.011 mg/Kg 08/09/24 14:22 08/10/24 03:43 1,2-Dichlorobenzene ND 0.025 0.0068 mg/Kg 08/09/24 14:22 08/10/24 03:43 1.2-Dichloroethane 0.0081 1,2-Dichloropropane ND 0.025 mg/Kg 08/09/24 14:22 08/10/24 03:43 ND 1,3,5-Trimethylbenzene 0.049 0.0094 mg/Kg 08/09/24 14:22 08/10/24 03:43 1,3-Dichlorobenzene ND 0.074 0.016 mg/Kg 08/09/24 14:22 08/10/24 03:43 1,3-Dichloropropane NΩ 0.074 0.0069 mg/Kg 08/09/24 14:22 08/10/24 03:43 mg/Kg 1,4-Dichlorobenzene 0.31 0.074 0.013 08/09/24 14:22 08/10/24 03:43 2,2-Dichloropropane ND 0.049 0.015 mg/Kg ÷ 08/09/24 14:22 08/10/24 03:43 2-Chlorotoluene ND 0.049 0.011 mg/Kg 08/09/24 14:22 08/10/24 03:43 4-Chlorotoluene ND 0.012 mg/Kg 08/09/24 14:22 08/10/24 03:43 0.049 4-Isopropyltoluene 0.020 0.049 0.013 mg/Kg 08/09/24 14:22 08/10/24 03:43 Benzene ND 0.025 0.0047 mg/Kg 08/09/24 14:22 08/10/24 03:43 0.0052 08/09/24 14:22 Bromobenzene ND 0.049 mg/Kg 08/10/24 03:43 Bromochloromethane ND 0.049 0.0077 mg/Kg 08/09/24 14:22 08/10/24 03:43 Bromodichloromethane 0.0068 08/09/24 14:22 ND 0.049 mg/Kg 08/10/24 03:43 0.0056 Bromoform NΩ 0.049 mg/Kg 08/09/24 14:22 08/10/24 03:43 Bromomethane ND 0.047 08/09/24 14:22 0.12 mg/Kg 08/10/24 03:43 Carbon tetrachloride 0.027 0.025 0.0054 mg/Kg 08/09/24 14:22 08/10/24 03:43 Chloroethane ND 0.099 0.026 mg/Kg 08/09/24 14:22 08/10/24 03:43 0.025 0.0052 mg/Kg 08/09/24 14:22 08/10/24 03:43 Chloroform 0.19 0.012 0.074 08/09/24 14:22 08/10/24 03:43 Chloromethane ND mg/Kg cis-1,2-Dichloroethene 0.018 0.074 0.016 mg/Kg 08/09/24 14:22 08/10/24 03:43 cis-1,3-Dichloropropene ND 0.025 0.0049 mg/Kg 08/09/24 14:22 08/10/24 03:43 0.0060 Dibromochloromethane ND 0.025 mg/Kg 08/09/24 14:22 08/10/24 03:43 Dibromomethane ND 0.049 0.0091 mg/Kg 08/09/24 14:22 08/10/24 03:43 Dichlorodifluoromethane ND 0.057 mg/Kg 08/09/24 14:22 0.31 Ö 08/10/24 03:43 Ethylbenzene ND 0.049 0.011 mg/Kg 08/09/24 14:22 08/10/24 03:43 Hexachlorobutadiene ND 0.12 0.030 mg/Kg 08/09/24 14:22 08/10/24 03:43 Isopropylbenzene ND 0.049 0.011 mg/Kg 08/09/24 14:22 08/10/24 03:43 0.0074 08/09/24 14:22 08/10/24 03:43 Methyl tert-butyl ether ND 0.049 mg/Kg 0.032 08/09/24 14:22 08/10/24 03:43 **Methylene Chloride** 0.19 J<sub>B</sub> 0.31 mg/Kg 08/09/24 14:22 08/10/24 03:43 m-Xylene & p-Xylene ND 0.049 8800.0 mg/Kg **Naphthalene** 0.19 0.048 mg/Kg 08/09/24 14:22 08/10/24 03:43 0.097 n-Butylbenzene ND 0.049 08/09/24 14:22 08/10/24 03:43 0.023 mg/Kg N-Propylbenzene ND 0.049 0.019 mg/Kg 08/09/24 14:22 08/10/24 03:43 o-Xylene ND 0.049 0.0062 mg/Kg 08/09/24 14:22 08/10/24 03:43

**Eurofins Seattle** 

Page 9 of 58 8/21/2024

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-14-SO-33-20240802

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - DL

Lab Sample ID: 580-142691-2 Date Collected: 08/02/24 13:05 **Matrix: Solid** Date Received: 08/06/24 14:10

Percent Solids: 91.4

Method: SW846 8260D - Vo	latile Organic	Compound	ds by GC/MS	(Conti	inued)				
Analyte		Qualifier	RL	-	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.049	0.011	mg/Kg	₽	08/09/24 14:22	08/10/24 03:43	1
Styrene	ND		0.049	0.016	mg/Kg	₽	08/09/24 14:22	08/10/24 03:43	1
t-Butylbenzene	ND		0.049	0.0095	mg/Kg	₽	08/09/24 14:22	08/10/24 03:43	1
Tetrachloroethene	0.11		0.049	0.0065	mg/Kg	☼	08/09/24 14:22	08/10/24 03:43	1
Toluene	ND		0.074	0.017	mg/Kg	≎	08/09/24 14:22	08/10/24 03:43	1
trans-1,2-Dichloroethene	ND		0.074	0.018	mg/Kg	₩	08/09/24 14:22	08/10/24 03:43	1
trans-1,3-Dichloropropene	ND		0.049	0.0086	mg/Kg	≎	08/09/24 14:22	08/10/24 03:43	1
Trichloroethene	ND		0.049	0.013	mg/Kg	≎	08/09/24 14:22	08/10/24 03:43	1
Vinyl chloride	ND		0.12	0.023	mg/Kg	₩	08/09/24 14:22	08/10/24 03:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			80 - 121				08/09/24 14:22	08/10/24 03:43	1
4-Bromofluorobenzene (Surr)	97		80 - 120				08/09/24 14:22	08/10/24 03:43	1
Dibromofluoromethane (Surr)	100		80 - 120				08/09/24 14:22	08/10/24 03:43	1
Toluene-d8 (Surr)	100		80 - 120				08/09/24 14:22	08/10/24 03:43	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	46		1.1	0.13	mg/Kg	<del>-</del>	08/14/24 09:22	08/14/24 17:21	1
Trichlorofluoromethane	ND		2.1	0.69	mg/Kg	₩	08/14/24 09:22	08/14/24 17:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				08/14/24 09:22	08/14/24 17:21	1
4-Bromofluorobenzene (Surr)	98		80 - 120				08/14/24 09:22	08/14/24 17:21	1
Dibromofluoromethane (Surr)	104		80 - 120				08/14/24 09:22	08/14/24 17:21	1
Toluene-d8 (Surr)	99		80 - 120				08/14/24 09:22	08/14/24 17:21	1

General Chemistry  Analyte	Result Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	91.4	0.1	0.1	%		•	08/12/24 10:30	1
Percent Moisture (SM22 2540G)	8.6	0.1	0.1	%			08/12/24 10:30	1

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

**Client Sample ID: TB-02-SO-20240802** 

Lab Sample ID: 580-142691-3 Date Collected: 08/02/24 00:01

Date Received: 08/06/24 14:10

-un	Campic	ID.	300-142031-3
			Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND .		0.020	0.0050		_ =	08/09/24 14:22	08/10/24 01:54	
1,1,1-Trichloroethane	ND		0.040	0.0046			08/09/24 14:22	08/10/24 01:54	
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076			08/09/24 14:22	08/10/24 01:54	
1,1,2-Trichloroethane	ND		0.020	0.0074				08/10/24 01:54	
1,1-Dichloroethane	ND		0.040	0.0092				08/10/24 01:54	
1,1-Dichloroethene	ND		0.040		mg/Kg			08/10/24 01:54	
1,1-Dichloropropene	ND		0.040	0.0053				08/10/24 01:54	
1,2,3-Trichlorobenzene	0.064	JB	0.080		mg/Kg			08/10/24 01:54	
1,2,3-Trichloropropane	ND		0.040		mg/Kg			08/10/24 01:54	
1,2,4-Trichlorobenzene	ND		0.080		mg/Kg			08/10/24 01:54	
1,2,4-Trimethylbenzene	ND		0.040		mg/Kg			08/10/24 01:54	
1,2-Dibromo-3-Chloropropane	ND		0.060		mg/Kg			08/10/24 01:54	
1,2-Dibromoethane	ND		0.020	0.0038				08/10/24 01:54	
1,2-Dichlorobenzene	ND		0.040	0.0087				08/10/24 01:54	
1,2-Dichloroethane	ND		0.020	0.0055				08/10/24 01:54	
1,2-Dichloropropane	ND		0.020	0.0066				08/10/24 01:54	
1,3,5-Trimethylbenzene	ND		0.040	0.0076				08/10/24 01:54	
1,3-Dichlorobenzene	ND		0.060	0.013				08/10/24 01:54	
1,3-Dichloropropane	ND		0.060	0.0056				08/10/24 01:54	
1,4-Dichlorobenzene	ND		0.060	0.011				08/10/24 01:54	
2,2-Dichloropropane	ND		0.040		mg/Kg			08/10/24 01:54	
2-Chlorotoluene	ND		0.040	0.0088				08/10/24 01:54	
4-Chlorotoluene	ND		0.040					08/10/24 01:54	
4-Isopropyltoluene	ND		0.040		mg/Kg			08/10/24 01:54	
Benzene	ND		0.020	0.0038				08/10/24 01:54	
Bromobenzene	ND		0.040	0.0042				08/10/24 01:54	
Bromochloromethane	ND		0.040	0.0062				08/10/24 01:54	
Bromodichloromethane	ND		0.040	0.0055				08/10/24 01:54	
Bromoform	ND		0.040	0.0035				08/10/24 01:54	
Bromomethane	ND		0.10		mg/Kg			08/10/24 01:54	
Carbon tetrachloride	ND		0.020	0.0044				08/10/24 01:54	
Chlorobenzene	ND		0.040	0.0044				08/10/24 01:54	
Chloroethane	ND		0.080	0.021	0 0			08/10/24 01:54	
Chloroform	ND		0.020	0.0042				08/10/24 01:54	
Chloromethane	ND		0.060		mg/Kg			08/10/24 01:54	
cis-1,2-Dichloroethene	ND		0.060		mg/Kg			08/10/24 01:54	
cis-1,3-Dichloropropene	ND		0.020	0.0040				08/10/24 01:54	
Dibromochloromethane	ND		0.020	0.0049				08/10/24 01:54	
Dibromomethane	ND ND		0.020	0.0074	0 0			08/10/24 01:54	
Dichlorodifluoromethane	ND		0.25		mg/Kg			08/10/24 01:54	
Ethylbenzene	ND		0.040	0.0091				08/10/24 01:54	
Hexachlorobutadiene	ND ND		0.10		mg/Kg			08/10/24 01:54	
Isopropylbenzene	ND		0.040		mg/Kg			08/10/24 01:54	
Methyl tert-butyl ether	ND ND		0.040	0.0060				08/10/24 01:54	
Methylene Chloride		I D	0.040		mg/Kg			08/10/24 01:54	
	<b>0.16</b> ND			0.026				08/10/24 01:54	
m-Xylene & p-Xylene	ND ND		0.040 0.15					08/10/24 01:54 08/10/24 01:54	
Naphthalene n Butylbonzono					mg/Kg				
n-Butylbenzene N-Propylbenzene	ND ND		0.040	0.019	mg/Kg			08/10/24 01:54 08/10/24 01:54	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Date Received: 08/06/24 14:10

**Client Sample ID: TB-02-SO-20240802** 

Date Collected: 08/02/24 00:01

Lab Sample ID: 580-142691-3

**Matrix: Solid** 

Method: SW846 8260D - Vo	olatile Organic	Compoun	ds by GC/MS	(Conti	nued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	MD		0.040	0.0050	mg/Kg		08/09/24 14:22	08/10/24 01:54	1
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		08/09/24 14:22	08/10/24 01:54	1
Styrene	ND		0.040	0.013	mg/Kg		08/09/24 14:22	08/10/24 01:54	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		08/09/24 14:22	08/10/24 01:54	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		08/09/24 14:22	08/10/24 01:54	1
Toluene	ND		0.060	0.014	mg/Kg		08/09/24 14:22	08/10/24 01:54	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		08/09/24 14:22	08/10/24 01:54	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		08/09/24 14:22	08/10/24 01:54	1
Trichloroethene	ND		0.040	0.010	mg/Kg		08/09/24 14:22	08/10/24 01:54	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		08/09/24 14:22	08/10/24 01:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		80 - 121				08/09/24 14:22	08/10/24 01:54	1
4-Bromofluorobenzene (Surr)	99		80 - 120				08/09/24 14:22	08/10/24 01:54	1
Dibromofluoromethane (Surr)	103		80 - 120				08/09/24 14:22	08/10/24 01:54	1
Toluene-d8 (Surr)	99		80 - 120				08/09/24 14:22	08/10/24 01:54	1

Method: SW846 8260D - Vo	platile Organic	Compoun	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		08/14/24 09:22	08/14/24 12:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		80 - 121				08/14/24 09:22	08/14/24 12:24	1
4-Bromofluorobenzene (Surr)	100		80 - 120				08/14/24 09:22	08/14/24 12:24	1
Dibromofluoromethane (Surr)	102		80 - 120				08/14/24 09:22	08/14/24 12:24	1
Toluene-d8 (Surr)	98		80 - 120				08/14/24 09:22	08/14/24 12:24	1

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-14-SO-40.5-20240802

Lab Sample ID: 580-142691-4 Date Collected: 08/02/24 14:45 Matrix: Solid Date Received: 08/06/24 14:10 Percent Solids: 91.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS **MDL** Unit Dil Fac Analyte Result Qualifier D Prepared Analyzed mg/Kg 1,1,1,2-Tetrachloroethane ND 0.021 0.0051 08/09/24 14:22 08/10/24 04:04 ND 1.1.1-Trichloroethane 0.041 0.0047 mg/Kg 08/09/24 14:22 08/10/24 04:04 1,1,2,2-Tetrachloroethane ND 0.021 0.0078 mg/Kg 08/09/24 14:22 08/10/24 04:04 ND 0.0076 08/09/24 14:22 08/10/24 04:04 1,1,2-Trichloroethane 0.021 mg/Kg ND 0.041 0.0095 mg/Kg 08/09/24 14:22 08/10/24 04:04 1 1-Dichloroethane ND 1,1-Dichloroethene 0.041 0.013 mg/Kg 08/09/24 14:22 08/10/24 04:04 1,1-Dichloropropene ND 0.041 0.0055 08/09/24 14:22 08/10/24 04:04 mg/Kg ND 0.082 0.041 08/09/24 14:22 08/10/24 04:04 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.041 0.012 mg/Kg 08/09/24 14:22 08/10/24 04:04 1,2,4-Trichlorobenzene ND 0.082 0.044 mg/Kg 08/09/24 14:22 08/10/24 04:04 1,2,4-Trimethylbenzene ND 0.041 0.014 mg/Kg 08/09/24 14:22 08/10/24 04:04 1.2-Dibromo-3-Chloropropane ND 0.062 0.016 ma/Ka 08/09/24 14:22 08/10/24 04:04 1 1,2-Dibromoethane ND 0.021 0.0039 mg/Kg 08/09/24 14:22 08/10/24 04:04 0.041 0.0090 mg/Kg 08/09/24 14:22 08/10/24 04:04 1,2-Dichlorobenzene 0.16 ND 0.021 0.0057 mg/Kg 08/09/24 14:22 08/10/24 04:04 1.2-Dichloroethane 1,2-Dichloropropane ND 0.021 0.0068 mg/Kg 08/09/24 14:22 08/10/24 04:04 ND 0.0078 1,3,5-Trimethylbenzene 0.041 mg/Kg 08/09/24 14:22 08/10/24 04:04 1,3-Dichlorobenzene ND 0.062 0.014 mg/Kg 08/09/24 14:22 08/10/24 04:04 1,3-Dichloropropane NΩ 0.062 0.0058 mg/Kg 08/09/24 14:22 08/10/24 04:04 1,4-Dichlorobenzene 0.54 0.062 0.011 mg/Kg 08/09/24 14:22 08/10/24 04:04 2,2-Dichloropropane ND 0.041 0.012 mg/Kg ť. 08/09/24 14:22 08/10/24 04:04 2-Chlorotoluene ND 0.041 0.0091 mg/Kg 08/09/24 14:22 08/10/24 04:04 0.010 4-Chlorotoluene ND 0.041 mg/Kg 08/09/24 14:22 08/10/24 04:04 4-Isopropyltoluene 0.017 0.041 0.011 mg/Kg 08/09/24 14:22 08/10/24 04:04 Benzene ND 0.021 0.0039 mg/Kg 08/09/24 14:22 08/10/24 04:04 0.0043 08/09/24 14:22 08/10/24 04:04 Bromobenzene ND 0.041 mg/Kg Bromochloromethane NΩ 0.041 0.0064 mg/Kg 08/09/24 14:22 08/10/24 04:04 Bromodichloromethane ND 0.0057 08/09/24 14:22 08/10/24 04:04 0.041 mg/Kg Bromoform 0.0046 ND 0.041 mg/Kg 08/09/24 14:22 08/10/24 04:04 0.039 Bromomethane ND 08/09/24 14:22 08/10/24 04:04 0.10 mg/Kg Carbon tetrachloride 0.13 0.021 0.0045 mg/Kg 08/09/24 14:22 08/10/24 04:04 Chloroethane ND 0.082 0.022 mg/Kg 08/09/24 14:22 08/10/24 04:04 0.021 0.0043 mg/Kg 08/09/24 14:22 08/10/24 04:04 Chloroform 0.16 0.010 08/09/24 14:22 08/10/24 04:04 Chloromethane ND 0.062 mg/Kg cis-1,2-Dichloroethene ND 0.062 0.013 mg/Kg 08/09/24 14:22 08/10/24 04:04 cis-1.3-Dichloropropene ND 0.021 0.0041 mg/Kg 08/09/24 14:22 08/10/24 04:04 Dibromochloromethane ND 0.021 0.0050 mg/Kg 08/09/24 14:22 08/10/24 04:04 Dibromomethane ND 0.041 0.0076 mg/Kg 08/09/24 14:22 08/10/24 04:04 Dichlorodifluoromethane ND 0.26 0.047 mg/Kg 08/09/24 14:22 ₩ 08/10/24 04:04 Ethylbenzene ND 0.041 0.0094 mg/Kg 08/09/24 14:22 08/10/24 04:04 Hexachlorobutadiene 1.1 0.10 0.025 mg/Kg 08/09/24 14:22 08/10/24 04:04 Isopropylbenzene ND 0.041 0.0089 mg/Kg 08/09/24 14:22 08/10/24 04:04 ND 0.0062 08/09/24 14:22 08/10/24 04:04 Methyl tert-butyl ether 0.041 mg/Kg 0.027 08/09/24 14:22 08/10/24 04:04 **Methylene Chloride** 0.15 J<sub>B</sub> 0.26 mg/Kg 0.041 08/09/24 14:22 08/10/24 04:04 m-Xylene & p-Xylene ND 0.0073 mg/Kg **Naphthalene** 0.15 0.040 mg/Kg 08/09/24 14:22 08/10/24 04:04 0.044 n-Butylbenzene ND 0.041 0.019 08/09/24 14:22 08/10/24 04:04 mg/Kg N-Propylbenzene ND 0.041 0.015 mg/Kg 08/09/24 14:22 08/10/24 04:04 o-Xylene ND 0.041 0.0051 mg/Kg 08/09/24 14:22 08/10/24 04:04

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-14-SO-40.5-20240802

Lab Sample ID: 580-142691-4 Date Collected: 08/02/24 14:45 **Matrix: Solid** 

Date Received: 08/06/24 14:10 Percent Solids: 91.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.041	0.0089	ma/Ka	— <u>-</u>	<u> </u>	08/10/24 04:04	1
Styrene	ND		0.041		mg/Kg	₩		08/10/24 04:04	1
t-Butylbenzene	ND		0.041	0.0079			08/09/24 14:22	08/10/24 04:04	1
Tetrachloroethene	5.8		0.041	0.0055		₩	08/09/24 14:22	08/10/24 04:04	1
Toluene	ND		0.062		mg/Kg	₩	08/09/24 14:22	08/10/24 04:04	1
trans-1,2-Dichloroethene	ND		0.062		mg/Kg		08/09/24 14:22	08/10/24 04:04	1
trans-1,3-Dichloropropene	ND		0.041	0.0072		☆	08/09/24 14:22	08/10/24 04:04	1
Trichloroethene	0.076		0.041		mg/Kg	☆	08/09/24 14:22	08/10/24 04:04	1
Vinyl chloride	ND		0.10		mg/Kg	₩	08/09/24 14:22	08/10/24 04:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				08/09/24 14:22	08/10/24 04:04	1
4-Bromofluorobenzene (Surr)	100		80 - 120				08/09/24 14:22	08/10/24 04:04	1
Dibromofluoromethane (Surr)	98		80 - 120				08/09/24 14:22	08/10/24 04:04	1
Toluene-d8 (Surr)	110		80 - 120				08/09/24 14:22	08/10/24 04:04	1
- <del>-</del>									
Method: SW846 8260D - Vola	_	•	•	- DL					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	220		0.89	0.11	mg/Kg	☼	08/14/24 09:22	08/14/24 17:43	1
Trichlorofluoromethane	ND		1.8	0.58	mg/Kg	₽	08/14/24 09:22	08/14/24 17:43	1
_	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Surrogate							00/44/04 00:00	00/44/04 47:40	
	98		80 - 121				08/14/24 09:22	08/14/24 17:43	1
1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr)	98 99		80 - 121 80 - 120					08/14/24 17:43	1
1,2-Dichloroethane-d4 (Surr)							08/14/24 09:22		•
1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr)	99		80 - 120				08/14/24 09:22 08/14/24 09:22	08/14/24 17:43	1
1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)	99 107		80 - 120 80 - 120				08/14/24 09:22 08/14/24 09:22	08/14/24 17:43 08/14/24 17:43	1
1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr)	99 107 98	Qualifier	80 - 120 80 - 120	RL	Unit	D	08/14/24 09:22 08/14/24 09:22	08/14/24 17:43 08/14/24 17:43	1

0.1

8.4

0.1 %

08/12/24 10:30

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-11-SO-39.5-20240805

Lab Sample ID: 580-142691-5 Date Collected: 08/05/24 12:25 **Matrix: Solid** Date Received: 08/06/24 14:10 Percent Solids: 91.5

Method: SW846 8260D - Vola Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.022	0.0056	mg/Kg	— <u>-</u>		08/10/24 04:26	1
1,1,1-Trichloroethane	ND		0.045	0.0051		₩	08/09/24 14:22	08/10/24 04:26	1
1,1,2,2-Tetrachloroethane	ND		0.022	0.0085		₩	08/09/24 14:22	08/10/24 04:26	1
1,1,2-Trichloroethane	ND		0.022	0.0083		₩	08/09/24 14:22	08/10/24 04:26	1
1,1-Dichloroethane	ND		0.045		mg/Kg	₩	08/09/24 14:22	08/10/24 04:26	1
1,1-Dichloroethene	ND		0.045		mg/Kg	₩	08/09/24 14:22	08/10/24 04:26	1
1,1-Dichloropropene	ND		0.045	0.0059		₩	08/09/24 14:22	08/10/24 04:26	1
1,2,3-Trichlorobenzene	ND		0.089		mg/Kg	₩	08/09/24 14:22	08/10/24 04:26	1
1,2,3-Trichloropropane	ND		0.045		mg/Kg	₩	08/09/24 14:22	08/10/24 04:26	1
1,2,4-Trichlorobenzene	ND		0.089		mg/Kg	∴	08/09/24 14:22	08/10/24 04:26	1
1,2,4-Trimethylbenzene	ND		0.045		mg/Kg	₩	08/09/24 14:22	08/10/24 04:26	1
1,2-Dibromo-3-Chloropropane	ND		0.067		mg/Kg	₩		08/10/24 04:26	
1,2-Dibromoethane	ND		0.022	0.0043		∴		08/10/24 04:26	1
1,2-Dichlorobenzene	ND		0.045	0.0097	0 0	₩		08/10/24 04:26	1
1,2-Dichloroethane	ND		0.022	0.0062	0 0	Ď.		08/10/24 04:26	,
1,2-Dichloropropane	ND		0.022	0.0074				08/10/24 04:26	,
1,3,5-Trimethylbenzene	ND		0.045	0.0085		Ď.		08/10/24 04:26	,
1,3-Dichlorobenzene	ND		0.067		mg/Kg	**		08/10/24 04:26	,
1,3-Dichloropropane	ND		0.067	0.0063				08/10/24 04:26	· · · · ·
1,4-Dichlorobenzene	ND		0.067		mg/Kg	₩		08/10/24 04:26	
2,2-Dichloropropane	ND		0.045		mg/Kg	₩		08/10/24 04:26	
2-Chlorotoluene	ND		0.045	0.0098		¥ ₩		08/10/24 04:26	,
4-Chlorotoluene	ND		0.045		mg/Kg	₩		08/10/24 04:26	
	ND ND				0 0				,
4-Isopropyltoluene			0.045		mg/Kg	· · · · ·		08/10/24 04:26	,
Benzene	ND		0.022	0.0043		₩.		08/10/24 04:26	
Bromobenzene	ND		0.045	0.0047	0 0	φ.		08/10/24 04:26	
Bromochloromethane	ND		0.045	0.0069		<del></del>		08/10/24 04:26	
Bromodichloromethane	ND		0.045	0.0062		₩.		08/10/24 04:26	
Bromoform	ND		0.045	0.0050		₩.		08/10/24 04:26	
Bromomethane	ND		0.11		mg/Kg	<del></del>		08/10/24 04:26	
Carbon tetrachloride	ND		0.022	0.0049		∵		08/10/24 04:26	
Chloroethane	ND		0.089		mg/Kg	<b>*</b>		08/10/24 04:26	•
Chloroform	ND		0.022	0.0047		<del>.</del> .		08/10/24 04:26	
Chloromethane	ND		0.067	0.011	mg/Kg	☼		08/10/24 04:26	•
cis-1,2-Dichloroethene	ND		0.067		mg/Kg	☼		08/10/24 04:26	
cis-1,3-Dichloropropene	ND		0.022	0.0045		<del>.</del>		08/10/24 04:26	
Dibromochloromethane	ND		0.022	0.0055		₩		08/10/24 04:26	
Dibromomethane	ND		0.045	0.0083		₩		08/10/24 04:26	
Dichlorodifluoromethane	ND		0.28		mg/Kg			08/10/24 04:26	
Ethylbenzene	ND		0.045		mg/Kg	₩		08/10/24 04:26	•
Hexachlorobutadiene	0.070	J	0.11		mg/Kg	₩	08/09/24 14:22	08/10/24 04:26	•
Isopropylbenzene	ND		0.045	0.0096			08/09/24 14:22	08/10/24 04:26	
Methyl tert-butyl ether	ND		0.045	0.0067		₽		08/10/24 04:26	
Methylene Chloride	0.16	JB	0.28	0.029	mg/Kg	₩	08/09/24 14:22	08/10/24 04:26	•
m-Xylene & p-Xylene	ND		0.045	0.0079	mg/Kg	₩	08/09/24 14:22	08/10/24 04:26	
Naphthalene	ND		0.17	0.044	mg/Kg	₽	08/09/24 14:22	08/10/24 04:26	
n-Butylbenzene	ND		0.045	0.021	mg/Kg	₩	08/09/24 14:22	08/10/24 04:26	1
N-Propylbenzene	ND		0.045	0.017	mg/Kg	₩	08/09/24 14:22	08/10/24 04:26	1
o-Xylene	ND		0.045	0.0056			08/09/24 14:22	08/10/24 04:26	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Toluene-d8 (Surr)

Client Sample ID: PDI-11-SO-39.5-20240805

Date Collected: 08/05/24 12:25 Date Received: 08/06/24 14:10

Lab Sample ID: 580-142691-5

08/14/24 09:22 08/14/24 15:53

**Matrix: Solid** 

Percent Solids: 91.5

Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	(Conti	nued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.045	0.0096	mg/Kg	<del>-</del>	08/09/24 14:22	08/10/24 04:26	1
Styrene	ND		0.045	0.014	mg/Kg	₽	08/09/24 14:22	08/10/24 04:26	1
t-Butylbenzene	ND		0.045	0.0086	mg/Kg	₽	08/09/24 14:22	08/10/24 04:26	1
Tetrachloroethene	0.0062	J	0.045	0.0059	mg/Kg	₽	08/09/24 14:22	08/10/24 04:26	1
Toluene	ND		0.067	0.015	mg/Kg	☼	08/09/24 14:22	08/10/24 04:26	1
trans-1,2-Dichloroethene	ND		0.067	0.016	mg/Kg	≎	08/09/24 14:22	08/10/24 04:26	1
trans-1,3-Dichloropropene	ND		0.045	0.0078	mg/Kg	≎	08/09/24 14:22	08/10/24 04:26	1
Trichloroethene	ND		0.045	0.012	mg/Kg	₽	08/09/24 14:22	08/10/24 04:26	1
Vinyl chloride	ND		0.11	0.021	mg/Kg	₩	08/09/24 14:22	08/10/24 04:26	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				08/09/24 14:22	08/10/24 04:26	1
4-Bromofluorobenzene (Surr)	97		80 - 120				08/09/24 14:22	08/10/24 04:26	1
Dibromofluoromethane (Surr)	100		80 - 120				08/09/24 14:22	08/10/24 04:26	1
Toluene-d8 (Surr)	99		80 - 120				08/09/24 14:22	08/10/24 04:26	1
- Method: SW846 8260D - Vo	olatile Organic	Compoun	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	0.67		0.045	0.0054	mg/Kg	<u></u>	08/14/24 09:22	08/14/24 15:53	1
Trichlorofluoromethane	ND		0.089	0.029	mg/Kg	≎	08/14/24 09:22	08/14/24 15:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 121				08/14/24 09:22	08/14/24 15:53	1
4-Bromofluorobenzene (Surr)	101		80 - 120				08/14/24 09:22	08/14/24 15:53	1
Dibromofluoromethane (Surr)	101		80 - 120				08/14/24 09:22	08/14/24 15:53	1

General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	91.5		0.1	0.1	%			08/12/24 10:30	1
Percent Moisture (SM22 2540G)	8.5		0.1	0.1	%			08/12/24 10:30	1

80 - 120

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Client Sample ID: DUP-03-SQ-20240805

Lab Sample ID: 580-142691-6 Date Collected: 08/05/24 12:30 Matrix: Solid Date Received: 08/06/24 14:10 Percent Solids: 90.7

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.020 0.0049 mg/Kg 08/09/24 14:22 08/10/24 04:48 0.039 ND 1.1.1-Trichloroethane 0.0045 mg/Kg 08/09/24 14:22 08/10/24 04:48 1,1,2,2-Tetrachloroethane ND 0.020 0.0074 mg/Kg 08/09/24 14:22 08/10/24 04:48 08/09/24 14:22 1,1,2-Trichloroethane ND 0.020 0.0072 mg/Kg 08/10/24 04:48 0.0090 mg/Kg 08/09/24 14:22 08/10/24 04:48 1 1-Dichloroethane ND 0.039 1,1-Dichloroethene ND 0.039 0.012 mg/Kg 08/09/24 14:22 08/10/24 04:48 1,1-Dichloropropene ND 0.039 0.0052 08/09/24 14:22 08/10/24 04:48 mg/Kg ND 0.078 0.039 08/09/24 14:22 08/10/24 04:48 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.039 0.011 mg/Kg 08/09/24 14:22 08/10/24 04:48 1,2,4-Trichlorobenzene ND 0.078 0.042 mg/Kg 08/09/24 14:22 08/10/24 04:48 1,2,4-Trimethylbenzene ND 0.039 0.013 mg/Kg 08/09/24 14:22 08/10/24 04:48 mg/Kg 1.2-Dibromo-3-Chloropropane ND 0.059 0.015 08/09/24 14:22 08/10/24 04:48 1 1,2-Dibromoethane ND 0.020 0.0037 mg/Kg 08/09/24 14:22 08/10/24 04:48 1,2-Dichlorobenzene ND 0.039 0.0085 mg/Kg 08/09/24 14:22 08/10/24 04:48 ND 0.020 0.0054 mg/Kg 08/09/24 14:22 08/10/24 04:48 1.2-Dichloroethane 1,2-Dichloropropane NΩ 0.020 0.0064 mg/Kg 08/09/24 14:22 08/10/24 04:48 1,3,5-Trimethylbenzene ND 0.039 0.0074 mg/Kg 08/09/24 14:22 08/10/24 04:48 1,3-Dichlorobenzene ND 0.059 0.013 mg/Kg 08/09/24 14:22 08/10/24 04:48 0.0055 ND 0.059 mg/Kg 08/09/24 14:22 08/10/24 04:48 1,3-Dichloropropane mg/Kg 1,4-Dichlorobenzene ND 0.059 0.011 08/09/24 14:22 08/10/24 04:48 2,2-Dichloropropane ND 0.039 0.012 mg/Kg ÷ 08/09/24 14:22 08/10/24 04:48 2-Chlorotoluene ND 0.039 0.0086 mg/Kg 08/09/24 14:22 08/10/24 04:48 4-Chlorotoluene ND 0.0096 mg/Kg 08/09/24 14:22 08/10/24 04:48 0.039 4-Isopropyltoluene ND 0.039 0.010 mg/Kg 08/09/24 14:22 08/10/24 04:48 Benzene ND 0.020 0.0037 mg/Kg 08/09/24 14:22 08/10/24 04:48 0.0041 08/09/24 14:22 Bromobenzene ND 0.039 mg/Kg 08/10/24 04:48 Bromochloromethane ND 0.039 0.0060 mg/Kg 08/09/24 14:22 08/10/24 04:48 Bromodichloromethane 0.0054 08/09/24 14:22 ND 0.039 mg/Kg 08/10/24 04:48 0.0044 Bromoform NΩ 0.039 mg/Kg 08/09/24 14:22 08/10/24 04:48 ND 0.037 08/09/24 14:22 08/10/24 04:48 Bromomethane 0.098 mg/Kg Carbon tetrachloride ND 0.020 0.0043 mg/Kg 08/09/24 14:22 08/10/24 04:48 0.039 0.0047 mg/Kg 08/09/24 14:22 08/10/24 04:48 Chlorobenzene 0.51 Chloroethane 0.078 0.020 08/09/24 14:22 08/10/24 04:48 ND mg/Kg Chloroform ND 08/09/24 14:22 08/10/24 04:48 0.020 0.0041 mg/Kg Chloromethane ND 0.059 0.0099 mg/Kg 08/09/24 14:22 08/10/24 04:48 cis-1.2-Dichloroethene ND 0.059 0.012 mg/Kg 08/09/24 14:22 08/10/24 04:48 cis-1,3-Dichloropropene ND 0.020 0.0039 mg/Kg 08/09/24 14:22 08/10/24 04:48 Dibromochloromethane ND 0.020 0.0048 mg/Kg 08/09/24 14:22 08/10/24 04:48 Dibromomethane ND 0.0072 mg/Kg 08/09/24 14:22 0.039 08/10/24 04:48 Dichlorodifluoromethane ND 0.24 0.045 mg/Kg 08/09/24 14:22 08/10/24 04:48 Ethylbenzene ND 0.039 0.0089 mg/Kg 08/09/24 14:22 08/10/24 04:48 Hexachlorobutadiene ND 0.098 0.023 mg/Kg 08/09/24 14:22 08/10/24 04:48 0.0084 ND 08/09/24 14:22 08/10/24 04:48 Isopropylbenzene 0.039 mg/Kg Methyl tert-butyl ether 0.0059 08/09/24 14:22 08/10/24 04:48 ND 0.039 mg/Kg 08/09/24 14:22 08/10/24 04:48 **Methylene Chloride** 0.24 0.025 mg/Kg 0.14 J B m-Xylene & p-Xylene ND 0.039 0.0069 mg/Kg 08/09/24 14:22 08/10/24 04:48 Naphthalene ND 08/09/24 14:22 08/10/24 04:48 0.15 0.038 mg/Kg n-Butylbenzene ND 0.039 0.018 mg/Kg 08/09/24 14:22 08/10/24 04:48 N-Propylbenzene ND 0.039 0.015 mg/Kg 08/09/24 14:22 08/10/24 04:48

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Client Sample ID: DUP-03-SQ-20240805

Lab Sample ID: 580-142691-6 Date Collected: 08/05/24 12:30 **Matrix: Solid** 

Date Received: 08/06/24 14:10 Percent Solids: 90.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.039	0.0049	mg/Kg	<u></u>	08/09/24 14:22	08/10/24 04:48	1
sec-Butylbenzene	ND		0.039	0.0084	mg/Kg	₩	08/09/24 14:22	08/10/24 04:48	1
Styrene	ND		0.039	0.012	mg/Kg	₩	08/09/24 14:22	08/10/24 04:48	1
t-Butylbenzene	ND		0.039	0.0075	mg/Kg	₩	08/09/24 14:22	08/10/24 04:48	1
Tetrachloroethene	ND		0.039	0.0052	mg/Kg	₩	08/09/24 14:22	08/10/24 04:48	1
Toluene	ND		0.059	0.013	mg/Kg	₩	08/09/24 14:22	08/10/24 04:48	1
trans-1,2-Dichloroethene	ND		0.059	0.014	mg/Kg	₩	08/09/24 14:22	08/10/24 04:48	1
trans-1,3-Dichloropropene	ND		0.039	0.0068	mg/Kg	₩	08/09/24 14:22	08/10/24 04:48	1
Trichloroethene	ND		0.039	0.010	mg/Kg	₩	08/09/24 14:22	08/10/24 04:48	1
Vinyl chloride	ND		0.098	0.018	mg/Kg	₽	08/09/24 14:22	08/10/24 04:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101	·	80 - 121				08/09/24 14:22	08/10/24 04:48	1
4-Bromofluorobenzene (Surr)	96		80 - 120				08/09/24 14:22	08/10/24 04:48	1
Dibromofluoromethane (Surr)	103		80 - 120				08/09/24 14:22	08/10/24 04:48	1
Toluene-d8 (Surr)	99		80 - 120				08/09/24 14:22	08/10/24 04:48	1
Method: SW846 8260D - Volat	tile Organic	Compound	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		0.078	0.025	mg/Kg	₽	08/14/24 09:22	08/14/24 16:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 121				08/14/24 09:22	08/14/24 16:15	1
4-Bromofluorobenzene (Surr)	99		80 - 120				08/14/24 09:22	08/14/24 16:15	1
Dibromofluoromethane (Surr)	101		80 - 120				08/14/24 09:22	08/14/24 16:15	1
Toluene-d8 (Surr)	99		80 - 120				08/14/24 09:22	08/14/24 16:15	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	90.7		0.1	0.1	%			08/12/24 10:30	1
Percent Moisture (SM22 2540G)	9.3		0.1	0.1	0/2			08/12/24 10:30	1

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-11-SO-44.5-20240805

Lab Sample ID: 580-142691-7 Date Collected: 08/05/24 14:30 Matrix: Solid Date Received: 08/06/24 14:10 Percent Solids: 90.8

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.021 0.0052 mg/Kg 08/09/24 14:22 08/10/24 05:10 ND 1.1.1-Trichloroethane 0.042 0.0048 mg/Kg 08/09/24 14:22 08/10/24 05:10 1,1,2,2-Tetrachloroethane ND 0.021 0.0080 mg/Kg 08/09/24 14:22 08/10/24 05:10 ND 08/09/24 14:22 1,1,2-Trichloroethane 0.021 0.0078 mg/Kg 08/10/24 05:10 0.042 0.0097 mg/Kg 08/09/24 14:22 08/10/24 05:10 1.1-Dichloroethane ND 1,1-Dichloroethene ND 0.042 0.013 mg/Kg 08/09/24 14:22 08/10/24 05:10 1,1-Dichloropropene ND 0.042 0.0056 08/09/24 14:22 08/10/24 05:10 mg/Kg ND 0.084 0.042 mg/Kg 08/09/24 14:22 08/10/24 05:10 1,2,3-Trichlorobenzene 1,2,3-Trichloropropane ND 0.042 0.012 mg/Kg 08/09/24 14:22 08/10/24 05:10 1,2,4-Trichlorobenzene ND 0.084 0.045 mg/Kg 08/09/24 14:22 08/10/24 05:10 1,2,4-Trimethylbenzene ND 0.042 0.014 mg/Kg 08/09/24 14:22 08/10/24 05:10 1.2-Dibromo-3-Chloropropane ND 0.063 0.016 ma/Ka 08/09/24 14:22 08/10/24 05:10 1 1,2-Dibromoethane ND 0.021 0.0040 mg/Kg 08/09/24 14:22 08/10/24 05:10 1,2-Dichlorobenzene ND 0.042 0.0091 mg/Kg 08/09/24 14:22 08/10/24 05:10 ND 0.021 0.0058 mg/Kg 08/09/24 14:22 08/10/24 05:10 1.2-Dichloroethane 0.0069 1,2-Dichloropropane NΩ 0.021 mg/Kg 08/09/24 14:22 08/10/24 05:10 ND 1,3,5-Trimethylbenzene 0.042 0.0080 mg/Kg 08/09/24 14:22 08/10/24 05:10 1,3-Dichlorobenzene ND 0.063 0.014 mg/Kg 08/09/24 14:22 08/10/24 05:10 ND 0.063 0.0059 mg/Kg 08/09/24 14:22 08/10/24 05:10 1,3-Dichloropropane mg/Kg 1,4-Dichlorobenzene ND 0.063 0.011 08/09/24 14:22 08/10/24 05:10 2,2-Dichloropropane ND 0.042 0.013 mg/Kg ÷ 08/09/24 14:22 08/10/24 05:10 2-Chlorotoluene ND 0.042 0.0092 mg/Kg 08/09/24 14:22 08/10/24 05:10 4-Chlorotoluene ND 0.042 0.010 mg/Kg 08/09/24 14:22 08/10/24 05:10 4-Isopropyltoluene ND 0.042 0.011 mg/Kg 08/09/24 14:22 08/10/24 05:10 Benzene ND 0.021 0.0040 mg/Kg 08/09/24 14:22 08/10/24 05:10 0.0044 08/09/24 14:22 Bromobenzene ND 0.042 mg/Kg 08/10/24 05:10 Bromochloromethane ND 0.042 0.0065 mg/Kg 08/09/24 14:22 08/10/24 05:10 Bromodichloromethane 0.0058 08/09/24 14:22 ND 0.042 mg/Kg 08/10/24 05:10 0.0047 Bromoform NΩ 0.042 mg/Kg 08/09/24 14:22 08/10/24 05:10 ND 0.040 08/09/24 14:22 Bromomethane 0.10 mg/Kg 08/10/24 05:10 Carbon tetrachloride ND 0.021 0.0046 mg/Kg 08/09/24 14:22 08/10/24 05:10 0.042 0.0050 mg/Kg 08/09/24 14:22 08/10/24 05:10 Chlorobenzene 0.13 Chloroethane 0.084 0.022 mg/Kg 08/09/24 14:22 08/10/24 05:10 ND Chloroform ND 08/09/24 14:22 08/10/24 05:10 0.021 0.0044 mg/Kg Chloromethane ND 0.063 0.011 mg/Kg 08/09/24 14:22 08/10/24 05:10 cis-1.2-Dichloroethene ND 0.063 0.013 mg/Kg 08/09/24 14:22 08/10/24 05:10 cis-1,3-Dichloropropene ND 0.021 0.0042 mg/Kg 08/09/24 14:22 08/10/24 05:10 Dibromochloromethane ND 0.021 0.0051 mg/Kg 08/09/24 14:22 08/10/24 05:10 Dibromomethane ND 0.0078 mg/Kg 08/09/24 14:22 0.042 08/10/24 05:10 Dichlorodifluoromethane ND 0.26 0.048 mg/Kg 08/09/24 14:22 08/10/24 05:10 Ethylbenzene ND 0.042 0.0096 mg/Kg 08/09/24 14:22 08/10/24 05:10 Hexachlorobutadiene ND 0.10 0.025 mg/Kg 08/09/24 14:22 08/10/24 05:10 0.0090 ND 08/09/24 14:22 08/10/24 05:10 Isopropylbenzene 0.042 mg/Kg Methyl tert-butyl ether 0.042 0.0063 08/09/24 14:22 08/10/24 05:10 ND mg/Kg **Methylene Chloride** 0.26 0.027 mg/Kg 08/09/24 14:22 08/10/24 05:10 0.15 J B m-Xylene & p-Xylene ND 0.042 0.0075 mg/Kg 08/09/24 14:22 08/10/24 05:10 Naphthalene ND 08/09/24 14:22 0.16 0.041 mg/Kg 08/10/24 05:10 n-Butylbenzene ND 0.042 0.019 mg/Kg 08/09/24 14:22 08/10/24 05:10 N-Propylbenzene ND 0.042 0.016 mg/Kg 08/09/24 14:22 08/10/24 05:10

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-11-SO-44.5-20240805

Date Collected: 08/05/24 14:30 Date Received: 08/06/24 14:10

Analyte

Percent Solids (SM22 2540G)

Percent Moisture (SM22 2540G)

Lab Sample ID: 580-142691-7

Matrix: Solid

Percent Solids: 90.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.042	0.0052	mg/Kg	<u></u>	08/09/24 14:22	08/10/24 05:10	1
sec-Butylbenzene	ND		0.042	0.0090	mg/Kg	☼	08/09/24 14:22	08/10/24 05:10	1
Styrene	ND		0.042	0.013	mg/Kg	₽	08/09/24 14:22	08/10/24 05:10	1
t-Butylbenzene	ND		0.042	0.0081	mg/Kg	☼	08/09/24 14:22	08/10/24 05:10	1
Tetrachloroethene	ND		0.042	0.0056	mg/Kg	☼	08/09/24 14:22	08/10/24 05:10	1
Toluene	ND		0.063	0.014	mg/Kg	₽	08/09/24 14:22	08/10/24 05:10	1
trans-1,2-Dichloroethene	ND		0.063	0.015	mg/Kg	☼	08/09/24 14:22	08/10/24 05:10	1
trans-1,3-Dichloropropene	ND		0.042	0.0073	mg/Kg	☼	08/09/24 14:22	08/10/24 05:10	1
Trichloroethene	ND		0.042	0.011	mg/Kg	₽	08/09/24 14:22	08/10/24 05:10	1
Vinyl chloride	ND		0.10	0.020	mg/Kg	₩	08/09/24 14:22	08/10/24 05:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				08/09/24 14:22	08/10/24 05:10	1
4-Bromofluorobenzene (Surr)	98		80 - 120				08/09/24 14:22	08/10/24 05:10	1
Dibromofluoromethane (Surr)	100		80 - 120				08/09/24 14:22	08/10/24 05:10	1
Toluene-d8 (Surr)	101		80 - 120				08/09/24 14:22	08/10/24 05:10	
Method: SW846 8260D - Vo	olatile Organic	Compound	ds by GC/MS	- RA					
Analyte	_	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		0.084	0.027	mg/Kg	☆	08/14/24 09:22	08/14/24 16:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		80 - 121				08/14/24 09:22	08/14/24 16:37	1
4-Bromofluorobenzene (Surr)	100		80 - 120				08/14/24 09:22	08/14/24 16:37	1
Dibromofluoromethane (Surr)	105		80 - 120				08/14/24 09:22	08/14/24 16:37	1
							08/14/24 09:22		

RL

0.1

0.1

RL Unit

0.1 %

0.1 %

D

Prepared

Result Qualifier

90.8

9.3

8/21/2024

Dil Fac

Analyzed

08/12/24 10:30

08/12/24 10:30

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-11-SO-49-20240805

Lab Sample ID: 580-142691-8 Date Collected: 08/05/24 14:35 Matrix: Solid Date Received: 08/06/24 14:10 Percent Solids: 88.4

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.022 0.0056 mg/Kg 08/09/24 14:22 08/10/24 05:32 ND 1.1.1-Trichloroethane 0.045 0.0051 mg/Kg 08/09/24 14:22 08/10/24 05:32 1,1,2,2-Tetrachloroethane ND 0.022 0.0085 mg/Kg 08/09/24 14:22 08/10/24 05:32 ND 08/09/24 14:22 1,1,2-Trichloroethane 0.022 0.0082 mg/Kg 08/10/24 05:32 0.045 0.010 mg/Kg 08/09/24 14:22 08/10/24 05:32 1 1-Dichloroethane ND 1,1-Dichloroethene ND 0.045 0.014 mg/Kg 08/09/24 14:22 08/10/24 05:32 1,1-Dichloropropene ND 0.045 0.0059 08/09/24 14:22 08/10/24 05:32 mg/Kg ND 0.089 0.044 08/09/24 14:22 08/10/24 05:32 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.045 0.013 mg/Kg 08/09/24 14:22 08/10/24 05:32 1,2,4-Trichlorobenzene ND 0.089 0.047 mg/Kg 08/09/24 14:22 08/10/24 05:32 1,2,4-Trimethylbenzene ND 0.045 0.015 mg/Kg 08/09/24 14:22 08/10/24 05:32 1.2-Dibromo-3-Chloropropane ND 0.067 0.017 mg/Kg 08/09/24 14:22 08/10/24 05:32 1 1,2-Dibromoethane ND 0.022 0.0042 mg/Kg 08/09/24 14:22 08/10/24 05:32 1,2-Dichlorobenzene ND 0.045 0.0097 mg/Kg 08/09/24 14:22 08/10/24 05:32 ND 0.022 0.0061 mg/Kg 08/09/24 14:22 08/10/24 05:32 1.2-Dichloroethane 0.0073 1,2-Dichloropropane NΩ 0.022 mg/Kg 08/09/24 14:22 08/10/24 05:32 0.0085 1,3,5-Trimethylbenzene ND 0.045 mg/Kg 08/09/24 14:22 08/10/24 05:32 1,3-Dichlorobenzene ND 0.067 0.015 mg/Kg 08/09/24 14:22 08/10/24 05:32 ND 0.067 0.0062 mg/Kg 08/09/24 14:22 08/10/24 05:32 1,3-Dichloropropane mg/Kg 1,4-Dichlorobenzene ND 0.067 0.012 08/09/24 14:22 08/10/24 05:32 2,2-Dichloropropane ND 0.045 0.013 mg/Kg ÷ 08/09/24 14:22 08/10/24 05:32 2-Chlorotoluene ND 0.045 0.0098 mg/Kg 08/09/24 14:22 08/10/24 05:32 0.011 4-Chlorotoluene ND 08/09/24 14:22 08/10/24 05:32 0.045 mg/Kg 4-Isopropyltoluene ND 0.045 0.011 mg/Kg 08/09/24 14:22 08/10/24 05:32 Benzene ND 0.022 0.0042 mg/Kg 08/09/24 14:22 08/10/24 05:32 0.0047 08/09/24 14:22 Bromobenzene ND 0.045 mg/Kg 08/10/24 05:32 Bromochloromethane ND 0.045 0.0069 mg/Kg 08/09/24 14:22 08/10/24 05:32 Bromodichloromethane 0.0061 08/09/24 14:22 ND 0.045 mg/Kg 08/10/24 05:32 0.0050 Bromoform NΩ 0.045 mg/Kg 08/09/24 14:22 08/10/24 05:32 ND 0.042 mg/Kg 08/09/24 14:22 08/10/24 05:32 Bromomethane 0.11 Carbon tetrachloride ND 0.022 0.0049 mg/Kg 08/09/24 14:22 08/10/24 05:32 0.045 0.0053 mg/Kg 08/09/24 14:22 08/10/24 05:32 0.057 Chlorobenzene Chloroethane 0.089 0.023 08/09/24 14:22 08/10/24 05:32 ND mg/Kg Chloroform ND 08/09/24 14:22 08/10/24 05:32 0.022 0.0047 mg/Kg Chloromethane ND 0.067 0.011 mg/Kg 08/09/24 14:22 08/10/24 05:32 cis-1.2-Dichloroethene ND 0.067 0.014 mg/Kg 08/09/24 14:22 08/10/24 05:32 cis-1,3-Dichloropropene ND 0.022 0.0045 mg/Kg 08/09/24 14:22 08/10/24 05:32 Dibromochloromethane ND 0.022 0.0055 mg/Kg 08/09/24 14:22 08/10/24 05:32 Dibromomethane ND 0.0082 mg/Kg 08/09/24 14:22 08/10/24 05:32 0.045 Dichlorodifluoromethane ND 0.28 0.051 mg/Kg 08/09/24 14:22 08/10/24 05:32 Ethylbenzene ND 0.045 0.010 mg/Kg 08/09/24 14:22 08/10/24 05:32 Hexachlorobutadiene ND 0 11 0.027 mg/Kg 08/09/24 14:22 08/10/24 05:32 ND 0.0096 08/09/24 14:22 08/10/24 05:32 Isopropylbenzene 0.045 mg/Kg Methyl tert-butyl ether 0.045 0.0067 08/09/24 14:22 08/10/24 05:32 ND mg/Kg 08/09/24 14:22 08/10/24 05:32 **Methylene Chloride** 0.16 0.28 0.029 mg/Kg J B m-Xylene & p-Xylene ND 0.045 0.0079 mg/Kg 08/09/24 14:22 08/10/24 05:32 Naphthalene ND 08/09/24 14:22 08/10/24 05:32 0.17 0.044 mg/Kg n-Butylbenzene ND 0.045 0.021 mg/Kg 08/09/24 14:22 08/10/24 05:32 N-Propylbenzene ND 0.045 0.017 mg/Kg 08/09/24 14:22 08/10/24 05:32

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-11-SO-49-20240805

Date Collected: 08/05/24 14:35

Date Received: 08/06/24 14:10

Lab Sample ID: 580-142691-8

**Matrix: Solid** 

Percent Solids: 88.4

Method: SW846 8260D - Vo	latile Organic	Compound	ds by GC/MS	(Conti	nued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.045	0.0056	mg/Kg	<u></u>	08/09/24 14:22	08/10/24 05:32	1
sec-Butylbenzene	ND		0.045	0.0096	mg/Kg	₩	08/09/24 14:22	08/10/24 05:32	1
Styrene	ND		0.045	0.014	mg/Kg	₩	08/09/24 14:22	08/10/24 05:32	1
t-Butylbenzene	ND		0.045	0.0086	mg/Kg	₩	08/09/24 14:22	08/10/24 05:32	1
Tetrachloroethene	ND		0.045	0.0059	mg/Kg	₩	08/09/24 14:22	08/10/24 05:32	1
Toluene	ND		0.067	0.015	mg/Kg	₩	08/09/24 14:22	08/10/24 05:32	1
trans-1,2-Dichloroethene	ND		0.067	0.016	mg/Kg	₩	08/09/24 14:22	08/10/24 05:32	1
trans-1,3-Dichloropropene	ND		0.045	0.0078	mg/Kg	₩	08/09/24 14:22	08/10/24 05:32	1
Trichloroethene	ND		0.045	0.011	mg/Kg	₩	08/09/24 14:22	08/10/24 05:32	1
Vinyl chloride	ND		0.11	0.021	mg/Kg	☼	08/09/24 14:22	08/10/24 05:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101	-	80 - 121				08/09/24 14:22	08/10/24 05:32	1
4-Bromofluorobenzene (Surr)	100		80 - 120				08/09/24 14:22	08/10/24 05:32	1
Dibromofluoromethane (Surr)	99		80 - 120				08/09/24 14:22	08/10/24 05:32	1
Toluene-d8 (Surr)	100		80 - 120				08/09/24 14:22	08/10/24 05:32	1

Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		0.089	0.029	mg/Kg	₩	08/14/24 09:22	08/14/24 16:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		80 - 121				08/14/24 09:22	08/14/24 16:59	1
4-Bromofluorobenzene (Surr)	99		80 - 120				08/14/24 09:22	08/14/24 16:59	1
Dibromofluoromethane (Surr)	103		80 - 120				08/14/24 09:22	08/14/24 16:59	1
Toluene-d8 (Surr)	100		80 - 120				08/14/24 09:22	08/14/24 16:59	1

General Chemistry							
Analyte	Result Qualifier	RL	RL Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	88.4	0.1	0.1 %			08/12/24 10:30	1
Percent Moisture (SM22 2540G)	11.6	0.1	0.1 %			08/12/24 10:30	1

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Client Sample ID: EB-080524 Lab Sample ID: 580-142691-9

Date Collected: 08/05/24 14:00 Matrix: Water Date Received: 08/06/24 14:10

General Chemistry
Analyte Result Qualifier RL MDL Unit D Prepared Analyzed Dil Fac

Total Organic Carbon (SM 5310C)

1.6

1.5

0.38 mg/L

08/09/24 06:50

1

3

5

6

8

9

10

44

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Client Sample ID: RB-03-WQ-20240806

Lab Sample ID: 580-142691-10

Date Collected: 08/06/24 08:15 **Matrix: Water** Date Received: 08/06/24 14:10

Analyte	Result Qu	alifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Dichlorodifluoromethane	ND	1.0	0.53	ug/L		-	08/08/24 21:38	
Chloromethane	ND	1.0	0.28	ug/L			08/08/24 21:38	
/inyl chloride	ND	1.0	0.22	-			08/08/24 21:38	
Bromomethane	ND	1.0	0.21				08/08/24 21:38	
Chloroethane	ND	1.0	0.35	-			08/08/24 21:38	
Frichlorofluoromethane	ND	1.0	0.36	_			08/08/24 21:38	
1,1-Dichloroethene	ND	1.0	0.28				08/08/24 21:38	
rans-1,2-Dichloroethene	ND	1.0	0.39	-			08/08/24 21:38	
1.1-Dichloroethane	ND	1.0	0.22	-			08/08/24 21:38	
2,2-Dichloropropane	ND	1.0	0.32				08/08/24 21:38	
cis-1,2-Dichloroethene	ND	1.0	0.35	-			08/08/24 21:38	
Bromochloromethane	ND	1.0	0.29	-			08/08/24 21:38	
Chloroform	ND	1.0	0.26				08/08/24 21:38	
1,1,1-Trichloroethane	ND	1.0	0.39	-			08/08/24 21:38	
Carbon tetrachloride	ND	1.0	0.30	-			08/08/24 21:38	
1,1-Dichloropropene	ND	1.0	0.29				08/08/24 21:38	
Benzene	ND	1.0	0.24	-			08/08/24 21:38	
1,2-Dichloroethane	ND	1.0	0.42	-			08/08/24 21:38	
Frichloroethene	ND	1.0	0.26				08/08/24 21:38	
1,2-Dichloropropane	ND	1.0	0.18	-			08/08/24 21:38	
Dibromomethane	ND	1.0	0.10	-			08/08/24 21:38	
Bromodichloromethane	ND	1.0	0.29				08/08/24 21:38	
cis-1,3-Dichloropropene	ND	1.0	0.42				08/08/24 21:38	
Foluene	ND ND	1.0	0.42	-			08/08/24 21:38	
rans-1,3-Dichloropropene	ND	1.0	0.39				08/08/24 21:38	
1,1,2-Trichloroethane	ND ND	1.0		_			08/08/24 21:38	
Fetrachloroethene	ND ND	1.0	0.24 0.41	-			08/08/24 21:38	
,3-Dichloropropane	ND ND	1.0	0.41				08/08/24 21:38	
Dibromochloromethane	ND ND	1.0	0.35	-			08/08/24 21:38	
1,2-Dibromoethane	ND ND	1.0	0.43	-			08/08/24 21:38	
Chlorobenzene Ethylbenzene	ND	1.0	0.44	-			08/08/24 21:38	
•	ND	1.0	0.50	-			08/08/24 21:38	
1,1,1,2-Tetrachloroethane	ND	1.0	0.18				08/08/24 21:38	
1,1,2,2-Tetrachloroethane	ND	1.0	0.52				08/08/24 21:38	
m-Xylene & p-Xylene	ND	2.0	0.53	-			08/08/24 21:38	
o-Xylene	ND	1.0	0.39				08/08/24 21:38	
Styrene	ND	1.0	0.53				08/08/24 21:38	
Bromoform 	ND	1.0		ug/L			08/08/24 21:38	
sopropylbenzene	ND	1.0		ug/L			08/08/24 21:38	
Bromobenzene	ND	1.0	0.43				08/08/24 21:38	
N-Propylbenzene	ND	1.0		ug/L			08/08/24 21:38	
1,2,3-Trichloropropane	ND	1.0		ug/L			08/08/24 21:38	
2-Chlorotoluene	ND	1.0	0.51				08/08/24 21:38	
1,3,5-Trimethylbenzene	ND	1.0	0.55	-			08/08/24 21:38	
4-Chlorotoluene	ND	1.0	0.38				08/08/24 21:38	
-Butylbenzene	ND	2.0		ug/L			08/08/24 21:38	
1,2,4-Trimethylbenzene	ND	3.0	0.61	_			08/08/24 21:38	
sec-Butylbenzene	ND	1.0	0.49	ug/L			08/08/24 21:38	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Client Sample ID: RB-03-WQ-20240806

Date Collected: 08/06/24 08:15

Lab Sample ID: 580-142691-10

**Matrix: Water** 

Date Received: 08/06/24 14:10

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Isopropyltoluene	ND		1.0	0.28	ug/L			08/08/24 21:38	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			08/08/24 21:38	1
n-Butylbenzene	ND		1.0	0.44	ug/L			08/08/24 21:38	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			08/08/24 21:38	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			08/08/24 21:38	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			08/08/24 21:38	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			08/08/24 21:38	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			08/08/24 21:38	1
Naphthalene	ND		3.0	0.93	ug/L			08/08/24 21:38	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			08/08/24 21:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120			-		08/08/24 21:38	1
4-Bromofluorobenzene (Surr)	99		80 - 120					08/08/24 21:38	1
Dibromofluoromethane (Surr)	105		80 - 120					08/08/24 21:38	1
1,2-Dichloroethane-d4 (Surr)	107		80 - 120					08/08/24 21:38	1
Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		5.0	1.4	ug/L			08/10/24 00:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		80 - 120					08/10/24 00:15	1
4-Bromofluorobenzene (Surr)	96		80 - 120					08/10/24 00:15	1
Dibromofluoromethane (Surr)	103		80 - 120					08/10/24 00:15	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 120					08/10/24 00:15	1

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-12-SO-36-20240806

Lab Sample ID: 580-142691-11 Date Collected: 08/06/24 10:00 Matrix: Solid Date Received: 08/06/24 14:10 Percent Solids: 91.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.019 0.0048 mg/Kg 08/09/24 14:22 08/10/24 02:16 0.039 ND 1.1.1-Trichloroethane 0.0044 mg/Kg 08/09/24 14:22 08/10/24 02:16 1,1,2,2-Tetrachloroethane ND 0.019 0.0073 mg/Kg 08/09/24 14:22 08/10/24 02:16 ND 0.0071 08/09/24 14:22 1,1,2-Trichloroethane 0.019 mg/Kg 08/10/24 02:16 ND 0.039 0.0089 mg/Kg 08/09/24 14:22 08/10/24 02:16 1.1-Dichloroethane 1,1-Dichloroethene ND 0.039 0.012 mg/Kg 08/09/24 14:22 08/10/24 02:16 1,1-Dichloropropene ND 0.039 0.0051 08/09/24 14:22 08/10/24 02:16 mg/Kg ND 0.077 0.038 08/09/24 14:22 08/10/24 02:16 1,2,3-Trichlorobenzene F2 mg/Kg 1,2,3-Trichloropropane ND 0.039 0.011 mg/Kg 08/09/24 14:22 08/10/24 02:16 1,2,4-Trichlorobenzene ND F2 0.077 0.041 mg/Kg 08/09/24 14:22 08/10/24 02:16 1,2,4-Trimethylbenzene ND 0.039 0.013 mg/Kg 08/09/24 14:22 08/10/24 02:16 1.2-Dibromo-3-Chloropropane ND 0.058 0.015 ma/Ka 08/09/24 14:22 08/10/24 02:16 1 1,2-Dibromoethane ND 0.019 0.0037 mg/Kg 08/09/24 14:22 08/10/24 02:16 1,2-Dichlorobenzene ND 0.039 0.0084 mg/Kg 08/09/24 14:22 08/10/24 02:16 ND 0.019 0.0053 mg/Kg 08/09/24 14:22 08/10/24 02:16 1.2-Dichloroethane 0.0064 1,2-Dichloropropane NΩ 0.019 mg/Kg 08/09/24 14:22 08/10/24 02:16 0.0073 1,3,5-Trimethylbenzene ND 0.039 mg/Kg 08/09/24 14:22 08/10/24 02:16 1,3-Dichlorobenzene ND 0.058 0.013 mg/Kg 08/09/24 14:22 08/10/24 02:16 1,3-Dichloropropane ND 0.058 0.0054 mg/Kg 08/09/24 14:22 08/10/24 02:16 mg/Kg 1,4-Dichlorobenzene ND 0.058 0.010 08/09/24 14:22 08/10/24 02:16 0.012 2,2-Dichloropropane ND F1 0.039 mg/Kg ÷ 08/09/24 14:22 08/10/24 02:16 2-Chlorotoluene ND 0.039 0.0085 mg/Kg 08/09/24 14:22 08/10/24 02:16 4-Chlorotoluene ND 0.0094 mg/Kg 08/09/24 14:22 08/10/24 02:16 0.039 4-Isopropyltoluene ND 0.039 0.0098 mg/Kg 08/09/24 14:22 08/10/24 02:16 Benzene ND 0.019 0.0037 mg/Kg 08/09/24 14:22 08/10/24 02:16 ND 0.0040 08/09/24 14:22 Bromobenzene 0.039 mg/Kg 08/10/24 02:16 Bromochloromethane ND 0.039 0.0060 mg/Kg 08/09/24 14:22 08/10/24 02:16 Bromodichloromethane 0.0053 08/09/24 14:22 ND 0.039 mg/Kg 08/10/24 02:16 0.0043 Bromoform ND 0.039 mg/Kg 08/09/24 14:22 08/10/24 02:16 0.036 ND 08/09/24 14:22 08/10/24 02:16 Bromomethane 0.096 mg/Kg Carbon tetrachloride ND 0.019 0.0042 mg/Kg 08/09/24 14:22 08/10/24 02:16 0.039 0.0046 mg/Kg 08/09/24 14:22 08/10/24 02:16 Chlorobenzene 1.3 Chloroethane 0.077 0.020 mg/Kg 08/09/24 14:22 08/10/24 02:16 ND Chloroform ND 08/09/24 14:22 08/10/24 02:16 0.019 0.0040 mg/Kg Chloromethane ND 0.058 0.0097 mg/Kg 08/09/24 14:22 08/10/24 02:16 cis-1.2-Dichloroethene ND 0.058 0.012 mg/Kg 08/09/24 14:22 08/10/24 02:16 cis-1,3-Dichloropropene ND 0.019 0.0039 mg/Kg 08/09/24 14:22 08/10/24 02:16 Dibromochloromethane ND 0.019 0.0047 mg/Kg 08/09/24 14:22 08/10/24 02:16 Dibromomethane ND 0.0071 mg/Kg 08/09/24 14:22 08/10/24 02:16 0.039 Dichlorodifluoromethane ND 0.24 0.044 mg/Kg 08/09/24 14:22 08/10/24 02:16 Ethylbenzene ND 0.039 0.0088 mg/Kg 08/09/24 14:22 08/10/24 02:16 Hexachlorobutadiene ND 0.096 0.023 mg/Kg 08/09/24 14:22 08/10/24 02:16 0.0083 ND 08/09/24 14:22 08/10/24 02:16 Isopropylbenzene 0.039 mg/Kg Methyl tert-butyl ether 0.039 0.0058 08/09/24 14:22 08/10/24 02:16 ND mg/Kg 08/09/24 14:22 08/10/24 02:16 **Methylene Chloride** JB 0.24 0.025 mg/Kg 0.14 m-Xylene & p-Xylene 0.039 0.0068 mg/Kg 08/09/24 14:22 08/10/24 02:16 ND Naphthalene ND F2 08/09/24 14:22 08/10/24 02:16 0.14 0.038 mg/Kg n-Butylbenzene ND 0.039 0.018 mg/Kg 08/09/24 14:22 08/10/24 02:16 N-Propylbenzene ND 0.039 0.014 mg/Kg 08/09/24 14:22 08/10/24 02:16

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Date Received: 08/06/24 14:10

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-12-SO-36-20240806

Lab Sample ID: 580-142691-11 Date Collected: 08/06/24 10:00

**Matrix: Solid** Percent Solids: 91.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.039	0.0048	mg/Kg	— <u>-</u>	08/09/24 14:22	08/10/24 02:16	1
sec-Butylbenzene	ND		0.039	0.0083	mg/Kg	☆	08/09/24 14:22	08/10/24 02:16	1
Styrene	ND		0.039	0.012	mg/Kg		08/09/24 14:22	08/10/24 02:16	1
t-Butylbenzene	ND		0.039	0.0074		☼	08/09/24 14:22	08/10/24 02:16	1
Tetrachloroethene	ND		0.039	0.0051	mg/Kg	₩	08/09/24 14:22	08/10/24 02:16	1
Toluene	ND		0.058	0.013	mg/Kg	₩	08/09/24 14:22	08/10/24 02:16	1
trans-1,2-Dichloroethene	ND		0.058	0.014	mg/Kg	☼	08/09/24 14:22	08/10/24 02:16	1
trans-1,3-Dichloropropene	ND		0.039	0.0067		₩	08/09/24 14:22	08/10/24 02:16	1
Trichloroethene	ND		0.039	0.0099	mg/Kg	₩	08/09/24 14:22	08/10/24 02:16	1
Vinyl chloride	ND		0.096	0.018	mg/Kg	₩	08/09/24 14:22	08/10/24 02:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				08/09/24 14:22	08/10/24 02:16	1
4-Bromofluorobenzene (Surr)	97		80 - 120				08/09/24 14:22	08/10/24 02:16	1
Dibromofluoromethane (Surr)	99		80 - 120				08/09/24 14:22	08/10/24 02:16	1
Toluene-d8 (Surr)	101		80 - 120				08/09/24 14:22	08/10/24 02:16	1
- Method: SW846 8260D - Vol	atile Organic	Compound	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		0.077	0.025	mg/Kg	☆	08/14/24 09:22	08/14/24 12:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		80 - 121				08/14/24 09:22	08/14/24 12:45	1
4-Bromofluorobenzene (Surr)	98		80 - 120				08/14/24 09:22	08/14/24 12:45	1
Dibromofluoromethane (Surr)	104		80 - 120				08/14/24 09:22	08/14/24 12:45	1
Toluene-d8 (Surr)	99		80 - 120				08/14/24 09:22	08/14/24 12:45	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	91.9		0.1	0.1	%			08/12/24 10:32	1

0.1

8.1

0.1 %

08/12/24 10:32

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Client Sample ID: TB-01-WQ-20240806

Lab Sample ID: 580-142691-12

Date Collected: 08/06/24 00:01 **Matrix: Water** Date Received: 08/06/24 14:10

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND	1.0		ug/L			08/08/24 15:09	1
Chloromethane	ND	1.0	0.28	ug/L			08/08/24 15:09	1
Vinyl chloride	ND	1.0	0.22	ug/L			08/08/24 15:09	1
Bromomethane	ND	1.0	0.21	ug/L			08/08/24 15:09	1
Chloroethane	ND	1.0	0.35	ug/L			08/08/24 15:09	1
Trichlorofluoromethane	ND	1.0	0.36	ug/L			08/08/24 15:09	1
1,1-Dichloroethene	ND	1.0	0.28	ug/L			08/08/24 15:09	1
Methylene Chloride	ND *-	5.0	1.4	ug/L			08/08/24 15:09	1
trans-1,2-Dichloroethene	ND	1.0	0.39	ug/L			08/08/24 15:09	1
1,1-Dichloroethane	ND	1.0	0.22	ug/L			08/08/24 15:09	1
2,2-Dichloropropane	ND	1.0	0.32	ug/L			08/08/24 15:09	1
cis-1,2-Dichloroethene	ND	1.0		ug/L			08/08/24 15:09	1
Bromochloromethane	ND	1.0		ug/L			08/08/24 15:09	1
Chloroform	ND	1.0		ug/L			08/08/24 15:09	1
1,1,1-Trichloroethane	ND	1.0		ug/L			08/08/24 15:09	1
Carbon tetrachloride	ND	1.0		ug/L			08/08/24 15:09	1
1,1-Dichloropropene	ND	1.0		ug/L			08/08/24 15:09	1
Benzene	ND	1.0		ug/L			08/08/24 15:09	1
1,2-Dichloroethane	ND	1.0		ug/L			08/08/24 15:09	
Trichloroethene	ND	1.0		ug/L			08/08/24 15:09	1
1,2-Dichloropropane	ND	1.0		ug/L			08/08/24 15:09	1
Dibromomethane	ND	1.0		ug/L ug/L			08/08/24 15:09	
Bromodichloromethane	ND	1.0		ug/L ug/L			08/08/24 15:09	
				-				1
cis-1,3-Dichloropropene	ND	1.0		ug/L			08/08/24 15:09	1
Toluene	ND	1.0		ug/L			08/08/24 15:09	1
trans-1,3-Dichloropropene	ND	1.0		ug/L			08/08/24 15:09	1
1,1,2-Trichloroethane	ND	1.0		ug/L			08/08/24 15:09	1
Tetrachloroethene	ND	1.0		ug/L			08/08/24 15:09	1
1,3-Dichloropropane	ND	1.0		ug/L			08/08/24 15:09	1
Dibromochloromethane	ND	1.0		ug/L			08/08/24 15:09	1
1,2-Dibromoethane	ND	1.0		ug/L			08/08/24 15:09	1
Chlorobenzene	ND	1.0		ug/L			08/08/24 15:09	1
Ethylbenzene	ND	1.0		ug/L			08/08/24 15:09	1
1,1,1,2-Tetrachloroethane	ND	1.0		ug/L			08/08/24 15:09	1
1,1,2,2-Tetrachloroethane	ND	1.0		ug/L			08/08/24 15:09	1
m-Xylene & p-Xylene	ND	2.0	0.53	ug/L			08/08/24 15:09	1
o-Xylene	ND	1.0		ug/L			08/08/24 15:09	1
Styrene	ND	1.0		ug/L			08/08/24 15:09	1
Bromoform	ND	1.0	0.51	ug/L			08/08/24 15:09	1
Isopropylbenzene	ND	1.0	0.44	ug/L			08/08/24 15:09	1
Bromobenzene	ND	1.0	0.43	ug/L			08/08/24 15:09	1
N-Propylbenzene	ND	1.0	0.50	ug/L			08/08/24 15:09	1
1,2,3-Trichloropropane	ND	1.0	0.41	ug/L			08/08/24 15:09	1
2-Chlorotoluene	ND	1.0	0.51	ug/L			08/08/24 15:09	1
1,3,5-Trimethylbenzene	ND	1.0	0.55	ug/L			08/08/24 15:09	1
4-Chlorotoluene	ND	1.0		ug/L			08/08/24 15:09	1
t-Butylbenzene	ND	2.0		ug/L			08/08/24 15:09	1
1,2,4-Trimethylbenzene	ND	3.0		ug/L			08/08/24 15:09	1
sec-Butylbenzene	ND	1.0		ug/L			08/08/24 15:09	1

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Client Sample ID: TB-01-WQ-20240806

Lab Sample ID: 580-142691-12 Date Collected: 08/06/24 00:01

**Matrix: Water** 

Date Received: 08/06/24 14:10

Method: SW846 8260D - Vo Analyte	_	Qualifier	RL	•	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	— ND		1.0		ug/L	= .		08/08/24 15:09	1
4-Isopropyltoluene	ND		1.0	0.28	•			08/08/24 15:09	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			08/08/24 15:09	1
n-Butylbenzene	ND		1.0	0.44	ug/L			08/08/24 15:09	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			08/08/24 15:09	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			08/08/24 15:09	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			08/08/24 15:09	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			08/08/24 15:09	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			08/08/24 15:09	1
Naphthalene	ND		3.0	0.93	ug/L			08/08/24 15:09	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			08/08/24 15:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		80 - 120					08/08/24 15:09	1
4-Bromofluorobenzene (Surr)	100		80 - 120					08/08/24 15:09	1
Dibromofluoromethane (Surr)	105		80 - 120					08/08/24 15:09	1
1,2-Dichloroethane-d4 (Surr)	107		80 - 120					08/08/24 15:09	1

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Date Collected: 08/02/24 11:55

Matrix: Water

Date Received: 08/06/24 14:10

General Chemistry								
Analyte	Result Qua	lifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310C)	5.6	1.5	0.38	mg/L			08/20/24 22:09	1

2

6

8

9

10

44

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Date Collected: 08/02/24 14:45

Date Received: 08/06/24 14:10

General Chemistry								
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310C)	17	1.5	0.38	mg/L			08/21/24 00:31	1

9

1

6

8

9

10

44

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

# Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-467579/7

**Matrix: Water** 

**Analysis Batch: 467579** 

ent Sample ID: Method Blank	
Prep Type: Total/NA	

Amalusta	MB		D.	BADI	l lmi4	_	Duamana a'	A mal	DU E
Analyte		Qualifier	RL _	MDL		<u>D</u> .	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.0		ug/L			08/08/24 13:51	1
1,1-Dichloroethane	ND		1.0		ug/L			08/08/24 13:51	1
1,1,1-Trichloroethane	ND		1.0		ug/L			08/08/24 13:51	1
1,1-Dichloropropene	ND		1.0		ug/L			08/08/24 13:51	1
1,2-Dichloroethane	ND		1.0		ug/L			08/08/24 13:51	1
1,2-Dichloropropane	ND		1.0		ug/L			08/08/24 13:51	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			08/08/24 13:51	1
Benzene	ND		1.0	0.24	ug/L			08/08/24 13:51	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			08/08/24 13:51	1
Bromochloromethane	ND		1.0	0.29	ug/L			08/08/24 13:51	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			08/08/24 13:51	1
Bromodichloromethane	ND		1.0	0.29	ug/L			08/08/24 13:51	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			08/08/24 13:51	1
Bromomethane	ND		1.0	0.21	ug/L			08/08/24 13:51	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			08/08/24 13:51	1
Chlorobenzene	ND		1.0	0.44	ug/L			08/08/24 13:51	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			08/08/24 13:51	1
Chloroethane	ND		1.0		ug/L			08/08/24 13:51	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			08/08/24 13:51	1
Chloroform	ND		1.0		ug/L			08/08/24 13:51	1
Chloromethane	ND		1.0		ug/L			08/08/24 13:51	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			08/08/24 13:51	
cis-1,3-Dichloropropene	ND		1.0		ug/L			08/08/24 13:51	1
Bromoform	ND		1.0		ug/L			08/08/24 13:51	1
Dibromochloromethane	ND		1.0		ug/L			08/08/24 13:51	' 1
Bromobenzene	ND		1.0		ug/L			08/08/24 13:51	1
	ND ND				-				
Dibromomethane			1.0		ug/L			08/08/24 13:51	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/08/24 13:51	1
1,2,3-Trichloropropane	ND		1.0		ug/L			08/08/24 13:51	1
Ethylbenzene	ND		1.0		ug/L			08/08/24 13:51	
2-Chlorotoluene	ND		1.0		ug/L			08/08/24 13:51	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			08/08/24 13:51	1
Isopropylbenzene	ND		1.0		ug/L			08/08/24 13:51	1
4-Chlorotoluene	ND		1.0		ug/L			08/08/24 13:51	1
Methylene Chloride	ND		5.0		ug/L			08/08/24 13:51	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			08/08/24 13:51	1
m-Xylene & p-Xylene	ND		2.0		ug/L			08/08/24 13:51	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			08/08/24 13:51	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			08/08/24 13:51	1
N-Propylbenzene	ND		1.0	0.50	ug/L			08/08/24 13:51	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			08/08/24 13:51	1
o-Xylene	ND		1.0	0.39	ug/L			08/08/24 13:51	1
n-Butylbenzene	ND		1.0	0.44	ug/L			08/08/24 13:51	1
sec-Butylbenzene	ND		1.0		ug/L			08/08/24 13:51	1
1,2-Dichlorobenzene	ND		1.0		ug/L			08/08/24 13:51	1
Styrene	ND		1.0		ug/L			08/08/24 13:51	1
1,2-Dibromo-3-Chloropropane	ND		3.0		ug/L			08/08/24 13:51	1
t-Butylbenzene	ND		2.0		ug/L			08/08/24 13:51	1

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

# Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-467579/7

**Matrix: Water** 

**Analysis Batch: 467579** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

Dil Fac
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•
•
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•
1 1 1

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared Analyzed	Dil Fac
Toluene-d8 (Surr)	96	80 - 120	08/08/24 13	51 1
4-Bromofluorobenzene (Surr)	102	80 - 120	08/08/24 13	51 1
Dibromofluoromethane (Surr)	105	80 - 120	08/08/24 13	51 1
1,2-Dichloroethane-d4 (Surr)	106	80 - 120	08/08/24 13	51 1

Lab Sample ID: LCS 580-467579/4

**Matrix: Water** 

Analysis Batch: 467579

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

Analysis Batch: 46/5/9	Cnika	1.00	LCS				%Rec
Analyte	Spike Added		Qualifier	Unit	D	%Rec	Limits
1,1-Dichloroethene		4.93		ug/L	_ <u>-</u>	99	70 - 129
1,1-Dichloroethane	5.00	5.29		ug/L		106	80 - 120
1,1,1-Trichloroethane	5.00	5.31		ug/L		106	74 - 130
1,1-Dichloropropene	5.00	5.47		ug/L		109	74 - 120
1,2-Dichloroethane	5.00	5.59		ug/L		112	69 - 126
1,2-Dichloropropane	5.00	5.45		ug/L		109	80 - 120
2,2-Dichloropropane	5.00	6.00		ug/L		120	66 - 126
Benzene	5.00	5.18		ug/L		104	80 - 122
1,1,2-Trichloroethane	5.00	5.18		ug/L		104	80 - 121
Bromochloromethane	5.00	5.26		ug/L		105	78 - 120
1,3-Dichloropropane	5.00	5.28		ug/L		106	79 - 120
Bromodichloromethane	5.00	5.71		ug/L		114	75 - 124
1,2-Dibromoethane	5.00	5.22		ug/L		104	79 - 126
Bromomethane	5.00	3.97		ug/L		79	36 - 150
Carbon tetrachloride	5.00	5.62		ug/L		112	72 - 129
Chlorobenzene	5.00	5.06		ug/L		101	80 - 120
1,1,1,2-Tetrachloroethane	5.00	5.44		ug/L		109	79 - 120
Chloroethane	5.00	6.06		ug/L		121	38 - 150
1,1,2,2-Tetrachloroethane	5.00	5.36		ug/L		107	74 - 124
Chloroform	5.00	5.29		ug/L		106	78 - 127
Chloromethane	5.00	5.57		ug/L		111	25 - 150
cis-1,2-Dichloroethene	5.00	5.30		ug/L		106	76 - 120
cis-1,3-Dichloropropene	5.00	4.93		ug/L		99	77 - 120
Bromoform	5.00	5.57		ug/L		111	56 - 139

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

# Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-467579/4

**Matrix: Water** 

Analyte

**Analysis Batch: 467579** 

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

LCS LCS Spike %Rec Added Result Qualifier Unit D %Rec Limits

Allalyte	Added	Nesult Qualifie	oint	D /olvec	Lillits	
Dibromochloromethane	5.00	5.29	ug/L	106	73 - 125	
Bromobenzene	5.00	5.00	ug/L	100	80 - 120	
Dibromomethane	5.00	5.50	ug/L	110	80 - 120	
Dichlorodifluoromethane	5.00	6.10	ug/L	122	20 - 150	
1,2,3-Trichloropropane	5.00	5.47	ug/L	109	76 - 124	
Ethylbenzene	5.00	5.30	ug/L	106	80 - 120	
2-Chlorotoluene	5.00	5.26	ug/L	105	80 - 120	
1,3,5-Trimethylbenzene	5.00	5.49	ug/L	110	80 - 122	
Isopropylbenzene	5.00	5.71	ug/L	114	80 - 123	
4-Chlorotoluene	5.00	5.62	ug/L	112	73 - 129	
Methylene Chloride	5.00	3.66 J*-	ug/L	73	77 - 125	
1,2,4-Trimethylbenzene	5.00	5.20	ug/L	104	80 - 120	
m-Xylene & p-Xylene	5.00	5.40	ug/L	108	80 - 120	
1,3-Dichlorobenzene	5.00	5.42	ug/L	108	77 - 127	
4-Isopropyltoluene	5.00	4.87	ug/L	97	77 - 126	
N-Propylbenzene	5.00	5.44	ug/L	109	80 - 122	
1,4-Dichlorobenzene	5.00	5.16	ug/L	103	80 - 120	
o-Xylene	5.00	5.49	ug/L	110	80 - 120	
n-Butylbenzene	5.00	4.92	ug/L	98	57 - 133	
sec-Butylbenzene	5.00	5.15	ug/L	103	78 - 122	
1,2-Dichlorobenzene	5.00	5.37	ug/L	107	80 - 120	
Styrene	5.00	5.33	ug/L	107	76 - 122	
1,2-Dibromo-3-Chloropropane	5.00	5.00	ug/L	100	65 - 133	
t-Butylbenzene	5.00	4.81	ug/L	96	75 - 123	
1,2,4-Trichlorobenzene	5.00	5.29	ug/L	106	61 - 148	
Tetrachloroethene	5.00	4.44	ug/L	89	76 - 125	
1,2,3-Trichlorobenzene	5.00	5.51	ug/L	110	65 - 150	
Toluene	5.00	4.84	ug/L	97	80 - 120	
Hexachlorobutadiene	5.00	4.90	ug/L	98	74 - 131	
Naphthalene	5.00	5.26	ug/L	105	63 - 150	
trans-1,2-Dichloroethene	5.00	5.06	ug/L	101	75 - 120	
trans-1,3-Dichloropropene	5.00	5.46	ug/L	109	76 - 122	
Trichloroethene	5.00	5.13	ug/L	103	80 - 125	
Trichlorofluoromethane	5.00	5.62	ug/L	112	45 - 148	
Methyl tert-butyl ether	5.00	5.67	ug/L	113	72 - 120	
Vinyl chloride	5.00	5.87	ug/L	117	31 - 150	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	96		80 - 120
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	103		80 - 120
1 2-Dichloroethane-d4 (Surr)	103		80 - 120

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-467579/5

**Matrix: Water** 

Analysis Batch: 467579

Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA

	Spike	LCSD	LCSD				%Rec		RF
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Lin
1,1-Dichloroethene	5.00	5.20		ug/L		104	70 - 129	5	
1,1-Dichloroethane	5.00	5.39		ug/L		108	80 - 120	2	
1,1,1-Trichloroethane	5.00	5.46		ug/L		109	74 - 130	3	
1,1-Dichloropropene	5.00	5.60		ug/L		112	74 - 120	2	
1,2-Dichloroethane	5.00	5.76		ug/L		115	69 - 126	3	
1,2-Dichloropropane	5.00	5.46		ug/L		109	80 - 120	0	
2,2-Dichloropropane	5.00	6.02		ug/L		120	66 - 126	0	
Benzene	5.00	5.26		ug/L		105	80 - 122	1	
1,1,2-Trichloroethane	5.00	5.19		ug/L		104	80 - 121	0	
Bromochloromethane	5.00	5.49		ug/L		110	78 - 120	4	
1,3-Dichloropropane	5.00	5.30		ug/L		106	79 - 120	0	
Bromodichloromethane	5.00	5.78		ug/L		116	75 - 124	1	
1,2-Dibromoethane	5.00	5.26		ug/L		105	79 - 126	1	
, Bromomethane	5.00	4.26		ug/L		85	36 - 150	7	
Carbon tetrachloride	5.00	5.86		ug/L		117	72 - 129	4	
Chlorobenzene	5.00	5.14		ug/L		103	80 - 120	2	
1,1,1,2-Tetrachloroethane	5.00	5.53		ug/L		111	79 - 120	2	
Chloroethane	5.00	6.01		ug/L		120	38 - 150	1	
1,1,2,2-Tetrachloroethane	5.00	5.59		ug/L		112	74 - 124	4	
Chloroform	5.00	5.45		ug/L		109	78 - 127	3	
Chloromethane	5.00	5.57		ug/L		111	25 - 150	0	
cis-1,2-Dichloroethene	5.00	5.43		ug/L		109	76 - 120	2	
cis-1,3-Dichloropropene	5.00	4.98		ug/L		100	77 - 120	1	
Bromoform	5.00	5.61		ug/L		112	56 - 139	1	
Dibromochloromethane	5.00	5.36		ug/L		107	73 - 125	1	
Bromobenzene	5.00	5.28		ug/L		106	80 - 120	5	
Dibromomethane	5.00	5.68		ug/L		114	80 - 120	3	
Dichlorodifluoromethane	5.00	6.11		ug/L		122	20 - 150	0	
1,2,3-Trichloropropane	5.00	5.56		ug/L		111	76 - 124	2	
Ethylbenzene	5.00	5.39		ug/L ug/L		108	80 - 120	2	
2-Chlorotoluene	5.00	5.56		ug/L		111	80 - 120	6	
1,3,5-Trimethylbenzene	5.00	5.62		ug/L ug/L		112	80 - 122	2	
Isopropylbenzene	5.00	5.87		ug/L		117	80 - 123	3	
4-Chlorotoluene	5.00	5.90		ug/L		118	73 - 129	5	
Methylene Chloride	5.00	3.84		ug/L ug/L		77	77 <sub>-</sub> 125	5	
1,2,4-Trimethylbenzene	5.00	5.32	J	ug/L		106	80 - 120	2	
m-Xylene & p-Xylene	5.00	5.45		ug/L ug/L		100	80 - 120	1	
1,3-Dichlorobenzene	5.00	5.62		-		112	77 - 127	4	
	5.00	4.99		ug/L		100	77 - 127 77 - 126	2	
4-Isopropyltoluene	5.00	5.57		ug/L		111	80 <sub>-</sub> 122	2	
N-Propylbenzene				ug/L			80 - 122 80 - 120		
1,4-Dichlorobenzene	5.00	5.37		ug/L		107		4	
o-Xylene	5.00	5.61		ug/L		112	80 - 120	2	
n-Butylbenzene	5.00	5.01		ug/L		100	57 - 133	2	
sec-Butylbenzene	5.00	5.24		ug/L		105	78 - 122	2	
1,2-Dichlorobenzene	5.00	5.63		ug/L		113	80 - 120	5	
Styrene	5.00	5.36		ug/L		107	76 - 122	1	
1,2-Dibromo-3-Chloropropane	5.00	5.15		ug/L		103	65 - 133	3	
t-Butylbenzene	5.00	5.00		ug/L		100	75 - 123	4	

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-467579/5

**Matrix: Water** 

Trichloroethene

Vinyl chloride

Trichlorofluoromethane

Methyl tert-butyl ether

**Analysis Batch: 467579** 

**Client Sample ID: Lab Control Sample Dup** 

105

115

118

121

**Prep Type: Total/NA** 

RPD LCSD LCSD Spike %Rec Analyte Added Result Qualifier Unit %Rec Limits RPD Limit 1,2,4-Trichlorobenzene 5.00 5.33 107 61 - 148 27 ug/L Tetrachloroethene 5.00 4.64 ug/L 93 76 - 125 5 13 1,2,3-Trichlorobenzene 5.00 ug/L 65 - 150 33 5.48 110 Toluene 5.00 4.93 ug/L 99 80 - 120 2 13 Hexachlorobutadiene 5.00 4.90 ug/L 98 74 - 131 22 0 Naphthalene 5.00 5.40 ug/L 108 63 - 150 33 trans-1,2-Dichloroethene 5.00 5.20 ug/L 104 75 - 120 3 21 5.00 20 trans-1,3-Dichloropropene 5.60 ug/L 112 76 - 122 2

5.25

5.76

5.90

6.03

ug/L

ug/L

ug/L

ug/L

5.00

5.00

5.00

5.00 LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	96		80 - 120
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	104		80 - 120
1,2-Dichloroethane-d4 (Surr)	104		80 - 120

Lab Sample ID: MB 580-467783/3-A

**Matrix: Solid** 

**Analysis Batch: 467786** 

**Client Sample ID: Method Blank** 

80 - 125

45 - 148

72 - 120

31 - 150

2

2

Prep Type: Total/NA **Prep Batch: 467783** 

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		0.040	0.012	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
1,1-Dichloroethane	ND		0.040	0.0092	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
1,1,1-Trichloroethane	ND		0.040	0.0046	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
1,1-Dichloropropene	ND		0.040	0.0053	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
1,2-Dichloroethane	ND		0.020	0.0055	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
1,2-Dichloropropane	ND		0.020	0.0066	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
2,2-Dichloropropane	ND		0.040	0.012	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
Benzene	ND		0.020	0.0038	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
1,1,2-Trichloroethane	ND		0.020	0.0074	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
Bromochloromethane	ND		0.040	0.0062	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
1,3-Dichloropropane	ND		0.060	0.0056	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
Bromodichloromethane	ND		0.040	0.0055	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
1,2-Dibromoethane	ND		0.020	0.0038	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
Bromomethane	ND		0.10	0.038	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
Carbon tetrachloride	ND		0.020	0.0044	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
Chlorobenzene	ND		0.040	0.0048	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
Chloroethane	ND		0.080	0.021	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
Chloroform	ND		0.020	0.0042	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
Chloromethane	ND		0.060	0.010	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
cis-1,2-Dichloroethene	ND		0.060	0.013	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
cis-1,3-Dichloropropene	ND		0.020	0.0040	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
Bromoform	ND		0.040	0.0045	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
<ul> <li>Control of the control /li></ul>									

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Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-467783/3-A

**Matrix: Solid** 

**Analysis Batch: 467786** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

**Prep Batch: 467783** 

-	MB	MB						-	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		0.020	0.0049	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
Bromobenzene	ND		0.040	0.0042	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
Dibromomethane	ND		0.040	0.0074	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
Dichlorodifluoromethane	ND		0.25	0.046	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
1,2,3-Trichloropropane	ND		0.040	0.012	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
Ethylbenzene	ND		0.040	0.0091	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
2-Chlorotoluene	ND		0.040	0.0088	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
1,3,5-Trimethylbenzene	ND		0.040	0.0076	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
Isopropylbenzene	ND		0.040	0.0086	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
4-Chlorotoluene	ND		0.040	0.0098	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
Methylene Chloride	0.138	J	0.25	0.026	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
1,2,4-Trimethylbenzene	ND		0.040	0.014	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
m-Xylene & p-Xylene	ND		0.040	0.0071	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
1,3-Dichlorobenzene	ND		0.060	0.013	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
4-Isopropyltoluene	ND		0.040	0.010	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
N-Propylbenzene	ND		0.040	0.015	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
1,4-Dichlorobenzene	ND		0.060	0.011	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
o-Xylene	ND		0.040	0.0050	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
n-Butylbenzene	ND		0.040	0.019	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
1,2-Dichlorobenzene	ND		0.040	0.0087	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
Styrene	ND		0.040	0.013	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
1,2-Dibromo-3-Chloropropane	ND		0.060	0.015	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
1,2,4-Trichlorobenzene	ND		0.080	0.043	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
1,2,3-Trichlorobenzene	0.0776	J	0.080	0.040	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
Toluene	ND		0.060	0.014	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
Hexachlorobutadiene	ND		0.10	0.024	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
Naphthalene	ND		0.15	0.039	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
Trichloroethene	ND		0.040	0.010	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
Methyl tert-butyl ether	ND		0.040	0.0060	mg/Kg		08/09/24 14:18	08/09/24 20:51	1
Vinyl chloride	ND		0.10		mg/Kg		08/09/24 14:18	08/09/24 20:51	1
	MR	MB							

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		80 - 120	08/09/24 14:18	08/09/24 20:51	1
4-Bromofluorobenzene (Surr)	98		80 - 120	08/09/24 14:18	08/09/24 20:51	1
Dibromofluoromethane (Surr)	100		80 - 120	08/09/24 14:18	08/09/24 20:51	1
1,2-Dichloroethane-d4 (Surr)	102		80 - 121	08/09/24 14:18	08/09/24 20:51	1

Lab Sample ID: LCS 580-467783/1-A

Matrix: Solid							Prep Type: Total/NA
Analysis Batch: 467786							<b>Prep Batch: 467783</b>
	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1-Dichloroethene	0.800	0.755		mg/Kg		94	73 - 134

**Eurofins Seattle** 

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**Client Sample ID: Lab Control Sample** 

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-467783/1-A

Matrix: Solid

**Analysis Batch: 467786** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 467783** 

Analysis Baton: 407700	Spike	LCS				%Rec	
Analyte	Added		Qualifier	Unit	D	%Rec	Limits
1,1-Dichloroethane	0.800	0.722		mg/Kg	_ =	90	78 - 126
1,1,1-Trichloroethane	0.800	0.775		mg/Kg		97	78 - 135
1,1-Dichloropropene	0.800	0.645		mg/Kg		81	76 - 140
1,2-Dichloroethane	0.800	0.766		mg/Kg		96	76 - 124
1,2-Dichloropropane	0.800	0.702		mg/Kg		88	73 - 130
2,2-Dichloropropane	0.800	0.664		mg/Kg		83	75 - 134
Benzene	0.800	0.785		mg/Kg		98	79 - 135
1,1,2-Trichloroethane	0.800	0.794		mg/Kg		99	80 - 123
Bromochloromethane	0.800	0.722		mg/Kg		90	76 - 131
1,3-Dichloropropane	0.800	0.723		mg/Kg		90	80 - 120
Bromodichloromethane	0.800	0.754		mg/Kg		94	78 <sub>-</sub> 125
1,2-Dibromoethane	0.800	0.783		mg/Kg		98	77 - 123
Bromomethane	0.800	0.703		mg/Kg		102	55 <sub>-</sub> 150
Carbon tetrachloride	0.800	0.655		mg/Kg		82	76 <sub>-</sub> 140
Chlorobenzene	0.800	0.776		mg/Kg		97	80 - 125
1,1,1,2-Tetrachloroethane	0.800	0.770		mg/Kg		99	79 <sub>-</sub> 128
Chloroethane	0.800	0.789		mg/Kg		99	26 <sub>-</sub> 150
1,1,2,2-Tetrachloroethane	0.800	0.769		mg/Kg		106	77 - 122
Chloroform	0.800	0.781		mg/Kg		98	74 - 133
Chloromethane	0.800	0.699				87	52 - 142
cis-1,2-Dichloroethene	0.800	0.706		mg/Kg mg/Kg		88	80 <sub>-</sub> 125
cis-1,3-Dichloropropene	0.800	0.700		mg/Kg		88	80 - 123 80 - 122
Bromoform		0.707				89	71 <sub>-</sub> 130
Dibromochloromethane	0.800 0.800	0.686		mg/Kg		86	71 - 130 75 - 125
Bromobenzene	0.800	0.000		mg/Kg			78 - 126
	0.800	0.799		mg/Kg		100 97	76 - 126 72 - 130
Dibromomethane				mg/Kg			
Dichlorodifluoromethane	0.800	0.804		mg/Kg		101	33 - 150
1,2,3-Trichloropropane	0.800	0.750		mg/Kg		94	77 <sub>-</sub> 127
Ethylbenzene	0.800	0.802		mg/Kg		100	80 - 135
2-Chlorotoluene	0.800	0.807		mg/Kg		101	77 <sub>-</sub> 134
1,3,5-Trimethylbenzene	0.800	0.805		mg/Kg		101	72 - 134
Isopropylbenzene	0.800	0.773		mg/Kg		97	80 - 131
4-Chlorotoluene	0.800	0.725		mg/Kg		91	71 - 137
Methylene Chloride	0.800	0.934		mg/Kg		117	56 - 140
1,2,4-Trimethylbenzene	0.800	0.744		mg/Kg		93	73 - 138
m-Xylene & p-Xylene	0.800	0.785		mg/Kg		98	80 - 132
1,3-Dichlorobenzene	0.800	0.801		mg/Kg		100	78 - 132
4-Isopropyltoluene	0.800	0.755		mg/Kg		94	71 - 142
N-Propylbenzene	0.800	0.721		mg/Kg		90	78 - 133
1,4-Dichlorobenzene	0.800	0.801		mg/Kg		100	77 - 123
o-Xylene	0.800	0.791		mg/Kg		99	80 - 132
n-Butylbenzene	0.800	0.793		mg/Kg		99	69 - 143
sec-Butylbenzene	0.800	0.787		mg/Kg		98	71 - 143
1,2-Dichlorobenzene	0.800	0.817		mg/Kg		102	78 - 126
Styrene	0.800	0.714		mg/Kg		89	79 - 129
1,2-Dibromo-3-Chloropropane	0.800	0.755		mg/Kg		94	64 - 129
t-Butylbenzene	0.800	0.715		mg/Kg		89	72 - 144
1,2,4-Trichlorobenzene	0.800	0.788		mg/Kg		98	74 - 131
Tetrachloroethene	0.800	0.783		mg/Kg		98	75 - 141

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-467783/1-A

Lab Sample ID: LCSD 580-467783/2-A

**Matrix: Solid** 

**Matrix: Solid** 

**Analysis Batch: 467786** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 467783** 

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,2,3-Trichlorobenzene	0.800	0.869		mg/Kg		109	58 - 146	
Toluene	0.800	0.772		mg/Kg		97	75 - 125	
Hexachlorobutadiene	0.800	0.818		mg/Kg		102	65 - 145	
Naphthalene	0.800	0.881		mg/Kg		110	56 - 145	
trans-1,2-Dichloroethene	0.800	0.788		mg/Kg		99	77 - 134	
trans-1,3-Dichloropropene	0.800	0.742		mg/Kg		93	80 - 121	
Trichloroethene	0.800	0.679		mg/Kg		85	80 - 134	
Methyl tert-butyl ether	0.800	0.800		mg/Kg		100	71 - 126	
Vinyl chloride	0.800	0.781		mg/Kg		98	62 - 144	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 120
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
1,2-Dichloroethane-d4 (Surr)	100		80 - 121

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA **Prep Batch: 467783** 

Analysis Batch: 467786			LCSD				Prep Batch: 46778		
	Spike	LCSD					%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	0.800	0.795		mg/Kg		99	73 - 134	5	25
1,1-Dichloroethane	0.800	0.762		mg/Kg		95	78 - 126	5	20
1,1,1-Trichloroethane	0.800	0.813		mg/Kg		102	78 - 135	5	20
1,1-Dichloropropene	0.800	0.694		mg/Kg		87	76 - 140	7	20
1,2-Dichloroethane	0.800	0.808		mg/Kg		101	76 - 124	5	20
1,2-Dichloropropane	0.800	0.739		mg/Kg		92	73 - 130	5	20
2,2-Dichloropropane	0.800	0.715		mg/Kg		89	75 - 134	7	20
Benzene	0.800	0.823		mg/Kg		103	79 - 135	5	20
1,1,2-Trichloroethane	0.800	0.822		mg/Kg		103	80 - 123	3	20
Bromochloromethane	0.800	0.776		mg/Kg		97	76 - 131	7	20
1,3-Dichloropropane	0.800	0.741		mg/Kg		93	80 - 120	3	20
Bromodichloromethane	0.800	0.778		mg/Kg		97	78 - 125	3	20
1,2-Dibromoethane	0.800	0.824		mg/Kg		103	77 - 123	5	20
Bromomethane	0.800	0.891		mg/Kg		111	55 - 150	9	26
Carbon tetrachloride	0.800	0.702		mg/Kg		88	76 - 140	7	20
Chlorobenzene	0.800	0.819		mg/Kg		102	80 - 125	5	20
1,1,1,2-Tetrachloroethane	0.800	0.820		mg/Kg		103	79 - 128	4	20
Chloroethane	0.800	0.819		mg/Kg		102	26 - 150	4	40
1,1,2,2-Tetrachloroethane	0.800	0.840		mg/Kg		105	77 - 122	1	20
Chloroform	0.800	0.835		mg/Kg		104	74 - 133	7	20
Chloromethane	0.800	0.716		mg/Kg		90	52 - 142	2	40
cis-1,2-Dichloroethene	0.800	0.751		mg/Kg		94	80 - 125	6	20
cis-1,3-Dichloropropene	0.800	0.720		mg/Kg		90	80 - 122	2	20
Bromoform	0.800	0.765		mg/Kg		96	71 - 130	7	20
Dibromochloromethane	0.800	0.742		mg/Kg		93	75 - 125	8	20
Bromobenzene	0.800	0.820		mg/Kg		102	78 - 126	3	20
Dibromomethane	0.800	0.808		mg/Kg		101	72 - 130	4	40

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-467783/2-A

**Matrix: Solid** 

**Analysis Batch: 467786** 

**Client Sample ID: Lab Control Sample Dup** 

**Prep Type: Total/NA** 

**Prep Batch: 467783** 

Analyte         Added         Result         Qualifier         Unit         D         %Rec         Limits         RPD         Limits           Dichlorodifluoromethane         0.800         0.747         mg/Kg         93         77-127         0         20         20           Ethylbenzene         0.800         0.816         mg/Kg         102         80.135         2         20           2-Chlorotoluene         0.800         0.816         mg/Kg         100         77-134         5         24           1,3,5-Trimethylbenzene         0.800         0.812         mg/Kg         101         80.131         5         20           4-Chlorotoluene         0.800         0.751         mg/Kg         101         80.131         5         20           4-Chlorotoluene         0.800         0.781         mg/Kg         101         80.131         5         20           4-Chlorotoluene         0.800         0.781         mg/Kg         102         80.132         42           Methylene Chloride         0.800         0.818         mg/Kg         102         80.132         42           1,2-4 Trimethylbenzene         0.800         0.832         mg/Kg         102         80.132		Spike LCSD LCSI		LCSD				%Rec		RPD
1,2,3-Trichloropropane         0.800         0.747         mg/Kg         93         77-127         0         20           Elhylbenzene         0.800         0.816         mg/Kg         102         80-135         2         20           Chlorotoluene         0.800         0.825         mg/Kg         103         77-134         2         21           1,3,5-Trimethylbenzene         0.800         0.812         mg/Kg         101         80-131         5         24           Isopropylbenzene         0.800         0.751         mg/Kg         101         80-131         5         20           Methylene Chloride         0.800         0.770         mg/Kg         96         73-138         3         22           1,2-4-Trimethylbenzene         0.800         0.770         mg/Kg         96         73-138         3         22           1,2-4-Trimethylbenzene         0.800         0.832         mg/Kg         102         80-132         4         20           1,2-4-Trimethylbenzene         0.800         0.832         mg/Kg         104         78-133         3         22           1,2-4-Trimethylbenzene         0.800         0.832         mg/Kg         104         78-133	Analyte	Added	Result	Qualifier	Unit	D	%Rec		RPD	Limit
Ethylbenzene         0.800         0.816         mg/Kg         102         80 - 135         2         20           2-Chlorotoluene         0.800         0.825         mg/Kg         103         77 - 134         2         21           1,35-Trimethylbenzene         0.800         0.812         mg/Kg         101         80 - 135         2         24           Isopropylbenzene         0.800         0.812         mg/Kg         101         80 - 131         5         20           4-Chlorotoluene         0.800         0.751         mg/Kg         94         71 - 137         3         21           Methylene Chloride         0.800         0.770         mg/Kg         96         73 - 138         3         22           mylene & p-Xylene         0.800         0.770         mg/Kg         96         73 - 138         3         22           m-Xylene & p-Xylene         0.800         0.818         mg/Kg         104         78 - 132         4         20           1,3-Dichlorobenzene         0.800         0.832         mg/Kg         104         78 - 132         4         20           4-Isopropyltoluene         0.800         0.847         mg/Kg         94         78 - 132	Dichlorodifluoromethane	0.800	0.847		mg/Kg		106	33 - 150	5	31
2-Chlorotoluene         0.800         0.825         mg/Kg         103         77.134         2         21           1,3.5-Trimethylbenzene         0.800         0.816         mg/Kg         106         72.134         5         24           Isopropylbenzene         0.800         0.812         mg/Kg         101         80.131         5         20           4-Chlorotoluene         0.800         0.751         mg/Kg         94         71.137         3         21           Methylene Chloride         0.800         0.750         mg/Kg         96         73.138         3         22           McChlorotoluene         0.800         0.818         mg/Kg         102         80.132         4         20           1,2-Frimethylbenzene         0.800         0.818         mg/Kg         102         80.132         4         20           1,2-Primethylbenzene         0.800         0.832         mg/Kg         104         78.133         4         22           1,3-Dichlorobenzene         0.800         0.832         mg/Kg         104         78.132         4         20           1,3-Dichlorobenzene         0.800         0.800         0.847         mg/Kg         94         78.133	1,2,3-Trichloropropane	0.800	0.747		mg/Kg		93	77 - 127	0	20
1,3,5-Trimethylbenzene         0.800         0.846         mg/Kg         106         72 - 134         5         24           Isopropylbenzene         0.800         0.812         mg/Kg         101         80.131         5         20           4-Chlorotoluene         0.800         0.751         mg/Kg         94         71.137         3         21           Methylene Chloride         0.800         0.985         mg/Kg         123         56.140         5         20           1,2,4-Trimethylbenzene         0.800         0.818         mg/Kg         102         80.132         4         20           1,3-Dichlorobenzene         0.800         0.832         mg/Kg         104         78.132         4         20           1,3-Dichlorobenzene         0.800         0.832         mg/Kg         104         78.132         4         20           1,3-Dichlorobenzene         0.800         0.781         mg/Kg         98         71.142         3         29           N-Propylbenzene         0.800         0.826         mg/Kg         106         77.123         6         20           0-Xylene         0.800         0.827         mg/Kg         103         71.142         3	Ethylbenzene	0.800	0.816		mg/Kg		102	80 - 135	2	20
Sopropylbenzene   0.800   0.812   mg/Kg   101   80 - 131   5   20   20   4-Chlorotoluene   0.800   0.751   mg/Kg   94   71 - 137   3   21   Methylene Chloride   0.800   0.985   mg/Kg   123   56 - 140   5   20   20   24-Timethylbenzene   0.800   0.985   mg/Kg   123   56 - 140   5   20   20   24-Timethylbenzene   0.800   0.770   mg/Kg   96   73 - 138   3   22   22   24-Sopropyltoluene   0.800   0.818   mg/Kg   102   80 - 132   4   20   20   24-Sopropyltoluene   0.800   0.832   mg/Kg   104   78 - 132   4   20   20   24-Sopropyltoluene   0.800   0.781   mg/Kg   98   71 - 142   3   29   20   24-Sopropyltoluene   0.800   0.781   mg/Kg   98   71 - 142   3   29   20   24-Sopropyltoluene   0.800   0.781   mg/Kg   94   78 - 133   4   20   20   20   20   20   20   20	2-Chlorotoluene	0.800	0.825		mg/Kg		103	77 - 134	2	21
4-Chlorotoluene         0.800         0.751         mg/kg         94         71-137         3         21           Methylene Chloride         0.800         0.985         mg/kg         123         56-140         5         20           1.2,4-Trimethylbenzene         0.800         0.770         mg/kg         96         73-138         3         22           m-Xylene & p-Xylene         0.800         0.818         mg/kg         96         73-138         3         22           1,3-Dichlorobenzene         0.800         0.832         mg/kg         104         78-132         4         20           4-Isopropylbeluzene         0.800         0.781         mg/kg         98         71-142         3         29           N-Propylbenzene         0.800         0.748         mg/kg         94         76-133         4         20           1,4-Dichlorobenzene         0.800         0.827         mg/kg         94         71-123         6         20           0-Xylene         0.800         0.827         mg/kg         103         69-143         4         20           1,4-Dichlorobenzene         0.800         0.827         mg/kg         103         69-143         4	1,3,5-Trimethylbenzene	0.800	0.846		mg/Kg		106	72 - 134	5	24
Methylene Chloride         0.800         0.985         mg/Kg         123         56.140         5         20           1,2,4-Trimethylbenzene         0.800         0.770         mg/Kg         96         73.138         3         22           m-Xylene & p-Xylene         0.800         0.818         mg/Kg         102         80.132         4         20           1,3-Dichlorobenzene         0.800         0.832         mg/Kg         104         78.132         4         20           4-Isopropyltoluene         0.800         0.781         mg/Kg         98         71.142         3         29           N-Propylbenzene         0.800         0.781         mg/Kg         94         78.133         4         24           1,4-Dichlorobenzene         0.800         0.847         mg/Kg         106         77.123         6         20           0-Xylene         0.800         0.827         mg/Kg         103         69.143         4         20           0-Xylene         0.800         0.827         mg/Kg         103         69.143         4         20           1,2-Dichlorobenzene         0.800         0.823         mg/Kg         105         78.126         3	Isopropylbenzene	0.800	0.812		mg/Kg		101	80 - 131	5	20
1,2,4-Trimethylbenzene       0.800       0.770       mg/Kg       96       73.138       3       22         m-Xylene & p-Xylene       0.800       0.818       mg/Kg       102       80.132       4       20         1,3-Dichlorobenzene       0.800       0.832       mg/Kg       104       78.132       4       20         4-Isopropylbulene       0.800       0.781       mg/Kg       98       71.142       3       29         N-Propylbenzene       0.800       0.748       mg/Kg       94       78.133       4       24         1,4-Dichlorobenzene       0.800       0.847       mg/Kg       106       77.123       6       20         0-Xylene       0.800       0.826       mg/Kg       103       80.132       4       20         n-Butylbenzene       0.800       0.827       mg/Kg       103       69.143       4       20         n-Butylbenzene       0.800       0.823       mg/Kg       103       71.143       4       29         1,2-Dichlorobenzene       0.800       0.823       mg/Kg       103       79.129       4       20         1,2-Dibromo-3-Chloropropane       0.800       0.746       mg/Kg       93 <td>4-Chlorotoluene</td> <td>0.800</td> <td>0.751</td> <td></td> <td>mg/Kg</td> <td></td> <td>94</td> <td>71 - 137</td> <td>3</td> <td>21</td>	4-Chlorotoluene	0.800	0.751		mg/Kg		94	71 - 137	3	21
m-Xylene & p-Xylene         0.800         0.818         mg/Kg         102         80 - 132         4         20           1,3-Dichlorobenzene         0.800         0.832         mg/Kg         104         78 - 132         4         20           4-Isopropyltoluene         0.800         0.781         mg/Kg         98         71 - 142         3         29           N-Propylbenzene         0.800         0.781         mg/Kg         94         78 - 133         4         24           1,4-Dichlorobenzene         0.800         0.847         mg/Kg         106         77 - 123         6         220           -Xylene         0.800         0.826         mg/Kg         103         80 - 132         4         20           n-Butylbenzene         0.800         0.826         mg/Kg         103         80 - 132         4         20           n-Butylbenzene         0.800         0.823         mg/Kg         103         80 - 132         4         20           n-Butylbenzene         0.800         0.823         mg/Kg         103         70 - 143         4         29           1,2-Dibromo-3-Chloropene         0.800         0.742         mg/Kg         93         79 - 126	Methylene Chloride	0.800	0.985		mg/Kg		123	56 - 140	5	20
1,3-Dichlorobenzene       0.800       0.832       mg/kg       104       78-132       4       20         4-Isopropyltoluene       0.800       0.781       mg/kg       98       71-142       3       29         N-Propylbenzene       0.800       0.748       mg/kg       94       78-133       4       24         1,4-Dichlorobenzene       0.800       0.847       mg/kg       106       77-123       6       20         0-Xylene       0.800       0.826       mg/kg       103       80-132       4       20         n-Butylbenzene       0.800       0.827       mg/kg       103       69-143       4       20         n-Butylbenzene       0.800       0.823       mg/kg       103       69-143       4       20         n-Butylbenzene       0.800       0.823       mg/kg       103       71-143       4       20         1,2-Dichlorobenzene       0.800       0.838       mg/kg       105       78-126       3       20         Styrene       0.800       0.742       mg/kg       97       64-129       3       40         1,2-Dibromo-3-Chloropropane       0.800       0.779       mg/kg       97       64-129<	1,2,4-Trimethylbenzene	0.800	0.770		mg/Kg		96	73 - 138	3	22
4-Isopropyltoluene       0.800       0.781       mg/Kg       98       71 - 142       3       29         N-Propylbenzene       0.800       0.748       mg/Kg       94       78 - 133       4       24         1,4-Dichlorobenzene       0.800       0.847       mg/Kg       106       77 - 123       6       20         0-Xylene       0.800       0.826       mg/Kg       103       80 - 132       4       20         n-Butylbenzene       0.800       0.827       mg/Kg       103       69 - 143       4       21         sec-Butylbenzene       0.800       0.823       mg/Kg       103       71 - 143       4       29         1,2-Dichlorobenzene       0.800       0.838       mg/Kg       105       78 - 126       3       20         Styrene       0.800       0.742       mg/Kg       93       79 - 129       4       20         1,2-Dibromo-3-Chloropropane       0.800       0.779       mg/Kg       97       64 - 129       3       40         t-Butylbenzene       0.800       0.746       mg/Kg       97       74 - 131       8       26         Tetrachlorobenzene       0.800       0.804       mg/Kg       101 <td>m-Xylene &amp; p-Xylene</td> <td>0.800</td> <td>0.818</td> <td></td> <td>mg/Kg</td> <td></td> <td>102</td> <td>80 - 132</td> <td>4</td> <td>20</td>	m-Xylene & p-Xylene	0.800	0.818		mg/Kg		102	80 - 132	4	20
N-Propylbenzene 0.800 0.748 mg/Kg 94 78.133 4 24 1,4-Dichlorobenzene 0.800 0.847 mg/Kg 106 77.123 6 20 c-Xylene 0.800 0.826 mg/Kg 103 80.132 4 20 n-Butylbenzene 0.800 0.826 mg/Kg 103 80.132 4 20 n-Butylbenzene 0.800 0.827 mg/Kg 103 69.143 4 31 sec-Butylbenzene 0.800 0.823 mg/Kg 103 71.143 4 29 1,2-Dichlorobenzene 0.800 0.838 mg/Kg 105 78.126 3 20 1,2-Dichlorobenzene 0.800 0.838 mg/Kg 105 78.126 3 20 1,2-Dichloropenzene 0.800 0.742 mg/Kg 93 79.129 4 20 1,2-Dibromo-3-Chloropropane 0.800 0.779 mg/Kg 97 64.129 3 40 1.5-Ditylbenzene 0.800 0.776 mg/Kg 97 64.129 3 40 1.5-Ditylbenzene 0.800 0.776 mg/Kg 93 72.144 4 27 1,24-Trichlorobenzene 0.800 0.857 mg/Kg 107 74.131 8 26 1.5-Ditylbenzene 0.800 0.804 mg/Kg 101 75.141 3 20 1,23-Trichlorobenzene 0.800 0.804 mg/Kg 101 75.141 3 20 1,23-Trichlorobenzene 0.800 0.944 mg/Kg 118 58.146 8 28 10 1,23-Trichlorobenzene 0.800 0.863 mg/Kg 108 65.145 5 36 10 1,23-Trichlorobenzene 0.800 0.803 mg/Kg 108 65.145 5 36 10 1,23-Trichlorobenzene 0.800 0.825 mg/Kg 103 77.134 5 20 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1,3-Dichlorobenzene	0.800	0.832		mg/Kg		104	78 - 132	4	20
1,4-Dichlorobenzene       0.800       0.847       mg/Kg       106       77 - 123       6       20         o-Xylene       0.800       0.826       mg/Kg       103       80 - 132       4       20         n-Butylbenzene       0.800       0.827       mg/Kg       103       69 - 143       4       31         sec-Butylbenzene       0.800       0.823       mg/Kg       105       78 - 126       3       20         Styrene       0.800       0.742       mg/Kg       93       79 - 129       4       20         1,2-Dibromo-3-Chloropropane       0.800       0.779       mg/Kg       97       64 - 129       3       40         t-Butylbenzene       0.800       0.776       mg/Kg       97       64 - 129       3       40         t-Butylbenzene       0.800       0.776       mg/Kg       97       64 - 129       3       40         t-Butylbenzene       0.800       0.786       mg/Kg       93       72 - 144       4       27         1,2-4-Trichlorobenzene       0.800       0.857       mg/Kg       107       74 - 131       8       26         Tetracklorobethane       0.800       0.804       mg/Kg       118	4-Isopropyltoluene	0.800	0.781		mg/Kg		98	71 - 142	3	29
o-Xylene         0.800         0.826         mg/Kg         103         80 - 132         4         20           n-Butylbenzene         0.800         0.827         mg/Kg         103         69 - 143         4         31           sec-Butylbenzene         0.800         0.823         mg/Kg         103         71 - 143         4         29           1,2-Dichlorobenzene         0.800         0.838         mg/Kg         105         78 - 126         3         20           Styrene         0.800         0.742         mg/Kg         93         79 - 129         4         20           1,2-Dibromo-3-Chloropropane         0.800         0.779         mg/Kg         97         64 - 129         3         40           t-Butylbenzene         0.800         0.776         mg/Kg         93         72 - 144         4         27           1,2,4-Trichlorobenzene         0.800         0.857         mg/Kg         107         74 - 131         8         26           Tetrachloroethene         0.800         0.804         mg/Kg         111         75 - 141         3         20           1,2,3-Trichlorobenzene         0.800         0.944         mg/Kg         118         58 - 146 <t< td=""><td>N-Propylbenzene</td><td>0.800</td><td>0.748</td><td></td><td>mg/Kg</td><td></td><td>94</td><td>78 - 133</td><td>4</td><td>24</td></t<>	N-Propylbenzene	0.800	0.748		mg/Kg		94	78 - 133	4	24
n-Butylbenzene       0.800       0.827       mg/Kg       103       69 - 143       4       31         sec-Butylbenzene       0.800       0.823       mg/Kg       103       71 - 143       4       29         1,2-Dichlorobenzene       0.800       0.838       mg/Kg       105       78 - 126       3       20         Styrene       0.800       0.742       mg/Kg       93       79 - 129       4       20         1,2-Dibromo-3-Chloropropane       0.800       0.779       mg/Kg       97       64 - 129       3       40         t-Butylbenzene       0.800       0.746       mg/Kg       93       72 - 144       4       27         1,2,4-Trichlorobenzene       0.800       0.857       mg/Kg       107       74 - 131       8       26         Tetrachloroethene       0.800       0.804       mg/Kg       101       75 - 141       3       20         1,2,3-Trichlorobenzene       0.800       0.944       mg/Kg       118       58 - 146       8       28         Toluene       0.800       0.791       mg/Kg       99       75 - 125       2       20         Hexachlorobutadiene       0.800       0.927       mg/Kg	1,4-Dichlorobenzene	0.800	0.847		mg/Kg		106	77 - 123	6	20
sec-Butylbenzene         0.800         0.823         mg/Kg         103         71-143         4         29           1,2-Dichlorobenzene         0.800         0.838         mg/Kg         105         78-126         3         20           Styrene         0.800         0.742         mg/Kg         93         79-129         4         20           1,2-Dibromo-3-Chloropropane         0.800         0.779         mg/Kg         97         64-129         3         40           t-Butylbenzene         0.800         0.746         mg/Kg         93         72-144         4         27           1,2,4-Trichlorobenzene         0.800         0.857         mg/Kg         107         74-131         8         26           Tetrachloroethene         0.800         0.804         mg/Kg         101         75-141         3         20           1,2,3-Trichlorobenzene         0.800         0.944         mg/Kg         118         58-146         8         28           Toluene         0.800         0.791         mg/Kg         99         75-125         2         20           Hexachlorobutadiene         0.800         0.863         mg/Kg         108         65-145         5	o-Xylene	0.800	0.826		mg/Kg		103	80 - 132	4	20
1,2-Dichlorobenzene       0.800       0.838       mg/kg       105       78 - 126       3       20         Styrene       0.800       0.742       mg/kg       93       79 - 129       4       20         1,2-Dibromo-3-Chloropropane       0.800       0.779       mg/kg       97       64 - 129       3       40         t-Butylbenzene       0.800       0.746       mg/kg       93       72 - 144       4       27         1,2,4-Trichlorobenzene       0.800       0.857       mg/kg       107       74 - 131       8       26         Tetrachloroethene       0.800       0.804       mg/kg       101       75 - 141       3       20         1,2,3-Trichlorobenzene       0.800       0.804       mg/kg       118       58 - 146       8       28         Toluene       0.800       0.791       mg/kg       99       75 - 125       2       20         Hexachlorobutadiene       0.800       0.863       mg/kg       108       65 - 145       5       36         Naphthalene       0.800       0.825       mg/kg       108       65 - 145       5       25         trans-1,3-Dichloroethene       0.800       0.772       mg/kg	n-Butylbenzene	0.800	0.827		mg/Kg		103	69 - 143	4	31
Styrene       0.800       0.742       mg/Kg       93       79 - 129       4       20         1,2-Dibromo-3-Chloropropane       0.800       0.779       mg/Kg       97       64 - 129       3       40         t-Butylbenzene       0.800       0.746       mg/Kg       93       72 - 144       4       27         1,2,4-Trichlorobenzene       0.800       0.857       mg/Kg       107       74 - 131       8       26         Tetrachloroethene       0.800       0.804       mg/Kg       101       75 - 141       3       20         1,2,3-Trichlorobenzene       0.800       0.944       mg/Kg       118       58 - 146       8       28         Toluene       0.800       0.791       mg/Kg       99       75 - 125       2       20         Hexachlorobutadiene       0.800       0.863       mg/Kg       108       65 - 145       5       36         Naphthalene       0.800       0.927       mg/Kg       116       56 - 145       5       25         trans-1,2-Dichloroethene       0.800       0.825       mg/Kg       103       77 - 134       5       20         Trichloroethene       0.800       0.720       mg/Kg	sec-Butylbenzene	0.800	0.823		mg/Kg		103	71 - 143	4	29
1,2-Dibromo-3-Chloropropane       0.800       0.779       mg/Kg       97       64 - 129       3       40         t-Butylbenzene       0.800       0.746       mg/Kg       93       72 - 144       4       27         1,2,4-Trichlorobenzene       0.800       0.857       mg/Kg       107       74 - 131       8       26         Tetrachloroethene       0.800       0.804       mg/Kg       101       75 - 141       3       20         1,2,3-Trichlorobenzene       0.800       0.944       mg/Kg       118       58 - 146       8       28         Toluene       0.800       0.791       mg/Kg       99       75 - 125       2       20         Hexachlorobutadiene       0.800       0.863       mg/Kg       108       65 - 145       5       36         Naphthalene       0.800       0.927       mg/Kg       116       56 - 145       5       25         trans-1,2-Dichloroethene       0.800       0.825       mg/Kg       103       77 - 134       5       20         Trichloroethene       0.800       0.772       mg/Kg       97       80 - 121       4       20         Trichloroethene       0.800       0.720       mg/Kg <td>1,2-Dichlorobenzene</td> <td>0.800</td> <td>0.838</td> <td></td> <td>mg/Kg</td> <td></td> <td>105</td> <td>78 - 126</td> <td>3</td> <td>20</td>	1,2-Dichlorobenzene	0.800	0.838		mg/Kg		105	78 - 126	3	20
t-Butylbenzene 0.800 0.746 mg/Kg 93 72 - 144 4 27 1,2,4-Trichlorobenzene 0.800 0.857 mg/Kg 107 74 - 131 8 26 Tetrachloroethene 0.800 0.804 mg/Kg 101 75 - 141 3 20 1,2,3-Trichlorobenzene 0.800 0.944 mg/Kg 118 58 - 146 8 28 Toluene 0.800 0.791 mg/Kg 99 75 - 125 2 20 Hexachlorobutadiene 0.800 0.863 mg/Kg 108 65 - 145 5 36 Naphthalene 0.800 0.927 mg/Kg 116 56 - 145 5 25 trans-1,2-Dichloroethene 0.800 0.825 mg/Kg 103 77 - 134 5 20 trans-1,3-Dichloropropene 0.800 0.772 mg/Kg 97 80 - 121 4 20 Trichloroethene 0.800 0.720 mg/Kg 90 80 - 134 6 20 Methyl tert-butyl ether 0.800 0.830 mg/Kg 104 71 - 126 4 20	Styrene	0.800	0.742		mg/Kg		93	79 - 129	4	20
1,2,4-Trichlorobenzene       0.800       0.857       mg/Kg       107       74 - 131       8       26         Tetrachloroethene       0.800       0.804       mg/Kg       101       75 - 141       3       20         1,2,3-Trichlorobenzene       0.800       0.944       mg/Kg       118       58 - 146       8       28         Toluene       0.800       0.791       mg/Kg       99       75 - 125       2       20         Hexachlorobutadiene       0.800       0.863       mg/Kg       108       65 - 145       5       36         Naphthalene       0.800       0.927       mg/Kg       116       56 - 145       5       25         trans-1,2-Dichloroethene       0.800       0.825       mg/Kg       103       77 - 134       5       20         trans-1,3-Dichloropropene       0.800       0.772       mg/Kg       97       80 - 121       4       20         Trichloroethene       0.800       0.720       mg/Kg       90       80 - 134       6       20         Methyl tert-butyl ether       0.800       0.830       mg/Kg       104       71 - 126       4       20	1,2-Dibromo-3-Chloropropane	0.800	0.779		mg/Kg		97	64 - 129	3	40
Tetrachloroethene         0.800         0.804         mg/Kg         101         75 - 141         3         20           1,2,3-Trichlorobenzene         0.800         0.944         mg/Kg         118         58 - 146         8         28           Toluene         0.800         0.791         mg/Kg         99         75 - 125         2         20           Hexachlorobutadiene         0.800         0.863         mg/Kg         108         65 - 145         5         36           Naphthalene         0.800         0.927         mg/Kg         116         56 - 145         5         25           trans-1,2-Dichloroethene         0.800         0.825         mg/Kg         103         77 - 134         5         20           trans-1,3-Dichloropropene         0.800         0.772         mg/Kg         97         80 - 121         4         20           Trichloroethene         0.800         0.720         mg/Kg         90         80 - 134         6         20           Methyl tert-butyl ether         0.800         0.830         mg/Kg         104         71 - 126         4         20	t-Butylbenzene	0.800	0.746		mg/Kg		93	72 - 144	4	27
1,2,3-Trichlorobenzene       0.800       0.944       mg/Kg       118       58 - 146       8       28         Toluene       0.800       0.791       mg/Kg       99       75 - 125       2       20         Hexachlorobutadiene       0.800       0.863       mg/Kg       108       65 - 145       5       36         Naphthalene       0.800       0.927       mg/Kg       116       56 - 145       5       25         trans-1,2-Dichloroethene       0.800       0.825       mg/Kg       103       77 - 134       5       20         trans-1,3-Dichloropropene       0.800       0.772       mg/Kg       97       80 - 121       4       20         Trichloroethene       0.800       0.720       mg/Kg       90       80 - 134       6       20         Methyl tert-butyl ether       0.800       0.830       mg/Kg       104       71 - 126       4       20	1,2,4-Trichlorobenzene	0.800	0.857		mg/Kg		107	74 - 131	8	26
Toluene         0.800         0.791         mg/Kg         99         75 - 125         2         20           Hexachlorobutadiene         0.800         0.863         mg/Kg         108         65 - 145         5         36           Naphthalene         0.800         0.927         mg/Kg         116         56 - 145         5         25           trans-1,2-Dichloroethene         0.800         0.825         mg/Kg         103         77 - 134         5         20           trans-1,3-Dichloropropene         0.800         0.772         mg/Kg         97         80 - 121         4         20           Trichloroethene         0.800         0.720         mg/Kg         90         80 - 134         6         20           Methyl tert-butyl ether         0.800         0.830         mg/Kg         104         71 - 126         4         20	Tetrachloroethene	0.800	0.804		mg/Kg		101	75 - 141	3	20
Hexachlorobutadiene         0.800         0.863         mg/Kg         108         65 - 145         5         36           Naphthalene         0.800         0.927         mg/Kg         116         56 - 145         5         25           trans-1,2-Dichloroethene         0.800         0.825         mg/Kg         103         77 - 134         5         20           trans-1,3-Dichloropropene         0.800         0.772         mg/Kg         97         80 - 121         4         20           Trichloroethene         0.800         0.720         mg/Kg         90         80 - 134         6         20           Methyl tert-butyl ether         0.800         0.830         mg/Kg         104         71 - 126         4         20	1,2,3-Trichlorobenzene	0.800	0.944		mg/Kg		118	58 - 146	8	28
Naphthalene         0.800         0.927         mg/Kg         116         56 - 145         5         25           trans-1,2-Dichloroethene         0.800         0.825         mg/Kg         103         77 - 134         5         20           trans-1,3-Dichloropropene         0.800         0.772         mg/Kg         97         80 - 121         4         20           Trichloroethene         0.800         0.720         mg/Kg         90         80 - 134         6         20           Methyl tert-butyl ether         0.800         0.830         mg/Kg         104         71 - 126         4         20	Toluene	0.800	0.791		mg/Kg		99	75 - 125	2	20
trans-1,2-Dichloroethene         0.800         0.825         mg/Kg         103         77 - 134         5         20           trans-1,3-Dichloropropene         0.800         0.772         mg/Kg         97         80 - 121         4         20           Trichloroethene         0.800         0.720         mg/Kg         90         80 - 134         6         20           Methyl tert-butyl ether         0.800         0.830         mg/Kg         104         71 - 126         4         20	Hexachlorobutadiene	0.800	0.863		mg/Kg		108	65 - 145	5	36
trans-1,3-Dichloropropene     0.800     0.772     mg/Kg     97     80 - 121     4     20       Trichloroethene     0.800     0.720     mg/Kg     90     80 - 134     6     20       Methyl tert-butyl ether     0.800     0.830     mg/Kg     104     71 - 126     4     20	Naphthalene	0.800	0.927		mg/Kg		116	56 - 145	5	25
Trichloroethene         0.800         0.720         mg/Kg         90         80 - 134         6         20           Methyl tert-butyl ether         0.800         0.830         mg/Kg         104         71 - 126         4         20	trans-1,2-Dichloroethene	0.800	0.825		mg/Kg		103	77 - 134	5	20
Methyl tert-butyl ether 0.800 0.830 mg/Kg 104 71 - 126 4 20	trans-1,3-Dichloropropene	0.800	0.772		mg/Kg		97	80 - 121	4	20
, ,	Trichloroethene	0.800	0.720		mg/Kg		90	80 - 134	6	20
Vinyl chloride 0.800 0.803 mg/Kg 100 62 - 144 3 20	Methyl tert-butyl ether	0.800	0.830		mg/Kg		104	71 - 126	4	20
	Vinyl chloride	0.800	0.803		mg/Kg		100	62 - 144	3	20

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 120
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	98		80 - 121

Lab Sample ID: 580-142691-11 MS

**Matrix: Solid** 

**Analysis Batch: 467786** 

Prep Type: Total/NA **Prep Batch: 467783** 

Sample Sample Spike MS MS %Rec Result Qualifier Analyte Added Result Qualifier Unit D %Rec Limits 1,1,1,2-Tetrachloroethane ND 0.724 0.678 mg/Kg ₩ 94 79 - 128 1,1,1-Trichloroethane ND 0.663 mg/Kg 78 - 135 0.724 92 ₩ 1,1,2,2-Tetrachloroethane ND 0.724 0.688 mg/Kg 95 77 - 122 ND 0.724 0.695 96 80 - 123 1,1,2-Trichloroethane mg/Kg ₩

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 580-142691-11 MS

Matrix: Solid

Client Sample ID: PDI-12-SO-36-20240806

**Prep Type: Total/NA** 


Prep	Batch:	467783
%Rec		
Limits		

Analysis Batch: 467786		Sample	Spike		MS		_	0/ 5	Prep Batch: 467783
Analyte		Qualifier	Added		Qualifier	Unit	_ <del>D</del>	%Rec	Limits
1,1-Dichloroethane	ND ND		0.724	0.628		mg/Kg		87	78 <sub>-</sub> 126
1,1-Dichloroethene			0.724	0.660		mg/Kg	<del></del> .	91	73 - 134
1,1-Dichloropropene	ND	F2	0.724	0.563		mg/Kg	<b>\$</b>	78	76 - 140
1,2,3-Trichlorobenzene		F2	0.724	0.503		mg/Kg	<b>‡</b>	69	58 - 146
1,2,3-Trichloropropane	ND		0.724	0.622		mg/Kg		86	77 - 127
1,2,4-Trichlorobenzene		F2	0.724	0.568		mg/Kg	₩	78	74 - 131
1,2,4-Trimethylbenzene	ND		0.724	0.627		mg/Kg	<b>☆</b>	87	73 - 138
1,2-Dibromo-3-Chloropropane	ND		0.724	0.605		mg/Kg	<del>.</del>	84	64 - 129
1,2-Dibromoethane	ND		0.724	0.685		mg/Kg	₩	95	77 - 123
1,2-Dichlorobenzene	ND		0.724	0.693		mg/Kg	₩	96	78 - 126
1,2-Dichloroethane	ND		0.724	0.667		mg/Kg		92	76 - 124
1,2-Dichloropropane	ND		0.724	0.612		mg/Kg	₩	85	73 - 130
1,3,5-Trimethylbenzene	ND		0.724	0.681		mg/Kg	₩	94	72 - 134
1,3-Dichlorobenzene	ND		0.724	0.663		mg/Kg		92	78 - 132
1,3-Dichloropropane	ND		0.724	0.627		mg/Kg	₩	87	80 - 120
1,4-Dichlorobenzene	ND		0.724	0.679		mg/Kg	₩	94	77 - 123
2,2-Dichloropropane	ND	F1	0.724	0.536	F1	mg/Kg	₩	74	75 - 134
2-Chlorotoluene	ND		0.724	0.686		mg/Kg	₩	95	77 <sub>-</sub> 134
4-Chlorotoluene	ND		0.724	0.618		mg/Kg	₩	85	71 <sub>-</sub> 137
4-Isopropyltoluene	ND		0.724	0.632		mg/Kg	₩	87	71 - 142
Benzene	ND		0.724	0.676		mg/Kg	₩	93	79 - 135
Bromobenzene	ND		0.724	0.678		mg/Kg	☼	94	78 - 126
Bromochloromethane	ND		0.724	0.638		mg/Kg	₩	88	76 - 131
Bromodichloromethane	ND		0.724	0.647		mg/Kg	₩	89	78 - 125
Bromoform	ND		0.724	0.618		mg/Kg	₩	85	71 - 130
Bromomethane	ND		0.724	0.754		mg/Kg	₩	104	55 - 150
Carbon tetrachloride	ND		0.724	0.576		mg/Kg	☼	80	76 - 140
Chlorobenzene	1.3	F1	0.724	1.45	F1	mg/Kg	☼	25	80 - 125
Chloroethane	ND		0.724	0.708		mg/Kg	₩	98	26 - 150
Chloroform	ND		0.724	0.676		mg/Kg	₩	93	74 - 133
Chloromethane	ND		0.724	0.598		mg/Kg	₩	83	52 - 142
cis-1,2-Dichloroethene	ND		0.724	0.617		mg/Kg	₩	85	80 - 125
cis-1,3-Dichloropropene	ND		0.724	0.600		mg/Kg	₩	83	80 - 122
Dibromochloromethane	ND		0.724	0.606		mg/Kg	₩	84	75 - 125
Dibromomethane	ND		0.724	0.689		mg/Kg	₩	95	72 - 130
Dichlorodifluoromethane	ND		0.724	0.679		mg/Kg	₩	94	33 - 150
Ethylbenzene	ND		0.724	0.673		mg/Kg	₩	93	80 - 135
Hexachlorobutadiene	ND		0.724	0.686		mg/Kg	₩	95	65 - 145
Isopropylbenzene	ND		0.724	0.661		mg/Kg		91	80 - 131
Methyl tert-butyl ether	ND		0.724	0.680		mg/Kg	₩	94	71 - 126
Methylene Chloride	0.14	JB	0.724	0.771		mg/Kg	₩	87	56 - 140
m-Xylene & p-Xylene	ND		0.724	0.664		mg/Kg	 ☆	92	80 - 132
Naphthalene		F2	0.724	0.546		mg/Kg	₩	76	56 - 145
n-Butylbenzene	ND		0.724	0.648		mg/Kg	₩	90	69 - 143
N-Propylbenzene	ND		0.724	0.614		mg/Kg		85	78 - 133
o-Xylene	ND		0.724	0.683		mg/Kg	₽	94	80 - 132
sec-Butylbenzene	ND		0.724	0.671		mg/Kg	₽	93	71 - 143
Styrene	ND		0.724	0.613		mg/Kg	<sup>™</sup>	85	79 - 129
t-Butylbenzene	ND		0.724	0.614		mg/Kg	74	85	72 - 144

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 580-142691-11 MS

Lab Sample ID: 580-142691-11 MSD

**Matrix: Solid** 

**Matrix: Solid** 

**Analysis Batch: 467786** 

Client Sample ID: PDI-12-SO-36-20240806

Prep Type: Total/NA

**Prep Batch: 467783** 

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Tetrachloroethene	ND		0.724	0.665		mg/Kg	<u></u>	92	75 - 141	
Toluene	ND		0.724	0.663		mg/Kg	☼	92	75 - 125	
trans-1,2-Dichloroethene	ND		0.724	0.675		mg/Kg	☼	93	77 - 134	
trans-1,3-Dichloropropene	ND		0.724	0.637		mg/Kg	☼	88	80 - 121	
Trichloroethene	ND		0.724	0.603		mg/Kg	☼	83	80 - 134	
Vinyl chloride	ND		0.724	0.652		mg/Kg	₩	90	62 - 144	

MS MS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		80 - 121
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
Toluene-d8 (Surr)	100		80 - 120

Client Sample ID: PDI-12-SO-36-20240806

Prep Type: Total/NA

**Analysis Batch: 467786 Prep Batch: 467783** MSD MSD **RPD** Sample Sample Spike %Rec Result Qualifier Limits **Analyte** Added Result Qualifier Unit D %Rec **RPD** Limit 1,1,1,2-Tetrachloroethane ND 0.763 0.791 mg/Kg ₩ 104 79 - 128 15 20 1,1,1-Trichloroethane ND 0.763 0.807 mg/Kg 106 78 - 135 20 ∜ 20 1,1,2,2-Tetrachloroethane ND 0.763 0.835 mg/Kg 109 77 - 122 19 20 1,1,2-Trichloroethane ND 0.763 0.796 mg/Kg 104 80 - 123 20 Ö 14 1,1-Dichloroethane ND 0.763 0.747 mg/Kg ₩ 98 78 - 126 17 20 1,1-Dichloroethene ND 0.763 0.788 103 73 - 134 18 25 mg/Kg ₩ ND 1,1-Dichloropropene 0.763 0.661 mg/Kg ₩ 87 76 - 140 16 20 1,2,3-Trichlorobenzene ND F2 0.763 0.874 F2 mg/Kg ₩ 114 58 - 146 54 28 0.750 1,2,3-Trichloropropane ND 0.763 mg/Kg ₩ 98 77 - 12719 20 0.808 F2 106 35 26 1,2,4-Trichlorobenzene ND F2 0.763 mg/Kg Ö 74 - 131 73 - 138 1,2,4-Trimethylbenzene ND 0.763 0.734 mg/Kg Ö 96 16 22 1,2-Dibromo-3-Chloropropane ND 0.763 0.787 mg/Kg ₩ 103 64 - 129 26 40 104 ND 0.763 0.792 ∜ 77 - 12315 20 1,2-Dibromoethane mg/Kg 1,2-Dichlorobenzene ND 0.763 0.810 106 78 - 12616 20 mg/Kg ₩ ND 0.788 103 20 1,2-Dichloroethane 0.763 mg/Kg ∜ 76 - 124 17 1,2-Dichloropropane ND 0.763 0.734 ₩ 96 73 - 130 18 20 mg/Kg 1,3,5-Trimethylbenzene ND 0.763 0.817 mg/Kg ₩ 107 72 - 134 24 18 1,3-Dichlorobenzene ND 0.763 0.808 mg/Kg ☼ 106 78 - 132 20 20 1,3-Dichloropropane ND 0.763 0.718 mg/Kg ₩ 94 80 - 120 14 20 ND 0.763 108 77 - 123 1,4-Dichlorobenzene 0.821 mg/Kg ₩ 19 20 2.2-Dichloropropane ND F1 0.763 0.642 mg/Kg ₩ 84 75 - 134 18 20 2-Chlorotoluene ND 0.763 0.796 mg/Kg ∜ 104 77 - 13415 21 4-Chlorotoluene ND 0.763 0.726 ₩ 95 71 - 137 16 21 mg/Kg ND 98 71 - 142 29 4-Isopropyltoluene 0.763 0.747 17 mg/Kg Ö Benzene ND 0.763 0.807 ₩ 106 79 - 135 20 mg/Kg 18 Bromobenzene ND 0.763 0.796 ∜ 104 78 - 126 20 mg/Kg 16 Bromochloromethane ND 0.763 0.744 mg/Kg ☼ 97 76 - 131 15 20 Bromodichloromethane ND 0.763 0.755 99 78 - 125 20 mg/Kg Ö 15 **Bromoform** ND 0.763 0.736 mg/Kg ₩ 96 71 - 130 17 20 Bromomethane ND 0.763 0.917 mg/Kg ₩ 120 55 - 15026

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 580-142691-11 MSD

**Matrix: Solid** 

**Analysis Batch: 467786** 

Client Sample ID: PDI-12-SO-36-20240806

**Prep Type: Total/NA** 

**Prep Batch: 467783** 

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Carbon tetrachloride	ND		0.763	0.696		mg/Kg	₩	91	76 - 140	19	20
Chlorobenzene	1.3	F1	0.763	1.60	F1	mg/Kg	₩	44	80 - 125	10	20
Chloroethane	ND		0.763	0.873		mg/Kg	₩	114	26 - 150	21	40
Chloroform	ND		0.763	0.807		mg/Kg	₩	106	74 - 133	18	20
Chloromethane	ND		0.763	0.712		mg/Kg	₩	93	52 - 142	17	40
cis-1,2-Dichloroethene	ND		0.763	0.726		mg/Kg	☼	95	80 - 125	16	20
cis-1,3-Dichloropropene	ND		0.763	0.699		mg/Kg	₩	92	80 - 122	15	20
Dibromochloromethane	ND		0.763	0.720		mg/Kg	☼	94	75 - 125	17	20
Dibromomethane	ND		0.763	0.801		mg/Kg	₩	105	72 - 130	15	40
Dichlorodifluoromethane	ND		0.763	0.846		mg/Kg	₩	111	33 - 150	22	31
Ethylbenzene	ND		0.763	0.784		mg/Kg	₩	103	80 - 135	15	20
Hexachlorobutadiene	ND		0.763	0.840		mg/Kg	₩	110	65 - 145	20	36
Isopropylbenzene	ND		0.763	0.781		mg/Kg	₩	102	80 - 131	17	20
Methyl tert-butyl ether	ND		0.763	0.813		mg/Kg	₩	107	71 - 126	18	20
Methylene Chloride	0.14	JB	0.763	0.908		mg/Kg	₩	100	56 - 140	16	20
m-Xylene & p-Xylene	ND		0.763	0.792		mg/Kg	₩	104	80 - 132	18	20
Naphthalene	ND	F2	0.763	0.939	F2	mg/Kg	₩	123	56 - 145	53	25
n-Butylbenzene	ND		0.763	0.785		mg/Kg	₩	103	69 - 143	19	31
N-Propylbenzene	ND		0.763	0.727		mg/Kg	₩	95	78 - 133	17	24
o-Xylene	ND		0.763	0.802		mg/Kg	₩	105	80 - 132	16	20
sec-Butylbenzene	ND		0.763	0.795		mg/Kg	₩	104	71 - 143	17	29
Styrene	ND		0.763	0.734		mg/Kg	₩	96	79 - 129	18	20
t-Butylbenzene	ND		0.763	0.733		mg/Kg	₩	96	72 - 144	18	27
Tetrachloroethene	ND		0.763	0.779		mg/Kg	₩	102	75 - 141	16	20
Toluene	ND		0.763	0.780		mg/Kg	₩	102	75 - 125	16	20
trans-1,2-Dichloroethene	ND		0.763	0.783		mg/Kg	₩	103	77 - 134	15	20
trans-1,3-Dichloropropene	ND		0.763	0.743		mg/Kg	₩	97	80 - 121	15	20
Trichloroethene	ND		0.763	0.710		mg/Kg	₩	93	80 - 134	16	20
Vinyl chloride	ND		0.763	0.787		mg/Kg	₩	103	62 - 144	19	20

MSD MSD

MB MB

Result Qualifier

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		80 - 121
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120
Toluene-d8 (Surr)	100		80 - 120

Lab Sample ID: MB 580-467806/7

**Matrix: Water** 

Analyte

Analysis Batch: 467806

Client Sample ID: Method Blank **Prep Type: Total/NA** 

Prepared Analyzed Dil Fac

Methylene Cl	hloride	ND		5.0	1.4 ug/L		08/09/24 19:36	1
		MB	MB					
Surrogate		%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
Toluene-d8 (S	Surr)	100		80 - 120			08/09/24 19:36	1
4-Bromofluor	obenzene (Surr)	98		80 - 120			08/09/24 19:36	1
Dibromofluor	omethane (Surr)	101		80 - 120			08/09/24 19:36	1
1,2-Dichloroe	ethane-d4 (Surr)	103		80 - 120			08/09/24 19:36	1

RL

MDL Unit

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Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: LCS 580-467806/4

**Matrix: Water** 

Methylene Chloride

Analyte

Analysis Batch: 467806

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Client Sample ID: Lab Control Sample Dup

Spike LCS LCS %Rec Added Result Qualifier %Rec Limits Unit 4.74 J 5.00 ug/L 95 77 - 125

LCS LCS Surrogate %Recovery Qualifier Limits Toluene-d8 (Surr) 100 80 - 120 4-Bromofluorobenzene (Surr) 101 80 - 120 Dibromofluoromethane (Surr) 101 80 - 120 1,2-Dichloroethane-d4 (Surr) 102 80 - 120

Lab Sample ID: LCSD 580-467806/5

**Matrix: Water** 

**Analysis Batch: 467806** 

Spike LCSD LCSD %Rec **RPD** Added Result Qualifier RPD Limit Analyte Unit D %Rec Limits Methylene Chloride 5.00 4.89 J ug/L 98 77 - 125

LCSD LCSD Surrogate %Recovery Qualifier Limits 80 - 120 Toluene-d8 (Surr) 101 4-Bromofluorobenzene (Surr) 100 80 - 120 Dibromofluoromethane (Surr) 100 80 - 120 1,2-Dichloroethane-d4 (Surr) 103 80 - 120

Lab Sample ID: MB 580-468147/5-A

**Matrix: Solid** 

**Analysis Batch: 468155** 

Client Sample ID: Method Blank Prep Type: Total/NA

**Prep Batch: 468147** 

Prep Type: Total/NA

MB MB Result Qualifier MDL Unit Prepared **Analyte** RL Analyzed Dil Fac Chlorobenzene  $\overline{\mathsf{ND}}$ 0.040 0.0048 mg/Kg 08/14/24 09:22 08/14/24 11:38 ND Ethylbenzene 0.040 0.0091 mg/Kg 08/14/24 09:22 08/14/24 11:38 o-Xylene ND 0.040 0.0050 mg/Kg 08/14/24 09:22 08/14/24 11:38 Tetrachloroethene ND 0.040 0.0053 mg/Kg 08/14/24 09:22 08/14/24 11:38 Toluene ND 0.060 0.014 mg/Kg 08/14/24 09:22 08/14/24 11:38 Trichlorofluoromethane ND 0.080 0.026 mg/Kg 08/14/24 09:22 08/14/24 11:38

MB MB Dil Fac Qualifier Limits Surrogate %Recovery Prepared Analyzed Toluene-d8 (Surr) 100 80 - 120 08/14/24 09:22 08/14/24 11:38 4-Bromofluorobenzene (Surr) 100 80 - 120 08/14/24 09:22 08/14/24 11:38 80 - 120 Dibromofluoromethane (Surr) 101 08/14/24 09:22 08/14/24 11:38 1,2-Dichloroethane-d4 (Surr) 99 80 - 121 08/14/24 09:22 08/14/24 11:38

Lab Sample ID: LCS 580-468147/1-A

**Matrix: Solid** 

Analysis Batch: 468155

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

**Prep Batch: 468147** 

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chlorobenzene	0.800	0.857		mg/Kg		107	80 - 125	
Ethylbenzene	0.800	0.876		mg/Kg		109	80 - 135	
o-Xylene	0.800	0.872		mg/Kg		109	80 - 132	
Tetrachloroethene	0.800	0.943		mg/Kg		118	75 - 141	

**Eurofins Seattle** 

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LCS LCS

Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-468147/1-A

**Matrix: Solid** 

Client: ERM-West

Analysis Batch: 468155

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA
<b>Prep Batch: 468147</b>
%Rec

Analyte	Added	Result	Qualifier Un	t D	%Rec	Limits
Toluene	0.800	0.856	mg	/Kg	107	75 - 125
Trichlorofluoromethane	0.800	0.812	mg	′Kg	102	71 - 150

Spike

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 120
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	103		80 - 120
1,2-Dichloroethane-d4 (Surr)	97		80 - 121

**Matrix: Solid** 

**Analysis Batch: 468155** 

Lab Sample ID: LCSD 580-468147/2-A

Chefft Sample	ID. Lab	Contro	ui Saii	ipie Dup
		Prep '	Type:	Total/NA

**Prep Batch: 468147** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chlorobenzene	 0.800	0.852		mg/Kg		106	80 - 125	1	20
Ethylbenzene	0.800	0.857		mg/Kg		107	80 - 135	2	20
o-Xylene	0.800	0.865		mg/Kg		108	80 - 132	1	20
Tetrachloroethene	0.800	0.867		mg/Kg		108	75 - 141	8	20
Toluene	0.800	0.830		mg/Kg		104	75 - 125	3	20
Trichlorofluoromethane	0.800	0.734		mg/Kg		92	71 - 150	10	30

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 120
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120
1,2-Dichloroethane-d4 (Surr)	98		80 - 121

**Client Sample ID: Method Blank Prep Type: Total/NA** 

Prepared

**Prep Batch: 468299** 

Dil Fac

Analyzed

Analysis Batch: 468300 MB MB Analyte

Lab Sample ID: MB 580-468299/3-A

Result Qualifier

Chlorobenzene	ND	0.040	0.0048 mg/Kg	08/15/24 08:47	08/15/24 10:50	1
	MB MI	В				
Surrogate	%Recovery Qu	ualifier Limits		Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99	80 - 120		08/15/24 08:47	08/15/24 10:50	1
4-Bromofluorobenzene (Surr)	100	80 - 120		08/15/24 08:47	08/15/24 10:50	1
Dibromofluoromethane (Surr)	102	80 - 120		08/15/24 08:47	08/15/24 10:50	1
1,2-Dichloroethane-d4 (Surr)	100	80 - 121		08/15/24 08:47	08/15/24 10:50	1

RL

MDL Unit

Lab Sample ID: LCS 580-468299/1-A

Matrix: Solid

**Matrix: Solid** 

Clie	nt Sar	nple ID	: Lab Control Sample
			Prep Type: Total/NA
			<b>Prep Batch: 468299</b>
			%Rec
Unit	D	%Rec	Limits

Analysis Batch: 468300							Prep Ba	atcn: 468299
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chlorobenzene	0.800	0.808		mg/Kg		101	80 - 125	

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-468299/1-A

Lab Sample ID: LCSD 580-468299/2-A

**Matrix: Solid** 

**Analysis Batch: 468300** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 468299** 

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 120
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120
1,2-Dichloroethane-d4 (Surr)	96		80 - 121

**Client Sample ID: Lab Control Sample Dup** 

**Matrix: Solid** 

Analyte

Chlorobenzene

**Analysis Batch: 468300** 

Prep Type: Total/NA **Prep Batch: 468299** 

114

80 - 125

%Rec **RPD** %Rec Limits **RPD** Limit

LCSD LCSD %Recovery Qualifier Limits Surrogate 80 - 120 102 101 80 - 120

Toluene-d8 (Surr) 4-Bromofluorobenzene (Surr) 101 80 - 120 Dibromofluoromethane (Surr) 95 1,2-Dichloroethane-d4 (Surr) 80 - 121

#### Method: 8260D - Volatile Organic Compounds by GC/MS - RA

Lab Sample ID: 580-142691-11 MS

**Matrix: Solid** 

**Analysis Batch: 468155** 

Client Sample ID: PDI-12-SO-36-20240806 Prep Type: Total/NA

**Prep Batch: 468147** 

Spike MS MS %Rec Sample Sample Added Analyte Result Qualifier Result Qualifier Unit %Rec Limits Trichlorofluoromethane - RA 0.724 71 - 150 ND 0.662 mg/Kg 91

Spike

Added

0.800

LCSD LCSD

0.914

Result Qualifier

Unit

mg/Kg

MS MS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr) -	99		80 - 121
RA			
4-Bromofluorobenzene (Surr) -	102		80 - 120
RA			
Dibromofluoromethane (Surr) -	103		80 - 120
RA			
Toluene-d8 (Surr) - RA	100		80 - 120

Client Sample ID: PDI-12-SO-36-20240806

**Matrix: Solid** 

Analysis Batch: 468155

Lab Sample ID: 580-142691-11 MSD

Prep Type: Total/NA **Prep Batch: 468147** 

Sample Sample Spike MSD MSD %Rec **RPD** Result Qualifier Added Result Qualifier Unit Limits Limit Trichlorofluoromethane - RA ND 0.763 0.656 mg/Kg 86 71 - 150

MSD MSD Surrogate %Recovery Qualifier Limits 97 80 - 121 1,2-Dichloroethane-d4 (Surr) -4-Bromofluorobenzene (Surr) -101 80 - 120 RA

Client: ERM-West

Project/Site: Arkema PDI Sampling

Lab Sample ID: 580-142691-11 MSD

Method: 8260D - Volatile Organic Compounds by GC/MS - RA (Continued)

**Matrix: Solid** 

**Analysis Batch: 468155** 

Client Sample ID: PDI-12-SO-36-20240806 Prep Type: Total/NA

**Client Sample ID: Lab Control Sample** 

Client Sample ID: Lab Control Sample Dup

Client Sample ID: Method Blank

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Type: Total/NA** 

Prep Type: Total/NA

Prep Type: Total/NA

Job ID: 580-142691-1

MSD MSD

%Recovery Qualifier Limits Surrogate Dibromofluoromethane (Surr) -100 80 - 120 RAToluene-d8 (Surr) - RA 100 80 - 120

**Prep Batch: 468147** 

Method: 2540G - SM 2540G

Lab Sample ID: 580-142691-1 DU Client Sample ID: PDI-14-SO-38.6-20240802

**Matrix: Solid Prep Type: Total/NA** 

**Analysis Batch: 467925** 

DU DU **RPD** Sample Sample Result Qualifier Result Qualifier **RPD** Limit Analyte Unit D Percent Solids 85.4 83 2 % 20 Percent Moisture 14.6 16.8 % 20

Method: SM 5310C - Dissolved Organic Carbon

Lab Sample ID: MB 580-467954/4 Client Sample ID: Method Blank Prep Type: Total/NA

**Matrix: Water** 

**Analysis Batch: 467954** 

MB MB

RL **MDL** Unit **Analyte** Result Qualifier Prepared Analyzed Dil Fac **Total Organic Carbon** ND 1.5 0.38 mg/L 08/08/24 21:26

Lab Sample ID: LCS 580-467954/5

**Matrix: Water** 

**Analysis Batch: 467954** 

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits Total Organic Carbon 25.0 25.5 mg/L 102 85 - 115

Lab Sample ID: LCSD 580-467954/6

**Matrix: Water** 

Analysis Batch: 467954

Spike LCSD LCSD %Rec **RPD** Added Result Qualifier Unit %Rec Limits Limit Total Organic Carbon 25.0 23.8 mg/L 95 85 - 115

Lab Sample ID: MB 580-468915/4

**Matrix: Water** 

**Analysis Batch: 468915** 

MB MB

Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac 1.5 Total Organic Carbon 08/20/24 20:22 ND 0.38 mg/L

Lab Sample ID: LCS 580-468915/5

**Matrix: Water** 

**Analysis Batch: 468915** 

Spike LCS LCS

%Rec Added Result Qualifier Unit D %Rec Limits Analyte Total Organic Carbon 25.0 24.9 100 85 - 115 mg/L

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

Method: SM 5310C - Dissolved Organic Carbon (Continued)

Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA

**Matrix: Water** 

Lab Sample ID: LCSD 580-468915/6

Analysis Batch: 468915 LCSD LCSD RPD Spike %Rec Added Result Qualifier Unit D %Rec Limits RPD Limit Analyte Total Organic Carbon 25.0 25.1 mg/L 100 85 - 115

Lab Sample ID: 580-142691-13 MS Client Sample ID: PDI-14-SO-38.6-20240802

**Matrix: Water** Prep Type: Total/NA

Analysis Batch: 468915

Sample Sample Spike MS MS %Rec Result Qualifier Added Result Qualifier Unit D %Rec Limits 10.0 85 - 115 **Total Organic Carbon** 5.6 14.5 mg/L 89

Lab Sample ID: 580-142691-13 MSD Client Sample ID: PDI-14-SO-38.6-20240802

**Matrix: Water** 

Analysis Batch: 468915

Sample Sample Spike MSD MSD %Rec RPD Result Qualifier Added Result Qualifier Limits RPD Analyte Unit %Rec Limit Total Organic Carbon 5.6 10.0 15.8 102 85 - 115 mg/L

Lab Sample ID: 580-142691-13 DU Client Sample ID: PDI-14-SO-38.6-20240802 Prep Type: Total/NA

**Matrix: Water** 

**Analysis Batch: 468915** 

DU DU **RPD** Sample Sample Analyte Result Qualifier Result Qualifier Unit **RPD** Limit Total Organic Carbon 5.09 5.6 mg/L 20

Prep Type: Total/NA

Project/Site: Arkema PDI Sampling

Client: ERM-West

Date Received: 08/06/24 14:10

Client Sample ID: PDI-14-SO-38.6-20240802

Date Collected: 08/02/24 11:55

Lab Sample ID: 580-142691-1 **Matrix: Solid** 

Batch Batch Dilution Batch **Prepared** Method Factor Number Analyst or Analyzed **Prep Type** Type Run Lab 08/12/24 10:30 Total/NA Analysis 2540G 467925 AUA EET SEA

Client Sample ID: PDI-14-SO-38.6-20240802

Lab Sample ID: 580-142691-1

**Matrix: Solid** 

Date Collected: 08/02/24 11:55 Date Received: 08/06/24 14:10 Percent Solids: 85.4

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467783	BYM	EET SEA	08/09/24 14:22
Total/NA	Analysis	8260D		1	467786	K1K	EET SEA	08/10/24 05:54
Total/NA	Prep	5035	DL		468147	BYM	EET SEA	08/14/24 09:22
Total/NA	Analysis	8260D	DL	1	468155	BYM	EET SEA	08/14/24 18:04
Total/NA	Prep	5035	DL2		468299	BYM	EET SEA	08/15/24 08:47
Total/NA	Analysis	8260D	DL2	10000	468300	BYM	EET SEA	08/15/24 19:17

Client Sample ID: PDI-14-SO-33-20240802

Lab Sample ID: 580-142691-2

Matrix: Solid

Date Collected: 08/02/24 13:05 Date Received: 08/06/24 14:10

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	467925	AUA	EET SEA	08/12/24 10:30

Client Sample ID: PDI-14-SO-33-20240802

Lab Sample ID: 580-142691-2

Matrix: Solid

Date Collected: 08/02/24 13:05 Date Received: 08/06/24 14:10 Percent Solids: 91.4

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467783	BYM	EET SEA	08/09/24 14:22
Total/NA	Analysis	8260D		1	467786	K1K	EET SEA	08/10/24 03:43
Total/NA	Prep	5035	DL		468147	BYM	EET SEA	08/14/24 09:22
Total/NA	Analysis	8260D	DL	1	468155	BYM	EET SEA	08/14/24 17:21

Client Sample ID: TB-02-SO-20240802

Lab Sample ID: 580-142691-3

**Matrix: Solid** 

Date Collected: 08/02/24 00:01 Date Received: 08/06/24 14:10

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467783	BYM	EET SEA	08/09/24 14:22
Total/NA	Analysis	8260D		1	467786	K1K	EET SEA	08/10/24 01:54
Total/NA	Prep	5035	RA		468147	BYM	EET SEA	08/14/24 09:22
Total/NA	Analysis	8260D	RA	1	468155	BYM	EET SEA	08/14/24 12:24

Project/Site: Arkema PDI Sampling

Client: ERM-West

Client Sample ID: PDI-14-SO-40.5-20240802

Lab Sample ID: 580-142691-4 Date Collected: 08/02/24 14:45

**Matrix: Solid** 

Date Received: 08/06/24 14:10

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	467925	AUA	EET SEA	08/12/24 10:30

Client Sample ID: PDI-14-SO-40.5-20240802 Lab Sample ID: 580-142691-4

Date Collected: 08/02/24 14:45 **Matrix: Solid** Date Received: 08/06/24 14:10 Percent Solids: 91.6

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467783	BYM	EET SEA	08/09/24 14:22
Total/NA	Analysis	8260D		1	467786	K1K	EET SEA	08/10/24 04:04
Total/NA	Prep	5035	DL		468147	BYM	EET SEA	08/14/24 09:22
Total/NA	Analysis	8260D	DL	1	468155	BYM	EET SEA	08/14/24 17:43

Client Sample ID: PDI-11-SO-39.5-20240805 Lab Sample ID: 580-142691-5

Date Collected: 08/05/24 12:25 **Matrix: Solid** 

Date Received: 08/06/24 14:10

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	467925	AUA	EET SEA	08/12/24 10:30

Client Sample ID: PDI-11-SO-39.5-20240805 Lab Sample ID: 580-142691-5

Date Collected: 08/05/24 12:25 **Matrix: Solid** Date Received: 08/06/24 14:10 Percent Solids: 91.5

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467783	BYM	EET SEA	08/09/24 14:22
Total/NA	Analysis	8260D		1	467786	K1K	EET SEA	08/10/24 04:26
Total/NA	Prep	5035	RA		468147	BYM	EET SEA	08/14/24 09:22
Total/NA	Analysis	8260D	RA	1	468155	BYM	EET SEA	08/14/24 15:53

Lab Sample ID: 580-142691-6 Client Sample ID: DUP-03-SQ-20240805

Date Collected: 08/05/24 12:30 **Matrix: Solid** Date Received: 08/06/24 14:10

Γ	Batch	Batch		Dilution	Batch			Prepared
Prep Typ	ре Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G	<del></del>	1	467925	AUA	EET SEA	08/12/24 10:30

Lab Sample ID: 580-142691-6 Client Sample ID: DUP-03-SQ-20240805

Date Collected: 08/05/24 12:30 **Matrix: Solid** Date Received: 08/06/24 14:10 Percent Solids: 90.7

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467783	BYM	EET SEA	08/09/24 14:22
Total/NA	Analysis	8260D		1	467786	K1K	EET SEA	08/10/24 04:48
Total/NA	Prep	5035	RA		468147	BYM	EET SEA	08/14/24 09:22
Total/NA	Analysis	8260D	RA	1	468155	BYM	EET SEA	08/14/24 16:15

Project/Site: Arkema PDI Sampling

Client: ERM-West

Client Sample ID: PDI-11-SO-44.5-20240805

Lab Sample ID: 580-142691-7 Date Collected: 08/05/24 14:30 **Matrix: Solid** 

Date Received: 08/06/24 14:10

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G			467925	AUA	EET SEA	08/12/24 10:30

Client Sample ID: PDI-11-SO-44.5-20240805

Lab Sample ID: 580-142691-7

Date Collected: 08/05/24 14:30 **Matrix: Solid** Date Received: 08/06/24 14:10 Percent Solids: 90.8

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467783	BYM	EET SEA	08/09/24 14:22
Total/NA	Analysis	8260D		1	467786	K1K	EET SEA	08/10/24 05:10
Total/NA	Prep	5035	RA		468147	BYM	EET SEA	08/14/24 09:22
Total/NA	Analysis	8260D	RA	1	468155	BYM	EET SEA	08/14/24 16:37

Client Sample ID: PDI-11-SO-49-20240805

Lab Sample ID: 580-142691-8

**Matrix: Solid** 

Date Collected: 08/05/24 14:35 Date Received: 08/06/24 14:10

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	467925	AUA	EET SEA	08/12/24 10:30

Client Sample ID: PDI-11-SO-49-20240805

Lab Sample ID: 580-142691-8

**Matrix: Solid** 

Date Collected: 08/05/24 14:35 Date Received: 08/06/24 14:10

Percent Solids: 88.4

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467783	BYM	EET SEA	08/09/24 14:22
Total/NA	Analysis	8260D		1	467786	K1K	EET SEA	08/10/24 05:32
Total/NA	Prep	5035	RA		468147	BYM	EET SEA	08/14/24 09:22
Total/NA	Analysis	8260D	RA	1	468155	BYM	EET SEA	08/14/24 16:59

Client Sample ID: EB-080524

Lab Sample ID: 580-142691-9

**Matrix: Water** 

Date Collected: 08/05/24 14:00 Date Received: 08/06/24 14:10

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	SM 5310C		1	467954	MJ	EET SEA	08/09/24 06:50

Client Sample ID: RB-03-WQ-20240806

Lab Sample ID: 580-142691-10

**Matrix: Water** 

Date Collected: 08/06/24 08:15 Date Received: 08/06/24 14:10

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	467579	AA	EET SEA	08/08/24 21:38
Total/NA	Analysis	8260D	RA	1	467806	AA	EET SEA	08/10/24 00:15

Project/Site: Arkema PDI Sampling

Client: ERM-West

Client Sample ID: PDI-12-SO-36-20240806

Lab Sample ID: 580-142691-11 Date Collected: 08/06/24 10:00

**Matrix: Solid** 

Date Received: 08/06/24 14:10

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	467926	AUA	EET SEA	08/12/24 10:32

Client Sample ID: PDI-12-SO-36-20240806

Lab Sample ID: 580-142691-11

Date Collected: 08/06/24 10:00 **Matrix: Solid** Date Received: 08/06/24 14:10 Percent Solids: 91.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	5035			467783	BYM	EET SEA	08/09/24 14:22
Total/NA	Analysis	8260D		1	467786	K1K	EET SEA	08/10/24 02:16
Total/NA Total/NA	Prep Analysis	5035 8260D	RA RA	1	468147 468155	BYM BYM	EET SEA EET SEA	08/14/24 09:22 08/14/24 12:45

Client Sample ID: TB-01-WQ-20240806

Lab Sample ID: 580-142691-12

**Matrix: Water** 

Date Collected: 08/06/24 00:01 Date Received: 08/06/24 14:10

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	467579	AA	EET SEA	08/08/24 15:09

Client Sample ID: PDI-14-SO-38.6-20240802

Lab Sample ID: 580-142691-13

**Matrix: Water** 

Date Collected: 08/02/24 11:55 Date Received: 08/06/24 14:10

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	SM 5310C		1	468915	AUA	EET SEA	08/20/24 22:09

Client Sample ID: PDI-14-SO-40.5-20240802

Lab Sample ID: 580-142691-14

**Matrix: Water** 

Date Collected: 08/02/24 14:45 Date Received: 08/06/24 14:10

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	SM 5310C		1	468915	AUA	EET SEA	08/21/24 00:31

**Laboratory References:** 

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

# **Accreditation/Certification Summary**

Client: ERM-West Job ID: 580-142691-1

Project/Site: Arkema PDI Sampling

### **Laboratory: Eurofins Seattle**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Progra	am	Identification Number	<b>Expiration Date</b>
Oregon	NELA	Р	4167	07-07-25
J. 195				0. 0. 20
The following analyte	s are included in this repo	rt, but the laboratory is r	not certified by the governing author	ity. This list may includ
0 ,	s are included in this repo does not offer certification	•	not certified by the governing author	ity. This list may includ
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# **Sample Summary**

Client: ERM-West

580-142691-14

Project/Site: Arkema PDI Sampling

PDI-14-SO-40.5-20240802

Lab Sample ID **Client Sample ID** Matrix Collected Received 580-142691-1 PDI-14-SO-38.6-20240802 08/02/24 11:55 08/06/24 14:10 Solid 580-142691-2 PDI-14-SO-33-20240802 Solid 08/02/24 13:05 08/06/24 14:10 TB-02-SO-20240802 580-142691-3 Solid 08/02/24 00:01 08/06/24 14:10 580-142691-4 PDI-14-SO-40.5-20240802 Solid 08/02/24 14:45 08/06/24 14:10 580-142691-5 PDI-11-SO-39.5-20240805 Solid 08/05/24 12:25 08/06/24 14:10 580-142691-6 DUP-03-SQ-20240805 Solid 08/05/24 12:30 08/06/24 14:10 580-142691-7 PDI-11-SO-44.5-20240805 Solid 08/05/24 14:30 08/06/24 14:10 580-142691-8 PDI-11-SO-49-20240805 Solid 08/05/24 14:35 08/06/24 14:10 580-142691-9 EB-080524 Water 08/05/24 14:00 08/06/24 14:10 RB-03-WQ-20240806 08/06/24 08:15 08/06/24 14:10 580-142691-10 Water 580-142691-11 PDI-12-SO-36-20240806 Solid 08/06/24 10:00 08/06/24 14:10 580-142691-12 TB-01-WQ-20240806 Water 08/06/24 00:01 08/06/24 14:10 580-142691-13 PDI-14-SO-38.6-20240802 Water 08/02/24 11:55 08/06/24 14:10

Water

08/02/24 14:45 08/06/24 14:10

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Job ID: 580-142691-1

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#### **Eurofins Seattle**

5755 8th Street East Tacoma, WA 98424 Phone (253) 922-2310

# **Chain of Custody Record**

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Environment Testing

Ver: 04/02/2024 8/21/2024

Client Information	Sampler:				PM:					Carrie	r Tracking No	(s):	COC No:			
nt Contact: Phone					ız, Sheri L					State	State of Origin:			580-62781-19269.12		
Avery Soplata Company:	Sheri.Cruz@e					z@et.eurofinsus.com			State	State of Origin:			Page: Page of			
ERM-West			PWSID:						Analysis F	Poqueet	od		Job#:			
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Deliverable Requested: I(II,)II, IV, Other (specify)	Olikii Cinkii	VIII .							Requirem	nents:						
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**Eurofins Seattle** 

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Client: ERM-West Job Number: 580-142691-1

Login Number: 142691 List Source: Eurofins Seattle

List Number: 1

Creator: Silva, Shawn 1

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Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

## PREPARED FOR

Attn: Avery Soplata ERM-West 1050 SW 6th Avenue Suite 1650 Portland, Oregon 97204

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**JOB DESCRIPTION** 

Arkema PDI Sampling

**JOB NUMBER** 

580-142813-1

Eurofins Seattle 5755 8th Street East Tacoma WA 98424

## **Eurofins Seattle**

### **Job Notes**

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### **Authorization**

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Authorized for release by Sheri Cruz, Project Manager I Sheri.Cruz@et.eurofinsus.com (253)922-2310

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Client: ERM-West

Project/Site: Arkema PDI Sampling

Laboratory Job ID: 580-142813-1

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Client: ERM-West Job ID: 580-142813-1

Project: Arkema PDI Sampling

Job ID: 580-142813-1 Eurofins Seattle

## Job Narrative 580-142813-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these
  situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise
  specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 8/9/2024 11:40 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 4.4°C.

#### Receipt Exceptions

The following sample was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): PD1-21-SO-20.2-20240808 (580-142813-17)

The Chain-of-Custody (COC) was incomplete as received. The additional methods for this sample were written on the containers, but not on the COC.

#### **GC/MS VOA**

Method 8260D: The following samples were provided to the laboratory with a significantly different initial weight than that required by the reference method: PDI-12-SO-47.8-20240806 (580-142813-1), PDI-18-SO-48.5-20240807 (580-142813-4) and PDI-20-SO-49-20240808 (580-142813-10). Deviations in the weight by more than 20% may affect reporting limits and potentially method performance. The method specifies 10g. The amount provided was above this range.

Method 8260D: The following sample was provided to the laboratory with a significantly different initial weight than that required by the reference method: PDI-20-SO-9-20240807 (580-142813-5). Deviations in the weight by more than 20% may affect reporting limits and potentially method performance. The method specifies 10g. The amount provided was below this range.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-467888 recovered outside acceptance criteria, low biased, for 1,2,3-Trichlorobenzene, Chloromethane, Dichlorodifluoromethane and Hexachlorobutadiene. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analytes, the data are reported.

Method 8260D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-468642 and analytical batch 580-468647 recovered outside control limits for the following analytes: Naphthalene.

Method 8260D: Surrogate recovery for the following sample was outside the upper control limit: PDI-20-SO-9-20240807 (580-142813-5). This sample did not contain any chemically associated analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-468721 recovered outside acceptance criteria, low biased, for 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 1,2-Dibromo-3-Chloropropane and Naphthalene. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8260D: The method blank for preparation batch 580-468710 and analytical batch 580-468721 contained Methylene Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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Project: Arkema PDI Sampling

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#### **Eurofins Seattle**

#### GC/MS Semi VOA

Method 8270E: The following sample required a dilution due to the nature of the sample matrix: PDI-20-SO-9-20240807 (580-142813-5). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8270E: The continuing calibration verification (CCV) associated with batch 580-468859 recovered above the upper control limit for 2-Nitrophenol, Benzoic acid, 2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol and Indeno[1,2,3-cd]pyrene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: PDI-20-SO-9-20240807 (580-142813-5), PD1-21-SO-20.2-20240808 (580-142813-17) and (CCVIS 580-468859/3).

Method 8270E: The method blank for preparation batch 580-468175 contained Di-n-butyl phthalate above the reporting limit (RL). None of the samples associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed.

Method 8270E: Internal standard responses were outside of acceptance limits for the following samples: PDI-20-SO-9-20240807 (580-142813-5) and PD1-21-SO-20.2-20240808 (580-142813-17). The sample(s) shows evidence of matrix interference. The low internal standard response creates a high bias in the sample and since the samples were non-detect for the affected analytes, the data is considered acceptable and reported.

Method 8270E: Surrogate recovery for the following samples were outside control limits: PDI-20-SO-9-20240807 (580-142813-5) and PD1-21-SO-20.2-20240808 (580-142813-17). Evidence of matrix interference is present; therefore, re-extraction and/or reanalysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **Herbicides**

Method 8151A: Due to the matrix being oily and containing asphalt, the initial volume(s) used for the following samples deviated from the standard procedure: PDI-20-SO-9-20240807 (580-142813-5) and PD1-21-SO-20.2-20240808 (580-142813-17). The reporting limits (RLs) have been adjusted proportionately. 8151A\_SP

Method 8151A: Due to the matrix, the following sample could not be concentrated to the final method required volume: PDI-20-SO-9-20240807 (580-142813-5). The reporting limits (RLs) are elevated proportionately. 8151A SP

Method 8151A: The continuing calibration verification (CCV) associated with 570-473202 recovered high and outside the control limits for Dalapon and Dicamba on one column. Results are confirmed on both columns and reported from the passing column.

Method 8151A: The continuing calibration verification (CCV) associated with 570-473202 recovered high and outside the control limits for Dalapon on one column. Results are confirmed on both columns and reported from the passing column.

Method 8151A: The continuing calibration verification (CCV) associated with 570-473202 recovered high and outside the control limits for 2,4,5-T, 2,4,5-TP (Silvex), Dicamba, Dinoseb, MCPA and 2,4-Dichlorophenylacetic acid on one column. Results are confirmed on both columns and reported from the passing column.

Method 8151A: The continuing calibration verification (CCV) associated with 570-473202 recovered high and outside the control limits for 2,4-DB and Dichlorprop on one column. Results are confirmed on both columns and reported from the passing column.

Method 8151A: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 570-471244 and analytical batch 570-473202 recovered outside control limits for the following analytes: 2,4-D.

Method 8151A: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 570-471244 and analytical batch 570-473202 recovered outside control limits for the following analytes: Dinoseb.

Method 8151A: The 2,4-Dichlorophenylacetic acid surrogate recovery for the following samples was outside acceptance limits (high biased) on one column due to matrix interference: PDI-20-SO-9-20240807 (580-142813-5) and PD1-21-SO-20.2-20240808 (580-142813-17). The recovery is within acceptance limits on the other column, indicating that the extraction process was in

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Project: Arkema PDI Sampling

#### Job ID: 580-142813-1 (Continued)

**Eurofins Seattle** 

control.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **Hydrocarbons**

Method NWTPH\_Dx: The following sample contained a hydrocarbon pattern in the diesel range; however, the elution pattern is not the typical diesel fuel pattern used by the laboratory for quantitative purposes: PD1-21-SO-20.2-20240808 (580-142813-17).

Method NWTPH\_Dx: Surrogate recovery for the following sample was outside control limits: PDI-20-SO-9-20240807 (580-142813-5). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method NWTPH\_Dx: The following sample contained a hydrocarbon pattern in the diesel range; however, the elution pattern is not the typical diesel fuel pattern used by the laboratory for quantitative purposes: PDI-20-SO-9-20240807 (580-142813-5).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **PCBs**

Method 8082A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 580-468715 and analytical batch 580-469089 was outside control limits. Sample matrix interference and/or non-homogeneity is suspected.

Method 8082A: The Tetrachloro-m-xylene surrogate recovery for the following samples was outside acceptance limits (low biased) on the primary column: PDI-20-SO-9-20240807 (580-142813-5), (580-142813-A-5-E MS) and (580-142813-A-5-F MSD). The recovery is within acceptance limits on the other column, indicating that the extraction process was in control.

Method 8082A: The following samples required TBA clean-up, via EPA Method 3660B, to reduce matrix interferences TBA\_00048: PDI-20-SO-9-20240807 (580-142813-5), PD1-21-SO-20.2-20240808 (580-142813-17), (LCS 580-468715/3-A), (MB 580-468715/1-A), (580-142813-A-5-E MS) and (580-142813-A-5-F MSD).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **Pesticides**

Method 8081B: The method blank for preparation batch 580-468715 and analytical batch 580-469041 contained 4,4'-DDT above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL) in the method blank; therefore, re-extraction and re-analysis of samples was not performed.

Method 8081B: The laboratory control sample duplicate (LCSD) for preparation batch 580-468715 and analytical batch 580-469041 recovered outside control limits for the following analytes: 2,4'-DDT. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method 8081B: The laboratory control sample (LCS) for preparation batch 580-468715 and analytical batch 580-469041 recovered outside control limits for the following analytes: Endrin ketone. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8081B: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-468715 and analytical batch 580-469041 recovered outside control limits for the following analytes: 2,4'-DDT.

Method 8081B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries and precision for preparation batch 580-468715 and analytical batch 580-469041 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory sample control duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8081B: The continuing calibration verification (CCV) associated with 580-469215 recovered outside the control limits for DCB Decachlorobiphenyl on one column. Results are confirmed on both columns and reported from the passing column. The associated sample is: (CCVIS 580-469215/2).

Method 8081B: The continuing calibration verification (CCV) associated with 580-469215 recovered outside the control limits for Toxaphene on one column. Results are confirmed on both columns and reported from the passing column. The associated sample is: (CCV 580-469215/3).

Method 8081B: The method blank for preparation batch 580-469121 and analytical batch 580-469215 contained 2,4'-DDT above

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**Eurofins Seattle** 

the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8081B: Surrogate recovery for the following samples were outside control limits: PDI-20-SO-9-20240807 (580-142813-5), PDI-21-SO-36.3-20240808 (580-142813-14), PD1-21-SO-20.2-20240808 (580-142813-17), (580-142813-A-5-C MS) and (580-142813-A-5-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8081B: The %RPD between the primary and confirmation column exceeded 40% for 2,4'-DDD, 4,4'-DDD, 4,4'-DDE and 4,4'-DDT for the following samples: PDI-21-SO-36.3-20240808 (580-142813-14) and PD1-21-SO-20.2-20240808 (580-142813-17). The higher value(s) has been reported and qualified in accordance with the laboratory's SOP.

Method 8081B: Sample absorbed solvent during microwave process. Solvent was added again prior to pouring off. 8081. PDI-21-SO-36.3-20240808 (580-142813-14) and PDI-21-SO-20.2-20240808 (580-142813-17)

Method 8081B: The following samples required a copper clean-up, via EPA Method 3660B, to reduce matrix interferences: PDI-21-SO-36.3-20240808 (580-142813-14), PD1-21-SO-20.2-20240808 (580-142813-17), (LCS 580-469121/2-A), (LCSD 580-469121/3-A) and (MB 580-469121/1-A).

Method 8081B: The following samples were diluted due to the nature of the sample matrix: PDI-20-SO-9-20240807 (580-142813-5), (580-142813-A-5-C MS) and (580-142813-A-5-D MSD). Elevated reporting limits (RLs) are provided.

Method 8081B: Internal standard (ISTD) response for the following samples exceeded the control limit on Column ZB-CLPesticides-1: PDI-20-SO-9-20240807 (580-142813-5), PDI-21-SO-36.3-20240808 (580-142813-14), PD1-21-SO-20.2-20240808 (580-142813-17) and (580-142813-A-5-D MSD). As such, the sample results associated with this ISTD were reported from the other column, which met ISTD acceptance criteria.

Method 8081B: Surrogate recovery for the following samples were outside control limits: PDI-21-SO-36.3-20240808 (580-142813-14) and PD1-21-SO-20.2-20240808 (580-142813-17). Evidence of matrix interference is present; therefore, reextraction and/or re-analysis was not performed.

Method 8081B: The following sample was diluted to bring the concentration of target analytes within the calibration range: PD1-21-SO-20.2-20240808 (580-142813-17). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **PFAS**

Method 1633: During the solid phase extraction process, the following samples PDI-15-SO-38-20240725 (580-142813-6), (580-142813-A-6 DU), (580-142813-A-6 MS) and (580-142813-A-6 MSD) in preparation batch 320-790133 contained non-settable particulates which clogged the solid phase extraction column.

Method 1633: The following samples in preparation batch 320-790133 were yellow in color following extraction. PDI-20-SO-9-20240807 (580-142813-5) and PD1-21-SO-20.2-20240808 (580-142813-17)

Method 1633: The following samples in preparation batch 320-790133 were turbid prior to extraction. PDI-15-SO-38-20240725 (580-142813-A-6 DU), (580-142813-A-6 MS) and (580-142813-A-6 MSD)

Method 1633: The "I" qualifier means the transition mass ratio for the indicated analyte was outside the established ratio limits. The qualitative identification of the analyte has some degree of uncertainty. However, analyst judgment was used to positively identify the analyte: (580-142813-A-6-C MS) and (580-142813-A-6-D MSD).

Method 1633: Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following sample: PD1-21-SO-20.2-20240808 (580-142813-17). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method 1633: The Isotope Dilution Analyte (IDA) recovery associated with the following samples is below the method recommended limit: PDI-15-SO-38-20240725 (580-142813-6), (580-142813-A-6-B DU), (580-142813-A-6-C MS) and (580-142813-A-6-D MSD). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample(s).

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Client: ERM-West Job ID: 580-142813-1

Project: Arkema PDI Sampling

### Job ID: 580-142813-1 (Continued)

**Eurofins Seattle** 

Method 1633: Due to the matrix interference affecting the Perfluorohexanesulfonic acid (PFHxS), the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 320-790133 and analytical batch 320-791618 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method 1633: The following sample has chromatographic interferences that could adversely impact the identification and quantitation of target analytes: (580-142813-A-6-B DU) These interferences could cause false positive results.

Method 1633: The following samples exhibited matrix interferences for Perfluorohexanesulfonic acid (PFHxS) causing elevation of the reporting limit:

PDI-15-SO-38-20240725 (580-142813-6). The reporting limit for the affected analyte has been raised to be equal to the matrix, and a "G"

qualifier applied.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### Dioxir

Method 1613B: EPA Method 1613B specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). The 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument 10D5 exceeded this criteria: (CCV 320-795750/2), (LCS 320-793381/2-A), (LCSD 320-793381/3-A) and (MB 320-793381/1-A). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit: PDI-20-SO-9-20240807 (580-142813-5). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample.

Method 1613B: Ion abundance ratios are outside criteria for the Isotope Dilution Analyte (IDA) associated with the following sample: PDI-20-SO-9-20240807 (580-142813-5). The theoretical area for the IDA was used to quantitate recovery and target concentration.

Method 1613B: The following sample was diluted due to the nature of the sample matrix: PDI-20-SO-9-20240807 (580-142813-5). Elevated reporting limits (RLs) are provided.

Method 1613B: EPA Method 1613B specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). The 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument 10D5 exceeded this criteria: PDI-20-SO-9-20240807 (580-142813-5) and (CCV 320-796419/2). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: The following sample exhibited elevated noise or matrix interferences for one or more analytes causing elevation of the detection limit (EDL): PDI-20-SO-9-20240807 (580-142813-5) . The reporting limit (RL) for the affected analytes has been raised to be equal to the EDL, and a "G" qualifier applied.

Method 1613B: EPA Method 1613B specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). The 13C-1,2,3,4-TCDD associated with the following samples run on instrument 11D2 exceeded this criteria: PDI-20-SO-9-20240807 (580-142813-5) and (CCV 320-797800/16). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: The following sample was diluted due to the nature of the sample matrix: PD1-21-SO-20.2-20240808 (580-142813-17) at 5.0. Elevated reporting limits (RLs) are provided.

Method 1613B: The Isotope Dilution Analyte (IDA) recovery associated with the following sample is below the method recommended limit: PD1-21-SO-20.2-20240808 (580-142813-17). Generally, data quality is not considered affected if the IDA signal-to-noise ratio is greater than 10:1, which is achieved for all IDA in the sample.

Method 1613B: Ion abundance ratios are outside criteria for the Isotope Dilution Analyte (IDA) associated with the following sample: PD1-21-SO-20.2-20240808 (580-142813-17). The theoretical area for the IDA was used to quantitate recovery and target concentration.

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Client: ERM-West Job ID: 580-142813-1

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### Job ID: 580-142813-1 (Continued)

**Eurofins Seattle** 

Method 1613B: The following sample was diluted due to the nature of the sample matrix: PD1-21-SO-20.2-20240808 (580-142813-17). Elevated reporting limits (RLs) are provided.

Method 1613B: EPA Method 1613B specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). The 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument DFS 1 exceeded this criteria: PD1-21-SO-20.2-20240808 (580-142813-17) and (CCV 320-798158/1). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: EPA Method 1613B specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). The 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument 10D5 exceeded this criteria: PD1-21-SO-20.2-20240808 (580-142813-17) and (CCV 320-796804/1). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **General Chemistry**

Method Moisture: The sample duplicate (DUP) precision for analytical batch 580-468418 was outside control limits. Sample matrix interference is suspected.

Method Moisture: The reference method does not list a specific holding time for this procedure; therefore, the laboratory defaults to an in-house holding time of 14 days. The following sample in analytical batch 320-790822 was prepared and analyzed outside this time period: PDI-15-SO-38-20240725 (580-142813-6) and (580-142813-A-6 DU).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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### **Definitions/Glossary**

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

#### Qualifiers

G			

Qualifier

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.

В Compound was found in the blank and sample.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

S1+ Surrogate recovery exceeds control limits, high biased.

#### GC/MS Semi VOA

\*3 ISTD response or retention time outside acceptable limits.

.I Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

S1-Surrogate recovery exceeds control limits, low biased. S1+ Surrogate recovery exceeds control limits, high biased.

#### **GC Semi VOA**

Qualifier	Qualifier Description
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LCS and/or LCSD is outside acceptance limits, high biased.

\*1 LCS/LCSD RPD exceeds control limits.

В Compound was found in the blank and sample. F1 MS and/or MSD recovery exceeds control limits.

F2 MS/MSD RPD exceeds control limits

Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. P The %RPD between the primary and confirmation column/detector is >40%. The higher value has been reported The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

S1-Surrogate recovery exceeds control limits, low biased.

S1+ Surrogate recovery exceeds control limits, high biased.

#### **LCMS**

#### Qualifier **Qualifier Description**

\*5-Isotope dilution analyte is outside acceptance limits, low biased. \*5+ Isotope dilution analyte is outside acceptance limits, high biased.

4 MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not

applicable.

G The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference

Value is EMPC (estimated maximum possible concentration).

Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### **Dioxin**

q

#### Qualifier **Qualifier Description**

\*5-Isotope dilution analyte is outside acceptance limits, low biased.

В Compound was found in the blank and sample.

G The reported quantitation limit has been raised due to an exhibited elevated noise or matrix interference J. Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The

measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

### **General Chemistry**

#### Qualifier **Qualifier Description**

F3 Duplicate RPD exceeds the control limit

Н Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.

H3 Sample was received and analyzed past holding time. This does not meet regulatory requirements.

#### **Glossary**

#### Abbreviation These commonly used abbreviations may or may not be present in this report.

n Listed under the "D" column to designate that the result is reported on a dry weight basis

Percent Recovery %R **CFL** Contains Free Liquid **CFU** Colony Forming Unit

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### **Definitions/Glossary**

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

### **Glossary (Continued)**

Abbreviation	These commonly used abbreviations may or may not be present in this report.
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL	=

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent
POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-12-SO-47.8-20240806

Lab Sample ID: 580-142813-1 Date Collected: 08/06/24 12:20 Matrix: Solid Date Received: 08/09/24 11:40 Percent Solids: 68.5

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 0.033 1,1,1,2-Tetrachloroethane ND 0.0082 mg/Kg 08/12/24 12:50 08/12/24 13:49 ND 1.1.1-Trichloroethane 0.066 0.0076 mg/Kg 08/12/24 12:50 08/12/24 13:49 1,1,2,2-Tetrachloroethane ND 0.033 0.012 mg/Kg 08/12/24 12:50 08/12/24 13:49 1,1,2-Trichloroethane ND 0.033 0.012 mg/Kg 08/12/24 12:50 08/12/24 13:49 0.066 0.015 mg/Kg 08/12/24 12:50 08/12/24 13:49 1.1-Dichloroethane ND 1,1-Dichloroethene ND 0.066 0.020 mg/Kg 08/12/24 12:50 08/12/24 13:49 1,1-Dichloropropene ND 0.066 0.0087 08/12/24 12:50 08/12/24 13:49 mg/Kg ND 0.065 08/12/24 12:50 08/12/24 13:49 1,2,3-Trichlorobenzene 0.13 mg/Kg 1,2,3-Trichloropropane ND 0.066 0.019 mg/Kg 08/12/24 12:50 08/12/24 13:49 1,2,4-Trichlorobenzene ND 0.13 0.070 mg/Kg 08/12/24 12:50 08/12/24 13:49 1,2,4-Trimethylbenzene ND 0.066 0.022 mg/Kg 08/12/24 12:50 08/12/24 13:49 mg/Kg 1.2-Dibromo-3-Chloropropane ND 0.099 0.025 08/12/24 12:50 08/12/24 13:49 1 1,2-Dibromoethane ND 0.033 0.0062 mg/Kg 08/12/24 12:50 08/12/24 13:49 1,2-Dichlorobenzene ND 0.066 0.014 mg/Kg 08/12/24 12:50 08/12/24 13:49 0.0090 ND 0.033 mg/Kg 08/12/24 12:50 08/12/24 13:49 1.2-Dichloroethane 0.011 1,2-Dichloropropane NΩ 0.033 mg/Kg 08/12/24 12:50 08/12/24 13:49 1,3,5-Trimethylbenzene ND 0.066 0.012 mg/Kg 08/12/24 12:50 08/12/24 13:49 1,3-Dichlorobenzene ND 0.099 0.022 mg/Kg 08/12/24 12:50 08/12/24 13:49 ND 0.099 0.0092 mg/Kg 08/12/24 12:50 08/12/24 13:49 1,3-Dichloropropane 1,4-Dichlorobenzene ND 0.099 0.018 mg/Kg 08/12/24 12:50 08/12/24 13:49 2,2-Dichloropropane ND 0.066 0.020 mg/Kg ť. 08/12/24 12:50 08/12/24 13:49 2-Chlorotoluene ND 0.066 0.014 mg/Kg 08/12/24 12:50 08/12/24 13:49 4-Chlorotoluene ND 0.016 mg/Kg 08/12/24 12:50 08/12/24 13:49 0.066 4-Isopropyltoluene ND 0.066 0.017 mg/Kg 08/12/24 12:50 08/12/24 13:49 Benzene ND 0.033 0.0062 mg/Kg 08/12/24 12:50 08/12/24 13:49 0.0069 Bromobenzene ND 0.066 mg/Kg 08/12/24 12:50 08/12/24 13:49 Bromochloromethane ND 0.066 0.010 mg/Kg 08/12/24 12:50 08/12/24 13:49 Bromodichloromethane 0.0090 ND 0.066 mg/Kg 08/12/24 12:50 08/12/24 13:49 0.0074 Bromoform ND 0.066 mg/Kg 08/12/24 12:50 08/12/24 13:49 ND 0.062 mg/Kg Bromomethane 0.16 08/12/24 12:50 08/12/24 13:49 Carbon tetrachloride ND 0.033 0.0072 mg/Kg 08/12/24 12:50 08/12/24 13:49 ND 0.066 0.0079 mg/Kg 08/12/24 12:50 08/12/24 13:49 Chlorobenzene Chloroethane ND 0.034 08/12/24 12:50 08/12/24 13:49 0.13 mg/Kg Chloroform ND 08/12/24 12:50 0.033 0.0069 mg/Kg 08/12/24 13:49 Chloromethane ND 0.099 0.017 mg/Kg 08/12/24 12:50 08/12/24 13:49 cis-1.2-Dichloroethene ND 0.099 0.021 mg/Kg 08/12/24 12:50 08/12/24 13:49 cis-1,3-Dichloropropene ND 0.033 0.0066 mg/Kg 08/12/24 12:50 08/12/24 13:49 Dibromochloromethane ND 0.033 0.0080 mg/Kg 08/12/24 12:50 08/12/24 13:49 Dibromomethane ND 0.012 mg/Kg 08/12/24 12:50 0.066 08/12/24 13:49 Dichlorodifluoromethane ND 0.41 0.075 mg/Kg 08/12/24 12:50 08/12/24 13:49 Ethylbenzene ND 0.066 0.015 mg/Kg 08/12/24 12:50 08/12/24 13:49 Hexachlorobutadiene ND 0.16 0.039 mg/Kg 08/12/24 12:50 08/12/24 13:49 0.014 ND 08/12/24 13:49 Isopropylbenzene 0.066 mg/Kg 08/12/24 12:50 Methyl tert-butyl ether 0.066 0.0099 08/12/24 12:50 08/12/24 13:49 ND mg/Kg ND 0.066 m-Xylene & p-Xylene 0.012 mg/Kg 08/12/24 12:50 08/12/24 13:49 Naphthalene ND 0.25 0.064 mg/Kg 08/12/24 12:50 08/12/24 13:49 n-Butylbenzene ND 0.030 0.066 mg/Kg 08/12/24 12:50 08/12/24 13:49 N-Propylbenzene ND 0.066 0.025 mg/Kg 08/12/24 12:50 08/12/24 13:49 08/12/24 12:50 o-Xylene ND 0.066 0.0082 mg/Kg 08/12/24 13:49

**Eurofins Seattle** 

9/12/2024

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Analyte

Percent Solids (SM22 2540G)

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-12-SO-47.8-20240806

Result Qualifier

68.5

31.5

Lab Sample ID: 580-142813-1 Date Collected: 08/06/24 12:20 **Matrix: Solid** Date Received: 08/09/24 11:40 Percent Solids: 68.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.066	0.014	mg/Kg	— <u></u>	08/12/24 12:50	08/12/24 13:49	
Styrene	ND		0.066	0.021	mg/Kg	₩	08/12/24 12:50	08/12/24 13:49	1
t-Butylbenzene	ND		0.066	0.013	mg/Kg	₩	08/12/24 12:50	08/12/24 13:49	1
Tetrachloroethene	ND		0.066	0.0087	mg/Kg	☼	08/12/24 12:50	08/12/24 13:49	1
Toluene	ND		0.099	0.022	mg/Kg	₩	08/12/24 12:50	08/12/24 13:49	1
trans-1,2-Dichloroethene	ND		0.099	0.024	mg/Kg	₩	08/12/24 12:50	08/12/24 13:49	1
trans-1,3-Dichloropropene	ND		0.066	0.011	mg/Kg	☼	08/12/24 12:50	08/12/24 13:49	1
Trichloroethene	ND		0.066	0.017	mg/Kg	₩	08/12/24 12:50	08/12/24 13:49	1
Trichlorofluoromethane	ND		0.13	0.043	mg/Kg	₩	08/12/24 12:50	08/12/24 13:49	1
Vinyl chloride	ND		0.16	0.031	mg/Kg	₩	08/12/24 12:50	08/12/24 13:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		80 - 121				08/12/24 12:50	08/12/24 13:49	-
4-Bromofluorobenzene (Surr)	101		80 - 120				08/12/24 12:50	08/12/24 13:49	1
Dibromofluoromethane (Surr)	107		80 - 120				08/12/24 12:50	08/12/24 13:49	1
Toluene-d8 (Surr)	99		80 - 120				08/12/24 12:50	08/12/24 13:49	1
Method: SW846 8260D - Vo	olatile Organic	Compound	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	0.12	J	0.41	0.043	mg/Kg	₩	08/19/24 09:17	08/19/24 15:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
Surrogate 1,2-Dichloroethane-d4 (Surr)	%Recovery	Qualifier	<b>Limits</b> 80 - 121				<b>Prepared</b> 08/19/24 09:17	Analyzed 08/19/24 15:09	Dil Fac
	<u>_</u>	Qualifier						08/19/24 15:09	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96	Qualifier	80 - 121				08/19/24 09:17	08/19/24 15:09 08/19/24 15:09	Dil Fa

RL

0.1

0.1

RL Unit

0.1 %

0.1 %

Prepared

Analyzed

08/15/24 15:25

08/15/24 15:25

Dil Fac

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-18-SO-38.7-20240807

Lab Sample ID: 580-142813-2 Date Collected: 08/07/24 10:20 **Matrix: Solid** Percent Solids: 89.0 Date Received: 08/09/24 11:40

Analyte	Result (	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND -	<u> </u>	2.4	0.60	mg/Kg	— <u></u>	08/19/24 14:51		1
1,1,1-Trichloroethane	ND		4.8		mg/Kg	₩	08/19/24 14:51	08/19/24 23:06	1
1,1,2,2-Tetrachloroethane	ND		2.4		mg/Kg	₩	08/19/24 14:51	08/19/24 23:06	1
1,1,2-Trichloroethane	ND		2.4		mg/Kg		08/19/24 14:51	08/19/24 23:06	1
1,1-Dichloroethane	ND		4.8	1.1	mg/Kg	₩	08/19/24 14:51	08/19/24 23:06	1
1,1-Dichloroethene	ND		4.8		mg/Kg	₩	08/19/24 14:51	08/19/24 23:06	1
1,1-Dichloropropene	ND		4.8		mg/Kg			08/19/24 23:06	1
1,2,3-Trichlorobenzene	ND		9.7		mg/Kg	₩		08/19/24 23:06	1
1,2,3-Trichloropropane	ND		4.8		mg/Kg	Ď.		08/19/24 23:06	1
1,2,4-Trichlorobenzene	ND		9.7		mg/Kg			08/19/24 23:06	· · · · · · · · · · · · · · · · · · ·
1,2,4-Trimethylbenzene	ND		4.8		mg/Kg	₩.		08/19/24 23:06	1
1,2-Dibromo-3-Chloropropane	ND		7.3		mg/Kg	**		08/19/24 23:06	
1,2-Dibromoethane	ND		2.4		mg/Kg			08/19/24 23:06	· · · · · · · · · · · · · · · · · · ·
•	8.0		4.8		mg/Kg	₩		08/19/24 23:06	1
<b>1,2-Dichlorobenzene</b> 1,2-Dichloroethane	ND		2.4		mg/Kg	₩		08/19/24 23:06	1
1,2-Dichloropropane	ND		2.4		mg/Kg	¥ \$		08/19/24 23:06	
1,3,5-Trimethylbenzene	ND		4.8		mg/Kg	₩		08/19/24 23:06	1
•	ND ND		7.3			¥ \$	08/19/24 14:51		
1,3-Dichlorobenzene	ND				mg/Kg				
1,3-Dichloropropane			7.3 7.3		mg/Kg	φ.	08/19/24 14:51	08/19/24 23:06 08/19/24 23:06	1
1,4-Dichlorobenzene	<b>32</b>				mg/Kg	₩.			1
2,2-Dichloropropane	ND		4.8		mg/Kg		08/19/24 14:51	08/19/24 23:06	
2-Chlorotoluene	ND		4.8	1.1	mg/Kg	<b>\$</b>	08/19/24 14:51		1
4-Chlorotoluene	ND		4.8		mg/Kg	<b>*</b>		08/19/24 23:06	1
1-Isopropyltoluene	ND		4.8		mg/Kg	<del>.</del>	08/19/24 14:51		
Benzene -	ND		2.4		mg/Kg	☼		08/19/24 23:06	1
Bromobenzene	ND		4.8		mg/Kg	☼	08/19/24 14:51		1
3romochloromethane	ND		4.8		mg/Kg		08/19/24 14:51		1
Bromodichloromethane	ND		4.8		mg/Kg	₩		08/19/24 23:06	1
Bromoform	ND		4.8		mg/Kg	₩		08/19/24 23:06	1
Bromomethane	ND		12		mg/Kg	<b>*</b>	08/19/24 14:51	08/19/24 23:06	1
Carbon tetrachloride	ND		2.4		mg/Kg	₩	08/19/24 14:51		1
Chloroethane	ND		9.7	2.5	mg/Kg	₩	08/19/24 14:51	08/19/24 23:06	1
Chloroform	2.1 、	J	2.4	0.51	mg/Kg		08/19/24 14:51	08/19/24 23:06	1
Chloromethane	ND		7.3	1.2	mg/Kg	₩	08/19/24 14:51	08/19/24 23:06	1
cis-1,2-Dichloroethene	ND		7.3	1.5	mg/Kg	₩	08/19/24 14:51	08/19/24 23:06	1
cis-1,3-Dichloropropene	ND		2.4	0.48	mg/Kg	₩	08/19/24 14:51	08/19/24 23:06	1
Dibromochloromethane	ND		2.4	0.59	mg/Kg	₩	08/19/24 14:51	08/19/24 23:06	1
Dibromomethane	ND		4.8	0.89	mg/Kg	₩	08/19/24 14:51	08/19/24 23:06	1
Dichlorodifluoromethane	ND		30	5.6	mg/Kg	☼	08/19/24 14:51	08/19/24 23:06	1
Ethylbenzene	ND		4.8	1.1	mg/Kg	₩	08/19/24 14:51	08/19/24 23:06	1
Hexachlorobutadiene	ND		12	2.9	mg/Kg	₩	08/19/24 14:51	08/19/24 23:06	1
Isopropylbenzene	ND		4.8	1.0	mg/Kg	₩	08/19/24 14:51	08/19/24 23:06	1
Methyl tert-butyl ether	ND		4.8	0.73	mg/Kg	₩	08/19/24 14:51	08/19/24 23:06	1
Methylene Chloride	7.2	JB	30		mg/Kg	☼	08/19/24 14:51	08/19/24 23:06	1
m-Xylene & p-Xylene	ND		4.8		mg/Kg	₽	08/19/24 14:51	08/19/24 23:06	1
Naphthalene	ND		18		mg/Kg	₩	08/19/24 14:51	08/19/24 23:06	1
n-Butylbenzene	ND		4.8		mg/Kg	₩	08/19/24 14:51	08/19/24 23:06	1
N-Propylbenzene	ND		4.8		mg/Kg	₩	08/19/24 14:51	08/19/24 23:06	1
o-Xylene	ND		4.8		mg/Kg		08/19/24 14:51		1

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Dibromofluoromethane (Surr)

Toluene-d8 (Surr)

Client Sample ID: PDI-18-SO-38.7-20240807

Lab Sample ID: 580-142813-2 Date Collected: 08/07/24 10:20 Matrix: Solid Date Received: 08/09/24 11:40 Percent Solids: 89.0

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued) Result Qualifier **MDL** Unit Prepared Dil Fac Analyte D Analyzed sec-Butylbenzene 4.8 1.0 mg/Kg 08/19/24 14:51 08/19/24 23:06 ND Styrene ND 08/19/24 14:51 08/19/24 23:06 4.8 1.5 mg/Kg t-Butylbenzene ND 4.8 0.93 mg/Kg 08/19/24 14:51 08/19/24 23:06 **Tetrachloroethene** 4.8 0.64 mg/Kg 08/19/24 14:51 08/19/24 23:06 31 Toluene ND 7.3 1.6 mg/Kg 08/19/24 14:51 08/19/24 23:06 trans-1,2-Dichloroethene ND 7.3 1.8 mg/Kg 08/19/24 14:51 08/19/24 23:06 trans-1,3-Dichloropropene ND 4.8 0.85 mg/Kg © 08/19/24 14:51 08/19/24 23:06 Trichloroethene ND 4.8 1.2 mg/Kg © 08/19/24 14:51 08/19/24 23:06 Trichlorofluoromethane ND 9.7 3.1 mg/Kg 08/19/24 14:51 08/19/24 23:06 Vinyl chloride ND 12 2.3 mg/Kg © 08/19/24 14:51 08/19/24 23:06 %Recovery Surrogate Qualifier Limits Prepared Analyzed Dil Fac 95 1,2-Dichloroethane-d4 (Surr) 80 - 121 08/19/24 14:51 08/19/24 23:06 4-Bromofluorobenzene (Surr) 100 80 - 120 08/19/24 14:51 08/19/24 23:06 Dibromofluoromethane (Surr) 103 80 - 120 08/19/24 14:51 08/19/24 23:06 1 Toluene-d8 (Surr) 109 80 - 120 08/19/24 14:51 08/19/24 23:06

Method: SW846 8260D - Vo	olatile Organic	Compoun	ds by GC/MS	- DL					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	12000		48	5.8	mg/Kg	<del>*</del>	08/21/24 15:12	08/21/24 21:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 121				08/21/24 15:12	08/21/24 21:48	1
4-Bromofluorobenzene (Surr)	98		80 - 120				08/21/24 15:12	08/21/24 21:48	1

80 - 120

80 - 120

101

101

General Chemistry Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	89.0		0.1	0.1	%			08/15/24 15:25	1
Percent Moisture (SM22 2540G)	11.0		0.1	0.1	%			08/15/24 15:25	1

08/21/24 15:12 08/21/24 21:48

08/21/24 15:12 08/21/24 21:48

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-18-SO-43.2-20240807

Date Collected: 08/07/24 10:50 Date Received: 08/09/24 11:40 Lab Sample ID: 580-142813-3

Matrix: Solid Percent Solids: 79.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND		0.027	0.0068	mg/Kg	— <u></u>	08/12/24 12:50		
1,1,1-Trichloroethane	ND		0.054	0.0063	0 0	₩	08/12/24 12:50	08/12/24 14:10	
1,1,2,2-Tetrachloroethane	ND		0.027		mg/Kg	₩	08/12/24 12:50	08/12/24 14:10	
1,1,2-Trichloroethane	ND		0.027		mg/Kg		08/12/24 12:50	08/12/24 14:10	
1,1-Dichloroethane	ND		0.054		mg/Kg	χ̈́	08/12/24 12:50		
1.1-Dichloroethene	ND		0.054		mg/Kg	ά		08/12/24 14:10	
1,1-Dichloropropene	ND		0.054	0.0072				08/12/24 14:10	
1,2,3-Trichlorobenzene	ND		0.11		mg/Kg	χ̈́		08/12/24 14:10	
1,2,3-Trichloropropane	ND		0.054		mg/Kg	ά		08/12/24 14:10	
1,2,4-Trichlorobenzene	ND		0.11		mg/Kg			08/12/24 14:10	
1,2,4-Trimethylbenzene	ND		0.054		mg/Kg	ά		08/12/24 14:10	
1,2-Dibromo-3-Chloropropane	ND		0.082		mg/Kg	Ď.		08/12/24 14:10	
1,2-Dibromoethane	ND		0.027	0.0052				08/12/24 14:10	
1,2-Dichlorobenzene	ND.		0.054		mg/Kg	~ \$		08/12/24 14:10	
1,2-Dichlorobenzene	ND		0.034	0.0075		₩		08/12/24 14:10	
,,2-Dichloropropane	ND		0.027	0.0073		¥. ☆		08/12/24 14:10	
1,3,5-Trimethylbenzene	ND		0.027		mg/Kg	₩		08/12/24 14:10	
1,3-Dichlorobenzene	ND ND		0.034		mg/Kg			08/12/24 14:10	
	ND		0.082					08/12/24 14:10	
I,3-Dichloropropane			0.082	0.0076		1\tr		08/12/24 14:10	
1,4-Dichlorobenzene	<b>0.031</b> ND	J			mg/Kg	<u>*</u>		08/12/24 14:10	
2,2-Dichloropropane			0.054		mg/Kg				
2-Chlorotoluene	ND		0.054		mg/Kg	₩.		08/12/24 14:10	
I-Chlorotoluene	ND		0.054		mg/Kg	<b>*</b>		08/12/24 14:10	
1-Isopropyltoluene	ND		0.054		mg/Kg	<del>.</del>		08/12/24 14:10	
Benzene	ND		0.027	0.0052		<b>*</b>		08/12/24 14:10	
Bromobenzene	ND		0.054	0.0057		Ď.		08/12/24 14:10	
3romochloromethane	ND		0.054	0.0084		<del>.</del>		08/12/24 14:10	
3romodichloromethane	ND		0.054	0.0075		Ď.		08/12/24 14:10	
Bromoform	ND		0.054	0.0061	mg/Kg	Ď.		08/12/24 14:10	
Bromomethane	ND		0.14	0.051	mg/Kg	<del>.</del>		08/12/24 14:10	
Carbon tetrachloride	ND		0.027	0.0060	mg/Kg	☼		08/12/24 14:10	
Chlorobenzene	13		0.054	0.0065		☼		08/12/24 14:10	
Chloroethane	ND		0.11		mg/Kg			08/12/24 14:10	
Chloroform	ND		0.027	0.0057	0 0	₩		08/12/24 14:10	
Chloromethane	ND		0.082		mg/Kg	₩		08/12/24 14:10	
cis-1,2-Dichloroethene	ND		0.082		mg/Kg			08/12/24 14:10	
cis-1,3-Dichloropropene	ND		0.027	0.0054		₩		08/12/24 14:10	
Dibromochloromethane	ND		0.027	0.0067	mg/Kg	₩	08/12/24 12:50	08/12/24 14:10	
Dibromomethane	ND		0.054		mg/Kg	₩		08/12/24 14:10	
Dichlorodifluoromethane	ND		0.34		mg/Kg	₩	08/12/24 12:50	08/12/24 14:10	
Ethylbenzene	ND		0.054	0.012	mg/Kg	☼	08/12/24 12:50	08/12/24 14:10	
Hexachlorobutadiene	ND		0.14		mg/Kg	₩	08/12/24 12:50	08/12/24 14:10	
sopropylbenzene	ND		0.054	0.012	mg/Kg	☆	08/12/24 12:50	08/12/24 14:10	
Methyl tert-butyl ether	ND		0.054	0.0082	mg/Kg	☼	08/12/24 12:50	08/12/24 14:10	
n-Xylene & p-Xylene	ND		0.054	0.0097	mg/Kg	☼	08/12/24 12:50	08/12/24 14:10	
Naphthalene	ND		0.20	0.053	mg/Kg	₩	08/12/24 12:50	08/12/24 14:10	
n-Butylbenzene	ND		0.054	0.025	mg/Kg	☼	08/12/24 12:50	08/12/24 14:10	
N-Propylbenzene	ND		0.054	0.020	mg/Kg	☼	08/12/24 12:50	08/12/24 14:10	
o-Xylene	ND		0.054	0.0068			08/12/24 12:50	08/12/24 14:10	

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Percent Solids (SM22 2540G)

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-18-SO-43.2-20240807 Lab Sample ID: 580-142813-3

Date Collected: 08/07/24 10:50

Matrix: Solid

Date Received: 08/09/24 11:40

Percent Solids: 79.2

Method: SW846 8260D - Vo	_	•	•	•	inued)	_			
Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.054	0.012	mg/Kg	≎	08/12/24 12:50	08/12/24 14:10	1
Styrene	ND		0.054	0.017	mg/Kg	☆	08/12/24 12:50	08/12/24 14:10	1
t-Butylbenzene	ND		0.054	0.010	mg/Kg	₽	08/12/24 12:50	08/12/24 14:10	1
Tetrachloroethene	0.097		0.054	0.0072	mg/Kg	≎	08/12/24 12:50	08/12/24 14:10	1
Toluene	ND		0.082	0.018	mg/Kg	≎	08/12/24 12:50	08/12/24 14:10	1
trans-1,2-Dichloroethene	ND		0.082	0.020	mg/Kg	₽	08/12/24 12:50	08/12/24 14:10	1
trans-1,3-Dichloropropene	ND		0.054	0.0095	mg/Kg	₩	08/12/24 12:50	08/12/24 14:10	1
Trichloroethene	0.018	J	0.054	0.014	mg/Kg	₩	08/12/24 12:50	08/12/24 14:10	1
Trichlorofluoromethane	ND		0.11	0.035	mg/Kg	₩	08/12/24 12:50	08/12/24 14:10	1
Vinyl chloride	ND		0.14	0.025	mg/Kg	₽	08/12/24 12:50	08/12/24 14:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				08/12/24 12:50	08/12/24 14:10	1
4-Bromofluorobenzene (Surr)	97		80 - 120				08/12/24 12:50	08/12/24 14:10	1
Dibromofluoromethane (Surr)	103		80 - 120				08/12/24 12:50	08/12/24 14:10	1
Toluene-d8 (Surr)	99		80 - 120				08/12/24 12:50	08/12/24 14:10	1
Method: SW846 8260D - Vo	olatile Organic	Compound	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	0.090	J	0.34	0.035	mg/Kg	<del>*</del>	08/19/24 09:17	08/19/24 15:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		80 - 121				08/19/24 09:17	08/19/24 15:30	1
4-Bromofluorobenzene (Surr)	99		80 - 120				08/19/24 09:17	08/19/24 15:30	1
Dibromofluoromethane (Surr)	101		80 - 120				08/19/24 09:17	08/19/24 15:30	1
Toluene-d8 (Surr)	103		80 - 120				08/19/24 09:17	08/19/24 15:30	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac

0.1

0.1

79.2

20.8

0.1 %

0.1 %

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08/15/24 15:25

08/15/24 15:25

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Date Collected: 08/07/24 12:05

Date Received: 08/09/24 11:40

Matrix: Solid
Percent Solids: 84.2

Analyte	Result	Ouglifier	RL	MDL	l Ini+	<b>D</b>	Droparad	Apaluzad	Dil Fa
<u> </u>	ND Result		$\frac{RL}{0.023}$			<u>D</u>	Prepared	Analyzed	DII Fa
1,1,1,2-Tetrachloroethane	ND ND		0.023		mg/Kg	*	08/12/24 12:50	08/12/24 14:30 08/12/24 14:30	
1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane	ND ND		0.047	0.0054		*		08/12/24 14:30	
<u> </u>				0.0089					
1,1,2-Trichloroethane	ND		0.023	0.0086	0 0	₩		08/12/24 14:30	
1,1-Dichloroethane	ND		0.047		mg/Kg	<b>*</b>		08/12/24 14:30	
1,1-Dichloroethene	ND		0.047		mg/Kg	<del>Ω</del>		08/12/24 14:30	
1,1-Dichloropropene	ND		0.047	0.0062		<b>*</b>		08/12/24 14:30	
1,2,3-Trichlorobenzene	ND		0.093		mg/Kg	<b>*</b>		08/12/24 14:30	
,2,3-Trichloropropane	ND		0.047		mg/Kg	<del>.</del> .		08/12/24 14:30	
1,2,4-Trichlorobenzene	ND		0.093		mg/Kg	₩		08/12/24 14:30	
1,2,4-Trimethylbenzene	ND		0.047		mg/Kg	₩		08/12/24 14:30	
1,2-Dibromo-3-Chloropropane	ND		0.070		mg/Kg			08/12/24 14:30	
1,2-Dibromoethane	ND		0.023	0.0044		₩		08/12/24 14:30	
1,2-Dichlorobenzene	ND		0.047		mg/Kg	₩		08/12/24 14:30	
1,2-Dichloroethane	ND		0.023	0.0064	mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	
1,2-Dichloropropane	ND		0.023	0.0077	mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	
1,3,5-Trimethylbenzene	ND		0.047	0.0089	mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	
1,3-Dichlorobenzene	ND		0.070	0.016	mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	
1,3-Dichloropropane	ND		0.070	0.0065	mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	
,4-Dichlorobenzene	ND		0.070	0.013	mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	
2,2-Dichloropropane	ND		0.047	0.014	mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	
2-Chlorotoluene	ND		0.047	0.010	mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	
-Chlorotoluene	ND		0.047	0.011	mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	
I-Isopropyltoluene	ND		0.047	0.012	mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	
Benzene	ND		0.023	0.0044	mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	
Bromobenzene	ND		0.047	0.0049	mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	
Bromochloromethane	ND		0.047	0.0072	mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	
Bromodichloromethane	ND		0.047	0.0064	mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	
Bromoform	ND		0.047	0.0053	mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	
Bromomethane	ND		0.12		mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	
Carbon tetrachloride	ND		0.023	0.0051	mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	
Chlorobenzene	2.6		0.047	0.0056		₩	08/12/24 12:50	08/12/24 14:30	
Chloroethane	ND		0.093		mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	
Chloroform	ND		0.023	0.0049			08/12/24 12:50	08/12/24 14:30	
Chloromethane	ND		0.070		mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	
sis-1,2-Dichloroethene	ND		0.070		mg/Kg	₩		08/12/24 14:30	
sis-1,3-Dichloropropene	ND		0.023	0.0047				08/12/24 14:30	
Dibromochloromethane	ND		0.023	0.0057		₩		08/12/24 14:30	
Dibromomethane	ND		0.047	0.0086				08/12/24 14:30	
Dichlorodifluoromethane	ND		0.29		mg/Kg	T ₩		08/12/24 14:30	
Ethylbenzene	ND		0.047		mg/Kg			08/12/24 14:30	
dexachlorobutadiene	ND		0.12		mg/Kg	₩		08/12/24 14:30	
sopropylbenzene	ND ND		0.12		mg/Kg	¥		08/12/24 14:30	
Methyl tert-butyl ether	ND ND		0.047	0.010	0 0			08/12/24 14:30	
, ,					0 0	<b>☆</b>			
n-Xylene & p-Xylene	ND		0.047	0.0083		···· τ.		08/12/24 14:30	
Naphthalene	ND		0.18		mg/Kg	ψ.		08/12/24 14:30	
n-Butylbenzene	ND		0.047		mg/Kg	<b>*</b>		08/12/24 14:30	
N-Propylbenzene	ND		0.047	0.018	mg/Kg	₽	บช/12/24 12:50	08/12/24 14:30	

**Eurofins Seattle** 

9/12/2024

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Lab Sample ID: 580-142813-4 Client Sample ID: PDI-18-SO-48.5-20240807

Date Collected: 08/07/24 12:05 **Matrix: Solid** Percent Solids: 84.2 Date Received: 08/09/24 11:40

Method: SW846 8260D - Vo	_	•	•	(Conti	,	_	Barrana	A	D'' E
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.047	0.010	mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	1
Styrene	ND		0.047	0.015	mg/Kg	☼	08/12/24 12:50	08/12/24 14:30	1
t-Butylbenzene	ND		0.047	0.0090	mg/Kg	₽	08/12/24 12:50	08/12/24 14:30	1
Tetrachloroethene	ND		0.047	0.0062	mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	1
Toluene	ND		0.070	0.016	mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	1
trans-1,2-Dichloroethene	ND		0.070	0.017	mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	1
trans-1,3-Dichloropropene	ND		0.047	0.0082	mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	1
Trichloroethene	ND		0.047	0.012	mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	1
Trichlorofluoromethane	ND		0.093	0.030	mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	1
Vinyl chloride	ND		0.12	0.022	mg/Kg	₩	08/12/24 12:50	08/12/24 14:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		80 - 121				08/12/24 12:50	08/12/24 14:30	1
4-Bromofluorobenzene (Surr)	98		80 - 120				08/12/24 12:50	08/12/24 14:30	1
Dibromofluoromethane (Surr)	104		80 - 120				08/12/24 12:50	08/12/24 14:30	1
Toluene-d8 (Surr)	99		80 - 120				08/12/24 12:50	08/12/24 14:30	1
Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	- RA					
Analyte	_	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	0.080	ī	0.29	0.030	mg/Kg		08/19/24 09:17	08/19/24 15:52	

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	0.080	J	0.29	0.030	mg/Kg	☆	08/19/24 09:17	08/19/24 15:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		80 - 121				08/19/24 09:17	08/19/24 15:52	1
4-Bromofluorobenzene (Surr)	100		80 - 120				08/19/24 09:17	08/19/24 15:52	1
Dibromofluoromethane (Surr)	101		80 - 120				08/19/24 09:17	08/19/24 15:52	1
Toluene-d8 (Surr)	103		80 - 120				08/19/24 09:17	08/19/24 15:52	1

General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	84.2		0.1	0.1	%			08/15/24 15:25	1
Percent Moisture (SM22 2540G)	15.8		0.1	0.1	%			08/15/24 15:25	1

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Date Collected: 08/07/24 14:42

Matrix: Solid
Date Received: 08/09/24 11:40

Percent Solids: 94.4

Method: SW846 8260D - Vola Analyte	Result (	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND ND		0.030	0.0074		— <u>-</u>	08/12/24 12:50		1
1,1,1-Trichloroethane	ND		0.059	0.0068		₩	08/12/24 12:50	08/12/24 14:51	1
1,1,2,2-Tetrachloroethane	ND		0.030		mg/Kg	₩	08/12/24 12:50	08/12/24 14:51	1
1,1,2-Trichloroethane	ND		0.030		mg/Kg	∴	08/12/24 12:50	08/12/24 14:51	1
1,1-Dichloroethane	ND		0.059		mg/Kg	₩	08/12/24 12:50	08/12/24 14:51	1
, 1,1-Dichloroethene	ND		0.059		mg/Kg	₩	08/12/24 12:50		1
1,1-Dichloropropene	ND		0.059	0.0079			08/12/24 12:50		1
1,2,3-Trichlorobenzene	ND		0.12		mg/Kg			08/12/24 14:51	1
1,2,3-Trichloropropane	ND		0.059		mg/Kg	₩.	08/12/24 12:50		1
1,2,4-Trichlorobenzene	ND		0.12		mg/Kg		08/12/24 12:50		· 1
1,2-Dibromo-3-Chloropropane	ND		0.089		mg/Kg	₩		08/12/24 14:51	1
1,2-Dibromoethane	ND		0.030	0.0056		*	08/12/24 12:50		1
1,2-Dishorhoethane	ND		0.059		mg/Kg		08/12/24 12:50		' 1
1,2-Dichloropenzene 1,2-Dichloroethane	ND ND		0.039	0.013				08/12/24 14:51	1
1,2-Dichloroethane 1,2-Dichloropropane	ND UD		0.030	0.0082	0 0	₩	08/12/24 12:50 08/12/24 12:50		1
	ND		0.059		mg/Kg			08/12/24 14:51	' 1
1,3,5-Trimethylbenzene	ND ND					φ.			
1,3-Dichlorobenzene	ND ND		0.089		mg/Kg	φ.		08/12/24 14:51	1
1,3-Dichlarshannan			0.089	0.0083		<del></del>		08/12/24 14:51	1
1,4-Dichlorobenzene	ND		0.089		mg/Kg	₩.	08/12/24 12:50		1
2,2-Dichloropropane	ND		0.059		mg/Kg	<b>*</b>		08/12/24 14:51	1
2-Chlorotoluene	ND		0.059		mg/Kg	<u>.</u> .	08/12/24 12:50		
4-Chlorotoluene	ND		0.059		mg/Kg	₩	08/12/24 12:50		1
Benzene	ND		0.030	0.0056	0 0	☼		08/12/24 14:51	1
Bromobenzene	ND		0.059	0.0062		<del></del>		08/12/24 14:51	1
Bromochloromethane	ND		0.059	0.0092		☼	08/12/24 12:50		1
Bromodichloromethane	ND		0.059	0.0082	0 0	₩		08/12/24 14:51	1
Bromoform	ND		0.059	0.0067		<del></del>		08/12/24 14:51	1
Bromomethane	ND		0.15		mg/Kg	₩	08/12/24 12:50		1
Carbon tetrachloride	ND		0.030	0.0065		₩		08/12/24 14:51	1
Chlorobenzene	0.14		0.059	0.0071	mg/Kg		08/12/24 12:50	08/12/24 14:51	1
Chloroethane	ND		0.12	0.031	mg/Kg	₩	08/12/24 12:50	08/12/24 14:51	1
Chloroform	ND		0.030	0.0062	mg/Kg	₩	08/12/24 12:50	08/12/24 14:51	1
Chloromethane	ND		0.089	0.015	mg/Kg	₩	08/12/24 12:50	08/12/24 14:51	1
cis-1,2-Dichloroethene	ND		0.089		mg/Kg	☼	08/12/24 12:50	08/12/24 14:51	1
cis-1,3-Dichloropropene	ND		0.030	0.0059	mg/Kg	₩	08/12/24 12:50	08/12/24 14:51	1
Dibromochloromethane	ND		0.030	0.0073	mg/Kg	☼	08/12/24 12:50	08/12/24 14:51	1
Dibromomethane	ND		0.059	0.011	mg/Kg	₽	08/12/24 12:50	08/12/24 14:51	1
Dichlorodifluoromethane	ND		0.37	0.068	mg/Kg	₩	08/12/24 12:50	08/12/24 14:51	1
Ethylbenzene	0.073		0.059	0.014	mg/Kg	₩	08/12/24 12:50	08/12/24 14:51	1
Hexachlorobutadiene	ND		0.15	0.035	mg/Kg	₩	08/12/24 12:50	08/12/24 14:51	1
Methyl tert-butyl ether	ND		0.059	0.0089	mg/Kg	₩	08/12/24 12:50	08/12/24 14:51	1
m-Xylene & p-Xylene	0.32		0.059	0.011	mg/Kg	₩	08/12/24 12:50	08/12/24 14:51	1
n-Butylbenzene	ND		0.059		mg/Kg		08/12/24 12:50	08/12/24 14:51	1
o-Xylene	0.14		0.059	0.0074		₽	08/12/24 12:50	08/12/24 14:51	1
Styrene	ND		0.059		mg/Kg	₩	08/12/24 12:50	08/12/24 14:51	1
t-Butylbenzene	ND		0.059		mg/Kg		08/12/24 12:50		1
Tetrachloroethene	ND		0.059	0.0079		₽	08/12/24 12:50		1
Toluene	0.082	J	0.089		mg/Kg	₩	08/12/24 12:50		1
trans-1,2-Dichloroethene	ND		0.089		mg/Kg		08/12/24 12:50		

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9/12/2024

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-20-SO-9-20240807

Lab Sample ID: 580-142813-5 Date Collected: 08/07/24 14:42 **Matrix: Solid** Date Received: 08/09/24 11:40 Percent Solids: 94.4

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued) Analyte Result Qualifier MDL Unit D Prepared Dil Fac **Analyzed** trans-1,3-Dichloropropene ND 0.059 0.010 mg/Kg 08/12/24 12:50 08/12/24 14:51 Trichloroethene ND 0.059 0.015 mg/Kg © 08/12/24 12:50 08/12/24 14:51 Trichlorofluoromethane ND 0.12 0.039 mg/Kg © 08/12/24 12:50 08/12/24 14:51 Vinyl chloride ND 0.028 mg/Kg © 08/12/24 12:50 08/12/24 14:51 0.15 Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1,2-Dichloroethane-d4 (Surr) 08/12/24 12:50 08/12/24 14:51 105 80 - 121 08/12/24 12:50 08/12/24 14:51 4-Bromofluorobenzene (Surr) 141 S1+ 80 - 120 Dibromofluoromethane (Surr) 101 80 - 120 08/12/24 12:50 08/12/24 14:51 Toluene-d8 (Surr) 96 80 - 120 08/12/24 12:50 08/12/24 14:51

Analyte	Result C	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	2.8		0.64	0.22	mg/Kg	<u></u>	08/19/24 09:17	08/19/24 19:07	1
4-Isopropyltoluene	0.77		0.64	0.16	mg/Kg	☆	08/19/24 09:17	08/19/24 19:07	1
Isopropylbenzene	0.30 J	J	0.64	0.14	mg/Kg	☆	08/19/24 09:17	08/19/24 19:07	1
Methylene Chloride	1.1 J	J	4.0	0.42	mg/Kg	☆	08/19/24 09:17	08/19/24 19:07	1
Naphthalene	0.72 J	J *1	2.4	0.62	mg/Kg	☆	08/19/24 09:17	08/19/24 19:07	1
N-Propylbenzene	ND		0.64	0.24	mg/Kg	☆	08/19/24 09:17	08/19/24 19:07	1
sec-Butylbenzene	0.85		0.64	0.14	mg/Kg	₩	08/19/24 09:17	08/19/24 19:07	1

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96	80 - 121	08/19/24 09:17 0	8/19/24 19:07	1
4-Bromofluorobenzene (Surr)	102	80 - 120	08/19/24 09:17 0	8/19/24 19:07	1
Dibromofluoromethane (Surr)	104	80 - 120	08/19/24 09:17 0	8/19/24 19:07	1
Toluene-d8 (Surr)	100	80 - 120	08/19/24 09:17 0	8/19/24 19:07	1

Analyte	Result C	Qualifier	RL MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND	150	00 2200	ug/Kg	<del></del>	08/14/24 10:45	08/20/24 18:59	100
Bis(2-chloroethyl)ether	ND	97	00 750	ug/Kg	₽	08/14/24 10:45	08/20/24 18:59	100
2-Chlorophenol	ND	190	00 390	ug/Kg	≎	08/14/24 10:45	08/20/24 18:59	100
1,3-Dichlorobenzene	ND	49	00 470	ug/Kg	₽	08/14/24 10:45	08/20/24 18:59	100
1,4-Dichlorobenzene	ND	49	00 810	ug/Kg	₽	08/14/24 10:45	08/20/24 18:59	100
Benzyl alcohol	ND	970	00 25000	ug/Kg	₽	08/14/24 10:45	08/20/24 18:59	100
1,2-Dichlorobenzene	ND	49	00 490	ug/Kg	₽	08/14/24 10:45	08/20/24 18:59	100
2-Methylphenol	ND	150	00 950	ug/Kg	₽	08/14/24 10:45	08/20/24 18:59	100
3 & 4 Methylphenol	ND	190	00 1500	ug/Kg	₽	08/14/24 10:45	08/20/24 18:59	100
N-Nitrosodi-n-propylamine	ND	190	00 2100	ug/Kg	₽	08/14/24 10:45	08/20/24 18:59	100
Hexachloroethane	ND	150	00 420	ug/Kg	₽	08/14/24 10:45	08/20/24 18:59	100
Nitrobenzene	ND	190	00 1900	ug/Kg	₽	08/14/24 10:45	08/20/24 18:59	100
Isophorone	ND	150	00 820	ug/Kg	₽	08/14/24 10:45	08/20/24 18:59	100
2-Nitrophenol	ND	190	00 1800	ug/Kg	₽	08/14/24 10:45	08/20/24 18:59	100
2,4-Dimethylphenol	ND	200	00 5800	ug/Kg	₽	08/14/24 10:45	08/20/24 18:59	100
Benzoic acid	ND	3900	00 120000	ug/Kg	₩	08/14/24 10:45	08/20/24 18:59	100
Bis(2-chloroethoxy)methane	ND	190	00 1800	ug/Kg	☆	08/14/24 10:45	08/20/24 18:59	100
2,4-Dichlorophenol	ND	200	00 2700	ug/Kg	₽	08/14/24 10:45	08/20/24 18:59	100
1,2,4-Trichlorobenzene	ND	49	00 580	ug/Kg	☼	08/14/24 10:45	08/20/24 18:59	100
Naphthalene	ND	24	00 490	ug/Kg	≎	08/14/24 10:45	08/20/24 18:59	100
4-Chloroaniline	ND	1500	00 13000	ug/Kg	☼	08/14/24 10:45	08/20/24 18:59	100

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Phenol-d5 (Surr)

Client Sample ID: PDI-20-SO-9-20240807

Lab Sample ID: 580-142813-5 Date Collected: 08/07/24 14:42 Matrix: Solid Date Received: 08/09/24 11:40 Percent Solids: 94.4

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued) MDL D Dil Fac Analyte Result Qualifier RL Unit Prepared Analyzed Hexachlorobutadiene ND 4900 1500 ug/Kg 08/14/24 10:45 08/20/24 18:59 100 ND ₩ 4-Chloro-3-methylphenol 15000 3200 ug/Kg 08/14/24 10:45 08/20/24 18:59 100 2-Methylnaphthalene ND 4900 860 ug/Kg 08/14/24 10:45 08/20/24 18:59 100 ND 08/20/24 18:59 Hexachlorocyclopentadiene 9700 750 ug/Kg ť 08/14/24 10:45 100 2,4,6-Trichlorophenol ND 15000 3200 ug/Kg 08/14/24 10:45 08/20/24 18:59 100 2,4,5-Trichlorophenol ND 19000 790 ug/Kg 08/14/24 10:45 08/20/24 18:59 100 2-Chloronaphthalene ND 2400 ug/Kg 08/14/24 10:45 08/20/24 18:59 100 1500 2-Nitroaniline ND 9700 08/14/24 10:45 08/20/24 18:59 100 ug/Kg Dimethyl phthalate ND 15000 490 ug/Kg 08/14/24 10:45 08/20/24 18:59 100 Acenaphthylene ND 2400 490 ug/Kg ₽ 08/14/24 10:45 08/20/24 18:59 100 2,6-Dinitrotoluene ND 15000 1500 ug/Kg 08/14/24 10:45 08/20/24 18:59 100 3-Nitroaniline ND 29000 9700 ua/Ka 08/14/24 10:45 08/20/24 18:59 100 Acenaphthene ND 3900 450 ug/Kg ť 08/14/24 10:45 08/20/24 18:59 100 2,4-Dinitrophenol ND 190000 57000 ug/Kg 08/14/24 10:45 08/20/24 18:59 100 25000 4-Nitrophenol ND 190000 ug/Kg 08/14/24 10:45 08/20/24 18:59 100 08/20/24 18:59 Dibenzofuran NΩ 15000 570 ug/Kg 08/14/24 10:45 100 ND 4200 08/20/24 18:59 2,4-Dinitrotoluene 19000 ug/Kg 08/14/24 10:45 100 Diethyl phthalate ND 39000 2100 ug/Kg 08/14/24 10:45 08/20/24 18:59 100 08/20/24 18:59 100 4-Chlorophenyl phenyl ether NΩ 19000 610 Ö 08/14/24 10:45 ug/Kg **Fluorene** 2800 2400 ug/Kg 08/14/24 10:45 08/20/24 18:59 100 4-Nitroaniline ND 15000 4900 ug/Kg ÷ 08/14/24 10:45 08/20/24 18:59 100 4,6-Dinitro-2-methylphenol ND 97000 9700 ug/Kg Ó 08/14/24 10:45 08/20/24 18:59 100 N-Nitrosodiphenylamine ND 5800 08/14/24 10:45 08/20/24 18:59 100 780 ug/Kg 4-Bromophenyl phenyl ether ND 19000 890 ug/Kg 08/14/24 10:45 08/20/24 18:59 100 Hexachlorobenzene ND 4900 1500 ug/Kg 08/14/24 10:45 08/20/24 18:59 100 ND 54000 26000 100 Pentachlorophenol ug/Kg 08/14/24 10:45 08/20/24 18:59 **Phenanthrene** 2200 5800 560 ug/Kg 08/14/24 10:45 08/20/24 18:59 100 Anthracene 1600 08/20/24 18:59 ND 5800 ug/Kg 08/14/24 10:45 100 Di-n-butyl phthalate NΩ 49000 4600 ug/Kg 08/14/24 10:45 08/20/24 18:59 100 100 Fluoranthene ND 1200 08/20/24 18:59 3900 ug/Kg ť 08/14/24 10:45 **Pyrene** 6200 5800 1300 ug/Kg 08/14/24 10:45 08/20/24 18:59 100 Butyl benzyl phthalate ND 19000 5000 ug/Kg 08/14/24 10:45 08/20/24 18:59 100 3,3'-Dichlorobenzidine ND 55000 28000 ug/Kg 08/14/24 10:45 08/20/24 18:59 100 1100 08/14/24 10:45 08/20/24 18:59 100 Benzo[a]anthracene 3100 3900 ug/Kg 8100 5800 1300 ug/Kg 08/14/24 10:45 08/20/24 18:59 100 Chrysene 6900 ND 58000 08/14/24 10:45 08/20/24 18:59 100 Bis(2-ethylhexyl) phthalate ug/Kg Ö \*3 Di-n-octyl phthalate ND 19000 8700 ug/Kg 08/14/24 10:45 08/20/24 18:59 100 Benzo[a]pyrene ND \*3 10000 3800 ug/Kg ά 08/14/24 10:45 08/20/24 18:59 100 ND \*3 1200 ug/Kg Indeno[1,2,3-cd]pyrene 3900 Ö 08/14/24 10:45 08/20/24 18:59 100 \*3 Dibenz(a,h)anthracene ND 10000 4600 ug/Kg 08/14/24 10:45 08/20/24 18:59 100 Benzo[g,h,i]perylene ND \*3 5800 1800 ug/Kg 08/14/24 10:45 08/20/24 18:59 100 Carbazole ND 15000 710 ug/Kg 08/14/24 10:45 08/20/24 18:59 100 2900 08/20/24 18:59 100 1-Methylnaphthalene 1500 Л 490 ug/Kg 08/14/24 10:45 970 Benzo[b]fluoranthene ND \*3 3900 08/14/24 10:45 08/20/24 18:59 100 ug/Kg Benzo[k]fluoranthene ND \*3 5800 08/20/24 18:59 100 1400 ug/Kg 08/14/24 10:45 bis(chloroisopropyl) ether ND 19000 590 08/14/24 10:45 08/20/24 18:59 100 ug/Kg %Recovery Surrogate Qualifier Limits Prepared Analyzed Dil Fac 2-Fluorophenol (Surr) S1+ 144 58 - 120 08/14/24 10:45 08/20/24 18:59 100

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08/14/24 10:45 08/20/24 18:59

59 - 120

169 S1+

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-20-SO-9-20240807

Lab Sample ID: 580-142813-5 Date Collected: 08/07/24 14:42 **Matrix: Solid** 

Date Received: 08/09/24 11:40 Percent Solids: 94.4

### Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	277	S1+	63 - 120	08/14/24 10:45	08/20/24 18:59	100
2-Fluorobiphenyl	190	S1+	64 - 120	08/14/24 10:45	08/20/24 18:59	100
2,4,6-Tribromophenol (Surr)	0	S1-	62 - 122	08/14/24 10:45	08/20/24 18:59	100
Terphenyl-d14 (Surr)	316	S1+	73 - 125	08/14/24 10:45	08/20/24 18:59	100

#### Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.011	0.0019	mg/Kg	<u></u>	08/19/24 15:55	08/21/24 20:20	2
2,4'-DDE	ND		0.011	0.0013	mg/Kg	₩	08/19/24 15:55	08/21/24 20:20	2
2,4'-DDT	ND	*+ *1	0.011	0.0021	mg/Kg	₩	08/19/24 15:55	08/21/24 20:20	2
4,4'-DDD	ND	F1 F2	0.0042	0.00049	mg/Kg	₩	08/19/24 15:55	08/21/24 20:20	2
4,4'-DDE	ND	F1	0.0042	0.00078	mg/Kg	₩	08/19/24 15:55	08/21/24 20:20	2
4,4'-DDT	ND	F1	0.0042	0.00078	mg/Kg	₩	08/19/24 15:55	08/21/24 20:20	2
Aldrin	ND		0.0063	0.00080	mg/Kg	₩	08/19/24 15:55	08/21/24 20:20	2
alpha-BHC	ND		0.0042	0.00034	mg/Kg	₩	08/19/24 15:55	08/21/24 20:20	2
beta-BHC	ND		0.011	0.00053	mg/Kg	₩	08/19/24 15:55	08/21/24 20:20	2
cis-Chlordane	ND		0.0042	0.0016	mg/Kg	₩	08/19/24 15:55	08/21/24 20:20	2
delta-BHC	ND	F1	0.0063	0.00059	mg/Kg	₩	08/19/24 15:55	08/21/24 20:20	2
Dieldrin	ND		0.0042	0.00074	mg/Kg	₩	08/19/24 15:55	08/21/24 20:20	2
Endosulfan I	ND	F1	0.0042	0.00072	mg/Kg	₩	08/19/24 15:55	08/21/24 20:20	2
Endosulfan II	ND	F1	0.0042	0.00055	mg/Kg	₩	08/19/24 15:55	08/21/24 20:20	2
Endosulfan sulfate	ND	F1	0.0042	0.00059	mg/Kg	₩	08/19/24 15:55	08/21/24 20:20	2
Endrin	ND	F1	0.0042	0.00099	mg/Kg	₩	08/19/24 15:55	08/21/24 20:20	2
Endrin aldehyde	ND		0.042	0.010	mg/Kg	₩	08/19/24 15:55	08/21/24 20:20	2
Endrin ketone	ND	*+ F1	0.0042	0.00089	mg/Kg	₩	08/19/24 15:55	08/21/24 20:20	2
gamma-BHC (Lindane)	ND		0.0042	0.0016	mg/Kg	₽	08/19/24 15:55	08/21/24 20:20	2
Heptachlor	ND	F1 F2	0.0063	0.00040	mg/Kg	☼	08/19/24 15:55	08/21/24 20:20	2
Heptachlor epoxide	ND	F1	0.0063	0.00063	mg/Kg	₩	08/19/24 15:55	08/21/24 20:20	2
Methoxychlor	ND	F1	0.021	0.00078	mg/Kg	₩	08/19/24 15:55	08/21/24 20:20	2
Toxaphene	ND		0.26		mg/Kg	☼	08/19/24 15:55	08/21/24 20:20	2
trans-Chlordane	ND	F1 F2	0.0063	0.00068		₩	08/19/24 15:55	08/21/24 20:20	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl		S1-	53 - 123	08/19/24 15:55	08/21/24 20:20	2
Tetrachloro-m-xylene	67		48 - 123	08/19/24 15:55	08/21/24 20:20	2

#### Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	F1	0.021	0.0078	mg/Kg	— <u></u>	08/19/24 15:55	08/22/24 17:23	1
PCB-1221	ND		0.021	0.013	mg/Kg	☆	08/19/24 15:55	08/22/24 17:23	1
PCB-1232	ND		0.021	0.0052	mg/Kg	☆	08/19/24 15:55	08/22/24 17:23	1
PCB-1242	ND		0.021	0.0085	mg/Kg	☼	08/19/24 15:55	08/22/24 17:23	1
PCB-1248	ND		0.021	0.0074	mg/Kg	☆	08/19/24 15:55	08/22/24 17:23	1
PCB-1254	ND		0.021	0.0095	mg/Kg	₽	08/19/24 15:55	08/22/24 17:23	1
PCB-1260	ND	F1	0.021	0.0078	mg/Kg	₩	08/19/24 15:55	08/22/24 17:23	1

	Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	DCB Decachlorobiphenyl	52	p	44 - 135	08/19/24 15:55	08/22/24 17:23	1
l	Tetrachloro-m-xylene	58		48 - 150	08/19/24 15:55	08/22/24 17:23	1

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-20-SO-9-20240807

Lab Sample ID: 580-142813-5 Date Collected: 08/07/24 14:42 Date Received: 08/09/24 11:40

**Matrix: Solid** Percent Solids: 94.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1100	390	ug/Kg	— <u></u>	08/15/24 15:29	08/22/24 19:57	10
2,4,5-TP (Silvex)	ND		1100	790	ug/Kg	₩	08/15/24 15:29	08/22/24 19:57	10
2,4-D	ND	*1	11000	5100	ug/Kg	₩	08/15/24 15:29	08/22/24 19:57	10
2,4-DB	ND		11000	10000	ug/Kg	₩	08/15/24 15:29	08/22/24 19:57	10
Dalapon	ND		26000	7600	ug/Kg	₩	08/15/24 15:29	08/22/24 19:57	10
Dicamba	ND		1100	500	ug/Kg	₩	08/15/24 15:29	08/22/24 19:57	10
Dichlorprop	ND		11000	5200	ug/Kg	₽	08/15/24 15:29	08/22/24 19:57	10
Dinoseb	ND	*1	11000	6200	ug/Kg	₩	08/15/24 15:29	08/22/24 19:57	10
MCPA	ND		1100000	510000	ug/Kg	₩	08/15/24 15:29	08/22/24 19:57	10
MCPP	ND		1100000	690000	ug/Kg	☼	08/15/24 15:29	08/22/24 19:57	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	110	p	20 - 163				08/15/24 15:29	08/22/24 19:57	10

Method: NWTPH-Dx - No	rthwest - Semi-V	olatile Pet	roleum Prod	ucts (G0	C) - DL				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	21000		990	240	mg/Kg	☆	08/14/24 16:13	08/17/24 01:48	20
Motor Oil (>C24-C36)	51000		990	350	mg/Kg	₩	08/14/24 16:13	08/17/24 01:48	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	217	S1+	50 - 150				08/14/24 16:13	08/17/24 01:48	20

Analyte	Result Qu	alifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND	0.84	0.21	ug/Kg	<del>-</del>	08/12/24 06:20	08/15/24 14:39	1
Perfluoropentanoic acid (PFPeA)	ND	0.42	0.10	ug/Kg	₽	08/12/24 06:20	08/15/24 14:39	1
Perfluorohexanoic acid (PFHxA)	ND	0.21	0.061	ug/Kg	₩	08/12/24 06:20	08/15/24 14:39	1
Perfluoroheptanoic acid (PFHpA)	ND	0.21	0.052	ug/Kg	₽	08/12/24 06:20	08/15/24 14:39	1
Perfluorooctanoic acid (PFOA)	ND	0.21	0.052	ug/Kg	₽	08/12/24 06:20	08/15/24 14:39	1
Perfluorononanoic acid (PFNA)	ND	0.21	0.061	ug/Kg	≎	08/12/24 06:20	08/15/24 14:39	1
Perfluorodecanoic acid (PFDA)	ND	0.21	0.058	ug/Kg	₽	08/12/24 06:20	08/15/24 14:39	1
Perfluoroundecanoic acid (PFUnA)	ND	0.21	0.052	ug/Kg	₽	08/12/24 06:20	08/15/24 14:39	1
Perfluorododecanoic acid (PFDoA)	ND	0.21	0.052	ug/Kg	☼	08/12/24 06:20	08/15/24 14:39	1
Perfluorotridecanoic acid (PFTrDA)	ND	0.21	0.052	ug/Kg	₽	08/12/24 06:20	08/15/24 14:39	1
Perfluorotetradecanoic acid (PFTeDA)	ND	0.21	0.059	ug/Kg	☼	08/12/24 06:20	08/15/24 14:39	1
Perfluorobutanesulfonic acid (PFBS)	ND	0.21	0.052	ug/Kg	☼	08/12/24 06:20	08/15/24 14:39	1
Perfluoropentanesulfonic acid (PFPeS)	ND	0.21	0.068	ug/Kg	.⇔	08/12/24 06:20	08/15/24 14:39	1
Perfluorohexanesulfonic acid (PFHxS)	ND	0.21	0.052	ug/Kg	☼	08/12/24 06:20	08/15/24 14:39	1
Perfluoroheptanesulfonic acid (PFHpS)	ND	0.21	0.052	ug/Kg	₩	08/12/24 06:20	08/15/24 14:39	1
Perfluorooctanesulfonic acid (PFOS)	0.093 J	0.21	0.065	ug/Kg	₽	08/12/24 06:20	08/15/24 14:39	1
Perfluorononanesulfonic acid (PFNS)	ND	0.21	0.066	ug/Kg	☼	08/12/24 06:20	08/15/24 14:39	1
Perfluorodecanesulfonic acid (PFDS)	ND	0.21	0.060	ug/Kg	☼	08/12/24 06:20	08/15/24 14:39	1
Perfluorododecanesulfonic acid (PFDoS)	ND	0.21	0.062	ug/Kg	₩	08/12/24 06:20	08/15/24 14:39	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND	0.84	0.21	ug/Kg	₩	08/12/24 06:20	08/15/24 14:39	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND	0.84	0.21	ug/Kg	₩	08/12/24 06:20	08/15/24 14:39	1

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Date Collected: 08/07/24 14:42

Matrix: Solid
Date Received: 08/09/24 11:40

Percent Solids: 94.4

Method: EPA Draft-4 1633 - Pe	•	•		•		•	inued)	A a b	D:: -
Analyte		Qualifier	RL -		Unit	D	Prepared	Analyzed	Dil Fa
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		0.84	0.21	ug/Kg	☼	08/12/24 06:20	08/15/24 14:39	
Perfluorooctanesulfonamide (PFOSA)	ND		0.21	0.052	ug/Kg	₩	08/12/24 06:20	08/15/24 14:39	
N-methylperfluorooctane sulfonamide NMeFOSA)	ND		0.21	0.052	ug/Kg	₽	08/12/24 06:20	08/15/24 14:39	
N-ethylperfluorooctane sulfonamide NEtFOSA)	ND		0.21	0.054	ug/Kg		08/12/24 06:20	08/15/24 14:39	
N-methylperfluorooctanesulfonamidoa cetic acid (NMeFOSAA)	ND		0.21	0.11	ug/Kg	₽	08/12/24 06:20	08/15/24 14:39	
N-ethylperfluorooctanesulfonami	0.39		0.21	0.057	ug/Kg	₽	08/12/24 06:20	08/15/24 14:39	
I-methylperfluorooctane ulfonamidoethanol (NMeFOSE)	ND		2.1	0.52	ug/Kg	₽	08/12/24 06:20	08/15/24 14:39	
N-ethylperfluorooctane	ND		2.1	0.53	ug/Kg	₩	08/12/24 06:20	08/15/24 14:39	
Hexafluoropropylene Oxide Dimer  Acid (HFPO-DA)	ND		0.84	0.23	ug/Kg	≎	08/12/24 06:20	08/15/24 14:39	
I,8-Dioxa-3H-perfluorononanoic acid ADONA)	ND		0.84	0.21	ug/Kg	₽	08/12/24 06:20	08/15/24 14:39	
Perfluoro-3-methoxypropanoic acid PFMPA)	ND		0.42	0.10	ug/Kg	≎	08/12/24 06:20	08/15/24 14:39	
Perfluoro-4-methoxybutanoic acid PFMBA)	ND		0.42	0.10	ug/Kg	₽	08/12/24 06:20	08/15/24 14:39	
Jonafluoro-3,6-dioxaheptanoic acid NFDHA)	ND		0.42	0.12	ug/Kg	₩	08/12/24 06:20	08/15/24 14:39	
-Chlorohexadecafluoro-3-oxanonan -1-sulfonic acid(9Cl-PF3ONS)	ND		0.84	0.25	ug/Kg	₽	08/12/24 06:20	08/15/24 14:39	
1-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11CI-PF3OUdS)	ND		0.84	0.30	ug/Kg	₽	08/12/24 06:20	08/15/24 14:39	
Perfluoro (2-ethoxyethane) sulfonic cicid (PFEESA)	ND		0.42	0.12	ug/Kg	₩	08/12/24 06:20	08/15/24 14:39	
-Perfluoropropylpropanoic acid (3:3 TCA)	ND		1.0	0.30	ug/Kg	₩	08/12/24 06:20	08/15/24 14:39	
-Perfluoropentylpropanoic acid (5:3 TCA)	ND		5.2	1.8	ug/Kg	≎	08/12/24 06:20	08/15/24 14:39	
-Perfluoroheptylpropanoic acid (7:3 TCA)	ND		5.2	1.9	ug/Kg	₩	08/12/24 06:20	08/15/24 14:39	
sotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil F
3C4 PFBA	92.0		20 - 150				08/12/24 06:20	08/15/24 14:39	
3C5 PFPeA	110		20 - 150				08/12/24 06:20	08/15/24 14:39	
3C5 PFHxA	102		20 - 150				08/12/24 06:20	08/15/24 14:39	
3C4 PFHpA	103		20 - 150				08/12/24 06:20	08/15/24 14:39	
3C8 PFOA	95.4		20 - 150				08/12/24 06:20	08/15/24 14:39	
3C9 PFNA	103		20 - 150				08/12/24 06:20	08/15/24 14:39	
3C6 PFDA	94.9		20 - 150					08/15/24 14:39	
3C7 PFUnA	86.5		20 - 150					08/15/24 14:39	
3C2 PFDoA	79.8		20 - 150					08/15/24 14:39	
3C2 PFTeDA	30.0		20 - 150					08/15/24 14:39	
3C3 PFBS	135		20 - 150 20 - 150					08/15/24 14:39	
3C3 PFHxS	108		20 - 150					08/15/24 14:39	
13C8 PFOS	113		20 - 150					08/15/24 14:39	
13C8 PFOSA	127		20 - 150					08/15/24 14:39	
d3-NMeFOSAA	125		20 - 150				08/12/24 06:20	08/15/24 14:39	
d5-NEtFOSAA	140		20 - 150				08/12/24 06:20	08/15/24 14:39	

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

37CI4-2,3,7,8-TCDD

Client Sample ID: PDI-20-SO-9-20240807 Lab Sample ID: 580-142813-5

Date Collected: 08/07/24 14:42 **Matrix: Solid** Date Received: 08/09/24 11:40 Percent Solids: 94.4

Method: EPA Draft-4 1633 - Pe	r- and Poly	fluoroalkyl	Substances by LC/MS/MS	(Continued)	
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed
13C2 4:2 FTS	124		20 - 150	08/12/24 06:20	08/15/24 14:39

	• • •		***************************************	-
13C2 6:2 FTS	131	20 - 150	08/12/24 06:20 08/15/24 14:39	1
13C2 8:2 FTS	147	20 - 150	08/12/24 06:20 08/15/24 14:39	1
13C3 HFPO-DA	98.0	20 - 150	08/12/24 06:20 08/15/24 14:39	1
d7-N-MeFOSE-M	46.1	20 - 150	08/12/24 06:20 08/15/24 14:39	1
d9-N-EtFOSE-M	31.5	20 - 150	08/12/24 06:20 08/15/24 14:39	1
d5-NEtPFOSA	35.3	20 - 150	08/12/24 06:20 08/15/24 14:39	1
d3-NMePFOSA	54.1	20 - 150	08/12/24 06:20 08/15/24 14:39	1

Method: EPA	1613B - Dio	oxins and F	urans (H	RGC/HRMS)

Analyte	Result Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND ND	5.2	2.8	pg/g	<del>-</del>	08/22/24 11:02	09/05/24 06:06	5
1,2,3,7,8-PeCDD	ND	26	2.8	pg/g	₩	08/22/24 11:02	09/05/24 06:06	5
1,2,3,7,8-PeCDF	ND	26	2.8	pg/g	₽	08/22/24 11:02	09/05/24 06:06	5
2,3,4,7,8-PeCDF	ND	26	3.1	pg/g	₽	08/22/24 11:02	09/05/24 06:06	5
1,2,3,4,7,8-HxCDD	ND	26	3.8	pg/g	₩	08/22/24 11:02	09/05/24 06:06	5
1,2,3,6,7,8-HxCDD	ND	26	3.8	pg/g	₽	08/22/24 11:02	09/05/24 06:06	5
1,2,3,7,8,9-HxCDD	ND	26	3.6	pg/g	₩	08/22/24 11:02	09/05/24 06:06	5
1,2,3,4,7,8-HxCDF	10 J	26	4.3	pg/g	₩	08/22/24 11:02	09/05/24 06:06	5
1,2,3,6,7,8-HxCDF	ND	26	4.3	pg/g	₽	08/22/24 11:02	09/05/24 06:06	5
1,2,3,7,8,9-HxCDF	ND	26	5.8	pg/g	₩	08/22/24 11:02	09/05/24 06:06	5
2,3,4,6,7,8-HxCDF	ND	26	4.4	pg/g	₩	08/22/24 11:02	09/05/24 06:06	5
1,2,3,4,6,7,8-HpCDD	92	26	9.4	pg/g	₩	08/22/24 11:02	09/05/24 06:06	5
1,2,3,4,6,7,8-HpCDF	34	26	8.4	pg/g	₩	08/22/24 11:02	09/05/24 06:06	5
1,2,3,4,7,8,9-HpCDF	ND	26	8.8	pg/g	₩	08/22/24 11:02	09/05/24 06:06	5
OCDD	840 B	52	47	pg/g	₩	08/22/24 11:02	09/05/24 06:06	5
OCDF	120	52	32	pg/g	₩	08/22/24 11:02	09/05/24 06:06	5

OOD.	120	0=	0 <u> </u>	00/22/21 11102	00,00,2 : 00.00	•
Isotope Dilution	%Recovery Qualifier	Limits		Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	68	25 - 164		08/22/24 11:02	09/05/24 06:06	5
13C-2,3,7,8-TCDF	62	24 - 169		08/22/24 11:02	09/05/24 06:06	5
13C-1,2,3,7,8-PeCDD	72	25 - 181		08/22/24 11:02	09/05/24 06:06	5
13C-1,2,3,7,8-PeCDF	60	24 - 185		08/22/24 11:02	09/05/24 06:06	5
13C-2,3,4,7,8-PeCDF	57	21 - 178		08/22/24 11:02	09/05/24 06:06	5
13C-1,2,3,4,7,8-HxCDD	74	32 - 141		08/22/24 11:02	09/05/24 06:06	5
13C-1,2,3,6,7,8-HxCDD	68 q	28 - 130		08/22/24 11:02	09/05/24 06:06	5
13C-1,2,3,4,7,8-HxCDF	97	26 - 152		08/22/24 11:02	09/05/24 06:06	5
13C-1,2,3,6,7,8-HxCDF	79	26 - 123		08/22/24 11:02	09/05/24 06:06	5
13C-2,3,4,6,7,8-HxCDF	80	28 - 136		08/22/24 11:02	09/05/24 06:06	5
13C-1,2,3,7,8,9-HxCDF	62	29 - 147		08/22/24 11:02	09/05/24 06:06	5
13C-1,2,3,4,6,7,8-HpCDD	37	23 - 140		08/22/24 11:02	09/05/24 06:06	5
13C-1,2,3,4,6,7,8-HpCDF	41	28 - 143		08/22/24 11:02	09/05/24 06:06	5
13C-1,2,3,4,7,8,9-HpCDF	41	26 - 138		08/22/24 11:02	09/05/24 06:06	5
13C-OCDD	19	17 - 157		08/22/24 11:02	09/05/24 06:06	5
13C-OCDF	16 *5-	17 - 157		08/22/24 11:02	09/05/24 06:06	5
Surrogate	%Recovery Qualifier	Limits		Prepared	Analyzed	Dil Fac

08/22/24 11:02 09/05/24 06:06

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Date Collected: 08/07/24 14:42

Matrix: Solid
Pare Respired: 08/07/24 14:42

Date Received: 08/09/24 11:40 Percent Solids: 94.4

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	6.2	G	2.1	2.1	pg/g	₩	08/22/24 11:02	09/10/24 19:53	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	76		24 - 169				08/22/24 11:02	09/10/24 19:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37CI4-2,3,7,8-TCDD	113		35 - 197				08/22/24 11:02	09/10/24 19:53	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	94.4		0.1	0.1	%			08/15/24 15:25	1
Percent Moisture (SM22 2540G)	5.6		0.1	0.1	%			08/15/24 15:25	4

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Date Collected: 07/25/24 12:20

Matrix: Solid
Date Received: 08/09/24 11:40

Percent Solids: 79.1

Method: EPA Draft-4 1633 - Per- Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		1.0	0.25	ug/Kg	— <u></u>	08/12/24 06:20		1
Perfluoropentanoic acid (PFPeA)	ND		0.50	0.12	ug/Kg	₩	08/12/24 06:20	08/15/24 14:59	1
Perfluorohexanoic acid (PFHxA)	ND		0.25	0.072	ug/Kg	₽	08/12/24 06:20	08/15/24 14:59	1
Perfluoroheptanoic acid (PFHpA)	ND		0.25	0.062	ug/Kg		08/12/24 06:20	08/15/24 14:59	1
Perfluorooctanoic acid (PFOA)	ND		0.25		ug/Kg	₩		08/15/24 14:59	1
Perfluorononanoic acid (PFNA)	ND		0.25		ug/Kg	₩		08/15/24 14:59	1
Perfluorodecanoic acid (PFDA)	ND		0.25		ug/Kg			08/15/24 14:59	· · · · · · · · · · · · · · · · · · ·
Perfluoroundecanoic acid (PFUnA)	ND		0.25		ug/Kg			08/15/24 14:59	
Perfluorododecanoic acid (PFDoA)	ND		0.25		ug/Kg	Ď.		08/15/24 14:59	,
Perfluorotridecanoic acid (PFTrDA)	ND		0.25		ug/Kg			08/15/24 14:59	
Perfluorotetradecanoic acid (PFTeDA)	ND		0.25		ug/Kg ug/Kg	₩		08/15/24 14:59	
` '	ND ND					<del>1,2</del>			1
Perfluorobutanesulfonic acid (PFBS)			0.25		ug/Kg	<del></del>		08/15/24 14:59	
Perfluoropentanesulfonic acid (PFPeS)	ND	0	0.25		ug/Kg		08/12/24 06:20		1
Perfluorohexanesulfonic acid (PFHxS)	ND	G	22		ug/Kg	**		08/15/24 14:59	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.25	0.062	ug/Kg		08/12/24 06:20	08/15/24 14:59	
Perfluorooctanesulfonic acid (PFOS)	ND		0.25	0.077	ug/Kg	₩	08/12/24 06:20	08/15/24 14:59	1
Perfluorononanesulfonic acid (PFNS)	ND		0.25	0.078	ug/Kg	₽	08/12/24 06:20	08/15/24 14:59	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.25	0.071	ug/Kg	₽	08/12/24 06:20	08/15/24 14:59	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.25	0.073	ug/Kg	₽	08/12/24 06:20	08/15/24 14:59	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		1.0	0.25	ug/Kg	₩	08/12/24 06:20	08/15/24 14:59	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		1.0	0.25	ug/Kg	₩	08/12/24 06:20	08/15/24 14:59	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		1.0	0.25	ug/Kg	₩	08/12/24 06:20	08/15/24 14:59	1
Perfluorooctanesulfonamide (PFOSA)	ND		0.25	0.062	ug/Kg	₩	08/12/24 06:20	08/15/24 14:59	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		0.25	0.062	ug/Kg	₩	08/12/24 06:20	08/15/24 14:59	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		0.25	0.065	ug/Kg	₩	08/12/24 06:20	08/15/24 14:59	,
N-methylperfluorooctanesulfonamidoa cetic acid (NMeFOSAA)	ND		0.25	0.13	ug/Kg	₩	08/12/24 06:20	08/15/24 14:59	1
N-ethylperfluorooctanesulfonamidoac etic acid (NEtFOSAA)	ND		0.25	0.067	ug/Kg	₩	08/12/24 06:20	08/15/24 14:59	1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		2.5	0.62	ug/Kg	₩	08/12/24 06:20	08/15/24 14:59	1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		2.5	0.63	ug/Kg	₩	08/12/24 06:20	08/15/24 14:59	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		1.0	0.27	ug/Kg	₩	08/12/24 06:20	08/15/24 14:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		1.0	0.25	ug/Kg	₽	08/12/24 06:20	08/15/24 14:59	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		0.50	0.12	ug/Kg	₩	08/12/24 06:20	08/15/24 14:59	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.50	0.12	ug/Kg	₩	08/12/24 06:20	08/15/24 14:59	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.50	0.14	ug/Kg		08/12/24 06:20	08/15/24 14:59	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	ND		1.0	0.30	ug/Kg	₩	08/12/24 06:20	08/15/24 14:59	1

**Eurofins Seattle** 

9/12/2024

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-15-SO-38-20240725

Lab Sample ID: 580-142813-6 Date Collected: 07/25/24 12:20 **Matrix: Solid** Date Received: 08/09/24 11:40

Percent Solids: 79.1

Method: EPA Draft-4 1633 - Po Analyte	Result	Qualifier	RL	MDI	Unit	D	Prepared	Analyzed	Dil Fa
11-Chloroeicosafluoro-3-oxaundecan	ND	Quanner	1.0		ug/Kg	— <u>=</u>		08/15/24 14:59	Diria
e-1-sulfonic acid (11Cl-PF3OUdS)	ND		1.0	0.50	ug/itg	*	00/12/24 00:20	00/10/24 14:00	
Perfluoro (2-ethoxyethane) sulfonic	ND		0.50	0.14	ug/Kg		08/12/24 06:20	08/15/24 14:59	
acid (PFESA)					0 0				
3-Perfluoropropylpropanoic acid (3:3	ND		1.2	0.36	ug/Kg	₩	08/12/24 06:20	08/15/24 14:59	
FTCA)									
3-Perfluoropentylpropanoic acid (5:3	ND		6.2	2.1	ug/Kg	₽	08/12/24 06:20	08/15/24 14:59	
FTCA)	ND.		6.2				09/40/04 06:00	00/45/04 44:50	
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		0.2	2.3	ug/Kg	<del>1,1</del>	08/12/24 06:20	06/15/24 14:59	
,	0/5	0	1.5					A 1 1	D'/ E-
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared 00/10/10/10	Analyzed	Dil Fa
13C4 PFBA	23.5		20 - 150					08/15/24 14:59	
13C5 PFPeA	28.2		20 - 150					08/15/24 14:59	
13C5 PFHxA	23.8		20 - 150					08/15/24 14:59	
13C4 PFHpA	25.2		20 - 150					08/15/24 14:59	
13C8 PFOA	25.0		20 - 150					08/15/24 14:59	
13C9 PFNA	28.8		20 - 150					08/15/24 14:59	
13C6 PFDA	22.8		20 - 150					08/15/24 14:59	
13C7 PFUnA	19.6		20 - 150					08/15/24 14:59	
13C2 PFDoA	18.7	*5-	20 - 150					08/15/24 14:59	
13C2 PFTeDA	21.3		20 - 150					08/15/24 14:59	
13C3 PFBS	25.3		20 - 150				08/12/24 06:20	08/15/24 14:59	
13C3 PFHxS	34.2		20 - 150				08/12/24 06:20	08/15/24 14:59	
13C8 PFOS	28.3		20 - 150				08/12/24 06:20	08/15/24 14:59	
13C8 PFOSA	23.6		20 - 150				08/12/24 06:20	08/15/24 14:59	
d3-NMeFOSAA	20.2		20 - 150				08/12/24 06:20	08/15/24 14:59	
d5-NEtFOSAA	23.0		20 - 150				08/12/24 06:20	08/15/24 14:59	
13C2 4:2 FTS	34.2		20 - 150				08/12/24 06:20	08/15/24 14:59	
13C2 6:2 FTS	28.7		20 - 150				08/12/24 06:20	08/15/24 14:59	
13C2 8:2 FTS	25.5		20 - 150				08/12/24 06:20	08/15/24 14:59	
13C3 HFPO-DA	25.2		20 - 150				08/12/24 06:20	08/15/24 14:59	
d7-N-MeFOSE-M	20.7		20 - 150				08/12/24 06:20	08/15/24 14:59	
d9-N-EtFOSE-M	20.0		20 - 150				08/12/24 06:20	08/15/24 14:59	
d5-NEtPFOSA	18.4	*5-	20 - 150				08/12/24 06:20	08/15/24 14:59	
d3-NMePFOSA	17.5	*5-	20 - 150				08/12/24 06:20	08/15/24 14:59	
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fa
Percent Moisture (SW846 3550C)	20.9	H H3	0.1	0.1	%			08/13/24 13:22	
Percent Solids (SW846 3550C)	79.1	н нз	0.1	0.1	%			08/13/24 13:22	

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Lab Sample ID: 580-142813-7 Client Sample ID: PDI-20-SO-38.1-20240808

Date Collected: 08/08/24 08:20 **Matrix: Solid** Date Received: 08/09/24 11:40 Percent Solids: 84.5

Method: SW846 8260D - Vola Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.024	0.0059		— <u>-</u>	08/12/24 12:50		1
1,1,1-Trichloroethane	ND		0.047	0.0054		₩	08/12/24 12:50	08/12/24 17:56	1
1,1,2,2-Tetrachloroethane	ND		0.024			₩	08/12/24 12:50	08/12/24 17:56	1
1,1,2-Trichloroethane	ND		0.024	0.0087				08/12/24 17:56	1
1,1-Dichloroethane	ND		0.047	0.011	mg/Kg	₩	08/12/24 12:50		1
1,1-Dichloroethene	ND		0.047		mg/Kg	₩		08/12/24 17:56	1
1,1-Dichloropropene	ND		0.047	0.0062				08/12/24 17:56	
1,2,3-Trichlorobenzene	ND		0.094		mg/Kg			08/12/24 17:56	1
1,2,3-Trichloropropane	ND		0.047		mg/Kg	₩.		08/12/24 17:56	1
1,2,4-Trichlorobenzene	ND		0.094		mg/Kg			08/12/24 17:56	· · · · · · · · · 1
1,2,4-Trimethylbenzene	ND		0.047		mg/Kg	₩		08/12/24 17:56	
1,2-Dibromo-3-Chloropropane	ND		0.047		mg/Kg	×		08/12/24 17:56	1
1,2-Dibromoethane	ND		0.024	0.0045				08/12/24 17:56	' 1
1,2-Distribution 1.2-Distribution 1.2-Di	ND ND		0.024		mg/Kg			08/12/24 17:56	1
1,2-Dichloropenzene	ND ND		0.047	0.016	0 0	₩		08/12/24 17:56	1
1,2-Dichloropropane	ND ND		0.024 0.047	0.0078		φ.		08/12/24 17:56	1
1,3,5-Trimethylbenzene				0.0089		φ.		08/12/24 17:56	1
1,3-Dichlorobenzene	ND		0.071		mg/Kg	<del></del>		08/12/24 17:56	
1,3-Dichloropropane	ND	_	0.071	0.0066	0 0	<b>*</b>		08/12/24 17:56	1
1,4-Dichlorobenzene	0.043	J	0.071		mg/Kg	₩		08/12/24 17:56	1
2,2-Dichloropropane	ND		0.047		mg/Kg	<u>.</u> .		08/12/24 17:56	1
2-Chlorotoluene	ND		0.047		mg/Kg	₩		08/12/24 17:56	1
4-Chlorotoluene	ND		0.047		mg/Kg	☼		08/12/24 17:56	1
4-Isopropyltoluene	ND		0.047		mg/Kg	<del></del>		08/12/24 17:56	1
Benzene	ND		0.024	0.0045		☼		08/12/24 17:56	1
Bromobenzene	ND		0.047	0.0049	0 0	₩		08/12/24 17:56	1
Bromochloromethane	ND		0.047	0.0073		<del></del>		08/12/24 17:56	1
Bromodichloromethane	ND		0.047	0.0065		₩		08/12/24 17:56	1
Bromoform	ND		0.047	0.0053		₩		08/12/24 17:56	1
Bromomethane	ND		0.12	0.044	mg/Kg		08/12/24 12:50	08/12/24 17:56	1
Carbon tetrachloride	ND		0.024	0.0052		₩	08/12/24 12:50	08/12/24 17:56	1
Chlorobenzene	5.7		0.047	0.0056	mg/Kg	₩	08/12/24 12:50	08/12/24 17:56	1
Chloroethane	ND		0.094	0.025	mg/Kg	₩	08/12/24 12:50	08/12/24 17:56	1
Chloroform	0.044		0.024	0.0049	mg/Kg	☼	08/12/24 12:50	08/12/24 17:56	1
Chloromethane	ND		0.071	0.012	mg/Kg	₩	08/12/24 12:50	08/12/24 17:56	1
cis-1,2-Dichloroethene	ND		0.071	0.015	mg/Kg	☼	08/12/24 12:50	08/12/24 17:56	1
cis-1,3-Dichloropropene	ND		0.024	0.0047	mg/Kg	₽	08/12/24 12:50	08/12/24 17:56	1
Dibromochloromethane	ND		0.024	0.0058	mg/Kg	₩	08/12/24 12:50	08/12/24 17:56	1
Dibromomethane	ND		0.047	0.0087	mg/Kg	₩	08/12/24 12:50	08/12/24 17:56	1
Dichlorodifluoromethane	ND		0.29	0.054	mg/Kg	₩	08/12/24 12:50	08/12/24 17:56	1
Ethylbenzene	ND		0.047	0.011	mg/Kg	₩	08/12/24 12:50	08/12/24 17:56	1
Hexachlorobutadiene	ND		0.12	0.028	mg/Kg	₩	08/12/24 12:50	08/12/24 17:56	1
Isopropylbenzene	ND		0.047	0.010	mg/Kg	₩	08/12/24 12:50	08/12/24 17:56	1
Methyl tert-butyl ether	ND		0.047	0.0071		₩		08/12/24 17:56	1
m-Xylene & p-Xylene	ND		0.047	0.0084		₩	08/12/24 12:50	08/12/24 17:56	1
Naphthalene	ND		0.18		mg/Kg			08/12/24 17:56	1
n-Butylbenzene	ND		0.047		mg/Kg	₽		08/12/24 17:56	1
N-Propylbenzene	ND		0.047		mg/Kg	₩		08/12/24 17:56	1
o-Xylene	ND		0.047	0.0059				08/12/24 17:56	1

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-20-SO-38.1-20240808 Lab Sample ID: 580-142813-7

Date Collected: 08/08/24 08:20 **Matrix: Solid** Date Received: 08/09/24 11:40 Percent Solids: 84.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.047	0.010	mg/Kg	— <u></u>	08/12/24 12:50	08/12/24 17:56	1
Styrene	ND		0.047	0.015	mg/Kg	₩	08/12/24 12:50	08/12/24 17:56	1
t-Butylbenzene	ND		0.047	0.0091			08/12/24 12:50	08/12/24 17:56	1
Tetrachloroethene	ND		0.047	0.0062	mg/Kg	₩	08/12/24 12:50	08/12/24 17:56	1
Toluene	ND		0.071	0.016	mg/Kg	₩	08/12/24 12:50	08/12/24 17:56	1
trans-1,2-Dichloroethene	ND		0.071	0.017	mg/Kg	₩	08/12/24 12:50	08/12/24 17:56	1
trans-1,3-Dichloropropene	ND		0.047	0.0082	mg/Kg	☼	08/12/24 12:50	08/12/24 17:56	1
Trichloroethene	ND		0.047	0.012	mg/Kg	☼	08/12/24 12:50	08/12/24 17:56	1
Trichlorofluoromethane	ND		0.094	0.031	mg/Kg	₩	08/12/24 12:50	08/12/24 17:56	1
Vinyl chloride	ND		0.12	0.022	mg/Kg	₩	08/12/24 12:50	08/12/24 17:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				08/12/24 12:50	08/12/24 17:56	1
4-Bromofluorobenzene (Surr)	100		80 - 120				08/12/24 12:50	08/12/24 17:56	1
Dibromofluoromethane (Surr)	101		80 - 120				08/12/24 12:50	08/12/24 17:56	1
Toluene-d8 (Surr)	100		80 - 120				08/12/24 12:50	08/12/24 17:56	1
- Method: SW846 8260D - Vola	atile Organic	Compound	ds by GC/MS	- RA					
Analyte	•	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	0.10	J	0.29	0.031	mg/Kg	<del>-</del>	08/19/24 09:17	08/19/24 16:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		80 - 121				08/19/24 09:17	08/19/24 16:14	1
4-Bromofluorobenzene (Surr)	100		80 - 120				08/19/24 09:17	08/19/24 16:14	1
Dibromofluoromethane (Surr)	100		80 - 120				08/19/24 09:17	08/19/24 16:14	1
Toluene-d8 (Surr)	104		80 - 120				08/19/24 09:17	08/19/24 16:14	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	84.5		0.1	0.1	%			08/15/24 15:25	

0.1

0.1 %

15.5

08/15/24 15:25

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-20-SO-43-20240808

Lab Sample ID: 580-142813-8 Date Collected: 08/08/24 10:25 **Matrix: Solid** Date Received: 08/09/24 11:40 Percent Solids: 83.0

Analyta	Booult 1	Qualifier F	I MIDI	Unit	_ P	Droporod	Analyzad	Dil E-
Analyte	ND	Qualifier 6.02			— <u>D</u>	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane 1,1,1-Trichloroethane	ND ND	0.0.		mg/Kg	*	08/12/24 12:50	08/12/24 15:11 08/12/24 15:11	
* *	ND ND	0.03		mg/Kg	*			
1,1,2,2-Tetrachloroethane				mg/Kg	· · · · · ·		08/12/24 15:11	
1,1,2-Trichloroethane	ND	0.02		mg/Kg	<b>*</b>		08/12/24 15:11	
1,1-Dichloroethane	ND	0.0		mg/Kg	<b>*</b>		08/12/24 15:11	
1,1-Dichloroethene	ND	0.0		mg/Kg	<del>.</del>		08/12/24 15:11	
1,1-Dichloropropene	ND	0.0		mg/Kg	<b>*</b>		08/12/24 15:11	
1,2,3-Trichlorobenzene	ND	0.0		0 0	<b>*</b>	08/12/24 12:50		
,2,3-Trichloropropane	ND	0.0		mg/Kg	<del>.</del> .	08/12/24 12:50		
1,2,4-Trichlorobenzene	ND	0.09		mg/Kg	☼	08/12/24 12:50		
1,2,4-Trimethylbenzene	ND	0.0		mg/Kg	₩	08/12/24 12:50	08/12/24 15:11	
1,2-Dibromo-3-Chloropropane	ND	0.0			<del>.</del>	08/12/24 12:50	08/12/24 15:11	
1,2-Dibromoethane	ND	0.02		mg/Kg	☼	08/12/24 12:50		
1,2-Dichlorobenzene	ND	0.0		0 0	☼		08/12/24 15:11	
1,2-Dichloroethane	ND	0.02		mg/Kg			08/12/24 15:11	
1,2-Dichloropropane	ND	0.02		mg/Kg	≎	08/12/24 12:50	08/12/24 15:11	
1,3,5-Trimethylbenzene	ND	0.0	0.0094	mg/Kg	≎	08/12/24 12:50	08/12/24 15:11	
1,3-Dichlorobenzene	ND	0.0	74 0.016	mg/Kg	₽	08/12/24 12:50	08/12/24 15:11	
1,3-Dichloropropane	ND	0.0	74 0.0069	mg/Kg	₽	08/12/24 12:50	08/12/24 15:11	
I,4-Dichlorobenzene	0.031	J 0.0°	74 0.013	mg/Kg	☼	08/12/24 12:50	08/12/24 15:11	
2,2-Dichloropropane	ND	0.0	0.015	mg/Kg	☼	08/12/24 12:50	08/12/24 15:11	
2-Chlorotoluene	ND	0.0	0.011	mg/Kg	₽	08/12/24 12:50	08/12/24 15:11	
l-Chlorotoluene	ND	0.0	0.012	mg/Kg	☼	08/12/24 12:50	08/12/24 15:11	
1-Isopropyltoluene	ND	0.0	0.013	mg/Kg	₩	08/12/24 12:50	08/12/24 15:11	
Benzene	ND	0.02	25 0.0047	mg/Kg	⊅	08/12/24 12:50	08/12/24 15:11	
Bromobenzene	ND	0.0	0.0052	mg/Kg	₽	08/12/24 12:50	08/12/24 15:11	
Bromochloromethane	ND	0.0	0.0077	mg/Kg	☼	08/12/24 12:50	08/12/24 15:11	
Bromodichloromethane	ND	0.0	0.0068	mg/Kg	₽	08/12/24 12:50	08/12/24 15:11	
Bromoform	ND	0.0	0.0056	mg/Kg	₽	08/12/24 12:50	08/12/24 15:11	
Bromomethane	ND	0.		mg/Kg	☼	08/12/24 12:50	08/12/24 15:11	
Carbon tetrachloride	ND	0.0	25 0.0054	mg/Kg	₩	08/12/24 12:50	08/12/24 15:11	
Chlorobenzene	12	0.0		mg/Kg	☼	08/12/24 12:50	08/12/24 15:11	
Chloroethane	ND	0.0		mg/Kg	☼	08/12/24 12:50	08/12/24 15:11	
Chloroform	ND	0.02		mg/Kg		08/12/24 12:50	08/12/24 15:11	
Chloromethane	ND	0.0		mg/Kg	₽	08/12/24 12:50	08/12/24 15:11	
cis-1,2-Dichloroethene	ND	0.0		mg/Kg	☆	08/12/24 12:50	08/12/24 15:11	
cis-1,3-Dichloropropene	ND	0.02		mg/Kg	 	08/12/24 12:50	08/12/24 15:11	
Dibromochloromethane	ND	0.02		mg/Kg	☆	08/12/24 12:50		
Dibromomethane	ND	0.0		mg/Kg		08/12/24 12:50		
Dichlorodifluoromethane	ND	0.3		mg/Kg	. T \$	08/12/24 12:50		
Ethylbenzene	ND	0.0		mg/Kg			08/12/24 15:11	
dexachlorobutadiene	ND	0.0		mg/Kg	₩		08/12/24 15:11	
sopropylbenzene	ND	0.0		mg/Kg	.∵ .∵	08/12/24 12:50		
Methyl tert-butyl ether	ND ND	0.0		mg/Kg			08/12/24 15:11	
, ,	ND ND	0.0		0 0	<b>☆</b>		08/12/24 15:11	
n-Xylene & p-Xylene				mg/Kg	· · · · · · · · · · · · · · · · · · ·			
Naphthalene	ND 0.000	0.1		mg/Kg	*	08/12/24 12:50		
1-Butylbenzene	0.028			mg/Kg	₩.		08/12/24 15:11	
N-Propylbenzene o-Xylene	ND	0.0		mg/Kg mg/Kg	<del>.</del>	08/12/24 12:50	08/12/24 15:11 08/12/24 15:11	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-20-SO-43-20240808 Lab Sample ID: 580-142813-8

Date Collected: 08/08/24 10:25 **Matrix: Solid** Date Received: 08/09/24 11:40 Percent Solids: 83.0

Method: SW846 8260D - Vola Analyte	_	Qualifier	RL	(Conti	•	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND	<u> </u>	0.050	0.011	mg/Kg	— <del>-</del>	08/12/24 12:50	08/12/24 15:11	1
Styrene	ND ND		0.050		mg/Kg	₩	08/12/24 12:50	08/12/24 15:11	1
t-Butylbenzene	ND		0.050	0.0095			08/12/24 12:50	08/12/24 15:11	
Tetrachloroethene	ND ND		0.050			☆	08/12/24 12:50	08/12/24 15:11	1
Toluene	ND ND		0.030		mg/Kg	₩	08/12/24 12:50	08/12/24 15:11	1
trans-1.2-Dichloroethene	ND		0.074		mg/Kg	¥.	08/12/24 12:50	08/12/24 15:11	
,	ND ND		0.074	0.018			08/12/24 12:50	08/12/24 15:11	1
trans-1,3-Dichloropropene Trichloroethene	ND ND		0.050		0 0	ψ.	08/12/24 12:50	08/12/24 15:11	1
					mg/Kg	<del></del>			
Trichlorofluoromethane	ND		0.099		mg/Kg	<b>‡</b>	08/12/24 12:50	08/12/24 15:11	1
Vinyl chloride	ND		0.12	0.023	mg/Kg	₽	08/12/24 12:50	08/12/24 15:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				08/12/24 12:50	08/12/24 15:11	1
4-Bromofluorobenzene (Surr)	101		80 - 120				08/12/24 12:50	08/12/24 15:11	1
Dibromofluoromethane (Surr)	100		80 - 120				08/12/24 12:50	08/12/24 15:11	1
Toluene-d8 (Surr)	100		80 - 120				08/12/24 12:50	08/12/24 15:11	1
Method: SW846 8260D - Vola	_	•	•						
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Methylene Chloride	0.084	J	0.31	0.032	mg/Kg	☼	08/19/24 09:17	08/19/24 16:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		80 - 121				08/19/24 09:17	08/19/24 16:35	1
4-Bromofluorobenzene (Surr)	100		80 - 120				08/19/24 09:17	08/19/24 16:35	1
Dibramaficaramathana (Cur)	102		80 - 120				08/19/24 09:17	08/19/24 16:35	1
טוטוטווטוועסrometnane (Surf)							00/40/04 00:47		
Dibromofluoromethane (Surr) Toluene-d8 (Surr)	103		80 - 120				08/19/24 09:17	08/19/24 16:35	1
Toluene-d8 (Surr)	103		80 - 120				08/19/24 09:17	08/19/24 16:35	1
		Qualifier	80 - 120 RL	RL	Unit	D	08/19/24 09:17  Prepared	08/19/24 16:35 Analyzed	1 Dil Fac
Toluene-d8 (Surr)  General Chemistry		Qualifier		RL 0.1	Unit %	<u>D</u>			

0.1

17.0

0.1 %

**Eurofins Seattle** 

08/15/24 15:25

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-20-SO-48.2-20240808 Lab Sample ID: 580-142813-9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.026	0.0065		— <u>-</u>	08/12/24 12:50		1
1,1,1-Trichloroethane	ND		0.052	0.0060		₩	08/12/24 12:50	08/12/24 15:32	1
1,1,2,2-Tetrachloroethane	ND		0.026		mg/Kg	₩	08/12/24 12:50	08/12/24 15:32	1
1,1,2-Trichloroethane	ND		0.026	0.0097				08/12/24 15:32	1
1,1-Dichloroethane	ND		0.052		mg/Kg	₩	08/12/24 12:50	08/12/24 15:32	1
1,1-Dichloroethene	ND		0.052		mg/Kg	₩		08/12/24 15:32	1
1,1-Dichloropropene	ND		0.052	0.0069		∷ #		08/12/24 15:32	1
1,2,3-Trichlorobenzene	ND		0.10		mg/Kg	₩		08/12/24 15:32	1
1,2,3-Trichloropropane	ND		0.052		mg/Kg	₩		08/12/24 15:32	1
1,2,4-Trichlorobenzene	ND		0.10		mg/Kg			08/12/24 15:32	1
1,2,4-Trimethylbenzene	ND		0.052		mg/Kg	₩		08/12/24 15:32	1
1,2-Dibromo-3-Chloropropane	ND		0.079		mg/Kg	₩.		08/12/24 15:32	1
1,2-Dibromoethane	ND		0.026	0.0050		∵		08/12/24 15:32	
1.2-Dichlorobenzene	ND		0.052		mg/Kg			08/12/24 15:32	1
1,2-Dichloroethane	ND		0.032	0.0072		₩		08/12/24 15:32	1
1,2-Dichloropropane	ND		0.026	0.0072				08/12/24 15:32	· · · · · · · · · · · · · · · · · · ·
1,3,5-Trimethylbenzene	ND		0.052		mg/Kg	₩		08/12/24 15:32	1
1,3-Dichlorobenzene	ND		0.032		mg/Kg	*		08/12/24 15:32	1
1,3-Dichloropropane	ND		0.079	0.0073				08/12/24 15:32	· · · · · · · · · · · · · · · · · · ·
1,4-Dichlorobenzene	ND ND		0.079		mg/Kg	₩		08/12/24 15:32	1
•	ND ND		0.079		mg/Kg			08/12/24 15:32	
2,2-Dichloropropane	ND					<del>.</del> .			1
2-Chlorotoluene			0.052		mg/Kg	<b>☆</b>		08/12/24 15:32	1
4-Chlorotoluene	ND		0.052		mg/Kg	₩.		08/12/24 15:32	1
4-Isopropyltoluene	ND		0.052		mg/Kg			08/12/24 15:32	
Benzene	ND		0.026	0.0050		<b>*</b>		08/12/24 15:32	1
Bromobenzene	ND		0.052	0.0055	0 0	<b>*</b>		08/12/24 15:32	1
Bromochloromethane	ND		0.052	0.0081		<del>.</del>		08/12/24 15:32	1
Bromodichloromethane	ND		0.052	0.0072		<b>*</b>		08/12/24 15:32	1
Bromoform	ND		0.052	0.0059		<b>*</b>		08/12/24 15:32	1
Bromomethane	ND		0.13		mg/Kg	<u>.</u> .		08/12/24 15:32	1
Carbon tetrachloride	ND		0.026	0.0058		₽		08/12/24 15:32	1
Chlorobenzene	7.3		0.052	0.0063		₩.	08/12/24 12:50	08/12/24 15:32	1
Chloroethane	ND		0.10		mg/Kg	<u>.</u> .		08/12/24 15:32	1
Chloroform	ND		0.026	0.0055		₩		08/12/24 15:32	1
Chloromethane	ND		0.079		mg/Kg	₩	08/12/24 12:50		1
cis-1,2-Dichloroethene	ND		0.079		mg/Kg	₩.	08/12/24 12:50		1
cis-1,3-Dichloropropene	ND		0.026	0.0052		₩		08/12/24 15:32	1
Dibromochloromethane	ND		0.026	0.0064		₩		08/12/24 15:32	1
Dibromomethane	ND		0.052	0.0097				08/12/24 15:32	1
Dichlorodifluoromethane	ND		0.33		mg/Kg	₩		08/12/24 15:32	1
Ethylbenzene	ND		0.052		mg/Kg	₩		08/12/24 15:32	1
Hexachlorobutadiene	ND		0.13		mg/Kg			08/12/24 15:32	1
Isopropylbenzene	ND		0.052		mg/Kg	₩		08/12/24 15:32	1
Methyl tert-butyl ether	ND		0.052	0.0079		₩		08/12/24 15:32	1
m-Xylene & p-Xylene	ND		0.052	0.0093				08/12/24 15:32	1
Naphthalene	ND		0.20		mg/Kg	₽		08/12/24 15:32	1
n-Butylbenzene	ND		0.052	0.024	mg/Kg	₩	08/12/24 12:50	08/12/24 15:32	1
N-Propylbenzene	ND		0.052	0.020	mg/Kg	₩	08/12/24 12:50	08/12/24 15:32	1

**Eurofins Seattle** 

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9/12/2024

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-20-SO-48.2-20240808

Lab Sample ID: 580-142813-9 Date Collected: 08/08/24 13:00

**Matrix: Solid** Date Received: 08/09/24 11:40 Percent Solids: 84.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
sec-Butylbenzene	ND		0.052	0.011	mg/Kg	— <u></u>	08/12/24 12:50	08/12/24 15:32	
Styrene	ND		0.052	0.017	mg/Kg	₩	08/12/24 12:50	08/12/24 15:32	
t-Butylbenzene	ND		0.052	0.010	mg/Kg	₩	08/12/24 12:50	08/12/24 15:32	
Tetrachloroethene	ND		0.052	0.0069	mg/Kg	₩	08/12/24 12:50	08/12/24 15:32	
Toluene	ND		0.079	0.018	mg/Kg	☼	08/12/24 12:50	08/12/24 15:32	
trans-1,2-Dichloroethene	ND		0.079	0.019	mg/Kg	₩	08/12/24 12:50	08/12/24 15:32	
trans-1,3-Dichloropropene	ND		0.052	0.0092	mg/Kg	₩	08/12/24 12:50	08/12/24 15:32	
Trichloroethene	ND		0.052	0.013	mg/Kg	₩	08/12/24 12:50	08/12/24 15:32	
Trichlorofluoromethane	ND		0.10	0.034	mg/Kg	₩	08/12/24 12:50	08/12/24 15:32	
Vinyl chloride	ND		0.13	0.024	mg/Kg	₽	08/12/24 12:50	08/12/24 15:32	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				08/12/24 12:50	08/12/24 15:32	
4-Bromofluorobenzene (Surr)	99		80 - 120				08/12/24 12:50	08/12/24 15:32	
Dibromofluoromethane (Surr)	103		80 - 120				08/12/24 12:50	08/12/24 15:32	
Toluene-d8 (Surr)	100		80 - 120				08/12/24 12:50	08/12/24 15:32	
Method: SW846 8260D - Vola	tile Organic	Compound	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Methylene Chloride	0.087	J	0.33	0.034	mg/Kg	₩	08/19/24 09:17	08/19/24 16:57	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	94		80 - 121				08/19/24 09:17	08/19/24 16:57	
4-Bromofluorobenzene (Surr)	98		80 - 120				08/19/24 09:17	08/19/24 16:57	
Dibromofluoromethane (Surr)	102		80 - 120				08/19/24 09:17	08/19/24 16:57	
Toluene-d8 (Surr)	101		80 - 120				08/19/24 09:17	08/19/24 16:57	
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fa
Percent Solids (SM22 2540G)	84.9		0.1	0.1	%			08/15/24 15:25	
Percent Moisture (SM22 2540G)	15.1		0.1	0.1	0/			08/15/24 15:25	

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-20-SO-49-20240808

Lab Sample ID: 580-142813-10 Date Collected: 08/08/24 13:05 Matrix: Solid Date Received: 08/09/24 11:40 Percent Solids: 77.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS **MDL** Unit Dil Fac Analyte Result Qualifier D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.027 0.0067 mg/Kg 08/12/24 12:50 08/12/24 15:52 ND 0.054 1.1.1-Trichloroethane 0.0062 mg/Kg 08/12/24 12:50 08/12/24 15:52 1,1,2,2-Tetrachloroethane ND 0.027 0.010 mg/Kg 08/12/24 12:50 08/12/24 15:52 0.010 mg/Kg 08/12/24 15:52 1,1,2-Trichloroethane ND 0.027 08/12/24 12:50 0.054 0.012 mg/Kg 08/12/24 12:50 08/12/24 15:52 1.1-Dichloroethane ND 1,1-Dichloroethene ND 0.054 0.017 mg/Kg 08/12/24 12:50 08/12/24 15:52 1,1-Dichloropropene ND 0.054 0.0071 08/12/24 12:50 08/12/24 15:52 mg/Kg ND 0.053 08/12/24 12:50 08/12/24 15:52 1,2,3-Trichlorobenzene 0 11 mg/Kg 1,2,3-Trichloropropane ND 0.054 0.015 mg/Kg 08/12/24 12:50 08/12/24 15:52 1,2,4-Trichlorobenzene ND 0.11 0.057 mg/Kg 08/12/24 12:50 08/12/24 15:52 1,2,4-Trimethylbenzene ND 0.054 0.018 mg/Kg 08/12/24 12:50 08/12/24 15:52 mg/Kg 1.2-Dibromo-3-Chloropropane ND 0.081 0.020 08/12/24 12:50 08/12/24 15:52 1 1,2-Dibromoethane ND 0.027 0.0051 mg/Kg 08/12/24 12:50 08/12/24 15:52 1,2-Dichlorobenzene ND 0.054 0.012 mg/Kg 08/12/24 12:50 08/12/24 15:52 ND 0.027 0.0074 mg/Kg 08/12/24 12:50 08/12/24 15:52 1.2-Dichloroethane 0.0089 1,2-Dichloropropane NΩ 0.027 mg/Kg 08/12/24 12:50 08/12/24 15:52 1,3,5-Trimethylbenzene ND 0.054 0.010 mg/Kg 08/12/24 12:50 08/12/24 15:52 1,3-Dichlorobenzene ND 0.081 0.018 mg/Kg 08/12/24 12:50 08/12/24 15:52 0.0075 ND 0.081 mg/Kg 08/12/24 12:50 08/12/24 15:52 1,3-Dichloropropane 1,4-Dichlorobenzene ND 0.081 0.015 mg/Kg 08/12/24 12:50 08/12/24 15:52 2,2-Dichloropropane ND 0.054 0.016 mg/Kg ť. 08/12/24 12:50 08/12/24 15:52 2-Chlorotoluene ND 0.054 0.012 mg/Kg 08/12/24 12:50 08/12/24 15:52 4-Chlorotoluene ND 0.054 0.013 08/12/24 12:50 08/12/24 15:52 mg/Kg 4-Isopropyltoluene ND 0.054 0.014 mg/Kg 08/12/24 12:50 08/12/24 15:52 Benzene ND 0.027 0.0051 mg/Kg 08/12/24 12:50 08/12/24 15:52 0.0057 Bromobenzene ND 0.054 mg/Kg 08/12/24 12:50 08/12/24 15:52 Bromochloromethane ND 0.054 0.0084 mg/Kg 08/12/24 12:50 08/12/24 15:52 Bromodichloromethane 0.0074 08/12/24 15:52 ND 0.054 mg/Kg 08/12/24 12:50 0.0061 Bromoform ND 0.054 mg/Kg 08/12/24 12:50 08/12/24 15:52 ND 0.051 08/12/24 15:52 Bromomethane 0.13 mg/Kg 08/12/24 12:50 Carbon tetrachloride ND 0.027 0.0059 mg/Kg 08/12/24 12:50 08/12/24 15:52 0.054 0.0065 mg/Kg 08/12/24 12:50 08/12/24 15:52 Chlorobenzene 16 Chloroethane 0.028 08/12/24 12:50 08/12/24 15:52 ND 0.11 mg/Kg Chloroform ND 08/12/24 12:50 08/12/24 15:52 0.027 0.0057 mg/Kg Chloromethane ND 0.081 0.014 mg/Kg 08/12/24 12:50 08/12/24 15:52 cis-1.2-Dichloroethene ND 0.081 0.017 mg/Kg 08/12/24 12:50 08/12/24 15:52 cis-1,3-Dichloropropene ND 0.027 0.0054 mg/Kg 08/12/24 12:50 08/12/24 15:52 Dibromochloromethane ND 0.027 0.0066 mg/Kg 08/12/24 12:50 08/12/24 15:52 Dibromomethane ND 0.054 0.010 mg/Kg 08/12/24 12:50 08/12/24 15:52 Dichlorodifluoromethane ND 0.34 0.062 mg/Kg 08/12/24 12:50 08/12/24 15:52 Ethylbenzene ND 0.054 0.012 mg/Kg 08/12/24 12:50 08/12/24 15:52 Hexachlorobutadiene ND 0.13 0.032 mg/Kg 08/12/24 12:50 08/12/24 15:52 ND 0.012 mg/Kg 08/12/24 15:52 Isopropylbenzene 0.054 08/12/24 12:50 Methyl tert-butyl ether 0.054 0.0081 08/12/24 12:50 08/12/24 15:52 ND mg/Kg ND 0.054 08/12/24 15:52 m-Xylene & p-Xylene 0.0096 mg/Kg 08/12/24 12:50 Naphthalene ND 0.20 0.053 mg/Kg 08/12/24 12:50 08/12/24 15:52 n-Butylbenzene ND 0.054 08/12/24 12:50 08/12/24 15:52 0.025 mg/Kg N-Propylbenzene ND 0.054 0.020 mg/Kg 08/12/24 12:50 08/12/24 15:52 o-Xylene ND 0.054 0.0067 mg/Kg 08/12/24 12:50 08/12/24 15:52

**Eurofins Seattle** 

9/12/2024

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Toluene-d8 (Surr)

Client Sample ID: PDI-20-SO-49-20240808 Lab Sample ID: 580-142813-10

Date Collected: 08/08/24 13:05 **Matrix: Solid** Date Received: 08/09/24 11:40 Percent Solids: 77.2

Method: SW846 8260D - Vo	olatile Organic	Compound	ds by GC/MS	(Cont	inued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.054	0.012	mg/Kg	≎	08/12/24 12:50	08/12/24 15:52	1
Styrene	ND		0.054	0.017	mg/Kg	≎	08/12/24 12:50	08/12/24 15:52	1
t-Butylbenzene	ND		0.054	0.010	mg/Kg	₽	08/12/24 12:50	08/12/24 15:52	1
Tetrachloroethene	ND		0.054	0.0071	mg/Kg	≎	08/12/24 12:50	08/12/24 15:52	1
Toluene	ND		0.081	0.018	mg/Kg	≎	08/12/24 12:50	08/12/24 15:52	1
trans-1,2-Dichloroethene	ND		0.081	0.020	mg/Kg	₽	08/12/24 12:50	08/12/24 15:52	1
trans-1,3-Dichloropropene	ND		0.054	0.0094	mg/Kg	≎	08/12/24 12:50	08/12/24 15:52	1
Trichloroethene	ND		0.054	0.014	mg/Kg	≎	08/12/24 12:50	08/12/24 15:52	1
Trichlorofluoromethane	ND		0.11	0.035	mg/Kg	₽	08/12/24 12:50	08/12/24 15:52	1
Vinyl chloride	ND		0.13	0.025	mg/Kg	₩	08/12/24 12:50	08/12/24 15:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 121				08/12/24 12:50	08/12/24 15:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 121	08/12/24 12:50	08/12/24 15:52	1
4-Bromofluorobenzene (Surr)	98		80 - 120	08/12/24 12:50	08/12/24 15:52	1
Dibromofluoromethane (Surr)	99		80 - 120	08/12/24 12:50	08/12/24 15:52	1
Toluene-d8 (Surr)	100		80 - 120	08/12/24 12:50	08/12/24 15:52	1
<del>_</del>						

Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	0.099	J	0.34	0.035	mg/Kg	₩	08/19/24 09:17	08/19/24 17:19	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		80 - 121				08/19/24 09:17	08/19/24 17:19	1
4-Bromofluorobenzene (Surr)	99		80 - 120				08/19/24 09:17	08/19/24 17:19	1
Dibromofluoromethane (Surr)	103		80 - 120				08/19/24 09:17	08/19/24 17:19	1

General Chemistry Analyte	Result Qua	alifier RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	77.2	0.1	0.1	%			08/15/24 15:25	1
Percent Moisture (SM22 2540G)	22.8	0.1	0.1	%			08/15/24 15:25	1

80 - 120

103

08/19/24 09:17 08/19/24 17:19

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-20-SO-52-20240808

Lab Sample ID: 580-142813-11 Date Collected: 08/08/24 13:10 Matrix: Solid Date Received: 08/09/24 11:40 Percent Solids: 79.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.027 0.0068 mg/Kg 08/12/24 12:50 08/12/24 16:13 ND 0.054 1.1.1-Trichloroethane 0.0062 mg/Kg 08/12/24 12:50 08/12/24 16:13 1,1,2,2-Tetrachloroethane ND 0.027 0.010 mg/Kg 08/12/24 12:50 08/12/24 16:13 1,1,2-Trichloroethane ND 0.027 0.010 mg/Kg 08/12/24 12:50 08/12/24 16:13 0.054 0.012 mg/Kg 08/12/24 12:50 08/12/24 16:13 1.1-Dichloroethane ND 1,1-Dichloroethene ND 0.054 0.017 mg/Kg 08/12/24 12:50 08/12/24 16:13 1,1-Dichloropropene ND 0.054 0.0072 08/12/24 12:50 08/12/24 16:13 mg/Kg ND 0.054 08/12/24 12:50 08/12/24 16:13 1,2,3-Trichlorobenzene 0 11 mg/Kg 1,2,3-Trichloropropane ND 0.054 0.016 mg/Kg 08/12/24 12:50 08/12/24 16:13 1,2,4-Trichlorobenzene ND 0.11 0.058 mg/Kg 08/12/24 12:50 08/12/24 16:13 1,2,4-Trimethylbenzene ND 0.054 0.018 mg/Kg 08/12/24 12:50 08/12/24 16:13 mg/Kg 1.2-Dibromo-3-Chloropropane ND 0.081 0.021 08/12/24 12:50 08/12/24 16:13 1 1,2-Dibromoethane ND 0.027 0.0051 mg/Kg 08/12/24 12:50 08/12/24 16:13 1,2-Dichlorobenzene ND 0.054 0.012 mg/Kg 08/12/24 12:50 08/12/24 16:13 ND 0.027 0.0074 mg/Kg 08/12/24 12:50 08/12/24 16:13 1.2-Dichloroethane 0.0089 1,2-Dichloropropane NΩ 0.027 mg/Kg 08/12/24 12:50 08/12/24 16:13 1,3,5-Trimethylbenzene ND 0.054 0.010 mg/Kg 08/12/24 12:50 08/12/24 16:13 1,3-Dichlorobenzene ND 0.081 0.018 mg/Kg 08/12/24 12:50 08/12/24 16:13 0.0076 ND 0.081 mg/Kg 08/12/24 12:50 08/12/24 16:13 1,3-Dichloropropane 1,4-Dichlorobenzene ND 0.081 0.015 mg/Kg 08/12/24 12:50 08/12/24 16:13 2,2-Dichloropropane ND 0.054 0.016 mg/Kg ť. 08/12/24 12:50 08/12/24 16:13 2-Chlorotoluene ND 0.054 0.012 mg/Kg 08/12/24 12:50 08/12/24 16:13 4-Chlorotoluene ND 0.013 08/12/24 12:50 08/12/24 16:13 0.054 mg/Kg 4-Isopropyltoluene ND 0.054 0.014 mg/Kg 08/12/24 12:50 08/12/24 16:13 Benzene ND 0.027 0.0051 mg/Kg 08/12/24 12:50 08/12/24 16:13 0.0057 Bromobenzene ND 0.054 mg/Kg 08/12/24 12:50 08/12/24 16:13 Bromochloromethane ND 0.054 0.0084 mg/Kg 08/12/24 12:50 08/12/24 16:13 Bromodichloromethane 0.0074 ND 0.054 mg/Kg 08/12/24 12:50 08/12/24 16:13 0.0061 Bromoform ND 0.054 mg/Kg 08/12/24 12:50 08/12/24 16:13 ND 0.051 08/12/24 16:13 Bromomethane 0.14 mg/Kg 08/12/24 12:50 Carbon tetrachloride ND 0.027 0.0060 mg/Kg 08/12/24 12:50 08/12/24 16:13 Chloroethane ND 0.11 0.028 mg/Kg 08/12/24 12:50 08/12/24 16:13 Chloroform 0.027 0.0057 08/12/24 12:50 08/12/24 16:13 ND mg/Kg Chloromethane ND 0.014 08/12/24 12:50 08/12/24 16:13 0.081 mg/Kg cis-1,2-Dichloroethene ND 0.081 0.017 mg/Kg 08/12/24 12:50 08/12/24 16:13 cis-1.3-Dichloropropene ND 0.027 0.0054 mg/Kg 08/12/24 12:50 08/12/24 16:13 0.0066 Dibromochloromethane ND 0.027 mg/Kg 08/12/24 12:50 08/12/24 16:13 Dibromomethane ND 0.054 0.010 mg/Kg 08/12/24 12:50 08/12/24 16:13 Dichlorodifluoromethane ND 0.062 mg/Kg 08/12/24 12:50 08/12/24 16:13 0.34 Ethylbenzene ND 0.054 0.012 mg/Kg 08/12/24 12:50 08/12/24 16:13 Hexachlorobutadiene ND 0.14 0.032 mg/Kg 08/12/24 12:50 08/12/24 16:13 Isopropylbenzene ND 0.054 0.012 mg/Kg 08/12/24 12:50 08/12/24 16:13 0.0081 08/12/24 16:13 Methyl tert-butyl ether ND 0.054 mg/Kg 08/12/24 12:50 m-Xylene & p-Xylene 0.054 0.0096 08/12/24 12:50 08/12/24 16:13 ND mg/Kg Naphthalene ND 0.20 0.053 mg/Kg 08/12/24 12:50 08/12/24 16:13 n-Butylbenzene ND 0.054 0.025 mg/Kg 08/12/24 12:50 08/12/24 16:13 N-Propylbenzene ND 0.054 0.020 mg/Kg 08/12/24 12:50 08/12/24 16:13 o-Xylene ND 0.054 0.0068 mg/Kg 08/12/24 12:50 08/12/24 16:13 sec-Butylbenzene 08/12/24 12:50 ND 0.054 0.012 mg/Kg 08/12/24 16:13

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-20-SO-52-20240808 Lab Sample ID: 580-142813-11

Date Collected: 08/08/24 13:10 **Matrix: Solid** Date Received: 08/09/24 11:40 Percent Solids: 79.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.054	0.017	mg/Kg	<u></u>	08/12/24 12:50	08/12/24 16:13	1
t-Butylbenzene	ND		0.054	0.010	mg/Kg	₽	08/12/24 12:50	08/12/24 16:13	1
Tetrachloroethene	ND		0.054	0.0072	mg/Kg		08/12/24 12:50	08/12/24 16:13	1
Toluene	ND		0.081	0.018	mg/Kg	☼	08/12/24 12:50	08/12/24 16:13	1
trans-1,2-Dichloroethene	ND		0.081	0.020	mg/Kg	₽	08/12/24 12:50	08/12/24 16:13	1
trans-1,3-Dichloropropene	ND		0.054	0.0095	mg/Kg	₩	08/12/24 12:50	08/12/24 16:13	1
Trichloroethene	ND		0.054	0.014	mg/Kg	☼	08/12/24 12:50	08/12/24 16:13	1
Trichlorofluoromethane	ND		0.11	0.035	mg/Kg	₽	08/12/24 12:50	08/12/24 16:13	1
Vinyl chloride	ND		0.14	0.025	mg/Kg	₩	08/12/24 12:50	08/12/24 16:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 121				08/12/24 12:50	08/12/24 16:13	1
4-Bromofluorobenzene (Surr)	101		80 - 120				08/12/24 12:50	08/12/24 16:13	1
Dibromofluoromethane (Surr)	101		80 - 120				08/12/24 12:50	08/12/24 16:13	1
Toluene-d8 (Surr)	101		80 - 120				08/12/24 12:50	08/12/24 16:13	1
		Compound		- DL			08/12/24 12:50	08/12/24 16:13	1
Method: SW846 8260D - Vola	tile Organic	Compound Qualifier		- DL MDL	Unit	D	08/12/24 12:50 Prepared	08/12/24 16:13 Analyzed	•
Method: SW846 8260D - Volat Analyte	tile Organic	•	ds by GC/MS		Unit mg/Kg	<u>D</u>			•
Method: SW846 8260D - Volat Analyte Chlorobenzene	tile Organic Result	Qualifier	ds by GC/MS	<b>MDL</b> 0.070			Prepared 08/19/24 09:17	Analyzed	
Method: SW846 8260D - Volat Analyte Chlorobenzene Methylene Chloride	tile Organic Result	Qualifier J	ds by GC/MS RL 0.58	<b>MDL</b> 0.070	mg/Kg	<u></u>	Prepared 08/19/24 09:17	Analyzed 08/19/24 19:29	Dil Fac
Method: SW846 8260D - Volat Analyte Chlorobenzene Methylene Chloride Surrogate	tile Organic Result 17 1.0	Qualifier J	ds by GC/MS RL 0.58 3.6	<b>MDL</b> 0.070	mg/Kg	<u></u>	Prepared 08/19/24 09:17 08/19/24 09:17	Analyzed 08/19/24 19:29 08/19/24 19:29	Dil Fac
Method: SW846 8260D - Volat Analyte Chlorobenzene Methylene Chloride Surrogate 1,2-Dichloroethane-d4 (Surr)	tile Organic Result 17 1.0 %Recovery	Qualifier J	ds by GC/MS  RL  0.58  3.6	<b>MDL</b> 0.070	mg/Kg	<u></u>	Prepared 08/19/24 09:17 08/19/24 09:17  Prepared 08/19/24 09:17	Analyzed 08/19/24 19:29 08/19/24 19:29 Analyzed	Dil Fac
Method: SW846 8260D - Volat Analyte Chlorobenzene Methylene Chloride Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr)	tile Organic Result 17 1.0 %Recovery 95	Qualifier J	ds by GC/MS RL 0.58 3.6  Limits 80-121	<b>MDL</b> 0.070	mg/Kg	<u></u>	Prepared 08/19/24 09:17 08/19/24 09:17  Prepared 08/19/24 09:17 08/19/24 09:17	Analyzed 08/19/24 19:29 08/19/24 19:29  Analyzed 08/19/24 19:29	Dil Fac
Method: SW846 8260D - Volate Analyte Chlorobenzene Methylene Chloride Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr)	tile Organic Result 17 1.0  %Recovery 95 98	Qualifier J	0.58 3.6 Limits 80 - 121 80 - 120	<b>MDL</b> 0.070	mg/Kg	<u></u>	Prepared 08/19/24 09:17 08/19/24 09:17  Prepared 08/19/24 09:17 08/19/24 09:17 08/19/24 09:17	Analyzed  08/19/24 19:29 08/19/24 19:29  Analyzed  08/19/24 19:29 08/19/24 19:29	Dil Fac
Method: SW846 8260D - Volar Analyte Chlorobenzene Methylene Chloride  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)  General Chemistry	### Companic   Result	Qualifier J	0.58 3.6 Limits 80 - 121 80 - 120 80 - 120	<b>MDL</b> 0.070	mg/Kg	<u></u>	Prepared 08/19/24 09:17 08/19/24 09:17  Prepared 08/19/24 09:17 08/19/24 09:17 08/19/24 09:17	Analyzed 08/19/24 19:29 08/19/24 19:29  Analyzed 08/19/24 19:29 08/19/24 19:29 08/19/24 19:29	Dil Fac
Method: SW846 8260D - Volation Analyte Chlorobenzene Methylene Chloride Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)	### Companic Result	Qualifier J	0.58 3.6 Limits 80 - 121 80 - 120 80 - 120	<b>MDL</b> 0.070	mg/Kg mg/Kg	<u></u>	Prepared 08/19/24 09:17 08/19/24 09:17  Prepared 08/19/24 09:17 08/19/24 09:17 08/19/24 09:17	Analyzed 08/19/24 19:29 08/19/24 19:29  Analyzed 08/19/24 19:29 08/19/24 19:29 08/19/24 19:29	Dil Fac  1 1 1  Dil Fac  1 1 1 1
Method: SW846 8260D - Volate Analyte Chlorobenzene Methylene Chloride  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)  General Chemistry	### Companic Result	Qualifier  J  Qualifier	0.58 3.6 Limits 80 - 121 80 - 120 80 - 120 80 - 120	MDL 0.070 0.38	mg/Kg mg/Kg	<u> </u>	Prepared 08/19/24 09:17 08/19/24 09:17  Prepared 08/19/24 09:17 08/19/24 09:17 08/19/24 09:17 08/19/24 09:17	Analyzed  08/19/24 19:29  08/19/24 19:29  Analyzed  08/19/24 19:29  08/19/24 19:29  08/19/24 19:29  08/19/24 19:29	Dil Fac  1  Dil Fac  1  1  Dil Fac  1  1  Dil Fac  1  1  1

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Date Collected: 08/08/24 13:15

Date Received: 08/09/24 11:40

Matrix: Solid
Percent Solids: 77.3

Method: SW846 8260D - Vola Analyte	Result C	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.030	0.0076	mg/Kg	— <u>-</u>	·	08/12/24 17:15	1
1,1,1-Trichloroethane	ND		0.060	0.0070		₩	08/12/24 12:50	08/12/24 17:15	1
1,1,2,2-Tetrachloroethane	ND		0.030			₩	08/12/24 12:50	08/12/24 17:15	1
1,1,2-Trichloroethane	ND		0.030		mg/Kg	₩	08/12/24 12:50	08/12/24 17:15	1
1,1-Dichloroethane	ND		0.060		mg/Kg	₩	08/12/24 12:50	08/12/24 17:15	1
1,1-Dichloroethene	ND		0.060		mg/Kg	₩	08/12/24 12:50	08/12/24 17:15	1
1,1-Dichloropropene	ND		0.060	0.0080		₩	08/12/24 12:50	08/12/24 17:15	1
1,2,3-Trichlorobenzene	ND		0.12		mg/Kg	₩	08/12/24 12:50	08/12/24 17:15	1
1,2,3-Trichloropropane	ND		0.060		mg/Kg	₩	08/12/24 12:50	08/12/24 17:15	1
1,2,4-Trichlorobenzene	ND		0.12		mg/Kg	∴	08/12/24 12:50	08/12/24 17:15	
1,2,4-Trimethylbenzene	ND		0.060		mg/Kg	₩	08/12/24 12:50	08/12/24 17:15	1
1,2-Dibromo-3-Chloropropane	ND		0.091		mg/Kg	₩		08/12/24 17:15	
1,2-Dibromoethane	ND		0.030	0.0057		∴		08/12/24 17:15	1
1.2-Dichlorobenzene	ND		0.060		mg/Kg	₩		08/12/24 17:15	
1,2-Dichloroethane	ND		0.030	0.0083				08/12/24 17:15	
1,2-Dichloropropane	ND		0.030		mg/Kg	∴		08/12/24 17:15	
1,3,5-Trimethylbenzene	ND		0.060	0.011		Ď.		08/12/24 17:15	
1,3-Dichlorobenzene	ND		0.091			**		08/12/24 17:15	
1,3-Dichloropropane	ND		0.091	0.0085				08/12/24 17:15	
1,4-Dichlorobenzene	ND ND		0.091		mg/Kg	₩		08/12/24 17:15	
2,2-Dichloropropane	ND		0.060		mg/Kg	₩		08/12/24 17:15	
2-Chlorotoluene	ND		0.060		mg/Kg	¥ ₩		08/12/24 17:15	,
4-Chlorotoluene	ND ND		0.060		mg/Kg	₩		08/12/24 17:15	
	ND ND				0 0				,
4-Isopropyltoluene	ND		0.060		mg/Kg	· · · · ·		08/12/24 17:15 08/12/24 17:15	,
Benzene				0.0057		φ.			
Bromobenzene	ND		0.060	0.0064	0 0	₩.		08/12/24 17:15	
Bromochloromethane	ND		0.060	0.0094		· · · · · · · · · · · · · · · · · · ·		08/12/24 17:15	
Bromodichloromethane	ND		0.060	0.0083		₩.		08/12/24 17:15	
Bromoform	ND		0.060	0.0068		₩.		08/12/24 17:15	
Bromomethane	ND		0.15		mg/Kg			08/12/24 17:15	
Carbon tetrachloride	ND		0.030	0.0067		∵		08/12/24 17:15	•
Chlorobenzene	13		0.060	0.0073		<b>*</b>		08/12/24 17:15	•
Chloroethane	ND		0.12		mg/Kg	<del>.</del> .		08/12/24 17:15	
Chloroform	ND		0.030	0.0064		☼		08/12/24 17:15	
Chloromethane	ND		0.091		mg/Kg	☼		08/12/24 17:15	
cis-1,2-Dichloroethene	ND		0.091		mg/Kg	<del>.</del>		08/12/24 17:15	
cis-1,3-Dichloropropene	ND		0.030	0.0060		☼		08/12/24 17:15	•
Dibromochloromethane	ND		0.030	0.0074		₩		08/12/24 17:15	
Dibromomethane	ND		0.060		mg/Kg			08/12/24 17:15	
Dichlorodifluoromethane	ND		0.38		mg/Kg	₩		08/12/24 17:15	•
Ethylbenzene	ND		0.060		mg/Kg	₩	08/12/24 12:50	08/12/24 17:15	•
Hexachlorobutadiene	ND		0.15		mg/Kg	₩		08/12/24 17:15	
sopropylbenzene	ND		0.060		mg/Kg	₩		08/12/24 17:15	•
Methyl tert-butyl ether	ND		0.060	0.0091		₩		08/12/24 17:15	,
m-Xylene & p-Xylene	ND		0.060	0.011	mg/Kg	₩	08/12/24 12:50	08/12/24 17:15	
Naphthalene	ND		0.23	0.059	mg/Kg	₩	08/12/24 12:50	08/12/24 17:15	•
n-Butylbenzene	ND		0.060	0.028	mg/Kg	☼	08/12/24 12:50	08/12/24 17:15	1
N-Propylbenzene	ND		0.060	0.023	mg/Kg	₩	08/12/24 12:50	08/12/24 17:15	1
o-Xylene	ND		0.060	0.0076	ma/Ka	₩	08/12/24 12:50	08/12/24 17:15	

**Eurofins Seattle** 

9/12/2024

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10

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Percent Moisture (SM22 2540G)

22.7

Client Sample ID: PDI-20-SO-57.8-20240808 Lab Sample ID: 580-142813-12

Date Collected: 08/08/24 13:15 **Matrix: Solid** Percent Solids: 77.3 Date Received: 08/09/24 11:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.060	0.013	mg/Kg	— <u></u>	08/12/24 12:50	08/12/24 17:15	1
Styrene	ND		0.060		mg/Kg	₩	08/12/24 12:50	08/12/24 17:15	1
t-Butylbenzene	ND		0.060		mg/Kg		08/12/24 12:50	08/12/24 17:15	1
Tetrachloroethene	ND		0.060	0.0080	mg/Kg	₽	08/12/24 12:50	08/12/24 17:15	1
Toluene	ND		0.091	0.020	mg/Kg	₩	08/12/24 12:50	08/12/24 17:15	1
trans-1,2-Dichloroethene	ND		0.091	0.022	mg/Kg	₩	08/12/24 12:50	08/12/24 17:15	1
trans-1,3-Dichloropropene	ND		0.060	0.011	mg/Kg	₩	08/12/24 12:50	08/12/24 17:15	1
Trichloroethene	ND		0.060	0.016	mg/Kg	₩	08/12/24 12:50	08/12/24 17:15	1
Trichlorofluoromethane	ND		0.12	0.039	mg/Kg	₩	08/12/24 12:50	08/12/24 17:15	1
Vinyl chloride	ND		0.15	0.028	mg/Kg	₩	08/12/24 12:50	08/12/24 17:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 121				08/12/24 12:50	08/12/24 17:15	1
4-Bromofluorobenzene (Surr)	101		80 - 120				08/12/24 12:50	08/12/24 17:15	1
Dibromofluoromethane (Surr)	101		80 - 120				08/12/24 12:50	08/12/24 17:15	1
Toluene-d8 (Surr)	98		80 - 120				08/12/24 12:50	08/12/24 17:15	1
- Method: SW846 8260D - Vol	atile Organic	Compound	ds by GC/MS	- RA					
Analyte	•	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	0.13	J	0.38	0.039	mg/Kg	<del>-</del>	08/19/24 09:17	08/19/24 17:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		80 - 121				08/19/24 09:17	08/19/24 17:41	1
4-Bromofluorobenzene (Surr)	102		80 - 120				08/19/24 09:17	08/19/24 17:41	1
Dibromofluoromethane (Surr)	101		80 - 120				08/19/24 09:17	08/19/24 17:41	1
Toluene-d8 (Surr)	102		80 - 120				08/19/24 09:17	08/19/24 17:41	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac

0.1

0.1 %

08/15/24 15:25

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-21-SO-19.8-20240808

Lab Sample ID: 580-142813-13 Date Collected: 08/08/24 15:45 **Matrix: Solid** Date Received: 08/09/24 11:40 Percent Solids: 82.4

Analyte	Dagul4	Qualifier	RL	MDL	Unit	_ P	Droporod	Analyzad	Dil Fa
	ND Result	Qualifier	0.025			— <u>D</u>	Prepared	Analyzed	DII Fa
1,1,1,2-Tetrachloroethane 1,1,1-Trichloroethane	ND ND		0.025	0.0062		*	08/12/24 12:50	08/12/24 16:33 08/12/24 16:33	
1, 1, 1- menioroemane 1, 1, 2, 2-Tetrachloroethane	ND ND		0.050	0.0057		*		08/12/24 16:33	
				0.0094					
1,1,2-Trichloroethane	ND		0.025	0.0092	0 0	₩		08/12/24 16:33	
1,1-Dichloroethane	ND		0.050		mg/Kg	<b>*</b>		08/12/24 16:33	
1,1-Dichloroethene	ND		0.050		mg/Kg	<del>Ω</del>		08/12/24 16:33	
1,1-Dichloropropene	ND		0.050	0.0066		<b>*</b>		08/12/24 16:33	
1,2,3-Trichlorobenzene	ND		0.099		mg/Kg	<b>*</b>		08/12/24 16:33	
1,2,3-Trichloropropane	ND		0.050		mg/Kg	<u>.</u>		08/12/24 16:33	
1,2,4-Trichlorobenzene	ND		0.099		mg/Kg	<b>*</b>		08/12/24 16:33	
1,2,4-Trimethylbenzene	ND		0.050		mg/Kg	₩		08/12/24 16:33	
1,2-Dibromo-3-Chloropropane	ND		0.075	0.019	mg/Kg	<del>.</del>		08/12/24 16:33	
1,2-Dibromoethane	ND		0.025	0.0047		₩		08/12/24 16:33	
1,2-Dichlorobenzene	ND		0.050	0.011	mg/Kg	₩		08/12/24 16:33	
1,2-Dichloroethane	ND		0.025	0.0068				08/12/24 16:33	
1,2-Dichloropropane	ND		0.025	0.0082	0 0	₩		08/12/24 16:33	
1,3,5-Trimethylbenzene	ND		0.050	0.0094	0 0	₩		08/12/24 16:33	
1,3-Dichlorobenzene	ND		0.075	0.017	mg/Kg	₩	08/12/24 12:50	08/12/24 16:33	
1,3-Dichloropropane	ND		0.075	0.0070	mg/Kg	₩	08/12/24 12:50	08/12/24 16:33	
1,4-Dichlorobenzene	ND		0.075	0.013	mg/Kg	₩	08/12/24 12:50	08/12/24 16:33	
2,2-Dichloropropane	ND		0.050	0.015	mg/Kg	₩	08/12/24 12:50	08/12/24 16:33	
2-Chlorotoluene	ND		0.050	0.011	mg/Kg	₽	08/12/24 12:50	08/12/24 16:33	
1-Chlorotoluene	ND		0.050	0.012	mg/Kg	₩	08/12/24 12:50	08/12/24 16:33	
1-Isopropyltoluene	ND		0.050	0.013	mg/Kg	₩	08/12/24 12:50	08/12/24 16:33	
Benzene	ND		0.025	0.0047	mg/Kg	₽	08/12/24 12:50	08/12/24 16:33	
Bromobenzene	ND		0.050	0.0052	mg/Kg	₩	08/12/24 12:50	08/12/24 16:33	
Bromochloromethane	ND		0.050	0.0077	mg/Kg	₩	08/12/24 12:50	08/12/24 16:33	
Bromodichloromethane	ND		0.050	0.0068	mg/Kg	₩	08/12/24 12:50	08/12/24 16:33	
Bromoform	ND		0.050	0.0056	mg/Kg	₽	08/12/24 12:50	08/12/24 16:33	
Bromomethane	ND		0.12	0.047	mg/Kg	₽	08/12/24 12:50	08/12/24 16:33	
Carbon tetrachloride	ND		0.025	0.0055	mg/Kg	₩	08/12/24 12:50	08/12/24 16:33	
Chlorobenzene	0.095		0.050	0.0060	mg/Kg	₩	08/12/24 12:50	08/12/24 16:33	
Chloroethane	ND		0.099	0.026	mg/Kg	₩	08/12/24 12:50	08/12/24 16:33	
Chloroform	ND		0.025	0.0052	mg/Kg	₩	08/12/24 12:50	08/12/24 16:33	
Chloromethane	ND		0.075	0.013	mg/Kg	₩	08/12/24 12:50	08/12/24 16:33	
cis-1,2-Dichloroethene	ND		0.075	0.016	mg/Kg	₽	08/12/24 12:50	08/12/24 16:33	
cis-1,3-Dichloropropene	ND		0.025	0.0050			08/12/24 12:50	08/12/24 16:33	
Dibromochloromethane	ND		0.025	0.0061		₩	08/12/24 12:50	08/12/24 16:33	
Dibromomethane	ND		0.050	0.0092		₩		08/12/24 16:33	
Dichlorodifluoromethane	ND		0.31		mg/Kg			08/12/24 16:33	
Ethylbenzene	ND		0.050		mg/Kg	<b>#</b>		08/12/24 16:33	
Hexachlorobutadiene	ND		0.12		mg/Kg	₩		08/12/24 16:33	
sopropylbenzene	0.042		0.050		mg/Kg			08/12/24 16:33	
Methyl tert-butyl ether	ND	•	0.050	0.0075		₩		08/12/24 16:33	
m-Xylene & p-Xylene	ND		0.050	0.0073	0 0	*		08/12/24 16:33	
					mg/Kg			08/12/24 16:33	
Naphthalene	ND 0.000		0.19 0.050		mg/Kg mg/Kg	<b>☆</b>		08/12/24 16:33	
n-Butylbenzene	0.068					<b>*</b>			
<b>N-Propylbenzene</b> o-Xylene	<b>0.067</b> ND		0.050 0.050	0.019	mg/Kg	<del>.</del>		08/12/24 16:33 08/12/24 16:33	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-21-SO-19.8-20240808 Lab Sample ID: 580-142813-13

Date Collected: 08/08/24 15:45 **Matrix: Solid** Date Received: 08/09/24 11:40 Percent Solids: 82.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	0.077		0.050		mg/Kg	— <u>-</u>	08/12/24 12:50	08/12/24 16:33	1
Styrene	ND		0.050		mg/Kg	₩	08/12/24 12:50	08/12/24 16:33	1
t-Butylbenzene	ND		0.050	0.0096			08/12/24 12:50	08/12/24 16:33	1
Tetrachloroethene	ND		0.050	0.0066		₩	08/12/24 12:50	08/12/24 16:33	1
Toluene	ND		0.075		mg/Kg	₩	08/12/24 12:50	08/12/24 16:33	1
trans-1,2-Dichloroethene	ND		0.075		mg/Kg		08/12/24 12:50	08/12/24 16:33	1
trans-1,3-Dichloropropene	ND		0.050	0.0087		₩	08/12/24 12:50	08/12/24 16:33	1
Trichloroethene	ND		0.050		mg/Kg	₩	08/12/24 12:50	08/12/24 16:33	1
Trichlorofluoromethane	ND		0.099	0.032	mg/Kg		08/12/24 12:50	08/12/24 16:33	1
Vinyl chloride	ND		0.12		mg/Kg	₩	08/12/24 12:50	08/12/24 16:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		80 - 121				08/12/24 12:50	08/12/24 16:33	1
4-Bromofluorobenzene (Surr)	99		80 - 120				08/12/24 12:50	08/12/24 16:33	1
Dibromofluoromethane (Surr)	102		80 - 120				08/12/24 12:50	08/12/24 16:33	1
Toluene-d8 (Surr)	98		80 - 120				08/12/24 12:50	08/12/24 16:33	1
- Method: SW846 8260D - Vol	atile Organic	Compound	ds by GC/MS	- RA					
Analyte	_	•							
Allalyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result 0.11		0.31		mg/Kg	<u>D</u>	08/19/24 09:17	08/19/24 18:02	Dil Fac
Methylene Chloride		J				=			Dil Fac
Methylene Chloride Surrogate	0.11	J	0.31			=	08/19/24 09:17	08/19/24 18:02	1
Methylene Chloride  Surrogate 1,2-Dichloroethane-d4 (Surr)	0.11 %Recovery	J	0.31			=	08/19/24 09:17  Prepared 08/19/24 09:17	08/19/24 18:02  Analyzed	1 Dil Fac
Methylene Chloride  Surrogate  1,2-Dichloroethane-d4 (Surr)  4-Bromofluorobenzene (Surr)	0.11 %Recovery 93	J	0.31  Limits  80 - 121			=	08/19/24 09:17  Prepared 08/19/24 09:17 08/19/24 09:17	08/19/24 18:02  Analyzed  08/19/24 18:02	Dil Fac
Methylene Chloride  Surrogate  1,2-Dichloroethane-d4 (Surr)  4-Bromofluorobenzene (Surr)  Dibromofluoromethane (Surr)	0.11  %Recovery  93 101	J	0.31  Limits  80 - 121 80 - 120			=	08/19/24 09:17 <b>Prepared</b> 08/19/24 09:17 08/19/24 09:17 08/19/24 09:17	08/19/24 18:02 <b>Analyzed</b> 08/19/24 18:02 08/19/24 18:02	1 Dil Fac
Methylene Chloride  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)  General Chemistry	<b>0.11 %Recovery</b> 93  101  101	J	0.31  Limits  80 - 121  80 - 120  80 - 120			=	08/19/24 09:17 <b>Prepared</b> 08/19/24 09:17 08/19/24 09:17 08/19/24 09:17	08/19/24 18:02 <b>Analyzed</b> 08/19/24 18:02 08/19/24 18:02 08/19/24 18:02	1 Dil Fac
Methylene Chloride  Surrogate  1,2-Dichloroethane-d4 (Surr)  4-Bromofluorobenzene (Surr)  Dibromofluoromethane (Surr)  Toluene-d8 (Surr)	93 101 101	J	0.31  Limits  80 - 121  80 - 120  80 - 120	0.032		=	08/19/24 09:17 <b>Prepared</b> 08/19/24 09:17 08/19/24 09:17 08/19/24 09:17	08/19/24 18:02 <b>Analyzed</b> 08/19/24 18:02 08/19/24 18:02 08/19/24 18:02	1 Dil Fac

0.1

0.1 %

17.6

08/15/24 15:25

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Date Collected: 08/08/24 17:15

Matrix: Solid

Date Received: 08/09/24 11:40

Percent Solids: 76.1

Analyte	Result Q	ualifier RL	MDI	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND	0.033	0.0082		— <del>-</del>	08/12/24 12:50	08/12/24 17:35	
1,1,1-Trichloroethane	ND	0.065	0.0075			08/12/24 12:50	08/12/24 17:35	
1,1,2,2-Tetrachloroethane	ND	0.033		mg/Kg	Ď.	08/12/24 12:50	08/12/24 17:35	
1,1,2-Trichloroethane	ND	0.033		mg/Kg	 	08/12/24 12:50	08/12/24 17:35	
1,1-Dichloroethane	ND	0.065		mg/Kg	~ \$	08/12/24 12:50	08/12/24 17:35	
1,1-Dichloroethene	ND	0.065		mg/Kg	Ϋ́	08/12/24 12:50	08/12/24 17:35	
1,1-Dichloropropene	ND	0.065	0.0087			08/12/24 12:50	08/12/24 17:35	
1,2,3-Trichlorobenzene	ND	0.13		mg/Kg		08/12/24 12:50	08/12/24 17:35	
1,2,3-Trichloropropane	ND	0.065		mg/Kg	Ď.	08/12/24 12:50		
1,2,4-Trichlorobenzene	ND	0.13		mg/Kg	. T		08/12/24 17:35	
1,2,4-Trimethylbenzene	ND	0.065		mg/Kg			08/12/24 17:35	
1,2-Dibromo-3-Chloropropane	ND	0.098		mg/Kg	Ť.	08/12/24 12:50		
1,2-Dibromoethane	ND	0.033	0.0062		. T .⇔	08/12/24 12:50		
1,2-Dichlorobenzene	0.051 J			mg/Kg	₩		08/12/24 17:35	
1,2-Dichloroethane	0.0090 J		0.0090	0 0	₩	08/12/24 12:50		
1,2-Dichloropropane	0.0030 3 ND	0.033		mg/Kg		08/12/24 12:50		
1,3,5-Trimethylbenzene	ND	0.065		mg/Kg	Ď.	08/12/24 12:50		
1,3-Dichlorobenzene	ND	0.098		mg/Kg	Ď.	08/12/24 12:50		
1,3-Dichloropropane	ND	0.098	0.0091				08/12/24 17:35	
I,4-Dichlorobenzene	0.20	0.098		mg/Kg	~ \$	08/12/24 12:50		
2.2-Dichloropropane	ND	0.065		mg/Kg	₩		08/12/24 17:35	
?-Chlorotoluene	ND	0.065		mg/Kg	 		08/12/24 17:35	
l-Chlorotoluene	ND	0.065		mg/Kg	~ \$		08/12/24 17:35	
I-Isopropyltoluene	ND ND	0.065		mg/Kg	₩		08/12/24 17:35	
Benzene	ND	0.003	0.0062			08/12/24 12:50		
Bromobenzene	ND ND	0.065	0.0069		₩	08/12/24 12:50		
Bromochloromethane	ND ND	0.065		mg/Kg	₩	08/12/24 12:50		
Bromodichloromethane	ND	0.065	0.0090			08/12/24 12:50		
Bromoform	ND ND	0.065	0.0090		₩	08/12/24 12:50	08/12/24 17:35	
Bromomethane	ND ND	0.003		mg/Kg	₩	08/12/24 12:50		
Carbon tetrachloride	ND	0.033	0.002		¥. 	08/12/24 12:50		
	18	0.065	0.0072		₩	08/12/24 12:50	08/12/24 17:35	
Chlorobenzene Chloroethane	ND					08/12/24 12:50		
		0.13 0.033	0.034	mg/Kg	· · · · · · · · · · · · · · · · · · ·	08/12/24 12:50	08/12/24 17:35 08/12/24 17:35	
Chloroform Chloromethane	<b>0.096</b> ND	0.033		mg/Kg	₩	08/12/24 12:50	08/12/24 17:35	
cis-1,2-Dichloroethene	ND	0.098		mg/Kg	· · · · · · · · · · · · · · · · · · ·		08/12/24 17:35 08/12/24 17:35	
cis-1,3-Dichloropropene	ND	0.033	0.0065					
Dibromochloromethane	ND	0.033	0.0080		₩.		08/12/24 17:35	
Dibromomethane	ND	0.065		mg/Kg			08/12/24 17:35	
Dichlorodifluoromethane	ND	0.41		mg/Kg	<b>*</b>		08/12/24 17:35	
Ethylbenzene	ND	0.065		mg/Kg	φ.	08/12/24 12:50		
Hexachlorobutadiene	ND	0.16		mg/Kg	· · · · · · · · · · · · · · · · · · ·	08/12/24 12:50		
sopropylbenzene	ND	0.065		mg/Kg	₩.		08/12/24 17:35	
Methyl tert-butyl ether	ND	0.065	0.0098		₩.	08/12/24 12:50		
n-Xylene & p-Xylene	ND	0.065		mg/Kg	· · · · · ·	08/12/24 12:50		
Naphthalene	ND	0.25		mg/Kg	₩.		08/12/24 17:35	
n-Butylbenzene	ND	0.065		mg/Kg	<b>*</b>		08/12/24 17:35	
N-Propylbenzene o-Xylene	ND ND	0.065 0.065	0.025	mg/Kg	<del>.</del> .		08/12/24 17:35 08/12/24 17:35	

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Date Collected: 08/08/24 17:15

Matrix: Solid
Date Received: 08/09/24 11:40

Percent Solids: 76.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.065	0.014	mg/Kg	<u></u>	08/12/24 12:50	08/12/24 17:35	1
Styrene	ND		0.065	0.021	mg/Kg	☼	08/12/24 12:50	08/12/24 17:35	1
t-Butylbenzene	ND		0.065	0.013	mg/Kg	☼	08/12/24 12:50	08/12/24 17:35	1
Tetrachloroethene	0.064	J	0.065	0.0087	mg/Kg	₩	08/12/24 12:50	08/12/24 17:35	1
Toluene	ND		0.098	0.022	mg/Kg	☼	08/12/24 12:50	08/12/24 17:35	1
trans-1,2-Dichloroethene	ND		0.098	0.024	mg/Kg	⊅	08/12/24 12:50	08/12/24 17:35	1
trans-1,3-Dichloropropene	ND		0.065	0.011	mg/Kg	₩	08/12/24 12:50	08/12/24 17:35	1
Trichloroethene	ND		0.065	0.017	mg/Kg	☼	08/12/24 12:50	08/12/24 17:35	1
Trichlorofluoromethane	ND		0.13	0.042	mg/Kg	⊅	08/12/24 12:50	08/12/24 17:35	1
Vinyl chloride	ND		0.16	0.031	mg/Kg	≎	08/12/24 12:50	08/12/24 17:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		80 - 121				08/12/24 12:50	08/12/24 17:35	1
4-Bromofluorobenzene (Surr)	99		80 - 120				08/12/24 12:50	08/12/24 17:35	1
Dibromofluoromethane (Surr)	100		80 - 120				08/12/24 12:50	08/12/24 17:35	1
Toluene-d8 (Surr)	99		80 - 120				08/12/24 12:50	08/12/24 17:35	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	0.14	J	0.41	0.042	mg/Kg	₩	08/19/24 09:17	08/19/24 18:24	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		80 - 121				08/19/24 09:17	08/19/24 18:24	1
4-Bromofluorobenzene (Surr)	101		80 - 120				08/19/24 09:17	08/19/24 18:24	1
Dibromofluoromethane (Surr)	102		80 - 120				08/19/24 09:17	08/19/24 18:24	1
Toluene-d8 (Surr)	102		80 - 120				08/19/24 09:17	08/19/24 18:24	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	0.043	P	0.0062	0.0011	mg/Kg	<u></u>	08/19/24 15:56	08/21/24 22:28	1
2,4'-DDE	ND		0.0062	0.00074	mg/Kg	₩	08/19/24 15:56	08/21/24 22:28	1
4,4'-DDD	0.15	P	0.0025	0.00028	mg/Kg	₩	08/19/24 15:56	08/21/24 22:28	1
4,4'-DDE	0.0011	J	0.0025	0.00046	mg/Kg	₩	08/19/24 15:56	08/21/24 22:28	1
4,4'-DDT	0.052	ВР	0.0025	0.00046	mg/Kg	₩	08/19/24 15:56	08/21/24 22:28	1
Aldrin	ND		0.0037	0.00047	mg/Kg	₩	08/19/24 15:56	08/21/24 22:28	1
alpha-BHC	ND		0.0025	0.00020	mg/Kg	₩	08/19/24 15:56	08/21/24 22:28	1
beta-BHC	0.0021	J	0.0062	0.00031	mg/Kg	₩	08/19/24 15:56	08/21/24 22:28	1
cis-Chlordane	ND		0.0025	0.00093	mg/Kg	₩	08/19/24 15:56	08/21/24 22:28	1
delta-BHC	ND		0.0037	0.00035	mg/Kg	₩	08/19/24 15:56	08/21/24 22:28	1
Dieldrin	ND		0.0025	0.00043	mg/Kg	₩	08/19/24 15:56	08/21/24 22:28	1
Endosulfan I	ND		0.0025	0.00042	mg/Kg	₩	08/19/24 15:56	08/21/24 22:28	1
Endosulfan II	ND		0.0025	0.00032	mg/Kg	₩	08/19/24 15:56	08/21/24 22:28	1
Endosulfan sulfate	ND		0.0025	0.00035	mg/Kg	₩	08/19/24 15:56	08/21/24 22:28	1
Endrin	ND		0.0025	0.00058	mg/Kg	₩	08/19/24 15:56	08/21/24 22:28	1
Endrin aldehyde	ND		0.025	0.0059	mg/Kg	₩	08/19/24 15:56	08/21/24 22:28	1
Endrin ketone	ND	*+	0.0025	0.00052	mg/Kg	₩	08/19/24 15:56	08/21/24 22:28	1
gamma-BHC (Lindane)	ND		0.0025	0.00093	mg/Kg	₩	08/19/24 15:56	08/21/24 22:28	1
Heptachlor	ND		0.0037	0.00023	mg/Kg	₩	08/19/24 15:56	08/21/24 22:28	1
Heptachlor epoxide	ND		0.0037	0.00037	mg/Kg	₩	08/19/24 15:56	08/21/24 22:28	1
Methoxychlor	ND		0.012	0.00046	mg/Kg	⇔	08/19/24 15:56	08/21/24 22:28	1

**Eurofins Seattle** 

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13

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Date Collected: 08/08/24 17:15

Matrix: Solid

Date Received: 08/09/24 11:40 Percent Solids: 76.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toxaphene	ND		0.15	0.031	mg/Kg	<u></u>	08/19/24 15:56	08/21/24 22:28	1
trans-Chlordane	ND		0.0037	0.00040	mg/Kg	₩	08/19/24 15:56	08/21/24 22:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	89	p	53 - 123				08/19/24 15:56	08/21/24 22:28	1
Tetrachloro-m-xylene	39	S1-	48 - 123				08/19/24 15:56	08/21/24 22:28	1
2,4'-DDT	0.0019	1 b R	0.0062	0.0012	mg/Kg	₩	08/22/24 12:18	08/23/24 14:32	1
•		•							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	71		53 - 123				08/22/24 12:18	08/23/24 14:32	1
Tetrachloro-m-xylene	286	S1+	48 - 123				08/22/24 12:18	08/23/24 14:32	1
General Chemistry									
	D	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Analyte	Result	Qualifier	114		•	_	opa. ca	Allulyzou	Dii i uo
Analyte Percent Solids (SM22 2540G)	76.1	Quanner	0.1	0.1	%	— <u>-</u>		08/15/24 15:25	1

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13

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-21-SO-39.5-20240808

Lab Sample ID: 580-142813-15 Date Collected: 08/08/24 17:45 Matrix: Solid Date Received: 08/09/24 11:40 Percent Solids: 85.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.026 0.0066 mg/Kg 08/12/24 12:50 08/12/24 16:54 ND 0.053 1.1.1-Trichloroethane 0.0060 mg/Kg 08/12/24 12:50 08/12/24 16:54 1,1,2,2-Tetrachloroethane ND 0.026 0.010 mg/Kg 08/12/24 12:50 08/12/24 16:54 0.0097 mg/Kg 08/12/24 16:54 1,1,2-Trichloroethane ND 0.026 08/12/24 12:50 0.053 0.012 mg/Kg 08/12/24 12:50 08/12/24 16:54 1.1-Dichloroethane ND 08/12/24 16:54 1,1-Dichloroethene ND 0.053 0.016 mg/Kg 08/12/24 12:50 1,1-Dichloropropene ND 0.053 0.0070 mg/Kg 08/12/24 12:50 08/12/24 16:54 ND 0.052 08/12/24 12:50 08/12/24 16:54 1,2,3-Trichlorobenzene 0 11 mg/Kg 1,2,3-Trichloropropane ND 0.053 0.015 mg/Kg 08/12/24 12:50 08/12/24 16:54 1,2,4-Trichlorobenzene ND 0.11 0.056 mg/Kg 08/12/24 12:50 08/12/24 16:54 1,2,4-Trimethylbenzene ND 0.053 0.018 mg/Kg 08/12/24 12:50 08/12/24 16:54 mg/Kg 1.2-Dibromo-3-Chloropropane ND 0.079 0.020 08/12/24 12:50 08/12/24 16:54 1 1,2-Dibromoethane ND 0.026 0.0050 mg/Kg 08/12/24 12:50 08/12/24 16:54 1,2-Dichlorobenzene ND 0.053 0.011 mg/Kg 08/12/24 12:50 08/12/24 16:54 ND 0.026 0.0072 mg/Kg 08/12/24 12:50 08/12/24 16:54 1.2-Dichloroethane 0.0087 1,2-Dichloropropane NΩ 0.026 mg/Kg 08/12/24 12:50 08/12/24 16:54 1,3,5-Trimethylbenzene ND 0.053 0.010 mg/Kg 08/12/24 12:50 08/12/24 16:54 1,3-Dichlorobenzene ND 0.079 0.017 mg/Kg 08/12/24 12:50 08/12/24 16:54 1,3-Dichloropropane ND 0.079 0.0074 mg/Kg 08/12/24 12:50 08/12/24 16:54 1,4-Dichlorobenzene ND 0.079 0.014 mg/Kg 08/12/24 12:50 08/12/24 16:54 2,2-Dichloropropane ND 0.053 0.016 mg/Kg ť. 08/12/24 12:50 08/12/24 16:54 2-Chlorotoluene ND 0.053 0.012 mg/Kg 08/12/24 12:50 08/12/24 16:54 4-Chlorotoluene ND 0.053 0.013 08/12/24 12:50 08/12/24 16:54 mg/Kg 4-Isopropyltoluene ND 0.053 0.013 mg/Kg 08/12/24 12:50 08/12/24 16:54 Benzene ND 0.026 0.0050 mg/Kg 08/12/24 12:50 08/12/24 16:54 0.0055 Bromobenzene ND 0.053 mg/Kg 08/12/24 12:50 08/12/24 16:54 Bromochloromethane ND 0.053 0.0081 mg/Kg 08/12/24 12:50 08/12/24 16:54 Bromodichloromethane 0.0072 08/12/24 16:54 ND 0.053 mg/Kg 08/12/24 12:50 0.0059 Bromoform ND 0.053 mg/Kg 08/12/24 12:50 08/12/24 16:54 ND 0.050 08/12/24 16:54 Bromomethane 0.13 mg/Kg 08/12/24 12:50 Carbon tetrachloride ND 0.026 0.0058 mg/Kg 08/12/24 12:50 08/12/24 16:54 0.053 0.0063 mg/Kg 08/12/24 12:50 08/12/24 16:54 Chlorobenzene 8.9 Chloroethane 0.027 08/12/24 12:50 08/12/24 16:54 ND 0.11 mg/Kg Chloroform ND 08/12/24 12:50 0.026 0.0055 mg/Kg 08/12/24 16:54 Chloromethane ND 0.079 0.013 mg/Kg 08/12/24 12:50 08/12/24 16:54 cis-1.2-Dichloroethene ND 0.079 0.017 mg/Kg 08/12/24 12:50 08/12/24 16:54 cis-1,3-Dichloropropene ND 0.026 0.0053 mg/Kg 08/12/24 12:50 08/12/24 16:54 Dibromochloromethane ND 0.026 0.0064 mg/Kg 08/12/24 12:50 08/12/24 16:54 Dibromomethane ND 0.0097 mg/Kg 08/12/24 12:50 08/12/24 16:54 0.053 Dichlorodifluoromethane ND 0.33 0.060 mg/Kg 08/12/24 12:50 08/12/24 16:54 Ethylbenzene ND 0.053 0.012 mg/Kg 08/12/24 12:50 08/12/24 16:54 Hexachlorobutadiene ND 0.13 0.031 mg/Kg 08/12/24 12:50 08/12/24 16:54 ND 0.011 08/12/24 16:54 Isopropylbenzene 0.053 mg/Kg 08/12/24 12:50 Methyl tert-butyl ether 0.053 0.0079 08/12/24 12:50 08/12/24 16:54 ND mg/Kg ND 0.053 08/12/24 16:54 m-Xylene & p-Xylene 0.0093 mg/Kg 08/12/24 12:50 Naphthalene ND 0.20 0.051 mg/Kg 08/12/24 12:50 08/12/24 16:54 n-Butylbenzene ND 08/12/24 12:50 08/12/24 16:54 0.053 0.024 mg/Kg N-Propylbenzene ND 0.053 0.020 mg/Kg 08/12/24 12:50 08/12/24 16:54 08/12/24 12:50 o-Xylene ND 0.053 0.0066 mg/Kg 08/12/24 16:54

**Eurofins Seattle** 

9/12/2024

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-21-SO-39.5-20240808 Lab Sample ID: 580-142813-15

Date Collected: 08/08/24 17:45 **Matrix: Solid** Date Received: 08/09/24 11:40 Percent Solids: 85.9

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.053	0.011	mg/Kg	— <u> </u>	08/12/24 12:50	08/12/24 16:54	1
Styrene	ND		0.053		mg/Kg	₩	08/12/24 12:50	08/12/24 16:54	1
t-Butylbenzene	ND		0.053	0.010	mg/Kg		08/12/24 12:50	08/12/24 16:54	1
Tetrachloroethene	ND		0.053	0.0070	mg/Kg	₩	08/12/24 12:50	08/12/24 16:54	1
Toluene	ND		0.079	0.018	mg/Kg	₩	08/12/24 12:50	08/12/24 16:54	1
trans-1,2-Dichloroethene	ND		0.079	0.019	mg/Kg	₩	08/12/24 12:50	08/12/24 16:54	1
trans-1,3-Dichloropropene	ND		0.053	0.0092	mg/Kg	☼	08/12/24 12:50	08/12/24 16:54	1
Trichloroethene	ND		0.053	0.014	mg/Kg	☼	08/12/24 12:50	08/12/24 16:54	1
Trichlorofluoromethane	ND		0.11	0.034	mg/Kg	₩	08/12/24 12:50	08/12/24 16:54	1
Vinyl chloride	ND		0.13	0.025	mg/Kg	₩	08/12/24 12:50	08/12/24 16:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				08/12/24 12:50	08/12/24 16:54	1
4-Bromofluorobenzene (Surr)	100		80 - 120				08/12/24 12:50	08/12/24 16:54	1
Dibromofluoromethane (Surr)	100		80 - 120				08/12/24 12:50	08/12/24 16:54	1
Toluene-d8 (Surr)	100		80 - 120				08/12/24 12:50	08/12/24 16:54	1
- Method: SW846 8260D - Vola	atile Organic	Compound	ds by GC/MS	- RA					
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	0.085	J	0.33	0.034	mg/Kg	<del>-</del>	08/19/24 09:17	08/19/24 18:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93	· ——	80 - 121				08/19/24 09:17	08/19/24 18:45	1
4-Bromofluorobenzene (Surr)	101		80 - 120				08/19/24 09:17	08/19/24 18:45	1
Dibromofluoromethane (Surr)	101		80 - 120				08/19/24 09:17	08/19/24 18:45	1
Toluene-d8 (Surr)	102		80 - 120				08/19/24 09:17	08/19/24 18:45	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	85.9		0.1	0.1	%			08/15/24 15:25	

0.1

0.1 %

14.1

08/15/24 15:25

Job ID: 580-142813-1 Client: ERM-West

Project/Site: Arkema PDI Sampling

**Client Sample ID: TB-01-SO-20240808** 

Lab Sample ID: 580-142813-16 Date Collected: 08/08/24 00:01

**Matrix: Solid** 

Date Received: 08/09/24 11:40 Method: SW846 8260D - Volatile Organic Compounds by GC/MS Analyte Result Qualifier MDL Unit Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.020 0.0050 mg/Kg 08/12/24 12:50 08/12/24 13:29 NID 0.040 00/40/04 40:50 00/40/04 40:00

Dil Fac

1,1,1-Trichloroethane	ND	0.040	0.0046 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
1,1,2,2-Tetrachloroethane	ND	0.020	0.0076 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
1,1,2-Trichloroethane	ND	0.020	0.0074 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
1,1-Dichloroethane	ND	0.040	0.0092 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
1,1-Dichloroethene	ND	0.040	0.012 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
1,1-Dichloropropene	ND	0.040	0.0053 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
1,2,3-Trichlorobenzene	ND	0.080	0.040 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
1,2,3-Trichloropropane	ND	0.040	0.012 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
1,2,4-Trichlorobenzene	ND	0.080	0.043 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
1,2,4-Trimethylbenzene	ND	0.040	0.014 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
1,2-Dibromo-3-Chloropropane	ND	0.060	0.015 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
1,2-Dibromoethane	ND	0.020	0.0038 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
1,2-Dichlorobenzene	ND	0.040	0.0087 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
1,2-Dichloroethane	ND	0.020	0.0055 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
1,2-Dichloropropane	ND	0.020	0.0066 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
1,3,5-Trimethylbenzene	ND	0.040	0.0076 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
1,3-Dichlorobenzene	ND	0.060	0.013 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
1,3-Dichloropropane	ND	0.060	0.0056 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
1,4-Dichlorobenzene	ND	0.060	0.011 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
2,2-Dichloropropane	ND	0.040	0.012 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
2-Chlorotoluene	ND	0.040	0.0088 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
4-Chlorotoluene	ND	0.040	0.0098 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
4-Isopropyltoluene	ND	0.040	0.010 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
Benzene	ND	0.020	0.0038 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
Bromobenzene	ND	0.040	0.0042 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
Bromochloromethane	ND	0.040	0.0062 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
Bromodichloromethane	ND	0.040	0.0055 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
Bromoform	ND	0.040	0.0045 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
Bromomethane	ND	0.10	0.038 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
Carbon tetrachloride	ND	0.020	0.0044 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
Chlorobenzene	ND	0.040	0.0048 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
Chloroethane	ND	0.080	0.021 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
Chloroform	ND	0.020	0.0042 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
Chloromethane	ND	0.060	0.010 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
cis-1,2-Dichloroethene	ND	0.060	0.013 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
cis-1,3-Dichloropropene	ND	0.020	0.0040 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
Dibromochloromethane	ND	0.020	0.0049 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
Dibromomethane	ND	0.040	0.0074 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
Dichlorodifluoromethane	ND	0.25	0.046 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
Ethylbenzene	ND	0.040	0.0091 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
Hexachlorobutadiene	ND	0.10	0.024 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
Isopropylbenzene	ND	0.040	0.0086 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
Methyl tert-butyl ether	ND	0.040	0.0060 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
m-Xylene & p-Xylene	ND	0.040	0.0071 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
Naphthalene	ND	0.15	0.039 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
n-Butylbenzene	ND	0.040	0.019 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
N-Propylbenzene	ND	0.040	0.015 mg/Kg	08/12/24 12:50 08/12/24 13:29 1
o-Xylene	ND	0.040	0.0050 mg/Kg	08/12/24 12:50 08/12/24 13:29 1

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Toluene-d8 (Surr)

**Client Sample ID: TB-01-SO-20240808** 

Lab Sample ID: 580-142813-16

Date Collected: 08/08/24 00:01 **Matrix: Solid** Date Received: 08/09/24 11:40

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		08/12/24 12:50	08/12/24 13:29	1
Styrene	ND		0.040	0.013	mg/Kg		08/12/24 12:50	08/12/24 13:29	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		08/12/24 12:50	08/12/24 13:29	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		08/12/24 12:50	08/12/24 13:29	1
Toluene	ND		0.060	0.014	mg/Kg		08/12/24 12:50	08/12/24 13:29	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		08/12/24 12:50	08/12/24 13:29	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		08/12/24 12:50	08/12/24 13:29	1
Trichloroethene	ND		0.040	0.010	mg/Kg		08/12/24 12:50	08/12/24 13:29	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		08/12/24 12:50	08/12/24 13:29	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		08/12/24 12:50	08/12/24 13:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		80 - 121				08/12/24 12:50	08/12/24 13:29	1
4-Bromofluorobenzene (Surr)	100		80 - 120				08/12/24 12:50	08/12/24 13:29	1
Dibromofluoromethane (Surr)	106		80 - 120				08/12/24 12:50	08/12/24 13:29	1
							08/12/24 12:50	08/12/24 13:29	
Toluene-d8 (Surr)	102		80 - 120						
·		Compound		- RA					
Toluene-d8 (Surr)  Method: SW846 8260D - Vo Analyte	olatile Organic	Compound Qualifier		- RA MDL	Unit	D	Prepared	Analyzed	Dil Fac
Method: SW846 8260D - Vo Analyte	olatile Organic	Qualifier	ds by GC/MS		Unit mg/Kg	<u>D</u>	Prepared 08/19/24 09:17	Analyzed 08/19/24 14:47	Dil Fac
Method: SW846 8260D - Vo Analyte	olatile Organic Result	Qualifier J	ds by GC/MS	MDL		<u>D</u>			Dil Fac
Method: SW846 8260D - Vo Analyte Methylene Chloride	Diatile Organic Result 0.070	Qualifier J	ds by GC/MS RL 0.25	MDL		<u>D</u>	08/19/24 09:17	08/19/24 14:47	1
Method: SW846 8260D - Vo Analyte Methylene Chloride Surrogate	Diatile Organic Result 0.070 %Recovery	Qualifier J	ds by GC/MS RL 0.25	MDL		<u>D</u>	08/19/24 09:17  Prepared 08/19/24 09:17	08/19/24 14:47  Analyzed	1

80 - 120 80 - 120

102

08/19/24 09:17 08/19/24 14:47

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PD1-21-SO-20.2-20240808

Lab Sample ID: 580-142813-17 Date Collected: 08/08/24 15:50 Matrix: Solid Date Received: 08/09/24 11:40 Percent Solids: 82.6

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) MDL D Dil Fac Analyte Result Qualifier RL Unit Prepared Analyzed Phenol ND 3400 530 ug/Kg 08/14/24 10:45 08/20/24 19:23 20 2300 ND 20 Bis(2-chloroethyl)ether 180 ug/Kg 08/14/24 10:45 08/20/24 19:23 2-Chlorophenol ND 4600 92 ug/Kg 08/14/24 10:45 08/20/24 19:23 20 08/20/24 19:23 20 1,3-Dichlorobenzene ND 1100 110 ug/Kg ť 08/14/24 10:45 1.4-Dichlorobenzene 1100 190 ug/Kg 08/14/24 10:45 08/20/24 19:23 20 ND 08/20/24 19:23 20 Benzyl alcohol ND 23000 5900 ug/Kg 08/14/24 10:45 1,2-Dichlorobenzene ND 110 08/14/24 10:45 08/20/24 19:23 20 1100 ug/Kg ND 3400 220 08/14/24 10:45 08/20/24 19:23 20 2-Methylphenol ug/Kg 3 & 4 Methylphenol ND 4600 340 ug/Kg 08/14/24 10:45 08/20/24 19:23 20 N-Nitrosodi-n-propylamine ND 4600 500 ug/Kg ά 08/14/24 10:45 08/20/24 19:23 20 Hexachloroethane ND 3400 ug/Kg 08/14/24 10:45 08/20/24 19:23 20 Nitrobenzene ND 4600 460 ug/Kg Ö 08/14/24 10:45 08/20/24 19:23 20 Isophorone ND 3400 190 ug/Kg ø 08/14/24 10:45 08/20/24 19:23 20 2-Nitrophenol ND 4600 430 ug/Kg 08/14/24 10:45 08/20/24 19:23 20 20 2,4-Dimethylphenol ND 4700 1400 ug/Kg 08/14/24 10:45 08/20/24 19:23 28000 20 Benzoic acid NΩ 92000 ug/Kg 08/14/24 10:45 08/20/24 19:23 ND 08/20/24 19:23 Bis(2-chloroethoxy)methane 4600 410 ug/Kg 08/14/24 10:45 20 2,4-Dichlorophenol ND 4700 08/14/24 10:45 08/20/24 19:23 20 ug/Kg 20 1.2.4-Trichlorobenzene ND 1100 08/14/24 10:45 08/20/24 19:23 140 ug/Kg Ö Naphthalene ND 570 ug/Kg 08/14/24 10:45 08/20/24 19:23 20 4-Chloroaniline ND 34000 3100 ug/Kg ÷ 08/14/24 10:45 08/20/24 19:23 20 Hexachlorobutadiene ND 1100 340 ug/Kg Ó 08/14/24 10:45 08/20/24 19:23 20 4-Chloro-3-methylphenol ND 3400 08/14/24 10:45 08/20/24 19:23 20 760 ug/Kg 2-Methylnaphthalene ND 1100 200 ug/Kg 08/14/24 10:45 08/20/24 19:23 20 Hexachlorocyclopentadiene ND 2300 180 ug/Kg 08/14/24 10:45 08/20/24 19:23 20 760 20 2,4,6-Trichlorophenol ND 3400 ug/Kg 08/14/24 10:45 08/20/24 19:23 2,4,5-Trichlorophenol ND 4600 190 ug/Kg ť 08/14/24 10:45 08/20/24 19:23 20 2-Chloronaphthalene ND 08/20/24 19:23 20 570 110 ug/Kg 08/14/24 10:45 20 2-Nitroaniline ND 2300 340 ug/Kg 08/14/24 10:45 08/20/24 19:23 ND 3400 08/20/24 19:23 20 Dimethyl phthalate 110 ug/Kg ť 08/14/24 10:45 Acenaphthylene ND 570 110 ug/Kg 08/14/24 10:45 08/20/24 19:23 20 2,6-Dinitrotoluene ND 3400 08/14/24 10:45 08/20/24 19:23 20 340 ug/Kg 3-Nitroaniline 6900 2300 ug/Kg 08/14/24 10:45 08/20/24 19:23 20 ND 08/20/24 19:23 20 **Acenaphthene** 210 920 110 ug/Kg 08/14/24 10:45 2,4-Dinitrophenol ND 46000 13000 ug/Kg 08/14/24 10:45 08/20/24 19:23 20 4-Nitrophenol ND 46000 5800 08/14/24 10:45 08/20/24 19:23 20 ug/Kg Ö Dibenzofuran ND 3400 140 ug/Kg 08/14/24 10:45 08/20/24 19:23 20 2,4-Dinitrotoluene ND 4600 980 ug/Kg ά 08/14/24 10:45 08/20/24 19:23 20 ND 9200 20 Diethyl phthalate 500 ug/Kg Ö 08/14/24 10:45 08/20/24 19:23 4-Chlorophenyl phenyl ether ND 4600 140 ug/Kg 08/14/24 10:45 08/20/24 19:23 20 **Fluorene** 730 570 110 ug/Kg 08/14/24 10:45 08/20/24 19:23 20 1100 4-Nitroaniline ND 3400 ug/Kg 08/14/24 10:45 08/20/24 19:23 20 ND 2300 08/20/24 19:23 20 4,6-Dinitro-2-methylphenol 23000 ug/Kg 08/14/24 10:45 N-Nitrosodiphenylamine 180 08/14/24 10:45 08/20/24 19:23 20 ND 1400 ug/Kg ND 08/20/24 19:23 20 4-Bromophenyl phenyl ether 4600 210 ug/Kg Ö 08/14/24 10:45 Hexachlorobenzene ND 1100 ug/Kg 08/14/24 10:45 08/20/24 19:23 20 Pentachlorophenol ND 6200 08/20/24 19:23 20 13000 ug/Kg 08/14/24 10:45 Phenanthrene ND 1400 130 ug/Kg ₩ 08/14/24 10:45 08/20/24 19:23 20 Anthracene ND 1400 370 ug/Kg 08/14/24 10:45 08/20/24 19:23

**Eurofins Seattle** 

9/12/2024

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PD1-21-SO-20.2-20240808

Lab Sample ID: 580-142813-17 Date Collected: 08/08/24 15:50 **Matrix: Solid** Date Received: 08/09/24 11:40 Percent Solids: 82.6

Method: SW846 8270E - Se	mivolatile Org	anic Com	oounds (GC/N	IS) (Co	ontinued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		11000	1100	ug/Kg	☆	08/14/24 10:45	08/20/24 19:23	20
Fluoranthene	ND		920	270	ug/Kg	₩	08/14/24 10:45	08/20/24 19:23	20
Pyrene	950	J	1400	300	ug/Kg	₩	08/14/24 10:45	08/20/24 19:23	20
Butyl benzyl phthalate	ND		4600	1200	ug/Kg	₩	08/14/24 10:45	08/20/24 19:23	20
3,3'-Dichlorobenzidine	ND		13000	6500	ug/Kg	☆	08/14/24 10:45	08/20/24 19:23	20
Benzo[a]anthracene	ND		920	250	ug/Kg	₩	08/14/24 10:45	08/20/24 19:23	20
Chrysene	ND		1400	300	ug/Kg	₩	08/14/24 10:45	08/20/24 19:23	20
Bis(2-ethylhexyl) phthalate	ND		14000	1600	ug/Kg	☆	08/14/24 10:45	08/20/24 19:23	20
Di-n-octyl phthalate	ND	*3	4600	2000	ug/Kg	₽	08/14/24 10:45	08/20/24 19:23	20
Benzo[a]pyrene	ND	*3	2400	890	ug/Kg	₩	08/14/24 10:45	08/20/24 19:23	20
Indeno[1,2,3-cd]pyrene	ND	*3	920	270	ug/Kg	₩	08/14/24 10:45	08/20/24 19:23	20
Dibenz(a,h)anthracene	ND	*3	2400	1100	ug/Kg	⊅	08/14/24 10:45	08/20/24 19:23	20
Benzo[g,h,i]perylene	ND	*3	1400	410	ug/Kg	₩	08/14/24 10:45	08/20/24 19:23	20
Carbazole	ND		3400	170	ug/Kg	₩	08/14/24 10:45	08/20/24 19:23	20
1-Methylnaphthalene	ND		690	110	ug/Kg	₽	08/14/24 10:45	08/20/24 19:23	20
Benzo[b]fluoranthene	ND	*3	920	230	ug/Kg	₩	08/14/24 10:45	08/20/24 19:23	20
Benzo[k]fluoranthene	ND	*3	1400	320	ug/Kg	₩	08/14/24 10:45	08/20/24 19:23	20
bis(chloroisopropyl) ether	ND		4600	140	ug/Kg	☆	08/14/24 10:45	08/20/24 19:23	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	72		58 - 120				08/14/24 10:45	08/20/24 19:23	20
Phenol-d5 (Surr)	82		59 - 120				08/14/24 10:45	08/20/24 19:23	20
Nitrobenzene-d5 (Surr)	102		63 - 120				08/14/24 10:45	08/20/24 19:23	20
2-Fluorobiphenyl	85		64 - 120				08/14/24 10:45	08/20/24 19:23	20
2,4,6-Tribromophenol (Surr)	121		62 - 122				08/14/24 10:45	08/20/24 19:23	20
Terphenyl-d14 (Surr)	96		73 - 125				08/14/24 10:45	08/20/24 19:23	20

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	0.83	P	0.011	0.0020	mg/Kg	₩	08/19/24 15:56	08/21/24 22:10	2
2,4'-DDE	ND		0.011	0.0014	mg/Kg	₩	08/19/24 15:56	08/21/24 22:10	2
4,4'-DDE	0.12	P	0.0045	0.00084	mg/Kg	₩	08/19/24 15:56	08/21/24 22:10	2
Aldrin	ND		0.0068	0.00086	mg/Kg	₩	08/19/24 15:56	08/21/24 22:10	2
alpha-BHC	ND		0.0045	0.00036	mg/Kg	₩	08/19/24 15:56	08/21/24 22:10	2
beta-BHC	ND		0.011	0.00057	mg/Kg	₩	08/19/24 15:56	08/21/24 22:10	2
cis-Chlordane	ND		0.0045	0.0017	mg/Kg	₩	08/19/24 15:56	08/21/24 22:10	2
delta-BHC	ND		0.0068	0.00063	mg/Kg	₩	08/19/24 15:56	08/21/24 22:10	2
Dieldrin	ND		0.0045	0.00079	mg/Kg	₩	08/19/24 15:56	08/21/24 22:10	2
Endosulfan I	ND		0.0045	0.00077	mg/Kg	₩	08/19/24 15:56	08/21/24 22:10	2
Endosulfan II	ND		0.0045	0.00059	mg/Kg	₩	08/19/24 15:56	08/21/24 22:10	2
Endosulfan sulfate	ND		0.0045	0.00063	mg/Kg	₩	08/19/24 15:56	08/21/24 22:10	2
Endrin	ND		0.0045	0.0011	mg/Kg	₩	08/19/24 15:56	08/21/24 22:10	2
Endrin aldehyde	ND		0.045	0.011	mg/Kg	₩	08/19/24 15:56	08/21/24 22:10	2
Endrin ketone	ND	*+	0.0045	0.00095	mg/Kg	₩	08/19/24 15:56	08/21/24 22:10	2
gamma-BHC (Lindane)	ND		0.0045	0.0017	mg/Kg	₩	08/19/24 15:56	08/21/24 22:10	2
Heptachlor	ND		0.0068	0.00043	mg/Kg	₩	08/19/24 15:56	08/21/24 22:10	2
Heptachlor epoxide	ND		0.0068	0.00068	mg/Kg	₩	08/19/24 15:56	08/21/24 22:10	2
Methoxychlor	ND		0.023	0.00084	mg/Kg	₩	08/19/24 15:56	08/21/24 22:10	2
Toxaphene	ND		0.28	0.057	mg/Kg	₽	08/19/24 15:56	08/21/24 22:10	2
trans-Chlordane	ND		0.0068	0.00072	mg/Kg	₩	08/19/24 15:56	08/21/24 22:10	2

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Job ID: 580-142813-1 Client: ERM-West

Project/Site: Arkema PDI Sampling

DCB Decachlorobiphenyl

Client Sample ID: PD1-21-SO-20.2-20240808 Lab Sample ID: 580-142813-17

Date Collected: 08/08/24 15:50 **Matrix: Solid** Date Received: 08/09/24 11:40 Percent Solids: 82.6

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	1507	S1+	53 - 123	08/19/24 15:56	08/21/24 22:10	2
Tetrachloro-m-xylene	55		48 - 123	08/19/24 15:56	08/21/24 22:10	2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDT	0.95	Вр	0.023	0.0042	mg/Kg	<u></u>	08/19/24 15:56	08/26/24 13:10	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	189	S1+	53 - 123				08/19/24 15:56	08/26/24 13:10	10
Tetrachloro-m-xylene	50		48 - 123				08/19/24 15:56	08/26/24 13:10	10

Method: SW846 8081B - Org	ganochlorine l	Pesticides	(GC) - RE						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDT	ND		0.012	0.0023	mg/Kg	₽	08/22/24 12:14	08/23/24 14:14	2
4,4'-DDD	ND		0.0047	0.00054	mg/Kg	☼	08/22/24 12:14	08/23/24 14:14	2
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	254	S1+	53 - 123				08/22/24 12:14	08/23/24 14:14	2
Tetrachloro-m-xylene	74		48 - 123				08/22/24 12:14	08/23/24 14:14	2

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND ND	0.023	0.0084	mg/Kg	<del>-</del>	08/19/24 15:56	08/22/24 18:33	1
PCB-1221	ND	0.023	0.014	mg/Kg	☼	08/19/24 15:56	08/22/24 18:33	1
PCB-1232	ND	0.023	0.0055	mg/Kg	≎	08/19/24 15:56	08/22/24 18:33	1
PCB-1242	ND	0.023	0.0091	mg/Kg	₽	08/19/24 15:56	08/22/24 18:33	1
PCB-1248	ND	0.023	0.0079	mg/Kg	≎	08/19/24 15:56	08/22/24 18:33	1
PCB-1254	ND	0.023	0.010	mg/Kg	≎	08/19/24 15:56	08/22/24 18:33	1
PCB-1260	ND	0.023	0.0084	mg/Kg	☆	08/19/24 15:56	08/22/24 18:33	1
Surrogate	%Recovery Qualifier	Limits				Prepared	Analyzed	Dil Fac

44 - 135

126 p

Tetrachloro-m-xylene	51		48 - 150				08/19/24 15:56	08/22/24 18:33	1
– Method: SW846 8151A - He	erbicides (GC)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		600	220	ug/Kg	<u></u>	08/15/24 15:29	08/22/24 20:19	10
2,4,5-TP (Silvex)	ND		600	450	ug/Kg	☼	08/15/24 15:29	08/22/24 20:19	10
2,4-D	ND	*1	6000	2900	ug/Kg	☼	08/15/24 15:29	08/22/24 20:19	10
2,4-DB	ND		6000	6000	ug/Kg	₩	08/15/24 15:29	08/22/24 20:19	10
Dalapon	ND		15000	4400	ug/Kg	☼	08/15/24 15:29	08/22/24 20:19	10
Dicamba	ND		600	290	ug/Kg	☼	08/15/24 15:29	08/22/24 20:19	10
Dichlorprop	ND		6000	3000	ug/Kg	⊅	08/15/24 15:29	08/22/24 20:19	10
Dinoseb	ND	*1	6000	3500	ug/Kg	₩	08/15/24 15:29	08/22/24 20:19	10
MCPA	ND		600000	290000	ug/Kg	☼	08/15/24 15:29	08/22/24 20:19	10
MCPP	ND		600000	400000	ug/Kg	☼	08/15/24 15:29	08/22/24 20:19	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	81	p	20 - 163				08/15/24 15:29	08/22/24 20:19	10

<u>08/19/24 15:56</u> <u>08/22/24 18:33</u>

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Date Collected: 08/08/24 15:50

Date Received: 08/09/24 11:40

Matrix: Solid
Percent Solids: 82.6

Method: NWTPH-Dx - No	rthwest - Semi-V	olatile Pet	roleum Prod	ucts (G0	C)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	3200		60	15	mg/Kg	<u></u>	08/14/24 16:13	08/16/24 04:16	1
Motor Oil (>C24-C36)	11000		60	21	mg/Kg	₩	08/14/24 16:13	08/16/24 04:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	81		50 - 150				08/14/24 16:13	08/16/24 04:16	1

o-Terphenyl	81		50 - 150				08/14/24 16:13	08/16/24 04:16	1
_ Method: EPA Draft-4 1633 - Per-	and Polv	fluoroalky	I Substance	s bv LC/I	MS/MS				
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		0.96	0.24	ug/Kg	<del>\</del>	08/12/24 06:20	08/15/24 16:22	1
Perfluoropentanoic acid (PFPeA)	ND		0.48	0.12	ug/Kg	₩	08/12/24 06:20	08/15/24 16:22	1
Perfluorohexanoic acid (PFHxA)	ND		0.24	0.069	ug/Kg	₽	08/12/24 06:20	08/15/24 16:22	1
Perfluoroheptanoic acid (PFHpA)	ND		0.24	0.060	ug/Kg	₩	08/12/24 06:20	08/15/24 16:22	1
Perfluorooctanoic acid (PFOA)	ND		0.24	0.060	ug/Kg	₽	08/12/24 06:20	08/15/24 16:22	1
Perfluorononanoic acid (PFNA)	ND		0.24	0.069	ug/Kg	₽	08/12/24 06:20	08/15/24 16:22	1
Perfluorodecanoic acid (PFDA)	ND		0.24	0.066	ug/Kg		08/12/24 06:20	08/15/24 16:22	1
Perfluoroundecanoic acid (PFUnA)	ND		0.24	0.060	ug/Kg	₩	08/12/24 06:20	08/15/24 16:22	1
Perfluorododecanoic acid (PFDoA)	ND		0.24		ug/Kg	₩	08/12/24 06:20	08/15/24 16:22	1
Perfluorotridecanoic acid (PFTrDA)	ND		0.24		ug/Kg		08/12/24 06:20	08/15/24 16:22	1
Perfluorotetradecanoic acid (PFTeDA)	ND		0.24		ug/Kg	₩	08/12/24 06:20	08/15/24 16:22	1
Perfluorobutanesulfonic acid (PFBS)	ND		0.24	0.060	0 0	₩		08/15/24 16:22	1
Perfluoropentanesulfonic acid (PFPeS)	ND		0.24		ug/Kg	₩	08/12/24 06:20	08/15/24 16:22	1
Perfluorohexanesulfonic acid (PFHxS)	ND		0.24	0.060	ug/Kg	₩	08/12/24 06:20	08/15/24 16:22	1
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.24		ug/Kg	₩	08/12/24 06:20	08/15/24 16:22	1
Perfluorooctanesulfonic acid (PFOS)	ND		0.24	0.074	ug/Kg	₩	08/12/24 06:20	08/15/24 16:22	1
Perfluorononanesulfonic acid (PFNS)	ND		0.24	0.075	ug/Kg	₽	08/12/24 06:20	08/15/24 16:22	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.24		ug/Kg	₽	08/12/24 06:20	08/15/24 16:22	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.24	0.070	ug/Kg		08/12/24 06:20	08/15/24 16:22	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		0.96	0.24	ug/Kg	₩	08/12/24 06:20	08/15/24 16:22	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		0.96	0.24	ug/Kg	₩	08/12/24 06:20	08/15/24 16:22	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		0.96		ug/Kg	₩	08/12/24 06:20	08/15/24 16:22	1
Perfluorooctanesulfonamide (PFOSA)	ND		0.24		ug/Kg	☼	08/12/24 06:20	08/15/24 16:22	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		0.24		ug/Kg	₩	08/12/24 06:20	08/15/24 16:22	1
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		0.24		ug/Kg	☼		08/15/24 16:22	1
N-methylperfluorooctanesulfonamidoa cetic acid (NMeFOSAA)	ND		0.24		ug/Kg	₩	08/12/24 06:20		1
N-ethylperfluorooctanesulfonamidoac etic acid (NEtFOSAA)	ND		0.24	0.064			08/12/24 06:20		1
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		2.4		ug/Kg		08/12/24 06:20		1
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		2.4		ug/Kg				1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		0.96		ug/Kg		08/12/24 06:20		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.96	0.24	ug/Kg	<b>‡</b>	08/12/24 06:20	08/15/24 16:22	1

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9/12/2024

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Job ID: 580-142813-1 Client: ERM-West

Project/Site: Arkema PDI Sampling

13C-OCDF

Client Sample ID: PD1-21-SO-20.2-20240808

Lab Sample ID: 580-142813-17 Date Collected: 08/08/24 15:50 **Matrix: Solid** 

Date Received: 08/09/24 11:40 Percent Solids: 82.6

Method: EPA Draft-4 1633 - Po Analyte	•	Qualifier	RL	•	Unit	` D	Prepared	Analyzed	Dil Fac
Perfluoro-3-methoxypropanoic acid	ND	Qualifier	0.48		ug/Kg	— <u>=</u>		08/15/24 16:22	Diriac
(PFMPA)	ND		0.40	0.12	ug/itg	7	00/12/24 00:20	00/10/24 10:22	'
Perfluoro-4-methoxybutanoic acid	ND		0.48	0.12	ug/Kg	₩	08/12/24 06:20	08/15/24 16:22	1
(PFMBA)									
Nonafluoro-3,6-dioxaheptanoic acid	ND		0.48	0.14	ug/Kg	☼	08/12/24 06:20	08/15/24 16:22	1
(NFDHA)	ND		0.00	0.00	/1/	· Lu	00/40/04 00:00	00/45/04 40:00	
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	ND		0.96	0.28	ug/Kg	☼	08/12/24 06:20	08/15/24 16:22	1
11-Chloroeicosafluoro-3-oxaundecan	ND		0.96	0.34	ug/Kg	Ť.	08/12/24 06:20	08/15/24 16:22	1
e-1-sulfonic acid (11CI-PF3OUdS)	115		0.00	0.01	ug/itg	T.	00/12/21 00:20	00/10/21 10:22	•
Perfluoro (2-ethoxyethane) sulfonic	ND		0.48	0.13	ug/Kg		08/12/24 06:20	08/15/24 16:22	1
acid (PFEESA)									
3-Perfluoropropylpropanoic acid (3:3	ND		1.2	0.34	ug/Kg	₩	08/12/24 06:20	08/15/24 16:22	1
FTCA)									
3-Perfluoropentylpropanoic acid (5:3	ND		6.0	2.0	ug/Kg	☼	08/12/24 06:20	08/15/24 16:22	1
FTCA) 3-Perfluoroheptylpropanoic acid (7:3	ND		6.0	22	ug/Kg	**	08/12/24 06:20	08/15/24 16:22	1
FTCA)	ND		0.0	2.2	ug/itg	**	00/12/24 00.20	00/10/24 10:22	'
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	84.0	Qualifier	20 - 150				<u> </u>	08/15/24 16:22	1
13C5 PFPeA	108		20 - 150					08/15/24 16:22	
13C5 PFHxA	100		20 - 150					08/15/24 16:22	
13C4 PFHpA	104		20 - 150					08/15/24 16:22	· · · · · · · · 1
13C8 PFOA	100		20 - 150					08/15/24 16:22	1
13C9 PFNA	112		20 - 150					08/15/24 16:22	1
13C6 PFDA	103		20 - 150					08/15/24 16:22	· · · · · · · · · · · · · · · · · · ·
13C7 PFUnA	97.0		20 - 150					08/15/24 16:22	1
13C2 PFDoA	88.0		20 - 150					08/15/24 16:22	1
13C2 PFTeDA	57.2		20 - 150					08/15/24 16:22	
13C3 PFBS	118		20 - 150					08/15/24 16:22	1
13C3 PFHxS	107		20 - 150					08/15/24 16:22	1
13C8 PFOS	114		20 - 150					08/15/24 16:22	· · · · · · · · · · · · · · · · · · ·
13C8 PFOSA	136		20 - 150 20 - 150					08/15/24 16:22	1
d3-NMeFOSAA	149		20 - 150					08/15/24 16:22	1
d5-NEtFOSAA	178	*5	20 - 150					08/15/24 16:22	· · · · · · · · · · · · · · · · · · ·
13C2 4:2 FTS	119	JŦ	20 - 150 20 - 150					08/15/24 16:22	1
13C2 6:2 FTS	144		20 - 150 20 - 150					08/15/24 16:22	1
13C2 8:2 FTS	158	*5.	20 - 150					08/15/24 16:22	
		JŦ	20 - 150 20 - 150						1
13C3 HFPO-DA d7-N-MeFOSE-M	94.5 30.5		20 - 150 20 - 150					08/15/24 16:22 08/15/24 16:22	
								08/15/24 16:22	
d9-N-EtFOSE-M d5-NEtPFOSA	20.2 45.4		20 - 150 20 - 150					08/15/24 16:22	1
d3-NMePFOSA	66.7		20 - 150				00/12/24 00.20	08/15/24 16:22	1
Method: EPA 1613B - Dioxins	and Furans	(HRGC/H	RMS)						
Analyte		Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
OCDD	130		59		pg/g	— <u>-</u>		09/05/24 19:11	55
OCDF		Jq	59		pg/g		08/22/24 11:02		5
		-			. 5-3	- 1			
Isotope Dilution	%Recovery	Qualitier	Limits				Prepared 11:02	Analyzed	Dil Fac
13C-OCDD	25		17 - 157				00/22/24 11:02	09/05/24 19:11	5

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08/22/24 11:02 09/05/24 19:11

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Date Collected: 08/08/24 15:50

Date Received: 08/09/24 11:40

Matrix: Solid
Percent Solids: 82.6

Method: EPA 1613B - Dioxins		•	•						
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		24	1.8	pg/g	₩	08/22/24 11:02	09/11/24 16:37	20
1,2,3,7,8-PeCDD	ND		120	2.7	pg/g	₩	08/22/24 11:02	09/11/24 16:37	20
1,2,3,7,8-PeCDF	ND		120	1.8	pg/g	☆	08/22/24 11:02	09/11/24 16:37	20
2,3,4,7,8-PeCDF	ND		120	2.0	pg/g	₩	08/22/24 11:02	09/11/24 16:37	20
1,2,3,4,7,8-HxCDD	ND		120	1.8	pg/g	₩	08/22/24 11:02	09/11/24 16:37	20
1,2,3,6,7,8-HxCDD	ND		120	1.6	pg/g	₩	08/22/24 11:02	09/11/24 16:37	20
1,2,3,7,8,9-HxCDD	ND		120	1.5	pg/g	₩	08/22/24 11:02	09/11/24 16:37	20
1,2,3,4,7,8-HxCDF	5.3	Jq	120	2.1	pg/g	☼	08/22/24 11:02	09/11/24 16:37	20
1,2,3,6,7,8-HxCDF		Jq	120	1.9	pg/g	₩	08/22/24 11:02	09/11/24 16:37	20
1,2,3,7,8,9-HxCDF	ND		120		pg/g	₩	08/22/24 11:02	09/11/24 16:37	20
2,3,4,6,7,8-HxCDF	ND		120		pg/g	₩	08/22/24 11:02	09/11/24 16:37	20
1,2,3,4,6,7,8-HpCDD	36	J	120	4.1	pg/g	☆	08/22/24 11:02	09/11/24 16:37	20
1,2,3,4,6,7,8-HpCDF	18		120	2.9	pg/g		08/22/24 11:02	09/11/24 16:37	20
1,2,3,4,7,8,9-HpCDF	ND		120		pg/g	₩		09/11/24 16:37	20
•		Ovalifian			13.3				
Isotope Dilution	- %Recovery 61	Qualifier	<u>Limits</u> 25 - 164				Prepared	Analyzed 09/11/24 16:37	Dil Fac
13C-2,3,7,8-TCDD									20
13C-2,3,7,8-TCDF	57		24 - 169					09/11/24 16:37	20
13C-1,2,3,7,8-PeCDD	42	9	25 - 181					09/11/24 16:37	20
13C-1,2,3,7,8-PeCDF	58		24 - 185					09/11/24 16:37	20
13C-2,3,4,7,8-PeCDF	58		21 - 178					09/11/24 16:37	20
13C-1,2,3,4,7,8-HxCDD	61		32 - 141					09/11/24 16:37	20
13C-1,2,3,6,7,8-HxCDD	64		28 - 130					09/11/24 16:37	20
13C-1,2,3,4,7,8-HxCDF	56		26 - 152					09/11/24 16:37	20
13C-1,2,3,6,7,8-HxCDF	60		26 - 123					09/11/24 16:37	20
13C-2,3,4,6,7,8-HxCDF	61		28 - 136				08/22/24 11:02	09/11/24 16:37	20
13C-1,2,3,7,8,9-HxCDF	57		29 - 147				08/22/24 11:02	09/11/24 16:37	20
13C-1,2,3,4,6,7,8-HpCDD	50		23 - 140				08/22/24 11:02	09/11/24 16:37	20
13C-1,2,3,4,6,7,8-HpCDF	52		28 - 143				08/22/24 11:02	09/11/24 16:37	20
13C-1,2,3,4,7,8,9-HpCDF	20	*5-	26 - 138				08/22/24 11:02	09/11/24 16:37	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37CI4-2,3,7,8-TCDD	86		35 - 197				08/22/24 11:02	09/11/24 16:37	20
Method: EPA 1613B - Dioxins	and Furans	(HRGC/H	RMS) - RA						
Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDF	1.8		5.9	1.3	pg/g	₩		09/11/24 15:10	5
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDF	60		24 - 169				08/22/24 11:02	09/11/24 15:10	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37Cl4-2,3,7,8-TCDD	99		35 - 197				08/22/24 11:02	09/11/24 15:10	5
General Chemistry									
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	82.6		0.1	0.1	%			08/15/24 15:25	1
Percent Moisture (SM22 2540G)	17.4		0.1	0.1	%			08/15/24 15:25	1

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

# Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-467929/1-A

**Matrix: Solid** 

Client Sample ID: Method Blank **Prep Type: Total/NA** 

Analysis Batch: 467888								Prep Batch:		
	MB	MB								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	i
1 1 1 2-Tetrachloroethane	ND.		0.020	0.0050	ma/Ka		08/12/24 09:02	08/12/24 11:54	1	

		MB						•	
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050			08/12/24 09:02	08/12/24 11:54	1
1,1,1-Trichloroethane	ND		0.040	0.0046			08/12/24 09:02	08/12/24 11:54	1
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
1,1,2-Trichloroethane	ND		0.020	0.0074	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
1,1-Dichloroethane	ND		0.040	0.0092	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
1,1-Dichloroethene	ND		0.040		mg/Kg		08/12/24 09:02	08/12/24 11:54	1
1,1-Dichloropropene	ND		0.040	0.0053	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
1,2,3-Trichlorobenzene	ND		0.080	0.040	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
1,2,3-Trichloropropane	ND		0.040	0.012	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
1,2,4-Trichlorobenzene	ND		0.080	0.043	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
1,2,4-Trimethylbenzene	ND		0.040	0.014	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
1,2-Dibromo-3-Chloropropane	ND		0.060	0.015	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
1,2-Dibromoethane	ND		0.020	0.0038	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
1,2-Dichlorobenzene	ND		0.040	0.0087	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
1,2-Dichloroethane	ND		0.020	0.0055	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
1,2-Dichloropropane	ND		0.020	0.0066	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
1,3,5-Trimethylbenzene	ND		0.040	0.0076	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
1,3-Dichlorobenzene	ND		0.060	0.013	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
1,3-Dichloropropane	ND		0.060	0.0056	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
1,4-Dichlorobenzene	ND		0.060	0.011	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
2,2-Dichloropropane	ND		0.040	0.012	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
2-Chlorotoluene	ND		0.040	0.0088	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
4-Chlorotoluene	ND		0.040	0.0098	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
4-Isopropyltoluene	ND		0.040	0.010	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
Benzene	ND		0.020	0.0038	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
Bromobenzene	ND		0.040	0.0042	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
Bromochloromethane	ND		0.040	0.0062	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
Bromodichloromethane	ND		0.040	0.0055	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
Bromoform	ND		0.040	0.0045	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
Bromomethane	ND		0.10	0.038	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
Carbon tetrachloride	ND		0.020	0.0044	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
Chlorobenzene	ND		0.040	0.0048	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
Chloroethane	ND		0.080	0.021	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
Chloroform	ND		0.020	0.0042			08/12/24 09:02	08/12/24 11:54	1
Chloromethane	ND		0.060		mg/Kg		08/12/24 09:02	08/12/24 11:54	1
cis-1,2-Dichloroethene	ND		0.060		mg/Kg		08/12/24 09:02	08/12/24 11:54	1
cis-1,3-Dichloropropene	ND		0.020	0.0040			08/12/24 09:02	08/12/24 11:54	1
Dibromochloromethane	ND		0.020	0.0049				08/12/24 11:54	1
Dibromomethane	ND		0.040	0.0074				08/12/24 11:54	1
Dichlorodifluoromethane	ND		0.25		mg/Kg			08/12/24 11:54	1
Ethylbenzene	ND		0.040	0.0091				08/12/24 11:54	1
Hexachlorobutadiene	0.0388	J	0.10		mg/Kg			08/12/24 11:54	1
Isopropylbenzene	ND		0.040	0.0086				08/12/24 11:54	1
Methyl tert-butyl ether	ND		0.040	0.0060				08/12/24 11:54	1
m-Xylene & p-Xylene	ND		0.040	0.0071	0 0			08/12/24 11:54	1
Naphthalene	ND		0.15		mg/Kg			08/12/24 11:54	1
n-Butylbenzene	ND		0.040		mg/Kg			08/12/24 11:54	1
, -	ND				J J				•

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-467929/1-A

**Matrix: Solid** 

**Analysis Batch: 467888** 

Client Sample ID: Method Blank

**Prep Type: Total/NA** 

**Prep Batch: 467929** 

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.040	0.0050	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
Styrene	ND		0.040	0.013	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
Toluene	ND		0.060	0.014	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
Trichloroethene	ND		0.040	0.010	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		08/12/24 09:02	08/12/24 11:54	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		08/12/24 09:02	08/12/24 11:54	1

MB MB

Surrogate	%Recovery	Qualifier Lim	its	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104	80 -	<u></u>	8/12/24 09:02	08/12/24 11:54	1
4-Bromofluorobenzene (Surr)	104	80 -	120 0	8/12/24 09:02	08/12/24 11:54	1
Dibromofluoromethane (Surr)	103	80 -	120 0	8/12/24 09:02	08/12/24 11:54	1
Toluene-d8 (Surr)	96	- 08	120 0	8/12/24 09:02	08/12/24 11:54	1

Lab Sample ID: LCS 580-467929/2-A

**Matrix: Solid** 

Analysis Batch: 467888

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA **Prep Batch: 467929** 

Alialysis Batcii. 407000	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1,1,2-Tetrachloroethane	0.800	0.831		mg/Kg		104	79 - 128
1,1,1-Trichloroethane	0.800	0.862		mg/Kg		108	78 - 135
1,1,2,2-Tetrachloroethane	0.800	0.769		mg/Kg		96	77 - 122
1,1,2-Trichloroethane	0.800	0.819		mg/Kg		102	80 - 123
1,1-Dichloroethane	0.800	0.823		mg/Kg		103	78 - 126
1,1-Dichloroethene	0.800	0.822		mg/Kg		103	73 - 134
1,1-Dichloropropene	0.800	0.836		mg/Kg		105	76 - 140
1,2,3-Trichlorobenzene	0.800	0.649		mg/Kg		81	58 - 146
1,2,3-Trichloropropane	0.800	0.786		mg/Kg		98	77 - 127
1,2,4-Trichlorobenzene	0.800	0.730		mg/Kg		91	74 - 131
1,2,4-Trimethylbenzene	0.800	0.850		mg/Kg		106	73 - 138
1,2-Dibromo-3-Chloropropane	0.800	0.625		mg/Kg		78	64 - 129
1,2-Dibromoethane	0.800	0.811		mg/Kg		101	77 - 123
1,2-Dichlorobenzene	0.800	0.788		mg/Kg		99	78 - 126
1,2-Dichloroethane	0.800	0.768		mg/Kg		96	76 - 124
1,2-Dichloropropane	0.800	0.783		mg/Kg		98	73 - 130
1,3,5-Trimethylbenzene	0.800	0.858		mg/Kg		107	72 - 134
1,3-Dichlorobenzene	0.800	0.746		mg/Kg		93	78 - 132
1,3-Dichloropropane	0.800	0.804		mg/Kg		101	80 - 120
1,4-Dichlorobenzene	0.800	0.771		mg/Kg		96	77 - 123
2,2-Dichloropropane	0.800	0.847		mg/Kg		106	75 - 134
2-Chlorotoluene	0.800	0.817		mg/Kg		102	77 - 134
4-Chlorotoluene	0.800	0.828		mg/Kg		103	71 - 137
4-Isopropyltoluene	0.800	0.814		mg/Kg		102	71 - 142
Benzene	0.800	0.832		mg/Kg		104	79 <sub>-</sub> 135

**Eurofins Seattle** 

9/12/2024

Spike

Client: ERM-West Job ID: 580-142813-1

LCS LCS

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-467929/2-A

**Matrix: Solid** 

Analysis Batch: 467888

**Client Sample ID: Lab Control Sample** 

%Rec

Prep Type: Total/NA

**Prep Batch: 467929** 

	Opine	LOU	LUU				/UIXCC	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Bromobenzene	0.800	0.776		mg/Kg		97	78 - 126	
Bromochloromethane	0.800	0.806		mg/Kg		101	76 - 131	
Bromodichloromethane	0.800	0.830		mg/Kg		104	78 - 125	
Bromoform	0.800	0.757		mg/Kg		95	71 - 130	
Bromomethane	0.800	0.917		mg/Kg		115	55 - 150	
Carbon tetrachloride	0.800	0.888		mg/Kg		111	76 - 140	
Chlorobenzene	0.800	0.815		mg/Kg		102	80 - 125	
Chloroethane	0.800	0.848		mg/Kg		106	26 - 150	
Chloroform	0.800	0.827		mg/Kg		103	74 - 133	
Chloromethane	0.800	0.639		mg/Kg		80	52 - 142	
cis-1,2-Dichloroethene	0.800	0.835		mg/Kg		104	80 - 125	
cis-1,3-Dichloropropene	0.800	0.770		mg/Kg		96	80 - 122	
Dibromochloromethane	0.800	0.807		mg/Kg		101	75 - 125	
Dibromomethane	0.800	0.786		mg/Kg		98	72 - 130	
Dichlorodifluoromethane	0.800	0.730		mg/Kg		91	33 - 150	
Ethylbenzene	0.800	0.844		mg/Kg		105	80 - 135	
Hexachlorobutadiene	0.800	0.670		mg/Kg		84	65 - 145	
Isopropylbenzene	0.800	0.950		mg/Kg		119	80 - 131	
Methyl tert-butyl ether	0.800	0.790		mg/Kg		99	71 - 126	
m-Xylene & p-Xylene	0.800	0.851		mg/Kg		106	80 - 132	
Naphthalene	0.800	0.683		mg/Kg		85	56 - 145	
n-Butylbenzene	0.800	0.819		mg/Kg		102	69 - 143	
N-Propylbenzene	0.800	0.839		mg/Kg		105	78 - 133	
o-Xylene	0.800	0.847		mg/Kg		106	80 - 132	

0.800

0.800

0.800

0.800

0.800

0.800

0.800

0.800

0.800

0.800

Spike

Added

0.800

0.800

0.808

0.860

0.821

0.849

0.809

0.791

0.858

0.862

0.868

0.845

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		80 - 121
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
Toluene-d8 (Surr)	102		80 - 120

Lab Sample ID: LCSD 580-467929/3-A

**Matrix: Solid** 

Analyte

sec-Butylbenzene

Tetrachloroethene

trans-1,2-Dichloroethene

Trichlorofluoromethane

trans-1,3-Dichloropropene

t-Butylbenzene

Trichloroethene

Vinyl chloride

Styrene

Toluene

**Analysis Batch: 467888** 

1,1,1,2-Tetrachloroethane

1,1,1-Trichloroethane

	Client Sample ID: Lab Control Sample Dup									
		Prep Type: Total/NA								
				<b>Prep Batch: 467929</b>						
LCSD	LCSD				%Rec		RPD			
Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit			
0.830		mg/Kg	_	104	79 - 128	0	20			
0.875		mg/Kg		109	78 - 135	1	20			

101

107

103

106

101

99

107

108

109

106

71 - 143

79 - 129

72 - 144

75 - 141

75 - 125

77 - 134

80 - 121 80 - 134

71 - 150

62 - 144

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-467929/3-A

**Matrix: Solid** 

Analysis Batch: 467888

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA Prep Batch: 467929

Analysis Batch: 467888							<b>Prep Batch: 467929</b>		
	Spike	_	LCSD				%Rec		RPD
Analyte	Added		Qualifier	Unit	_ D	%Rec	Limits	RPD	Limit
1,1,2,2-Tetrachloroethane	0.800	0.768		mg/Kg		96	77 - 122	0	20
1,1,2-Trichloroethane	0.800	0.830		mg/Kg		104	80 - 123	1	20
1,1-Dichloroethane	0.800	0.854		mg/Kg		107	78 - 126	4	20
1,1-Dichloroethene	0.800	0.878		mg/Kg		110	73 - 134	7	25
1,1-Dichloropropene	0.800	0.852		mg/Kg		106	76 - 140	2	20
1,2,3-Trichlorobenzene	0.800	0.660		mg/Kg		82	58 - 146	2	28
1,2,3-Trichloropropane	0.800	0.777		mg/Kg		97	77 - 127	1	20
1,2,4-Trichlorobenzene	0.800	0.777		mg/Kg		97	74 - 131	6	26
1,2,4-Trimethylbenzene	0.800	0.851		mg/Kg		106	73 - 138	0	22
1,2-Dibromo-3-Chloropropane	0.800	0.647		mg/Kg		81	64 - 129	4	40
1,2-Dibromoethane	0.800	0.808		mg/Kg		101	77 - 123	0	20
1,2-Dichlorobenzene	0.800	0.803		mg/Kg		100	78 - 126	2	20
1,2-Dichloroethane	0.800	0.791		mg/Kg		99	76 - 124	3	20
1,2-Dichloropropane	0.800	0.822		mg/Kg		103	73 - 130	5	20
1,3,5-Trimethylbenzene	0.800	0.881		mg/Kg		110	72 - 134	3	24
1,3-Dichlorobenzene	0.800	0.798		mg/Kg		100	78 - 132	7	20
1,3-Dichloropropane	0.800	0.808		mg/Kg		101	80 - 120	0	20
1,4-Dichlorobenzene	0.800	0.796		mg/Kg		99	77 - 123	3	20
2,2-Dichloropropane	0.800	0.860		mg/Kg		108	75 - 134	2	20
2-Chlorotoluene	0.800	0.847		mg/Kg		106	77 - 134	4	21
4-Chlorotoluene	0.800	0.826		mg/Kg		103	71 - 137	0	21
4-Isopropyltoluene	0.800	0.826		mg/Kg		103	71 - 142	1	29
Benzene	0.800	0.853		mg/Kg		107	79 - 135	2	20
Bromobenzene	0.800	0.810		mg/Kg		101	78 - 126	4	20
Bromochloromethane	0.800	0.846		mg/Kg		106	76 - 120	5	20
Bromodichloromethane	0.800	0.840		mg/Kg		105	78 - 125	1	20
Bromoform	0.800	0.766					71 - 130		
Bromomethane	0.800			mg/Kg		96 124		1 8	20
		0.993		mg/Kg		124	55 - 150		26
Carbon tetrachloride	0.800	0.892		mg/Kg		111	76 <sub>-</sub> 140	0	20
Chlorophysical	0.800	0.826		mg/Kg		103	80 - 125	1	20
Chloroethane	0.800	0.932		mg/Kg		116	26 - 150	9	40
Chloroform	0.800	0.855		mg/Kg		107	74 - 133	3	20
Chloromethane	0.800	0.667		mg/Kg		83	52 - 142	4	40
cis-1,2-Dichloroethene	0.800	0.846		mg/Kg		106	80 - 125		20
cis-1,3-Dichloropropene	0.800	0.776		mg/Kg		97	80 - 122	1	20
Dibromochloromethane	0.800	0.815		mg/Kg		102	75 - 125	1	20
Dibromomethane	0.800	0.813		mg/Kg		102	72 - 130	3	40
Dichlorodifluoromethane	0.800	0.778		mg/Kg		97	33 - 150	6	31
Ethylbenzene	0.800	0.884		mg/Kg		111	80 - 135	5	20
Hexachlorobutadiene	0.800	0.738		mg/Kg		92	65 - 145	10	36
Isopropylbenzene	0.800	0.966		mg/Kg		121	80 - 131	2	20
Methyl tert-butyl ether	0.800	0.800		mg/Kg		100	71 - 126	1	20
m-Xylene & p-Xylene	0.800	0.869		mg/Kg		109	80 - 132	2	20
Naphthalene	0.800	0.685		mg/Kg		86	56 - 145	0	25
n-Butylbenzene	0.800	0.833		mg/Kg		104	69 - 143	2	31
N-Propylbenzene	0.800	0.841		mg/Kg		105	78 - 133	0	24
o-Xylene	0.800	0.870		mg/Kg		109	80 - 132	3	20
sec-Butylbenzene	0.800	0.828		mg/Kg		103	71 - 143	2	29
Styrene	0.800	0.872		mg/Kg		109	79 - 129	1	20

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-467929/3-A

**Matrix: Solid** 

**Analysis Batch: 467888** 

**Client Sample ID: Lab Control Sample Dup** 

**Prep Type: Total/NA** 

**Prep Batch: 467929** 

	Spike	LCSD LCSD				%Rec		RPD
Analyte	Added	Result Qualifier	Unit	D	%Rec	Limits	RPD	Limit
t-Butylbenzene	0.800	0.839	mg/Kg		105	72 - 144	2	27
Tetrachloroethene	0.800	0.880	mg/Kg		110	75 - 141	4	20
Toluene	0.800	0.827	mg/Kg		103	75 - 125	2	20
trans-1,2-Dichloroethene	0.800	0.821	mg/Kg		103	77 - 134	4	20
trans-1,3-Dichloropropene	0.800	0.845	mg/Kg		106	80 - 121	1	20
Trichloroethene	0.800	0.859	mg/Kg		107	80 - 134	0	20
Trichlorofluoromethane	0.800	0.903	mg/Kg		113	71 - 150	4	30
Vinyl chloride	0.800	0.887	mg/Kg		111	62 - 144	5	20

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		80 - 121
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
Toluene-d8 (Surr)	101		80 - 120

Lab Sample ID: MB 580-468642/3-A

**Matrix: Solid** 

**Analysis Batch: 468647** 

**Client Sample ID: Method Blank** Prep Type: Total/NA

**Prep Batch: 468642** 

-	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		0.0010	0.00034	mg/Kg		08/19/24 09:17	08/19/24 11:52	1
4-Isopropyltoluene	ND		0.0010	0.00026	mg/Kg		08/19/24 09:17	08/19/24 11:52	1
Chlorobenzene	ND		0.0010	0.00012	mg/Kg		08/19/24 09:17	08/19/24 11:52	1
Isopropylbenzene	ND		0.0010	0.00022	mg/Kg		08/19/24 09:17	08/19/24 11:52	1
Methylene Chloride	ND		0.0063	0.00065	mg/Kg		08/19/24 09:17	08/19/24 11:52	1
Naphthalene	ND		0.0038	0.00098	mg/Kg		08/19/24 09:17	08/19/24 11:52	1
N-Propylbenzene	ND		0.0010	0.00038	mg/Kg		08/19/24 09:17	08/19/24 11:52	1
sec-Butylbenzene	ND		0.0010	0.00022	mg/Kg		08/19/24 09:17	08/19/24 11:52	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121	08/19/24 09:17	08/19/24 11:52	1
4-Bromofluorobenzene (Surr)	98		80 - 120	08/19/24 09:17	08/19/24 11:52	1
Dibromofluoromethane (Surr)	105		80 - 120	08/19/24 09:17	08/19/24 11:52	1
Toluene-d8 (Surr)	102		80 - 120	08/19/24 09:17	08/19/24 11:52	1

Lab Sample ID: LCS 580-468642/1-A

**Matrix: Solid** 

Analysis Batch: 468647

Client Sample	ID: Lab	Control	l Sample
	Prep	Type:	Total/NA

**Prep Batch: 468642** 

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,2,4-Trimethylbenzene	0.800	0.806		mg/Kg		101	73 - 138	
4-Isopropyltoluene	0.800	0.844		mg/Kg		106	71 - 142	
Chlorobenzene	0.800	0.835		mg/Kg		104	80 - 125	
Isopropylbenzene	0.800	0.772		mg/Kg		97	80 - 131	
Methylene Chloride	0.800	0.820		mg/Kg		102	56 - 140	
Naphthalene	0.800	0.890		mg/Kg		111	56 - 145	
N-Propylbenzene	0.800	0.772		mg/Kg		96	78 - 133	
sec-Butylbenzene	0.800	0.869		mg/Kg		109	71 - 143	

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-468642/1-A

Lab Sample ID: LCSD 580-468642/2-A

**Matrix: Solid** 

**Matrix: Solid** 

Analysis Batch: 468647

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 468642** 

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		80 - 121
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
Toluene-d8 (Surr)	102		80 - 120

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

**Prep Batch: 468642** 

**Analysis Batch: 468647** LCSD LCSD Spike %Rec **RPD** Added Result Qualifier Unit %Rec Limits **RPD** Limit 1,2,4-Trimethylbenzene 0.800 3 22 0.780 97 73 - 138 mg/Kg 4-Isopropyltoluene 0.800 0.815 mg/Kg 102 71 - 142 4 29 Chlorobenzene 0.800 0.824 mg/Kg 103 80 - 125 20 Isopropylbenzene 0.800 0.751 mg/Kg 94 80 - 131 20 Methylene Chloride 0.800 0.813 102 56 - 140 20 mg/Kg 0.517 \*1 65 Naphthalene 0.800 mg/Kg 56 - 145 53 25 N-Propylbenzene 0.800 0.757 mg/Kg 95 78 - 133 2 24 sec-Butylbenzene 0.800 105 71 - 143 0.843 mg/Kg

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		80 - 121
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
Toluene-d8 (Surr)	103		80 - 120

Lab Sample ID: MB 580-468710/3-A Client Sample ID: Method Blank **Matrix: Solid** 

**Analysis Batch: 468721** 

Prep Type: Total/NA

**Prep Batch: 468710** 

	MB	MB						•	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
1,1,1-Trichloroethane	ND		0.040	0.0046	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
1,1,2-Trichloroethane	ND		0.020	0.0074	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
1,1-Dichloroethane	ND		0.040	0.0092	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
1,1-Dichloroethene	ND		0.040	0.012	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
1,1-Dichloropropene	ND		0.040	0.0053	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
1,2,3-Trichlorobenzene	ND		0.080	0.040	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
1,2,3-Trichloropropane	ND		0.040	0.012	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
1,2,4-Trichlorobenzene	ND		0.080	0.043	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
1,2,4-Trimethylbenzene	ND		0.040	0.014	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
1,2-Dibromo-3-Chloropropane	ND		0.060	0.015	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
1,2-Dibromoethane	ND		0.020	0.0038	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
1,2-Dichlorobenzene	ND		0.040	0.0087	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
1,2-Dichloroethane	ND		0.020	0.0055	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
1,2-Dichloropropane	ND		0.020	0.0066	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
1,3,5-Trimethylbenzene	ND		0.040	0.0076	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
1,3-Dichlorobenzene	ND		0.060	0.013	mg/Kg		08/19/24 14:51	08/19/24 22:22	1

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

MB MB

Lab Sample ID: MB 580-468710/3-A

**Matrix: Solid** 

Trichlorofluoromethane

Vinyl chloride

Analysis Batch: 468721

Client Sample ID: Method Blank

**Prep Type: Total/NA** 

**Prep Batch: 468710** 

Analyte	Result C	Qualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichloropropane	ND ND	0.060	0.0056	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
1,4-Dichlorobenzene	ND	0.060	0.011	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
2,2-Dichloropropane	ND	0.040	0.012	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
2-Chlorotoluene	ND	0.040	0.0088	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
4-Chlorotoluene	ND	0.040	0.0098	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
4-Isopropyltoluene	ND	0.040	0.010	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Benzene	ND	0.020	0.0038	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Bromobenzene	ND	0.040	0.0042	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Bromochloromethane	ND	0.040	0.0062	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Bromodichloromethane	ND	0.040	0.0055	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Bromoform	ND	0.040	0.0045	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Bromomethane	ND	0.10	0.038	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Carbon tetrachloride	ND	0.020	0.0044	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Chlorobenzene	ND	0.040	0.0048	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Chloroethane	ND	0.080	0.021	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Chloroform	ND	0.020	0.0042	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Chloromethane	ND	0.060	0.010	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
cis-1,2-Dichloroethene	ND	0.060	0.013	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
cis-1,3-Dichloropropene	ND	0.020	0.0040	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Dibromochloromethane	ND	0.020	0.0049	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Dibromomethane	ND	0.040	0.0074	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Dichlorodifluoromethane	ND	0.25	0.046	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Ethylbenzene	ND	0.040	0.0091	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Hexachlorobutadiene	ND	0.10	0.024	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Isopropylbenzene	ND	0.040	0.0086	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Methyl tert-butyl ether	ND	0.040	0.0060	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Methylene Chloride	0.0726 J	J 0.25	0.026	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
m-Xylene & p-Xylene	ND	0.040	0.0071	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Naphthalene	ND	0.15	0.039	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
n-Butylbenzene	ND	0.040	0.019	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
N-Propylbenzene	ND	0.040	0.015	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
o-Xylene	ND	0.040	0.0050	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
sec-Butylbenzene	ND	0.040	0.0086	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Styrene	ND	0.040	0.013	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
t-Butylbenzene	ND	0.040	0.0077	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Tetrachloroethene	ND	0.040	0.0053	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Toluene	ND	0.060		mg/Kg		08/19/24 14:51	08/19/24 22:22	1
trans-1,2-Dichloroethene	ND	0.060	0.015	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
trans-1,3-Dichloropropene	ND	0.040	0.0070			08/19/24 14:51	08/19/24 22:22	1
Trichloroethene	ND	0.040		mg/Kg		08/19/24 14:51	08/19/24 22:22	1

ND

ND

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95	80 - 121	08/19/24 14:51	08/19/24 22:22	1
4-Bromofluorobenzene (Surr)	98	80 - 120	08/19/24 14:51	08/19/24 22:22	1
Dibromofluoromethane (Surr)	104	80 - 120	08/19/24 14:51	08/19/24 22:22	1
Toluene-d8 (Surr)	101	80 - 120	08/19/24 14:51	08/19/24 22:22	1

0.080

0.10

0.026 mg/Kg

0.019 mg/Kg

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08/19/24 14:51 08/19/24 22:22

08/19/24 14:51 08/19/24 22:22

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

# Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-468710/1-A

**Matrix: Solid** 

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 468710

Analysis Batch: 468721	Spike	LCS	LCS				Prep Type: Total/N Prep Batch: 46871 %Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1,1,2-Tetrachloroethane	0.800	0.820		mg/Kg		103	79 - 128
1,1,1-Trichloroethane	0.800	0.789		mg/Kg		99	78 - 135
1,1,2,2-Tetrachloroethane	0.800	0.719		mg/Kg		90	77 - 122
1,1,2-Trichloroethane	0.800	0.755		mg/Kg		94	80 - 123
1,1-Dichloroethane	0.800	0.704		mg/Kg		88	78 - 126
1,1-Dichloroethene	0.800	0.771		mg/Kg		96	73 - 134
1,1-Dichloropropene	0.800	0.666		mg/Kg		83	76 - 140
1,2,3-Trichlorobenzene	0.800	0.813		mg/Kg		102	58 - 146
1,2,3-Trichloropropane	0.800	0.680		mg/Kg		85	77 - 127
1,2,4-Trichlorobenzene	0.800	0.712		mg/Kg		89	74 - 131
1,2,4-Trimethylbenzene	0.800	0.769		mg/Kg		96	73 - 138
1,2-Dibromo-3-Chloropropane	0.800	0.706		mg/Kg		88	64 - 129
1,2-Dibromoethane	0.800	0.735		mg/Kg		92	77 - 123
1,2-Dichlorobenzene	0.800	0.814		mg/Kg		102	78 - 126
1,2-Dichloroethane	0.800	0.715		mg/Kg		89	76 - 124
1,2-Dichloropropane	0.800	0.686		mg/Kg		86	73 - 130
1,3,5-Trimethylbenzene	0.800	0.843		mg/Kg		105	72 - 134
1,3-Dichlorobenzene	0.800	0.824		mg/Kg		103	78 - 132
1,3-Dichloropropane	0.800	0.673		mg/Kg		84	80 - 120
1,4-Dichlorobenzene	0.800	0.808		mg/Kg		101	77 - 123
2,2-Dichloropropane	0.800	0.702		mg/Kg		88	75 - 134
2-Chlorotoluene	0.800	0.844		mg/Kg		105	77 - 134
4-Chlorotoluene	0.800	0.746		mg/Kg		93	71 - 137
4-Isopropyltoluene	0.800	0.822		mg/Kg		103	71 - 142
Benzene	0.800	0.768		mg/Kg		96	79 - 135
Bromobenzene	0.800	0.792		mg/Kg		99	78 - 126
Bromochloromethane	0.800	0.707		mg/Kg		88	76 - 120 76 - 131
Bromodichloromethane	0.800	0.712		mg/Kg		89	78 - 125
Bromoform	0.800	0.712		mg/Kg		88	71 - 130
Bromomethane	0.800	0.763		mg/Kg		95	55 <sub>-</sub> 150
Carbon tetrachloride	0.800	0.700		mg/Kg		87	76 - 140
Chlorobenzene	0.800	0.700		mg/Kg		101	80 <sub>-</sub> 125
Chloroethane	0.800	0.858				107	26 - 150
Chloroform	0.800	0.778		mg/Kg		97	74 - 133
Chloromethane	0.800	0.778		mg/Kg		97 97	74 - 133 52 - 142
				mg/Kg			
cis-1,2-Dichloroethene	0.800	0.716		mg/Kg		90	80 - 125
cis-1,3-Dichloropropene	0.800	0.754		mg/Kg		94	80 - 122
Dibromochloromethane	0.800	0.699		mg/Kg		87	75 - 125
Diblomomethane	0.800	0.698		mg/Kg		87	72 - 130
Dichlorodifluoromethane	0.800	0.992		mg/Kg		124	33 - 150
Ethylbenzene	0.800	0.822		mg/Kg		103	80 - 135
Hexachlorobutadiene	0.800	0.844		mg/Kg		106	65 - 145
Isopropylbenzene	0.800	0.753		mg/Kg		94	80 - 131
Methyl tert-butyl ether	0.800	0.727		mg/Kg		91	71 - 126
Methylene Chloride	0.800	0.810		mg/Kg		101	56 - 140
m-Xylene & p-Xylene	0.800	0.807		mg/Kg		101	80 - 132
Naphthalene	0.800	0.816		mg/Kg		102	56 - 145
n-Butylbenzene	0.800	0.835		mg/Kg		104	69 - 143

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-468710/1-A

**Matrix: Solid** 

**Matrix: Solid** 

4-Isopropyltoluene

**Analysis Batch: 468721** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 468710** %Rec

-	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
N-Propylbenzene	0.800	0.768		mg/Kg		96	78 - 133
o-Xylene	0.800	0.828		mg/Kg		103	80 - 132
sec-Butylbenzene	0.800	0.855		mg/Kg		107	71 - 143
Styrene	0.800	0.736		mg/Kg		92	79 - 129
t-Butylbenzene	0.800	0.767		mg/Kg		96	72 - 144
Tetrachloroethene	0.800	0.842		mg/Kg		105	75 - 141
Toluene	0.800	0.812		mg/Kg		102	75 - 125
trans-1,2-Dichloroethene	0.800	0.778		mg/Kg		97	77 - 134
trans-1,3-Dichloropropene	0.800	0.713		mg/Kg		89	80 - 121
Trichloroethene	0.800	0.713		mg/Kg		89	80 - 134
Trichlorofluoromethane	0.800	0.700		mg/Kg		87	71 - 150
Vinyl chloride	0.800	0.759		mg/Kg		95	62 - 144

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	93		80 - 121
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
Toluene-d8 (Surr)	104		80 - 120

Lab Sample ID: LCSD 580-468710/2-A

**Client Sample ID: Lab Control Sample Dup** Prep Type: Total/NA

**Prep Batch: 468710** 

**Analysis Batch: 468721** Spike LCSD LCSD %Rec **RPD** Analyte Added Result Qualifier Unit %Rec Limits RPD Limit 1,1,1,2-Tetrachloroethane 0.800 0.851 106 79 - 128 20 mg/Kg 0.800 1,1,1-Trichloroethane 0.841 mg/Kg 105 78 - 135 6 20 0.800 0.784 98 77 - 122 20 1,1,2,2-Tetrachloroethane mg/Kg 0.800 0.766 96 80 - 123 20 1,1,2-Trichloroethane mg/Kg 20 1,1-Dichloroethane 0.800 0.756 mg/Kg 94 78 - 126 1,1-Dichloroethene 0.800 0.838 mg/Kg 105 73 - 134 25 20 1,1-Dichloropropene 0.800 0.702 88 76 - 140 5 mg/Kg 1,2,3-Trichlorobenzene 0.800 0.905 113 58 - 146 11 28 mg/Kg 0.800 87 77 - 127 20 1,2,3-Trichloropropane 0.699 mg/Kg 3 1,2,4-Trichlorobenzene 0.800 0.762 95 74 - 131 26 mg/Kg 1,2,4-Trimethylbenzene 0.800 0.800 100 73 - 138 22 mg/Kg 0.800 40 1,2-Dibromo-3-Chloropropane 0.729 mg/Kg 91 64 - 129 1,2-Dibromoethane 0.800 0.762 mg/Kg 95 77 - 123 20 1,2-Dichlorobenzene 0.800 106 78 - 126 20 0.845 mg/Kg 1.2-Dichloroethane 0.800 0.725 mg/Kg 91 76 - 124 20 1,2-Dichloropropane 0.800 0.714 mg/Kg 89 73 - 130 20 1,3,5-Trimethylbenzene 0.800 0.881 mg/Kg 110 72 - 134 24 78 - 132 0.800 0.851 106 20 1,3-Dichlorobenzene mg/Kg 1,3-Dichloropropane 0.800 0.696 87 80 - 120 20 mg/Kg 1,4-Dichlorobenzene 0.800 0.837 105 77 - 12320 mg/Kg 2,2-Dichloropropane 0.800 0.765 mg/Kg 96 75 - 134 20 0.800 108 77 - 134 2-Chlorotoluene 0.866 21 mg/Kg 4-Chlorotoluene 0.800 0.762 mg/Kg 95 71 - 137 21

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0.853

mg/Kg

107

71 - 142

0.800

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-468710/2-A

**Matrix: Solid** 

Analysis Batch: 468721

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA Prep Batch: 468710

	•		LCSD				%Rec		RPD
Analyte	Added		Qualifier	Unit	_ D	%Rec	Limits	RPD	Limit
Benzene	0.800	0.811		mg/Kg		101	79 - 135	5	20
Bromobenzene	0.800	0.804		mg/Kg		101	78 - 126	1	20
Bromochloromethane	0.800	0.768		mg/Kg		96	76 - 131	8	20
Bromodichloromethane	0.800	0.736		mg/Kg		92	78 - 125	3	20
Bromoform	0.800	0.749		mg/Kg		94	71 - 130	6	20
Bromomethane	0.800	0.767		mg/Kg		96	55 - 150	1	26
Carbon tetrachloride	0.800	0.752		mg/Kg		94	76 - 140	7	20
Chlorobenzene	0.800	0.839		mg/Kg		105	80 - 125	4	20
Chloroethane	0.800	0.946		mg/Kg		118	26 - 150	10	40
Chloroform	0.800	0.832		mg/Kg		104	74 - 133	7	20
Chloromethane	0.800	0.799		mg/Kg		100	52 - 142	3	40
cis-1,2-Dichloroethene	0.800	0.760		mg/Kg		95	80 - 125	6	20
cis-1,3-Dichloropropene	0.800	0.753		mg/Kg		94	80 - 122	0	20
Dibromochloromethane	0.800	0.735		mg/Kg		92	75 - 125	5	20
Dibromomethane	0.800	0.740		mg/Kg		93	72 - 130	6	40
Dichlorodifluoromethane	0.800	1.04		mg/Kg		130	33 - 150	4	31
Ethylbenzene	0.800	0.855		mg/Kg		107	80 - 135	4	20
Hexachlorobutadiene	0.800	0.896		mg/Kg		112	65 - 145	6	36
Isopropylbenzene	0.800	0.771		mg/Kg		96	80 - 131	2	20
Methyl tert-butyl ether	0.800	0.772		mg/Kg		96	71 - 126	6	20
Methylene Chloride	0.800	0.863		mg/Kg		108	56 - 140	6	20
m-Xylene & p-Xylene	0.800	0.833		mg/Kg		104	80 - 132	3	20
Naphthalene	0.800	0.894		mg/Kg		112	56 - 145	9	25
n-Butylbenzene	0.800	0.858		mg/Kg		107	69 - 143	3	31
N-Propylbenzene	0.800	0.796		mg/Kg		99	78 - 133	4	24
o-Xylene	0.800	0.845		mg/Kg		106	80 - 132	2	20
sec-Butylbenzene	0.800	0.869		mg/Kg		109	71 - 143	2	29
Styrene	0.800	0.755		mg/Kg		94	79 - 129	3	20
t-Butylbenzene	0.800	0.788		mg/Kg		99	72 - 144	3	27
Tetrachloroethene	0.800	0.874		mg/Kg		109	75 - 141	4	20
Toluene	0.800	0.829		mg/Kg		104	75 - 125	2	20
trans-1,2-Dichloroethene	0.800	0.856		mg/Kg		107	77 - 134	10	20
trans-1,3-Dichloropropene	0.800	0.744		mg/Kg		93	80 - 121	4	20
Trichloroethene	0.800	0.737		mg/Kg		92	80 - 134	3	20
Trichlorofluoromethane	0.800	0.750		mg/Kg		94	71 - 150	7	30
Vinyl chloride	0.800	0.814		mg/Kg		102	62 - 144	7	20

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	93		80 - 121
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	103		80 - 120
Toluene-d8 (Surr)	103		80 - 120

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-469011/3-A

**Matrix: Solid** 

Analysis Batch: 468961

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

**Prep Batch: 469011** 

MB MB Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac Chlorobenzene 0.040 08/21/24 15:12 08/21/24 16:19 ND 0.0048 mg/Kg

	IVID	IVID				
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		80 - 121	08/21/24 15:12	08/21/24 16:19	1
4-Bromofluorobenzene (Surr)	100		80 - 120	08/21/24 15:12	08/21/24 16:19	1
Dibromofluoromethane (Surr)	104		80 - 120	08/21/24 15:12	08/21/24 16:19	1
Toluene-d8 (Surr)	98		80 - 120	08/21/24 15:12	08/21/24 16:19	1
	1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr)	Surrogate%Recovery1,2-Dichloroethane-d4 (Surr)1054-Bromofluorobenzene (Surr)100Dibromofluoromethane (Surr)104	1,2-Dichloroethane-d4 (Surr)1054-Bromofluorobenzene (Surr)100Dibromofluoromethane (Surr)104	Surrogate         %Recovery         Qualifier         Limits           1,2-Dichloroethane-d4 (Surr)         105         80 - 121           4-Bromofluorobenzene (Surr)         100         80 - 120           Dibromofluoromethane (Surr)         104         80 - 120	Surrogate         %Recovery         Qualifier         Limits         Prepared           1,2-Dichloroethane-d4 (Surr)         105         80 - 121         08/21/24 15:12           4-Bromofluorobenzene (Surr)         100         80 - 120         08/21/24 15:12           Dibromofluoromethane (Surr)         104         80 - 120         08/21/24 15:12	Surrogate         %Recovery         Qualifier         Limits         Prepared         Analyzed           1,2-Dichloroethane-d4 (Surr)         105         80 - 121         08/21/24 15:12         08/21/24 15:12         08/21/24 16:19           4-Bromofluorobenzene (Surr)         100         80 - 120         08/21/24 15:12         08/21/24 16:19           Dibromofluoromethane (Surr)         104         80 - 120         08/21/24 15:12         08/21/24 16:19

Lab Sample ID: LCS 580-469011/1-A

**Matrix: Solid** 

**Analysis Batch: 468961** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 469011** 

Spike LCS LCS %Rec Analyte Added Result Qualifier Limits Unit D %Rec 0.800 80 - 125 Chlorobenzene 0.958 mg/Kg 120

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		80 - 121
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	98		80 - 120
Toluene-d8 (Surr)	100		80 - 120

Lab Sample ID: LCSD 580-469011/2-A

**Matrix: Solid** 

**Analysis Batch: 468961** 

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA **Prep Batch: 469011** 

%Rec **RPD** 

Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit Chlorobenzene 0.800 0.816 mg/Kg 102 80 - 125 16

LCSD LCSD

Spike

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		80 - 121
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	97		80 - 120
Toluene-d8 (Surr)	100		80 - 120

#### Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-468175/1-A

**Matrix: Solid** 

**Analysis Batch: 468859** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

**Prep Batch: 468175** 

	MB	B MB								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Phenol	ND		150	23	ug/Kg		08/14/24 10:44	08/20/24 15:49	1	
Bis(2-chloroethyl)ether	ND		100	7.7	ug/Kg		08/14/24 10:44	08/20/24 15:49	1	
2-Chlorophenol	ND		200	4.0	ug/Kg		08/14/24 10:44	08/20/24 15:49	1	
1,3-Dichlorobenzene	ND		50	4.8	ug/Kg		08/14/24 10:44	08/20/24 15:49	1	
1,4-Dichlorobenzene	ND		50	8.3	ug/Kg		08/14/24 10:44	08/20/24 15:49	1	
Benzyl alcohol	ND		1000	260	ug/Kg		08/14/24 10:44	08/20/24 15:49	1	
1,2-Dichlorobenzene	ND		50	5.0	ug/Kg		08/14/24 10:44	08/20/24 15:49	1	

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

# Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-468175/1-A

Matrix: Solid

Analysis Batch: 468859

Client Sample ID: Method Blank	
Prep Type: Total/NA	
Prep Batch: 468175	

Analyte	MB Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	ND		150		ug/Kg		08/14/24 10:44		1
3 & 4 Methylphenol	ND		200		ug/Kg		08/14/24 10:44		1
N-Nitrosodi-n-propylamine	ND		200		ug/Kg			08/20/24 15:49	
Hexachloroethane	ND		150		ug/Kg			08/20/24 15:49	1
Nitrobenzene	ND		200		ug/Kg			08/20/24 15:49	1
Isophorone	ND		150		ug/Kg			08/20/24 15:49	······································
2-Nitrophenol	ND		200		ug/Kg			08/20/24 15:49	1
2,4-Dimethylphenol	ND		210		ug/Kg			08/20/24 15:49	1
Benzoic acid	ND		4000		ug/Kg			08/20/24 15:49	· · · · · · · · · · · · · · · · · · ·
Bis(2-chloroethoxy)methane	ND		200		ug/Kg			08/20/24 15:49	1
2,4-Dichlorophenol	ND		210		ug/Kg			08/20/24 15:49	1
1,2,4-Trichlorobenzene	ND		50		ug/Kg			08/20/24 15:49	· · · · · · · · · · · · · · · · · · ·
Naphthalene	ND		25		ug/Kg			08/20/24 15:49	1
4-Chloroaniline	ND		1500		ug/Kg			08/20/24 15:49	1
Hexachlorobutadiene	ND		50		ug/Kg ug/Kg			08/20/24 15:49	
4-Chloro-3-methylphenol	ND ND		150		ug/Kg ug/Kg		08/14/24 10:44		1
2-Methylnaphthalene	ND		50		ug/Kg			08/20/24 15:49	1
Hexachlorocyclopentadiene	ND		100		ug/Kg			08/20/24 15:49	
2,4,6-Trichlorophenol	ND		150		ug/Kg			08/20/24 15:49	1
2,4,5-Trichlorophenol	ND		200		ug/Kg			08/20/24 15:49	1
2-Chloronaphthalene	ND ND		25		ug/Kg ug/Kg			08/20/24 15:49	
2-Nitroaniline	ND		100		ug/Kg ug/Kg			08/20/24 15:49	1
	ND ND		150		0 0			08/20/24 15:49	1
Dimethyl phthalate	ND		25		ug/Kg			08/20/24 15:49	
Acenaphthylene	ND ND		150		ug/Kg				
2,6-Dinitrotoluene	ND ND		300		ug/Kg			08/20/24 15:49	1
3-Nitroaniline					ug/Kg			08/20/24 15:49	1
Acenaphthene	ND ND		40 2000		ug/Kg			08/20/24 15:49	1
2,4-Dinitrophenol	ND ND		2000		ug/Kg			08/20/24 15:49	1
4-Nitrophenol								08/20/24 15:49	1
Dibenzofuran 2.4-Dinitrotoluene	ND ND		150		ug/Kg			08/20/24 15:49	1
,			200		ug/Kg			08/20/24 15:49	1
Diethyl phthalate	ND		400		ug/Kg			08/20/24 15:49	1
4-Chlorophenyl phenyl ether	ND		200		ug/Kg			08/20/24 15:49	1
Fluorene	ND		25		ug/Kg			08/20/24 15:49	1
4-Nitroaniline	ND		150		ug/Kg			08/20/24 15:49	1
4,6-Dinitro-2-methylphenol	ND		1000		ug/Kg			08/20/24 15:49	1
N-Nitrosodiphenylamine	ND		60		ug/Kg			08/20/24 15:49	1
4-Bromophenyl phenyl ether	ND		200		ug/Kg		08/14/24 10:44		
Hexachlorobenzene	ND		50		ug/Kg			08/20/24 15:49	1
Pentachlorophenol	ND		550		ug/Kg			08/20/24 15:49	1
Phenanthrene	ND		60		ug/Kg			08/20/24 15:49	
Anthracene	ND		60		ug/Kg			08/20/24 15:49	1
Di-n-butyl phthalate	731		500		ug/Kg			08/20/24 15:49	1
Fluoranthene	ND		40		ug/Kg			08/20/24 15:49	1
Pyrene	ND		60		ug/Kg			08/20/24 15:49	1
Butyl benzyl phthalate	ND		200		ug/Kg			08/20/24 15:49	1
3,3'-Dichlorobenzidine	ND		570		ug/Kg			08/20/24 15:49	1
Benzo[a]anthracene	ND		40		ug/Kg			08/20/24 15:49	1
Chrysene	ND		60	13	ug/Kg		08/14/24 10:44	08/20/24 15:49	1

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

### Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-468175/1-A

**Matrix: Solid** 

**Analysis Batch: 468859** 

Client Sample ID: Method Blank

**Prep Type: Total/NA** 

**Prep Batch: 468175** 

	MB	MR							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-ethylhexyl) phthalate	ND		600	71	ug/Kg		08/14/24 10:44	08/20/24 15:49	1
Di-n-octyl phthalate	ND		200	89	ug/Kg		08/14/24 10:44	08/20/24 15:49	1
Benzo[a]pyrene	ND		110	39	ug/Kg		08/14/24 10:44	08/20/24 15:49	1
Indeno[1,2,3-cd]pyrene	ND		40	12	ug/Kg		08/14/24 10:44	08/20/24 15:49	1
Dibenz(a,h)anthracene	ND		110	47	ug/Kg		08/14/24 10:44	08/20/24 15:49	1
Benzo[g,h,i]perylene	ND		60	18	ug/Kg		08/14/24 10:44	08/20/24 15:49	1
Carbazole	ND		150	7.3	ug/Kg		08/14/24 10:44	08/20/24 15:49	1
1-Methylnaphthalene	ND		30	5.0	ug/Kg		08/14/24 10:44	08/20/24 15:49	1
Benzo[b]fluoranthene	ND		40	10	ug/Kg		08/14/24 10:44	08/20/24 15:49	1
Benzo[k]fluoranthene	ND		60	14	ug/Kg		08/14/24 10:44	08/20/24 15:49	1
bis(chloroisopropyl) ether	ND		200	6.1	ug/Kg		08/14/24 10:44	08/20/24 15:49	1

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	87	58 - 120	08/14/24 10:44	08/20/24 15:49	1
Phenol-d5 (Surr)	84	59 - 120	08/14/24 10:44	08/20/24 15:49	1
Nitrobenzene-d5 (Surr)	92	63 - 120	08/14/24 10:44	08/20/24 15:49	1
2-Fluorobiphenyl	87	64 - 120	08/14/24 10:44	08/20/24 15:49	1
2,4,6-Tribromophenol (Surr)	77	62 - 122	08/14/24 10:44	08/20/24 15:49	1
Terphenyl-d14 (Surr)	96	73 - 125	08/14/24 10:44	08/20/24 15:49	1

Lab Sample ID: LCS 580-468175/2-A

Matrix: Solid

**Analysis Batch: 468859** 

**Client Sample ID: Lab Control Sample Prep Type: Total/NA** 

**Prep Batch: 468175** 

7 <b>,</b> 0.0	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Phenol	2000	1840		ug/Kg		92	59 - 120
Bis(2-chloroethyl)ether	2000	1850		ug/Kg		92	61 - 120
2-Chlorophenol	2000	1890		ug/Kg		94	66 - 120
1,3-Dichlorobenzene	2000	1720		ug/Kg		86	65 - 120
1,4-Dichlorobenzene	2000	1710		ug/Kg		86	68 - 120
Benzyl alcohol	2000	1940		ug/Kg		97	10 - 134
1,2-Dichlorobenzene	2000	1740		ug/Kg		87	68 - 120
2-Methylphenol	2000	1880		ug/Kg		94	53 - 120
3 & 4 Methylphenol	2000	2100		ug/Kg		105	54 - 120
N-Nitrosodi-n-propylamine	2000	1940		ug/Kg		97	63 - 120
Hexachloroethane	2000	1730		ug/Kg		86	68 - 120
Nitrobenzene	2000	1880		ug/Kg		94	57 - 128
Isophorone	2000	1980		ug/Kg		99	61 - 123
2-Nitrophenol	2000	2240		ug/Kg		112	67 - 131
2,4-Dimethylphenol	2000	2010		ug/Kg		101	55 - 120
Benzoic acid	4000	3410	J	ug/Kg		85	10 - 120
Bis(2-chloroethoxy)methane	2000	1980		ug/Kg		99	60 - 120
2,4-Dichlorophenol	2000	1980		ug/Kg		99	63 - 120
1,2,4-Trichlorobenzene	2000	1800		ug/Kg		90	66 - 125
Naphthalene	2000	1870		ug/Kg		93	68 - 120
4-Chloroaniline	2000	1660		ug/Kg		83	10 - 120
Hexachlorobutadiene	2000	1820		ug/Kg		91	56 - 146
4-Chloro-3-methylphenol	2000	1960		ug/Kg		98	55 - 120

**Eurofins Seattle** 

9/12/2024

Client: ERM-West Job ID: 580-142813-1

LCS LCS

Project/Site: Arkema PDI Sampling

### Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-468175/2-A

**Matrix: Solid** 

**Analysis Batch: 468859** 

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

riep type. Totalita	
<b>Prep Batch: 468175</b>	
%Rec	

Analyte	Added	Result	Qualifier Unit	D %Rec	Limits	
2-Methylnaphthalene	2000	1940	ug/Kg	97	75 - 120	
Hexachlorocyclopentadiene	2000	1820	ug/Kg	91	36 - 124	
2,4,6-Trichlorophenol	2000	2040	ug/Kg	102	68 - 120	
2,4,5-Trichlorophenol	2000	1850	ug/Kg	93	60 - 120	
2-Chloronaphthalene	2000	1790	ug/Kg	89	65 - 120	
2-Nitroaniline	2000	2020	ug/Kg	101	65 - 120	
Dimethyl phthalate	2000	1880	ug/Kg	94	71 - 120	
Acapanhthylana	2000	1060	ua/Va	02	72 120	

Spike

Acenaphthylene 2000 1860 ug/Kg 72 - 120 2,6-Dinitrotoluene 100 2000 2000 ug/Kg 70 - 1262000 1540 77 3-Nitroaniline ug/Kg 28 - 120 2000 88 64 - 120 Acenaphthene 1760 ug/Kg 4000 2,4-Dinitrophenol 5310 133 10 - 139 ug/Kg

4-Nitrophenol 4000 3760 94 26 - 140 ug/Kg 2000 95 Dibenzofuran 1900 ug/Kg 68 - 120 2,4-Dinitrotoluene 2000 2150 ug/Kg 108 63 - 120 Diethyl phthalate 2000 97 1930 ug/Kg 71 - 1204-Chlorophenyl phenyl ether 2000 1810 90 70 - 120 ug/Kg

Fluorene 2000 1880 94 68 - 121 ug/Kg 2000 101 4-Nitroaniline 2020 ug/Kg 53 - 123 4,6-Dinitro-2-methylphenol 4000 5320 133 10 - 141 ug/Kg 67 - 120 N-Nitrosodiphenylamine 2000 2050 ug/Kg 103 4-Bromophenyl phenyl ether 2000 1960 ug/Kg 98 65 - 127Hexachlorobenzene 2000 1910 ug/Kg 96 65 - 126 Pentachlorophenol 4000 4340 109 18 - 133 ug/Kg

2000 1920 96 Phenanthrene 74 - 120 ug/Kg Anthracene 2000 1960 98 67 - 120 ug/Kg 66 - 135 2000 2440 122 Di-n-butyl phthalate ug/Kg Fluoranthene 2000 2030 ug/Kg 101 69 - 133 Pyrene 2000 2040 ug/Kg 102 68 - 126Butyl benzyl phthalate 2000 2180 ug/Kg 109 58 - 150 3.3'-Dichlorobenzidine 4000 3100 ug/Kg 78 41 - 137

2000 Benzo[a]anthracene 2120 ug/Kg 106 60 - 135 Chrysene 2000 1940 97 69 - 127 ug/Kg Bis(2-ethylhexyl) phthalate 2000 2200 110 56 - 150 ug/Kg Di-n-octyl phthalate 2000 2270 ug/Kg 114 53 - 150 Benzo[a]pyrene 2000 2030 102 70 - 129 ug/Kg Indeno[1,2,3-cd]pyrene 2000 2460 ug/Kg 123 43 - 133 2000 2470 123 Dibenz(a,h)anthracene 51 - 139 ug/Kg 2000 2450 122 50 - 130 Benzo[g,h,i]perylene ug/Kg 2000 Carbazole 1960 98 76 - 150 ug/Kg

1-Methylnaphthalene 2000 1870 ug/Kg 93 69 - 120 2000 2070 104 58 - 136 Benzo[b]fluoranthene ug/Kg Benzo[k]fluoranthene 2000 2000 ug/Kg 100 57 - 1422000 1810 91 bis(chloroisopropyl) ether ug/Kg 39 - 129

LCS LCS Surrogate %Recovery Qualifier Limits 2-Fluorophenol (Surr) 88 58 - 120 Phenol-d5 (Surr) 88 59 - 120

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

## Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-468175/2-A

**Matrix: Solid** 

**Analysis Batch: 468859** 

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

**Prep Batch: 468175** 

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Nitrobenzene-d5 (Surr)	93		63 - 120
2-Fluorobiphenyl	84		64 - 120
2,4,6-Tribromophenol (Surr)	93		62 - 122
Terphenyl-d14 (Surr)	90		73 - 125

**Client Sample ID: Lab Control Sample Dup** 

Lab Sample ID: LCSD 580-468175/3-A **Matrix: Solid** 

Prep Type: Total/NA

Analysis Batch: 468859							Prep Ba	atch: 40	
	•		LCSD				%Rec		RPD
Analyte	Added		Qualifier	Unit	_ D	%Rec	Limits	RPD	Limit
Phenol	2000	1820		ug/Kg		91	59 - 120	1	30
Bis(2-chloroethyl)ether	2000	1780		ug/Kg		89	61 - 120	4	30
2-Chlorophenol	2000	1850		ug/Kg		92	66 - 120	2	32
1,3-Dichlorobenzene	2000	1700		ug/Kg		85	65 - 120	2	29
1,4-Dichlorobenzene	2000	1680		ug/Kg		84	68 - 120	2	35
Benzyl alcohol	2000	1870		ug/Kg		93	10 - 134	4	40
1,2-Dichlorobenzene	2000	1680		ug/Kg		84	68 - 120	3	30
2-Methylphenol	2000	1860		ug/Kg		93	53 - 120	1	40
3 & 4 Methylphenol	2000	2000		ug/Kg		100	54 - 120	5	36
N-Nitrosodi-n-propylamine	2000	1850		ug/Kg		92	63 - 120	5	35
Hexachloroethane	2000	1630		ug/Kg		82	68 - 120	5	34
Nitrobenzene	2000	1840		ug/Kg		92	57 - 128	2	33
Isophorone	2000	1930		ug/Kg		96	61 - 123	2	31
2-Nitrophenol	2000	2140		ug/Kg		107	67 - 131	4	30
2,4-Dimethylphenol	2000	1950		ug/Kg		97	55 - 120	3	40
Benzoic acid	4000	3090	J	ug/Kg		77	10 - 120	10	40
Bis(2-chloroethoxy)methane	2000	1900		ug/Kg		95	60 - 120	4	33
2,4-Dichlorophenol	2000	1970		ug/Kg		99	63 - 120	0	19
1,2,4-Trichlorobenzene	2000	1770		ug/Kg		89	66 - 125	1	18
Naphthalene	2000	1790		ug/Kg		90	68 - 120	4	15
4-Chloroaniline	2000	1650		ug/Kg		82	10 - 120	1	40
Hexachlorobutadiene	2000	1840		ug/Kg		92	56 - 146	1	19
4-Chloro-3-methylphenol	2000	1850		ug/Kg		92	55 - 120	6	25
2-Methylnaphthalene	2000	1930		ug/Kg		96	75 - 120	1	21
Hexachlorocyclopentadiene	2000	1830		ug/Kg		92	36 - 124	0	21
2,4,6-Trichlorophenol	2000	1950		ug/Kg		98	68 - 120	4	20
2,4,5-Trichlorophenol	2000	1850		ug/Kg		93	60 - 120	0	23
2-Chloronaphthalene	2000	1730		ug/Kg		87	65 - 120	3	21
2-Nitroaniline	2000	1940		ug/Kg		97	65 - 120	4	16
Dimethyl phthalate	2000	1830		ug/Kg		91	71 - 120	3	21
Acenaphthylene	2000	1810		ug/Kg		90	72 - 120	3	18
2,6-Dinitrotoluene	2000	1950		ug/Kg		98	70 - 126	3	18
3-Nitroaniline	2000	1540		ug/Kg		77	28 - 120	0	25
Acenaphthene	2000	1720		ug/Kg		86	64 - 120	2	19
2,4-Dinitrophenol	4000	5320		ug/Kg		133	10 - 139	0	40
4-Nitrophenol	4000	3700		ug/Kg		93	26 - 140	2	31
Dibenzofuran	2000	1840		ug/Kg		92	68 - 120	3	18
2,4-Dinitrotoluene	2000	2020		ug/Kg		101	63 - 120	6	23

Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

#### Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-468175/3-A

**Matrix: Solid** 

Client: ERM-West

**Analysis Batch: 468859** 

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA Prep Batch: 468175

Analysis Baton. 400000	Cmileo	LCCD	LCCD				% Pag	1011. 4	
Analyte	Spike Added		LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Diethyl phthalate	2000	1890		ug/Kg	_ =	94	71 - 120	2	22
4-Chlorophenyl phenyl ether	2000	1740		ug/Kg		87	70 - 120	4	21
Fluorene	2000	1820		ug/Kg		91	68 - 121	3	17
4-Nitroaniline	2000	2050		ug/Kg		102	53 - 123	1	23
4,6-Dinitro-2-methylphenol	4000	5230		ug/Kg		131	10 - 141	2	40
N-Nitrosodiphenylamine	2000	1990		ug/Kg		99	67 - 120	3	30
4-Bromophenyl phenyl ether	2000	1870		ug/Kg		94	65 - 127	5	32
Hexachlorobenzene	2000	1810		ug/Kg		90	65 - 126	6	32
Pentachlorophenol	4000	4260		ug/Kg		106	18 - 133	2	40
Phenanthrene	2000	1890		ug/Kg		95	74 - 120	2	27
Anthracene	2000	1910		ug/Kg		95	67 - 120	3	28
Di-n-butyl phthalate	2000	2700		ug/Kg		135	66 - 135	10	26
Fluoranthene	2000	1950		ug/Kg		98	69 - 133	4	21
Pyrene	2000	1990		ug/Kg		99	68 - 126	3	24
Butyl benzyl phthalate	2000	2050		ug/Kg		102	58 - 150	6	27
3,3'-Dichlorobenzidine	4000	3030		ug/Kg		76	41 - 137	2	40
Benzo[a]anthracene	2000	2010		ug/Kg		101	60 - 135	5	21
Chrysene	2000	1850		ug/Kg		92	69 - 127	5	27
Bis(2-ethylhexyl) phthalate	2000	2100		ug/Kg		105	56 - 150	4	25
Di-n-octyl phthalate	2000	2160		ug/Kg		108	53 - 150	5	18
Benzo[a]pyrene	2000	1930		ug/Kg		97	70 - 129	5	27
Indeno[1,2,3-cd]pyrene	2000	2320		ug/Kg		116	43 - 133	6	30
Dibenz(a,h)anthracene	2000	2390		ug/Kg		120	51 - 139	3	29
Benzo[g,h,i]perylene	2000	2370		ug/Kg		118	50 - 130	3	26
Carbazole	2000	1960		ug/Kg		98	76 - 150	0	24
1-Methylnaphthalene	2000	1850		ug/Kg		92	69 - 120	1	24
Benzo[b]fluoranthene	2000	2010		ug/Kg		100	58 - 136	3	25
Benzo[k]fluoranthene	2000	1870		ug/Kg		94	57 - 142	6	18
bis(chloroisopropyl) ether	2000	1700		ug/Kg		85	39 - 129	6	33

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
2-Fluorophenol (Surr)	88		58 - 120
Phenol-d5 (Surr)	89		59 - 120
Nitrobenzene-d5 (Surr)	89		63 - 120
2-Fluorobiphenyl	80		64 - 120
2,4,6-Tribromophenol (Surr)	97		62 - 122
Terphenyl-d14 (Surr)	90		73 - 125

#### Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-468715/1-A

**Matrix: Solid** 

**Analysis Batch: 469041** 

Client Sample ID: Method Blank Prep Type: Total/NA Prep Batch: 468715

MB	MB					•	
Analyte Result	Qualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD ND	0.0050	0.00090	mg/Kg	_	08/19/24 15:55	08/21/24 18:30	1
2,4'-DDE ND	0.0050	0.00060	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
2,4'-DDT ND	0.0050	0.0010	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
4,4'-DDD ND	0.0020	0.00023	mg/Kg		08/19/24 15:55	08/21/24 18:30	1

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

### Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 580-468715/1-A Client Sample ID: Method Blank **Matrix: Solid Prep Type: Total/NA** Analysis Batch: 469041 **Prep Batch: 468715** MB MB

	MB	INIR							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDE	ND		0.0020	0.00037	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
4,4'-DDT	0.000705	J	0.0020	0.00037	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
Aldrin	ND		0.0030	0.00038	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
alpha-BHC	ND		0.0020	0.00016	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
beta-BHC	ND		0.0050	0.00025	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
cis-Chlordane	ND		0.0020	0.00075	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
delta-BHC	ND		0.0030	0.00028	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
Dieldrin	ND		0.0020	0.00035	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
Endosulfan I	ND		0.0020	0.00034	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
Endosulfan II	ND		0.0020	0.00026	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
Endosulfan sulfate	ND		0.0020	0.00028	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
Endrin	ND		0.0020	0.00047	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
Endrin aldehyde	ND		0.020	0.0048	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
Endrin ketone	ND		0.0020	0.00042	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
gamma-BHC (Lindane)	ND		0.0020	0.00075	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
Heptachlor	ND		0.0030	0.00019	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
Heptachlor epoxide	ND		0.0030	0.00030	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
Methoxychlor	ND		0.010	0.00037	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
Toxaphene	ND		0.13	0.025	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
trans-Chlordane	ND		0.0030	0.00032	mg/Kg		08/19/24 15:55	08/21/24 18:30	1

MB MB %Recovery Qualifier Limits Surrogate Prepared Analyzed Dil Fac <u>08/19/24 15:55</u> <u>08/21/24 18:30</u> DCB Decachlorobiphenyl 72 53 - 123 Tetrachloro-m-xylene 85 48 - 123 08/19/24 15:55 08/21/24 18:30

Lab Sample ID: LCS 580-468715/2-A **Client Sample ID: Lab Control Sample** 

Matrix: Solid Analysis Batch: 469041	Spike	LCS	LCS				Prep Type: Total/NA Prep Batch: 468715 %Rec
Analyte	Added		Qualifier	Unit	D	%Rec	Limits
4,4'-DDD	0.0200	0.0186	<u> </u>	mg/Kg	_ =	93	55 - 121
4,4'-DDE	0.0200	0.0192		mg/Kg		96	59 - 124
4,4'-DDT	0.0200	0.0190		mg/Kg		95	42 - 132
Aldrin	0.0200	0.0191		mg/Kg		96	56 - 121
alpha-BHC	0.0200	0.0190		mg/Kg		95	57 - 120
beta-BHC	0.0200	0.0197		mg/Kg		99	53 - 120
cis-Chlordane	0.0200	0.0187		mg/Kg		94	56 - 120
delta-BHC	0.0200	0.0157		mg/Kg		78	47 - 120
Dieldrin	0.0200	0.0180		mg/Kg		90	61 - 121
Endosulfan I	0.0200	0.0202		mg/Kg		101	48 - 121
Endosulfan II	0.0200	0.0194		mg/Kg		97	20 - 125
Endosulfan sulfate	0.0200	0.0181		mg/Kg		90	57 - 120
Endrin	0.0200	0.0211		mg/Kg		106	56 - 126
Endrin aldehyde	0.0200	0.0197	J	mg/Kg		99	24 - 136
Endrin ketone	0.0200	0.0291	*+	mg/Kg		145	56 - 121
gamma-BHC (Lindane)	0.0200	0.0200		mg/Kg		100	55 - 120
Heptachlor	0.0200	0.0209		mg/Kg		104	57 - 124
Heptachlor epoxide	0.0200	0.0202		mg/Kg		101	54 - 125

Job ID: 580-142813-1 Client: ERM-West

Project/Site: Arkema PDI Sampling

### Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 580-468715/2-A			Client Sample ID: Lab Control Sample
Matrix: Solid			Prep Type: Total/NA
Analysis Batch: 469041			Prep Batch: 468715
	Spike	LCS LCS	%Rec

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Methoxychlor	0.0200	0.0194		mg/Kg		97	51 - 133	
trans-Chlordane	0.0200	0.0165		mg/Kg		83	42 - 136	

	LCS LCS	
Surrogate	%Recovery Qualifier	Limits
DCB Decachlorobiphenyl	82	53 - 123
Tetrachloro-m-xylene	91	48 - 123

Lab Sample ID: LCS 580-468715/4-A **Client Sample ID: Lab Control Sample Matrix: Solid Prep Type: Total/NA Analysis Batch: 469041 Prep Batch: 468715** 

LCS LCS %Rec Spike Added Result Qualifier Unit D %Rec Limits Toxaphene 0.500 0.476 mg/Kg 95 54 - 141

	LCS LCS	
Surrogate	%Recovery Qualifier	Limits
DCB Decachlorobiphenyl	81	53 - 123
Tetrachloro-m-xylene	88	48 - 123

Lab Sample ID: LCS 580-468715/6-A **Client Sample ID: Lab Control Sample Matrix: Solid** Prep Type: Total/NA **Prep Batch: 468715** 

Analysis Batch: 469041

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit D %Rec Limits 2,4'-DDD 0.0200 0.0156 mg/Kg 78 39 - 126 2,4'-DDE 0.0200 0.0147 mg/Kg 74 31 - 130 2,4'-DDT 0.0200 0.0162 mg/Kg 81 36 - 125

	LCS		
Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl	75		53 - 123
Tetrachloro-m-xylene	85		48 - 123

Lab Sample ID: LCSD 580-468715/5-A **Client Sample ID: Lab Control Sample Dup Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 469041								<b>Prep Batch: 468715</b>			
	Spike	LCSD	LCSD				%Rec		RPD		
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit		
Toxaphene	0.500	0.458		mg/Kg	_	92	54 - 141	4	27		

	LCSD LCSD	
Surrogate	%Recovery Qualifier	Limits
DCB Decachlorobiphenyl	78	53 - 123
Tetrachloro-m-xylene	92	48 - 123

Lab Sample ID: LCSD 580-468715/7-A **Client Sample ID: Lab Control Sample Dup** 

Matrix: Solid							Prep ly	pe: 10t	al/NA
Analysis Batch: 469041							Prep Ba	atch: 46	68715
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2,4'-DDD	0.0200	0.0181		mg/Kg		91	39 - 126	15	35

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

#### Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 580-468715/7-A

Lab Sample ID: 580-142813-5 MS

**Matrix: Solid** 

**Matrix: Solid** 

Analysis Batch: 469041

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

**Prep Batch: 468715 RPD** 

LCSD LCSD Spike %Rec Analyte Added Result Qualifier Unit D %Rec Limits RPD Limit 2,4'-DDE 0.0200 0.0166 mg/Kg 83 31 - 130 12 40 2,4'-DDT 0.0200 0.0290 \*+ \*1 mg/Kg 145 36 - 125 57 32

LCSD LCSD

Surrogate	%Recovery Qualifie	r Limits
DCB Decachlorobiphenyl	83	53 - 123
Tetrachloro-m-xylene	90	48 - 123

Client Sample ID: PDI-20-SO-9-20240807

Prep Type: Total/NA

Analysis Batch: 469041	Sample	Sample	Spike	MS	MS				Prep Batch: 46871 %Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
4,4'-DDD	ND	F1 F2	0.0195	0.137	F1	mg/Kg	☆	703	55 - 121
4,4'-DDE	ND	F1	0.0195	0.0498	F1	mg/Kg	☆	255	59 - 124
4,4'-DDT	ND	F1	0.0195	0.00712	F1	mg/Kg	₩	36	42 - 132
Aldrin	ND		0.0195	0.0140		mg/Kg	₩	72	56 - 121
alpha-BHC	ND		0.0195	0.0128		mg/Kg	☆	65	57 - 120
beta-BHC	ND		0.0195	0.0141		mg/Kg	₩	72	53 - 120
cis-Chlordane	ND		0.0195	0.0126		mg/Kg	☆	65	56 - 120
delta-BHC	ND	F1	0.0195	0.00925		mg/Kg	☆	47	47 - 120
Dieldrin	ND		0.0195	0.0201		mg/Kg	₩	103	61 - 121
Endosulfan I	ND	F1	0.0195	ND	F1	mg/Kg	≎	0	48 - 121
Endosulfan II	ND	F1	0.0195	0.0333	F1	mg/Kg	☆	170	20 - 125
Endosulfan sulfate	ND	F1	0.0195	0.0234		mg/Kg	≎	120	57 - 120
Endrin	ND	F1	0.0195	0.0124		mg/Kg	≎	64	56 - 126
Endrin aldehyde	ND		0.0195	0.0179	J	mg/Kg	☆	91	24 - 136
Endrin ketone	ND	*+ F1	0.0195	0.0240	F1	mg/Kg	≎	123	56 - 121
gamma-BHC (Lindane)	ND		0.0195	0.0131		mg/Kg	≎	67	55 - 120

0.0195

0.0195

0.0195

0.0195

MS MS

ND F1F2

ND F1F2

ND F1

ND F1

Surrogate	%Recovery	Qualifier	Limits		
DCB Decachlorobiphenyl	335	S1+	53 - 123		
Tetrachloro-m-xylene	63		48 - 123		

Lab Sample ID: 580-142813-5 MSD Client Sample ID: PDI-20-SO-9-20240807

0.0112

0.0238

ND F1

0.182 F1

mg/Kg

mg/Kg

mg/Kg

mg/Kg

57

122

931

0

₩

₩

57 - 124

54 - 125

51 - 133

42 - 136

**Matrix: Solid** 

Heptachlor

Methoxychlor

trans-Chlordane

Heptachlor epoxide

Analysis Batch: 469041									Prep Batch: 4687'		38715
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
4,4'-DDD	ND	F1 F2	0.0206	0.281	F1 F2	mg/Kg	<del>*</del>	1362	55 - 121	69	33
4,4'-DDE	ND	F1	0.0206	0.0638	F1	mg/Kg	₩	310	59 - 124	25	27
4,4'-DDT	ND	F1	0.0206	ND	F1	mg/Kg	₩	0	42 - 132	NC	40
Aldrin	ND		0.0206	0.0153		mg/Kg	₩	74	56 - 121	9	20
alpha-BHC	ND		0.0206	0.0141		mg/Kg	₩	68	57 - 120	9	22
beta-BHC	ND		0.0206	0.0160		mg/Kg	₩	77	53 - 120	12	40

**Eurofins Seattle** 

Prep Type: Total/NA

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

### Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: 580-142813-5 MSD

**Matrix: Solid** 

Analysis Batch: 469041

Client Sample ID: PDI-20-SO-9-20240807

**Prep Type: Total/NA** 

**Prep Batch: 468715** 

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
cis-Chlordane	ND		0.0206	0.0118		mg/Kg	<del>-</del>	57	56 - 120	7	23
delta-BHC	ND	F1	0.0206	0.00937	F1	mg/Kg	₩	45	47 - 120	1	40
Dieldrin	ND		0.0206	0.0166		mg/Kg	☼	81	61 - 121	19	24
Endosulfan I	ND	F1	0.0206	ND	F1	mg/Kg	₽	0	48 - 121	NC	25
Endosulfan II	ND	F1	0.0206	0.0396	F1	mg/Kg	☼	192	20 - 125	17	37
Endosulfan sulfate	ND	F1	0.0206	0.0284	F1	mg/Kg	₩	138	57 - 120	19	25
Endrin	ND	F1	0.0206	0.0113	F1	mg/Kg	₽	55	56 - 126	9	25
Endrin aldehyde	ND		0.0206	0.0206	J	mg/Kg	☼	100	24 - 136	14	40
Endrin ketone	ND	*+ F1	0.0206	0.0290	F1	mg/Kg	₩	141	56 - 121	19	20
gamma-BHC (Lindane)	ND		0.0206	0.0124		mg/Kg	₩	60	55 - 120	6	18
Heptachlor	ND	F1 F2	0.0206	0.00893	F1 F2	mg/Kg	☼	43	57 - 124	23	22
Heptachlor epoxide	ND	F1	0.0206	0.0301	F1	mg/Kg	☼	146	54 - 125	23	34
Methoxychlor	ND	F1	0.0206	ND	F1	mg/Kg	₽	0	51 - 133	NC	30
trans-Chlordane	ND	F1 F2	0.0206	0.303	F1 F2	mg/Kg	☼	1472	42 - 136	50	26

MSD MSD

%Recovery Qualifier Limits Surrogate DCB Decachlorobiphenyl 0 S1-53 - 123 48 - 123 Tetrachloro-m-xylene 63

Lab Sample ID: MB 580-469121/1-A

**Matrix: Solid** 

Analysis Batch: 469215

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

**Prep Batch: 469121** 

	MB	MB
Analyte	Result	Qua

Analyte	Result	Qualifier	KL	MDL	Unit	ט	Prepared	Anaiyzea	DII Fac
2,4'-DDD	ND		0.0050	0.00090	mg/Kg		08/22/24 12:14	08/23/24 13:19	1
2,4'-DDE	ND		0.0050	0.00060	mg/Kg		08/22/24 12:14	08/23/24 13:19	1
2,4'-DDT	0.00387	J	0.0050	0.0010	mg/Kg		08/22/24 12:14	08/23/24 13:19	1

	MB MB				
Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	83	53 - 123	08/22/24 12:14	08/23/24 13:19	1
Tetrachloro-m-xylene	93	48 - 123	08/22/24 12:14	08/23/24 13:19	1

Lab Sample ID: LCS 580-469121/2-A

**Matrix: Solid** 

Analysis Batch: 469215

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

**Prep Batch: 469121** 

	Spike	LCS	LCS			%Rec	
Analyte	Added	Result	Qualifier Unit	. <b>D</b>	%Rec	Limits	
2,4'-DDD	0.0200	0.0167	mg/l	 <b>K</b> g	83	39 - 126	
2,4'-DDE	0.0200	0.0176	mg/l	<b>K</b> g	88	31 - 130	
2,4'-DDT	0.0200	0.0177	mg/l	<b>K</b> g	88	36 - 125	

LCS	LCS
-----	-----

Surrogate	%Recovery	Qualifier	Limits
DCB Decachlorobiphenyl	84		53 - 123
Tetrachloro-m-xvlene	102		48 - 123

**Eurofins Seattle** 

9/12/2024

Spike

Added

0.0200

0.0200

0.0200

Client: ERM-West Job ID: 580-142813-1

LCSD LCSD

0.0163

0.0169

0.0179

Result Qualifier

**MDL** Unit

0.0074 mg/Kg

0.012 mg/Kg

0.0049 mg/Kg

0.0080 mg/Kg

0.0070 mg/Kg

0.0090 mg/Kg

0.0074 mg/Kg

Unit

mg/Kg

mg/Kg

mg/Kg

Project/Site: Arkema PDI Sampling

#### Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 580-469121/3-A

**Matrix: Solid** 

Analyte

2,4'-DDD

2,4'-DDE

2,4'-DDT

Analysis Batch: 469215

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

**Prep Batch: 469121** 

		%Rec		RPD	
D	%Rec	Limits	RPD	Limit	
_	81	39 - 126	2	35	
	85	31 - 130	4	40	
	89	36 - 125	1	32	

LCSD LCSD

Surrogate %Recovery Qualifier Limits DCB Decachlorobiphenyl 79 53 - 123 Tetrachloro-m-xylene 96 48 - 123

#### Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 580-468715/1-A

**Matrix: Solid** 

Analyte

PCB-1016

PCB-1221

PCB-1232

PCB-1242

PCB-1248

PCB-1254

PCB-1260

**Analysis Batch: 469089** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

Drop Batch: 469745

MB MB

ND

ND

ND

ND

ND

ND

ND

Result Qualifier

		100/15	
D	Prepared	Analyzed	Dil Fac
	08/19/24 15:55	08/22/24 16:48	1
	08/19/24 15:55	08/22/24 16:48	1
	08/19/24 15:55	08/22/24 16:48	1
	08/19/24 15:55	08/22/24 16:48	1
	08/19/24 15:55	08/22/24 16:48	1
	08/19/24 15:55	08/22/24 16:48	1

08/19/24 15:55 08/22/24 16:48

MB MB

Surrogate	%Recovery Qua	alifier Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	77	44 - 135	08/19/24 15:55	08/22/24 16:48	1
Tetrachloro-m-xylene	79	48 - 150	08/19/24 15:55	08/22/24 16:48	1

RL

0.020

0.020

0.020

0.020

0.020

0.020

0.020

Lab Sample ID: LCS 580-468715/3-A

**Matrix: Solid** 

**Analysis Batch: 469089** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 468715** %Rec

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
PCB-1016	 0.100	0.0845		mg/Kg		85	42 - 150	
PCB-1260	0.100	0.0850		mg/Kg		85	43 - 145	

LCS LCS

Surrogate	%Recovery Qualifier	Limits
DCB Decachlorobiphenyl	79	44 - 135
Tetrachloro-m-xylene	79	48 - 150

Lab Sample ID: 580-142813-5 MS

**Matrix: Solid** 

**Analysis Batch: 469089** 

Client Sample ID: PDI-20-SO-9-20240807

Prep Type: Total/NA

**Prep Batch: 468715** 

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
PCB-1016	ND	F1	0.0987	ND	F1	mg/Kg	☼	0	42 - 150	
PCB-1260	ND	F1	0.0987	ND	F1	mg/Kg	₩	0	43 - 145	

Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

#### Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Limits

Lab Sample ID: 580-142813-5 MS

**Matrix: Solid** 

Client: ERM-West

**Analysis Batch: 469089** 

Client Sample ID: PDI-20-SO-9-20240807

Prep Type: Total/NA

**Prep Batch: 468715** 

MS MS %Recovery Qualifier Surrogate

DCB Decachlorobiphenyl 56 44 - 135 Tetrachloro-m-xylene 55 48 - 150

Lab Sample ID: 580-142813-5 MSD Client Sample ID: PDI-20-SO-9-20240807

**Matrix: Solid** 

**Analysis Batch: 469089** 

Prep Type: Total/NA

**Prep Batch: 468715** 

MSD MSD %Rec **RPD** Sample Sample Spike Analyte Result Qualifier Added Result Qualifier Unit D %Rec Limits RPD Limit PCB-1016 ND F1 0.102 ND F1 mg/Kg ☼ 0 42 - 150 NC 17 PCB-1260 ND F1 ND F1 0 0.102 mg/Kg ₩ 43 - 145 NC 13

MSD MSD

Surrogate %Recovery Qualifier Limits DCB Decachlorobiphenyl 44 - 135 74 р Tetrachloro-m-xylene 63 48 - 150

#### Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 570-471244/1-A

**Matrix: Solid** 

**Analysis Batch: 473202** 

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 471244

MB MB **Analyte** Result Qualifier RL **MDL** Unit D Prepared Analyzed Dil Fac 2,4,5-T ND 10 3.7 ug/Kg 08/15/24 15:29 08/22/24 02:41 2,4,5-TP (Silvex) ND 10 08/15/24 15:29 08/22/24 02:41 7.5 ug/Kg 08/15/24 15:29 08/22/24 02:41 ND 100 2,4-D ug/Kg 2.4-DB ND 100 100 ug/Kg 08/15/24 15:29 08/22/24 02:41 ND 250 08/15/24 15:29 08/22/24 02:41 Dalapon 72 ug/Kg Dicamba ND 10 4.7 ug/Kg 08/15/24 15:29 08/22/24 02:41 ND 100 Dichlorprop 49 ug/Kg 08/15/24 15:29 08/22/24 02:41 Dinoseb ND 100 59 ug/Kg 08/15/24 15:29 08/22/24 02:41 **MCPA** ND 10000 4900 ug/Kg 08/15/24 15:29 08/22/24 02:41 **MCPP** ND 10000 6600 ug/Kg 08/15/24 15:29 08/22/24 02:41

MB MB

%Recovery Qualifier Limits Dil Fac Surrogate Prepared Analyzed 20 - 163 08/15/24 15:29 08/22/24 02:41 2,4-Dichlorophenylacetic acid 58

Lab Sample ID: LCS 570-471244/2-A

**Matrix: Solid** 

**Analysis Batch: 473202** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 471244** 

Spike LCS LCS %Rec Added Limits Result Qualifier Unit %Rec Analyte 2,4,5-T 20.0 27.3 ug/Kg 136 26 - 180 ug/Kg 2,4,5-TP (Silvex) 20.0 24.7 123 10 - 180 200 124 2,4-D 248 p ug/Kg 13 - 180 2,4-DB 200 282 ug/Kg 141 10 - 180 Dalapon 500 413 83 10 - 176 ug/Kg 20.0 124 Dicamba 24.8 ug/Kg 21 - 164 200 85 Dichlorprop 170 10 - 175 ug/Kg

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Method: 8151A - Herbicides (GC) (Continued)

Lab Sample ID: LCS 570-471244/2-A **Matrix: Solid** 

Lab Sample ID: LCSD 570-471244/3-A

Analysis Batch: 473202

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 471244

Spike	LCS	LCS				%Rec	
Added	Result	Qualifier	Unit	D	%Rec	Limits	
100	114		ug/Kg		114	10 - 180	
20000	26600		ug/Kg		133	22 - 180	
20000	20000	р	ug/Kg		100	18 - 180	
	Added 100 20000	Added Result 100 114 20000 26600	100 114 20000 26600	Added         Result         Qualifier         Unit           100         114         ug/Kg           20000         26600         ug/Kg	Added         Result 114         Qualifier ug/Kg         Unit ug/Kg         D           20000         26600         ug/Kg	Added         Result 100         Qualifier 114         Unit ug/Kg         D wRec 114           20000         26600         ug/Kg         133	Added         Result         Qualifier         Unit         D         %Rec         Limits           100         114         ug/Kg         114         10 - 180           20000         26600         ug/Kg         133         22 - 180

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
2,4-Dichlorophenylacetic acid	76	p	20 - 163

**Client Sample ID: Lab Control Sample Dup** 

**Matrix: Solid** 

**Analysis Batch: 473202** 

**Prep Type: Total/NA Prep Batch: 471244** 

•	Spike	LCSD	LCSD				%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
2,4,5-T	20.0	21.4		ug/Kg		107	26 - 180	24	40	
2,4,5-TP (Silvex)	20.0	20.1		ug/Kg		100	10 - 180	21	40	
2,4-D	200	157	p *1	ug/Kg		78	13 - 180	45	40	
2,4-DB	200	162		ug/Kg		81	10 - 180	25	40	
Dalapon	500	350		ug/Kg		70	10 - 176	16	40	
Dicamba	20.0	19.0		ug/Kg		95	21 - 164	27	40	
Dichlorprop	200	127		ug/Kg		64	10 - 175	29	40	
Dinoseb	100	ND	*1	ug/Kg		44	10 - 180	96	40	
MCPA	20000	18900		ug/Kg		94	22 - 180	34	40	
MCPP	20000	14700	р	ug/Kg		73	18 - 180	30	40	

LCSD LCSD

Surrogate %Recovery Qualifier Limits 2,4-Dichlorophenylacetic acid 57 p 20 - 163

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-468240/1-A

**Matrix: Solid** 

**Analysis Batch: 468338** 

**Client Sample ID: Method Blank** Prep Type: Total/NA **Prep Batch: 468240** 

	IVID	IVID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		50	12	mg/Kg		08/14/24 16:12	08/15/24 20:04	1
Motor Oil (>C24-C36)	ND		50	18	mg/Kg		08/14/24 16:12	08/15/24 20:04	1
	МВ	MB							

Surrogate Limits Dil Fac %Recovery Qualifier Prepared Analyzed 08/14/24 16:12 08/15/24 20:04 o-Terphenyl 61 50 - 150

Lab Sample ID: LCS 580-468240/2-A

**Matrix: Solid** 

**Analysis Batch: 468338** 

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA **Prep Batch: 468240** 

	Spike	LCS	LCS			%Rec	
Analyte	Added	Result	Qualifier Unit	D	%Rec	Limits	
#2 Diesel (C10-C24)	500	398	mg/Kg	 I	80	70 - 125	
Motor Oil (>C24-C36)	500	426	mg/Kg	I	85	70 - 129	

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

### Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Spike

Added

500

500

427

Lab Sample ID: LCS 580-468240/2-A

Lab Sample ID: LCSD 580-468240/3-A

**Matrix: Solid** 

**Matrix: Solid** 

#2 Diesel (C10-C24)

Motor Oil (>C24-C36)

Analyte

Analysis Batch: 468338

**Analysis Batch: 468338** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Prep Batch: 468240** 

LCS LCS

Surrogate %Recovery Qualifier Limits o-Terphenyl 50 - 150

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

**Prep Batch: 468240** 

0

16

LCSD LCSD %Rec **RPD** Result Qualifier Limits RPD Limit Unit D %Rec 2 390 mg/Kg 78 70 - 125 16

85

mg/Kg

LCSD LCSD

Surrogate %Recovery Qualifier Limits o-Terphenyl 74 50 - 150

#### Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Lab Sample ID: MB 320-790133/1-A

**Matrix: Solid** 

Analysis Batch: 791618

**Client Sample ID: Method Blank** Prep Type: Total/NA

70 - 129

Prep Batch: 790133

Analysis Batch: 791618								Prep Batch: 790133				
	MB											
Analyte		Qualifier	RL _		Unit	D	Prepared	Analyzed	Dil Fac			
Perfluorobutanoic acid (PFBA)	ND		0.80	0.20	ug/Kg		08/12/24 06:20	08/15/24 13:37	1			
Perfluoropentanoic acid (PFPeA)	ND		0.40	0.10	ug/Kg		08/12/24 06:20	08/15/24 13:37	1			
Perfluorohexanoic acid (PFHxA)	ND		0.20	0.058	ug/Kg		08/12/24 06:20	08/15/24 13:37	1			
Perfluoroheptanoic acid (PFHpA)	ND		0.20	0.050	ug/Kg		08/12/24 06:20	08/15/24 13:37	1			
Perfluorooctanoic acid (PFOA)	ND		0.20	0.050	ug/Kg		08/12/24 06:20	08/15/24 13:37	1			
Perfluorononanoic acid (PFNA)	ND		0.20	0.058	ug/Kg		08/12/24 06:20	08/15/24 13:37	1			
Perfluorodecanoic acid (PFDA)	ND		0.20	0.055	ug/Kg		08/12/24 06:20	08/15/24 13:37	1			
Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.050	ug/Kg		08/12/24 06:20	08/15/24 13:37	1			
Perfluorododecanoic acid (PFDoA)	ND		0.20	0.050	ug/Kg		08/12/24 06:20	08/15/24 13:37	1			
Perfluorotridecanoic acid (PFTrDA)	ND		0.20	0.050	ug/Kg		08/12/24 06:20	08/15/24 13:37	1			
Perfluorotetradecanoic acid (PFTeDA)	ND		0.20	0.056	ug/Kg		08/12/24 06:20	08/15/24 13:37	1			
Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.050	ug/Kg		08/12/24 06:20	08/15/24 13:37	1			
Perfluoropentanesulfonic acid (PFPeS)	ND		0.20	0.065	ug/Kg		08/12/24 06:20	08/15/24 13:37	1			
Perfluorohexanesulfonic acid (PFHxS)	ND		0.20	0.050	ug/Kg		08/12/24 06:20	08/15/24 13:37	1			
Perfluoroheptanesulfonic acid (PFHpS)	ND		0.20	0.050	ug/Kg		08/12/24 06:20	08/15/24 13:37	1			
Perfluorooctanesulfonic acid (PFOS)	ND		0.20	0.062	ug/Kg		08/12/24 06:20	08/15/24 13:37	1			
Perfluorononanesulfonic acid (PFNS)	ND		0.20	0.063	ug/Kg		08/12/24 06:20	08/15/24 13:37	1			
Perfluorodecanesulfonic acid (PFDS)	ND		0.20	0.057	ug/Kg		08/12/24 06:20	08/15/24 13:37	1			
Perfluorododecanesulfonic acid (PFDoS)	ND		0.20	0.059	ug/Kg		08/12/24 06:20	08/15/24 13:37	1			
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		0.80	0.20	ug/Kg		08/12/24 06:20	08/15/24 13:37	1			
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		0.80	0.20	ug/Kg		08/12/24 06:20	08/15/24 13:37	1			
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		0.80		ug/Kg		08/12/24 06:20	08/15/24 13:37	1			
Perfluorooctanesulfonamide (PFOSA)	ND		0.20	0.050	ug/Kg		08/12/24 06:20	08/15/24 13:37	1			

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

## Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-790133/1-A

**Matrix: Solid** 

d5-NEtFOSAA

13C2 4:2 FTS

Client Sample ID: Method Blank Prep Type: Total/NA

**Analysis Batch: 791618 Prep Batch: 790133** MB MB

Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
amide ND	(	0.20	0.050	ug/Kg		08/12/24 06:20	08/15/24 13:37	1
mide ND	(	0.20	0.052	ug/Kg		08/12/24 06:20	08/15/24 13:37	1
amidoa ND	(	0.20	0.10	ug/Kg		08/12/24 06:20	08/15/24 13:37	1
nidoac ND	(	0.20	0.054	ug/Kg		08/12/24 06:20	08/15/24 13:37	1
		2.0	0.50	ug/Kg		08/12/24 06:20	08/15/24 13:37	1
ND )		2.0	0.51	ug/Kg		08/12/24 06:20	08/15/24 13:37	1
ner ND	(	0.80	0.22	ug/Kg		08/12/24 06:20	08/15/24 13:37	1
c acid ND	(	0.80	0.20	ug/Kg		08/12/24 06:20	08/15/24 13:37	1
acid ND	(	0.40	0.10	ug/Kg		08/12/24 06:20	08/15/24 13:37	1
cid ND	(	0.40	0.10	ug/Kg		08/12/24 06:20	08/15/24 13:37	1
acid ND	(	0.40	0.11	ug/Kg		08/12/24 06:20	08/15/24 13:37	1
	(	0.80	0.24	ug/Kg		08/12/24 06:20	08/15/24 13:37	1
	(	0.80	0.29	ug/Kg		08/12/24 06:20	08/15/24 13:37	1
	(	0.40	0.11	ug/Kg		08/12/24 06:20	08/15/24 13:37	1
d (3:3 ND		1.0	0.29	ug/Kg		08/12/24 06:20	08/15/24 13:37	1
d (5:3 ND		5.0	1.7	ug/Kg		08/12/24 06:20	08/15/24 13:37	1
	mide ND mide ND mide ND mide ND midoac ND nidoac ND ner ND c acid ND acid ND acid ND acid ND acid ND decan ND decan ND ds) onic ND d (3:3 ND	mide ND amidoac ND nidoac ND ND E) ND ner ND c acid ND acid ND acid ND acid ND acid ND acid ND acid ND nonan ND decan ND dS) onic ND	namide         ND         0.20           mide         ND         0.20           amidoa         ND         0.20           nidoac         ND         0.20           ND         2.0           E)         ND         2.0           ner         ND         0.80           c acid         ND         0.80           acid         ND         0.40           cid         ND         0.40           acid         ND         0.80           decan         ND         0.80           dS)         0.0ic         ND         0.40           d (3:3         ND         1.0	namide         ND         0.20         0.050           mide         ND         0.20         0.052           amidoa         ND         0.20         0.10           nidoac         ND         0.20         0.054           ND         2.0         0.50           E)         ND         2.0         0.51           neer         ND         0.80         0.22           c acid         ND         0.80         0.20           acid         ND         0.40         0.10           acid         ND         0.40         0.11           nonan         ND         0.80         0.24           decan         ND         0.80         0.29           dS)         0.040         0.11           d (3:3         ND         1.0         0.29	namide         ND         0.20         0.050         ug/Kg           mide         ND         0.20         0.052         ug/Kg           amidoa         ND         0.20         0.10         ug/Kg           nidoac         ND         0.20         0.054         ug/Kg           ND         2.0         0.50         ug/Kg           ND         2.0         0.51         ug/Kg           ND         0.80         0.22         ug/Kg           ac acid         ND         0.80         0.20         ug/Kg           acid         ND         0.40         0.10         ug/Kg           acid         ND         0.40         0.11         ug/Kg           acid         ND         0.80         0.24         ug/Kg           acid         ND         0.80         0.29         ug/Kg           acid         ND         0.80         0.29         ug/Kg           acid         ND         0.40         0.11         ug/Kg           acid         ND         0.40         0.11         ug/Kg           acid         ND         0.40         0.11         ug/Kg           acid         ND	namide         ND         0.20         0.050         ug/Kg           mide         ND         0.20         0.052         ug/Kg           amidoa         ND         0.20         0.10         ug/Kg           nidoac         ND         0.20         0.054         ug/Kg           ND         2.0         0.50         ug/Kg           ND         2.0         0.51         ug/Kg           ND         0.80         0.22         ug/Kg           c acid         ND         0.80         0.20         ug/Kg           acid         ND         0.40         0.10         ug/Kg           acid         ND         0.40         0.11         ug/Kg           acid         ND         0.80         0.24         ug/Kg           acid         ND         0.80         0.29         ug/Kg           acid         ND	namide         ND         0.20         0.050         ug/Kg         08/12/24 06:20           mide         ND         0.20         0.052         ug/Kg         08/12/24 06:20           amidoa         ND         0.20         0.10         ug/Kg         08/12/24 06:20           nidoac         ND         0.20         0.054         ug/Kg         08/12/24 06:20           ND         2.0         0.50         ug/Kg         08/12/24 06:20           ND         2.0         0.51         ug/Kg         08/12/24 06:20           ND         0.80         0.22         ug/Kg         08/12/24 06:20           ND         0.80         0.20         ug/Kg         08/12/24 06:20           acid         ND         0.40         0.10         ug/Kg         08/12/24 06:20           acid         ND         0.40         0.11         ug/Kg         08/12/24 06:20           acid         ND         0.40         0.11         ug/Kg         08/12/24 06:20           acid         ND         0.80         0.24         ug/Kg         08/12/24 06:20           acid         ND         0.80         0.29         ug/Kg         08/12/24 06:20           acid         ND	namide         ND         0.20         0.050         ug/Kg         08/12/24 06:20         08/15/24 13:37           mide         ND         0.20         0.052         ug/Kg         08/12/24 06:20         08/15/24 13:37           amidoa         ND         0.20         0.10         ug/Kg         08/12/24 06:20         08/15/24 13:37           midoac         ND         0.20         0.054         ug/Kg         08/12/24 06:20         08/15/24 13:37           midoac         ND         2.0         0.50         ug/Kg         08/12/24 06:20         08/15/24 13:37           mer         ND         2.0         0.51         ug/Kg         08/12/24 06:20         08/15/24 13:37           mer         ND         0.80         0.22         ug/Kg         08/12/24 06:20         08/15/24 13:37           decaid         ND         0.80         0.20         ug/Kg         08/12/24 06:20         08/15/24 13:37           acid         ND         0.40         0.10         ug/Kg         08/12/24 06:20         08/15/24 13:37           acid         ND         0.40         0.10         ug/Kg         08/12/24 06:20         08/15/24 13:37           acid         ND         0.40         0.11         ug/Kg

3-Perfluoroheptylpropanoic acid (7:3	ND		5.0	1.9 ug/Kg	08/12/24 06:20	08/15/24 13:37	1
FTCA)							
	MB	MB					
Isotope Dilution	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
13C4 PFBA	98.8		20 - 150		08/12/24 06:20	08/15/24 13:37	1
13C5 PFPeA	114		20 - 150		08/12/24 06:20	08/15/24 13:37	1
13C5 PFHxA	105		20 - 150		08/12/24 06:20	08/15/24 13:37	1
13C4 PFHpA	103		20 - 150		08/12/24 06:20	08/15/24 13:37	1
13C8 PFOA	96.0		20 - 150		08/12/24 06:20	08/15/24 13:37	1
13C9 PFNA	104		20 - 150		08/12/24 06:20	08/15/24 13:37	1
13C6 PFDA	98.1		20 - 150		08/12/24 06:20	08/15/24 13:37	1
13C7 PFUnA	88.2		20 - 150		08/12/24 06:20	08/15/24 13:37	1
13C2 PFDoA	80.0		20 - 150		08/12/24 06:20	08/15/24 13:37	1
13C2 PFTeDA	91.0		20 - 150		08/12/24 06:20	08/15/24 13:37	1
13C3 PFBS	104		20 - 150		08/12/24 06:20	08/15/24 13:37	1
13C3 PFHxS	96.6		20 - 150		08/12/24 06:20	08/15/24 13:37	1
13C8 PFOS	102		20 - 150		08/12/24 06:20	08/15/24 13:37	1
13C8 PFOSA	97.8		20 - 150		08/12/24 06:20	08/15/24 13:37	1
d3-NMeFOSAA	95.9		20 - 150		08/12/24 06:20	08/15/24 13:37	1

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08/12/24 06:20 08/15/24 13:37

08/12/24 06:20 08/15/24 13:37

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20 - 150

20 - 150

94.4

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

### Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

66.0

Lab Sample ID: MB 320-790133/1-A

**Matrix: Solid** 

**Analysis Batch: 791618** 

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 790133

MB MB Isotope Dilution %Recovery Qualifier Limits Prepared Analyzed Dil Fac 13C2 6:2 FTS 111 20 - 150 08/12/24 06:20 08/15/24 13:37 13C2 8:2 FTS 101 20 - 150 08/12/24 06:20 08/15/24 13:37 13C3 HFPO-DA 08/12/24 06:20 08/15/24 13:37 20 - 150 118 d7-N-MeFOSE-M 85.4 20 - 150 08/12/24 06:20 08/15/24 13:37 d9-N-EtFOSE-M 81.7 20 - 150 08/12/24 06:20 08/15/24 13:37 d5-NEtPFOSA 20 - 150 61.4 08/12/24 06:20 08/15/24 13:37

20 - 150

Lab Sample ID: LCS 320-790133/3-A

**Matrix: Solid** 

d3-NMePFOSA

**Analysis Batch: 791618** 

Client Sample ID: Lab Control Sample Prep Type: Total/NA

08/12/24 06:20 08/15/24 13:37

Prep Batch: 790133

LCS LCS Spike %Rec Analyte Added Result Qualifier Unit %Rec Limits Perfluorobutanoic acid (PFBA) 12.8 12.3 ug/Kg 96 40 - 150 Perfluoropentanoic acid (PFPeA) 6.40 5.20 ug/Kg 81 40 - 150 Perfluorohexanoic acid (PFHxA) 3.20 3.09 ug/Kg 97 40 - 150 Perfluoroheptanoic acid (PFHpA) 3.20 3.15 ug/Kg 98 40 - 150 Perfluorooctanoic acid (PFOA) 3.20 3.02 94 40 - 150 ug/Kg Perfluorononanoic acid (PFNA) 3.20 2.99 ug/Kg 93 40 - 150 Perfluorodecanoic acid (PFDA) 3.20 2.95 ug/Kg 92 40 - 150 3.20 102 40 - 150 Perfluoroundecanoic acid 3.27 ug/Kg (PFUnA) 3.20 Perfluorododecanoic acid 3.10 ug/Kg 97 40 - 150 (PFDoA) Perfluorotridecanoic acid 3.20 2.81 88 40 - 150 ug/Kg (PFTrDA) Perfluorotetradecanoic acid 3.20 2.76 86 40 - 150 ug/Kg (PFTeDA) Perfluorobutanesulfonic acid 2.84 2.60 ug/Kg 92 40 - 150 (PFBS) Perfluoropentanesulfonic acid 3.01 2.80 ug/Kg 93 40 - 150 (PFPeS) 2.92 2.53 ug/Kg 87 40 - 150 Perfluorohexanesulfonic acid (PFHxS) Perfluoroheptanesulfonic acid 3.05 2.89 ug/Kg 95 40 - 150 (PFHpS) Perfluorooctanesulfonic acid 2.98 2.85 ug/Kg 96 40 - 150 (PFOS) Perfluorononanesulfonic acid 3.08 2.68 ug/Kg 87 40 - 150 (PFNS) 3.08 2.40 ug/Kg 78 40 - 150 Perfluorodecanesulfonic acid (PFDS) 3.10 2.34 76 40 - 150 Perfluorododecanesulfonic acid ug/Kg (PFDoS) 1H,1H,2H,2H-Perfluorohexane 12.0 11.6 ug/Kg 97 40 - 150 sulfonic acid (4:2 FTS) 1H.1H.2H.2H-Perfluorooctane 12.2 11.7 ug/Kg 40 - 150 sulfonic acid (6:2 FTS) 12.3 12.3 ug/Kg 100 40 - 150 1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS) Perfluorooctanesulfonamide 3.20 3.21 ug/Kg 100 40 - 150 (PFOSA)

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

#### Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample	ID: LCS	S 320-790133/3-A	
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**Matrix: Solid** 

Perfluoro-4-methoxybutanoic

acid (PFMBA)

ecane-1-sulfonic acid

Client Sample ID: Lab Control Sample

Prep Type: Total/NA Prep Batch: 790133

Analysis Batch: 791618							<b>Prep Batch: 790133</b>
	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
N-methylperfluorooctane	3.20	3.12		ug/Kg		98	40 - 150
sulfonamide (NMeFOSA)							
N-ethylperfluorooctane	3.20	3.12		ug/Kg		97	40 - 150

sulfonamide (NEtFOSA) N-methylperfluorooctanesulfona 3.20 2.85 ug/Kg 40 - 150 midoacetic acid (NMeFOSAA) N-ethylperfluorooctanesulfonami 3.20 2.96 ug/Kg 92 40 - 150 doacetic acid (NEtFOSAA) 32.0 28.8 90 N-methylperfluorooctane ug/Kg 40 - 150 sulfonamidoethanol (NMeFOSE) 32.0 30.5 N-ethylperfluorooctane ug/Kg 95 40 - 150 sulfonamidoethanol (NEtFOSE)

Hexafluoropropylene Oxide 12.8 12.4 ug/Kg 97 40 - 150 Dimer Acid (HFPO-DA) 4,8-Dioxa-3H-perfluorononanoic 12.1 12.5 ug/Kg 103 40 - 150 acid (ADONA) Perfluoro-3-methoxypropanoic 6.40 5.77 ug/Kg 90 40 - 150 acid (PFMPA)

5.59

ug/Kg

87

40 - 150

Nonafluoro-3,6-dioxaheptanoic 6.40 6.08 ug/Kg 95 40 - 150 acid (NFDHA) 9-Chlorohexadecafluoro-3-oxan 12.0 11.3 ug/Kg 95 40 - 150 onane-1-sulfonic acid(9CI-PF3ONS) 11-Chloroeicosafluoro-3-oxaund 12.1 9.72 80 40 - 150 ug/Kg

6.40

(11CI-PF3OUdS) Perfluoro (2-ethoxyethane) 5.71 5.46 ug/Kg 96 40 - 150 sulfonic acid (PFESA) 3-Perfluoropropylpropanoic acid 16.0 13.7 ug/Kg 86 40 - 150 (3:3 FTCA) 3-Perfluoropentylpropanoic acid 40 - 150 79.9 75.6 ug/Kg 95

(5:3 FTCA)

3-Perfluoroheptylpropanoic acid 79.9 68.6 ug/Kg 86 40 - 150 (7:3 FTCA)

LCS	LCS	
%Recovery	Qualifier	Limits
98.2		20 - 150
115		20 - 150
98.2		20 - 150
95.7		20 - 150
97.5		20 - 150
100		20 - 150
93.0		20 - 150
82.0		20 - 150
75.1		20 - 150
79.4		20 - 150
99.9		20 - 150
97.7		20 - 150
101		20 - 150
98.0		20 - 150
99.9		20 - 150
	%Recovery 98.2 115 98.2 95.7 97.5 100 93.0 82.0 75.1 79.4 99.9 97.7 101 98.0	115 98.2 95.7 97.5 100 93.0 82.0 75.1 79.4 99.9 97.7 101 98.0

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

### Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LCS 320-790133/3-A

Lab Sample ID: LLCS 320-790133/2-A

**Matrix: Solid** 

**Analysis Batch: 791618** 

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

**Prep Batch: 790133** 

LCS LCS

Isotope Dilution	%Recovery	Qualifier	Limits
d5-NEtFOSAA	99.3		20 - 150
13C2 4:2 FTS	92.8		20 - 150
13C2 6:2 FTS	99.2		20 - 150
13C2 8:2 FTS	95.4		20 - 150
13C3 HFPO-DA	92.2		20 - 150
d7-N-MeFOSE-M	83.3		20 - 150
d9-N-EtFOSE-M	74.8		20 - 150
d5-NEtPFOSA	63.5		20 - 150
d3-NMePFOSA	63.5		20 - 150

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

**Matrix: Solid Analysis Batch: 791618 Prep Batch: 790133** 

<b>,</b>	Spike	LLCS	LLCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Perfluorobutanoic acid (PFBA)	1.28	1.24		ug/Kg		97	40 - 150	
Perfluoropentanoic acid (PFPeA)	0.640	0.524		ug/Kg		82	40 - 150	
Perfluorohexanoic acid (PFHxA)	0.320	0.314		ug/Kg		98	40 - 150	
Perfluoroheptanoic acid (PFHpA)	0.320	0.306		ug/Kg		96	40 - 150	
Perfluorooctanoic acid (PFOA)	0.320	0.334		ug/Kg		104	40 - 150	
Perfluorononanoic acid (PFNA)	0.320	0.319		ug/Kg		100	40 - 150	
Perfluorodecanoic acid (PFDA)	0.320	0.297		ug/Kg		93	40 - 150	
Perfluoroundecanoic acid (PFUnA)	0.320	0.343		ug/Kg		107	40 - 150	
Perfluorododecanoic acid (PFDoA)	0.320	0.355		ug/Kg		111	40 - 150	
Perfluorotridecanoic acid (PFTrDA)	0.320	0.304		ug/Kg		95	40 - 150	
Perfluorotetradecanoic acid (PFTeDA)	0.320	0.288		ug/Kg		90	40 - 150	
Perfluorobutanesulfonic acid (PFBS)	0.284	0.270		ug/Kg		95	40 - 150	
Perfluoropentanesulfonic acid (PFPeS)	0.301	0.291		ug/Kg		97	40 - 150	
Perfluorohexanesulfonic acid (PFHxS)	0.292	0.249		ug/Kg		85	40 - 150	
Perfluoroheptanesulfonic acid (PFHpS)	0.305	0.274		ug/Kg		90	40 - 150	
Perfluorooctanesulfonic acid (PFOS)	0.298	0.283		ug/Kg		95	40 - 150	
Perfluorononanesulfonic acid (PFNS)	0.308	0.274		ug/Kg		89	40 - 150	
Perfluorodecanesulfonic acid (PFDS)	0.308	0.254		ug/Kg		82	40 - 150	
Perfluorododecanesulfonic acid (PFDoS)	0.310	0.263		ug/Kg		85	40 - 150	
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	1.20	1.13		ug/Kg		94	40 - 150	
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	1.22	1.29		ug/Kg		106	40 - 150	
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	1.23	1.27		ug/Kg		103	40 - 150	

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9/12/2024

Client: ERM-West Job ID: 580-142813-1

LLCS LLCS

Project/Site: Arkema PDI Sampling

## Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Spike

Lab Sample ID: LLCS 320-790133/2-A	
Matrice Calid	

Matrix: Solid

(7:3 FTCA)

**Analysis Batch: 791618** 

**Client Sample ID: Lab Control Sample** 

	Prep Type: Total/NA
	Prep Batch: 790133
	%Rec
 0/ Dag	Limita

Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Perfluorooctanesulfonamide (PFOSA)	0.320	0.339		ug/Kg		106	40 - 150	
N-methylperfluorooctane sulfonamide (NMeFOSA)	0.320	0.301		ug/Kg		94	40 - 150	
N-ethylperfluorooctane sulfonamide (NEtFOSA)	0.320	0.306		ug/Kg		96	40 - 150	
N-methylperfluorooctanesulfona midoacetic acid (NMeFOSAA)	0.320	0.320		ug/Kg		100	40 - 150	
N-ethylperfluorooctanesulfonami doacetic acid (NEtFOSAA)	0.320	0.309		ug/Kg		97	40 - 150	
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	3.20	3.01		ug/Kg		94	40 - 150	
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	3.20	3.23		ug/Kg		101	40 - 150	
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	1.28	1.27		ug/Kg		99	40 - 150	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.21	1.19		ug/Kg		99	40 - 150	
Perfluoro-3-methoxypropanoic acid (PFMPA)	0.640	0.566		ug/Kg		88	40 - 150	
Perfluoro-4-methoxybutanoic acid (PFMBA)	0.640	0.533		ug/Kg		83	40 - 150	
Nonafluoro-3,6-dioxaheptanoic	0.640	0.570		ug/Kg		89	40 - 150	
9-Chlorohexadecafluoro-3-oxan onane-1-sulfonic acid(9CI-PF3ONS)	1.20	1.16		ug/Kg		97	40 - 150	
11-Chloroeicosafluoro-3-oxaund ecane-1-sulfonic acid (11CI-PF3OUdS)	1.21	1.05		ug/Kg		87	40 - 150	
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	0.571	0.525		ug/Kg		92	40 - 150	
3-Perfluoropropylpropanoic acid (3:3 FTCA)	1.60	1.27		ug/Kg		80	40 - 150	
3-Perfluoropentylpropanoic acid (5:3 FTCA)	7.99	6.97		ug/Kg		87	40 - 150	
3-Perfluoroheptylpropanoic acid	7.99	6.77		ug/Kg		85	40 - 150	

LLCS LLCS
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Isotope Dilution	%Recovery Qualifie	er Limits
13C4 PFBA	97.8	20 - 150
13C5 PFPeA	112	20 - 150
13C5 PFHxA	103	20 - 150
13C4 PFHpA	89.5	20 - 150
13C8 PFOA	96.0	20 - 150
13C9 PFNA	97.7	20 - 150
13C6 PFDA	105	20 - 150
13C7 PFUnA	95.5	20 - 150
13C2 PFDoA	84.0	20 - 150
13C2 PFTeDA	95.2	20 - 150
13C3 PFBS	111	20 - 150
13C3 PFHxS	103	20 - 150
13C8 PFOS	103	20 - 150

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

### Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-790133/2-A

**Matrix: Solid** 

**Analysis Batch: 791618** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA **Prep Batch: 790133** 

LLCS LLCS Isotope Dilution %Recovery Qualifier Limits 13C8 PFOSA 105 20 - 150 d3-NMeFOSAA 107 20 - 150 d5-NEtFOSAA 101 20 - 150 13C2 4:2 FTS 108 20 - 150 13C2 6:2 FTS 108 20 - 150 13C2 8:2 FTS 110 20 - 150 13C3 HFPO-DA 93.5 20 - 150 20 - 150 d7-N-MeFOSE-M 82.6 d9-N-EtFOSE-M 77.7 20 - 150 d5-NEtPFOSA 20 - 150 73.0 d3-NMePFOSA 75.3 20 - 150

Client Sample ID: PDI-15-SO-38-20240725

Prep Type: Total/NA

Lab Sample ID: 580-142813-6 MS

**Matrix: Solid** 

Analysis Batch: 791618	Sample	Sample	Spike	MS	MS				Prep Batch: 790133 %Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
Perfluorobutanoic acid (PFBA)	ND		16.1	15.0		ug/Kg	— <u></u>	93	40 - 150
Perfluoropentanoic acid (PFPeA)	ND		8.04	6.83		ug/Kg	☼	85	40 - 150
Perfluorohexanoic acid (PFHxA)	ND		4.02	3.71		ug/Kg	₩	92	40 - 150
Perfluoroheptanoic acid (PFHpA)	ND		4.02	3.65		ug/Kg	₩	91	40 - 150
Perfluorooctanoic acid (PFOA)	ND		4.02	4.22		ug/Kg	₩	105	40 - 150
Perfluorononanoic acid (PFNA)	ND		4.02	4.07		ug/Kg	₩	101	40 - 150
Perfluorodecanoic acid (PFDA)	ND		4.02	4.29		ug/Kg		107	40 - 150
Perfluoroundecanoic acid (PFUnA)	ND		4.02	4.48		ug/Kg	₽	112	40 - 150
Perfluorododecanoic acid (PFDoA)	ND		4.02	4.38		ug/Kg		109	40 - 150
Perfluorotridecanoic acid (PFTrDA)	ND		4.02	4.27		ug/Kg	₩	106	40 - 150
Perfluorotetradecanoic acid (PFTeDA)	ND		4.02	3.85		ug/Kg	₩	96	40 - 150
Perfluorobutanesulfonic acid (PFBS)	ND		3.57	2.91		ug/Kg	₩	82	40 - 150
Perfluoropentanesulfonic acid (PFPeS)	ND		3.78	2.47		ug/Kg	₽	65	40 - 150
Perfluorohexanesulfonic acid (PFHxS)	ND	G	3.67	36.5	I 4	ug/Kg	≎	402	40 - 150
Perfluoroheptanesulfonic acid (PFHpS)	ND		3.84	3.64		ug/Kg	≎	95	40 - 150
Perfluorooctanesulfonic acid (PFOS)	ND		3.74	4.36		ug/Kg	₽	117	40 - 150
Perfluorononanesulfonic acid (PFNS)	ND		3.87	3.28		ug/Kg	₽	85	40 - 150
Perfluorodecanesulfonic acid (PFDS)	ND		3.88	3.61		ug/Kg	₽	93	40 - 150
Perfluorododecanesulfonic acid (PFDoS)	ND		3.90	3.99		ug/Kg	₽	102	40 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		15.1	9.40		ug/Kg	₩	62	40 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		15.3	15.8		ug/Kg	₩	103	40 - 150

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

### Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: 580-142813-6 MS		Lab	Samp	le ID	: 580-1	14281	3-6 MS
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**Matrix: Solid** 

**Analysis Batch: 791618** 

Client Sample ID: PDI-15-SO-38-20240725

Prep Type: Total/NA

Prep Batch: 790133

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		15.4	14.9		ug/Kg	<del>*</del>	97	40 - 150	
Perfluorooctanesulfonamide	ND		4.02	4.09		ug/Kg	₽	102	40 - 150	
(PFOSA)										
N-methylperfluorooctane	ND		4.02	3.66		ug/Kg	₩	91	40 - 150	
sulfonamide (NMeFOSA)	<u></u> -									
N-ethylperfluorooctane	ND		4.02	3.98		ug/Kg	₽	99	40 - 150	
sulfonamide (NEtFOSA)			4.00	4.04		11.6		405	40 450	
N-methylperfluorooctanesulfona	ND		4.02	4.24		ug/Kg	₩	105	40 - 150	
midoacetic acid (NMeFOSAA)	ND		4.00	4.04				445	40 450	
N-ethylperfluorooctanesulfonami doacetic acid (NEtFOSAA)	ND		4.02	4.64		ug/Kg	₽	115	40 - 150	
N-methylperfluorooctane	ND		40.2	36.6		ug/Kg	 ☆	91	40 - 150	
sulfonamidoethanol (NMeFOSE)	112		10.2	00.0		ug/11g	π.	0.	10 - 100	
N-ethylperfluorooctane	ND		40.2	37.3		ug/Kg	₽	93	40 - 150	
sulfonamidoethanol (NEtFOSE)										
Hexafluoropropylene Oxide	ND		16.1	16.8		ug/Kg	≎	104	40 - 150	
Dimer Acid (HFPO-DA)										
4,8-Dioxa-3H-perfluorononanoic	ND		15.2	14.0		ug/Kg	₽	92	40 - 150	
acid (ADONA)										
Perfluoro-3-methoxypropanoic	ND		8.04	6.72		ug/Kg	₩	84	40 - 150	
acid (PFMPA)	ND		0.04	0.00				70	40 450	
Perfluoro-4-methoxybutanoic	ND		8.04	6.29		ug/Kg	₩	78	40 - 150	
acid (PFMBA)  Nonafluoro-3,6-dioxaheptanoic	ND		8.04	7.52		ug/Kg		94	40 - 150	
acid (NFDHA)	ND		0.04	1.52		ug/Kg	340	94	40 - 130	
9-Chlorohexadecafluoro-3-oxan	ND		15.0	14.1		ug/Kg	☆	94	40 - 150	
onane-1-sulfonic	ND		10.0	17.1		ug/itg	~	04	40 - 100	
acid(9CI-PF3ONS)										
11-Chloroeicosafluoro-3-oxaund	ND		15.2	14.2		ug/Kg	₩	94	40 - 150	
ecane-1-sulfonic acid						0 0				
(11CI-PF3OUdS)										
Perfluoro (2-ethoxyethane)	ND		7.17	6.55		ug/Kg	₩	91	40 - 150	
sulfonic acid (PFEESA)										
3-Perfluoropropylpropanoic acid	ND		20.1	16.4		ug/Kg	☼	82	40 - 150	
(3:3 FTCA)										
3-Perfluoropentylpropanoic acid	ND		100	86.3		ug/Kg	₩	86	40 - 150	
(5:3 FTCA)	<u></u> -							<u></u>		
3-Perfluoroheptylpropanoic acid	ND		100	78.4		ug/Kg	☼	78	40 - 150	
(7:3 FTCA)										

Isotope Dilution	%Recovery	Qualifier	Limits
13C4 PFBA	17.7	*5-	20 - 150
13C5 PFPeA	20.8		20 - 150
13C5 PFHxA	18.5	*5-	20 - 150
13C4 PFHpA	18.0	*5-	20 - 150
13C8 PFOA	16.8	*5-	20 - 150
13C9 PFNA	18.4	*5-	20 - 150
13C6 PFDA	17.5	*5-	20 - 150
13C7 PFUnA	16.0	*5-	20 - 150
13C2 PFDoA	16.8	*5-	20 - 150
13C2 PFTeDA	17.3	*5-	20 - 150
13C3 PFBS	20.0		20 - 150
13C3 PFHxS	26.5		20 - 150

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

### Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: 580-142813-6 MS

**Matrix: Solid** 

**Analysis Batch: 791618** 

Client Sample ID: PDI-15-SO-38-20240725

Prep Type: Total/NA

**Prep Batch: 790133** 

	IVIS	IVIS	
Isotope Dilution	%Recovery	Qualifier	Limits
13C8 PFOS	19.7	*5-	20 - 150
13C8 PFOSA	20.4		20 - 150
d3-NMeFOSAA	18.6	*5-	20 - 150
d5-NEtFOSAA	18.6	*5-	20 - 150
13C2 4:2 FTS	27.7		20 - 150
13C2 6:2 FTS	19.9	*5-	20 - 150
13C2 8:2 FTS	18.7	*5-	20 - 150
13C3 HFPO-DA	17.2	*5-	20 - 150
d7-N-MeFOSE-M	17.7	*5-	20 - 150
d9-N-EtFOSE-M	18.5	*5-	20 - 150
d5-NEtPFOSA	16.1	*5-	20 - 150
d3-NMePEOSA	17.5	*5-	20 - 150

Lab Sample ID: 580-142813-6 MSD

**Matrix: Solid** 

Client Sample ID: PDI-15-SO-38-20240725

Prep Type: Total/NA

Analysis Batch: 791618									Prep Ba		
7 maryoro Zatom 101010	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Perfluorobutanoic acid (PFBA)	ND	-	16.0	14.9		ug/Kg	<del>-</del>	93	40 - 150	1	30
Perfluoropentanoic acid (PFPeA)	ND		8.02	6.58		ug/Kg	₩	82	40 - 150	4	30
Perfluorohexanoic acid (PFHxA)	ND		4.01	3.97		ug/Kg	₩	99	40 - 150	7	30
Perfluoroheptanoic acid (PFHpA)	ND		4.01	3.50		ug/Kg	₽	87	40 - 150	4	30
Perfluorooctanoic acid (PFOA)	ND		4.01	3.74		ug/Kg	☼	93	40 - 150	12	30
Perfluorononanoic acid (PFNA)	ND		4.01	3.36		ug/Kg	☼	84	40 - 150	19	30
Perfluorodecanoic acid (PFDA)	ND		4.01	3.41		ug/Kg	₩	85	40 - 150	23	30
Perfluoroundecanoic acid (PFUnA)	ND		4.01	3.71		ug/Kg	₩	92	40 - 150	19	30
Perfluorododecanoic acid (PFDoA)	ND		4.01	4.29		ug/Kg	₽	107	40 - 150	2	30
Perfluorotridecanoic acid (PFTrDA)	ND		4.01	4.15		ug/Kg	₽	103	40 - 150	3	30
Perfluorotetradecanoic acid (PFTeDA)	ND		4.01	3.88		ug/Kg	₽	97	40 - 150	1	30
Perfluorobutanesulfonic acid (PFBS)	ND		3.56	3.21		ug/Kg	₽	90	40 - 150	10	30
Perfluoropentanesulfonic acid (PFPeS)	ND		3.77	2.39		ug/Kg	₽	63	40 - 150	3	30
Perfluorohexanesulfonic acid (PFHxS)	ND	G	3.66	35.9	I 4	ug/Kg	₽	387	40 - 150	2	30
Perfluoroheptanesulfonic acid (PFHpS)	ND		3.83	3.17		ug/Kg	₽	83	40 - 150	14	30
Perfluorooctanesulfonic acid (PFOS)	ND		3.73	3.71		ug/Kg	₽	99	40 - 150	16	30
Perfluorononanesulfonic acid (PFNS)	ND		3.86	3.36		ug/Kg	₽	87	40 - 150	2	30
Perfluorodecanesulfonic acid (PFDS)	ND		3.87	3.36		ug/Kg	₽	87	40 - 150	7	30
Perfluorododecanesulfonic acid (PFDoS)	ND		3.89	3.11		ug/Kg	₽	80	40 - 150	25	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		15.1	8.93		ug/Kg	₽	59	40 - 150	5	30

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

## Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab	Sample I	D: 580-14	2813-6 MSD

**Matrix: Solid** 

**Analysis Batch: 791618** 

Client Sample ID: PDI-15-SO-38-20240725

**Prep Type: Total/NA** 

**Prep Batch: 790133** 

Analysis Batch: 791618	Sample	Sample	Spike	Men	MSD				%Rec	atcn: /	90133 RPD
Analyte	•	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1H,1H,2H,2H-Perfluorooctane	ND	Qualifier	15.3	14.8	Qualifier	ug/Kg	— <del>-</del>	97	40 <sub>-</sub> 150	7	30
sulfonic acid (6:2 FTS)	ND		15.5	14.0		ug/Ng	*	91	40 - 150	,	30
1H,1H,2H,2H-Perfluorodecane	ND		15.4	14.6		ug/Kg	∴	95	40 - 150	2	30
sulfonic acid (8:2 FTS)	ND		10.4	14.0		ug/itg	*	33	40 - 100		50
Perfluorooctanesulfonamide	ND		4.01	3.85		ug/Kg	☼	96	40 - 150	6	30
(PFOSA)				0.00		~g/. tg			.0 = .00	· ·	
N-methylperfluorooctane	ND		4.01	4.01		ug/Kg	₩	100	40 - 150	9	30
sulfonamide (NMeFOSA)						3 3					
N-ethylperfluorooctane	ND		4.01	3.78		ug/Kg		94	40 - 150	5	30
sulfonamide (NEtFOSA)						0 0					
N-methylperfluorooctanesulfona	ND		4.01	4.18		ug/Kg	₽	104	40 - 150	1	30
midoacetic acid (NMeFOSAA)											
N-ethylperfluorooctanesulfonami	ND		4.01	4.32		ug/Kg	₩	108	40 - 150	7	30
doacetic acid (NEtFOSAA)											
N-methylperfluorooctane	ND		40.1	34.3		ug/Kg	₽	86	40 - 150	6	30
sulfonamidoethanol (NMeFOSE)											
N-ethylperfluorooctane	ND		40.1	36.7		ug/Kg	☼	91	40 - 150	2	30
sulfonamidoethanol (NEtFOSE)											
Hexafluoropropylene Oxide	ND		16.0	15.4		ug/Kg	₩	96	40 - 150	8	30
Dimer Acid (HFPO-DA)											
4,8-Dioxa-3H-perfluorononanoic	ND		15.2	13.6		ug/Kg	₩	90	40 - 150	3	30
acid (ADONA)											
Perfluoro-3-methoxypropanoic	ND		8.02	6.81		ug/Kg	₩	85	40 - 150	1	30
acid (PFMPA)										_	
Perfluoro-4-methoxybutanoic	ND		8.02	6.47		ug/Kg	☼	81	40 - 150	3	30
acid (PFMBA)											
Nonafluoro-3,6-dioxaheptanoic	ND		8.02	7.48		ug/Kg	≎	93	40 - 150	1	30
acid (NFDHA)	ND		45.0	40.0				0.7	40 450	0	20
9-Chlorohexadecafluoro-3-oxan	ND		15.0	13.0		ug/Kg	≎	87	40 - 150	8	30
onane-1-sulfonic											
acid(9Cl-PF3ONS) 11-Chloroeicosafluoro-3-oxaund	ND		15.2	12.8		ug/Kg	÷	84	40 - 150	11	30
ecane-1-sulfonic acid	ND		13.2	12.0		ug/Ng	*	04	40 - 150	11	30
(11CI-PF3OUdS)											
Perfluoro (2-ethoxyethane)	ND		7.16	6.73		ug/Kg		94	40 - 150	3	30
sulfonic acid (PFEESA)	ND		7.10	0.73		ug/itg	*	34	40 - 130	3	30
3-Perfluoropropylpropanoic acid	ND		20.0	16.1		ug/Kg	₩	80	40 - 150	2	30
(3:3 FTCA)	IND		20.0	10.1		ug/11g	*	00	<del>-0-100</del>	_	50
3-Perfluoropentylpropanoic acid	ND		100	91.8		ug/Kg	₩	92	40 - 150	6	30
(5:3 FTCA)	110			01.0		~9'''Y	~	-	10 - 100	Ū	30
3-Perfluoroheptylpropanoic acid	ND		100	86.5		ug/Kg	∴	86	40 - 150	10	30
(7:3 FTCA)				00.0		-98	*11*				
(											

MSD MSD

Isotope Dilution	%Recovery	Qualifier	Limits
13C4 PFBA	16.8	*5-	20 - 150
13C5 PFPeA	20.2		20 - 150
13C5 PFHxA	16.8	*5-	20 - 150
13C4 PFHpA	18.0	*5-	20 - 150
13C8 PFOA	17.4	*5-	20 - 150
13C9 PFNA	18.2	*5-	20 - 150
13C6 PFDA	18.1	*5-	20 - 150
13C7 PFUnA	17.9	*5-	20 - 150
13C2 PFDoA	15.5	*5-	20 - 150
13C2 PFTeDA	14.9	*5-	20 - 150

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

## Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: 580-142813-6 MSD

Lab Sample ID: 580-142813-6 DU

**Matrix: Solid** 

**Matrix: Solid** 

**Analysis Batch: 791618** 

Client Sample ID: PDI-15-SO-38-20240725

**Prep Type: Total/NA** 

**Prep Batch: 790133** 

	พรบ	พรบ	
Isotope Dilution	%Recovery	Qualifier	Limits
13C3 PFBS	17.6	*5-	20 - 150
13C3 PFHxS	24.7		20 - 150
13C8 PFOS	19.7	*5-	20 - 150
13C8 PFOSA	19.0	*5-	20 - 150
d3-NMeFOSAA	16.6	*5-	20 - 150
d5-NEtFOSAA	18.7	*5-	20 - 150
13C2 4:2 FTS	25.4		20 - 150
13C2 6:2 FTS	19.7	*5-	20 - 150
13C2 8:2 FTS	17.5	*5-	20 - 150
13C3 HFPO-DA	17.6	*5-	20 - 150
d7-N-MeFOSE-M	16.6	*5-	20 - 150
d9-N-EtFOSE-M	16.8	*5-	20 - 150
d5-NEtPFOSA	15.4	*5-	20 - 150
d3-NMePFOSA	14.9	*5-	20 - 150

MSD MSD

Client Sample ID: PDI-15-SO-38-20240725

Prep Type: Total/NA

Analysis Batch: 791618							Prep Batch: 7	90133
	Sample	Sample	DU	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
Perfluorobutanoic acid (PFBA)	ND		ND		ug/Kg	<u></u>	NC	30
Perfluoropentanoic acid (PFPeA)	ND		ND		ug/Kg	₽	NC	30
Perfluorohexanoic acid (PFHxA)	ND		ND		ug/Kg	₽	NC	30
Perfluoroheptanoic acid (PFHpA)	ND		ND		ug/Kg	₽	NC	30
Perfluorooctanoic acid (PFOA)	ND		ND		ug/Kg	₩	NC	30
Perfluorononanoic acid (PFNA)	ND		ND		ug/Kg	₽	NC	30
Perfluorodecanoic acid (PFDA)	ND		ND		ug/Kg	₽	NC	30
Perfluoroundecanoic acid (PFUnA)	ND		ND		ug/Kg	₩	NC	30
Perfluorododecanoic acid (PFDoA)	ND		ND		ug/Kg	<b>☆</b>	NC	30
Perfluorotridecanoic acid (PFTrDA)	ND		ND		ug/Kg	₩.	NC	30
Perfluorotetradecanoic acid (PFTeDA)	ND		ND		ug/Kg	₩	NC	30
Perfluorobutanesulfonic acid (PFBS)	ND		ND		ug/Kg		NC	30
Perfluoropentanesulfonic acid (PFPeS)	ND		ND		ug/Kg	₩	NC	30
Perfluorohexanesulfonic acid (PFHxS)	ND	G	25.2	I	ug/Kg	<b>‡</b>	NC	30
Perfluoroheptanesulfonic acid (PFHpS)	ND		ND		ug/Kg	₩	NC	30
Perfluorooctanesulfonic acid (PFOS)	ND		ND		ug/Kg	₩	NC	30
Perfluorononanesulfonic acid (PFNS)	ND		ND		ug/Kg	<b>\$</b>	NC	30
Perfluorodecanesulfonic acid (PFDS)	ND		ND		ug/Kg	₩	NC	30
Perfluorododecanesulfonic acid (PFDoS)	ND		ND		ug/Kg	<b>☆</b>	NC	30

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

### Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: 580-142813-6 DU

Matrix: Solid

**Analysis Batch: 791618** 

Client Sample ID: PDI-15-SO-38-20240725

**Prep Type: Total/NA** 

**Prep Batch: 790133** 

	Sample	Sample		DU			-	RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		ND		ug/Kg	<u> </u>	NC NC	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		ND		ug/Kg	<b>\$</b>	NC	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		ND		ug/Kg	☼	NC	30
Perfluorooctanesulfonamide (PFOSA)	ND		ND		ug/Kg	☼	NC	30
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		ND		ug/Kg	☼	NC	30
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		ND		ug/Kg	☼	NC	30
N-methylperfluorooctanesulfona midoacetic acid (NMeFOSAA)	ND		ND		ug/Kg	₽	NC	30
N-ethylperfluorooctanesulfonami doacetic acid (NEtFOSAA)	ND		ND		ug/Kg	☼	NC	30
N-methylperfluorooctane sulfonamidoethanol (NMeFOSE)	ND		ND		ug/Kg		NC	30
N-ethylperfluorooctane sulfonamidoethanol (NEtFOSE)	ND		ND		ug/Kg	☼	NC	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ND		ug/Kg	☼	NC	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		ND		ug/Kg		NC	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		ND		ug/Kg	₩	NC	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		ND		ug/Kg	☼	NC	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		ND		ug/Kg		NC	30
9-Chlorohexadecafluoro-3-oxan onane-1-sulfonic acid(9CI-PF3ONS)	ND		ND		ug/Kg	☼	NC	30
11-Chloroeicosafluoro-3-oxaund ecane-1-sulfonic acid (11CI-PF3OUdS)	ND		ND		ug/Kg	<b>‡</b>	NC	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		ND		ug/Kg	☼	NC	30
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		ND		ug/Kg	☼	NC	30
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		ND		ug/Kg	₩	NC	30
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		ND		ug/Kg	☼	NC	30
•								

DU	DU

%Recovery Qualifier	Limits
20.2	20 - 150
24.1	20 - 150
21.0	20 - 150
22.9	20 - 150
22.5	20 - 150
21.2	20 - 150
20.5	20 - 150
18.6 *5-	20 - 150
	20.2 24.1 21.0 22.9 22.5 21.2 20.5

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

### Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: 580-142813-6 DU

**Matrix: Solid** 

**Analysis Batch: 791618** 

Client Sample ID: PDI-15-SO-38-20240725

**Prep Type: Total/NA** 

**Prep Batch: 790133** 

Isotope Dilution	DU %Recovery	DU Qualifier	Limits
13C2 PFDoA	18.4	*5-	20 - 150
13C2 PFTeDA	20.7		20 - 150
13C3 PFBS	21.6		20 - 150
13C3 PFHxS	33.2		20 - 150
13C8 PFOS	21.2		20 - 150
13C8 PFOSA	22.4		20 - 150
d3-NMeFOSAA	18.9	*5-	20 - 150
d5-NEtFOSAA	20.7		20 - 150
13C2 4:2 FTS	30.5		20 - 150
13C2 6:2 FTS	24.8		20 - 150
13C2 8:2 FTS	21.2		20 - 150
13C3 HFPO-DA	21.9		20 - 150
d7-N-MeFOSE-M	18.5	*5-	20 - 150
d9-N-EtFOSE-M	19.2	*5-	20 - 150
d5-NEtPFOSA	17.5	*5-	20 - 150
d3-NMePFOSA	18.6	*5-	20 - 150

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Lab Sample ID: MB 320-793381/1-A

**Matrix: Solid** 

**Analysis Batch: 795750** 

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 793381

	MB	МВ							
Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.11	pg/g		08/22/24 11:02	08/31/24 15:04	1
2,3,7,8-TCDF	ND		1.0	0.096	pg/g		08/22/24 11:02	08/31/24 15:04	1
1,2,3,7,8-PeCDD	ND		5.0	0.081	pg/g		08/22/24 11:02	08/31/24 15:04	1
1,2,3,7,8-PeCDF	ND		5.0	0.094	pg/g		08/22/24 11:02	08/31/24 15:04	1
2,3,4,7,8-PeCDF	ND		5.0	0.11	pg/g		08/22/24 11:02	08/31/24 15:04	1
1,2,3,4,7,8-HxCDD	ND		5.0	0.10	pg/g		08/22/24 11:02	08/31/24 15:04	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.099	pg/g		08/22/24 11:02	08/31/24 15:04	1
1,2,3,7,8,9-HxCDD	ND		5.0	0.095	pg/g		08/22/24 11:02	08/31/24 15:04	1
1,2,3,4,7,8-HxCDF	ND		5.0	0.053	pg/g		08/22/24 11:02	08/31/24 15:04	1
1,2,3,6,7,8-HxCDF	ND		5.0	0.048	pg/g		08/22/24 11:02	08/31/24 15:04	1
1,2,3,7,8,9-HxCDF	ND		5.0	0.057	pg/g		08/22/24 11:02	08/31/24 15:04	1
2,3,4,6,7,8-HxCDF	ND		5.0	0.048	pg/g		08/22/24 11:02	08/31/24 15:04	1
1,2,3,4,6,7,8-HpCDD	ND		5.0	0.10	pg/g		08/22/24 11:02	08/31/24 15:04	1
1,2,3,4,6,7,8-HpCDF	ND		5.0	0.070	pg/g		08/22/24 11:02	08/31/24 15:04	1
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.089	pg/g		08/22/24 11:02	08/31/24 15:04	1
OCDD	1.98	J	10	0.40	pg/g		08/22/24 11:02	08/31/24 15:04	1
OCDF	ND		10	0.080	pg/g		08/22/24 11:02	08/31/24 15:04	1
	MB	MB							

Isotope Dilution	%Recovery Qua	alifier Limits	Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	67	25 - 164	08/22/24 11:02	08/31/24 15:04	1
13C-2,3,7,8-TCDF	66	24 - 169	08/22/24 11:02	08/31/24 15:04	1
13C-1,2,3,7,8-PeCDD	64	25 - 181	08/22/24 11:02	08/31/24 15:04	1
13C-1,2,3,7,8-PeCDF	63	24 - 185	08/22/24 11:02	08/31/24 15:04	1
13C-2,3,4,7,8-PeCDF	60	21 - 178	08/22/24 11:02	08/31/24 15:04	1
13C-1,2,3,4,7,8-HxCDD	61	32 - 141	08/22/24 11:02	08/31/24 15:04	1

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

#### Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: MB 320-793381/1-A

**Matrix: Solid** 

**Analysis Batch: 795750** 

**Client Sample ID: Method Blank Prep Type: Total/NA** 

**Prep Batch: 793381** 

	MB MB				
Isotope Dilution %Re	ecovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C-1,2,3,6,7,8-HxCDD	79	28 - 130	08/22/24 11:02	08/31/24 15:04	1
13C-1,2,3,4,7,8-HxCDF	66	26 - 152	08/22/24 11:02	08/31/24 15:04	1
13C-1,2,3,6,7,8-HxCDF	77	26 - 123	08/22/24 11:02	08/31/24 15:04	1
13C-2,3,4,6,7,8-HxCDF	71	28 - 136	08/22/24 11:02	08/31/24 15:04	1
13C-1,2,3,7,8,9-HxCDF	64	29 - 147	08/22/24 11:02	08/31/24 15:04	1
13C-1,2,3,4,6,7,8-HpCDD	60	23 - 140	08/22/24 11:02	08/31/24 15:04	1
13C-1,2,3,4,6,7,8-HpCDF	62	28 - 143	08/22/24 11:02	08/31/24 15:04	1
13C-1,2,3,4,7,8,9-HpCDF	57	26 - 138	08/22/24 11:02	08/31/24 15:04	1
13C-OCDD	58	17 - 157	08/22/24 11:02	08/31/24 15:04	1
13C-OCDF	58	17 - 157	08/22/24 11:02	08/31/24 15:04	1

MB MB

Qualifier Limits Surrogate %Recovery Prepared Analyzed Dil Fac 37CI4-2,3,7,8-TCDD 89 35 - 197 08/22/24 11:02 08/31/24 15:04

Lab Sample ID: LCS 320-793381/2-A

**Matrix: Solid** 

**Analysis Batch: 795750** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA **Prep Batch: 793381** 

LCS LCS Spike %Rec Analyte Added Result Qualifier Unit %Rec Limits 67 - 158 2,3,7,8-TCDD 20.0 18.9 94 pg/g 2,3,7,8-TCDF 20.0 18.2 91 75 - 158 pg/g 100 90.7 91 70 - 142 1,2,3,7,8-PeCDD pg/g 1,2,3,7,8-PeCDF 100 98.2 98 80 - 134 pg/g 2,3,4,7,8-PeCDF 100 68 - 160 99.4 99 pg/g 100 97 1,2,3,4,7,8-HxCDD 96.8 pg/g 70 - 164 1,2,3,6,7,8-HxCDD 100 95.2 95 76 - 134 pg/g 100 1,2,3,7,8,9-HxCDD 104 pg/g 104 64 - 162 100 98.8 99 72 - 134 1,2,3,4,7,8-HxCDF pg/g 1,2,3,6,7,8-HxCDF 100 101 pg/g 101 84 - 130 1,2,3,7,8,9-HxCDF 100 102 102 78 - 130 pg/g 100 103 103 70 - 156 2,3,4,6,7,8-HxCDF pg/g 1,2,3,4,6,7,8-HpCDD 100 97.1 pg/g 97 70 - 140 100 98.8 1,2,3,4,6,7,8-HpCDF 99 82 - 122 pg/g 1,2,3,4,7,8,9-HpCDF 100 97.6 98 78 - 138 pg/g OCDD 200 201 100 78 - 144 pg/g OCDF 200 195 pg/g 97 63 - 170

LCS LCS

Isotope Dilution	%Recovery Qualifier	Limits
13C-2,3,7,8-TCDD	71	20 - 175
13C-2,3,7,8-TCDF	71	22 - 152
13C-1,2,3,7,8-PeCDD	67	21 - 227
13C-1,2,3,7,8-PeCDF	66	21 - 192
13C-2,3,4,7,8-PeCDF	61	13 - 328
13C-1,2,3,4,7,8-HxCDD	63	21 - 193
13C-1,2,3,6,7,8-HxCDD	80	25 - 163
13C-1,2,3,4,7,8-HxCDF	70	19 - 202
13C-1,2,3,6,7,8-HxCDF	81	21 - 159
13C-2,3,4,6,7,8-HxCDF	76	22 - 176

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

### Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-793381/2-A

Lab Sample ID: LCSD 320-793381/3-A

**Matrix: Solid** 

**Analysis Batch: 795750** 

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

**Prep Batch: 793381** 

LCS LCS Isotope Dilution %Recovery Qualifier Limits 13C-1,2,3,7,8,9-HxCDF 69 17 - 205 13C-1,2,3,4,6,7,8-HpCDD 66 26 - 166 13C-1,2,3,4,6,7,8-HpCDF 65 21 - 158 13C-1,2,3,4,7,8,9-HpCDF 63 20 - 186 13C-OCDD 13 - 199 64 13C-OCDF 64 13 - 199

LCS LCS

%Recovery Qualifier Surrogate Limits 37CI4-2,3,7,8-TCDD 86 31 - 191

**Client Sample ID: Lab Control Sample Dup** 

**Prep Type: Total/NA** 

**Matrix: Solid** 

Analysis Batch: 795750							Prep Ba	itch: 79	93381
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2,3,7,8-TCDD	20.0	19.1		pg/g		96	67 - 158	1	50
2,3,7,8-TCDF	20.0	18.4		pg/g		92	75 - 158	1	50
1,2,3,7,8-PeCDD	100	92.8		pg/g		93	70 - 142	2	50
1,2,3,7,8-PeCDF	100	97.1		pg/g		97	80 - 134	1	50
2,3,4,7,8-PeCDF	100	100		pg/g		100	68 - 160	1	50
1,2,3,4,7,8-HxCDD	100	96.1		pg/g		96	70 - 164	1	50
1,2,3,6,7,8-HxCDD	100	99.6		pg/g		100	76 - 134	4	50
1,2,3,7,8,9-HxCDD	100	99.1		pg/g		99	64 - 162	5	50
1,2,3,4,7,8-HxCDF	100	104		pg/g		104	72 - 134	5	50
1,2,3,6,7,8-HxCDF	100	103		pg/g		103	84 - 130	1	50
1,2,3,7,8,9-HxCDF	100	103		pg/g		103	78 - 130	2	50
2,3,4,6,7,8-HxCDF	100	105		pg/g		105	70 - 156	2	50
1,2,3,4,6,7,8-HpCDD	100	99.8		pg/g		100	70 - 140	3	50
1,2,3,4,6,7,8-HpCDF	100	105		pg/g		105	82 - 122	6	50
1,2,3,4,7,8,9-HpCDF	100	103		pg/g		103	78 - 138	6	50
OCDD	200	207		pg/g		104	78 - 144	3	50
OCDF	200	197		pg/g		99	63 - 170	1	50

LCSD LCSD

Isotope Dilution	%Recovery	Qualifier	Limits
13C-2,3,7,8-TCDD	68		20 - 175
13C-2,3,7,8-TCDF	67		22 - 152
13C-1,2,3,7,8-PeCDD	63		21 - 227
13C-1,2,3,7,8-PeCDF	63		21 - 192
13C-2,3,4,7,8-PeCDF	60		13 - 328
13C-1,2,3,4,7,8-HxCDD	65		21 - 193
13C-1,2,3,6,7,8-HxCDD	79		25 - 163
13C-1,2,3,4,7,8-HxCDF	66		19 - 202
13C-1,2,3,6,7,8-HxCDF	76		21 - 159
13C-2,3,4,6,7,8-HxCDF	71		22 - 176
13C-1,2,3,7,8,9-HxCDF	64		17 - 205
13C-1,2,3,4,6,7,8-HpCDD	61		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	64		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	59		20 - 186

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Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-793381/3-A **Matrix: Solid** 

13C-OCDD

13C-OCDF

Analysis Batch: 795750

LCSD LCSD

Prep Type: Total/NA

**Prep Batch: 793381** 

**Client Sample ID: Lab Control Sample Dup** 

Isotope Dilution %Recovery Qualifier Limits 13 - 199 61 59 13 - 199

LCSD LCSD

Surrogate %Recovery Qualifier Limits 37CI4-2,3,7,8-TCDD 31 - 191

Client Sample ID: PDI-12-SO-47.8-20240806

Prep Type: Total/NA

**Matrix: Solid** 

Analysis Batch: 468418

Method: 2540G - SM 2540G

Lab Sample ID: 580-142813-1 DU

DU DU RPD Sample Sample Analyte Result Qualifier Result Qualifier RPD Limit Unit D Percent Solids 68.5 % 81.0 17 20 Percent Moisture 31.5 19.0 F3 % 50 20

Method: 3550C - Percent Moisture

Lab Sample ID: 580-142813-6 DU Client Sample ID: PDI-15-SO-38-20240725 Prep Type: Total/NA

**Matrix: Solid** 

**Analysis Batch: 790822** 

Sample Sample DU DU **RPD** Analyte Result Qualifier Result Qualifier Unit D RPD Limit Percent Moisture 20.9 H H3 20.8 % 0.5 20 Percent Solids 79.1 H H3 79.2 % 0.1 20

#### **Lab Chronicle**

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-12-SO-47.8-20240806

Lab Sample ID: 580-142813-1 Date Collected: 08/06/24 12:20 **Matrix: Solid** 

Date Received: 08/09/24 11:40

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	468418	AUA	EET SEA	08/15/24 15:25

Client Sample ID: PDI-12-SO-47.8-20240806

Lab Sample ID: 580-142813-1 Date Collected: 08/06/24 12:20 **Matrix: Solid** 

Date Received: 08/09/24 11:40 Percent Solids: 68.5

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467929	AC	EET SEA	08/12/24 12:50
Total/NA	Analysis	8260D		1	467888	K1K	EET SEA	08/12/24 13:49
Total/NA	Prep	5035	RA		468642	BYM	EET SEA	08/19/24 09:17
Total/NA	Analysis	8260D	RA	1	468647	AC	EET SEA	08/19/24 15:09

Client Sample ID: PDI-18-SO-38.7-20240807

Lab Sample ID: 580-142813-2 Date Collected: 08/07/24 10:20 **Matrix: Solid** 

Date Received: 08/09/24 11:40

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	468418	AUA	EET SEA	08/15/24 15:25

Client Sample ID: PDI-18-SO-38.7-20240807

Lab Sample ID: 580-142813-2 Date Collected: 08/07/24 10:20 Matrix: Solid Date Received: 08/09/24 11:40 Percent Solids: 89.0

Batch Batch Dilution Batch Prepared Method or Analyzed **Prep Type** Туре Run Factor Number Analyst Lab 08/21/24 15:12 5035 DL EET SEA Total/NA Prep 469011 BYM EET SEA Total/NA Analysis 8260D DL 1 468961 BYM 08/21/24 21:48 Total/NA EET SEA 08/19/24 14:51 Prep 5035 468710 BYM Total/NA Analysis 8260D 468721 BYM EET SEA 08/19/24 23:06 1

Client Sample ID: PDI-18-SO-43.2-20240807

Date Collected: 08/07/24 10:50 **Matrix: Solid** 

Date Received: 08/09/24 11:40

Γ		Batch	Batch		Dilution	Batch		Prepared
P	гер Туре	Type	Method	Run	Factor	Number Analy	yst Lab	or Analyzed
T	otal/NA	Analysis	2540G	<del></del>	1	468418 AUA	EET SEA	08/15/24 15:25

Client Sample ID: PDI-18-SO-43.2-20240807 Lab Sample ID: 580-142813-3

Date Collected: 08/07/24 10:50 Matrix: Solid Date Received: 08/09/24 11:40 Percent Solids: 79.2

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467929	AC	EET SEA	08/12/24 12:50
Total/NA	Analysis	8260D		1	467888	K1K	EET SEA	08/12/24 14:10
Total/NA	Prep	5035	RA		468642	BYM	EET SEA	08/19/24 09:17
Total/NA	Analysis	8260D	RA	1	468647	AC	EET SEA	08/19/24 15:30

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Lab Sample ID: 580-142813-3

#### **Lab Chronicle**

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-18-SO-48.5-20240807

Lab Sample ID: 580-142813-4 Date Collected: 08/07/24 12:05 **Matrix: Solid** 

Date Received: 08/09/24 11:40

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	468418	AUA	EET SEA	08/15/24 15:25

Client Sample ID: PDI-18-SO-48.5-20240807

Lab Sample ID: 580-142813-4 Date Collected: 08/07/24 12:05 **Matrix: Solid** Percent Solids: 84.2

Date Received: 08/09/24 11:40

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467929	AC	EET SEA	08/12/24 12:50
Total/NA	Analysis	8260D		1	467888	K1K	EET SEA	08/12/24 14:30
Total/NA	Prep	5035	RA		468642	BYM	EET SEA	08/19/24 09:17
Total/NA	Analysis	8260D	RA	1	468647	AC	EET SEA	08/19/24 15:52

Client Sample ID: PDI-20-SO-9-20240807

Lab Sample ID: 580-142813-5 Date Collected: 08/07/24 14:42 Matrix: Solid

Date Received: 08/09/24 11:40

Batch **Batch** Dilution Batch **Prepared Prep Type** Method Factor Number Analyst or Analyzed Type Run Lab EET SEA 08/15/24 15:25 Total/NA Analysis 2540G 468418 AUA

Client Sample ID: PDI-20-SO-9-20240807

Lab Sample ID: 580-142813-5 Date Collected: 08/07/24 14:42 **Matrix: Solid** 

Date Received: 08/09/24 11:40 Percent Solids: 94.4

=	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467929	AC	EET SEA	08/12/24 12:50
Total/NA	Analysis	8260D		1	467888	K1K	EET SEA	08/12/24 14:51
Total/NA	Prep	5035	DL		468642	BYM	EET SEA	08/19/24 09:17
Total/NA	Analysis	8260D	DL	1	468647	AC	EET SEA	08/19/24 19:07
Total/NA	Prep	3546			468175	TOA	EET SEA	08/14/24 10:45
Total/NA	Analysis	8270E		100	468859	K1K	EET SEA	08/20/24 18:59
Total/NA	Prep	3546			468715	ER	EET SEA	08/19/24 15:55
Total/NA	Analysis	8081B		2	469041	TL1	EET SEA	08/21/24 20:20
Total/NA	Prep	3546			468715	ER	EET SEA	08/19/24 15:55
Total/NA	Analysis	8082A		1	469089	VLF	EET SEA	08/22/24 17:23
Total/NA	Prep	8151A			471244	DVE6	EET CAL 4	08/15/24 15:29
Total/NA	Analysis	8151A		10	473202	ZE2W	EET CAL 4	08/22/24 19:57
Total/NA	Prep	3546	DL		468240	EM	EET SEA	08/14/24 16:13
Total/NA	Analysis	NWTPH-Dx	DL	20	468476	SW	EET SEA	08/17/24 01:48
Total/NA	Prep	1633 Shake			790133	BVB	EET SAC	08/12/24 06:20
Total/NA	Analysis	Draft-4 1633		1	791618	SS	EET SAC	08/15/24 14:39
Total/NA	Prep	HRMS-Sox			793381	BLR	EET SAC	08/22/24 11:02
Total/NA	Analysis	1613B		5	796419	СВ	EET SAC	09/05/24 06:06
Total/NA	Prep	HRMS-Sox	RA		793381	BLR	EET SAC	08/22/24 11:02
Total/NA	Analysis	1613B	RA	1	797800	DB	EET SAC	09/10/24 19:53

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Client: ERM-West Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-15-SO-38-20240725

Lab Sample ID: 580-142813-6 Date Collected: 07/25/24 12:20

**Matrix: Solid** 

Date Received: 08/09/24 11:40

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	3550C		1	790822	CFR	EET SAC	08/13/24 13:22

Client Sample ID: PDI-15-SO-38-20240725

Lab Sample ID: 580-142813-6

Date Collected: 07/25/24 12:20 **Matrix: Solid** Date Received: 08/09/24 11:40 Percent Solids: 79.1

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	1633 Shake			790133	BVB	EET SAC	08/12/24 06:20
Total/NA	Analysis	Draft-4 1633		1	791618	SS	EET SAC	08/15/24 14:59

Client Sample ID: PDI-20-SO-38.1-20240808

Lab Sample ID: 580-142813-7 Date Collected: 08/08/24 08:20

**Matrix: Solid** 

Lab Sample ID: 580-142813-8

Date Received: 08/09/24 11:40

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	468418	AUA	EET SEA	08/15/24 15:25

Client Sample ID: PDI-20-SO-38.1-20240808

Lab Sample ID: 580-142813-7 Date Collected: 08/08/24 08:20 **Matrix: Solid** 

Date Received: 08/09/24 11:40 Percent Solids: 84.5

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467929	AC	EET SEA	08/12/24 12:50
Total/NA	Analysis	8260D		1	467888	K1K	EET SEA	08/12/24 17:56
Total/NA	Prep	5035	RA		468642	BYM	EET SEA	08/19/24 09:17
Total/NA	Analysis	8260D	RA	1	468647	AC	EET SEA	08/19/24 16:14

Client Sample ID: PDI-20-SO-43-20240808

Lab Sample ID: 580-142813-8

Date Collected: 08/08/24 10:25 **Matrix: Solid** 

Date Received: 08/09/24 11:40

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G			468418	AUA	EET SEA	08/15/24 15:25

Client Sample ID: PDI-20-SO-43-20240808

Date Collected: 08/08/24 10:25 **Matrix: Solid** 

Date Received: 08/09/24 11:40 Percent Solids: 83.0

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467929	AC	EET SEA	08/12/24 12:50
Total/NA	Analysis	8260D		1	467888	K1K	EET SEA	08/12/24 15:11
Total/NA	Prep	5035	RA		468642	BYM	EET SEA	08/19/24 09:17
Total/NA	Analysis	8260D	RA	1	468647	AC	EET SEA	08/19/24 16:35

#### **Lab Chronicle**

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-20-SO-48.2-20240808

Lab Sample ID: 580-142813-9 Date Collected: 08/08/24 13:00 **Matrix: Solid** 

Date Received: 08/09/24 11:40

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	468418	AUA	EET SEA	08/15/24 15:25

Client Sample ID: PDI-20-SO-48.2-20240808

Lab Sample ID: 580-142813-9 Date Collected: 08/08/24 13:00 Matrix: Solid

Date Received: 08/09/24 11:40 Percent Solids: 84.9

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467929	AC	EET SEA	08/12/24 12:50
Total/NA	Analysis	8260D		1	467888	K1K	EET SEA	08/12/24 15:32
Total/NA	Prep	5035	RA		468642	BYM	EET SEA	08/19/24 09:17
Total/NA	Analysis	8260D	RA	1	468647	AC	EET SEA	08/19/24 16:57

Client Sample ID: PDI-20-SO-49-20240808

Lab Sample ID: 580-142813-10 Date Collected: 08/08/24 13:05 **Matrix: Solid** 

Date Received: 08/09/24 11:40

Batch Batch Dilution Batch **Prepared** Prep Type Method Factor Number Analyst or Analyzed Type Run Lab

EET SEA 08/15/24 15:25 Total/NA Analysis 2540G 468418 AUA

Client Sample ID: PDI-20-SO-49-20240808 Lab Sample ID: 580-142813-10

Date Collected: 08/08/24 13:05 Matrix: Solid Date Received: 08/09/24 11:40 Percent Solids: 77.2

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467929	AC	EET SEA	08/12/24 12:50
Total/NA	Analysis	8260D		1	467888	K1K	EET SEA	08/12/24 15:52
Total/NA	Prep	5035	RA		468642	BYM	EET SEA	08/19/24 09:17
Total/NA	Analysis	8260D	RA	1	468647	AC	EET SEA	08/19/24 17:19

Client Sample ID: PDI-20-SO-52-20240808

Date Collected: 08/08/24 13:10

Date Received: 08/09/24 11:40

	Batch	Batch		Dilution	Batch		Prepared
Prep Type	Type	Method	Run	Factor	Number Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G			468418 AUA	EET SEA	08/15/24 15:25

Client Sample ID: PDI-20-SO-52-20240808 Lab Sample ID: 580-142813-11

Date Collected: 08/08/24 13:10 **Matrix: Solid** Date Received: 08/09/24 11:40 Percent Solids: 79.2

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467929	AC	EET SEA	08/12/24 12:50
Total/NA	Analysis	8260D		1	467888	K1K	EET SEA	08/12/24 16:13
Total/NA	Prep	5035	DL		468642	BYM	EET SEA	08/19/24 09:17
Total/NA	Analysis	8260D	DL	1	468647	AC	EET SEA	08/19/24 19:29

**Eurofins Seattle** 

9/12/2024

Lab Sample ID: 580-142813-11 **Matrix: Solid** 

#### **Lab Chronicle**

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-20-SO-57.8-20240808

Lab Sample ID: 580-142813-12 Date Collected: 08/08/24 13:15 **Matrix: Solid** 

Date Received: 08/09/24 11:40

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	468418	AUA	EET SEA	08/15/24 15:25

Client Sample ID: PDI-20-SO-57.8-20240808

Lab Sample ID: 580-142813-12 Date Collected: 08/08/24 13:15 Matrix: Solid

Date Received: 08/09/24 11:40 Percent Solids: 77.3

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467929	AC	EET SEA	08/12/24 12:50
Total/NA	Analysis	8260D		1	467888	K1K	EET SEA	08/12/24 17:15
Total/NA	Prep	5035	RA		468642	BYM	EET SEA	08/19/24 09:17
Total/NA	Analysis	8260D	RA	1	468647	AC	EET SEA	08/19/24 17:41

Client Sample ID: PDI-21-SO-19.8-20240808

Lab Sample ID: 580-142813-13 Date Collected: 08/08/24 15:45 **Matrix: Solid** 

Date Received: 08/09/24 11:40

	Batch	Batch		Dilution	Batch		Prepared
Prep Type	Type	Method	Run	Factor	Number Analy	yst Lab	or Analyzed
Total/NA	Analysis	2540G		1	468418 AUA	EET SEA	08/15/24 15:25

Client Sample ID: PDI-21-SO-19.8-20240808

Lab Sample ID: 580-142813-13 Date Collected: 08/08/24 15:45 Matrix: Solid Date Received: 08/09/24 11:40 Percent Solids: 82.4

Batch Batch Dilution Batch Prepared Method or Analyzed **Prep Type** Туре Run Factor Number Analyst Lab 08/12/24 12:50 5035 467929 AC EET SEA Total/NA Prep Total/NA Analysis 8260D 467888 K1K EET SEA 08/12/24 16:33 1 Total/NA EET SEA 08/19/24 09:17 Prep 5035 RA 468642 BYM Total/NA Analysis 8260D 468647 AC EET SEA 08/19/24 18:02 RΑ 1

Client Sample ID: PDI-21-SO-36.3-20240808

Date Collected: 08/08/24 17:15 Matrix: Solid

Date Received: 08/09/24 11:40

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	468418	AUA	EET SEA	08/15/24 15:25

Client Sample ID: PDI-21-SO-36.3-20240808 Lab Sample ID: 580-142813-14

Date Collected: 08/08/24 17:15 Matrix: Solid Date Received: 08/09/24 11:40 Percent Solids: 76.1

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467929	AC	EET SEA	08/12/24 12:50
Total/NA	Analysis	8260D		1	467888	K1K	EET SEA	08/12/24 17:35
Total/NA	Prep	5035	RA		468642	BYM	EET SEA	08/19/24 09:17
Total/NA	Analysis	8260D	RA	1	468647	AC	EET SEA	08/19/24 18:24

**Eurofins Seattle** 

Lab Sample ID: 580-142813-14

Project/Site: Arkema PDI Sampling

Client: ERM-West

Client Sample ID: PDI-21-SO-36.3-20240808

Date Collected: 08/08/24 17:15

Lab Sample ID: 580-142813-14 Matrix: Solid Percent Solids: 76.1

Date Received: 08/09/24 11:40

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	3546			468715	ER	EET SEA	08/19/24 15:56
Total/NA	Analysis	8081B		1	469041	TL1	EET SEA	08/21/24 22:28
Total/NA	Prep	3546	RE		469121	TOA	EET SEA	08/22/24 12:18
Total/NA	Analysis	8081B	RE	1	469215	VLF	EET SEA	08/23/24 14:32

Client Sample ID: PDI-21-SO-39.5-20240808

Lab Sample ID: 580-142813-15

Date Collected: 08/08/24 17:45 **Matrix: Solid** Date Received: 08/09/24 11:40

Batch Batch Dilution Batch Prepared Method Number Analyst or Analyzed **Prep Type** Type Run **Factor** Lab EET SEA 08/15/24 15:25 Total/NA Analysis 2540G 468418 AUA

Client Sample ID: PDI-21-SO-39.5-20240808

Lab Sample ID: 580-142813-15 Date Collected: 08/08/24 17:45 Matrix: Solid

Date Received: 08/09/24 11:40 Percent Solids: 85.9

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467929	AC	EET SEA	08/12/24 12:50
Total/NA	Analysis	8260D		1	467888	K1K	EET SEA	08/12/24 16:54
Total/NA	Prep	5035	RA		468642	BYM	EET SEA	08/19/24 09:17
Total/NA	Analysis	8260D	RA	1	468647	AC	EET SEA	08/19/24 18:45

Client Sample ID: TB-01-SO-20240808

Lab Sample ID: 580-142813-16 Date Collected: 08/08/24 00:01 **Matrix: Solid** 

Date Received: 08/09/24 11:40

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			467929	AC	EET SEA	08/12/24 12:50
Total/NA	Analysis	8260D		1	467888	K1K	EET SEA	08/12/24 13:29
Total/NA	Prep	5035	RA		468642	BYM	EET SEA	08/19/24 09:17
Total/NA	Analysis	8260D	RA	1	468647	AC	EET SEA	08/19/24 14:47

Client Sample ID: PD1-21-SO-20.2-20240808

Lab Sample ID: 580-142813-17 Date Collected: 08/08/24 15:50 Matrix: Solid

Date Received: 08/09/24 11:40

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	468418	AUA	EET SEA	08/15/24 15:25

Client Sample ID: PD1-21-SO-20.2-20240808

Lab Sample ID: 580-142813-17 Date Collected: 08/08/24 15:50 Matrix: Solid Date Received: 08/09/24 11:40 Percent Solids: 82.6

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	3546			468175	TOA	EET SEA	08/14/24 10:45
Total/NA	Analysis	8270E		20	468859	K1K	EET SEA	08/20/24 19:23

#### **Lab Chronicle**

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PD1-21-SO-20.2-20240808

Lab Sample ID: 580-142813-17 Date Collected: 08/08/24 15:50 **Matrix: Solid** Date Received: 08/09/24 11:40 Percent Solids: 82.6

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	3546			468715	ER	EET SEA	08/19/24 15:56
Total/NA	Analysis	8081B		2	469041	TL1	EET SEA	08/21/24 22:10
Total/NA	Prep	3546	RE		469121	TOA	EET SEA	08/22/24 12:14
Total/NA	Analysis	8081B	RE	2	469215	VLF	EET SEA	08/23/24 14:14
Total/NA	Prep	3546	DL		468715	ER	EET SEA	08/19/24 15:56
Total/NA	Analysis	8081B	DL	10	469412	VLF	EET SEA	08/26/24 13:10
Total/NA	Prep	3546			468715	ER	EET SEA	08/19/24 15:56
Total/NA	Analysis	8082A		1	469089	VLF	EET SEA	08/22/24 18:33
Total/NA	Prep	8151A			471244	DVE6	EET CAL 4	08/15/24 15:29
Total/NA	Analysis	8151A		10	473202	ZE2W	EET CAL 4	08/22/24 20:19
Total/NA	Prep	3546			468240	EM	EET SEA	08/14/24 16:13
Total/NA	Analysis	NWTPH-Dx		1	468338	SW	EET SEA	08/16/24 04:16
Total/NA	Prep	1633 Shake			790133	BVB	EET SAC	08/12/24 06:20
Total/NA	Analysis	Draft-4 1633		1	791618	SS	EET SAC	08/15/24 16:22
Total/NA	Prep	HRMS-Sox			793381	BLR	EET SAC	08/22/24 11:02
Total/NA	Analysis	1613B		5	796804	JBC	EET SAC	09/05/24 19:11
Total/NA	Prep	HRMS-Sox	RA		793381	BLR	EET SAC	08/22/24 11:02
Total/NA	Analysis	1613B	RA	5	798205	DB	EET SAC	09/11/24 15:10
Total/NA	Prep	HRMS-Sox	DL		793381	BLR	EET SAC	08/22/24 11:02
Total/NA	Analysis	1613B	DL	20	798158	СВ	EET SAC	09/11/24 16:37

#### **Laboratory References:**

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

## **Accreditation/Certification Summary**

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

#### **Laboratory: Eurofins Seattle**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	<b>Expiration Date</b>
Oregon	NELAP	4167	07-07-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
2540G		Solid	Percent Solids
8270E	3546	Solid	2,4,6-Trichlorophenol
8270E	3546	Solid	2-Nitrophenol
8270E	3546	Solid	Bis(2-ethylhexyl) phthalate
8270E	3546	Solid	Butyl benzyl phthalate
8270E	3546	Solid	Hexachlorobutadiene
8270E	3546	Solid	Isophorone

#### **Laboratory: Eurofins Calscience**

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	<b>Expiration Date</b>
Arizona	State	AZ0830	11-16-24
Arkansas DEQ	State	88-0161	07-02-25
California	Los Angeles County Sanitation Districts	9257304	08-01-24 *
California	State	3082	07-31-26
Kansas	NELAP	E-10420	07-31-25
Nevada	State	CA00111	10-31-24
Oregon	NELAP	4175	02-02-25
USDA	US Federal Programs	P330-22-00059	06-08-26
Washington	State	C916-18	10-11-24

#### **Laboratory: Eurofins Sacramento**

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

- Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	02-20-27
ANAB	Dept. of Defense ELAP	L2468	01-20-27
ANAB	Dept. of Energy	L2468.01	01-20-27
ANAB	ISO/IEC 17025	L2468	01-20-27
Arizona	State	AZ0708	08-11-25
Arkansas DEQ	State	88-0691	05-18-25
California	State	2897	01-31-26
Colorado	State	CA00044	08-31-25
Florida	NELAP	E87570	06-30-25
Georgia	State	4040	01-29-25
Hawaii	State	<b>Eurofins Sacramento</b>	01-29-25
Illinois	NELAP	200060	03-31-25
Kansas	NELAP	E-10375	10-31-25
Louisiana	NELAP	01944	06-30-25
Louisiana (All)	NELAP	01944	06-30-25
Maine	State	CA00004	04-14-26
Michigan	State	9947	01-29-25
Minnesota	NELAP	2749448	12-31-24
Nevada	State	CA00044	10-31-24

<sup>\*</sup> Accreditation/Certification renewal pending - accreditation/certification considered valid.

# **Accreditation/Certification Summary**

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

### **Laboratory: Eurofins Sacramento (Continued)**

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date	
New Hampshire	NELAP	2997	04-19-25	
New Jersey	NELAP	CA005	06-30-25	
New York	NELAP	11666	04-01-25	
Ohio	State	41252	01-29-25	
Oregon	NELAP	4040	01-29-25	
Texas	NELAP	T104704399-23-17	05-31-25	
US Fish & Wildlife	US Federal Programs	A22139	04-30-25	
USDA	US Federal Programs	P330-18-00239	02-28-26	
Utah	NELAP	CA000442023-16	02-28-25	
Virginia	NELAP	460278	03-14-25	
Washington	State	C581	05-05-25	
West Virginia (DW)	State	9930C	01-31-25	
Wisconsin	State	998204680	08-31-25	
Wyoming	State Program	8TMS-L	01-28-19 *	

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 $<sup>{}^{\</sup>star}\operatorname{Accreditation/Certification\ renewal\ pending\ -\ accreditation/certification\ considered\ valid}.$ 

Eurofins Seattle

# **Sample Summary**

Client: ERM-West

580-142813-17

Project/Site: Arkema PDI Sampling

PD1-21-SO-20.2-20240808

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-142813-1	PDI-12-SO-47.8-20240806	Solid	08/06/24 12:20	08/09/24 11:40
580-142813-2	PDI-18-SO-38.7-20240807	Solid	08/07/24 10:20	08/09/24 11:40
580-142813-3	PDI-18-SO-43.2-20240807	Solid	08/07/24 10:50	08/09/24 11:40
580-142813-4	PDI-18-SO-48.5-20240807	Solid	08/07/24 12:05	08/09/24 11:40
580-142813-5	PDI-20-SO-9-20240807	Solid	08/07/24 14:42	08/09/24 11:40
580-142813-6	PDI-15-SO-38-20240725	Solid	07/25/24 12:20	08/09/24 11:40
580-142813-7	PDI-20-SO-38.1-20240808	Solid	08/08/24 08:20	08/09/24 11:40
580-142813-8	PDI-20-SO-43-20240808	Solid	08/08/24 10:25	08/09/24 11:40
580-142813-9	PDI-20-SO-48.2-20240808	Solid	08/08/24 13:00	08/09/24 11:40
580-142813-10	PDI-20-SO-49-20240808	Solid	08/08/24 13:05	08/09/24 11:40
580-142813-11	PDI-20-SO-52-20240808	Solid	08/08/24 13:10	08/09/24 11:40
580-142813-12	PDI-20-SO-57.8-20240808	Solid	08/08/24 13:15	08/09/24 11:40
580-142813-13	PDI-21-SO-19.8-20240808	Solid	08/08/24 15:45	08/09/24 11:40
580-142813-14	PDI-21-SO-36.3-20240808	Solid	08/08/24 17:15	08/09/24 11:40
580-142813-15	PDI-21-SO-39.5-20240808	Solid	08/08/24 17:45	08/09/24 11:40
580-142813-16	TB-01-SO-20240808	Solid	08/08/24 00:01	08/09/24 11:40

Solid

08/08/24 15:50 08/09/24 11:40

Job ID: 580-142813-1

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5755 8th Street East Tacoma, WA 98424 Phone (253) 922-2310

# **Chain of Custody Record**



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**Environment Testing** 

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Client Contact: Avery Soplata	Phone:			E-Mail: Sheri.	: .Cruz@e	et.eurc	finsus	.com		State	or Origin.			Page of	1	
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5755 8th Street East Tacoma, WA 98424 Phone (253) 922-2310

# **Chain of Custody Record**



Phone (253) 922-2310																
Client Information	Sampler:			Lab Cru	PM: iz, Sher	i L				Carr	ier Tracking I	lo(s):		COC No: 580-62781-19	269.12	
Client Contact: Avery Soplata	Phone:			E-M	ail:		eurofi	nsus.com	1	State	of Origin:		_	Page: Page of Z	2 of	a
Company:	<b>L</b>		PWSID:	Tolle	1					Pogue	etad			Job #:	W 0.1	
ERM-West Address:	Due Date Request	ed:			<i>(</i> )			A	nalysis	Reque	stea			Preservation (	Codes:	
1050 SW 6th Avenue Suite 1650	TAT Requested (d.	a			400									F - MeOH E - NaHSO4		
City: Portland	P)							ø						A - HCL		
State, Zip: OR, 97204	Compliance Project	ct: A Yes	Δ Νο	·				blanks								
Phone:	PO#:							nent								
Email:	0732436.301 Wo#:				- 2	FO.		dinp								
avery.soplata@erm.com Project Name:	Project#:				8 2	list	ist.	liste					ers			
Arkema - PDI Investigation	58020754				를 일 일	P E	ndard	ndard					ntaine			
Site:	SSOW#:				Samp	stal	, star	s, star					of con	Other:		
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wasts/oli,	Field Filtered S	8260D - Votatiles	8260D - Volatiles	8260D - Volatiles					Total Number	Special	Instructions	s/Note:
		><	Preservat		XX		E						X		>-<	
POT-20-50-57.8-20240808	03/03/2024	1315	G	5	П	Х							2			
POI-01-50-19.8-20240808	08/08/2024		G	S	П	X							2			
POI-81-50 -36,3-20240808	08/03/2024		G	S		X							2			
POI-21-50-39 5-2024080X	08/08/202			5	††	×							2			
	08/08/00	1743	-		++	-							0			
16-01-20440308					+	N.	$\vdash$					+	1			
TB-01-SU-20240808	<del>08/08/2020</del>	•		5	₩	X		-					1			
TB-01-50-20240808	08/05/24			5	$\perp$	X		-								
					Ш											
Possible Hazard Identification	<b>~</b>		I		Sa	mple	Disp	osal ( A	fee may l	be asses	sed if san	ples are re	tained	l longer than	1 month)	
Non-Hazard Flammable Skin Irritant	Poison B Wunkno	own LA	Radiological					To Client			sal By Lab	<u> </u>	Archiv	e For	Months	
Deliverable Requested: I(II)III, IV, Other (specify)						ecial	ınstru	ctions/Q0	C Require							
Empty Kit Relinquished by:		Date:			Time:						Method of S	•				
Relinquished by: David Stone	Date/Time:	1 18	37	ERI ERI	м.	Recei	ived by		500	2		0ate/Time: 8/9/24	4	1035	Company	1
Relinquished by:	Date/Time: 8 9 24	1.19	C	ompany	T.	Recei	ived by	1	00	)	Ī	Date/Time:			Company	ET
Relinquished by:	Date/Time:			ompany	2	Recei	ived by	-	X			Date/Time:	UT	1140	Company	
Custody Socie Intent:   Custody Soci No.						Contr	e Tarr	anah malah	°C and Othe	as Barrari						
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No							er 1 emp	perature(\$)	C and Othe	er Kemarks						
			P	age 107	of 1	21									Ver: 04/02	2/2029/12

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5755 8th Street East Tacoma, WA 98424

# **Chain of Custody Record**



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Environment Testing

Phone (253) 922-2310																		
Client Information	Sampler:	8	∕l: Sheri	L	580	0-142	813 C	hain o	Cust	oay			COC No: 580-62781	-19269.1	2	I		
Client Information Client Contact:	Phone:			E-Mail			e		_		State	or Ungin			Page: Page of			
Avery Soplata  Company:	<u> </u>		PWSID:	Sheri	.Cruz@	get.eur	ofinsu	is.com	}		<u></u>				Job#:			
ERM-West								A	nalys	is Re	ques	ted						
Address: 1050 SW 6th Avenue Suite 1650	Due Date Requeste	ed:													Preservation F - MeOH	n Codes:		1
City:	TAT Requested (da							ĺ							E - NaHSO4 A - HCL			l
Portland State, Zip:		200					ınks											
OR, 97204	Compliance Projec PO #:	t: ∆ Yes ∠	7 No				nt bla											į
Phone:	0732436.301				9	Ŧ	ipme											l
Email: avery.soplata@erm.com	WO #:				2 0	t MeOH	t equ	•						yo.				1
Project Name:	Project #:				S s	rd lis	Si bi	10						ainer				ı
Arkema - PDI Investigation Site:	58020754 SSOW#:				Ses (Ses	anda	anda	1 3		İ				containe	Other:			
Site.					San	es, st	88, 81	1 a	1					rof		charge and a second and the		
			Campic	Matrix	MS/	olatil	olatii	10						agu				ı
		Sample	'Ape	W=water, B=solid, waste/oil,		0 9		33						Z Z				1
Sample Identification	Sample Date	Time	G=grab) вт=т	ssue, A=Air)	Per Fie	8260D	8260D	-						Total	Spe	cial Instr	uctions/Note	:
		$\geq \leq$	Preservation		XX	F E	A							<del>      X</del>				
POT-12-SO-417.8-20240806	08/06/2024	1220		S		X								2				
PVI-13-50-38.7-202406067	08/07/24	ය 20	6	5		X								a	High	Concer	tration	DIN
PDI-18-50-43.2-20240807			GS	3		X								2			-	
PDI-16-50-48.5-20240807	08/07/24		6	5		X								a				
PDI-20-50-9-20240807	08/07/24	1442	6	5		X			П					2				,
PDI-15-50-38-20240725	07/25/24	1220		5				X						1				
PDI-20-50-38,1-20240803	08/58/24			5		Х								2				1
PDT-20-50-43-20240908	68/08/24		6 9	5		X			П					2				1
PPI-20-50-48,2-20240808	08/08/24			5		χ								9				1
POT-20-50-49-20240808	1 7 7 1	1305		S	П	X	$\top$							2				
POI-20-50-52-20240808	1 7	1310		D	$\top$	X								1				1
Possible Hazard Identification	A				Sar	nple D	ispos	al (A	fee m	ay be	asses	sed if	samples	are retain	ed longer t	han 1 mc	onth)	
Non-Hazard Flammable Skin Irritant Poise	on B Unkno	own LF	Radiological			CONTRACTOR OF THE PARTY OF THE	NAMES OF TAXABLE PARTY.	Clier	THE RESERVE AND PARTY OF THE PA	WEST WHITE THE PARTY OF	THE RESERVE OF THE PERSON NAMED IN	sal By L	.ab	Arch	ive For		Months	
Deliverable Requested: I(II)III, IV, Other (specify)					Spe	ecial In	structi	ons/Q	C Req	uireme	ents:					***************************************		
Empty Kit Relinquished by:		Date:			Time:							Method	of Shipme					
Relinquished by: David Stone?	Date/Time:	1 1835		ER/	^	Receive	ed by:	1		7			Date/T	ime: 19/24	1035	C	ompany M-E	
Relinquished by:	Date/Time:		Com	pany		Receive	d by:	0	7				Date		1146	C	ompany	
Relinquished by	89,24 Date/Time/	4.4		<u> A ・E</u> pany		Receive	d by	<u> </u>		-			Date/T	me:	11 (0		ompany	
5/1	Date/Time/	165		er		~	1	CONTRACTOR PROPERTY.	lp				81	10/24	043		EETM	
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No						Cooler				Other R	Remarks	3	1.41	4.4	PP	5	CAR	
4 100 A 110				10e 10	امح	494L	1										04/02/202	2/1 2/5

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eurofins 💸

SIGNATURE

2461274

**eurofins** 

**Environment Testing TestAmerica** 

Custody Seal

ORIGIN ID:BNOA (503) 90 SAMPLE RECEIVING EUROFINS PORTLAND 7959 SW CIRRUS DR 3UILDING 22 3EAVERTON, OR 970087145 INITED STATES US

SHIP DATE: O9AUG24 ACTWGT: 44.00 LB MAN CAD: 0893932/CAFE3808

BILL THIRD PARTY

**EUROFINS ENVIRONMENT TESTING SOUTHW** 2841 DOW AVENUE, SUITE 100

TUSTIN CA 92780 714) 805 - 5494 REF: 8580 - 63437



7465 1631 1797

PRIORITY OVERNIGHT

92780 CA-US SNA

eurofins

580-142813 Waybill

**Environment Testing TestAmerica** 





Page 109 of 121

Ver 04/02/2024

10

Chain of Custody Record	Sampler Larcking No(s)	Phone:	Accreditations Required (See note): NELAP - Oregon	Due Date Requested. 8/22/2024			(,	WO#	1633 A Mil List		Sample Matrix of	Preservation Code: XX	8/7/24	7/25/24	.2813-17) 8/8/24 15.50 Solid X X X				Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northwest, LLC places the ownership of method analyte & accreditation compilance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/latests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northwest, use analyzed. Any changes to accreditation status should be brought to Eurofins Environment Testing Northwest, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compilance to Eurofins Environment Testing Northwest, LLC attention immediately.	Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)	Hhar (enertify) Drilliscombile Drails: 2 Control Indianates Control In	riiliaiy Deliyetable Rafik. 2 Opeda Ilistiucuolisi QC Requiements.	Date: Time. Method of Shipment	124 1619 Company   Prostratory / Strollar 6900	Company Received by Date/Time: 0	. Date/Time: Company Received by Date/Time: Company	Seal No. Contraction (s) Cond Other Remarks:
Eurofins Seattle 5755 8th Street East Tacoma, WA 98424 Phone. 253-922-2310	ormation (Sub Contract Lab)		Company Eurofins Environment Testing Northem Ca		mento	лр. 5605	Phone: 916-373-5600(Tel) 916-372-1059(Fax)		Project Name: Arkema PDI Sampling 51		Sample Identification - Client ID (Lab ID)		PDI-20-SO-9-20240807 (580-142813-5)	PDI-15-SO-38-20240725 (580-142813-6)	PD1-21-SO-20.2-20240808 (580-142813-17)	21	1		Note: Since laboratory accreditations are subject to change, Eurofins Environment Triaboratory does not currently maintain accreditation in the State of Origin listed above accreditation status should be brought to Eurofins Environment Testing Northwest, L.	Possible Hazard Identification	Unconfirmed Deliverable Reminested 1 II III N/ Other (specify)		linguished by:		Relinquished by	•	Custody-Seals Intact: Custody Seal No.

5755 8th Street East Tacoma, WA 98424

## **Chain of Custody Record**



eurofins |

Loc: 580 Envi 142813

Phone: 253-922-2310	Sampler:							Lab PM:							Carrier Tracking No(s): COC No:						
Client Information (Sub Contract Lab)						heri	L						Jamei	. roomi	g (10(0)				580-135951.1		
Client Contact:	Phone:			E-M										Origin:					Page:		
Shipping/Receiving Company:				Sn				urofinsi Required					Orego	on		-			Page 1 of 1 Job #:		
Eurofins Environment Testing Southwest,								regon	2 (000	11010).									580-142813-1		
Address:	Due Date Request	ed:			Т							_							Preservation Co	des:	
2841 Dow Avenue, Suite 100,	8/22/2024				-				P	Analy	/SIS	Req	uest	ed							
City: Tustin	TAT Requested (d	ays):			5	10	ike)						1					60 m			
State, Zip:	-					100	S											100	1		
CA, 92780							교														
Phone:	PO #:				100		List												1		
714-895-5494(Tel) Email:	WO #:	-			<b>-</b> [위	100	des												1		
Linea.	, , , , , , , , , , , , , , , , , , ,				ō	9	[윤											ξ.			
Project Name:	Project #:	1			ار ار	or No)	Routine Herbicides List (Full Spike)						× .				- 1	containers			
Arkema PDI Sampling	58020754					Yes	흌										+ 7	onts	Other:		
Site:	SSOW#:				E	Perform MS/MSD (Yes	8											of C	Outer.		
V The Control of the	-	11 to 11	T			S/IMS	8151A/8151A_SP						10			- 1		Total Number of	÷.	10.0	Supers 1
Compression for the second		Fare	Sample	Matrix (w=water,	te re	ž.	151				- 5				1.	818	-W	umb		170.7	GE 1
		Sample	Type (C=comp,	S=solid, O=waste/oil,	E	E	A/8							-		400	12.0	Z	1116		123.7
Sample Identification - Client ID (Lab ID)	Sample Date	Time		O=waste/oil, BT=Tissue, A=A	r) 🖺	Per	8151	70	-					4		200		Tot	Special II	nstructions/	Note:
		><	_	ation Code:	X	X	==0	444 33	9 14	- 156	55	SE	186 K	51 12	166	145		X	Sales of the sales		- ALL LIN
PDI-20-SO-9-20240807 (580-142813-5)	8/7/24	14:42		Solid	П		х						-				.10	1	1.	4 900	Terry 1
1 51-20-30-9-20240007 (300-142013-3)	0///24	Pacific 15:50			+	Н	-	-	+	-		-			+-			100		10	
PD1-21-SO-20.2-20240808 (580-142813-17)	8/8/24	Pacific		Solid	ш	П	Х											1		135	24
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580 142913 Obsis	. 110 (100)   110 (100)   110 (100)   110 (100)   110 (100)   110 (100)   110 (100)   110 (100)   110 (100)		-		-	П			1	1	1				1		1 2			4	
	of Custody				$\perp$	$\vdash$			_	_	-		-		-		196	350	-	14	400
	1	3 w	1														.17	36			
Note: Since laboratory accreditations are subject to change, Eurofins Environm	ent Testing Northwest	LLC places th	e ownershin o	f method ana	lyte &	accre	ditatio	n compli	ance u	nou or	ur subc	ontrac	t labora	tories.	This sa	mole s	shipm	ent is	s forwarded under ch	nain-of-custody.	If the
laboratory does not currently maintain accreditation in the State of Origin listed	above for analysis/test	s/matrix being	analyzed, the	samples must	be sh	nipped	d back	to the Eu	urofins	Enviro	nment	Testir	g North	west, L	LÇ labo	ratory	or ot	her in	nstructions will be pro	ovided. Any cha	anges to
accreditation status should be brought to Eurofins Environment Testing Northwe	est, LLC attention imm	ediately. If all	requested acc	reditations are	curre																LC.
Possible Hazard Identification						Sar	nple	Dispos	sal ( /	A fee	may	be a	sess	ed if s	ampl	es ar	re ret	tain	ed longer than	1 month)	
Unconfirmed							- <sub>Re</sub>	eturn T	o Clie	ent		$\neg_{\scriptscriptstyle D}$	isposa	al By L	ab		<u> </u>	4rch	ive For	Months	
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliver	able Rank:	2			Spe	ecial I	Instruct	ions/	QC R	equire	emen	ts:								
Empty Kit Relinquished by:		Date:			Tir	me:							In	lethod o	f Shipn	nent:	_				
	Date/Time:/	Date.		Company	1,	110.	Pacai	ived by:								/Time:	_			Company	
Relinquished by:	S/9/24	/63	0	Company			1	ived by.							Date	, , ,,,,,,				Company	
Relinquished by:	Date/Time:	700		Company			Recei	ived by:								/Time:				Company	
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Relinquished by:	Date/Time:			Company			Recei	ived by							Date	/Time:				Company	
0.444 0.4144 10.44 10.44				L			-			(-) °C	- 4 0						-	90 10			0.8
Custody Seals Intact: Custody Seal No.:						10	COOLE	er Tempe	rature	(s) 'C a	and Oth	ег ке	marks.	20	12	T	SIA	12			

### **Login Sample Receipt Checklist**

Client: ERM-West Job Number: 580-142813-1

Login Number: 142813 List Source: Eurofins Seattle

List Number: 1

Creator: O'Connell, Jason I

oreator. o comien, duson i		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	False	Received extra samples not listed on COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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Client: ERM-West Job Number: 580-142813-1

Login Number: 142813 List Number: 3 Creator: Yu. Tiffany List Source: Eurofins Calscience List Creation: 08/10/24 12:53 PM

Creator: Yu, Tiffany		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

**Eurofins Seattle** 

Client: ERM-West Job Number: 580-142813-1

Login Number: 142813 List Source: Eurofins Sacramento
List Number: 2 List Creation: 08/10/24 10:10 AM

Creator: Morazzini, Dominic S

Creator: Morazzini, Dominic S		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	2468889
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.7
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Jop.

# **Environment Testing**

# Sacramento Sample Receiving Notes (SSRN)



580-142813 Field Sheet

Fracking #	$\mathbf{a}$	1105	11021	177	=

SO / PO / FO SAT / 2-Day / Ground / UPS / CDO / Courier GSL / OnTrac / Goldstreak / USPS / Other\_\_\_\_\_

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations File in the job folder with the COC

ile in the job folder with the COC							
		, I A		l No.			
Therm. ID: LOU Corr. Factor				Notes:			
lce Wet Gel	Othe	r					
Cooler Custody Seal: 246 125	3_		<del></del>			···········	
Cooler ID							
Temp Observed 2. 1 °C Correct From Temp Blank □ Samp	ted <u>2</u> ole <b>Z</b>	7	_°C				
Opening/Processing The Shipment	<u>Yes</u>	<u>No</u>	<u>NA</u>				
Cooler compromised/tampered with?	ם	Ø					
Cooler Temperature is acceptable?	Ø	<u>م</u> ם					
Frozen samples show signs of thaw?	ٰ 🗅		P			<u></u>	
Initials. DM Date: 08/10/2	4		,				
Unpacking/Labeling The Samples	Yes	<u>No</u>	<u>NA</u>	***************************************		<u>-</u>	
Containers are not broken or leaking?	Ø	Δ,					
Samples compromised/tampered with?		P					
COC is complete w/o discrepancies	ø/			Trizma Lot #(s).			
Sample custody seal?			ø				
Sample containers have legible labels?	p/						
Sample date/times are provided?	ø						
Appropriate containers are used?	΄ <b>⊿</b> ′			Ammonium			
Sample bottles are completely filled?	, pzř			Acetate Lot #(s)			
Sample preservatives verified?	_ _		ø				
Is the Field Sampler's name on COC?			ĺ <b>z</b> ľ				
Samples w/o discrepancies?	₽′		, 				
Zero headspace?*	۵	$\Box$	ø				
Alkalinity has no headspace?	۵		ø	Login Completion	<u>Yes</u>	<u>No</u>	<u>NA</u>
Perchlorate has headspace? (Methods 314, 331, 6850)			$\not\square$	Receipt Temperature on COC?  NCM Filed?	<b>9</b> ′	ם	□ ⁄ <b>≥</b> ⁄
Multiphasic samples are not present?	Ø			Samples received within hold time?  Log Release checked in TALS?	<u> </u>	0	é d
*Containers requiring zero headspace have no headspac	e, or bubb	le < 6 mn	n (1/4")			_	_
Initials DM Date 68/10/2	4			W			
		_		Initials DM Date 68 10	24	_	

Client: ERM-West Job ID: 580-142813-1 Project/Site: Arkema PDI Sampling

### Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Matrix: Solid Pren Type: Total/NA

		reice	ent Isotope	Dilution Re	covery (Ac	ceptance L	ກາກເຮ)		
	PFBA	PFPeA	13C5PHA	C4PFHA	C8PFOA	C9PFNA	C6PFDA	13C7PUA	
Client Sample ID	(20-150)	(20-150)	(20-150)	(20-150)	(20-150)	(20-150)	(20-150)	(20-150)	
PDI-20-SO-9-20240807	92.0	110	102	103	95.4	103	94.9	86.5	
PDI-15-SO-38-20240725	23.5	28.2	23.8	25.2	25.0	28.8	22.8	19.6 *5-	
PDI-15-SO-38-20240725	20.2	24.1	21.0	22.9	22.5	21.2	20.5	18.6 *5-	
PDI-15-SO-38-20240725	17.7 *5-	20.8	18.5 *5-	18.0 *5-	16.8 *5-	18.4 *5-	17.5 *5-	16.0 *5-	
PDI-15-SO-38-20240725	16.8 *5-	20.2	16.8 *5-	18.0 *5-	17.4 *5-	18.2 *5-	18.1 *5-	17.9 *5-	
PD1-21-SO-20.2-20240808	84.0	108	100	104	100	112	103	97.0	
Lab Control Sample	98.2	115	98.2	95.7	97.5	100	93.0	82.0	
Lab Control Sample	97.8	112	103	89.5	96.0	97.7	105	95.5	
Method Blank	98.8	114	105	103	96.0	104	98.1	88.2	
	Percent Isotope Dilution Recovery (Acceptance Limits)								
	PFDoA	PFTDA	C3PFBS	C3PFHS	C8PFOS	<b>PFOSA</b>	d3NMFOS	d5NEFOS	
Client Sample ID	(20-150)	(20-150)	(20-150)	(20-150)	(20-150)	(20-150)	(20-150)	(20-150)	
PDI-20-SO-9-20240807	79.8	30.0	135	108	113	127	125	140	
PDI-15-SO-38-20240725	18.7 *5-	21.3	25.3	34.2	28.3	23.6	20.2	23.0	
PDI-15-SO-38-20240725	18.4 *5-	20.7	21.6	33.2	21.2	22.4	18.9 *5-	20.7	
PDI-15-SO-38-20240725	16.8 *5-	17.3 *5-	20.0	26.5	19.7 *5-	20.4	18.6 *5-	18.6 *5-	
PDI-15-SO-38-20240725	15.5 *5-	14.9 *5-	17.6 *5-	24.7	19.7 *5-	19.0 *5-	16.6 *5-	18.7 *5-	
PD1-21-SO-20.2-20240808	88.0	57.2	118	107	114	136	149	178 *5+	
Lab Control Sample	75.1	79.4	99.9	97.7	101	98.0	99.9	99.3	
Lab Control Sample	84.0	95.2	111	103	103	105	107	101	
Method Blank	80.0	91.0	104	96.6	102	97.8	95.9	94.4	
	PDI-20-SO-9-20240807 PDI-15-SO-38-20240725 PDI-15-SO-38-20240725 PDI-15-SO-38-20240725 PDI-15-SO-38-20240725 PDI-15-SO-38-20240725 PD1-21-SO-20.2-20240808 Lab Control Sample Lab Control Sample Method Blank  Client Sample ID PDI-20-SO-9-20240807 PDI-15-SO-38-20240725	Client Sample ID         (20-150)           PDI-20-SO-9-20240807         92.0           PDI-15-SO-38-20240725         23.5           PDI-15-SO-38-20240725         17.7 *5-           PDI-15-SO-38-20240725         16.8 *5-           PDI-21-SO-20.2-20240808         84.0           Lab Control Sample         98.2           Lab Control Sample         97.8           Method Blank         98.8           PFDoA           Client Sample ID         (20-150)           PDI-20-SO-9-20240807         79.8           PDI-15-SO-38-20240725         18.7 *5-           PDI-15-SO-38-20240725         16.8 *5-           PDI-15-SO-38-20240725         15.5 *5-           PDI-21-SO-20.2-20240808         88.0           Lab Control Sample         75.1           Lab Control Sample         84.0	Client Sample ID         (20-150)         (20-150)           PDI-20-SO-9-20240807         92.0         110           PDI-15-SO-38-20240725         23.5         28.2           PDI-15-SO-38-20240725         17.7 *5-         20.8           PDI-15-SO-38-20240725         16.8 *5-         20.2           PDI-21-SO-38-20240725         16.8 *5-         20.2           PDI-21-SO-38-20240725         16.8 *5-         20.2           PD1-21-SO-20.2-20240808         84.0         108           Lab Control Sample         98.2         115           Lab Control Sample         97.8         112           Method Blank         98.8         114           Perce           PFDoA         PFTDA           PDI-20-SO-9-20240807         79.8         30.0           PDI-15-SO-38-20240725         18.7 *5-         21.3           PDI-15-SO-38-20240725         18.4 *5-         20.7           PDI-15-SO-38-20240725         16.8 *5-         17.3 *5-           PDI-15-SO-38-20240725         15.5 *5-         14.9 *5-           PDI-21-SO-20.2-20240808         88.0         57.2           Lab Control Sample         75.1         79.4           Lab Control Sample <td>Client Sample ID         (20-150)         (20-150)         (20-150)           PDI-20-SO-9-20240807         92.0         110         102           PDI-15-SO-38-20240725         23.5         28.2         23.8           PDI-15-SO-38-20240725         17.7 *5-         20.8         18.5 *5-           PDI-15-SO-38-20240725         16.8 *5-         20.2         16.8 *5-           PDI-21-SO-38-20240725         16.8 *5-         20.2         16.8 *5-           PDI-21-SO-38-20240725         16.8 *5-         20.2         16.8 *5-           PDI-21-SO-20.2-20240808         84.0         108         100           Lab Control Sample         98.2         115         98.2           Lab Control Sample         97.8         112         103           Method Blank         98.8         114         105           PFDoA         PFTDA         C3PFBS           Client Sample ID         (20-150)         (20-150)         (20-150)           PDI-20-SO-9-20240807         79.8         30.0         135           PDI-15-SO-38-20240725         18.7 *5-         21.3         25.3           PDI-15-SO-38-20240725         18.4 *5-         20.7         21.6           PDI-15-SO-38-2024072</td> <td>Client Sample ID         (20-150)         (20-150)         (20-150)         (20-150)         (20-150)           PDI-20-SO-9-20240807         92.0         110         102         103           PDI-15-SO-38-20240725         23.5         28.2         23.8         25.2           PDI-15-SO-38-20240725         17.7 *5-         20.8         18.5 *5-         18.0 *5-           PDI-15-SO-38-20240725         16.8 *5-         20.2         16.8 *5-         18.0 *5-           PDI-21-SO-38-20240725         16.8 *5-         20.2         16.8 *5-         18.0 *5-           PDI-21-SO-38-20240725         16.8 *5-         20.2         16.8 *5-         18.0 *5-           PDI-21-SO-38-20240808         84.0         108         100         104           Lab Control Sample         97.8         112         103         89.5           Method Blank         98.8         114         105         103           PFDoA         PFTDA         C3PFBS         C3PFHS           Client Sample ID         (20-150)         (20-150)         (20-150)         (20-150)           PDI-20-SO-9-20240807         79.8         30.0         135         108           PDI-15-SO-38-20240725         18.7 *5-         21.3</td> <td>Client Sample ID         (20-150)</td> <td>Client Sample ID         (20-150)</td> <td>Client Sample ID         (20-150)</td>	Client Sample ID         (20-150)         (20-150)         (20-150)           PDI-20-SO-9-20240807         92.0         110         102           PDI-15-SO-38-20240725         23.5         28.2         23.8           PDI-15-SO-38-20240725         17.7 *5-         20.8         18.5 *5-           PDI-15-SO-38-20240725         16.8 *5-         20.2         16.8 *5-           PDI-21-SO-38-20240725         16.8 *5-         20.2         16.8 *5-           PDI-21-SO-38-20240725         16.8 *5-         20.2         16.8 *5-           PDI-21-SO-20.2-20240808         84.0         108         100           Lab Control Sample         98.2         115         98.2           Lab Control Sample         97.8         112         103           Method Blank         98.8         114         105           PFDoA         PFTDA         C3PFBS           Client Sample ID         (20-150)         (20-150)         (20-150)           PDI-20-SO-9-20240807         79.8         30.0         135           PDI-15-SO-38-20240725         18.7 *5-         21.3         25.3           PDI-15-SO-38-20240725         18.4 *5-         20.7         21.6           PDI-15-SO-38-2024072	Client Sample ID         (20-150)         (20-150)         (20-150)         (20-150)         (20-150)           PDI-20-SO-9-20240807         92.0         110         102         103           PDI-15-SO-38-20240725         23.5         28.2         23.8         25.2           PDI-15-SO-38-20240725         17.7 *5-         20.8         18.5 *5-         18.0 *5-           PDI-15-SO-38-20240725         16.8 *5-         20.2         16.8 *5-         18.0 *5-           PDI-21-SO-38-20240725         16.8 *5-         20.2         16.8 *5-         18.0 *5-           PDI-21-SO-38-20240725         16.8 *5-         20.2         16.8 *5-         18.0 *5-           PDI-21-SO-38-20240808         84.0         108         100         104           Lab Control Sample         97.8         112         103         89.5           Method Blank         98.8         114         105         103           PFDoA         PFTDA         C3PFBS         C3PFHS           Client Sample ID         (20-150)         (20-150)         (20-150)         (20-150)           PDI-20-SO-9-20240807         79.8         30.0         135         108           PDI-15-SO-38-20240725         18.7 *5-         21.3	Client Sample ID         (20-150)	Client Sample ID         (20-150)	Client Sample ID         (20-150)	

Percent Isotope	Dilution	Recovery	(Acceptance Lin	nits)
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			. 0.0	onic lootopo	Da		ooptaoo .		
		M242FTS	M262FTS	M282FTS	HFPODA	NMFM	NEFM	d5NPFSA	d3NMFSA
Lab Sample ID	Client Sample ID	(20-150)	(20-150)	(20-150)	(20-150)	(20-150)	(20-150)	(20-150)	(20-150)
580-142813-5	PDI-20-SO-9-20240807	124	131	147	98.0	46.1	31.5	35.3	54.1
580-142813-6	PDI-15-SO-38-20240725	34.2	28.7	25.5	25.2	20.7	20.0	18.4 *5-	17.5 *5-
580-142813-6 DU	PDI-15-SO-38-20240725	30.5	24.8	21.2	21.9	18.5 *5-	19.2 *5-	17.5 *5-	18.6 *5-
580-142813-6 MS	PDI-15-SO-38-20240725	27.7	19.9 *5-	18.7 *5-	17.2 *5-	17.7 *5-	18.5 *5-	16.1 *5-	17.5 *5-
580-142813-6 MSD	PDI-15-SO-38-20240725	25.4	19.7 *5-	17.5 *5-	17.6 *5-	16.6 *5-	16.8 *5-	15.4 *5-	14.9 *5-
580-142813-17	PD1-21-SO-20.2-20240808	119	144	158 *5+	94.5	30.5	20.2	45.4	66.7
LCS 320-790133/3-A	Lab Control Sample	92.8	99.2	95.4	92.2	83.3	74.8	63.5	63.5
LLCS 320-790133/2-A	Lab Control Sample	108	108	110	93.5	82.6	77.7	73.0	75.3
MB 320-790133/1-A	Method Blank	108	111	101	118	85.4	81.7	61.4	66.0

#### Surrogate Legend

PFBA = 13C4 PFBA

PFPeA = 13C5 PFPeA

13C5PHA = 13C5 PFHxA

C4PFHA = 13C4 PFHpA

C8PFOA = 13C8 PFOA

C9PFNA = 13C9 PFNA C6PFDA = 13C6 PFDA

13C7PUA = 13C7 PFUnA

PFDoA = 13C2 PFDoA

PFTDA = 13C2 PFTeDA

C3PFBS = 13C3 PFBS

C3PFHS = 13C3 PFHxS

C8PFOS = 13C8 PFOS

PFOSA = 13C8 PFOSA

**Eurofins Seattle** 

9/12/2024

### **Isotope Dilution Summary**

Client: ERM-West

Project/Site: Arkema PDI Sampling

d3NMFOS = d3-NMeFOSAA d5NEFOS = d5-NEtFOSAA

M242FTS = 13C2 4:2 FTS

M262FTS = 13C2 6:2 FTS

M282FTS = 13C2 8:2 FTS

HFPODA = 13C3 HFPO-DA

NMFM = d7-N-MeFOSE-M

NEFM = d9-N-EtFOSE-M

d5NPFSA = d5-NEtPFOSA

d3NMFSA = d3-NMePFOSA

OCDF = 13C-OCDF

### Method: 1613B - Dioxins and Furans (HRGC/HRMS)

**Matrix: Solid** Prep Type: Total/NA

			Percent Is	sotope Dilution Recovery (Acceptance Limits)
OCDD OCDF				
Lab Sample ID	Client Sample ID	(17-157)	(17-157)	
580-142813-17	PD1-21-SO-20.2-20240808	25	18 q	
Surrogate Legend				
OCDD = 13C-OCDD				

### Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Method Blank

**Matrix: Solid** Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
		TCDD	TCDF	PeCDD	PeCDF	PeCF	HxCDD	HxDD	HxCDF
Lab Sample ID	Client Sample ID	(25-164)	(24-169)	(25-181)	(24-185)	(21-178)	(32-141)	(28-130)	(26-152)
580-142813-5	PDI-20-SO-9-20240807	68	62	72	60	57	74	68 q	97
580-142813-17 - DL	PD1-21-SO-20.2-20240808	61	57	42 q	58	58	61	64	56
MB 320-793381/1-A	Method Blank	67	66	64	63	60	61	79	66
			Perce	ent Isotope	Dilution Re	covery (Ac	ceptance L	imits)	
		HxDF	13CHxCF	HxCF	HpCDD	HpCDF	HpCDF2	OCDD	OCDF
Lab Sample ID	Client Sample ID	(26-123)	(28-136)	(29-147)	(23-140)	(28-143)	(26-138)	(17-157)	(17-157)
580-142813-5	PDI-20-SO-9-20240807	79	80	62	37	41	41	19	16 *5-
580-142813-17 - DL	PD1-21-SO-20.2-20240808	60	61	57	50	52	20 *5-		

71

64

77

60

62

57

58

58

#### **Surrogate Legend**

MB 320-793381/1-A

TCDD = 13C-2,3,7,8-TCDD

TCDF = 13C-2,3,7,8-TCDF

PeCDD = 13C-1,2,3,7,8-PeCDD

PeCDF = 13C-1,2,3,7,8-PeCDF

PeCF = 13C-2,3,4,7,8-PeCDF

HxCDD = 13C-1,2,3,4,7,8-HxCDD

HxDD = 13C-1,2,3,6,7,8-HxCDD

HxCDF = 13C-1,2,3,4,7,8-HxCDFHxDF = 13C-1,2,3,6,7,8-HxCDF

13CHxCF = 13C-2,3,4,6,7,8-HxCDF

HxCF = 13C-1,2,3,7,8,9-HxCDF

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD

HpCDF = 13C-1,2,3,4,6,7,8-HpCDF

HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF

OCDD = 13C-OCDD

OCDF = 13C-OCDF

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Job ID: 580-142813-1

### **Isotope Dilution Summary**

Client: ERM-West Job ID: 580-142813-1

Project/Site: Arkema PDI Sampling

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

**Matrix: Solid** Prep Type: Total/NA

Percent Isotope	<b>Dilution Recovery</b>	(Acceptance Limits)

Lab Sample ID	Client Sample ID	TCDF (24-169)
580-142813-5 - RA	PDI-20-SO-9-20240807	76
580-142813-17 - RA	PD1-21-SO-20.2-20240808	60

Surrogate Legend

TCDF = 13C-2,3,7,8-TCDF

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

Matrix: Solid Prep Type: Total/NA

	Percent Isotope Dilution Recovery (Acceptance Limits)								
		TCDD	TCDF	PeCDD	PeCDF	PeCF	HxCDD	HxDD	HxCDF
Lab Sample ID	Client Sample ID	(20-175)	(22-152)	(21-227)	(21-192)	(13-328)	(21-193)	(25-163)	(19-202)
LCS 320-793381/2-A	Lab Control Sample	71	71	67	66	61	63	80	70
LCSD 320-793381/3-A	Lab Control Sample Dup	68	67	63	63	60	65	79	66
			Perce	nt Isotope	Dilution Re	covery (Ac	ceptance L	imits)	
		HxDF	13CHxCF	HxCF	HpCDD	HpCDF	HpCDF2	OCDD	OCDF
Lab Sample ID	Client Sample ID	(21-159)	(22-176)	(17-205)	(26-166)	(21-158)	(20-186)	(13-199)	(13-199)
LCS 320-793381/2-A	Lab Control Sample	81	76	69	66	65	63	64	64
LCSD 320-793381/3-A	Lab Control Sample Dup	76	71	64	61	64	59	61	59

**Surrogate Legend** 

TCDD = 13C-2,3,7,8-TCDD

TCDF = 13C-2,3,7,8-TCDF

PeCDD = 13C-1,2,3,7,8-PeCDD

PeCDF = 13C-1,2,3,7,8-PeCDF

PeCF = 13C-2,3,4,7,8-PeCDF

HxCDD = 13C-1,2,3,4,7,8-HxCDD

HxDD = 13C-1,2,3,6,7,8-HxCDD

HxCDF = 13C-1,2,3,4,7,8-HxCDF

HxDF = 13C-1,2,3,6,7,8-HxCDF

13CHxCF = 13C-2,3,4,6,7,8-HxCDF

HxCF = 13C-1,2,3,7,8,9-HxCDF

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD

HpCDF = 13C-1,2,3,4,6,7,8-HpCDF

HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF

OCDD = 13C-OCDD

OCDF = 13C-OCDF

**Eurofins Seattle** 

#### **Tracy Dutton**

From: Avery Soplata <Avery.Soplata@erm.com>
Sent: Thursday, August 15, 2024 8:59 AM

**To:** Tracy Dutton

**Subject:** FW: 580-142813 Arkema PDI Sampling Sample Confirmation files from Eurofins

Northwest

**Unverified Sender:** The sender of this email has not been verified. Review the content of the message carefully and verify the identity of the sender before acting on this email: replying, opening attachments or clicking links.

Hey Tracy,

Can you see if the request I sent Sheri below is possible since she is out?

Thanks



Avery Soplata, R.G.

Managing Consultant, Geology She/Her/Hers

Portland, Oregon 901-828-2017 erm.com

From: Avery Soplata

Sent: Thursday, August 15, 2024 8:53 AM

To: Sheri.Cruz@et.eurofinsus.com

Cc: Lena Mollica <lena.mollica@erm.com>; David Stone <David.Stone@erm.com>; Carissa True

<Carissa.True@erm.com>

Subject: RE: 580-142813 Arkema PDI Sampling Sample Confirmation files from Eurofins Northwest

Hey Sheri,

Would you be able to also run 8081 pesticides on the 4 oz moisture jar included in sample PDI-21-SO-36.3-20240808 with this job number?

**Thanks** 



Avery Soplata, R.G.

Managing Consultant, Geology She/Her/Hers

Portland, Oregon 901-828-2017

erm.com

From: Sheri Cruz <TALS@reports.et.eurofinsus.com>

**Sent:** Friday, August 9, 2024 4:01 PM

To: Alexa Sebastian <alexa.sebastian@erm.com>; Andrew Gardner <Andrew.Gardner@erm.com>; Avery Soplata

2

<a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:square;"><a href="mailto:squar

<<u>iosh.hyrman@erm.com</u>>; Lena Mollica <<u>lena.mollica@erm.com</u>>; Madison Rosen <<u>madison.rosen@erm.com</u>>; Paul Van Nevel <<u>paul.vannevel@erm.com</u>>; Rachel James <<u>rachel.james@erm.com</u>>

Subject: 580-142813 Arkema PDI Sampling Sample Confirmation files from Eurofins Northwest

#### **EXTERNAL MESSAGE**

Hello,

Attached, please find the Sample Confirmation files for job 580-142813; Arkema PDI Sampling

Please review the attachments for accuracy and notify your Project Manager of any discrepancies as quickly as possible.

Any discrepancies not communicated in a timely fashion could result in missed holding times, TAT delays and may potentially incur additional charges.

Please feel free to contact me if you have any questions.

Thank you.

#### Receipt

The samples were received on 8/9/2024 11:40 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.4° C.

#### **Receipt Exceptions**

The following sample was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): PD1-21-SO-20.2-20240808 (580-142813-17)

The Chain-of-Custody (COC) was incomplete as received. The additional methods for this sample were written on the containers, but not on the COC.

#### Sheri L Cruz

Project Manager

Eurofins Seattle Phone: 253-922-2310

E-mail: Sheri.Cruz@et.eurofinsus.com

www.eurofinsus.com/env



Reference: [580-557230]

### > > Bank information has changed, please refer to remittance information on invoice. < <

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# **ANALYTICAL REPORT**

### PREPARED FOR

Attn: Avery Soplata ERM-West 1050 SW 6th Avenue Suite 1650 Portland, Oregon 97204 Generated 9/12/2024 9:18:37 PM

# **JOB DESCRIPTION**

Arkema PDI Sampling

### **JOB NUMBER**

580-142896-1

Eurofins Seattle 5755 8th Street East Tacoma WA 98424

#### **Job Notes**

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

### **Authorization**

Generated 9/12/2024 9:18:37 PM

Authorized for release by Sheri Cruz, Project Manager I Sheri.Cruz@et.eurofinsus.com (253)922-2310

Shuid any

Client: ERM-West

Project/Site: Arkema PDI Sampling

Laboratory Job ID: 580-142896-1

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Project: Arkema PDI Sampling

Job ID: 580-142896-1 Eurofins Seattle

Job Narrative 580-142896-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these
  situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise
  specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 8/13/2024 1:25 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 5.0°C.

#### GC/MS VOA

Method 8260D: The [QC] associated with 580-468430 is compliant under 8260D criteria for 2,2-Dichloropropane. The software does not display the data to the whole number as is listed in the method (i.e. limit of 20%). When applying the evaluation to a whole number, the QC passes the criteria.

Method 8260D: The method blank for analytical batch 580-468430 contained 1,2,4-Trichlorobenzene, Hexachlorobutadiene and Naphthalene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8260D: The method blank for preparation batch analytical batch 580-468430 contained 1,2,3-Trichlorobenzene above the reporting limit (RL). There was insufficient sample to perform a re-analysis; therefore, the data have been reported.

Method 8260D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 580-468430 recovered outside control limits for the following analytes: 1,2,3-Trichlorobenzene and Naphthalene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-468430 recovered outside acceptance criteria, low biased, for 1,2,3-Trichlorobenzene and Naphthalene. No more volume remains for re-analysis, therefore, results are reported. The following samples are associated TB-01-WQ-20240809 (580-142896-2) and (CCVIS 580-468430/3).

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-468460 recovered outside acceptance criteria, low biased, for 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene and 1,2-Dibromo-3-Chloropropane. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8260D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-468455 and analytical batch 580-468460 recovered outside control limits for the following analytes: 1,2,3-Trichlorobenzene and Naphthalene.

Method 8260D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 580-468455 and analytical batch 580-468460 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8260D: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 580-468455 and analytical batch 580-468460 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8260D: Due to the high concentration of Chlorobenzene, the matrix spike / matrix spike duplicate (MS/MSD) for preparation batch 580-468455 and analytical batch 580-468460 could not be evaluated for accuracy and precision. The

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#### Job ID: 580-142896-1 (Continued)

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associated laboratory control sample (LCS) met acceptance criteria.

Method 8260D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-468642 and analytical batch 580-468647 recovered outside control limits for the following analytes: Naphthalene.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-468961 recovered outside acceptance criteria, low biased, for 1,2,3-Trichlorobenzene. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte, the data are reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### GC/MS Semi VOA

Method 8270E: The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 580-468422 and analytical batch 580-469291 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8270E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 580-468422 and analytical batch 580-469291 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8270E: Surrogate recovery for the following samples were outside control limits: (580-142896-B-8-C MS) and (580-142896-B-8-D MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8270E: Internal standard responses were outside of acceptance limits for the following samples: PDI-24-SO-23.1-20240809 (580-142896-8), (580-142896-B-8-C MS) and (580-142896-B-8-D MSD). The sample(s) shows evidence of matrix interference. The low internal standard recovery creates a high bias in the sample. Therefore, since the data is non-detect for the affected analytes, the data has been considered acceptable and reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **Herbicides**

Method 8151A: The continuing calibration verification (CCV) associated with 570-473202 recovered high and outside the control limits for Dalapon and Dicamba on one column. Results are confirmed on both columns and reported from the passing column. The associated sample is: (570-191729-A-73-B MDLS).

Method 8151A: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 570-471244 and analytical batch 570-473202 recovered outside control limits for the following analytes: 2,4-D.

Method 8151A: The continuing calibration verification (CCV) associated with batch 570-473873 recovered above the upper control limit for 2,4,5-TP (Silvex). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: PDI-24-SO-23.1-20240809 (580-142896-8).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **Hydrocarbons**

Method NWTPH\_Dx: The following sample contained a hydrocarbon pattern in the diesel range; however, the elution pattern is not the typical diesel fuel pattern used by the laboratory for quantitative purposes: PDI-24-SO-23.1-20240809 (580-142896-8).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **PCBs**

Method 8082A: The following sample was diluted due to the nature of the sample matrix: PDI-24-SO-23.1-20240809 (580-142896-8). Elevated reporting limits (RLs) are provided.

Method 8082A: The following samples required TBA clean-up, via EPA Method 3660B, to reduce matrix interferences TBA\_00048: PDI-24-SO-23.1-20240809 (580-142896-8).

Method 8082A: The following sample required a dilution due to the nature of the sample matrix: PDI-24-SO-23.1-20240809

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(580-142896-8). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **Pesticides**

The method blank for preparation batch 580-468715 and analytical batch 580-469041 contained 4,4'-DDT above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

The laboratory control sample duplicate (LCSD) for preparation batch 580-468715 and analytical batch 580-469041 recovered outside control limits for the following analytes: 2,4'-DDT. While the LCSD is biased high, due to the amount of 2,4'-DDT in the sample, the high bias did not affect sample results, and therefore results are reported.

Method 8081B: The %RPD between the primary and confirmation detector exceeded 40% for alpha-BHC, Endrin and Heptachlor epoxide for the following sample: PDI-24-SO-23.1-20240809 (580-142896-8). The lower values has been reported and qualified in accordance with the laboratory's SOP.

Method 8081B: The following samples required a copper clean-up, via EPA Method 3660B, to reduce matrix interferences: PDI-24-SO-23.1-20240809 (580-142896-8).

Method 8081B: The following sample was diluted to bring the concentration of target analytes within the calibration range: PDI-24-SO-23.1-20240809 (580-142896-8). Elevated reporting limits (RLs) are provided.

Method 8081B: Surrogate recovery for the following sample was outside control limits: PDI-24-SO-23.1-20240809 (580-142896-8). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8081B: The following sample required a dilution due to the nature of the sample matrix: PDI-24-SO-23.1-20240809 (580-142896-8). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method 8081B: 4,4'-DDT is being reported from the 20,000x dilution. Sample has been diluted and ran multiple times and is still not within calibration range. No further dilutions will be done. PDI-24-SO-23.1-20240809 (580-142896-8)

Method 8081B: The continuing calibration verification (CCV) associated with 580-469499 recovered high and outside the control limits for DCB Decachlorobiphenyl on one column. Results are confirmed on both columns and reported from the passing column. The associated sample is: (CCVIS 580-469499/2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **PFAS**

Method 1633: The following sample in preparation batch 320-791789 was light red in color following extraction. PDI-24-SO-23.1-20240809 (580-142896-8)

Method 1633: Internal standard (ISTD) response for the following sample was outside control limits: PDI-24-SO-23.1-20240809 (580-142896-8). The sample(s) was re-analyzed and ISTD response was outside control limits. The ISTD is not used to quantitate the target analytes.

Method 1633: Internal standard (ISTD) response for the following sample was outside control limits: PDI-24-SO-23.1-20240809 (580-142896-8). The sample(s) was re-analyzed and ISTD response was outside control limits.

Method 1633: Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for the following sample: PDI-24-SO-23.1-20240809 (580-142896-8). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### Dioxin

Method 1613B: Due to the matrix, the initial volume used for the following sample deviated from the standard procedure: Instead of 10g only 1g of sample was used for extraction. PDI-24-SO-23.1-20240809 (580-142896-8). The reporting limits (RLs) have been

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Client: ERM-West Job ID: 580-142896-1

Project: Arkema PDI Sampling

#### Job ID: 580-142896-1 (Continued)

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adjusted proportionately.

preparation batch 320-793238

Method: HRMS\_Sox

Matrix: Solid

Method 1613B: EPA Method 1613B specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). The 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument 10D5 exceeded this criteria: PDI-24-SO-23.1-20240809 (580-142896-8), (CCV 320-796419/2), (LCS 320-793238/2-A), (LCSD 320-793238/3-A) and (MB 320-793238/1-A). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: EPA Method 1613B specifies a +/- 15 second retention time difference between the recovery standard in the initial calibration (ICAL) and the continuing calibration verification (CCV). The 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD associated with the following samples run on instrument DFS 1 exceeded this criteria: PDI-24-SO-23.1-20240809 (580-142896-8) and (CCV 320-797506/2). This retention time shift is due to normal and reasonable column maintenance and does not affect the instrument chromatography resolution, sensitivity, or identification of target analytes. System retention times have been updated for proper analyte identification.

Method 1613B: The following sample was diluted due to suspected saturation of the instrument detector in the analysis of the undiluted extract: PDI-24-SO-23.1-20240809 (580-142896-8). Elevated reporting limits (RLs) are provided.

Method 1613B: There was significant matrix present in this sample that affected the detection and quantitation of the 2,3,7,8-TCDF analyte. Multiple dilutions were made to try to mitigate the effect of the matrix and analyzed on both the DB-5 and ZB confirmation column. However, even with the multiple attempts, no reportable result for 2,3,7,8-TCDF was achieved. The data is reported with narration. PDI-24-SO-23.1-20240809 (580-142896-8)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **General Chemistry**

Method Moisture: The sample duplicate (DUP) precision for analytical batch 580-468495 was outside control limits. Sample matrix interference is suspected.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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## **Definitions/Glossary**

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

### Qualifiers

GC/MS VOA	
Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
В	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC/MS Semi	VOA

Qualifier	Qualifier Description
*3	ISTD response or retention time outside acceptable limits.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.

#### **GC Semi VOA**

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
В	Compound was found in the blank and sample.
E	Result exceeded calibration range.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
р	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.

#### **LCMS**

Qualifier	Qualifier Description
*3	ISTD response or retention time outside acceptable limits.
*5+	Isotope dilution analyte is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### **Dioxin**

Qualifier	Qualifier Description
В	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
q	The reported result is the estimated maximum possible concentration of this analyte, quantitated using the theoretical ion ratio. The measured ion ratio does not meet qualitative identification criteria and indicates a possible interference.

#### **General Chemistry**

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
3	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

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## **Definitions/Glossary**

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

### **Glossary (Continued)**

TEQ TNTC Toxicity Equivalent Quotient (Dioxin)

Too Numerous To Count

Abbreviation	These commonly used abbreviations may or may not be present in this report.
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)

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Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Ethylbenzene

o-Xylene

Styrene

**Bromoform** 

Isopropylbenzene

N-Propylbenzene

2-Chlorotoluene

4-Chlorotoluene

t-Butylbenzene

sec-Butylbenzene

1,2,3-Trichloropropane

1,3,5-Trimethylbenzene

1,2,4-Trimethylbenzene

Bromobenzene

1,1,1,2-Tetrachloroethane

1,1,2,2-Tetrachloroethane

m-Xylene & p-Xylene

Client Sample ID: RB-01-WQ-20240809

Lab Sample ID: 580-142896-1 Date Collected: 08/09/24 09:40

**Matrix: Water** 

Date Received: 08/13/24 13:25 Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed Dichlorodifluoromethane ND 1.0 0.53 ug/L 08/15/24 22:57 ND Chloromethane 1.0 0.28 ug/L 08/15/24 22:57 Vinyl chloride ND 1.0 0.22 ug/L 08/15/24 22:57 ND Bromomethane 1.0 0.21 ug/L 08/15/24 22:57 ND 0.35 08/15/24 22:57 Chloroethane 1.0 ug/L Trichlorofluoromethane ND 1.0 0.36 ug/L 08/15/24 22:57 1,1-Dichloroethene ND 1.0 0.28 08/15/24 22:57 ug/L ND 5.0 Methylene Chloride 1.4 ug/L 08/15/24 22:57 trans-1,2-Dichloroethene ND 1.0 0.39 ug/L 08/15/24 22:57 1,1-Dichloroethane ND 1.0 0.22 ug/L 08/15/24 22:57 2,2-Dichloropropane ND 1.0 0.32 ug/L 08/15/24 22:57 cis-1.2-Dichloroethene ND 1.0 0.35 ug/L 08/15/24 22:57 1 Bromochloromethane ND 1.0 0.29 ug/L 08/15/24 22:57 Chloroform ND 1.0 0.26 ug/L 08/15/24 22:57 1,1,1-Trichloroethane ND 0.39 ug/L 08/15/24 22:57 1.0 Carbon tetrachloride ND 1.0 0.30 ug/L 08/15/24 22:57 1,1-Dichloropropene ND 1.0 0.29 ug/L 08/15/24 22:57 Benzene ND 1.0 0.24 ug/L 08/15/24 22:57 1.0 1 2-Dichloroethane ND 0.42 ug/L 08/15/24 22:57 Trichloroethene ND 1.0 0.26 ug/L 08/15/24 22:57 1,2-Dichloropropane ND 1.0 0.18 ug/L 08/15/24 22:57 Dibromomethane ND 1.0 0.34 ug/L 08/15/24 22:57 Bromodichloromethane ND 0.29 1.0 ug/L 08/15/24 22:57 cis-1,3-Dichloropropene ND 1.0 0.42 ug/L 08/15/24 22:57 Toluene ND 1.0 0.39 ug/L 08/15/24 22:57 ND trans-1,3-Dichloropropene 1.0 0.41 ug/L 08/15/24 22:57 1,1,2-Trichloroethane ND 1.0 0.24 ug/L 08/15/24 22:57 Tetrachloroethene ND 0.41 1.0 ug/L 08/15/24 22:57 1,3-Dichloropropane ND 1.0 0.35 ug/L 08/15/24 22:57 ND 1.0 0.43 ug/L Dibromochloromethane 08/15/24 22:57 1,2-Dibromoethane ND 1.0 0.40 ug/L 08/15/24 22:57 Chlorobenzene ND 1.0 0.44 ug/L 08/15/24 22:57

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ug/L

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9/12/2024

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Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Client Sample ID: RB-01-WQ-20240809

Date Collected: 08/09/24 09:40 Date Received: 08/13/24 13:25 Lab Sample ID: 580-142896-1

Matrix: Water

Method: SW846 8260D - Vo	latile Organic	Compound	ds by GC/MS	(Conti	nued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			08/15/24 22:57	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			08/15/24 22:57	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			08/15/24 22:57	1
n-Butylbenzene	ND		1.0	0.44	ug/L			08/15/24 22:57	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			08/15/24 22:57	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			08/15/24 22:57	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			08/15/24 22:57	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			08/15/24 22:57	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			08/15/24 22:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120					08/15/24 22:57	1
4-Bromofluorobenzene (Surr)	103		80 - 120					08/15/24 22:57	1
Dibromofluoromethane (Surr)	101		80 - 120					08/15/24 22:57	1
1,2-Dichloroethane-d4 (Surr)	97		80 - 120					08/15/24 22:57	1

Wetnoa: 544846 8260D - Vo	Diatile Organic	Compoun	as by GC/NS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	MD		2.0	0.43	ug/L			08/20/24 17:52	1
Naphthalene	ND		3.0	0.93	ug/L			08/20/24 17:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120					08/20/24 17:52	1
4-Bromofluorobenzene (Surr)	102		80 - 120					08/20/24 17:52	1
Dibromofluoromethane (Surr)	103		80 - 120					08/20/24 17:52	1
1.2-Dichloroethane-d4 (Surr)	97		80 - 120					08/20/24 17:52	1

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Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Client Sample ID: TB-01-WQ-20240809

Lab Sample ID: 580-142896-2 Date Collected: 08/09/24 00:01

**Matrix: Water** 

Date Received: 08/13/24 13:25

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Dichlorodifluoromethane	ND -	1.0	0.53	ug/L			08/15/24 22:35	
Chloromethane	ND	1.0	0.28	ug/L			08/15/24 22:35	
Vinyl chloride	ND	1.0	0.22	ug/L			08/15/24 22:35	
Bromomethane	ND	1.0	0.21	ug/L			08/15/24 22:35	
Chloroethane	ND	1.0	0.35	ug/L			08/15/24 22:35	
Trichlorofluoromethane	ND	1.0	0.36	ug/L			08/15/24 22:35	
1,1-Dichloroethene	ND	1.0	0.28	ug/L			08/15/24 22:35	
Methylene Chloride	ND	5.0	1.4	ug/L			08/15/24 22:35	
trans-1,2-Dichloroethene	ND	1.0	0.39	ug/L			08/15/24 22:35	
1,1-Dichloroethane	ND	1.0	0.22	ug/L			08/15/24 22:35	
2,2-Dichloropropane	ND	1.0	0.32	ug/L			08/15/24 22:35	
cis-1,2-Dichloroethene	ND	1.0	0.35	ug/L			08/15/24 22:35	
Bromochloromethane	ND	1.0	0.29	ug/L			08/15/24 22:35	
Chloroform	ND	1.0		ug/L			08/15/24 22:35	
1,1,1-Trichloroethane	ND	1.0		ug/L			08/15/24 22:35	
Carbon tetrachloride	ND	1.0		ug/L			08/15/24 22:35	
1,1-Dichloropropene	ND	1.0		ug/L			08/15/24 22:35	
Benzene	ND	1.0		ug/L			08/15/24 22:35	
1,2-Dichloroethane	ND	1.0		ug/L			08/15/24 22:35	
Trichloroethene	ND	1.0		ug/L			08/15/24 22:35	
1,2-Dichloropropane	ND	1.0		ug/L			08/15/24 22:35	
Dibromomethane	ND	1.0		ug/L			08/15/24 22:35	
Bromodichloromethane	ND	1.0		ug/L			08/15/24 22:35	
cis-1,3-Dichloropropene	ND	1.0		ug/L			08/15/24 22:35	
Toluene	ND	1.0		ug/L			08/15/24 22:35	
trans-1,3-Dichloropropene	ND	1.0		ug/L			08/15/24 22:35	
1,1,2-Trichloroethane	ND	1.0		ug/L			08/15/24 22:35	
Tetrachloroethene	ND	1.0		ug/L			08/15/24 22:35	
1,3-Dichloropropane	ND	1.0		ug/L			08/15/24 22:35	
Dibromochloromethane	ND	1.0		ug/L			08/15/24 22:35	
1,2-Dibromoethane	ND	1.0		ug/L			08/15/24 22:35	
Chlorobenzene	ND	1.0		ug/L			08/15/24 22:35	
Ethylbenzene	ND	1.0		ug/L			08/15/24 22:35	
1,1,1,2-Tetrachloroethane	ND	1.0		ug/L			08/15/24 22:35	
1,1,2,2-Tetrachloroethane	ND	1.0		ug/L			08/15/24 22:35	
m-Xylene & p-Xylene	ND	2.0		ug/L			08/15/24 22:35	
o-Xylene	ND	1.0		ug/L			08/15/24 22:35	
Styrene	ND	1.0		ug/L			08/15/24 22:35	
Bromoform	ND	1.0		ug/L ug/L			08/15/24 22:35	
Isopropylbenzene	ND	1.0		ug/L			08/15/24 22:35	
Bromobenzene	ND	1.0		ug/L			08/15/24 22:35	
N-Propylbenzene	ND ND	1.0		ug/L ug/L			08/15/24 22:35	
				ug/L			08/15/24 22:35	
1,2,3-Trichloropropane 2-Chlorotoluene	ND ND	1.0 1.0		ug/L ug/L			08/15/24 22:35	
	ND	1.0		-			08/15/24 22:35	
1,3,5-Trimethylbenzene				ug/L			08/15/24 22:35	
4-Chlorotoluene	ND ND	1.0		ug/L				
t-Butylbenzene		2.0		ug/L			08/15/24 22:35	
1,2,4-Trimethylbenzene sec-Butylbenzene	ND ND	3.0		ug/L ug/L			08/15/24 22:35 08/15/24 22:35	

**Eurofins Seattle** 

9/12/2024

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Client Sample ID: TB-01-WQ-20240809

Date Collected: 08/09/24 00:01

Date Received: 08/09/24 00:01

Date Received: 08/13/24 13:25

Lab Sample ID: 580-142896-2 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L		-	08/15/24 22:35	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			08/15/24 22:35	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			08/15/24 22:35	1
n-Butylbenzene	ND		1.0	0.44	ug/L			08/15/24 22:35	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			08/15/24 22:35	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			08/15/24 22:35	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			08/15/24 22:35	1
1,2,3-Trichlorobenzene	0.53	J B *+	2.0	0.43	ug/L			08/15/24 22:35	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			08/15/24 22:35	1
Naphthalene	ND	*+	3.0	0.93	ug/L			08/15/24 22:35	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			08/15/24 22:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120					08/15/24 22:35	1
4-Bromofluorobenzene (Surr)	102		80 - 120					08/15/24 22:35	1
Dibromofluoromethane (Surr)	102		80 - 120					08/15/24 22:35	1
1,2-Dichloroethane-d4 (Surr)	99		80 - 120					08/15/24 22:35	1

9/12/2024

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Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

**Client Sample ID: TB-01-SO-20240809** 

Lab Sample ID: 580-142896-3

Date Collected: 08/09/24 00:01 **Matrix: Solid** Date Received: 08/13/24 13:25

Analyte	Result Qualifier	RL	MDL	OTHE .	D	Prepared	Analyzed	Dil F
1,1,1,2-Tetrachloroethane	ND	0.020	0.0050	mg/Kg		08/16/24 12:44	08/16/24 16:13	
1,1,1-Trichloroethane	ND	0.040	0.0046			08/16/24 12:44	08/16/24 16:13	
1,1,2,2-Tetrachloroethane	ND	0.020	0.0076	mg/Kg		08/16/24 12:44	08/16/24 16:13	
1,1,2-Trichloroethane	ND	0.020	0.0074	mg/Kg		08/16/24 12:44	08/16/24 16:13	
1,1-Dichloroethane	ND	0.040	0.0092	mg/Kg		08/16/24 12:44	08/16/24 16:13	
1,1-Dichloroethene	ND	0.040	0.012	mg/Kg		08/16/24 12:44	08/16/24 16:13	
1,1-Dichloropropene	ND	0.040	0.0053	mg/Kg		08/16/24 12:44	08/16/24 16:13	
1,2,3-Trichlorobenzene	ND *1	0.080	0.040	mg/Kg		08/16/24 12:44	08/16/24 16:13	
I,2,3-Trichloropropane	ND	0.040	0.012	mg/Kg		08/16/24 12:44	08/16/24 16:13	
1,2,4-Trichlorobenzene	ND	0.080	0.043	mg/Kg		08/16/24 12:44	08/16/24 16:13	
1,2,4-Trimethylbenzene	ND	0.040	0.014	mg/Kg		08/16/24 12:44	08/16/24 16:13	
1,2-Dibromo-3-Chloropropane	ND	0.060	0.015	mg/Kg		08/16/24 12:44	08/16/24 16:13	
1,2-Dibromoethane	ND	0.020	0.0038	mg/Kg		08/16/24 12:44	08/16/24 16:13	
1,2-Dichlorobenzene	ND	0.040	0.0087	mg/Kg		08/16/24 12:44	08/16/24 16:13	
1,2-Dichloroethane	ND	0.020	0.0055			08/16/24 12:44	08/16/24 16:13	
1,2-Dichloropropane	ND	0.020	0.0066			08/16/24 12:44	08/16/24 16:13	
1,3,5-Trimethylbenzene	ND	0.040	0.0076			08/16/24 12:44	08/16/24 16:13	
1,3-Dichlorobenzene	ND	0.060		mg/Kg		08/16/24 12:44	08/16/24 16:13	
1,3-Dichloropropane	ND	0.060	0.0056			08/16/24 12:44	08/16/24 16:13	
1,4-Dichlorobenzene	ND	0.060		mg/Kg		08/16/24 12:44	08/16/24 16:13	
2,2-Dichloropropane	ND	0.040		mg/Kg		08/16/24 12:44	08/16/24 16:13	
2-Chlorotoluene	ND	0.040	0.0088			08/16/24 12:44	08/16/24 16:13	
I-Chlorotoluene	ND	0.040	0.0098				08/16/24 16:13	
1-Isopropyltoluene	ND	0.040		mg/Kg			08/16/24 16:13	
Benzene	ND	0.020	0.0038				08/16/24 16:13	
Bromobenzene	ND	0.040	0.0042				08/16/24 16:13	
Bromochloromethane	ND	0.040	0.0062				08/16/24 16:13	
Bromodichloromethane	ND	0.040	0.0055				08/16/24 16:13	
Bromoform	ND	0.040	0.0045				08/16/24 16:13	
Bromomethane	ND	0.10		mg/Kg			08/16/24 16:13	
Carbon tetrachloride	ND	0.020	0.0044				08/16/24 16:13	
Chlorobenzene	ND	0.040	0.0044				08/16/24 16:13	
Chloroethane	ND	0.040	0.021	mg/Kg			08/16/24 16:13	
Chloroform	ND	0.020	0.0042				08/16/24 16:13	
Chloromethane	ND	0.020		mg/Kg			08/16/24 16:13	
cis-1,2-Dichloroethene	ND	0.060		mg/Kg			08/16/24 16:13	
cis-1,3-Dichloropropene		0.020	0.0040				08/16/24 16:13	
Dibromochloromethane	ND ND	0.020					08/16/24 16:13	
			0.0049					
Dibromomethane	ND ND	0.040	0.0074				08/16/24 16:13	
Dichlorodifluoromethane	ND	0.25		mg/Kg			08/16/24 16:13	
Ethylbenzene	ND	0.040	0.0091				08/16/24 16:13	
-dexachlorobutadiene	ND	0.10		mg/Kg			08/16/24 16:13	
sopropylbenzene	ND	0.040	0.0086				08/16/24 16:13	
Methyl tert-butyl ether	ND	0.040	0.0060				08/16/24 16:13	
Methylene Chloride	ND	0.25		mg/Kg			08/16/24 16:13	
m-Xylene & p-Xylene	ND	0.040	0.0071				08/16/24 16:13	
Naphthalene	ND *1	0.15		mg/Kg			08/16/24 16:13	
n-Butylbenzene N-Propylbenzene	ND ND	0.040 0.040		mg/Kg mg/Kg			08/16/24 16:13 08/16/24 16:13	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

**Client Sample ID: TB-01-SO-20240809** 

Lab Sample ID: 580-142896-3 Date Collected: 08/09/24 00:01 **Matrix: Solid** 

Date Received: 08/13/24 13:25

Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	(Conti	inued)				
Analyte	_	Qualifier	RL	•	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.040	0.0050	mg/Kg		08/16/24 12:44	08/16/24 16:13	1
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		08/16/24 12:44	08/16/24 16:13	1
Styrene	ND		0.040	0.013	mg/Kg		08/16/24 12:44	08/16/24 16:13	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		08/16/24 12:44	08/16/24 16:13	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		08/16/24 12:44	08/16/24 16:13	1
Toluene	ND		0.060	0.014	mg/Kg		08/16/24 12:44	08/16/24 16:13	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		08/16/24 12:44	08/16/24 16:13	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		08/16/24 12:44	08/16/24 16:13	1
Trichloroethene	ND		0.040	0.010	mg/Kg		08/16/24 12:44	08/16/24 16:13	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		08/16/24 12:44	08/16/24 16:13	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		08/16/24 12:44	08/16/24 16:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		80 - 121				08/16/24 12:44	08/16/24 16:13	1
4-Bromofluorobenzene (Surr)	98		80 - 120				08/16/24 12:44	08/16/24 16:13	1
Dibromofluoromethane (Surr)	102		80 - 120				08/16/24 12:44	08/16/24 16:13	1
Toluene-d8 (Surr)	102		80 - 120				08/16/24 12:44	08/16/24 16:13	1

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-21-SO-55.6-20240809

Lab Sample ID: 580-142896-4 Date Collected: 08/09/24 10:50 Matrix: Solid Date Received: 08/13/24 13:25 Percent Solids: 88.7

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.023 0.0058 mg/Kg 08/16/24 12:44 08/16/24 18:01 ND 1.1.1-Trichloroethane 0.047 0.0054 mg/Kg 08/16/24 12:44 08/16/24 18:01 1,1,2,2-Tetrachloroethane ND 0.023 0.0089 mg/Kg 08/16/24 12:44 08/16/24 18:01 ND 0.0087 1,1,2-Trichloroethane 0.023 mg/Kg 08/16/24 12:44 08/16/24 18:01 ND 0.011 mg/Kg 08/16/24 12:44 08/16/24 18:01 1 1-Dichloroethane 0.047 1,1-Dichloroethene NΠ 0.047 0.014 mg/Kg 08/16/24 12:44 08/16/24 18:01 1,1-Dichloropropene ND 0.047 0.0062 08/16/24 12:44 08/16/24 18:01 mg/Kg 0.094 0.046 08/16/24 12:44 08/16/24 18:01 mg/Kg 1,2,3-Trichlorobenzene 0.14 1,2,3-Trichloropropane ND 0.047 0.013 mg/Kg 08/16/24 12:44 08/16/24 18:01 1,2,4-Trichlorobenzene ND 0.094 0.050 mg/Kg 08/16/24 12:44 08/16/24 18:01 1,2,4-Trimethylbenzene ND 0.047 0.016 mg/Kg 08/16/24 12:44 08/16/24 18:01 mg/Kg 1.2-Dibromo-3-Chloropropane ND 0.070 0.018 08/16/24 12:44 08/16/24 18:01 1 1,2-Dibromoethane ND 0.023 0.0044 mg/Kg 08/16/24 12:44 08/16/24 18:01 1,2-Dichlorobenzene ND 0.047 0.010 mg/Kg 08/16/24 12:44 08/16/24 18:01 ND 0.023 0.0064 mg/Kg 08/16/24 12:44 08/16/24 18:01 1.2-Dichloroethane 0.0077 1,2-Dichloropropane NΩ 0.023 mg/Kg 08/16/24 12:44 08/16/24 18:01 ND 0.0089 1,3,5-Trimethylbenzene 0.047 mg/Kg 08/16/24 12:44 08/16/24 18:01 1,3-Dichlorobenzene ND 0.070 0.016 mg/Kg 08/16/24 12:44 08/16/24 18:01 1,3-Dichloropropane ND 0.070 0.0065 mg/Kg 08/16/24 12:44 08/16/24 18:01 1,4-Dichlorobenzene ND 0.070 0.013 mg/Kg 08/16/24 12:44 08/16/24 18:01 2,2-Dichloropropane ND 0.047 0.014 mg/Kg ť. 08/16/24 12:44 08/16/24 18:01 2-Chlorotoluene ND 0.047 0.010 mg/Kg 08/16/24 12:44 08/16/24 18:01 4-Chlorotoluene ND mg/Kg 08/16/24 12:44 08/16/24 18:01 0.047 0.011 4-Isopropyltoluene ND 0.047 0.012 mg/Kg 08/16/24 12:44 08/16/24 18:01 Benzene ND 0.023 0.0044 mg/Kg 08/16/24 12:44 08/16/24 18:01 0.0049 Bromobenzene ND 0.047 mg/Kg 08/16/24 12:44 08/16/24 18:01 Bromochloromethane ND 0.047 0.0073 mg/Kg 08/16/24 12:44 08/16/24 18:01 Bromodichloromethane 0.0064 ND 0.047 mg/Kg 08/16/24 12:44 08/16/24 18:01 0.0053 Bromoform ND 0.047 mg/Kg 08/16/24 12:44 08/16/24 18:01 ND 0.044 Bromomethane 0.12 mg/Kg 08/16/24 12:44 08/16/24 18:01 Carbon tetrachloride ND 0.023 0.0051 mg/Kg 08/16/24 12:44 08/16/24 18:01 Chloroethane ND 0.094 0.024 mg/Kg 08/16/24 12:44 08/16/24 18:01 Chloroform ND 0.023 0.0049 mg/Kg 08/16/24 12:44 08/16/24 18:01 0.012 Chloromethane ND 08/16/24 12:44 08/16/24 18:01 0.070 mg/Kg cis-1,2-Dichloroethene ND 0.070 0.015 mg/Kg 08/16/24 12:44 08/16/24 18:01 cis-1.3-Dichloropropene ND 0.023 0.0047 mg/Kg 08/16/24 12:44 08/16/24 18:01 Dibromochloromethane ND 0.023 0.0057 mg/Kg 08/16/24 12:44 08/16/24 18:01 Dibromomethane ND 0.047 0.0087 mg/Kg 08/16/24 12:44 08/16/24 18:01 Dichlorodifluoromethane ND 0.054 mg/Kg 0.29 08/16/24 12:44 08/16/24 18:01 Ethylbenzene ND 0.047 0.011 mg/Kg 08/16/24 12:44 08/16/24 18:01 Hexachlorobutadiene 0.030 0.12 0.028 mg/Kg 08/16/24 12:44 08/16/24 18:01 Isopropylbenzene ND 0.047 0.010 mg/Kg 08/16/24 12:44 08/16/24 18:01 0.0070 ND Methyl tert-butyl ether 0.047 mg/Kg 08/16/24 12:44 08/16/24 18:01 Methylene Chloride 0.030 08/16/24 12:44 08/16/24 18:01 ND 0.29 mg/Kg m-Xylene & p-Xylene ND 0.047 0.0083 mg/Kg 08/16/24 12:44 08/16/24 18:01 **Naphthalene** 0.18 0.046 mg/Kg 08/16/24 12:44 08/16/24 18:01 0.060 n-Butylbenzene ND 0.047 08/16/24 12:44 08/16/24 18:01 0.022 mg/Kg N-Propylbenzene ND 0.047 0.018 mg/Kg 08/16/24 12:44 08/16/24 18:01 08/16/24 12:44 08/16/24 18:01 o-Xylene ND 0.047 0.0058 mg/Kg

**Eurofins Seattle** 

9/12/2024

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-21-SO-55.6-20240809

Date Collected: 08/09/24 10:50 Date Received: 08/13/24 13:25

Lab Sample ID: 580-142896-4

**Matrix: Solid** Percent Solids: 88.7

Method: SW846 8260D - Vo	latile Organic	Compound	ds by GC/MS	(Conti	nued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.047	0.010	mg/Kg	<u></u>	08/16/24 12:44	08/16/24 18:01	1
Styrene	ND		0.047	0.015	mg/Kg	☼	08/16/24 12:44	08/16/24 18:01	1
t-Butylbenzene	ND		0.047	0.0090	mg/Kg	₩	08/16/24 12:44	08/16/24 18:01	1
Tetrachloroethene	ND		0.047	0.0062	mg/Kg	☼	08/16/24 12:44	08/16/24 18:01	1
Toluene	ND		0.070	0.016	mg/Kg	☼	08/16/24 12:44	08/16/24 18:01	1
trans-1,2-Dichloroethene	ND		0.070	0.017	mg/Kg	₩	08/16/24 12:44	08/16/24 18:01	1
trans-1,3-Dichloropropene	ND		0.047	0.0082	mg/Kg	☼	08/16/24 12:44	08/16/24 18:01	1
Trichloroethene	ND		0.047	0.012	mg/Kg	☼	08/16/24 12:44	08/16/24 18:01	1
Trichlorofluoromethane	ND		0.094	0.030	mg/Kg	₩	08/16/24 12:44	08/16/24 18:01	1
Vinyl chloride	ND		0.12	0.022	mg/Kg	☼	08/16/24 12:44	08/16/24 18:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		80 - 121				08/16/24 12:44	08/16/24 18:01	1
4-Bromofluorobenzene (Surr)	101		80 - 120				08/16/24 12:44	08/16/24 18:01	1
Dibromofluoromethane (Surr)	100		80 - 120				08/16/24 12:44	08/16/24 18:01	1
Toluene-d8 (Surr)	103		80 - 120				08/16/24 12:44	08/16/24 18:01	1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - DL											
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac		
Chlorobenzene	17		0.50	0.060	mg/Kg	₩	08/19/24 09:17	08/19/24 13:19	1		
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac		
1,2-Dichloroethane-d4 (Surr)	95		80 - 121				08/19/24 09:17	08/19/24 13:19	1		
4-Bromofluorobenzene (Surr)	98		80 - 120				08/19/24 09:17	08/19/24 13:19	1		
Dibromofluoromethane (Surr)	104		80 - 120				08/19/24 09:17	08/19/24 13:19	1		
Toluene-d8 (Surr)	101		80 - 120				08/19/24 09:17	08/19/24 13:19	1		

General Chemistry						_			
Analyte	Result C	Qualitier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	88.7		0.1	0.1	%			08/16/24 10:33	1
Percent Moisture (SM22 2540G)	11.3		0.1	0.1	%			08/16/24 10:33	1

9/12/2024

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Methylene Chloride

Naphthalene

o-Xylene

n-Butylbenzene

N-Propylbenzene

m-Xylene & p-Xylene

Client Sample ID: DUP-04-SQ-20240809

Lab Sample ID: 580-142896-5 Date Collected: 08/09/24 10:55 Matrix: Solid Date Received: 08/13/24 13:25 Percent Solids: 93.4

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.019 0.0048 mg/Kg 08/16/24 12:44 08/16/24 18:23 0.038 ND 1.1.1-Trichloroethane 0.0044 mg/Kg 08/16/24 12:44 08/16/24 18:23 1,1,2,2-Tetrachloroethane ND 0.019 0.0073 mg/Kg 08/16/24 12:44 08/16/24 18:23 ND 0.0071 1,1,2-Trichloroethane 0.019 mg/Kg 08/16/24 12:44 08/16/24 18:23 ND 0.038 8800.0 mg/Kg 08/16/24 12:44 08/16/24 18:23 1.1-Dichloroethane 1,1-Dichloroethene ND 0.038 0.012 mg/Kg 08/16/24 12:44 08/16/24 18:23 1,1-Dichloropropene ND 0.038 0.0051 08/16/24 12:44 08/16/24 18:23 mg/Kg ND 0.076 0.038 08/16/24 12:44 08/16/24 18:23 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.038 0.011 mg/Kg 08/16/24 12:44 08/16/24 18:23 1,2,4-Trichlorobenzene ND 0.076 0.041 mg/Kg 08/16/24 12:44 08/16/24 18:23 1,2,4-Trimethylbenzene ND 0.038 0.013 mg/Kg 08/16/24 12:44 08/16/24 18:23 mg/Kg 1.2-Dibromo-3-Chloropropane ND 0.057 0.015 08/16/24 12:44 08/16/24 18:23 1 1,2-Dibromoethane ND 0.019 0.0036 mg/Kg 08/16/24 12:44 08/16/24 18:23 1,2-Dichlorobenzene ND 0.038 0.0083 mg/Kg 08/16/24 12:44 08/16/24 18:23 ND 0.0053 mg/Kg 08/16/24 12:44 08/16/24 18:23 1.2-Dichloroethane 0.019 1,2-Dichloropropane NΩ 0.019 0.0063 mg/Kg 08/16/24 12:44 08/16/24 18:23 0.0073 1,3,5-Trimethylbenzene ND 0.038 mg/Kg 08/16/24 12:44 08/16/24 18:23 1,3-Dichlorobenzene ND 0.057 0.013 mg/Kg 08/16/24 12:44 08/16/24 18:23 ND 0.057 0.0053 mg/Kg 08/16/24 12:44 08/16/24 18:23 1,3-Dichloropropane mg/Kg 1,4-Dichlorobenzene ND 0.057 0.010 08/16/24 12:44 08/16/24 18:23 2,2-Dichloropropane ND 0.038 0.012 mg/Kg ť. 08/16/24 12:44 08/16/24 18:23 2-Chlorotoluene ND 0.038 0.0084 mg/Kg 08/16/24 12:44 08/16/24 18:23 4-Chlorotoluene ND 0.0094 08/16/24 12:44 08/16/24 18:23 0.038 mg/Kg 4-Isopropyltoluene ND 0.038 0.0097 mg/Kg 08/16/24 12:44 08/16/24 18:23 Benzene ND 0.019 0.0036 mg/Kg 08/16/24 12:44 08/16/24 18:23 0.0040 Bromobenzene ND 0.038 mg/Kg 08/16/24 12:44 08/16/24 18:23 Bromochloromethane ND 0.038 0.0059 mg/Kg 08/16/24 12:44 08/16/24 18:23 Bromodichloromethane 0.0053 08/16/24 18:23 ND 0.038 mg/Kg 08/16/24 12:44 0.0043 Bromoform ND 0.038 mg/Kg 08/16/24 12:44 08/16/24 18:23 0.036 ND Bromomethane 0.096 mg/Kg 08/16/24 12:44 08/16/24 18:23 Carbon tetrachloride ND 0.019 0.0042 mg/Kg 08/16/24 12:44 08/16/24 18:23 Chloroethane ND 0.076 0.020 mg/Kg 08/16/24 12:44 08/16/24 18:23 Chloroform 0.019 0.0040 mg/Kg 08/16/24 12:44 08/16/24 18:23 ND 0.0096 Chloromethane ND 08/16/24 12:44 08/16/24 18:23 0.057 mg/Kg cis-1,2-Dichloroethene ND 0.057 0.012 mg/Kg 08/16/24 12:44 08/16/24 18:23 cis-1.3-Dichloropropene ND 0.019 0.0038 mg/Kg 08/16/24 12:44 08/16/24 18:23 Dibromochloromethane ND 0.019 0.0047 mg/Kg 08/16/24 12:44 08/16/24 18:23 Dibromomethane ND 0.038 0.0071 mg/Kg 08/16/24 12:44 08/16/24 18:23 Dichlorodifluoromethane ND 0.044 0.24 mg/Kg 08/16/24 12:44 08/16/24 18:23 Ethylbenzene ND 0.038 0.0087 mg/Kg 08/16/24 12:44 08/16/24 18:23 Hexachlorobutadiene ND 0.096 0.023 mg/Kg 08/16/24 12:44 08/16/24 18:23 Isopropylbenzene ND 0.038 0.0082 mg/Kg 08/16/24 12:44 08/16/24 18:23 ND 0.0057 08/16/24 12:44 08/16/24 18:23 Methyl tert-butyl ether 0.038 mg/Kg

**Eurofins Seattle** 

9/12/2024

08/16/24 18:23

08/16/24 18:23

08/16/24 18:23

08/16/24 12:44

08/16/24 12:44

08/16/24 12:44

08/16/24 12:44 08/16/24 18:23

08/16/24 12:44 08/16/24 18:23

08/16/24 12:44 08/16/24 18:23

0.24

0.038

0.14

0.038

0.038

0.038

ND

ND

ND

ND

ND

ND

0.025

0.0068

0.037

0.018

0.014

0.0048 mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Client Sample ID: DUP-04-SQ-20240809

Lab Sample ID: 580-142896-5 Date Collected: 08/09/24 10:55

**Matrix: Solid** Date Received: 08/13/24 13:25 Percent Solids: 93.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.038	0.0082	mg/Kg	— <u></u>	08/16/24 12:44	08/16/24 18:23	1
Styrene	ND		0.038	0.012	mg/Kg	₩	08/16/24 12:44	08/16/24 18:23	1
t-Butylbenzene	ND		0.038	0.0074		≎	08/16/24 12:44	08/16/24 18:23	1
Tetrachloroethene	ND		0.038	0.0051	mg/Kg	≎	08/16/24 12:44	08/16/24 18:23	1
Toluene	ND		0.057	0.013	mg/Kg	₩	08/16/24 12:44	08/16/24 18:23	1
trans-1,2-Dichloroethene	ND		0.057	0.014	mg/Kg	≎	08/16/24 12:44	08/16/24 18:23	1
trans-1,3-Dichloropropene	ND		0.038	0.0067	mg/Kg	₩	08/16/24 12:44	08/16/24 18:23	1
Trichloroethene	ND		0.038	0.0098	mg/Kg	₩	08/16/24 12:44	08/16/24 18:23	1
Trichlorofluoromethane	ND		0.076	0.025	mg/Kg	≎	08/16/24 12:44	08/16/24 18:23	1
Vinyl chloride	ND		0.096	0.018	mg/Kg	₽	08/16/24 12:44	08/16/24 18:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		80 - 121				08/16/24 12:44	08/16/24 18:23	1
4-Bromofluorobenzene (Surr)	101		80 - 120				08/16/24 12:44	08/16/24 18:23	1
Dibromofluoromethane (Surr)	102		80 - 120				08/16/24 12:44	08/16/24 18:23	1
Toluene-d8 (Surr)	103		80 - 120				08/16/24 12:44	08/16/24 18:23	1
Method: SW846 8260D - Volat	tile Organic	Compound	ds by GC/MS	- DL					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	14		0.41	0.049	mg/Kg	₩	08/19/24 09:17	08/19/24 13:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				08/19/24 09:17	08/19/24 13:41	1
4-Bromofluorobenzene (Surr)	99		80 - 120				08/19/24 09:17	08/19/24 13:41	1
Dibromofluoromethane (Surr)	104		80 - 120				08/19/24 09:17	08/19/24 13:41	1
Toluene-d8 (Surr)	101		80 - 120				08/19/24 09:17	08/19/24 13:41	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	93.4		0.1	0.1	%			08/16/24 10:33	1
Percent Moisture (SM22 2540G)	6.6		0.1	0.1	%			08/16/24 10:33	1

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-24-SO-35.5-20240809

Lab Sample ID: 580-142896-6 Date Collected: 08/09/24 16:10 **Matrix: Solid** Date Received: 08/13/24 13:25 Percent Solids: 74.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND		0.034	0.0086		— <u>=</u>	08/16/24 12:44	08/16/24 18:45	- Dil 1 d
1,1,1-Trichloroethane	ND		0.068	0.0079	mg/Kg		08/16/24 12:44	08/16/24 18:45	
1,1,2,2-Tetrachloroethane	ND		0.034		mg/Kg		08/16/24 12:44	08/16/24 18:45	
1,1,2-Trichloroethane	ND		0.034		mg/Kg		08/16/24 12:44	08/16/24 18:45	
1,1-Dichloroethane	ND		0.068		mg/Kg	~ ☆	08/16/24 12:44	08/16/24 18:45	
1,1-Dichloroethene	ND		0.068	0.021	mg/Kg	Ď.	08/16/24 12:44	08/16/24 18:45	
1,1-Dichloropropene	ND		0.068	0.0091			08/16/24 12:44	08/16/24 18:45	
1,2,3-Trichlorobenzene	ND	*1	0.14		mg/Kg	₩.	08/16/24 12:44		
1,2,3-Trichloropropane	ND	•	0.068		mg/Kg	Ď.		08/16/24 18:45	
1,2,4-Trichlorobenzene	ND		0.14		mg/Kg			08/16/24 18:45	
1,2,4-Trimethylbenzene	ND		0.068		mg/Kg	₩	08/16/24 12:44	08/16/24 18:45	
1,2-Dibromo-3-Chloropropane	ND		0.008		mg/Kg	** **	08/16/24 12:44		
1,2-Dibromoethane	ND		0.10					08/16/24 18:45	
			0.034	0.0065		Ψ.			
1,2-Dichlorobenzene	<b>0.27</b> ND		0.068		mg/Kg	☆ **	08/16/24 12:44 08/16/24 12:44	08/16/24 18:45 08/16/24 18:45	
1,2-Dichloroethane				0.0094		· · · · · · · · · · · ·			
1,2-Dichloropropane	ND		0.034		mg/Kg	₩.	08/16/24 12:44		
1,3,5-Trimethylbenzene	ND		0.068		mg/Kg	<b>*</b>	08/16/24 12:44	08/16/24 18:45	
1,3-Dichlorobenzene	ND		0.10			<del>.</del>		08/16/24 18:45	
1,3-Dichloropropane	ND		0.10	0.0096		<b>*</b>		08/16/24 18:45	
1,4-Dichlorobenzene	0.66		0.10		mg/Kg	☼	08/16/24 12:44	08/16/24 18:45	
2,2-Dichloropropane	ND		0.068		mg/Kg		08/16/24 12:44	08/16/24 18:45	
2-Chlorotoluene	ND		0.068		mg/Kg	₩		08/16/24 18:45	
4-Chlorotoluene	ND		0.068		mg/Kg	☼		08/16/24 18:45	
4-Isopropyltoluene	0.039	. <b>J</b>	0.068		mg/Kg		08/16/24 12:44	08/16/24 18:45	
Benzene	ND		0.034	0.0065		₩	08/16/24 12:44		
Bromobenzene	ND		0.068	0.0072		₩	08/16/24 12:44		
Bromochloromethane	ND		0.068		mg/Kg		08/16/24 12:44	08/16/24 18:45	
Bromodichloromethane	ND		0.068	0.0094		₩	08/16/24 12:44	08/16/24 18:45	
Bromoform	ND		0.068	0.0077		₩	08/16/24 12:44	08/16/24 18:45	
Bromomethane	ND		0.17		mg/Kg	₩	08/16/24 12:44	08/16/24 18:45	
Carbon tetrachloride	ND		0.034	0.0075		☼	08/16/24 12:44	08/16/24 18:45	
Chloroethane	ND		0.14	0.036	mg/Kg	☼	08/16/24 12:44	08/16/24 18:45	
Chloroform	0.072		0.034	0.0072	mg/Kg	₩	08/16/24 12:44	08/16/24 18:45	
Chloromethane	ND		0.10	0.017	mg/Kg	₩	08/16/24 12:44	08/16/24 18:45	
cis-1,2-Dichloroethene	ND		0.10	0.022	mg/Kg	☼	08/16/24 12:44	08/16/24 18:45	
cis-1,3-Dichloropropene	ND		0.034	0.0068	mg/Kg	₩	08/16/24 12:44	08/16/24 18:45	
Dibromochloromethane	ND		0.034	0.0084	mg/Kg	₩	08/16/24 12:44	08/16/24 18:45	
Dibromomethane	ND		0.068	0.013	mg/Kg	₩	08/16/24 12:44	08/16/24 18:45	
Dichlorodifluoromethane	ND		0.43	0.079	mg/Kg	₩	08/16/24 12:44	08/16/24 18:45	
Ethylbenzene	ND		0.068	0.016	mg/Kg	₽	08/16/24 12:44	08/16/24 18:45	
Hexachlorobutadiene	ND		0.17	0.041	mg/Kg	₩	08/16/24 12:44	08/16/24 18:45	
sopropylbenzene	ND		0.068	0.015	mg/Kg	₩	08/16/24 12:44	08/16/24 18:45	
Methyl tert-butyl ether	ND		0.068		mg/Kg	₩	08/16/24 12:44	08/16/24 18:45	
Methylene Chloride	ND		0.43		mg/Kg	₽	08/16/24 12:44	08/16/24 18:45	
m-Xylene & p-Xylene	ND		0.068		mg/Kg	₽	08/16/24 12:44		
Naphthalene	0.082	J *1	0.26		mg/Kg			08/16/24 18:45	
n-Butylbenzene	ND	J .	0.068		mg/Kg			08/16/24 18:45	
N-Propylbenzene	ND		0.068		mg/Kg		08/16/24 12:44	08/16/24 18:45	
o-Xylene	ND		0.068	0.0086				08/16/24 18:45	

**Eurofins Seattle** 

9/12/2024

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Percent Moisture (SM22 2540G)

25.3

Client Sample ID: PDI-24-SO-35.5-20240809 Lab Sample ID: 580-142896-6

Date Collected: 08/09/24 16:10 **Matrix: Solid** Date Received: 08/13/24 13:25 Percent Solids: 74.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.068	0.015	mg/Kg	— <u></u>	08/16/24 12:44	08/16/24 18:45	1
Styrene	ND		0.068	0.022	mg/Kg	☆	08/16/24 12:44	08/16/24 18:45	1
t-Butylbenzene	ND		0.068		mg/Kg		08/16/24 12:44	08/16/24 18:45	1
Tetrachloroethene	0.30		0.068	0.0091	mg/Kg	₩	08/16/24 12:44	08/16/24 18:45	1
Toluene	ND		0.10	0.023	mg/Kg	₩	08/16/24 12:44	08/16/24 18:45	1
trans-1,2-Dichloroethene	ND		0.10	0.025	mg/Kg	₩	08/16/24 12:44	08/16/24 18:45	1
trans-1,3-Dichloropropene	ND		0.068	0.012	mg/Kg	₩	08/16/24 12:44	08/16/24 18:45	1
Trichloroethene	ND		0.068	0.018	mg/Kg	₽	08/16/24 12:44	08/16/24 18:45	1
Trichlorofluoromethane	ND		0.14	0.044	mg/Kg	₩	08/16/24 12:44	08/16/24 18:45	1
Vinyl chloride	ND		0.17	0.032	mg/Kg	₩	08/16/24 12:44	08/16/24 18:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		80 - 121				08/16/24 12:44	08/16/24 18:45	1
4-Bromofluorobenzene (Surr)	101		80 - 120				08/16/24 12:44	08/16/24 18:45	1
Dibromofluoromethane (Surr)	100		80 - 120				08/16/24 12:44	08/16/24 18:45	1
Toluene-d8 (Surr)	109		80 - 120				08/16/24 12:44	08/16/24 18:45	1
- Method: SW846 8260D - Vol	atile Organic	Compound	ds by GC/MS	- DL					
Analyte	•	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	180		7.4	0.88	mg/Kg	<del>\</del>	08/19/24 09:17	08/19/24 14:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 121				08/19/24 09:17	08/19/24 14:03	1
4-Bromofluorobenzene (Surr)	100		80 - 120				08/19/24 09:17	08/19/24 14:03	1
Dibromofluoromethane (Surr)	104		80 - 120				08/19/24 09:17	08/19/24 14:03	1
Toluene-d8 (Surr)	103		80 - 120				08/19/24 09:17	08/19/24 14:03	1
-									
General Chemistry									
General Chemistry Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac

0.1

0.1 %

08/16/24 10:39

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-24-SO-37.5-20240809

Lab Sample ID: 580-142896-7 Date Collected: 08/09/24 16:15 Matrix: Solid Date Received: 08/13/24 13:25 Percent Solids: 86.0

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.026 0.0065 mg/Kg 08/16/24 12:44 08/16/24 16:34 ND 0.052 1.1.1-Trichloroethane 0.0059 mg/Kg 08/16/24 12:44 08/16/24 16:34 1,1,2,2-Tetrachloroethane ND 0.026 0.0098 mg/Kg 08/16/24 12:44 08/16/24 16:34 ND 0.0096 1,1,2-Trichloroethane 0.026 mg/Kg 08/16/24 12:44 08/16/24 16:34 ND 0.052 0.012 mg/Kg 08/16/24 12:44 08/16/24 16:34 1 1-Dichloroethane 1,1-Dichloroethene NΠ 0.052 0.016 mg/Kg 08/16/24 12:44 08/16/24 16:34 1,1-Dichloropropene ND 0.052 0.0068 08/16/24 12:44 08/16/24 16:34 mg/Kg ND 0.10 0.051 08/16/24 12:44 08/16/24 16:34 1,2,3-Trichlorobenzene F2 F1 \*1 mg/Kg 1,2,3-Trichloropropane ND 0.052 0.015 mg/Kg 08/16/24 12:44 08/16/24 16:34 1,2,4-Trichlorobenzene ND F2 F1 0.10 0.055 mg/Kg 08/16/24 12:44 08/16/24 16:34 1,2,4-Trimethylbenzene ND 0.052 0.017 mg/Kg 08/16/24 12:44 08/16/24 16:34 1.2-Dibromo-3-Chloropropane ND 0.077 0.020 ma/Ka 08/16/24 12:44 08/16/24 16:34 1 1,2-Dibromoethane ND 0.026 0.0049 mg/Kg 08/16/24 12:44 08/16/24 16:34 1,2-Dichlorobenzene ND 0.052 0.011 mg/Kg 08/16/24 12:44 08/16/24 16:34 ND 0.026 0.0071 mg/Kg 08/16/24 12:44 08/16/24 16:34 1.2-Dichloroethane 0.0085 1,2-Dichloropropane NΩ 0.026 mg/Kg 08/16/24 12:44 08/16/24 16:34 ND 1,3,5-Trimethylbenzene 0.052 0.0098 mg/Kg 08/16/24 12:44 08/16/24 16:34 1,3-Dichlorobenzene ND 0.077 0.017 mg/Kg 08/16/24 12:44 08/16/24 16:34 1,3-Dichloropropane NΩ 0.077 0.0072 mg/Kg 08/16/24 12:44 08/16/24 16:34 1,4-Dichlorobenzene 0.016 J 0.077 0.014 mg/Kg 08/16/24 12:44 08/16/24 16:34 2,2-Dichloropropane ND 0.052 0.016 mg/Kg ť. 08/16/24 12:44 08/16/24 16:34 2-Chlorotoluene ND 0.052 0.011 mg/Kg 08/16/24 12:44 08/16/24 16:34 4-Chlorotoluene ND 0.052 0.013 mg/Kg 08/16/24 12:44 08/16/24 16:34 4-Isopropyltoluene ND 0.052 0.013 mg/Kg 08/16/24 12:44 08/16/24 16:34 Benzene ND 0.026 0.0049 mg/Kg 08/16/24 12:44 08/16/24 16:34 0.0054 Bromobenzene ND 0.052 mg/Kg 08/16/24 12:44 08/16/24 16:34 Bromochloromethane ND 0.052 0.0080 mg/Kg 08/16/24 12:44 08/16/24 16:34 Bromodichloromethane 0.0071 08/16/24 16:34 ND 0.052 mg/Kg 08/16/24 12:44 0.0058 Bromoform ND 0.052 mg/Kg 08/16/24 12:44 08/16/24 16:34 0.049 ND Bromomethane 0.13 mg/Kg 08/16/24 12:44 08/16/24 16:34 Carbon tetrachloride ND 0.026 0.0057 mg/Kg 08/16/24 12:44 08/16/24 16:34 0.052 0.0062 mg/Kg 08/16/24 12:44 08/16/24 16:34 Chlorobenzene 4.8 Chloroethane 0.027 08/16/24 12:44 08/16/24 16:34 ND 0.10 mg/Kg Chloroform ND 08/16/24 12:44 08/16/24 16:34 0.026 0.0054 mg/Kg Chloromethane ND 0.077 0.013 mg/Kg 08/16/24 12:44 08/16/24 16:34 cis-1.2-Dichloroethene ND 0.077 0.016 mg/Kg 08/16/24 12:44 08/16/24 16:34 cis-1,3-Dichloropropene ND 0.026 0.0052 mg/Kg 08/16/24 12:44 08/16/24 16:34 Dibromochloromethane ND 0.026 0.0063 mg/Kg 08/16/24 12:44 08/16/24 16:34 Dibromomethane ND 0.052 0.0096 mg/Kg 08/16/24 12:44 08/16/24 16:34 Dichlorodifluoromethane ND 0.32 0.059 mg/Kg 08/16/24 12:44 08/16/24 16:34 Ethylbenzene ND 0.052 0.012 mg/Kg 08/16/24 12:44 08/16/24 16:34 Hexachlorobutadiene ND 0.13 0.031 mg/Kg 08/16/24 12:44 08/16/24 16:34 0.011 ND Isopropylbenzene 0.052 mg/Kg 08/16/24 12:44 08/16/24 16:34 Methyl tert-butyl ether 0.052 0.0077 08/16/24 12:44 08/16/24 16:34 ND mg/Kg ND Methylene Chloride 0.32 0.034 mg/Kg 08/16/24 12:44 08/16/24 16:34 m-Xylene & p-Xylene ND 0.052 0.0092 mg/Kg 08/16/24 12:44 08/16/24 16:34 Naphthalene 0.050 08/16/24 12:44 ND F2 \*1 0.19 mg/Kg 08/16/24 16:34 n-Butylbenzene ND 0.052 0.024 mg/Kg 08/16/24 12:44 08/16/24 16:34 08/16/24 12:44 08/16/24 16:34 N-Propylbenzene ND 0.052 0.019 mg/Kg

**Eurofins Seattle** 

9/12/2024

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-24-SO-37.5-20240809

14.0

Lab Sample ID: 580-142896-7 Date Collected: 08/09/24 16:15 **Matrix: Solid** Date Received: 08/13/24 13:25

Percent Solids: 86.0

08/16/24 10:39

Method: SW846 8260D - Vola Analyte	_	Qualifier	RL	(Conti	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.052	0.0065	mg/Kg	— <u></u>	08/16/24 12:44	08/16/24 16:34	1
sec-Butylbenzene	ND		0.052	0.011	mg/Kg	☼	08/16/24 12:44	08/16/24 16:34	1
Styrene	ND		0.052	0.016	mg/Kg	₩	08/16/24 12:44	08/16/24 16:34	1
t-Butylbenzene	ND		0.052	0.0099	mg/Kg	₩	08/16/24 12:44	08/16/24 16:34	1
Tetrachloroethene	ND		0.052	0.0068	mg/Kg	₩	08/16/24 12:44	08/16/24 16:34	1
Toluene	ND		0.077	0.017	mg/Kg	₩	08/16/24 12:44	08/16/24 16:34	1
trans-1,2-Dichloroethene	ND		0.077	0.019	mg/Kg	₩	08/16/24 12:44	08/16/24 16:34	1
trans-1,3-Dichloropropene	ND		0.052	0.0090	mg/Kg	₩	08/16/24 12:44	08/16/24 16:34	1
Trichloroethene	ND		0.052	0.013	mg/Kg	₩	08/16/24 12:44	08/16/24 16:34	1
Trichlorofluoromethane	ND		0.10	0.034	mg/Kg	₩	08/16/24 12:44	08/16/24 16:34	1
Vinyl chloride	ND		0.13	0.024	mg/Kg	≎	08/16/24 12:44	08/16/24 16:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		80 - 121				08/16/24 12:44	08/16/24 16:34	1
4-Bromofluorobenzene (Surr)	99		80 - 120				08/16/24 12:44	08/16/24 16:34	1
Dibromofluoromethane (Surr)	103		80 - 120				08/16/24 12:44	08/16/24 16:34	1
Toluene-d8 (Surr)	102		80 - 120				08/16/24 12:44	08/16/24 16:34	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	86.0		0.1	0.1	%			08/16/24 10:39	

0.1

0.1 %

9/12/2024

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-24-SO-23.1-20240809

Date Collected: 08/09/24 15:00
Date Received: 08/13/24 13:25
Per

Lab Sample ID: 580-142896-8

Matrix: Solid

Percent Solids: 85.8

Analyte		Qualifier	RL _	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND		0.028	0.0070	mg/Kg	☼	08/19/24 09:17	08/19/24 12:14	
1,1,1-Trichloroethane	ND		0.056	0.0065	mg/Kg	☼	08/19/24 09:17	08/19/24 12:14	
1,1,2,2-Tetrachloroethane	ND		0.028	0.011	mg/Kg	☼	08/19/24 09:17	08/19/24 12:14	
1,1,2-Trichloroethane	ND		0.028	0.010	mg/Kg	₩	08/19/24 09:17	08/19/24 12:14	
1,1-Dichloroethane	ND		0.056	0.013	mg/Kg	☼	08/19/24 09:17	08/19/24 12:14	
1,1-Dichloroethene	ND		0.056	0.017	mg/Kg	☆	08/19/24 09:17	08/19/24 12:14	
1,1-Dichloropropene	ND		0.056	0.0075	mg/Kg	⊅	08/19/24 09:17	08/19/24 12:14	
1,2,3-Trichloropropane	ND		0.056	0.016	mg/Kg	₩	08/19/24 09:17	08/19/24 12:14	
1,2,4-Trichlorobenzene	ND		0.11	0.060	mg/Kg	☼	08/19/24 09:17	08/19/24 12:14	
1,2,4-Trimethylbenzene	ND		0.056	0.019	mg/Kg	₽	08/19/24 09:17	08/19/24 12:14	
1,2-Dibromo-3-Chloropropane	ND		0.084	0.021	mg/Kg	☼	08/19/24 09:17	08/19/24 12:14	
1,2-Dibromoethane	ND		0.028	0.0054	mg/Kg	₩	08/19/24 09:17	08/19/24 12:14	
1,2-Dichlorobenzene	ND		0.056	0.012	mg/Kg		08/19/24 09:17	08/19/24 12:14	
1,2-Dichloroethane	ND		0.028	0.0077	mg/Kg	☼	08/19/24 09:17		
1,2-Dichloropropane	ND		0.028	0.0093	0 0	☼	08/19/24 09:17		
1,3,5-Trimethylbenzene	ND		0.056		mg/Kg			08/19/24 12:14	
1,3-Dichlorobenzene	ND		0.084		mg/Kg	₩		08/19/24 12:14	
1,3-Dichloropropane	ND		0.084	0.0079	0 0	₩		08/19/24 12:14	
1,4-Dichlorobenzene	0.015		0.084		mg/Kg			08/19/24 12:14	
2,2-Dichloropropane	ND		0.056		mg/Kg			08/19/24 12:14	
2-Chlorotoluene	ND		0.056		mg/Kg	Ť Ö		08/19/24 12:14	
4-Chlorotoluene	ND		0.056		mg/Kg			08/19/24 12:14	
4-Isopropyltoluene	ND		0.056		mg/Kg	₩		08/19/24 12:14	
Benzene	ND ND		0.030			☆		08/19/24 12:14	
Bromobenzene	ND		0.026	0.0059				08/19/24 12:14	
Bromochloromethane	ND		0.056	0.0039		☆	08/19/24 09:17		
Bromodichloromethane	ND ND		0.056	0.0067		₩		08/19/24 12:14	
Bromoform	ND								
			0.056	0.0063	0 0	±		08/19/24 12:14	
Bromomethane	ND		0.14		mg/Kg	±	08/19/24 09:17		
Carbon tetrachloride	ND		0.028	0.0062		<u>.</u> .		08/19/24 12:14	
Chlorobenzene	2.2		0.056	0.0068	0 0	<b>*</b>		08/19/24 12:14	
Chloroethane	ND		0.11		mg/Kg	☼		08/19/24 12:14	
Chloroform	0.12		0.028	0.0059				08/19/24 12:14	
Chloromethane	ND		0.084		mg/Kg	₩		08/19/24 12:14	
cis-1,2-Dichloroethene	ND		0.084		mg/Kg	₩	08/19/24 09:17	08/19/24 12:14	
cis-1,3-Dichloropropene	ND		0.028	0.0056		₩	08/19/24 09:17	08/19/24 12:14	
Dibromochloromethane	ND		0.028	0.0069		☼		08/19/24 12:14	
Dibromomethane	ND		0.056		mg/Kg	₩	08/19/24 09:17	08/19/24 12:14	
Dichlorodifluoromethane	ND		0.35	0.065	mg/Kg	₩	08/19/24 09:17	08/19/24 12:14	
Ethylbenzene	ND		0.056		mg/Kg	₩	08/19/24 09:17	08/19/24 12:14	
Hexachlorobutadiene	0.071	J	0.14	0.034	mg/Kg	☼	08/19/24 09:17	08/19/24 12:14	
sopropylbenzene	ND		0.056	0.012	mg/Kg	☼	08/19/24 09:17	08/19/24 12:14	
Methyl tert-butyl ether	ND		0.056	0.0084		☼	08/19/24 09:17	08/19/24 12:14	
Methylene Chloride	ND		0.35	0.037	mg/Kg	☼	08/19/24 09:17	08/19/24 12:14	
n-Xylene & p-Xylene	ND		0.056	0.010	mg/Kg	☼	08/19/24 09:17	08/19/24 12:14	
Naphthalene	ND	*1	0.21	0.055	mg/Kg	☼	08/19/24 09:17	08/19/24 12:14	
n-Butylbenzene	ND		0.056		mg/Kg	☼		08/19/24 12:14	
N-Propylbenzene	ND		0.056		mg/Kg	☆	08/19/24 09:17	08/19/24 12:14	
o-Xylene	ND		0.056	0.0070				08/19/24 12:14	

**Eurofins Seattle** 

9/12/2024

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1:

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-24-SO-23.1-20240809

Date Collected: 08/09/24 15:00 Date Received: 08/13/24 13:25 Lab Sample ID: 580-142896-8

**Matrix: Solid** Percent Solids: 85.8

Method: SW846 8260D - Vo	latile Organic	Compound	ds by GC/MS	(Conti	inued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.056	0.012	mg/Kg	≎	08/19/24 09:17	08/19/24 12:14	1
Styrene	ND		0.056	0.018	mg/Kg	☼	08/19/24 09:17	08/19/24 12:14	1
t-Butylbenzene	ND		0.056	0.011	mg/Kg	₽	08/19/24 09:17	08/19/24 12:14	1
Tetrachloroethene	0.40		0.056	0.0075	mg/Kg	☼	08/19/24 09:17	08/19/24 12:14	1
Toluene	ND		0.084	0.019	mg/Kg	☼	08/19/24 09:17	08/19/24 12:14	1
trans-1,2-Dichloroethene	ND		0.084	0.021	mg/Kg	☼	08/19/24 09:17	08/19/24 12:14	1
trans-1,3-Dichloropropene	ND		0.056	0.0099	mg/Kg	☼	08/19/24 09:17	08/19/24 12:14	1
Trichloroethene	ND		0.056	0.015	mg/Kg	☼	08/19/24 09:17	08/19/24 12:14	1
Trichlorofluoromethane	ND		0.11	0.037	mg/Kg	₽	08/19/24 09:17	08/19/24 12:14	1
Vinyl chloride	ND		0.14	0.026	mg/Kg	₩	08/19/24 09:17	08/19/24 12:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		80 - 121				08/19/24 09:17	08/19/24 12:14	1
4-Bromofluorobenzene (Surr)	103		80 - 120				08/19/24 09:17	08/19/24 12:14	1
Dibromofluoromethane (Surr)	102		80 - 120				08/19/24 09:17	08/19/24 12:14	1
Toluene-d8 (Surr)	101		80 - 120				08/19/24 09:17	08/19/24 12:14	1

Method: SW846 8260D - Vo	latile Organic	Compoun	as by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND		0.11	0.056	mg/Kg	<del></del>	08/21/24 15:12	08/21/24 19:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				08/21/24 15:12	08/21/24 19:44	1
4-Bromofluorobenzene (Surr)	103		80 - 120				08/21/24 15:12	08/21/24 19:44	1
Dibromofluoromethane (Surr)	101		80 - 120				08/21/24 15:12	08/21/24 19:44	1
Toluene-d8 (Surr)	97		80 - 120				08/21/24 15:12	08/21/24 19:44	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		57	6.9	ug/Kg	<u></u>	08/15/24 16:45	08/23/24 23:52	1
1,2-Dichlorobenzene	12	J	57	5.7	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	1
1,3-Dichlorobenzene	ND		57	5.5	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	1
1,4-Dichlorobenzene	80		57	9.5	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	1
1-Methylnaphthalene	6.2	J	34	5.7	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	1
2,4,5-Trichlorophenol	ND		230	9.3	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	1
2,4,6-Trichlorophenol	ND		170	38	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	1
2,4-Dichlorophenol	ND		240	32	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	1
2,4-Dimethylphenol	ND		240	69	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	1
2,4-Dinitrophenol	ND		2300	670	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	1
2,4-Dinitrotoluene	ND		230	49	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	1
2,6-Dinitrotoluene	ND		170	17	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	1
2-Chloronaphthalene	ND		29	5.7	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	1
2-Chlorophenol	15	J	230	4.6	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	1
2-Methylnaphthalene	ND		57	10	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	1
2-Methylphenol	ND		170	11	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	1
2-Nitroaniline	ND		110	17	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	1
2-Nitrophenol	ND		230	22	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	1
3 & 4 Methylphenol	ND		230	17	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	1
3,3'-Dichlorobenzidine	ND	F1 *3	650	330	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	1
3-Nitroaniline	ND		340	110	ug/Kg	☼	08/15/24 16:45	08/23/24 23:52	1

2-Fluorophenol (Surr)

Phenol-d5 (Surr)

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-24-SO-23.1-20240809

Date Collected: 08/09/24 15:00 Date Received: 08/13/24 13:25 Lab Sample ID: 580-142896-8

**Matrix: Solid** 

Percent Solids: 85.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,6-Dinitro-2-methylphenol	MD		1100	110	ug/Kg	☼	08/15/24 16:45	08/23/24 23:52	•
4-Bromophenyl phenyl ether	ND		230	10	ug/Kg	₽	08/15/24 16:45	08/23/24 23:52	
4-Chloro-3-methylphenol	ND		170	38	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	
4-Chloroaniline	ND		1700	150	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	
4-Chlorophenyl phenyl ether	ND		230	7.2	ug/Kg	☆	08/15/24 16:45	08/23/24 23:52	•
4-Nitroaniline	ND	F1	170	57	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	•
4-Nitrophenol	ND		2300	290	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	
Acenaphthene	ND		46	5.3	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	
Acenaphthylene	ND		29	5.7	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	
Anthracene	ND		69	18	ug/Kg		08/15/24 16:45	08/23/24 23:52	
Benzo[a]anthracene	ND	F2 F1 *3	46		ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	
Benzo[a]pyrene	ND	*3	120		ug/Kg	☆	08/15/24 16:45	08/23/24 23:52	
Benzo[b]fluoranthene	ND	F1 *3	46		ug/Kg		08/15/24 16:45	08/23/24 23:52	
Benzo[g,h,i]perylene		F1 *3	69		ug/Kg			08/23/24 23:52	1
Benzo[k]fluoranthene		F2 *3	69		ug/Kg	☆		08/23/24 23:52	
Benzoic acid	ND	- : <del>-</del> - • •	4600		ug/Kg	∴		08/23/24 23:52	
Benzyl alcohol	ND.		1100	290	ug/Kg	☆		08/23/24 23:52	
Bis(2-chloroethoxy)methane	ND.		230	21	ug/Kg	☆		08/23/24 23:52	
Bis(2-chloroethyl)ether		F1	110		ug/Kg	∵. ∵		08/23/24 23:52	,
Bis(2-ethylhexyl) phthalate		F2 F1 *3	690		ug/Kg ug/Kg	☆		08/23/24 23:52	,
` , , , , ,	ND ND	FZ F1 3	230		ug/Kg ug/Kg	₩		08/23/24 23:52	,
bis(chloroisopropyl) ether Butyl benzyl phthalate		F1 *3	230					08/23/24 23:52	
, , ,		FI 3			ug/Kg	φ.			•
Carbazole	ND	E0 E4 *0	170		ug/Kg	<b>*</b>		08/23/24 23:52	
Chrysene		F2 F1 *3	69		ug/Kg	<del>.</del> .		08/23/24 23:52	
Dibenz(a,h)anthracene		F1 *3	120		ug/Kg	<b>‡</b>		08/23/24 23:52	•
Dibenzofuran	ND		170	6.8	ug/Kg	₩		08/23/24 23:52	•
Diethyl phthalate	39	. <b>J</b>	460		ug/Kg			08/23/24 23:52	
Dimethyl phthalate	ND		170		ug/Kg	₩		08/23/24 23:52	•
Di-n-butyl phthalate		F1	570	54	ug/Kg	₩		08/23/24 23:52	•
Di-n-octyl phthalate	ND	*3	230				08/15/24 16:45	08/23/24 23:52	
Fluoranthene	ND	F1	46		ug/Kg	☆	08/15/24 16:45	08/23/24 23:52	•
Fluorene	ND		29	5.7	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	•
Hexachlorobenzene	ND		57	17	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	
Hexachlorobutadiene	27	J	57	17	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	•
Hexachlorocyclopentadiene	ND		110	8.8	ug/Kg	≎	08/15/24 16:45	08/23/24 23:52	•
Hexachloroethane	ND		170	4.9	ug/Kg	☼	08/15/24 16:45	08/23/24 23:52	
Indeno[1,2,3-cd]pyrene	ND	F1 *3	46	14	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	
Isophorone	ND		170	9.7	ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	•
Naphthalene	ND		29	5.7	ug/Kg	☼	08/15/24 16:45	08/23/24 23:52	
Nitrobenzene	ND		230		ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	,
N-Nitrosodi-n-propylamine	ND		230		ug/Kg	₩	08/15/24 16:45	08/23/24 23:52	
N-Nitrosodiphenylamine	ND		69		ug/Kg	₩		08/23/24 23:52	
Pentachlorophenol	ND		630		ug/Kg	 		08/23/24 23:52	
Phenanthrene	36	J	69		ug/Kg	₩		08/23/24 23:52	
Phenol	ND	-	170		ug/Kg	₩		08/23/24 23:52	
Pyrene	ND	F1	69		ug/Kg	∵		08/23/24 23:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
							20/45/04 40 45	00/00/04 00 50	

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08/15/24 16:45 08/23/24 23:52

08/15/24 16:45 08/23/24 23:52

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Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Client: ERM-West

Client Sample ID: PDI-24-SO-23.1-20240809 Lab Sample ID: 580-142896-8

Date Collected: 08/09/24 15:00 **Matrix: Solid** 

Date Received: 08/13/24 13:25 Percent Solids: 85.8

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	83	63 - 120	$08/15/24 \ 16:45 \ 0$	8/23/24 23:52	1
2-Fluorobiphenyl	82	64 - 120	08/15/24 16:45 0	8/23/24 23:52	1
2,4,6-Tribromophenol (Surr)	76	62 - 122	08/15/24 16:45 0	8/23/24 23:52	1
Terphenyl-d14 (Surr)	27 S1-	73 - 125	08/15/24 16:45 0	8/23/24 23:52	1

Method: SW846	3081B - Organochiorine F	'esticides (GC) - DL

Analyte	_	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	100		5.4	0.98	mg/Kg	— <u></u>	08/19/24 15:56	08/27/24 12:14	1000
2,4'-DDE	88	р	5.4	0.65	mg/Kg	₩	08/19/24 15:56	08/27/24 12:14	1000
4,4'-DDE	200		2.2	0.40	mg/Kg	₩	08/19/24 15:56	08/27/24 12:14	1000
Aldrin	0.033	J	0.16	0.021	mg/Kg	₩	08/19/24 15:56	08/26/24 11:45	50
alpha-BHC	0.050	Jр	0.11	0.0087	mg/Kg	₩	08/19/24 15:56	08/26/24 11:45	50
beta-BHC	ND		0.27	0.014	mg/Kg	₩	08/19/24 15:56	08/26/24 11:45	50
cis-Chlordane	ND		0.11	0.041	mg/Kg	₩	08/19/24 15:56	08/26/24 11:45	50
delta-BHC	ND		0.16	0.015	mg/Kg	₩	08/19/24 15:56	08/26/24 11:45	50
Dieldrin	ND		0.11	0.019	mg/Kg	₩	08/19/24 15:56	08/26/24 11:45	50
Endosulfan I	ND		0.11	0.018	mg/Kg	₩	08/19/24 15:56	08/26/24 11:45	50
Endosulfan II	ND		0.11	0.014	mg/Kg	₩	08/19/24 15:56	08/26/24 11:45	50
Endosulfan sulfate	ND		0.11	0.015	mg/Kg	₩	08/19/24 15:56	08/26/24 11:45	50
Endrin	2.2	p	0.11	0.026	mg/Kg	₩	08/19/24 15:56	08/26/24 11:45	50
Endrin aldehyde	ND		1.1	0.26	mg/Kg	₩	08/19/24 15:56	08/26/24 11:45	50
Endrin ketone	ND		0.11	0.023	mg/Kg	₩	08/19/24 15:56	08/26/24 11:45	50
gamma-BHC (Lindane)	ND		0.11	0.041	mg/Kg	₩	08/19/24 15:56	08/26/24 11:45	50
Heptachlor	ND		0.16	0.010	mg/Kg	₩	08/19/24 15:56	08/26/24 11:45	50
Heptachlor epoxide	0.083	Jр	0.16	0.016	mg/Kg	₩	08/19/24 15:56	08/26/24 11:45	50
Methoxychlor	ND		0.54	0.020	mg/Kg	₩	08/19/24 15:56	08/26/24 11:45	50
Toxaphene	ND		6.8	1.4	mg/Kg	₩	08/19/24 15:56	08/26/24 11:45	50
trans-Chlordane	ND		0.16	0.017	ma/Ka	₩	08/19/24 15:56	08/26/24 11:45	50

	Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	DCB Decachlorobiphenyl	7530	S1+	53 - 123	08/19/24 15:56	08/26/24 11:45	50
	DCB Decachlorobiphenyl	19952	S1+	53 - 123	08/19/24 15:56	08/27/24 12:14	1000
	Tetrachloro-m-xylene	279	p S1+	48 - 123	08/19/24 15:56	08/26/24 11:45	50
١	Tetrachloro-m-xylene	0	S1-	48 - 123	08/19/24 15:56	08/27/24 12:14	1000

#### Method: SW846 8081B - Organochlorine Pesticides (GC) - DL2

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDT	3700	110	22	mg/Kg	☆	08/19/24 15:56	08/27/24 13:12	20000
4,4'-DDD	410	43	5.0	mg/Kg	₩	08/19/24 15:56	08/27/24 13:12	20000
4,4'-DDT	19000 EB	43	8.0	mg/Kg	☼	08/19/24 15:56	08/27/24 13:12	20000

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	384428	S1+	53 - 123	08/19/24 15:56	08/27/24 13:12	20000
Tetrachloro-m-xylene	0	S1-	48 - 123	08/19/24 15:56	08/27/24 13:12	20000

#### Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - DI

method. Offoro occar	- i Oiyoilloilliatea E	Sipilicity (i	ODS, by Go	15 01110	matogra	'Pi'y			
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		1.1	0.40	mg/Kg	<del></del>	08/19/24 15:56	08/26/24 11:27	50
PCB-1221	ND		1.1	0.65	mg/Kg	₩	08/19/24 15:56	08/26/24 11:27	50
PCB-1232	ND		1.1	0.27	mg/Kg	₩	08/19/24 15:56	08/26/24 11:27	50

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Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

2,4-Dichlorophenylacetic acid

o-Terphenyl

Client Sample ID: PDI-24-SO-23.1-20240809

Lab Sample ID: 580-142896-8 Date Collected: 08/09/24 15:00 **Matrix: Solid** 

Date Received: 08/13/24 13:25 Percent Solids: 85.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1242	ND		1.1	0.43	mg/Kg	<u></u>	08/19/24 15:56	08/26/24 11:27	50
PCB-1248	ND		1.1	0.38	mg/Kg	₩	08/19/24 15:56	08/26/24 11:27	50
PCB-1254	ND		1.1	0.49	mg/Kg	₩	08/19/24 15:56	08/26/24 11:27	50
PCB-1260	ND		1.1	0.40	mg/Kg	₩	08/19/24 15:56	08/26/24 11:27	50
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	6657	S1+	44 - 135				08/19/24 15:56	08/26/24 11:27	50
Tetrachloro-m-xylene	111	p	48 - 150				08/19/24 15:56	08/26/24 11:27	50

Method: SW846 8151	A - Herbicides (GC)								
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		230	86	ug/Kg	— <u></u>	08/15/24 15:29	08/23/24 21:31	20
2,4,5-TP (Silvex)	ND		230	180	ug/Kg	₩	08/15/24 15:29	08/23/24 21:31	20
2,4-D	ND	*1	2300	1100	ug/Kg	≎	08/15/24 15:29	08/23/24 21:31	20
2,4-DB	ND		2300	2300	ug/Kg	₩	08/15/24 15:29	08/23/24 21:31	20
Dalapon	ND		5800	1700	ug/Kg	₩	08/15/24 15:29	08/23/24 21:31	20
Dicamba	ND		230	110	ug/Kg	₩	08/15/24 15:29	08/23/24 21:31	20
Dichlorprop	ND		2300	1100	ug/Kg		08/15/24 15:29	08/23/24 21:31	20
Dinoseb	ND		2300	1400	ug/Kg	₩	08/15/24 15:29	08/23/24 21:31	20
MCPA	ND		230000	110000	ug/Kg	₩	08/15/24 15:29	08/23/24 21:31	20
MCPP	ND		230000	150000	ug/Kg	₩	08/15/24 15:29	08/23/24 21:31	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

Method: NWTPH-Dx - No	rthwest - Semi-Volatile Pet	troleum Prod	ucts (GC	<b>(</b> )				
Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	4000	54	13	mg/Kg	<u></u>	08/14/24 16:15	08/16/24 03:36	1
Motor Oil (>C24-C36)	10000	54	19	mg/Kg	≎	08/14/24 16:15	08/16/24 03:36	1
Surrogate	%Recovery Qualifier	Limits				Prepared	Analyzed	Dil Fac

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Analyte	Result Qualifi	er RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND	0.91	0.23	ug/Kg	₽	08/16/24 11:43	08/18/24 06:01	1
Perfluoropentanoic acid (PFPeA)	ND	0.46	0.11	ug/Kg	₽	08/16/24 11:43	08/18/24 06:01	1
Perfluorohexanoic acid (PFHxA)	ND	0.23	0.066	ug/Kg	₽	08/16/24 11:43	08/18/24 06:01	1
Perfluoroheptanoic acid (PFHpA)	ND	0.23	0.057	ug/Kg	₽	08/16/24 11:43	08/18/24 06:01	1
Perfluorooctanoic acid (PFOA)	ND	0.23	0.057	ug/Kg	₽	08/16/24 11:43	08/18/24 06:01	1
Perfluorononanoic acid (PFNA)	ND	0.23	0.066	ug/Kg	₽	08/16/24 11:43	08/18/24 06:01	1
Perfluorodecanoic acid (PFDA)	ND	0.23	0.063	ug/Kg	₽	08/16/24 11:43	08/18/24 06:01	1
Perfluoroundecanoic acid (PFUnA)	ND	0.23	0.057	ug/Kg	₽	08/16/24 11:43	08/18/24 06:01	1
Perfluorododecanoic acid (PFDoA)	ND	0.23	0.057	ug/Kg	₽	08/16/24 11:43	08/18/24 06:01	1
Perfluorotridecanoic acid (PFTrDA)	ND	0.23	0.057	ug/Kg	₽	08/16/24 11:43	08/18/24 06:01	1
Perfluorotetradecanoic acid (PFTeDA)	ND	0.23	0.064	ug/Kg	₽	08/16/24 11:43	08/18/24 06:01	1
Perfluorobutanesulfonic acid (PFBS)	ND	0.23	0.057	ug/Kg	≎	08/16/24 11:43	08/18/24 06:01	1
Perfluoropentanesulfonic acid (PFPeS)	ND	0.23	0.074	ug/Kg	₽	08/16/24 11:43	08/18/24 06:01	1
Perfluorohexanesulfonic acid (PFHxS)	ND	0.23	0.057	ug/Kg	☼	08/16/24 11:43	08/18/24 06:01	1

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08/15/24 15:29 08/23/24 21:31

<u>08/14/24 16:15</u> <u>08/16/24 03:36</u>

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-24-SO-23.1-20240809 Lab Sample ID: 580-142896-8

Method: EPA Draft-4 1633 - Pe Analyte	•	Tluoroalky Qualifier	1 Substance: RL	S DY LC/I		(Cont	inued) Prepared	Analyzed	Dil Fac
Perfluoroheptanesulfonic acid	ND	Qualifier	0.23		ug/Kg	— <del>Ö</del>	08/16/24 11:43		DII Fac
(PFHpS)	ND		0.23	0.037	ug/itg	**	00/10/24 11.43	00/10/24 00:01	'
Perfluorooctanesulfonic acid (PFOS)	ND		0.23	0.071	ug/Kg		08/16/24 11:43	08/18/24 06:01	1
Perfluorononanesulfonic acid (PFNS)	ND		0.23	0.072	ug/Kg	☼	08/16/24 11:43	08/18/24 06:01	1
Perfluorodecanesulfonic acid (PFDS)	ND		0.23	0.065	ug/Kg	₩	08/16/24 11:43	08/18/24 06:01	1
Perfluorododecanesulfonic acid (PFDoS)	ND		0.23	0.067	ug/Kg	₩	08/16/24 11:43	08/18/24 06:01	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		0.91	0.23	ug/Kg	₽	08/16/24 11:43	08/18/24 06:01	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	ND		0.91		ug/Kg	<b>*</b>	08/16/24 11:43	08/18/24 06:01	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	ND		0.91		ug/Kg	☼	08/16/24 11:43	08/18/24 06:01	1
Perfluorooctanesulfonamide (PFOSA)	ND		0.23		ug/Kg	☼	08/16/24 11:43	08/18/24 06:01	1
N-methylperfluorooctane sulfonamide (NMeFOSA)	ND		0.23		ug/Kg	<b>*</b>	08/16/24 11:43	08/18/24 06:01	
N-ethylperfluorooctane sulfonamide (NEtFOSA)	ND		0.23		ug/Kg	☼		08/18/24 06:01	1
N-ethylperfluorooctanesulfonamidoac etic acid (NEtFOSAA)	ND		0.23		ug/Kg	₽		08/18/24 06:01	1
N-methylperfluorooctane	ND		2.3	0.57	ug/Kg	₩	08/16/24 11:43	08/18/24 06:01	1
sulfonamidoethanol (NMeFOSE) N-ethylperfluorooctane	ND		2.3	0.58	ug/Kg		08/16/24 11:43	08/18/24 06:01	1
sulfonamidoethanol (NEtFOSE)	ND		2.3	0.56	ug/Kg	· · · · · · · · ·	06/10/24 11.43	00/10/24 00.01	
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		0.91	0.25	ug/Kg	₩	08/16/24 11:43	08/18/24 06:01	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	ND		0.91	0.23	ug/Kg	₩	08/16/24 11:43	08/18/24 06:01	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	ND		0.46	0.11	ug/Kg	₩	08/16/24 11:43	08/18/24 06:01	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	ND		0.46		ug/Kg	☼	08/16/24 11:43	08/18/24 06:01	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	ND		0.46	0.13	ug/Kg	<b>*</b>	08/16/24 11:43	08/18/24 06:01	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9CI-PF3ONS)	ND		0.91		ug/Kg	☼		08/18/24 06:01	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	ND		0.91		ug/Kg	₽		08/18/24 06:01	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	ND		0.46		ug/Kg			08/18/24 06:01	
3-Perfluoropropylpropanoic acid (3:3 FTCA)	ND		1.1		ug/Kg	₽	08/16/24 11:43		1
3-Perfluoropentylpropanoic acid (5:3 FTCA)	ND		5.7		ug/Kg	₽	08/16/24 11:43	08/18/24 06:01	1
3-Perfluoroheptylpropanoic acid (7:3 FTCA)	ND		5.7	2.1	ug/Kg	₽	08/16/24 11:43	08/18/24 06:01	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	97.7		20 - 150				08/16/24 11:43	08/18/24 06:01	1
13C5 PFPeA	128		20 - 150				08/16/24 11:43	08/18/24 06:01	1
13C5 PFHxA	95.3		20 - 150				08/16/24 11:43	08/18/24 06:01	1
13C4 PFHpA	85.3		20 - 150				08/16/24 11:43	08/18/24 06:01	1
13C8 PFOA	94.0	*3	20 - 150					08/18/24 06:01	1
13C9 PFNA	115	*3	20 - 150				08/16/24 11:43	08/18/24 06:01	1
13C6 PFDA	107	*3	20 - 150				08/16/24 11:43	08/18/24 06:01	1

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Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

d7-N-MeFOSE-M

d9-N-EtFOSE-M

d5-NEtPFOSA

d3-NMePFOSA

Client Sample ID: PDI-24-SO-23.1-20240809 Lab Sample ID: 580-142896-8

Date Collected: 08/09/24 15:00 Matrix: Solid
Date Received: 08/13/24 13:25 Percent Solids: 85.8

Method: EPA Draft-4 1	1633 - Per- and Polyf	luoroalky	I Substances by LC/MS/MS	(Continued)		
Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C7 PFUnA	113	*3	20 - 150	08/16/24 11:43	08/18/24 06:01	1
13C2 PFDoA	223	*3 *5+	20 - 150	08/16/24 11:43	08/18/24 06:01	1
13C2 PFTeDA	263	*3 *5+	20 - 150	08/16/24 11:43	08/18/24 06:01	1
13C3 PFBS	174	*5+	20 - 150	08/16/24 11:43	08/18/24 06:01	1
13C3 PFHxS	143		20 - 150	08/16/24 11:43	08/18/24 06:01	1
13C8 PFOS	156	*3 *5+	20 - 150	08/16/24 11:43	08/18/24 06:01	1
13C8 PFOSA	165	*3 *5+	20 - 150	08/16/24 11:43	08/18/24 06:01	1
d5-NEtFOSAA	56.9	*3	20 - 150	08/16/24 11:43	08/18/24 06:01	1
13C2 4:2 FTS	115		20 - 150	08/16/24 11:43	08/18/24 06:01	1
13C2 6:2 FTS	108		20 - 150	08/16/24 11:43	08/18/24 06:01	1
13C2 8:2 FTS	80.3		20 - 150	08/16/24 11:43	08/18/24 06:01	1
13C3 HFPO-DA	31.3		20 - 150	08/16/24 11:43	08/18/24 06:01	1

20 - 150

20 - 150

20 - 150

20 - 150

103 \*3

67.0 \*3

131 \*3

96.1 \*3

Method: EPA Draft-4 1633 - Pe	r- and Poly	fluoroalky	l Substances	by LC/	MS/MS	- RA			
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctanesulfonamidoa cetic acid (NMeFOSAA)	ND		0.23	0.12	ug/Kg	<u></u>	08/16/24 11:43	08/19/24 19:06	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
d3-NMeFOSAA	46.0	*3	20 - 150				08/16/24 11:43	08/19/24 19:06	1

Method: EPA 1613B - Did		•							
Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3,4,7,8-HxCDD	2.8	JB	47	1.0	pg/g	₩	08/21/24 15:11	09/05/24 05:19	1
1,2,3,6,7,8-HxCDD	3.2	J	47	1.0	pg/g	₽	08/21/24 15:11	09/05/24 05:19	1
1,2,3,7,8,9-HxCDD	ND		47	0.96	pg/g	₽	08/21/24 15:11	09/05/24 05:19	1
1,2,3,4,7,8-HxCDF	330		47	2.9	pg/g	₽	08/21/24 15:11	09/05/24 05:19	1
1,2,3,6,7,8-HxCDF	89		47	2.7	pg/g	₽	08/21/24 15:11	09/05/24 05:19	1
1,2,3,7,8,9-HxCDF	12	JB	47	3.2	pg/g	₽	08/21/24 15:11	09/05/24 05:19	1
2,3,4,6,7,8-HxCDF	11	J	47	2.7	pg/g	₽	08/21/24 15:11	09/05/24 05:19	1
1,2,3,4,6,7,8-HpCDD	19	J	47	2.7	pg/g	≎	08/21/24 15:11	09/05/24 05:19	1
1,2,3,4,6,7,8-HpCDF	150	В	47	3.8	pg/g	₽	08/21/24 15:11	09/05/24 05:19	1
1,2,3,4,7,8,9-HpCDF	49		47	19	pg/g	₽	08/21/24 15:11	09/05/24 05:19	1
OCDD	150	В	93	7.6	pg/g	₽	08/21/24 15:11	09/05/24 05:19	1
OCDF	170	В	93	3.2	pg/g	₩	08/21/24 15:11	09/05/24 05:19	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-1,2,3,4,7,8-HxCDD	85	<del></del>	32 - 141				08/21/24 15:11	09/05/24 05:19	1
400 4000 7044 000			00 100				00/04/04 45 44	00/05/04 05 40	

13C-1,2,3,4,7,8-HxCDD	85	32 - 141	08/21/24 15:11 09/05/24 05:19	1
13C-1,2,3,6,7,8-HxCDD	91	28 - 130	08/21/24 15:11 09/05/24 05:19	1
13C-1,2,3,4,7,8-HxCDF	84	26 - 152	08/21/24 15:11 09/05/24 05:19	1
13C-1,2,3,6,7,8-HxCDF	88	26 - 123	08/21/24 15:11 09/05/24 05:19	1
13C-2,3,4,6,7,8-HxCDF	85	28 - 136	08/21/24 15:11 09/05/24 05:19	1
13C-1,2,3,7,8,9-HxCDF	79	29 - 147	08/21/24 15:11 09/05/24 05:19	1
13C-1,2,3,4,6,7,8-HpCDD	83	23 - 140	08/21/24 15:11 09/05/24 05:19	1
13C-1,2,3,4,6,7,8-HpCDF	80	28 - 143	08/21/24 15:11 09/05/24 05:19	1
13C-1,2,3,4,7,8,9-HpCDF	26	26 - 138	08/21/24 15:11 09/05/24 05:19	1
13C-OCDD	79	17 - 157	08/21/24 15:11 09/05/24 05:19	1
13C-OCDF	72	17 - 157	08/21/24 15:11 09/05/24 05:19	1

**Eurofins Seattle** 

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08/16/24 11:43 08/18/24 06:01

08/16/24 11:43 08/18/24 06:01

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Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-24-SO-23.1-20240809

Lab Sample ID: 580-142896-8 Date Collected: 08/09/24 15:00

**Matrix: Solid** Date Received: 08/13/24 13:25 Percent Solids: 85.8

Analyte	Result	Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		93	31	pg/g	<del>-</del>	08/21/24 15:11	09/09/24 07:19	10
1,2,3,7,8-PeCDD	ND		470	8.7	pg/g	₽	08/21/24 15:11	09/09/24 07:19	10
1,2,3,7,8-PeCDF	250	J	470	6.1	pg/g	₽	08/21/24 15:11	09/09/24 07:19	10
2,3,4,7,8-PeCDF	83	Jq	470	7.2	pg/g	₩	08/21/24 15:11	09/09/24 07:19	10
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	116		25 - 164				08/21/24 15:11	09/09/24 07:19	10
13C-1,2,3,7,8-PeCDD	124		25 - 181				08/21/24 15:11	09/09/24 07:19	10
13C-1,2,3,7,8-PeCDF	115		24 - 185				08/21/24 15:11	09/09/24 07:19	10
13C-2,3,4,7,8-PeCDF	112		21 - 178				08/21/24 15:11	09/09/24 07:19	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
37CI4-2,3,7,8-TCDD	121		35 - 197				08/21/24 15:11	09/09/24 07:19	10
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	85.8		0.1	0.1	%			08/16/24 10:39	1
Percent Moisture (SM22 2540G)	14.2		0.1	0.1	%			08/16/24 10:39	1

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-24-SO-43-20240812

Lab Sample ID: 580-142896-9 Date Collected: 08/12/24 08:45 Matrix: Solid Date Received: 08/13/24 13:25 Percent Solids: 81.0

Method: SW846 8260D - Volatile Organic Compounds by GC/MS **MDL** Unit Dil Fac Analyte Result Qualifier D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.026 0.0065 mg/Kg 08/19/24 09:17 08/19/24 12:36 ND 0.052 1.1.1-Trichloroethane 0.0060 mg/Kg 08/19/24 09:17 08/19/24 12:36 1,1,2,2-Tetrachloroethane ND 0.026 0.0099 mg/Kg 08/19/24 09:17 08/19/24 12:36 0.0097 mg/Kg 08/19/24 12:36 1,1,2-Trichloroethane ND 0.026 08/19/24 09:17 1.1-Dichloroethane 0.052 0.012 mg/Kg 08/19/24 09:17 08/19/24 12:36 ND 1,1-Dichloroethene ND 0.052 0.016 mg/Kg 08/19/24 09:17 08/19/24 12:36 1,1-Dichloropropene ND 0.052 0.0069 08/19/24 09:17 08/19/24 12:36 mg/Kg ND 0.052 0.015 08/19/24 09:17 08/19/24 12:36 1,2,3-Trichloropropane mg/Kg 1,2,4-Trichlorobenzene ND 0.10 0.056 mg/Kg 08/19/24 09:17 08/19/24 12:36 0.018 1,2,4-Trimethylbenzene ND 0.052 mg/Kg 08/19/24 09:17 08/19/24 12:36 1,2-Dibromo-3-Chloropropane ND 0.079 0.020 mg/Kg 08/19/24 09:17 08/19/24 12:36 mg/Kg 1.2-Dibromoethane ND 0.026 0.0050 08/19/24 09:17 08/19/24 12:36 1 1,2-Dichlorobenzene ND 0.052 0.011 mg/Kg 08/19/24 09:17 08/19/24 12:36 1,2-Dichloroethane ND 0.026 0.0072 mg/Kg 08/19/24 09:17 08/19/24 12:36 0.0086 ND 0.026 mg/Kg 08/19/24 09:17 08/19/24 12:36 1,2-Dichloropropane 1,3,5-Trimethylbenzene NΩ 0.052 0.0099 mg/Kg 08/19/24 09:17 08/19/24 12:36 ND 08/19/24 12:36 1,3-Dichlorobenzene 0.079 0.017 mg/Kg 08/19/24 09:17 1,3-Dichloropropane ND 0.079 0.0073 mg/Kg 08/19/24 09:17 08/19/24 12:36 1.4-Dichlorobenzene ND 0.079 0.014 mg/Kg 08/19/24 09:17 08/19/24 12:36 2,2-Dichloropropane ND 0.052 0.016 mg/Kg 08/19/24 09:17 08/19/24 12:36 2-Chlorotoluene ND 0.052 0.012 mg/Kg ť. 08/19/24 09:17 08/19/24 12:36 4-Chlorotoluene ND 0.052 0.013 mg/Kg 08/19/24 09:17 08/19/24 12:36 4-Isopropyltoluene ND 0.052 0.013 mg/Kg 08/19/24 09:17 08/19/24 12:36 0.0068 0.026 0.0050 mg/Kg 08/19/24 09:17 08/19/24 12:36 **Benzene** Bromobenzene ND 0.052 0.0055 mg/Kg 08/19/24 09:17 08/19/24 12:36 ND 0.0081 Bromochloromethane 0.052 mg/Kg 08/19/24 09:17 08/19/24 12:36 Bromodichloromethane ND 0.052 0.0072 mg/Kg 08/19/24 09:17 08/19/24 12:36 Bromoform 0.0059 08/19/24 12:36 ND 0.052 mg/Kg 08/19/24 09:17 Bromomethane ND 0.13 0.049 mg/Kg 08/19/24 09:17 08/19/24 12:36 Carbon tetrachloride ND 0.0058 08/19/24 12:36 0.026 mg/Kg 08/19/24 09:17 Chlorobenzene 1.3 0.052 0.0063 mg/Kg 08/19/24 09:17 08/19/24 12:36 Chloroethane ND 0.027 mg/Kg 08/19/24 09:17 08/19/24 12:36 0.10 Chloroform ND 0.026 0.0055 08/19/24 09:17 08/19/24 12:36 mg/Kg 0.013 Chloromethane ND 08/19/24 12:36 0.079 mg/Kg 08/19/24 09:17 cis-1,2-Dichloroethene ND 0.079 0.016 mg/Kg 08/19/24 09:17 08/19/24 12:36 cis-1.3-Dichloropropene ND 0.026 0.0052 mg/Kg 08/19/24 09:17 08/19/24 12:36 Dibromochloromethane ND 0.026 0.0064 mg/Kg 08/19/24 09:17 08/19/24 12:36 Dibromomethane ND 0.052 0.0097 mg/Kg 08/19/24 09:17 08/19/24 12:36 Dichlorodifluoromethane ND 0.060 mg/Kg 08/19/24 12:36 0.33 08/19/24 09:17 Ethylbenzene ND 0.052 0.012 mg/Kg 08/19/24 09:17 08/19/24 12:36 Hexachlorobutadiene ND 0.13 0.031 mg/Kg 08/19/24 09:17 08/19/24 12:36 Isopropylbenzene ND 0.052 0.011 mg/Kg 08/19/24 09:17 08/19/24 12:36 0.0079 ND 0.052 08/19/24 09:17 08/19/24 12:36 Methyl tert-butyl ether mg/Kg Methylene Chloride 0.034 08/19/24 09:17 08/19/24 12:36 ND 0.33 mg/Kg 0.052 08/19/24 12:36 m-Xylene & p-Xylene ND 0.0093 mg/Kg 08/19/24 09:17 Naphthalene ND 0.20 0.051 mg/Kg 08/19/24 09:17 08/19/24 12:36 n-Butylbenzene ND 0.052 0.024 mg/Kg 08/19/24 09:17 08/19/24 12:36 N-Propylbenzene ND 0.052 0.020 mg/Kg 08/19/24 09:17 08/19/24 12:36 o-Xylene ND 0.052 0.0065 mg/Kg 08/19/24 09:17 08/19/24 12:36

**Eurofins Seattle** 

9/12/2024

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-24-SO-43-20240812

Lab Sample ID: 580-142896-9 Date Collected: 08/12/24 08:45 **Matrix: Solid** 

Date Received: 08/13/24 13:25 Percent Solids: 81.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.052	0.011	mg/Kg	— <u></u>	08/19/24 09:17	08/19/24 12:36	1
Styrene	ND		0.052	0.017	mg/Kg	₩	08/19/24 09:17	08/19/24 12:36	1
t-Butylbenzene	ND		0.052	0.010	mg/Kg	₩	08/19/24 09:17	08/19/24 12:36	1
Tetrachloroethene	ND		0.052	0.0069	mg/Kg	₩	08/19/24 09:17	08/19/24 12:36	1
Toluene	ND		0.079	0.018	mg/Kg	₩	08/19/24 09:17	08/19/24 12:36	1
trans-1,2-Dichloroethene	ND		0.079	0.019	mg/Kg	₩	08/19/24 09:17	08/19/24 12:36	1
trans-1,3-Dichloropropene	ND		0.052	0.0092	mg/Kg	₩	08/19/24 09:17	08/19/24 12:36	1
Trichloroethene	ND		0.052	0.013	mg/Kg	₩	08/19/24 09:17	08/19/24 12:36	1
Trichlorofluoromethane	ND		0.10	0.034	mg/Kg	₩	08/19/24 09:17	08/19/24 12:36	1
Vinyl chloride	ND		0.13	0.024	mg/Kg	₽	08/19/24 09:17	08/19/24 12:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		80 - 121				08/19/24 09:17	08/19/24 12:36	1
4-Bromofluorobenzene (Surr)	101		80 - 120				08/19/24 09:17	08/19/24 12:36	1
Dibromofluoromethane (Surr)	102		80 - 120				08/19/24 09:17	08/19/24 12:36	1
Toluene-d8 (Surr)	103		80 - 120				08/19/24 09:17	08/19/24 12:36	1
Method: SW846 8260D - Vola	tile Organic	Compound	ds by GC/MS	- RA					
Analyte	_	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND		0.10	0.052	mg/Kg	☼	08/21/24 15:12	08/21/24 20:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				08/21/24 15:12	08/21/24 20:05	1
4-Bromofluorobenzene (Surr)	100		80 - 120				08/21/24 15:12	08/21/24 20:05	1
Dibromofluoromethane (Surr)	100		80 - 120				08/21/24 15:12	08/21/24 20:05	1
Toluene-d8 (Surr)	98		80 - 120				08/21/24 15:12	08/21/24 20:05	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	81.0		0.1	0.1	%			08/16/24 10:39	1
Percent Moisture (SM22 2540G)	19.0		0.1	0.1	0/			08/16/24 10:39	1

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-24-SO-44-20240812

Lab Sample ID: 580-142896-10 Date Collected: 08/12/24 08:50 Matrix: Solid Date Received: 08/13/24 13:25 Percent Solids: 83.0

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.024 0.0059 mg/Kg 08/16/24 12:44 08/16/24 19:06 ND 1.1.1-Trichloroethane 0.047 0.0055 mg/Kg 08/16/24 12:44 08/16/24 19:06 1,1,2,2-Tetrachloroethane ND 0.024 0.0090 mg/Kg 08/16/24 12:44 08/16/24 19:06 ND 0.0088 1,1,2-Trichloroethane 0.024 mg/Kg 08/16/24 12:44 08/16/24 19:06 ND 0.011 mg/Kg 08/16/24 12:44 08/16/24 19:06 1 1-Dichloroethane 0.047 1,1-Dichloroethene ND 0.047 0.015 mg/Kg 08/16/24 12:44 08/16/24 19:06 1,1-Dichloropropene ND 0.047 0.0063 08/16/24 12:44 08/16/24 19:06 mg/Kg ND 0.095 0.047 08/16/24 12:44 08/16/24 19:06 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.047 0.014 mg/Kg 08/16/24 12:44 08/16/24 19:06 0.051 1,2,4-Trichlorobenzene ND 0.095 mg/Kg 08/16/24 12:44 08/16/24 19:06 1,2,4-Trimethylbenzene ND 0.047 0.016 mg/Kg 08/16/24 12:44 08/16/24 19:06 mg/Kg 1.2-Dibromo-3-Chloropropane ND 0.071 0.018 08/16/24 12:44 08/16/24 19:06 1 1,2-Dibromoethane ND 0.024 0.0045 mg/Kg 08/16/24 12:44 08/16/24 19:06 1,2-Dichlorobenzene ND 0.047 0.010 mg/Kg 08/16/24 12:44 08/16/24 19:06 ND 0.024 0.0065 mg/Kg 08/16/24 12:44 08/16/24 19:06 1.2-Dichloroethane 0.0078 1,2-Dichloropropane NΩ 0.024 mg/Kg 08/16/24 12:44 08/16/24 19:06 ND 08/16/24 19:06 1,3,5-Trimethylbenzene 0.047 0.0090 mg/Kg 08/16/24 12:44 1,3-Dichlorobenzene ND 0.071 0.016 mg/Kg 08/16/24 12:44 08/16/24 19:06 1,3-Dichloropropane ND 0.071 0.0066 mg/Kg 08/16/24 12:44 08/16/24 19:06 1,4-Dichlorobenzene ND 0.071 0.013 mg/Kg 08/16/24 12:44 08/16/24 19:06 2,2-Dichloropropane ND 0.047 0.014 mg/Kg ť. 08/16/24 12:44 08/16/24 19:06 2-Chlorotoluene ND 0.047 0.010 mg/Kg 08/16/24 12:44 08/16/24 19:06 4-Chlorotoluene ND 0.012 mg/Kg 08/16/24 12:44 08/16/24 19:06 0.047 4-Isopropyltoluene ND 0.047 0.012 mg/Kg 08/16/24 12:44 08/16/24 19:06 Benzene ND 0.024 0.0045 mg/Kg 08/16/24 12:44 08/16/24 19:06 0.0050 Bromobenzene ND 0.047 mg/Kg 08/16/24 12:44 08/16/24 19:06 Bromochloromethane ND 0.047 0.0074 mg/Kg 08/16/24 12:44 08/16/24 19:06 Bromodichloromethane 0.0065 08/16/24 19:06 ND 0.047 mg/Kg 08/16/24 12:44 0.0053 Bromoform ND 0.047 mg/Kg 08/16/24 12:44 08/16/24 19:06 ND 0.045 mg/Kg Bromomethane 0.12 08/16/24 12:44 08/16/24 19:06 Carbon tetrachloride ND 0.024 0.0052 mg/Kg 08/16/24 12:44 08/16/24 19:06 Chloroethane ND 0.095 0.025 mg/Kg 08/16/24 12:44 08/16/24 19:06 Chloroform 0.024 0.0050 mg/Kg 08/16/24 12:44 08/16/24 19:06 ND 0.012 Chloromethane ND 08/16/24 12:44 08/16/24 19:06 0.071 mg/Kg cis-1,2-Dichloroethene ND 0.071 0.015 mg/Kg 08/16/24 12:44 08/16/24 19:06 cis-1.3-Dichloropropene ND 0.024 0.0047 mg/Kg 08/16/24 12:44 08/16/24 19:06 Dibromochloromethane ND 0.024 0.0058 mg/Kg 08/16/24 12:44 08/16/24 19:06 Dibromomethane ND 0.047 0.0088 mg/Kg 08/16/24 12:44 08/16/24 19:06 Dichlorodifluoromethane ND 0.054 mg/Kg 0.30 08/16/24 12:44 08/16/24 19:06 Ethylbenzene ND 0.047 0.011 mg/Kg 08/16/24 12:44 08/16/24 19:06 Hexachlorobutadiene ND 0.12 0.028 mg/Kg 08/16/24 12:44 08/16/24 19:06 Isopropylbenzene ND 0.047 0.010 mg/Kg 08/16/24 12:44 08/16/24 19:06 ND 0.0071 08/16/24 12:44 08/16/24 19:06 Methyl tert-butyl ether 0.047 mg/Kg Methylene Chloride 0.031 08/16/24 12:44 08/16/24 19:06 ND 0.30 mg/Kg m-Xylene & p-Xylene ND 0.047 0.0084 mg/Kg 08/16/24 12:44 08/16/24 19:06 Naphthalene ND 0.18 0.046 mg/Kg 08/16/24 12:44 08/16/24 19:06 n-Butylbenzene ND 0.047 08/16/24 12:44 08/16/24 19:06 0.022 mg/Kg N-Propylbenzene ND 0.047 0.018 mg/Kg 08/16/24 12:44 08/16/24 19:06 08/16/24 12:44 08/16/24 19:06 o-Xylene ND 0.047 0.0059 mg/Kg

**Eurofins Seattle** 

9/12/2024

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-24-SO-44-20240812

Lab Sample ID: 580-142896-10 Date Collected: 08/12/24 08:50 **Matrix: Solid** 

Date Received: 08/13/24 13:25 Percent Solids: 83.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
sec-Butylbenzene	ND		0.047	0.010	mg/Kg	— <u> </u>	08/16/24 12:44	08/16/24 19:06	
Styrene	ND		0.047	0.015	mg/Kg	₩	08/16/24 12:44	08/16/24 19:06	
t-Butylbenzene	ND		0.047	0.0091	mg/Kg	₩	08/16/24 12:44	08/16/24 19:06	
Tetrachloroethene	ND		0.047	0.0063	mg/Kg	₩	08/16/24 12:44	08/16/24 19:06	
Toluene	ND		0.071	0.016	mg/Kg	☼	08/16/24 12:44	08/16/24 19:06	
trans-1,2-Dichloroethene	ND		0.071	0.017	mg/Kg	₩	08/16/24 12:44	08/16/24 19:06	
trans-1,3-Dichloropropene	ND		0.047	0.0083	mg/Kg	☼	08/16/24 12:44	08/16/24 19:06	
Trichloroethene	ND		0.047	0.012	mg/Kg	₩	08/16/24 12:44	08/16/24 19:06	
Trichlorofluoromethane	ND		0.095	0.031	mg/Kg	₩	08/16/24 12:44	08/16/24 19:06	
Vinyl chloride	ND		0.12	0.022	mg/Kg	₩	08/16/24 12:44	08/16/24 19:06	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	95		80 - 121				08/16/24 12:44	08/16/24 19:06	
4-Bromofluorobenzene (Surr)	99		80 - 120				08/16/24 12:44	08/16/24 19:06	
Dibromofluoromethane (Surr)	103		80 - 120				08/16/24 12:44	08/16/24 19:06	
Toluene-d8 (Surr)	101		80 - 120				08/16/24 12:44	08/16/24 19:06	
Method: SW846 8260D - Vola	tile Organic	Compound	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chlorobenzene	2.8		0.047	0.0057	mg/Kg	☼	08/19/24 09:17	08/19/24 12:57	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	96		80 - 121				08/19/24 09:17	08/19/24 12:57	
4-Bromofluorobenzene (Surr)	99		80 - 120				08/19/24 09:17	08/19/24 12:57	
Dibromofluoromethane (Surr)	105		80 - 120				08/19/24 09:17	08/19/24 12:57	
Toluene-d8 (Surr)	102		80 - 120				08/19/24 09:17	08/19/24 12:57	
General Chemistry									
-	Pocult	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fa
Analyte	Nesuit								
Analyte Percent Solids (SM22 2540G)	83.0		0.1	0.1	%			08/16/24 10:39	

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-24-SO-72.5-20240812

Lab Sample ID: 580-142896-11 Date Collected: 08/12/24 11:40 Matrix: Solid Date Received: 08/13/24 13:25 Percent Solids: 83.3

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.024 0.0059 mg/Kg 08/16/24 12:44 08/16/24 19:28 ND 1.1.1-Trichloroethane 0.047 0.0054 mg/Kg 08/16/24 12:44 08/16/24 19:28 1,1,2,2-Tetrachloroethane ND 0.024 0.0089 mg/Kg 08/16/24 12:44 08/16/24 19:28 ND 0.0087 1,1,2-Trichloroethane 0.024 mg/Kg 08/16/24 12:44 08/16/24 19:28 ND 0.011 mg/Kg 08/16/24 12:44 08/16/24 19:28 1.1-Dichloroethane 0.047 1,1-Dichloroethene ND 0.047 0.014 mg/Kg 08/16/24 12:44 08/16/24 19:28 1,1-Dichloropropene ND 0.047 0.0062 08/16/24 12:44 08/16/24 19:28 mg/Kg ND 0.094 0.047 08/16/24 12:44 08/16/24 19:28 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.047 0.014 mg/Kg 08/16/24 12:44 08/16/24 19:28 1,2,4-Trichlorobenzene ND 0.094 0.050 mg/Kg 08/16/24 12:44 08/16/24 19:28 1,2,4-Trimethylbenzene ND 0.047 0.016 mg/Kg 08/16/24 12:44 08/16/24 19:28 mg/Kg 1.2-Dibromo-3-Chloropropane ND 0.071 0.018 08/16/24 12:44 08/16/24 19:28 1 1,2-Dibromoethane ND 0.024 0.0045 mg/Kg 08/16/24 12:44 08/16/24 19:28 1,2-Dichlorobenzene ND 0.047 0.010 mg/Kg 08/16/24 12:44 08/16/24 19:28 ND 0.024 0.0065 mg/Kg 08/16/24 12:44 08/16/24 19:28 1.2-Dichloroethane 0.0078 1,2-Dichloropropane NΩ 0.024 mg/Kg 08/16/24 12:44 08/16/24 19:28 ND 0.0089 08/16/24 19:28 1,3,5-Trimethylbenzene 0.047 mg/Kg 08/16/24 12:44 1,3-Dichlorobenzene ND 0.071 0.016 mg/Kg 08/16/24 12:44 08/16/24 19:28 1,3-Dichloropropane ND 0.071 0.0066 mg/Kg 08/16/24 12:44 08/16/24 19:28 1,4-Dichlorobenzene ND 0.071 0.013 mg/Kg 08/16/24 12:44 08/16/24 19:28 2,2-Dichloropropane ND 0.047 0.014 mg/Kg ť. 08/16/24 12:44 08/16/24 19:28 2-Chlorotoluene ND 0.047 0.010 mg/Kg 08/16/24 12:44 08/16/24 19:28 4-Chlorotoluene ND 0.012 mg/Kg 08/16/24 12:44 08/16/24 19:28 0.047 4-Isopropyltoluene ND 0.047 0.012 mg/Kg 08/16/24 12:44 08/16/24 19:28 Benzene ND 0.024 0.0045 mg/Kg 08/16/24 12:44 08/16/24 19:28 0.0049 Bromobenzene ND 0.047 mg/Kg 08/16/24 12:44 08/16/24 19:28 Bromochloromethane ND 0.047 0.0073 mg/Kg 08/16/24 12:44 08/16/24 19:28 Bromodichloromethane 0.0065 08/16/24 19:28 ND 0.047 mg/Kg 08/16/24 12:44 0.0053 Bromoform NΩ 0.047 mg/Kg 08/16/24 12:44 08/16/24 19:28 0.044 ND Bromomethane 0.12 mg/Kg 08/16/24 12:44 08/16/24 19:28 Carbon tetrachloride ND 0.024 0.0052 mg/Kg 08/16/24 12:44 08/16/24 19:28 0.047 0.0056 mg/Kg 08/16/24 12:44 08/16/24 19:28 0.048 Chlorobenzene Chloroethane 0.094 0.025 mg/Kg 08/16/24 12:44 08/16/24 19:28 ND Chloroform ND 08/16/24 12:44 08/16/24 19:28 0.024 0.0049 mg/Kg Chloromethane ND 0.071 0.012 mg/Kg 08/16/24 12:44 08/16/24 19:28 cis-1.2-Dichloroethene ND 0.071 0.015 mg/Kg 08/16/24 12:44 08/16/24 19:28 cis-1,3-Dichloropropene ND 0.024 0.0047 mg/Kg 08/16/24 12:44 08/16/24 19:28 Dibromochloromethane ND 0.024 0.0058 mg/Kg 08/16/24 12:44 08/16/24 19:28 Dibromomethane ND 0.0087 mg/Kg 0.047 08/16/24 12:44 08/16/24 19:28 Dichlorodifluoromethane ND 0.29 0.054 mg/Kg 08/16/24 12:44 08/16/24 19:28 Ethylbenzene ND 0.047 0.011 mg/Kg 08/16/24 12:44 08/16/24 19:28 Hexachlorobutadiene ND 0.12 0.028 mg/Kg 08/16/24 12:44 08/16/24 19:28 0.010 ND 08/16/24 12:44 08/16/24 19:28 Isopropylbenzene 0.047 mg/Kg Methyl tert-butyl ether 0.047 0.0071 08/16/24 12:44 08/16/24 19:28 ND mg/Kg ND Methylene Chloride 0.29 0.031 mg/Kg 08/16/24 12:44 08/16/24 19:28 m-Xylene & p-Xylene ND 0.047 0.0084 mg/Kg 08/16/24 12:44 08/16/24 19:28 Naphthalene ND 08/16/24 12:44 08/16/24 19:28 0.18 0.046 mg/Kg n-Butylbenzene ND 0.047 0.022 mg/Kg 08/16/24 12:44 08/16/24 19:28 08/16/24 12:44 08/16/24 19:28 N-Propylbenzene ND 0.047 0.018 mg/Kg

**Eurofins Seattle** 

9/12/2024

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-24-SO-72.5-20240812

Lab Sample ID: 580-142896-11 Date Collected: 08/12/24 11:40

**Matrix: Solid** Date Received: 08/13/24 13:25 Percent Solids: 83.3

Method: SW846 8260D - Vola Analyte	_	Qualifier	RL	(Conti	•	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND	<u> </u>	0.047	0.0059		— <u>-</u>	08/16/24 12:44		1
sec-Butylbenzene	ND		0.047		mg/Kg			08/16/24 19:28	1
Styrene	ND		0.047		mg/Kg		08/16/24 12:44	08/16/24 19:28	1
t-Butylbenzene	ND		0.047	0.0091		₩	08/16/24 12:44	08/16/24 19:28	1
Tetrachloroethene	ND		0.047	0.0062		₩	08/16/24 12:44	08/16/24 19:28	1
Toluene	ND		0.071		mg/Kg	₩	08/16/24 12:44	08/16/24 19:28	1
trans-1,2-Dichloroethene	ND		0.071	0.017	mg/Kg	₩	08/16/24 12:44	08/16/24 19:28	1
trans-1,3-Dichloropropene	ND		0.047	0.0082	mg/Kg	₩	08/16/24 12:44	08/16/24 19:28	1
Trichloroethene	ND		0.047	0.012	mg/Kg	₩	08/16/24 12:44	08/16/24 19:28	1
Trichlorofluoromethane	ND		0.094	0.031	mg/Kg	₩	08/16/24 12:44	08/16/24 19:28	1
Vinyl chloride	ND		0.12	0.022	mg/Kg	₽	08/16/24 12:44	08/16/24 19:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		80 - 121				08/16/24 12:44	08/16/24 19:28	1
4-Bromofluorobenzene (Surr)	100		80 - 120				08/16/24 12:44	08/16/24 19:28	1
Dibromofluoromethane (Surr)	101		80 - 120				08/16/24 12:44	08/16/24 19:28	1
Toluene-d8 (Surr)	103		80 - 120				08/16/24 12:44	08/16/24 19:28	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	83.3		0.1	0.1	%			08/16/24 10:39	

0.1

16.7

0.1 %

08/16/24 10:39

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

## Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-468430/7

**Matrix: Water** 

Analysis Batch: 468430

Client Sample ID: Method Bl	lank
Prep Type: Total	I/NA

Analysis	MB		D.	BADI	l lmit	_	Duamana a'	A mal	Dil 5
Analyte		Qualifier	RL _	MDL		<u>D</u> .	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.0		ug/L			08/15/24 22:13	1
1,1-Dichloroethane	ND		1.0		ug/L			08/15/24 22:13	1
1,1,1-Trichloroethane	ND		1.0		ug/L			08/15/24 22:13	1
1,1-Dichloropropene	ND		1.0		ug/L			08/15/24 22:13	1
1,2-Dichloroethane	ND		1.0		ug/L			08/15/24 22:13	1
1,2-Dichloropropane	ND		1.0		ug/L			08/15/24 22:13	1
2,2-Dichloropropane	ND		1.0		ug/L			08/15/24 22:13	1
Benzene	ND		1.0	0.24	ug/L			08/15/24 22:13	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			08/15/24 22:13	1
Bromochloromethane	ND		1.0	0.29	ug/L			08/15/24 22:13	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			08/15/24 22:13	1
Bromodichloromethane	ND		1.0	0.29	ug/L			08/15/24 22:13	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			08/15/24 22:13	1
Bromomethane	ND		1.0	0.21	ug/L			08/15/24 22:13	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			08/15/24 22:13	1
Chlorobenzene	ND		1.0	0.44	ug/L			08/15/24 22:13	1
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			08/15/24 22:13	1
Chloroethane	ND		1.0		ug/L			08/15/24 22:13	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			08/15/24 22:13	1
Chloroform	ND		1.0		ug/L			08/15/24 22:13	1
Chloromethane	ND		1.0		ug/L			08/15/24 22:13	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			08/15/24 22:13	
cis-1,3-Dichloropropene	ND		1.0		ug/L			08/15/24 22:13	1
Bromoform	ND		1.0		ug/L			08/15/24 22:13	1
Dibromochloromethane	ND		1.0		ug/L			08/15/24 22:13	· · · · · · · · · · · · · · · · · · ·
Bromobenzene	ND		1.0		ug/L			08/15/24 22:13	1
Dibromomethane	ND		1.0		ug/L			08/15/24 22:13	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/15/24 22:13	· · · · · · · · · · · · · · · · · · ·
1,2,3-Trichloropropane	ND ND		1.0		ug/L ug/L			08/15/24 22:13	1
Ethylbenzene	ND ND		1.0		ug/L ug/L			08/15/24 22:13	1
2-Chlorotoluene	ND		1.0		ug/L ug/L			08/15/24 22:13	
	ND ND				-				
1,3,5-Trimethylbenzene			1.0		ug/L			08/15/24 22:13	1
Isopropylbenzene	ND		1.0		ug/L			08/15/24 22:13	
4-Chlorotoluene	ND		1.0		ug/L			08/15/24 22:13	1
Methylene Chloride	ND		5.0		ug/L			08/15/24 22:13	1
1,2,4-Trimethylbenzene	ND		3.0	0.61				08/15/24 22:13	
m-Xylene & p-Xylene	ND		2.0		ug/L			08/15/24 22:13	1
1,3-Dichlorobenzene	ND		1.0		ug/L			08/15/24 22:13	1
4-Isopropyltoluene	ND		1.0		ug/L			08/15/24 22:13	1
N-Propylbenzene	ND		1.0		ug/L			08/15/24 22:13	1
1,4-Dichlorobenzene	ND		1.0		ug/L			08/15/24 22:13	1
o-Xylene	ND		1.0	0.39	ug/L			08/15/24 22:13	1
n-Butylbenzene	ND		1.0		ug/L			08/15/24 22:13	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			08/15/24 22:13	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			08/15/24 22:13	1
Styrene	ND		1.0	0.53	ug/L			08/15/24 22:13	1
1,2-Dibromo-3-Chloropropane	ND		3.0		ug/L			08/15/24 22:13	1
t-Butylbenzene	ND		2.0	0.58	ug/L			08/15/24 22:13	1

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-468430/7

**Matrix: Water** 

Analysis Batch: 468430

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

_	МВ	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	0.688	J	1.0	0.33	ug/L			08/15/24 22:13	1
Tetrachloroethene	ND		1.0	0.41	ug/L			08/15/24 22:13	1
1,2,3-Trichlorobenzene	2.02		2.0	0.43	ug/L			08/15/24 22:13	1
Toluene	ND		1.0	0.39	ug/L			08/15/24 22:13	
Hexachlorobutadiene	0.809	J	3.0	0.79	ug/L			08/15/24 22:13	•
Naphthalene	1.29	J	3.0	0.93	ug/L			08/15/24 22:13	•
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			08/15/24 22:13	
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			08/15/24 22:13	•
Trichloroethene	ND		1.0	0.26	ug/L			08/15/24 22:13	•
Trichlorofluoromethane	ND		1.0	0.36	ug/L			08/15/24 22:13	
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			08/15/24 22:13	•
Vinyl chloride	ND		1.0	0.22	ug/L			08/15/24 22:13	•

MB MB

	Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	Toluene-d8 (Surr)	100		80 - 120		3/15/24 22:13	1
	4-Bromofluorobenzene (Surr)	103		80 - 120	08	3/15/24 22:13	1
	Dibromofluoromethane (Surr)	101		80 - 120	08	3/15/24 22:13	1
l	1,2-Dichloroethane-d4 (Surr)	99		80 - 120	08	3/15/24 22:13	1

Lab Sample ID: LCS 580-468430/4

**Matrix: Water** 

Analysis Batch: 468430

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analysis Batch: 468430							0/ 5
Avaluta	Spike		LCS	1114	_	0/ 🗖	%Rec
Analyte	Added		Qualifier	Unit	D	%Rec	Limits
1,1-Dichloroethene	10.0	9.16		ug/L		92	70 - 129
1,1-Dichloroethane	10.0	10.6		ug/L		106	80 - 120
1,1,1-Trichloroethane	10.0	9.30		ug/L		93	74 - 130
1,1-Dichloropropene	10.0	9.73		ug/L		97	74 - 120
1,2-Dichloroethane	10.0	9.51		ug/L		95	69 - 126
1,2-Dichloropropane	10.0	10.1		ug/L		101	80 - 120
2,2-Dichloropropane	10.0	11.3		ug/L		113	66 - 126
Benzene	10.0	10.8		ug/L		108	80 - 122
1,1,2-Trichloroethane	10.0	11.0		ug/L		110	80 - 121
Bromochloromethane	10.0	9.57		ug/L		96	78 - 120
1,3-Dichloropropane	10.0	10.1		ug/L		101	79 - 120
Bromodichloromethane	10.0	10.6		ug/L		106	75 - 124
1,2-Dibromoethane	10.0	9.80		ug/L		98	79 - 126
Bromomethane	10.0	8.56		ug/L		86	36 - 150
Carbon tetrachloride	10.0	10.0		ug/L		100	72 - 129
Chlorobenzene	10.0	10.9		ug/L		109	80 - 120
1,1,1,2-Tetrachloroethane	10.0	10.6		ug/L		106	79 - 120
Chloroethane	10.0	8.80		ug/L		88	38 - 150
1,1,2,2-Tetrachloroethane	10.0	8.60		ug/L		86	74 - 124
Chloroform	10.0	10.7		ug/L		107	78 - 127
Chloromethane	10.0	8.02		ug/L		80	25 - 150
cis-1,2-Dichloroethene	10.0	10.1		ug/L		101	76 - 120
cis-1,3-Dichloropropene	10.0	9.68		ug/L		97	77 - 120
Bromoform	10.0	10.1		ug/L		101	56 - 139

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-468430/4

**Matrix: Water** 

Analysis Batch: 468430

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Dibromochloromethane	10.0	10.4		ug/L		104	73 - 125	
Bromobenzene	10.0	11.2		ug/L		112	80 - 120	
Dibromomethane	10.0	10.4		ug/L		104	80 - 120	
Dichlorodifluoromethane	10.0	7.87		ug/L		79	20 - 150	
1,2,3-Trichloropropane	10.0	10.6		ug/L		106	76 - 124	
Ethylbenzene	10.0	10.5		ug/L		105	80 - 120	
2-Chlorotoluene	10.0	10.7		ug/L		107	80 - 120	
1,3,5-Trimethylbenzene	10.0	10.8		ug/L		108	80 - 122	
Isopropylbenzene	10.0	11.6		ug/L		116	80 - 123	
4-Chlorotoluene	10.0	10.8		ug/L		108	73 - 129	
Methylene Chloride	10.0	9.56		ug/L		96	77 - 125	
1,2,4-Trimethylbenzene	10.0	10.7		ug/L		107	80 - 120	
m-Xylene & p-Xylene	10.0	10.8		ug/L		108	80 - 120	
1,3-Dichlorobenzene	10.0	9.78		ug/L		98	77 - 127	
4-Isopropyltoluene	10.0	10.8		ug/L		108	77 - 126	
N-Propylbenzene	10.0	10.1		ug/L		101	80 - 122	
1,4-Dichlorobenzene	10.0	11.2		ug/L		112	80 - 120	
o-Xylene	10.0	10.9		ug/L		109	80 - 120	
n-Butylbenzene	10.0	11.0		ug/L		110	57 - 133	
sec-Butylbenzene	10.0	10.7		ug/L		107	78 - 122	
1,2-Dichlorobenzene	10.0	9.64		ug/L		96	80 - 120	
Styrene	10.0	10.7		ug/L		107	76 - 122	
1,2-Dibromo-3-Chloropropane	10.0	10.4		ug/L		104	65 - 133	
t-Butylbenzene	10.0	10.5		ug/L		105	75 - 123	
1,2,4-Trichlorobenzene	10.0	12.8		ug/L		128	61 - 148	
Tetrachloroethene	10.0	11.3		ug/L		113	76 - 125	
1,2,3-Trichlorobenzene	10.0	16.0	*+	ug/L		160	65 - 150	
Toluene	10.0	10.3		ug/L		103	80 - 120	
Hexachlorobutadiene	10.0	11.6		ug/L		116	74 - 131	
Naphthalene	10.0	16.2	*+	ug/L		162	63 - 150	
trans-1,2-Dichloroethene	10.0	9.07		ug/L		91	75 - 120	
trans-1,3-Dichloropropene	10.0	10.7		ug/L		107	76 - 122	
Trichloroethene	10.0	10.2		ug/L		102	80 - 125	
Trichlorofluoromethane	10.0	9.35		ug/L		94	45 - 148	
Methyl tert-butyl ether	10.0	9.66		ug/L		97	72 - 120	
Vinyl chloride	10.0	8.47		ug/L		85	31 - 150	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 120
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
1,2-Dichloroethane-d4 (Surr)	96		80 - 120

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-468430/5

Matrix: Water

**Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA** 

Analysis Batch: 468430	Spike	LCSD	LCSD				%Rec		RPI
Analyte	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limi
1,1-Dichloroethene	10.0	9.56		ug/L		96	70 - 129	4	2
1,1-Dichloroethane	10.0	11.0		ug/L		110	80 - 120	3	1
1,1,1-Trichloroethane	10.0	9.36		ug/L		94	74 - 130	1	1
1,1-Dichloropropene	10.0	9.93		ug/L		99	74 - 120	2	1.
1,2-Dichloroethane	10.0	9.60		ug/L		96	69 - 126	1	1
1,2-Dichloropropane	10.0	10.2		ug/L		102	80 - 120	1	1
2,2-Dichloropropane	10.0	11.3		ug/L		113	66 - 126		2
Benzene	10.0	10.8		ug/L		108	80 - 122	0	1
1,1,2-Trichloroethane	10.0	10.7		ug/L		107	80 - 121	2	1
Bromochloromethane	10.0	9.75		ug/L		98	78 - 120	2	·····:
1,3-Dichloropropane	10.0	10.1		ug/L		101	79 - 120	1	1
Bromodichloromethane	10.0	10.1		ug/L		108	75 - 120 75 - 124	1	1
1,2-Dibromoethane	10.0	9.60		ug/L		96	79 - 126		
Bromomethane	10.0	8.44		-		84	36 <sub>-</sub> 150	1	3
Carbon tetrachloride	10.0	10.0		ug/L ug/L		100	72 - 129	0	3 1
Carbon tetrachionide Chlorobenzene	10.0	11.1				111	80 <sub>-</sub> 120	2	1
		10.7		ug/L			79 <sub>-</sub> 120		
1,1,1,2-Tetrachloroethane	10.0	8.57		ug/L		107	79 - 120 38 - 150	1	1 2
Chloroethane	10.0			ug/L		86			
1,1,2,2-Tetrachloroethane	10.0	9.00		ug/L		90	74 - 124	4	2
Chloroform	10.0	10.9		ug/L		109	78 - 127	2	1
Chloromethane	10.0	8.04		ug/L		80	25 - 150		2
cis-1,2-Dichloroethene	10.0	10.2		ug/L		102	76 - 120	1	2
cis-1,3-Dichloropropene	10.0	9.67		ug/L		97	77 - 120	0	3
Bromoform	10.0	9.80		ug/L		98	56 - 139	3	2
Dibromochloromethane	10.0	10.2		ug/L		102	73 - 125	2	1
Bromobenzene	10.0	11.0		ug/L		110	80 - 120	1	2
Dibromomethane	10.0	10.7		ug/L		107	80 - 120	3	1
Dichlorodifluoromethane	10.0	7.89		ug/L		79	20 - 150	0	3
1,2,3-Trichloropropane	10.0	9.90		ug/L		99	76 - 124	7	2
Ethylbenzene	10.0	10.8		ug/L		108	80 - 120	2	1
2-Chlorotoluene	10.0	10.5		ug/L		105	80 - 120	3	2
1,3,5-Trimethylbenzene	10.0	10.9		ug/L		109	80 - 122	0	2
Isopropylbenzene	10.0	11.6		ug/L		116	80 - 123	1	1
4-Chlorotoluene	10.0	10.5		ug/L		105	73 - 129	3	2
Methylene Chloride	10.0	9.86		ug/L		99	77 - 125	3	1
1,2,4-Trimethylbenzene	10.0	10.5		ug/L		105	80 - 120	2	1
m-Xylene & p-Xylene	10.0	10.8		ug/L		108	80 - 120	0	1
1,3-Dichlorobenzene	10.0	9.71		ug/L		97	77 - 127	1	3
4-Isopropyltoluene	10.0	10.6		ug/L		106	77 - 126	2	2
N-Propylbenzene	10.0	10.5		ug/L		105	80 - 122	3	2
1,4-Dichlorobenzene	10.0	11.2		ug/L		112	80 - 120	1	1
o-Xylene	10.0	11.0		ug/L		110	80 - 120	1	1
n-Butylbenzene	10.0	10.7		ug/L		107	57 - 133	3	1
sec-Butylbenzene	10.0	10.6		ug/L		106	78 - 122	1	1
1,2-Dichlorobenzene	10.0	9.36		ug/L		94	80 - 120	3	1
Styrene	10.0	10.7		ug/L		107	76 - 122	0	1
1,2-Dibromo-3-Chloropropane	10.0	9.64		ug/L		96	65 - 133	7	2
t-Butylbenzene	10.0	10.4		ug/L		104	75 - 123	1	2

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-468430/5

**Matrix: Water** 

Analysis Batch: 468430

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

<b>,</b>									
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,2,4-Trichlorobenzene	10.0	10.8		ug/L		108	61 - 148	17	27
Tetrachloroethene	10.0	11.3		ug/L		113	76 - 125	0	13
1,2,3-Trichlorobenzene	10.0	13.3		ug/L		133	65 - 150	18	33
Toluene	10.0	10.5		ug/L		105	80 - 120	2	13
Hexachlorobutadiene	10.0	11.6		ug/L		116	74 - 131	0	22
Naphthalene	10.0	12.6		ug/L		126	63 - 150	25	33
trans-1,2-Dichloroethene	10.0	9.10		ug/L		91	75 - 120	0	21
trans-1,3-Dichloropropene	10.0	10.8		ug/L		108	76 - 122	0	20
Trichloroethene	10.0	10.4		ug/L		104	80 - 125	1	13
Trichlorofluoromethane	10.0	9.48		ug/L		95	45 - 148	1	35
Methyl tert-butyl ether	10.0	9.70		ug/L		97	72 - 120	0	18
Vinyl chloride	10.0	8.50		ug/L		85	31 - 150	0	26

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 120
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	96		80 - 120

Lab Sample ID: MB 580-468455/5-A

**Matrix: Solid** 

Analysis Batch: 468460

Client Sample ID: Method Blank

**Prep Type: Total/NA** 

**Prep Batch: 468455** 

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	MD		0.040	0.012	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
1,1-Dichloroethane	ND		0.040	0.0092	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
1,1,1-Trichloroethane	ND		0.040	0.0046	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
1,1-Dichloropropene	ND		0.040	0.0053	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
1,2-Dichloroethane	ND		0.020	0.0055	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
1,2-Dichloropropane	ND		0.020	0.0066	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
2,2-Dichloropropane	ND		0.040	0.012	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Benzene	ND		0.020	0.0038	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
1,1,2-Trichloroethane	ND		0.020	0.0074	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Bromochloromethane	ND		0.040	0.0062	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
1,3-Dichloropropane	ND		0.060	0.0056	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Bromodichloromethane	ND		0.040	0.0055	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
1,2-Dibromoethane	ND		0.020	0.0038	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Bromomethane	ND		0.10	0.038	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Carbon tetrachloride	ND		0.020	0.0044	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Chlorobenzene	ND		0.040	0.0048	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Chloroethane	ND		0.080	0.021	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Chloroform	ND		0.020	0.0042	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Chloromethane	ND		0.060	0.010	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
cis-1,2-Dichloroethene	ND		0.060	0.013	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
cis-1,3-Dichloropropene	ND		0.020	0.0040	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Bromoform	ND		0.040	0.0045	mg/Kg		08/16/24 09:42	08/16/24 12:37	1

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Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

MB MB

Lab Sample ID: MB 580-468455/5-A

Matrix: Solid

**Analysis Batch: 468460** 

**Client Sample ID: Method Blank** 

**Prep Type: Total/NA** 

**Prep Batch: 468455** 

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		0.020	0.0049	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Bromobenzene	ND		0.040	0.0042	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Dibromomethane	ND		0.040	0.0074	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Dichlorodifluoromethane	ND		0.25	0.046	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
1,2,3-Trichloropropane	ND		0.040	0.012	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Ethylbenzene	ND		0.040	0.0091	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
2-Chlorotoluene	ND		0.040	0.0088	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
1,3,5-Trimethylbenzene	ND		0.040	0.0076	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Isopropylbenzene	ND		0.040	0.0086	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
4-Chlorotoluene	ND		0.040	0.0098	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Methylene Chloride	ND		0.25	0.026	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
1,2,4-Trimethylbenzene	ND		0.040	0.014	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
m-Xylene & p-Xylene	ND		0.040	0.0071	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
1,3-Dichlorobenzene	ND		0.060	0.013	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
4-Isopropyltoluene	ND		0.040	0.010	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
N-Propylbenzene	ND		0.040	0.015	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
1,4-Dichlorobenzene	ND		0.060	0.011	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
o-Xylene	ND		0.040	0.0050	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
n-Butylbenzene	ND		0.040	0.019	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
1,2-Dichlorobenzene	ND		0.040	0.0087	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Styrene	ND		0.040	0.013	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
1,2-Dibromo-3-Chloropropane	ND		0.060	0.015	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
1,2,4-Trichlorobenzene	ND		0.080	0.043	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
1,2,3-Trichlorobenzene	ND		0.080	0.040	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Toluene	ND		0.060	0.014	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Hexachlorobutadiene	ND		0.10	0.024	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Naphthalene	ND		0.15	0.039	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Trichloroethene	ND		0.040	0.010	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Methyl tert-butyl ether	ND		0.040	0.0060	mg/Kg		08/16/24 09:42	08/16/24 12:37	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		08/16/24 09:42	08/16/24 12:37	1

Surrogate	%Recovery Qual	lifier Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101	80 - 120	08/16/24 09:42	08/16/24 12:37	1
4-Bromofluorobenzene (Surr)	99	80 - 120	08/16/24 09:42	08/16/24 12:37	1
Dibromofluoromethane (Surr)	103	80 - 120	08/16/24 09:42	08/16/24 12:37	1
1,2-Dichloroethane-d4 (Surr)	97	80 - 121	08/16/24 09:42	08/16/24 12:37	1

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-468455/1-A

**Matrix: Solid** 

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 468455

Added 0.800 0.800 0.800 0.800 0.800 0.800 0.800 0.800 0.800 0.800	0.797 0.738 0.834 0.687 0.730 0.713	Qualifier	mg/Kg mg/Kg mg/Kg mg/Kg		92	<b>Limits</b> 73 - 134 78 - 126
0.800 0.800 0.800 0.800 0.800 0.800	0.738 0.834 0.687 0.730 0.713		mg/Kg mg/Kg mg/Kg		92	
0.800 0.800 0.800 0.800 0.800	0.834 0.687 0.730 0.713		mg/Kg mg/Kg	1		78 - 126
0.800 0.800 0.800 0.800	0.687 0.730 0.713		mg/Kg	1		
0.800 0.800 0.800	0.730 0.713				04	78 - 135
0.800 0.800	0.713				86	76 - 140
0.800			mg/Kg		91	76 - 124
			mg/Kg		89	73 - 130
0.800	0.766		mg/Kg		96	75 - 134
	0.804		mg/Kg	1	00	79 - 135
0.800	0.794		mg/Kg		99	80 - 123
0.800	0.738		mg/Kg		92	76 - 131
0.800	0.690		mg/Kg		86	80 - 120
0.800	0.759		mg/Kg		95	78 - 125
0.800	0.743		mg/Kg		93	77 - 123
0.800	0.852			1	07	55 - 150
0.800	0.751				94	76 - 140
0.800	0.847			1	06	80 - 125
0.800	0.863			1	08	79 - 128
0.800	0.857					26 - 150
0.800	0.760				95	77 - 122
				1		74 - 133
						52 - 142
						80 - 125
						80 - 122
						71 - 130
						75 - 125
				4		78 - 126
						72 - 130
						33 - 150
						77 - 127
				4		80 - 135
						77 - 134
						72 - 134
						80 - 131
						71 - 137
						56 - 140
						73 - 138
						80 - 132
						78 - 132
						71 - 142
						78 - 133
						77 - 123
						80 - 132
						69 - 143
						71 - 143
						78 - 126
						79 - 129
						64 - 129
						72 - 144
	0.800 0.800 0.800 0.800 0.800 0.800 0.800 0.800 0.800	0.800       0.804         0.800       0.794         0.800       0.798         0.800       0.690         0.800       0.759         0.800       0.743         0.800       0.852         0.800       0.847         0.800       0.863         0.800       0.760         0.800       0.760         0.800       0.733         0.800       0.723         0.800       0.732         0.800       0.732         0.800       0.733         0.800       0.733         0.800       0.733         0.800       0.733         0.800       0.733         0.800       0.733         0.800       0.733         0.800       0.843         0.800       0.849         0.800       0.849         0.800       0.876         0.800       0.876         0.800       0.874         0.800       0.847         0.800       0.847         0.800       0.847         0.800       0.843         0.800       0.843         0.	0.800       0.804         0.800       0.794         0.800       0.738         0.800       0.690         0.800       0.759         0.800       0.852         0.800       0.852         0.800       0.847         0.800       0.863         0.800       0.760         0.800       0.760         0.800       0.733         0.800       0.733         0.800       0.732         0.800       0.732         0.800       0.738         0.800       0.738         0.800       0.738         0.800       0.849         0.800       0.849         0.800       0.849         0.800       0.849         0.800       0.876         0.800       0.874         0.800       0.855         0.800       0.847         0.800       0.847         0.800       0.847         0.800       0.847         0.800       0.843         0.800       0.843         0.800       0.866         0.800       0.869         0.	0.800         0.804         mg/Kg           0.800         0.794         mg/Kg           0.800         0.738         mg/Kg           0.800         0.690         mg/Kg           0.800         0.759         mg/Kg           0.800         0.743         mg/Kg           0.800         0.852         mg/Kg           0.800         0.852         mg/Kg           0.800         0.847         mg/Kg           0.800         0.863         mg/Kg           0.800         0.857         mg/Kg           0.800         0.857         mg/Kg           0.800         0.760         mg/Kg           0.800         0.760         mg/Kg           0.800         0.733         mg/Kg           0.800         0.733         mg/Kg           0.800         0.708         mg/Kg           0.800         0.732         mg/Kg           0.800         0.738         mg/Kg           0.800         0.738         mg/Kg           0.800         0.849         mg/Kg           0.800         0.876         mg/Kg           0.800         0.876         mg/Kg <td< td=""><td>0.800         0.804         mg/Kg         1           0.800         0.794         mg/Kg         1           0.800         0.738         mg/Kg         1           0.800         0.690         mg/Kg         0           0.800         0.759         mg/Kg         1           0.800         0.759         mg/Kg         1           0.800         0.852         mg/Kg         1           0.800         0.852         mg/Kg         1           0.800         0.847         mg/Kg         1           0.800         0.863         mg/Kg         1           0.800         0.857         mg/Kg         1           0.800         0.760         mg/Kg         1           0.800         0.760         mg/Kg         1           0.800         0.760         mg/Kg         1           0.800         0.733         mg/Kg         1           0.800         0.723         mg/Kg         1           0.800         0.732         mg/Kg         1           0.800         0.738         mg/Kg         1           0.800         0.849         mg/Kg         1</td><td>0.800         0.804         mg/Kg         100           0.800         0.794         mg/Kg         99           0.800         0.738         mg/Kg         92           0.800         0.690         mg/Kg         86           0.800         0.759         mg/Kg         95           0.800         0.743         mg/Kg         93           0.800         0.852         mg/Kg         107           0.800         0.857         mg/Kg         106           0.800         0.847         mg/Kg         106           0.800         0.857         mg/Kg         107           0.800         0.857         mg/Kg         107           0.800         0.857         mg/Kg         107           0.800         0.760         mg/Kg         95           0.800         0.760         mg/Kg         95           0.800         0.733         mg/Kg         92           0.800         0.723         mg/Kg         92           0.800         0.732         mg/Kg         92           0.800         0.738         mg/Kg         10           0.800         0.738         mg/Kg         10&lt;</td></td<>	0.800         0.804         mg/Kg         1           0.800         0.794         mg/Kg         1           0.800         0.738         mg/Kg         1           0.800         0.690         mg/Kg         0           0.800         0.759         mg/Kg         1           0.800         0.759         mg/Kg         1           0.800         0.852         mg/Kg         1           0.800         0.852         mg/Kg         1           0.800         0.847         mg/Kg         1           0.800         0.863         mg/Kg         1           0.800         0.857         mg/Kg         1           0.800         0.760         mg/Kg         1           0.800         0.760         mg/Kg         1           0.800         0.760         mg/Kg         1           0.800         0.733         mg/Kg         1           0.800         0.723         mg/Kg         1           0.800         0.732         mg/Kg         1           0.800         0.738         mg/Kg         1           0.800         0.849         mg/Kg         1	0.800         0.804         mg/Kg         100           0.800         0.794         mg/Kg         99           0.800         0.738         mg/Kg         92           0.800         0.690         mg/Kg         86           0.800         0.759         mg/Kg         95           0.800         0.743         mg/Kg         93           0.800         0.852         mg/Kg         107           0.800         0.857         mg/Kg         106           0.800         0.847         mg/Kg         106           0.800         0.857         mg/Kg         107           0.800         0.857         mg/Kg         107           0.800         0.857         mg/Kg         107           0.800         0.760         mg/Kg         95           0.800         0.760         mg/Kg         95           0.800         0.733         mg/Kg         92           0.800         0.723         mg/Kg         92           0.800         0.732         mg/Kg         92           0.800         0.738         mg/Kg         10           0.800         0.738         mg/Kg         10<

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Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-468455/1-A

Matrix: Solid

**Analysis Batch: 468460** 

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

**Prep Batch: 468455** 

	Spike	LCS	LCS			%Rec	
Analyte	Added	Result	Qualifier	Unit	D %Re	c Limits	
1,2,4-Trichlorobenzene	0.800	0.634		mg/Kg	7:	9 74 - 131	
Tetrachloroethene	0.800	0.892		mg/Kg	11:	2 75 - 141	
1,2,3-Trichlorobenzene	0.800	0.532		mg/Kg	6	6 58 - 146	
Toluene	0.800	0.827		mg/Kg	10	3 75 - 125	
Hexachlorobutadiene	0.800	0.863		mg/Kg	10	8 65 - 145	
Naphthalene	0.800	0.592		mg/Kg	7-	4 56 - 145	
trans-1,2-Dichloroethene	0.800	0.808		mg/Kg	10	1 77 - 134	
trans-1,3-Dichloropropene	0.800	0.756		mg/Kg	9.	4 80 - 121	
Trichloroethene	0.800	0.737		mg/Kg	9:	2 80 - 134	
Trichlorofluoromethane	0.800	0.756		mg/Kg	9:	5 71 - 150	
Methyl tert-butyl ether	0.800	0.748		mg/Kg	9:	3 71 - 126	
Vinyl chloride	0.800	0.796		mg/Kg	9	9 62 - 144	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	103		80 - 120
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	93		80 - 121

Lab Sample ID: LCSD 580-468455/2-A

**Matrix: Solid** 

Analysis Batch: 468460

**Prep Type: Total/NA** 

**Prep Batch: 468455** 

Amaryolo Batom 400400						op <b>D</b> c		00-100	
	Spike LCSD I		LCSD			%Rec		RPD	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	0.800	0.807		mg/Kg		101	73 - 134	1	25
1,1-Dichloroethane	0.800	0.714		mg/Kg		89	78 - 126	3	20
1,1,1-Trichloroethane	0.800	0.836		mg/Kg		105	78 - 135	0	20
1,1-Dichloropropene	0.800	0.691		mg/Kg		86	76 - 140	1	20
1,2-Dichloroethane	0.800	0.742		mg/Kg		93	76 - 124	2	20
1,2-Dichloropropane	0.800	0.726		mg/Kg		91	73 - 130	2	20
2,2-Dichloropropane	0.800	0.773		mg/Kg		97	75 - 134	1	20
Benzene	0.800	0.805		mg/Kg		101	79 - 135	0	20
1,1,2-Trichloroethane	0.800	0.774		mg/Kg		97	80 - 123	3	20
Bromochloromethane	0.800	0.735		mg/Kg		92	76 - 131	0	20
1,3-Dichloropropane	0.800	0.694		mg/Kg		87	80 - 120	1	20
Bromodichloromethane	0.800	0.754		mg/Kg		94	78 - 125	1	20
1,2-Dibromoethane	0.800	0.740		mg/Kg		92	77 - 123	0	20
Bromomethane	0.800	0.794		mg/Kg		99	55 - 150	7	26
Carbon tetrachloride	0.800	0.751		mg/Kg		94	76 - 140	0	20
Chlorobenzene	0.800	0.834		mg/Kg		104	80 - 125	1	20
1,1,1,2-Tetrachloroethane	0.800	0.854		mg/Kg		107	79 - 128	1	20
Chloroethane	0.800	0.846		mg/Kg		106	26 - 150	1	40
1,1,2,2-Tetrachloroethane	0.800	0.748		mg/Kg		94	77 - 122	1	20
Chloroform	0.800	0.814		mg/Kg		102	74 - 133	0	20
Chloromethane	0.800	0.715		mg/Kg		89	52 - 142	4	40
cis-1,2-Dichloroethene	0.800	0.729		mg/Kg		91	80 - 125	1	20
cis-1,3-Dichloropropene	0.800	0.735		mg/Kg		92	80 - 122	2	20
Bromoform	0.800	0.712		mg/Kg		89	71 - 130	1	20

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Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-468455/2-A

**Matrix: Solid** 

**Analysis Batch: 468460** 

**Client Sample ID: Lab Control Sample Dup** 

**Prep Type: Total/NA Prep Batch: 468455** 

Analyte	Spike Added		LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dibromochloromethane	0.800	0.731		mg/Kg	_ =	91	75 - 125	0	20
Bromobenzene	0.800	0.808		mg/Kg		101	78 - 126	1	20
Dibromomethane	0.800	0.748		mg/Kg		93	72 - 130	1	40
Dichlorodifluoromethane	0.800	0.898		mg/Kg		112	33 - 150	1	31
1,2,3-Trichloropropane	0.800	0.658		mg/Kg		82	77 - 127	1	20
Ethylbenzene	0.800	0.847		mg/Kg		106	80 - 135	0	20
2-Chlorotoluene	0.800	0.879		mg/Kg		110	77 - 134	0	21
1,3,5-Trimethylbenzene	0.800	0.887		mg/Kg		111	72 - 134	2	24
Isopropylbenzene	0.800	0.853		mg/Kg		107	80 - 131	0	20
4-Chlorotoluene	0.800	0.770		mg/Kg		96	71 - 137	0	21
Methylene Chloride	0.800	0.813		mg/Kg		102	56 - 140	1	20
1,2,4-Trimethylbenzene	0.800	0.805		mg/Kg		101	73 - 138	1	22
m-Xylene & p-Xylene	0.800	0.842		mg/Kg		105	80 - 132	2	20
1,3-Dichlorobenzene	0.800	0.844		mg/Kg		105	78 - 132	0	20
4-Isopropyltoluene	0.800	0.839		mg/Kg		105	71 - 142	1	29
N-Propylbenzene	0.800	0.797		mg/Kg		100	78 - 133	1	24
1,4-Dichlorobenzene	0.800	0.838		mg/Kg		105	77 - 123	1	20
o-Xylene	0.800	0.849		mg/Kg		106	80 - 132	2	20
n-Butylbenzene	0.800	0.879		mg/Kg		110	69 - 143	1	31
sec-Butylbenzene	0.800	0.882		mg/Kg		110	71 - 143	1	29
1,2-Dichlorobenzene	0.800	0.829		mg/Kg		104	78 - 126	1	20
Styrene	0.800	0.758		mg/Kg		95	79 - 129	0	20
1,2-Dibromo-3-Chloropropane	0.800	0.638		mg/Kg		80	64 - 129	5	40
t-Butylbenzene	0.800	0.806		mg/Kg		101	72 - 144	2	27
1,2,4-Trichlorobenzene	0.800	0.738		mg/Kg		92	74 - 131	15	26
Tetrachloroethene	0.800	0.888		mg/Kg		111	75 - 141	0	20
1,2,3-Trichlorobenzene	0.800	0.847	*1	mg/Kg		106	58 - 146	46	28
Toluene	0.800	0.817		mg/Kg		102	75 - 125	1	20
Hexachlorobutadiene	0.800	0.924		mg/Kg		115	65 - 145	7	36
Naphthalene	0.800	0.823	*1	mg/Kg		103	56 - 145	33	25
trans-1,2-Dichloroethene	0.800	0.805		mg/Kg		101	77 - 134	0	20
trans-1,3-Dichloropropene	0.800	0.754		mg/Kg		94	80 - 121	0	20
Trichloroethene	0.800	0.744		mg/Kg		93	80 - 134	1	20
Trichlorofluoromethane	0.800	0.749		mg/Kg		94	71 - 150	1	30
Methyl tert-butyl ether	0.800	0.765		mg/Kg		96	71 - 126	2	20
Vinyl chloride	0.800	0.798		mg/Kg		100	62 - 144	0	20

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	103		80 - 120
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	96		80 - 121

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 580-142896-7 MS

Matrix: Solid

Analysis Batch: 468460

Client Sample ID: PDI-24-SO-37.5-20240809

•	Prep Type: Total/NA
	<b>Prep Batch: 468455</b>

Analysis Batch: 468460	Sample	Sample	Spike	MS	MS				Prep Batch: 4684 %Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1,1,2-Tetrachloroethane	ND		0.969	0.984		mg/Kg	<u></u>	101	79 - 128
1,1,1-Trichloroethane	ND		0.969	1.01		mg/Kg	≎	104	78 <sub>-</sub> 135
1,1,2,2-Tetrachloroethane	ND		0.969	0.870		mg/Kg	☼	90	77 - 122
1,1,2-Trichloroethane	ND		0.969	0.897		mg/Kg	☼	92	80 - 123
1,1-Dichloroethane	ND		0.969	0.873		mg/Kg	₩	90	78 - 126
1,1-Dichloroethene	ND		0.969	0.974		mg/Kg	₩	101	73 - 134
1,1-Dichloropropene	ND		0.969	0.839		mg/Kg	☼	87	76 - 140
1,2,3-Trichlorobenzene	ND	F2 F1 *1	0.969	0.543	F1	mg/Kg	₽	56	58 - 146
1,2,3-Trichloropropane	ND		0.969	0.763		mg/Kg	☼	79	77 - 127
1,2,4-Trichlorobenzene	ND	F2 F1	0.969	0.685	F1	mg/Kg	∴ 	71	74 - 131
1,2,4-Trimethylbenzene	ND		0.969	0.912		mg/Kg	☼	94	73 - 138
1,2-Dibromo-3-Chloropropane	ND		0.969	0.758		mg/Kg	☼	78	64 - 129
1,2-Dibromoethane	ND		0.969	0.870		mg/Kg	∴	90	77 - 123
1,2-Dichlorobenzene	ND		0.969	0.951		mg/Kg	₽	98	78 - 126
1,2-Dichloroethane	ND		0.969	0.876		mg/Kg	₽	90	76 - 124
1,2-Dichloropropane	ND		0.969	0.804		mg/Kg	 	83	73 - 130
1,3,5-Trimethylbenzene	ND		0.969	0.994		mg/Kg	₩	103	72 - 134
1,3-Dichlorobenzene	ND		0.969	0.969		mg/Kg	₩	100	78 - 132
1,3-Dichloropropane	ND		0.969	0.799		mg/Kg		82	80 - 120
1,4-Dichlorobenzene	0.016	J	0.969	0.963		mg/Kg	≎	98	77 - 123
2,2-Dichloropropane	ND	· ·	0.969	0.918		mg/Kg	≎	95	75 - 134
2-Chlorotoluene	ND		0.969	0.990		mg/Kg		102	77 - 134
4-Chlorotoluene	ND		0.969	0.894		mg/Kg	≎	92	71 - 137
4-Isopropyltoluene	ND		0.969	0.094		mg/Kg	₩	101	71 - 137 71 - 142
Benzene	ND		0.969	0.930		mg/Kg	 \$	96	79 - 135
Bromobenzene	ND		0.969	0.922		mg/Kg	₩	95	78 - 126
Bromochloromethane	ND		0.969	0.922		mg/Kg	₩	90	76 - 131
Bromodichloromethane	ND		0.969	0.849		mg/Kg	 \$	88	78 - 125
Bromoform	ND ND		0.969	0.849		mg/Kg	<b>☆</b>	84	71 - 130
Bromomethane	ND		0.969	1.02		mg/Kg	₩	105	55 <sub>-</sub> 150
Carbon tetrachloride	ND		0.969	0.902		mg/Kg	 ☆	93	76 - 140
Chlorobenzene	4.8		0.969	5.06		mg/Kg	<b>☆</b>	93 26	80 <sub>-</sub> 125
	ND		0.969						26 - 150
Chloroethane Chloroform	ND			1.12		mg/Kg	· · · · · <del>*</del>	115	
			0.969	0.971		mg/Kg	<b>*</b>	100	74 - 133
Chloromethane	ND		0.969	0.961		mg/Kg	<b>‡</b>	99	52 - 142
cis-1,2-Dichloroethene	ND		0.969	0.878		mg/Kg	<del></del> .	91	80 - 125
cis-1,3-Dichloropropene	ND		0.969	0.851		mg/Kg	₽	88	80 - 122
Dibromochloromethane	ND		0.969	0.825		mg/Kg	₽	85	75 - 125
Dibromomethane	ND		0.969	0.836		mg/Kg	<del>.</del>	86	72 - 130
Dichlorodifluoromethane	ND		0.969	1.30		mg/Kg	₽	134	33 - 150
Ethylbenzene	ND		0.969	0.987		mg/Kg	₽	102	80 - 135
Hexachlorobutadiene	ND		0.969	0.962		mg/Kg	<del>.</del> .	99	65 - 145
Isopropylbenzene	ND		0.969	0.896		mg/Kg	≎	92	80 - 131
Methyl tert-butyl ether	ND		0.969	0.903		mg/Kg	≎	93	71 - 126
Methylene Chloride	ND		0.969	0.979		mg/Kg		101	56 - 140
m-Xylene & p-Xylene	ND		0.969	0.971		mg/Kg	₩	100	80 - 132
Naphthalene		F2 *1	0.969	0.569		mg/Kg	₩	59	56 - 145
n-Butylbenzene	ND		0.969	0.984		mg/Kg	☼	102	69 - 143

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Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 580-142896-7 MS

**Matrix: Solid** 

**Analysis Batch: 468460** 

Client Sample ID: PDI-24-SO-37.5-20240809

**Prep Type: Total/NA** 

**Prep Batch: 468455** 

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
N-Propylbenzene	ND		0.969	0.895		mg/Kg	<u></u>	92	78 - 133	
o-Xylene	ND		0.969	0.993		mg/Kg	☼	102	80 - 132	
sec-Butylbenzene	ND		0.969	0.993		mg/Kg	☼	102	71 - 143	
Styrene	ND		0.969	0.881		mg/Kg	₩	91	79 - 129	
t-Butylbenzene	ND		0.969	0.901		mg/Kg	☼	93	72 - 144	
Tetrachloroethene	ND		0.969	0.989		mg/Kg	☼	102	75 - 141	
Toluene	ND		0.969	0.948		mg/Kg	₩	98	75 - 125	
trans-1,2-Dichloroethene	ND		0.969	0.987		mg/Kg	₩	102	77 - 134	
trans-1,3-Dichloropropene	ND		0.969	0.839		mg/Kg	☼	87	80 - 121	
Trichloroethene	ND		0.969	0.860		mg/Kg	☼	89	80 - 134	
Trichlorofluoromethane	ND		0.969	0.923		mg/Kg	☼	95	71 - 150	
Vinyl chloride	ND		0.969	0.932		ma/Ka	☆	96	62 - 144	

MS MS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96		80 - 121
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	105		80 - 120
Toluene-d8 (Surr)	101		80 - 120

Client Sample ID: PDI-24-SO-37.5-20240809

**Matrix: Solid** 

Analysis Batch: 468460

Lab Sample ID: 580-142896-7 MSD

**Prep Type: Total/NA** 

**Prep Batch: 468455** 

Allalysis Datell. 400400									i icp Batch. 400400		
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	ND		1.04	1.10		mg/Kg	<u></u>	105	79 - 128	11	20
1,1,1-Trichloroethane	ND		1.04	1.15		mg/Kg	☼	110	78 - 135	14	20
1,1,2,2-Tetrachloroethane	ND		1.04	0.982		mg/Kg	☼	94	77 - 122	12	20
1,1,2-Trichloroethane	ND		1.04	0.982		mg/Kg	☼	94	80 - 123	9	20
1,1-Dichloroethane	ND		1.04	1.01		mg/Kg	☼	96	78 - 126	14	20
1,1-Dichloroethene	ND		1.04	1.12		mg/Kg	☼	107	73 - 134	14	25
1,1-Dichloropropene	ND		1.04	0.936		mg/Kg	☼	90	76 - 140	11	20
1,2,3-Trichlorobenzene	ND	F2 F1 *1	1.04	1.10	F2	mg/Kg	☼	106	58 - 146	68	28
1,2,3-Trichloropropane	ND		1.04	0.920		mg/Kg	☼	88	77 - 127	19	20
1,2,4-Trichlorobenzene	ND	F2 F1	1.04	0.964	F2	mg/Kg	∌	92	74 - 131	34	26
1,2,4-Trimethylbenzene	ND		1.04	1.04		mg/Kg	☼	100	73 - 138	13	22
1,2-Dibromo-3-Chloropropane	ND		1.04	0.915		mg/Kg	₩	88	64 - 129	19	40
1,2-Dibromoethane	ND		1.04	0.973		mg/Kg	☼	93	77 - 123	11	20
1,2-Dichlorobenzene	ND		1.04	1.10		mg/Kg	☼	105	78 - 126	15	20
1,2-Dichloroethane	ND		1.04	0.952		mg/Kg	☼	91	76 - 124	8	20
1,2-Dichloropropane	ND		1.04	0.917		mg/Kg	☼	88	73 - 130	13	20
1,3,5-Trimethylbenzene	ND		1.04	1.15		mg/Kg	₩	110	72 - 134	14	24
1,3-Dichlorobenzene	ND		1.04	1.13		mg/Kg	☼	108	78 - 132	15	20
1,3-Dichloropropane	ND		1.04	0.903		mg/Kg	☼	86	80 - 120	12	20
1,4-Dichlorobenzene	0.016	J	1.04	1.12		mg/Kg	₩	105	77 - 123	15	20
2,2-Dichloropropane	ND		1.04	1.05		mg/Kg	☼	100	75 - 134	13	20
2-Chlorotoluene	ND		1.04	1.13		mg/Kg	∌	108	77 - 134	13	21
4-Chlorotoluene	ND		1.04	1.01		mg/Kg	☼	97	71 - 137	12	21
4-Isopropyltoluene	ND		1.04	1.12		mg/Kg	₩	107	71 - 142	13	29

Job ID: 580-142896-1 Client: ERM-West

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 580-142896-7 MSD

**Matrix: Solid** 

**Analysis Batch: 468460** 

Client Sample ID: PDI-24-SO-37.5-20240809

**Prep Type: Total/NA Prep Batch: 468455** 

Allalysis Batch. 400400	Sample	Sample	Spike	Men	MSD				%Rec	31CH. 40	RPD
Analyte	-	Qualifier	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Benzene	ND	- Qualifier	1.04	1.07	Qualifier	mg/Kg	— <del>-</del>	103	79 <sub>-</sub> 135	14	20
Bromobenzene	ND		1.04	1.07		mg/Kg		102	78 - 126	15	20
Bromochloromethane	ND		1.04	1.01		mg/Kg	≎	96	76 - 120 76 - 131	14	20
Bromodichloromethane	ND		1.04	0.983		mg/Kg		94	78 - 125	15	20
Bromoform	ND		1.04	0.967		mg/Kg	₩	93	71 - 130	17	20
Bromomethane	ND		1.04	1.12		mg/Kg	₩	107	55 <sub>-</sub> 150	9	26
Carbon tetrachloride	ND		1.04	1.03		mg/Kg		98	76 - 140	13	20
Chlorobenzene	4.8		1.04	5.51	4	mg/Kg	☼	67	80 - 125	8	20
Chloroethane	ND		1.04	1.26	•	mg/Kg	☼	120	26 - 150	12	40
Chloroform	ND		1.04	1.10		mg/Kg	∴ ∴ ∴ ∴	105	74 - 133	12	20
Chloromethane	ND		1.04	1.07		mg/Kg	☼	103	52 - 142	11	40
cis-1.2-Dichloroethene	ND		1.04	0.998		mg/Kg	₩	96	80 - 125	13	20
cis-1,3-Dichloropropene	ND		1.04	0.971		mg/Kg		93	80 - 122	13	20
Dibromochloromethane	ND		1.04	0.938		mg/Kg	₩	90	75 - 125	13	20
Dibromomethane	ND		1.04	0.957		mg/Kg	::: ::::::::::::::::::::::::::::::::::	92	72 - 130	14	40
Dichlorodifluoromethane	ND		1.04	1.45		mg/Kg		139	33 - 150	11	31
Ethylbenzene	ND		1.04	1.12		mg/Kg	₩	107	80 - 135	13	20
Hexachlorobutadiene	ND		1.04	1.17		mg/Kg	₩	112	65 - 145	19	36
Isopropylbenzene	ND		1.04	1.01		mg/Kg		97	80 - 131	12	20
Methyl tert-butyl ether	ND		1.04	1.01		mg/Kg	₩	97	71 - 126	11	20
Methylene Chloride	ND		1.04	1.09		mg/Kg	₩	105	56 - 140	11	20
m-Xylene & p-Xylene	ND		1.04	1.10		mg/Kg		105	80 - 132	13	20
Naphthalene		F2 *1	1.04	1.12	F2	mg/Kg	₩	107	56 - 145	65	25
n-Butylbenzene	ND		1.04	1.14		mg/Kg	₩	109	69 - 143	15	31
N-Propylbenzene	ND		1.04	1.03		mg/Kg		99	78 - 133	14	24
o-Xylene	ND		1.04	1.12		mg/Kg	₩	108	80 - 132	12	20
sec-Butylbenzene	ND		1.04	1.14		mg/Kg	₩	109	71 - 143	13	29
Styrene	ND		1.04	0.987		mg/Kg		94	79 - 129	11	20
t-Butylbenzene	ND		1.04	1.03		mg/Kg	₩	99	72 - 144	13	27
Tetrachloroethene	ND		1.04	1.15		mg/Kg	₩	110	75 - 141	15	20
Toluene	ND		1.04	1.08		mg/Kg		103	75 - 125	13	20
trans-1,2-Dichloroethene	ND		1.04	1.15		mg/Kg	₩	111	77 - 134	16	20
trans-1,3-Dichloropropene	ND		1.04	0.972		mg/Kg	₩	93	80 - 121	15	20
Trichloroethene	ND		1.04	0.974		mg/Kg	₩	93	80 - 134	12	20
Trichlorofluoromethane	ND		1.04	1.05		mg/Kg	₩	100	71 - 150	13	30
Vinyl chloride	ND		1.04	1.07		mg/Kg	₩	103	62 - 144	14	20

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	93		80 - 121
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120
Toluene-d8 (Surr)	102		80 - 120

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-468642/3-A

**Matrix: Solid** 

Analysis Batch: 468647

**Client Sample ID: Method Blank** Prep Type: Total/NA

	Prep Batch:	
Prepared	Analyzed	Dil Fac
08/19/24 09:17	08/19/24 11:52	1

Analyte		MB Qualifier RL	MDI	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND	0.0010	0.00031		_ =	08/19/24 09:17		1
1,1-Dichloroethane	ND	0.0010	0.00023				08/19/24 11:52	1
1,1,1-Trichloroethane	ND	0.0010	0.00012				08/19/24 11:52	1
1,1-Dichloropropene	ND	0.0010	0.00012				08/19/24 11:52	· · · · · · · · · · · · · · · · · · ·
1,2-Dichloroethane	ND	0.00050	0.00014				08/19/24 11:52	1
1,2-Dichloropropane	ND	0.00050	0.00017	0 0			08/19/24 11:52	1
2,2-Dichloropropane	ND	0.0010	0.00030				08/19/24 11:52	
Benzene	ND	0.00050	0.000095				08/19/24 11:52	1
1,1,2-Trichloroethane	ND	0.00050	0.00019				08/19/24 11:52	1
Bromochloromethane	ND	0.0010	0.00016				08/19/24 11:52	
1,3-Dichloropropane	ND	0.0015	0.00014				08/19/24 11:52	1
Bromodichloromethane	ND	0.0010	0.00014				08/19/24 11:52	1
1,2-Dibromoethane	ND	0.00050	0.000014				08/19/24 11:52	
Bromomethane	ND	0.00030	0.00095				08/19/24 11:52	1
Carbon tetrachloride	ND ND	0.0025	0.00093				08/19/24 11:52	1
Chlorobenzene	ND	0.00030	0.00011				08/19/24 11:52	
	ND ND	0.00050	0.00012				08/19/24 11:52	1
1,1,1,2-Tetrachloroethane	ND ND	0.00030	0.00013				08/19/24 11:52	
Chloroethane		0.0020						
1,1,2,2-Tetrachloroethane	ND		0.00019				08/19/24 11:52	1
Chloroform	ND	0.00050	0.00011				08/19/24 11:52	1
Chloromethane	ND	0.0015	0.00025				08/19/24 11:52	
cis-1,2-Dichloroethene	ND	0.0015	0.00032				08/19/24 11:52	1
cis-1,3-Dichloropropene	ND	0.00050	0.00010				08/19/24 11:52	1
Bromoform	ND	0.0010	0.00011				08/19/24 11:52	
Dibromochloromethane	ND	0.00050	0.00012				08/19/24 11:52	1
Bromobenzene	ND	0.0010	0.00011				08/19/24 11:52	1
Dibromomethane	ND	0.0010	0.00019				08/19/24 11:52	1
Dichlorodifluoromethane	ND	0.0063		mg/Kg			08/19/24 11:52	1
1,2,3-Trichloropropane	ND	0.0010	0.00029				08/19/24 11:52	1
Ethylbenzene	ND	0.0010	0.00023				08/19/24 11:52	1
2-Chlorotoluene	ND	0.0010	0.00022				08/19/24 11:52	1
1,3,5-Trimethylbenzene	ND	0.0010	0.00019				08/19/24 11:52	1
Isopropylbenzene	ND	0.0010	0.00022				08/19/24 11:52	1
4-Chlorotoluene	ND	0.0010	0.00025				08/19/24 11:52	1
Methylene Chloride	ND	0.0063	0.00065				08/19/24 11:52	1
1,2,4-Trimethylbenzene	ND	0.0010	0.00034				08/19/24 11:52	1
m-Xylene & p-Xylene	ND	0.0010	0.00018				08/19/24 11:52	1
1,3-Dichlorobenzene	ND	0.0015	0.00033				08/19/24 11:52	1
4-Isopropyltoluene	ND	0.0010	0.00026				08/19/24 11:52	1
N-Propylbenzene	ND	0.0010	0.00038				08/19/24 11:52	1
1,4-Dichlorobenzene	ND	0.0015	0.00027				08/19/24 11:52	1
o-Xylene	ND	0.0010	0.00013			08/19/24 09:17	08/19/24 11:52	1
n-Butylbenzene	ND	0.0010	0.00046				08/19/24 11:52	1
sec-Butylbenzene	ND	0.0010	0.00022	mg/Kg		08/19/24 09:17	08/19/24 11:52	1
1,2-Dichlorobenzene	ND	0.0010	0.00022			08/19/24 09:17	08/19/24 11:52	1
Styrene	ND	0.0010	0.00032			08/19/24 09:17	08/19/24 11:52	1
1,2-Dibromo-3-Chloropropane	ND	0.0015	0.00038	mg/Kg		08/19/24 09:17	08/19/24 11:52	1
t-Butylbenzene	ND	0.0010	0.00019	mg/Kg		08/19/24 09:17	08/19/24 11:52	1

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-468642/3-A

**Matrix: Solid** 

Analysis Batch: 468647

Client Sample ID: Method Blank

**Prep Type: Total/NA** 

**Prep Batch: 468642** 

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.0020	0.0011	mg/Kg		08/19/24 09:17	08/19/24 11:52	1
Tetrachloroethene	ND		0.0010	0.00013	mg/Kg		08/19/24 09:17	08/19/24 11:52	1
Toluene	ND		0.0015	0.00034	mg/Kg		08/19/24 09:17	08/19/24 11:52	1
Hexachlorobutadiene	ND		0.0025	0.00060	mg/Kg		08/19/24 09:17	08/19/24 11:52	1
Naphthalene	ND		0.0038	0.00098	mg/Kg		08/19/24 09:17	08/19/24 11:52	1
trans-1,2-Dichloroethene	ND		0.0015	0.00037	mg/Kg		08/19/24 09:17	08/19/24 11:52	1
trans-1,3-Dichloropropene	ND		0.0010	0.00018	mg/Kg		08/19/24 09:17	08/19/24 11:52	1
Trichloroethene	ND		0.0010	0.00026	mg/Kg		08/19/24 09:17	08/19/24 11:52	1
Trichlorofluoromethane	ND		0.0020	0.00065	mg/Kg		08/19/24 09:17	08/19/24 11:52	1
Methyl tert-butyl ether	ND		0.0010	0.00015	mg/Kg		08/19/24 09:17	08/19/24 11:52	1
Vinyl chloride	ND		0.0025	0.00047	mg/Kg		08/19/24 09:17	08/19/24 11:52	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 120	08/19/24 09:17	08/19/24 11:52	1
4-Bromofluorobenzene (Surr)	98		80 - 120	08/19/24 09:17	08/19/24 11:52	1
Dibromofluoromethane (Surr)	105		80 - 120	08/19/24 09:17	08/19/24 11:52	1
1,2-Dichloroethane-d4 (Surr)	99		80 - 121	08/19/24 09:17	08/19/24 11:52	1

Lab Sample ID: LCS 580-468642/1-A

**Matrix: Solid** 

Analysis Batch: 468647

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA **Prep Batch: 468642** 

Analysis Batch: 468647	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1-Dichloroethene	0.800	0.819		mg/Kg		102	73 - 134
1,1-Dichloroethane	0.800	0.728		mg/Kg		91	78 - 126
1,1,1-Trichloroethane	0.800	0.839		mg/Kg		105	78 - 135
1,1-Dichloropropene	0.800	0.706		mg/Kg		88	76 - 140
1,2-Dichloroethane	0.800	0.760		mg/Kg		95	76 - 124
1,2-Dichloropropane	0.800	0.721		mg/Kg		90	73 - 130
2,2-Dichloropropane	0.800	0.798		mg/Kg		100	75 - 134
Benzene	0.800	0.797		mg/Kg		100	79 - 135
1,1,2-Trichloroethane	0.800	0.797		mg/Kg		100	80 - 123
Bromochloromethane	0.800	0.770		mg/Kg		96	76 - 131
1,3-Dichloropropane	0.800	0.710		mg/Kg		89	80 - 120
Bromodichloromethane	0.800	0.756		mg/Kg		95	78 - 125
1,2-Dibromoethane	0.800	0.774		mg/Kg		97	77 - 123
Bromomethane	0.800	0.774		mg/Kg		97	55 - 150
Carbon tetrachloride	0.800	0.743		mg/Kg		93	76 - 140
Chlorobenzene	0.800	0.835		mg/Kg		104	80 - 125
1,1,1,2-Tetrachloroethane	0.800	0.843		mg/Kg		105	79 - 128
Chloroethane	0.800	0.871		mg/Kg		109	26 - 150
1,1,2,2-Tetrachloroethane	0.800	0.821		mg/Kg		103	77 - 122
Chloroform	0.800	0.818		mg/Kg		102	74 - 133
Chloromethane	0.800	0.788		mg/Kg		98	52 - 142
cis-1,2-Dichloroethene	0.800	0.736		mg/Kg		92	80 - 125
cis-1,3-Dichloropropene	0.800	0.774		mg/Kg		97	80 - 122
Bromoform	0.800	0.759		mg/Kg		95	71 - 130
Dibromochloromethane	0.800	0.746		mg/Kg		93	75 - 125

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-468642/1-A

**Matrix: Solid** 

Isopropylbenzene

Methylene Chloride

1,2,4-Trimethylbenzene

m-Xylene & p-Xylene

1,3-Dichlorobenzene

1,4-Dichlorobenzene

4-Isopropyltoluene

N-Propylbenzene

o-Xylene

4-Chlorotoluene

**Analysis Batch: 468647** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

P

i tep type. TotalitiA
<b>Prep Batch: 468642</b>
%Rec

Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Bromobenzene	0.800	0.813		mg/Kg		102	78 - 126
Dibromomethane	0.800	0.774		mg/Kg		97	72 - 130
Dichlorodifluoromethane	0.800	1.06		mg/Kg		132	33 - 150
1,2,3-Trichloropropane	0.800	0.701		mg/Kg		88	77 - 127
Ethylbenzene	0.800	0.844		mg/Kg		105	80 - 135
2-Chlorotoluene	0.800	0.862		mg/Kg		108	77 - 134
1,3,5-Trimethylbenzene	0.800	0.867		mg/Kg		108	72 - 134

Spike

0.800 0.867 mg/Kg 108 72 - 134 0.800 0.772 mg/Kg 97 80 - 131 0.800 0.766 mg/Kg 96 71 - 1370.800 102 0.820 mg/Kg 56 - 140 0.800 0.806 101 mg/Kg 73 - 138 0.800 105 0.842 80 - 132 mg/Kg

0.800 0.859 107 78 - 132 mg/Kg 0.800 106 71 - 142 0.844 mg/Kg 0.800 0.772 mg/Kg 96 78 - 133 0.800 105 77 - 123 0.841 mg/Kg 0.800 0.840 mg/Kg 105 80 - 132

LCS LCS

n-Butylbenzene 0.800 0.863 108 69 - 143 mg/Kg sec-Butylbenzene 0.800 0.869 mg/Kg 109 71 - 143 1,2-Dichlorobenzene 0.800 0.836 mg/Kg 104 78 - 126 Styrene 0.800 0.744 mg/Kg 93 79 - 129 1,2-Dibromo-3-Chloropropane 0.800 0.725 mg/Kg 91 64 - 129 72 - 144 t-Butylbenzene 0.800 0.798 mg/Kg 100 1,2,4-Trichlorobenzene 0.800 0.765 74 - 131 mg/Kg 96

Tetrachloroethene 0.800 107 0.854 mg/Kg 75 - 141 Toluene 0.800 0.826 103 75 - 125 mg/Kg 0.800 113 65 - 145 Hexachlorobutadiene 0.905 mg/Kg Naphthalene 0.800 0.890 mg/Kg 111 56 - 145 trans-1,2-Dichloroethene 0.800 0.823 mg/Kg 103 77 - 134

trans-1,3-Dichloropropene 0.800 0.770 mg/Kg 96 80 - 121 Trichloroethene 0.800 0.739 92 80 - 134 mg/Kg Trichlorofluoromethane 0.800 0.746 mg/Kg 93 71 - 150 Methyl tert-butyl ether 0.800 0.782 mg/Kg 98 71 - 126

0.800 98 Vinyl chloride 0.783 mg/Kg 62 - 144 LCS LCS

Surrogate %Recovery Qualifier Limits Toluene-d8 (Surr) 102 80 - 120 4-Bromofluorobenzene (Surr) 101 80 - 120 101 80 - 120 Dibromofluoromethane (Surr) 1,2-Dichloroethane-d4 (Surr) 97 80 - 121

Lab Sample ID: LCSD 580-468642/2-A

**Matrix: Solid** 

Analysis Batch: 468647

**Client Sample ID: Lab Control Sample Dup** Prep Type: Total/NA Pren Batch: 468642

Alialysis Datcil. 400041							riep Daten. 400042		
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	0.800	0.781		mg/Kg		98	73 - 134	5	25
1,1-Dichloroethane	0.800	0.739		mg/Kg		92	78 - 126	2	20

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-468642/2-A

**Matrix: Solid** 

Analysis Batch: 468647

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA Prep Batch: 468642

Analysis Batch: 468647	0			CSD			Prep Batch: 468642		
Analyte	Spike Added		LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPC Limi
1,1,1-Trichloroethane	0.800	0.826	Qualifier	mg/Kg	_ =	103	78 <sub>-</sub> 135	2	20
1,1-Dichloropropene	0.800	0.694		mg/Kg		87	76 - 140	2	20
1,2-Dichloroethane	0.800	0.759		mg/Kg		95	76 - 140 76 - 124	0	20
1,2-Dichloropropane	0.800	0.739		mg/Kg		89	73 - 130	2	20
	0.800	0.710				99	75 - 134	<u>.</u>	20
2,2-Dichloropropane Benzene	0.800	0.787		mg/Kg		98	79 <sub>-</sub> 135	1	20
	0.800	0.787		mg/Kg		96	80 - 123	3	20
1,1,2-Trichloroethane Bromochloromethane	0.800	0.760		mg/Kg		95	76 - 131	3 1	20
1,3-Dichloropropane	0.800	0.760		mg/Kg		95 86	80 <sub>-</sub> 120	3	20
Bromodichloromethane	0.800	0.741		mg/Kg		93	78 - 125		
				mg/Kg				2	20
1,2-Dibromoethane	0.800	0.768		mg/Kg		96	77 <sub>-</sub> 123	1	20
Bromomethane	0.800	0.790		mg/Kg		99	55 - 150	2	2
Carbon tetrachloride	0.800	0.743		mg/Kg		93	76 - 140	0	20
Chlorobenzene	0.800	0.824		mg/Kg		103	80 - 125	1	20
1,1,1,2-Tetrachloroethane	0.800	0.830		mg/Kg		104	79 - 128	2	20
Chloroethane	0.800	0.881		mg/Kg		110	26 - 150	1	40
1,1,2,2-Tetrachloroethane	0.800	0.765		mg/Kg		96	77 - 122	7	20
Chloroform	0.800	0.813		mg/Kg		102	74 - 133	1	20
Chloromethane	0.800	0.765		mg/Kg		96	52 - 142	3	40
cis-1,2-Dichloroethene	0.800	0.719		mg/Kg		90	80 - 125	2	20
cis-1,3-Dichloropropene	0.800	0.775		mg/Kg		97	80 - 122	0	20
Bromoform	0.800	0.733		mg/Kg		92	71 - 130	4	20
Dibromochloromethane	0.800	0.713		mg/Kg		89	75 - 125	5	20
Bromobenzene	0.800	0.796		mg/Kg		99	78 - 126	2	20
Dibromomethane	0.800	0.744		mg/Kg		93	72 - 130	4	40
Dichlorodifluoromethane	0.800	0.985		mg/Kg		123	33 - 150	7	3
1,2,3-Trichloropropane	0.800	0.661		mg/Kg		83	77 - 127	6	20
Ethylbenzene	0.800	0.830		mg/Kg		104	80 - 135	2	20
2-Chlorotoluene	0.800	0.847		mg/Kg		106	77 - 134	2	2
1,3,5-Trimethylbenzene	0.800	0.846		mg/Kg		106	72 - 134	2	2
Isopropylbenzene	0.800	0.751		mg/Kg		94	80 - 131	3	20
4-Chlorotoluene	0.800	0.755		mg/Kg		94	71 - 137	2	2
Methylene Chloride	0.800	0.813		mg/Kg		102	56 - 140	1	20
1,2,4-Trimethylbenzene	0.800	0.780		mg/Kg		97	73 - 138	3	22
m-Xylene & p-Xylene	0.800	0.823		mg/Kg		103	80 - 132	2	20
1,3-Dichlorobenzene	0.800	0.819		mg/Kg		102	78 - 132	5	20
4-Isopropyltoluene	0.800	0.815		mg/Kg		102	71 - 142	4	29
N-Propylbenzene	0.800	0.757		mg/Kg		95	78 - 133	2	2
1,4-Dichlorobenzene	0.800	0.829		mg/Kg		104	77 - 123	1	20
o-Xylene	0.800	0.827		mg/Kg		103	80 - 132	2	20
n-Butylbenzene	0.800	0.843		mg/Kg		105	69 - 143	2	3
sec-Butylbenzene	0.800	0.843		mg/Kg		105	71 - 143	3	29
1,2-Dichlorobenzene	0.800	0.826		mg/Kg		103	78 - 126	1	20
Styrene	0.800	0.744		mg/Kg		93	79 - 129	0	20
1,2-Dibromo-3-Chloropropane	0.800	0.675		mg/Kg		84	64 - 129	7	40
t-Butylbenzene	0.800	0.776		mg/Kg		97	72 - 144	3	2
1,2,4-Trichlorobenzene	0.800	0.618		mg/Kg		77	74 - 131	21	26
Tetrachloroethene	0.800	0.856		mg/Kg		107	75 <sub>-</sub> 141	0	20
Toluene	0.800	0.810		mg/Kg		107	75 - 141 75 - 125	2	20

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-468642/2-A

**Matrix: Solid** 

Analysis Batch: 468647

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

**Prep Batch: 468642** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Hexachlorobutadiene	0.800	0.860		mg/Kg		108	65 - 145	5	36
Naphthalene	0.800	0.517	*1	mg/Kg		65	56 - 145	53	25
trans-1,2-Dichloroethene	0.800	0.814		mg/Kg		102	77 - 134	1	20
trans-1,3-Dichloropropene	0.800	0.767		mg/Kg		96	80 - 121	0	20
Trichloroethene	0.800	0.728		mg/Kg		91	80 - 134	2	20
Trichlorofluoromethane	0.800	0.736		mg/Kg		92	71 - 150	1	30
Methyl tert-butyl ether	0.800	0.765		mg/Kg		96	71 - 126	2	20
Vinyl chloride	0.800	0.749		mg/Kg		94	62 - 144	4	20

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	103		80 - 120
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	99		80 - 121

Client Sample ID: Method Blank

Prep Type: Total/NA

**Matrix: Water** 

**Analysis Batch: 468819** 

Lab Sample ID: MB 580-468819/11

MB MB

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			08/20/24 16:42	1
Naphthalene	ND		3.0	0.93	ug/L			08/20/24 16:42	1

MB MB

Surrogate	%Recovery Qualifi	er Limits	Prepared Analyz	zed Dil Fac
Toluene-d8 (Surr)	98	80 - 120	08/20/24	16:42 1
4-Bromofluorobenzene (Surr)	102	80 - 120	08/20/24	16:42 1
Dibromofluoromethane (Surr)	101	80 - 120	08/20/24	16:42 1
1.2-Dichloroethane-d4 (Surr)	95	80 - 120	08/20/24	16:42 1

Lab Sample ID: LCS 580-468819/6

**Matrix: Water** 

**Analysis Batch: 468819** 

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit D %Rec Limits 1,2,3-Trichlorobenzene 5.00 4.53 ug/L 91 65 - 150 Naphthalene 5.00 4.49 ug/L 90 63 - 150

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 120
4-Bromofluorobenzene (Surr)	107		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	96		80 - 120

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

**Analysis Batch: 468819** 

Lab Sample ID: LCSD 580-468819/7 **Client Sample ID: Lab Control Sample Dup Matrix: Water Prep Type: Total/NA** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,2,3-Trichlorobenzene	5.00	4.60		ug/L		92	65 - 150	2	33
Naphthalene	5.00	4.44		ug/L		89	63 - 150	1	33

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	98		80 - 120
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	99		80 - 120

Lab Sample ID: MB 580-469011/3-A Client Sample ID: Method Blank

Matrix: Solid

**Analysis Batch: 468961** 

MB MB

Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND	0.080	0.040 mg/Kg		08/21/24 15:12	08/21/24 16:19	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120	08/21/24 15:12	08/21/24 16:19	1
4-Bromofluorobenzene (Surr)	100		80 - 120	08/21/24 15:12	08/21/24 16:19	1
Dibromofluoromethane (Surr)	104		80 - 120	08/21/24 15:12	08/21/24 16:19	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 121	08/21/24 15:12	08/21/24 16:19	1

Lab Sample ID: LCS 580-469011/1-A

**Matrix: Solid** 

**Analysis Batch: 468961** 

**Prep Type: Total/NA Prep Batch: 469011** 

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,2,3-Trichlorobenzene	0.800	0.656		mg/Kg		82	58 - 146	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 120
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	98		80 - 120
1,2-Dichloroethane-d4 (Surr)	95		80 - 121

Lab Sample ID: LCSD 580-469011/2-A

**Matrix: Solid** 

Analysis Batch: 468961

Client Sample ID: Lab	<b>Control Sample Dup</b>	

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA Prep Batch: 469011** 

**Prep Type: Total/NA** 

**Prep Batch: 469011** 

	<b>Spike</b>	LCSD	LCSD				%Rec		KPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,2,3-Trichlorobenzene	0.800	0.669		mg/Kg		84	58 - 146	2	28

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 120
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	97		80 - 120
1,2-Dichloroethane-d4 (Surr)	98		80 - 121

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

#### Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-468422/1-A

**Matrix: Solid** 

Analysis Batch: 469291

Client Sample ID: Method Blank Prep Type: Total/NA

Prep Batch: 468422

	Qualifier	RL			D	Prepared	Analyzed	Dil Fac
								1
								1
ND		50	4.8	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
ND		50	8.3	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
ND		30	5.0	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
ND		200	8.1	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
ND		150	33	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
ND		210	28	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
ND		210	60	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
ND		2000	590	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
ND		200	43	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
ND		150	15	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
ND		25	5.0	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
ND		200	4.0	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
ND		50	8.8	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
ND		150	9.8	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
ND		100	15	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
ND		200	19	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
ND		200				08/15/24 16:45	08/23/24 21:09	1
ND		570				08/15/24 16:45	08/23/24 21:09	1
ND		300				08/15/24 16:45	08/23/24 21:09	1
								1
								1
								1
								1
		200						1
								1
								1
								1
								1
								1
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								1 1
ND		400	22	ug/Kg		08/15/24 16:45	08/23/24 21:09	
	Result	ND ND ND ND ND ND ND ND ND ND ND ND ND N	Result         Qualifier         RL           ND         50           ND         50           ND         50           ND         50           ND         50           ND         200           ND         200           ND         210           ND         210           ND         200           ND         200           ND         25           ND         200           ND         150           ND         200           ND         100           ND         200           ND         100           ND         200           ND         150           ND         150           ND         150           ND         150           ND         150           ND         200           ND         150           ND         40           ND         40           ND         40           ND         40           ND         40           ND         40           ND         40 <td>Result Qualifier         RL         MDL           ND         50         6.0           ND         50         5.0           ND         50         4.8           ND         50         8.3           ND         30         5.0           ND         200         8.1           ND         200         8.1           ND         210         60           ND         210         68           ND         200         590           ND         200         590           ND         200         43           ND         200         40           ND         200         40           ND         200         40           ND         30         15           ND         30         100           ND         100         15           ND         300         100           ND         300         100           ND<!--</td--><td>  Result   Qualifier   RL   MDL   Unit    </td><td>Result         Qualifier         RL         MDL         Unit         D           ND         50         6.0         ug/Kg         ug/Kg           ND         50         5.0         ug/Kg         ug/Kg           ND         50         4.8         ug/Kg         ug/Kg           ND         50         8.3         ug/Kg         ug/Kg           ND         200         8.1         ug/Kg         ug/Kg           ND         200         8.1         ug/Kg         ug/Kg           ND         210         60         ug/Kg         ug/Kg           ND         200         590         ug/Kg         ug/Kg           ND         200         43         ug/Kg         ug/Kg           ND         150         15         ug/Kg         ug/Kg           ND         200         4.0         ug/Kg         ug/Kg           ND         200         4.0         ug/Kg         ug/Kg         ug/Kg           ND         150         8.8         ug/Kg         ug/Kg</td><td>  Result   Qualifier   RL   MDL   Unit   D   Prepared    </td><td>  Result   Qualifier   RL   MDL   Unit   D   Prepared   Analyzed    </td></td>	Result Qualifier         RL         MDL           ND         50         6.0           ND         50         5.0           ND         50         4.8           ND         50         8.3           ND         30         5.0           ND         200         8.1           ND         200         8.1           ND         210         60           ND         210         68           ND         200         590           ND         200         590           ND         200         43           ND         200         40           ND         200         40           ND         200         40           ND         30         15           ND         30         100           ND         100         15           ND         300         100           ND         300         100           ND </td <td>  Result   Qualifier   RL   MDL   Unit    </td> <td>Result         Qualifier         RL         MDL         Unit         D           ND         50         6.0         ug/Kg         ug/Kg           ND         50         5.0         ug/Kg         ug/Kg           ND         50         4.8         ug/Kg         ug/Kg           ND         50         8.3         ug/Kg         ug/Kg           ND         200         8.1         ug/Kg         ug/Kg           ND         200         8.1         ug/Kg         ug/Kg           ND         210         60         ug/Kg         ug/Kg           ND         200         590         ug/Kg         ug/Kg           ND         200         43         ug/Kg         ug/Kg           ND         150         15         ug/Kg         ug/Kg           ND         200         4.0         ug/Kg         ug/Kg           ND         200         4.0         ug/Kg         ug/Kg         ug/Kg           ND         150         8.8         ug/Kg         ug/Kg</td> <td>  Result   Qualifier   RL   MDL   Unit   D   Prepared    </td> <td>  Result   Qualifier   RL   MDL   Unit   D   Prepared   Analyzed    </td>	Result   Qualifier   RL   MDL   Unit	Result         Qualifier         RL         MDL         Unit         D           ND         50         6.0         ug/Kg         ug/Kg           ND         50         5.0         ug/Kg         ug/Kg           ND         50         4.8         ug/Kg         ug/Kg           ND         50         8.3         ug/Kg         ug/Kg           ND         200         8.1         ug/Kg         ug/Kg           ND         200         8.1         ug/Kg         ug/Kg           ND         210         60         ug/Kg         ug/Kg           ND         200         590         ug/Kg         ug/Kg           ND         200         43         ug/Kg         ug/Kg           ND         150         15         ug/Kg         ug/Kg           ND         200         4.0         ug/Kg         ug/Kg           ND         200         4.0         ug/Kg         ug/Kg         ug/Kg           ND         150         8.8         ug/Kg         ug/Kg	Result   Qualifier   RL   MDL   Unit   D   Prepared	Result   Qualifier   RL   MDL   Unit   D   Prepared   Analyzed

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Project/Site: Arkema PDI Sampling

# Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-468422/1-A

**Matrix: Solid** 

Analysis Batch: 469291

Client Sample ID: Method Blank

Prep Type: Total/NA **Prep Batch: 468422** 

7 <b>,</b> 0.0 100_0 .	MB	МВ							
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethyl phthalate	ND		150	5.0	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
Di-n-butyl phthalate	ND		500	47	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
Di-n-octyl phthalate	ND		200	89	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
Fluoranthene	ND		40	12	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
Fluorene	ND		25	5.0	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
Hexachlorobenzene	ND		50	15	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
Hexachlorobutadiene	ND		50	15	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
Hexachlorocyclopentadiene	ND		100	7.7	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
Hexachloroethane	ND		150	4.3	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
Indeno[1,2,3-cd]pyrene	ND		40	12	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
Isophorone	ND		150	8.4	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
Naphthalene	ND		25	5.0	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
Nitrobenzene	ND		200	20	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
N-Nitrosodi-n-propylamine	ND		200	22	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
N-Nitrosodiphenylamine	ND		60	8.0	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
Pentachlorophenol	ND		550	270	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
Phenanthrene	ND		60	5.8	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
Phenol	ND		150	23	ug/Kg		08/15/24 16:45	08/23/24 21:09	1
Pyrene	ND		60	13	ug/Kg		08/15/24 16:45	08/23/24 21:09	1

MB MB

Surrogate	%Recovery Qualifie	r Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	77	58 - 120	08/15/24 16:45	08/23/24 21:09	1
Phenol-d5 (Surr)	80	59 - 120	08/15/24 16:45	08/23/24 21:09	1
Nitrobenzene-d5 (Surr)	77	63 - 120	08/15/24 16:45	08/23/24 21:09	1
2-Fluorobiphenyl	86	64 - 120	08/15/24 16:45	08/23/24 21:09	1
2,4,6-Tribromophenol (Surr)	69	62 - 122	08/15/24 16:45	08/23/24 21:09	1
Terphenyl-d14 (Surr)	87	73 - 125	08/15/24 16:45	08/23/24 21:09	1

Lab Sample ID: LCS 580-468422/2-A

**Matrix: Solid** 

Analysis Batch: 469291

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

**Prep Batch: 468422** 

	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,2,4-Trichlorobenzene	2000	1840		ug/Kg		92	66 - 125
1,2-Dichlorobenzene	2000	1820		ug/Kg		91	68 - 120
1,3-Dichlorobenzene	2000	1780		ug/Kg		89	65 - 120
1,4-Dichlorobenzene	2000	1790		ug/Kg		89	68 - 120
1-Methylnaphthalene	2000	1870		ug/Kg		93	69 - 120
2,4,5-Trichlorophenol	2000	2110		ug/Kg		105	60 - 120
2,4,6-Trichlorophenol	2000	2150		ug/Kg		107	68 - 120
2,4-Dichlorophenol	2000	1990		ug/Kg		99	63 - 120
2,4-Dimethylphenol	2000	2030		ug/Kg		102	55 - 120
2,4-Dinitrophenol	4000	4870		ug/Kg		122	10 - 139
2,4-Dinitrotoluene	2000	1990		ug/Kg		99	63 - 120
2,6-Dinitrotoluene	2000	1980		ug/Kg		99	70 - 126
2-Chloronaphthalene	2000	1980		ug/Kg		99	65 - 120
2-Chlorophenol	2000	1860		ug/Kg		93	66 - 120
2-Methylnaphthalene	2000	2120		ug/Kg		106	75 - 120

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Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

#### Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-468422/2-A

**Matrix: Solid** 

Analysis Batch: 469291

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Type: Total/NA Prep Batch: 468422

Analysis Batch: 469291	Outles	1.00	1.00			Prep Batch: 4684
Analyte	Spike Added		LCS Qualifier	Unit	D %Rec	%Rec Limits
2-Methylphenol	2000	2010	Qualifier	ug/Kg	<u>B</u>	53 - 120
2-Nitroaniline	2000	1980		ug/Kg	99	65 - 120
2-Nitrophenol	2000	1810		ug/Kg	91	67 - 131
3 & 4 Methylphenol	2000	2070		ug/Kg ug/Kg	103	54 - 120
3,3'-Dichlorobenzidine	4000	3200		ug/Kg ug/Kg	80	41 - 137
3-Nitroaniline	2000	2060		ug/Kg ug/Kg	103	28 - 120
4,6-Dinitro-2-methylphenol	4000	3820		ug/Kg	96	10 - 141
4-Bromophenyl phenyl ether	2000	1980		ug/Kg ug/Kg	99	65 - 127
4-Chloro-3-methylphenol	2000	2130		ug/Kg ug/Kg	107	55 <u>-</u> 120
4-Chloroaniline	2000	1900		ug/Kg	95	10 - 120
4-Chlorophenyl phenyl ether	2000	2040		ug/Kg ug/Kg	102	70 - 120
4-Nitroaniline						
	2000	2220		ug/Kg	111	53 - 123
4-Nitrophenol	4000	4080		ug/Kg	102	26 - 140
Acenaphthene	2000	2070		ug/Kg	104	64 - 120
Acenaphthylene	2000	2060		ug/Kg	103	72 - 120
Anthracene	2000	1960		ug/Kg	98	67 - 120
Benzo[a]anthracene	2000	2090		ug/Kg	104	60 - 135
Benzo[a]pyrene	2000	2200		ug/Kg	110	70 - 129
Benzo[b]fluoranthene	2000	2070		ug/Kg	103	58 - 136
Benzo[g,h,i]perylene	2000	2050		ug/Kg	102	50 - 130
Benzo[k]fluoranthene	2000	2120		ug/Kg	106	57 - 142
Benzoic acid	4000	2990	J	ug/Kg	75	10 - 120
Benzyl alcohol	2000	1960		ug/Kg	98	10 - 134
Bis(2-chloroethoxy)methane	2000	1920		ug/Kg	96	60 - 120
Bis(2-chloroethyl)ether	2000	1770		ug/Kg	89	61 - 120
Bis(2-ethylhexyl) phthalate	2000	1970		ug/Kg	98	56 - 150
bis(chloroisopropyl) ether	2000	1830		ug/Kg	92	39 - 129
Butyl benzyl phthalate	2000	2020		ug/Kg	101	58 - 150
Carbazole	2000	2080		ug/Kg	104	76 - 150
Chrysene	2000	1870		ug/Kg	94	69 - 127
Dibenz(a,h)anthracene	2000	2040		ug/Kg	102	51 - 139
Dibenzofuran	2000	2070		ug/Kg	104	68 - 120
Diethyl phthalate	2000	2100		ug/Kg	105	71 - 120
Dimethyl phthalate	2000	2070		ug/Kg	104	71 - 120
Di-n-butyl phthalate	2000	1980		ug/Kg	99	66 - 135
Di-n-octyl phthalate	2000	1910		ug/Kg	96	53 - 150
Fluoranthene	2000	2050		ug/Kg	103	69 - 133
Fluorene	2000	2050		ug/Kg	103	68 - 121
Hexachlorobenzene	2000	1980		ug/Kg	99	65 - 126
Hexachlorobutadiene	2000	1850		ug/Kg	93	56 - 146
Hexachlorocyclopentadiene	2000	1860		ug/Kg	93	36 - 124
Hexachloroethane	2000	1750		ug/Kg	87	68 - 120
Indeno[1,2,3-cd]pyrene	2000	2040		ug/Kg	102	43 - 133
Isophorone	2000	2040		ug/Kg	102	61 - 123
Naphthalene	2000	1840		ug/Kg	92	68 - 120
Nitrobenzene	2000	1880		ug/Kg	94	57 - 128
N-Nitrosodi-n-propylamine	2000	2040		ug/Kg	102	63 - 120
N-Nitrosodiphenylamine	2000	2020		ug/Kg	101	67 - 120
Pentachlorophenol	4000	3900		ug/Kg	98	18 - 133

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

#### Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-468422/2-A

Matrix: Solid

Analysis Batch: 469291

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Prep Batch: 468422

•	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Phenanthrene	 2000	1940		ug/Kg		97	74 - 120	
Phenol	2000	2000		ug/Kg		100	59 - 120	
Pyrene	2000	2050		ug/Kg		102	68 - 126	

LCS LCS

Sample Sample

Surrogate	%Recovery	Qualifier	Limits
2-Fluorophenol (Surr)	83		58 - 120
Phenol-d5 (Surr)	87		59 - 120
Nitrobenzene-d5 (Surr)	82		63 - 120
2-Fluorobiphenyl	89		64 - 120
2,4,6-Tribromophenol (Surr)	84		62 - 122
Terphenyl-d14 (Surr)	88		73 - 125

Client Sample ID: PDI-24-SO-23.1-20240809

**Matrix: Solid** 

Analysis Batch: 469291

Lab Sample ID: 580-142896-8 MS

Prep Type: Total/NA

Prep Batch: 468422 %Rec

Result Qualifier Added Result Qualifier D %Rec Limits Analyte Unit ND 2170 ☼ 93 1.2.4-Trichlorobenzene 2030 66 - 125 ug/Kg 1,2-Dichlorobenzene 12 2170 1940 ug/Kg ₩ 89 68 - 120 2170 1,3-Dichlorobenzene ND 1920 ug/Kg 88 65 - 120 ∜ 1,4-Dichlorobenzene 80 2170 2070 ug/Kg ₩ 92 68 - 120 6.2 2170 1990 91 69 - 120 1-Methylnaphthalene ug/Kg Ö

MS MS

Spike

2,4,5-Trichlorophenol ND 2170 2010 ug/Kg ₩ 92 60 - 120 2,4,6-Trichlorophenol ND 2170 2230 103 68 - 120 ug/Kg ₩ ND 2170 98 2,4-Dichlorophenol 2140 ug/Kg ₩ 63 - 1202,4-Dimethylphenol ND 2170 1990 ug/Kg ₩ 92 55 - 1202,4-Dinitrophenol ND 4370 101 4350 ug/Kg ₩ 10 - 139 ND 2170 2180 100 2,4-Dinitrotoluene ug/Kg Ö 63 - 120 ND 2270 104 2,6-Dinitrotoluene 2170 ug/Kg Ö 70 - 126 2-Chloronaphthalene ND 2170 2050 ug/Kg ₩ 94 65 - 120 2-Chlorophenol 15 2170 1930 88 66 - 120 ug/Kg ∜ 2-Methylnaphthalene ND 2170 2270 104 75 - 120 ug/Kg ₩ ND 2170 91 2-Methylphenol 1980 ug/Kg ∜ 53 - 1202-Nitroaniline ND 2170 2250 ug/Kg ₩ 103 65 - 120 2-Nitrophenol ND 2170 2400 ₩ 110 67 - 131 ug/Kg 3 & 4 Methylphenol ND 2170 2050 ug/Kg ☼ 94 54 - 120 3,3'-Dichlorobenzidine ND F1 \*3 4350 ND F1\*3 ug/Kg ₩ 0 41 - 137 ND 2170 1670 77 28 - 120 3-Nitroaniline ug/Kg ₩ 4,6-Dinitro-2-methylphenol ND 4350 4040 ₩ 86 10 - 141

ug/Kg 4-Bromophenyl phenyl ether ND 2170 2090 ug/Kg ∜ 96 65 - 1274-Chloro-3-methylphenol ND 2170 2030 ug/Kg 93 55 - 120 ND 2170 70 10 - 120 4-Chloroaniline 1510 J Ö ug/Kg 4-Chlorophenyl phenyl ether 2170 2060 ₩ 95 70 - 120 ND ug/Kg 4-Nitroaniline ND 2170 1870 F1 ug/Kg ₩ -171 53 - 1234-Nitrophenol ND 4350 3930 ₩ 91 26 - 140 ug/Kg

ND 2170 2100 96 64 - 120 Acenaphthene ug/Kg Ö Acenaphthylene ND 2170 2000 ug/Kg ₩ 92 72 - 120 67 - 120 Anthracene ND 2170 1960 ug/Kg 90

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Project/Site: Arkema PDI Sampling

#### Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-142896-8 MS

**Matrix: Solid** 

Analysis Batch: 469291

Client Sample ID: PDI-24-SO-23.1-20240809

Prep Type: Total/NA

Pr

	Batch: 468422	
Rec		

inalycic Datein 100201										
	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzo[a]pyrene	ND	*3	2170	2060	*3	ug/Kg	<del>-</del>	95	70 - 129	
Benzo[b]fluoranthene	ND	F1 *3	2170	3710	F1 *3	ug/Kg	₩	138	58 - 136	
Renzola h ilnervlene	ND	F1 *3	2170	4080	F1 *3	ua/Ka	**	188	50 130	

	Oumpic	Campic	Opino	1110	1410				/01100	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzo[a]pyrene	ND	*3	2170	2060	*3	ug/Kg	<u></u>	95	70 - 129	
Benzo[b]fluoranthene	ND	F1 *3	2170	3710	F1 *3	ug/Kg	₩	138	58 - 136	
Benzo[g,h,i]perylene	ND	F1 *3	2170	4080	F1 *3	ug/Kg	☆	188	50 - 130	
Benzo[k]fluoranthene	ND	F2 *3	2170	2730	*3	ug/Kg	☆	97	57 - 142	
Benzoic acid	ND		4350	1860	J	ug/Kg	₩	43	10 - 120	
Benzyl alcohol	ND		2170	2010		ug/Kg	₩	92	10 - 134	
Bis(2-chloroethoxy)methane	ND		2170	2030		ug/Kg	₩	93	60 - 120	
Bis(2-chloroethyl)ether	ND	F1	2170	3460	F1	ug/Kg	₩	159	61 - 120	
bis(chloroisopropyl) ether	ND		2170	1880		ug/Kg	₩	86	39 - 129	
Butyl benzyl phthalate	ND	F1 *3	2170	ND	F1 *3	ug/Kg	☆	0	58 - 150	
Carbazole	ND		2170	2000		ug/Kg	₩	92	76 - 150	
Dibenz(a,h)anthracene	ND	F1 *3	2170	3570	F1 *3	ug/Kg	☆	164	51 - 139	
Dibenzofuran	ND		2170	2140		ug/Kg	☆	98	68 - 120	
Diethyl phthalate	39	J	2170	2290		ug/Kg	₩	104	71 - 120	
Dimethyl phthalate	ND		2170	2230		ug/Kg	☆	103	71 - 120	
Di-n-butyl phthalate	ND	F1	2170	2060	F1	ug/Kg	₩	64	66 - 135	
Di-n-octyl phthalate	ND	*3	2170	1910	*3	ug/Kg	☆	88	53 - 150	
Fluoranthene	ND	F1	2170	1530	F1	ug/Kg	₩	67	69 - 133	
Fluorene	ND		2170	2150		ug/Kg	₩	99	68 - 121	
Hexachlorobenzene	ND		2170	2080		ug/Kg	₩	96	65 - 126	
Hexachlorobutadiene	27	J	2170	2040		ug/Kg	₩	93	56 - 146	
Hexachlorocyclopentadiene	ND		2170	2130		ug/Kg	₩	98	36 - 124	
Hexachloroethane	ND		2170	1830		ug/Kg	₩	84	68 - 120	
Indeno[1,2,3-cd]pyrene	ND	F1 *3	2170	3210	F1 *3	ug/Kg	₩	148	43 - 133	
Isophorone	ND		2170	2110		ug/Kg	₩	97	61 - 123	
Naphthalene	ND		2170	2000		ug/Kg	₩	92	68 - 120	
Nitrobenzene	ND		2170	2060		ug/Kg	₩	95	57 - 128	
N-Nitrosodi-n-propylamine	ND		2170	2120		ug/Kg	₩	97	63 - 120	
N-Nitrosodiphenylamine	ND		2170	2290		ug/Kg	₩	106	67 - 120	
Pentachlorophenol	ND		4350	4380		ug/Kg	₩	101	18 - 133	
Phenanthrene	36	J	2170	2050		ug/Kg	₩	93	74 - 120	
Phenol	ND		2170	1810		ug/Kg	₩	83	59 - 120	
Pyrene	ND	F1	2170	1370	F1	ug/Kg	≎	63	68 - 126	

Surrogate	%Recovery	Qualifier	Limits
2-Fluorophenol (Surr)	78		58 - 120
Phenol-d5 (Surr)	81		59 - 120
Nitrobenzene-d5 (Surr)	91		63 - 120
2-Eluorohinhenyl	84		64 120

Lab Sample ID: 580-142896-8 MSD

**Matrix: Solid** 

64 - 120 2,4,6-Tribromophenol (Surr) 84 62 - 122 Terphenyl-d14 (Surr) 32 S1-73 - 125

MS MS

Client Sample ID: PDI-24-SO-23.1-20240809

**Prep Type: Total/NA Prep Batch: 468422** %Rec **RPD** 

Analysis Batch: 469291 MSD MSD Sample Sample Spike Result Qualifier Added Result Qualifier Unit %Rec Limits Limit 1,2,4-Trichlorobenzene ND 2130 1910 90 66 - 125 6 ug/Kg

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

# Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-142896-8 MSD

**Matrix: Solid** 

Analysis Batch: 469291

Client Sample ID: PDI-24-SO-23.1-20240809

**Prep Type: Total/NA** 

**Prep Batch: 468422** 

Analysis Batch: 469291	0	0	0						Prep Ba	atch: 40	
Analyte	•	Sample Qualifier	Spike Added		MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dichlorobenzene	12		2130	1790	Qualifier	ug/Kg	— <del>-</del>	83	68 <sub>-</sub> 120	8	30
1,3-Dichlorobenzene	ND	3	2130	1760		ug/Kg ug/Kg	₩	83	65 - 120	8	29
1,4-Dichlorobenzene	80		2130	1830		ug/Kg		82	68 - 120	12	35
1-Methylnaphthalene	6.2	i	2130	1950		ug/Kg ug/Kg	₩ ₩	91	69 - 120	2	24
2,4,5-Trichlorophenol	ND	3	2130	1860		ug/Kg ug/Kg	₩	87	60 - 120	8	23
2,4,6-Trichlorophenol	ND		2130	2150		ug/Kg ug/Kg	¥	101	68 - 120	4	20
2,4-Dichlorophenol	ND ND		2130	2020		ug/Kg ug/Kg	<b>☆</b>	94	63 - 120	6	19
2,4-Dimethylphenol	ND ND		2130	2020		ug/Kg ug/Kg	<b>☆</b>	94	55 <sub>-</sub> 120	0	40
2,4-Dinitrophenol	ND		4270	3970		ug/Kg ug/Kg	¥ 	93	10 - 139	10	40
2,4-Dinitrotoluene	ND ND		2130	2120				100	63 - 120	2	23
·	ND ND		2130	2170		ug/Kg	<b>‡</b>	100	70 <sub>-</sub> 126	4	18
2,6-Dinitrotoluene						ug/Kg	<del></del>				
2-Chloronaphthalene	ND 15		2130	1950		ug/Kg	ψ.	91	65 - 120	5 4	21
2-Chlorophenol	ND	J	2130 2130	1860 2200		ug/Kg ug/Kg	<b>\$</b>	86 103	66 <sub>-</sub> 120 75 <sub>-</sub> 120	3	32 21
2-Methylnaphthalene							<del>.</del>				
2-Methylphenol	ND		2130	1960		ug/Kg	<b>☆</b>	92	53 - 120	1	40
2-Nitroaniline	ND		2130	2060		ug/Kg	<b>\$</b>	97	65 <sub>-</sub> 120	9	16
2-Nitrophenol	ND		2130	2320		ug/Kg	<b>*</b>	109	67 - 131		30
3 & 4 Methylphenol	ND	E4 40	2130	2050	*0.54	ug/Kg	☼	96	54 - 120	0	36
3,3'-Dichlorobenzidine	ND	F1 *3	4270		*3 F1	ug/Kg	₩	0	41 - 137	NC	40
3-Nitroaniline	ND		2130	1510		ug/Kg	<del>.</del>	71	28 - 120	10	25
4,6-Dinitro-2-methylphenol	ND		4270	3770		ug/Kg	₩	81	10 - 141	7	40
4-Bromophenyl phenyl ether	ND		2130	1970		ug/Kg	₩	93	65 - 127	6	32
4-Chloro-3-methylphenol	ND		2130	1940		ug/Kg	∴	91	55 - 120	5	25
4-Chloroaniline	ND		2130	1460	J	ug/Kg	₽	68	10 - 120	4	40
4-Chlorophenyl phenyl ether	ND		2130	1970		ug/Kg	☼	93	70 - 120	4	21
4-Nitroaniline	ND	F1	2130	1540	F1	ug/Kg	<del>.</del>	-190	53 - 123	20	23
4-Nitrophenol	ND		4270	3910		ug/Kg	₩	92	26 - 140	1	31
Acenaphthene	ND		2130	1990		ug/Kg	₩	93	64 - 120	5	19
Acenaphthylene	ND		2130	1860		ug/Kg	<del>\</del>	87	72 - 120		18
Anthracene	ND		2130	1890		ug/Kg	₩	89	67 - 120	4	28
Benzo[a]anthracene	ND		2130		F2 *3	ug/Kg	₩	65	60 - 135	190	21
Benzo[a]pyrene	ND		2130	2680		ug/Kg		126	70 - 129	26	27
Benzo[b]fluoranthene	ND		2130	3240		ug/Kg	≎	119	58 - 136	14	25
Benzo[g,h,i]perylene	ND		2130		F1 *3	ug/Kg	≎	177	50 - 130	8	26
Benzo[k]fluoranthene	ND	F2 *3	2130	3420	F2 *3	ug/Kg		132	57 - 142	23	18
Benzoic acid	ND		4270	1610	J	ug/Kg	☼	38	10 - 120	14	40
Benzyl alcohol	ND		2130	1970		ug/Kg	₩	92	10 - 134	2	40
Bis(2-chloroethoxy)methane	ND		2130	1930		ug/Kg	<b>*</b>	90	60 - 120	5	33
Bis(2-chloroethyl)ether	ND	F1	2130	3330	F1	ug/Kg	☼	156	61 - 120	4	30
Bis(2-ethylhexyl) phthalate	ND	F2 F1 *3	2130	1110	F2 *3 F1	ug/Kg	☼	52	56 - 150	190	25
bis(chloroisopropyl) ether	ND		2130	1820		ug/Kg	☼	85	39 - 129	3	33
Butyl benzyl phthalate	ND	F1 *3	2130	ND	*3 F1	ug/Kg	₩	0	58 - 150	NC	27
Carbazole	ND		2130	1920		ug/Kg	☼	90	76 - 150	4	24
Chrysene	ND	F2 F1 *3	2130	1210	F2 *3 F1	ug/Kg	₩	56	69 - 127	190	27
Dibenz(a,h)anthracene	ND	F1 *3	2130	3540	F1 *3	ug/Kg	≎	166	51 - 139	1	29
Dibenzofuran	ND		2130	2060		ug/Kg	☼	96	68 - 120	4	18
Diethyl phthalate	39	J	2130	2170		ug/Kg	☼	100	71 - 120	5	22
Dimethyl phthalate	ND		2130	2140		ug/Kg	☼	100	71 - 120	4	21
Di-n-butyl phthalate	ND	F1	2130	1930	F1	ug/Kg	☼	59	66 - 135	6	26

**Eurofins Seattle** 

9/12/2024

Project/Site: Arkema PDI Sampling

#### Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-142896-8 MSD

**Matrix: Solid** 

Analysis Batch: 469291

Client Sample ID: PDI-24-SO-23.1-20240809

Prep Type: Total/NA

**Prep Batch: 468422** 

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Di-n-octyl phthalate	ND	*3	2130	2170	*3	ug/Kg	☼	102	53 - 150	13	18
Fluoranthene	ND	F1	2130	1350	F1	ug/Kg	₽	60	69 - 133	12	21
Fluorene	ND		2130	2070		ug/Kg	☼	97	68 - 121	4	17
Hexachlorobenzene	ND		2130	1970		ug/Kg	☼	92	65 - 126	5	32
Hexachlorobutadiene	27	J	2130	1960		ug/Kg	☼	91	56 - 146	4	19
Hexachlorocyclopentadiene	ND		2130	2050		ug/Kg	☼	96	36 - 124	4	21
Hexachloroethane	ND		2130	1770		ug/Kg	☼	83	68 - 120	3	34
Indeno[1,2,3-cd]pyrene	ND	F1 *3	2130	3400	F1 *3	ug/Kg	☼	160	43 - 133	6	30
Isophorone	ND		2130	2040		ug/Kg	☼	96	61 - 123	3	31
Naphthalene	ND		2130	1880		ug/Kg	☼	88	68 - 120	6	15
Nitrobenzene	ND		2130	2020		ug/Kg	☼	95	57 - 128	2	33
N-Nitrosodi-n-propylamine	ND		2130	2070		ug/Kg	☼	97	63 - 120	2	35
N-Nitrosodiphenylamine	ND		2130	2220		ug/Kg	☼	104	67 - 120	3	30
Pentachlorophenol	ND		4270	4150		ug/Kg	≎	97	18 - 133	5	40
Phenanthrene	36	J	2130	1920		ug/Kg	≎	88	74 - 120	7	27
Phenol	ND		2130	1730		ug/Kg	☼	81	59 - 120	4	30
Pyrene	ND	F1	2130	1230	F1	ug/Kg	₩	58	68 - 126	11	24

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
2-Fluorophenol (Surr)	80		58 - 120
Phenol-d5 (Surr)	80		59 - 120
Nitrobenzene-d5 (Surr)	90		63 - 120
2-Fluorobiphenyl	84		64 - 120
2,4,6-Tribromophenol (Surr)	84		62 - 122
Terphenyl-d14 (Surr)	32	S1-	73 - 125

#### Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 580-468715/1-A

**Matrix: Solid** 

Analysis Batch: 469041

**Client Sample ID: Method Blank** 

**Prep Type: Total/NA** 

**Prep Batch: 468715** 

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.0050	0.00090	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
2,4'-DDE	ND		0.0050	0.00060	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
2,4'-DDT	ND		0.0050	0.0010	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
4,4'-DDD	ND		0.0020	0.00023	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
4,4'-DDE	ND		0.0020	0.00037	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
4,4'-DDT	0.000705	J	0.0020	0.00037	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
Aldrin	ND		0.0030	0.00038	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
alpha-BHC	ND		0.0020	0.00016	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
beta-BHC	ND		0.0050	0.00025	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
cis-Chlordane	ND		0.0020	0.00075	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
delta-BHC	ND		0.0030	0.00028	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
Dieldrin	ND		0.0020	0.00035	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
Endosulfan I	ND		0.0020	0.00034	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
Endosulfan II	ND		0.0020	0.00026	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
Endosulfan sulfate	ND		0.0020	0.00028	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
Endrin	ND		0.0020	0.00047	mg/Kg		08/19/24 15:55	08/21/24 18:30	1

**Eurofins Seattle** 

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Project/Site: Arkema PDI Sampling

#### Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 580-468715/1-A

**Matrix: Solid** 

Analysis Batch: 469041

**Client Sample ID: Method Blank** Prep Type: Total/NA

**Prep Batch: 468715** 

	IVID	IVID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endrin aldehyde	MD		0.020	0.0048	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
Endrin ketone	ND		0.0020	0.00042	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
gamma-BHC (Lindane)	ND		0.0020	0.00075	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
Heptachlor	ND		0.0030	0.00019	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
Heptachlor epoxide	ND		0.0030	0.00030	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
Methoxychlor	ND		0.010	0.00037	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
Toxaphene	ND		0.13	0.025	mg/Kg		08/19/24 15:55	08/21/24 18:30	1
trans-Chlordane	ND		0.0030	0.00032	mg/Kg		08/19/24 15:55	08/21/24 18:30	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	72		53 - 123	08/19/24 15:55	08/21/24 18:30	1
Tetrachloro-m-xylene	83		48 - 123	08/19/24 15:55	08/21/24 18:30	1

Lab Sample ID: LCS 580-468715/2-A

**Matrix: Solid** 

**Analysis Batch: 469041** 

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

**Prep Batch: 468715** 

Spike LCS LCS %Rec Added Analyte Result Qualifier Unit %Rec Limits 4,4'-DDD 0.0200 0.0186 mg/Kg 93 55 - 121 4,4'-DDE 0.0200 0.0192 mg/Kg 96 59 - 124 4,4'-DDT 0.0200 0.0187 mg/Kg 93 42 - 132 Aldrin 0.0200 0.0191 96 56 - 121 mg/Kg alpha-BHC 0.0200 0.0189 mg/Kg 94 57 - 120 beta-BHC 0.0200 0.0197 99 53 - 120 mg/Kg cis-Chlordane 0.0200 0.0186 mg/Kg 93 56 - 120 delta-BHC 78 0.0200 0.0157 mg/Kg 47 - 120 Dieldrin 0.0200 0.0180 90 mg/Kg 61 - 121 Endosulfan I 0.0200 0.0202 101 48 - 121 mg/Kg 20 - 125 Endosulfan II 0.0200 0.0194 mg/Kg 97 Endosulfan sulfate 0.0200 0.0181 mg/Kg 90 57 - 120 Endrin 0.0200 0.0211 106 56 - 126 mg/Kg Endrin aldehyde 0.0200 0.0197 J 99 24 - 136 mg/Kg 0.0202 101 Endrin ketone 0.0200 mg/Kg 56 - 121 gamma-BHC (Lindane) 0.0200 0.0200 mg/Kg 100 55 - 120 Heptachlor 0.0200 0.0209 104 57 - 124 mg/Kg Heptachlor epoxide 0.0200 101 0.0202 mg/Kg 54 - 125 Methoxychlor 0.0200 0.0194 mg/Kg 97 51 - 133 trans-Chlordane 0.0200 0.0165 mg/Kg 83 42 - 136

LCS LCS

Surrogate	%Recovery Qเ	ıalifier Limits
DCB Decachlorobiphenyl	82	53 - 123
Tetrachloro-m-xylene	89	48 - 123

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

#### Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 580-468715/4-A Client Sample ID: Lab Control Sample **Matrix: Solid** Prep Type: Total/NA Analysis Batch: 469041 **Prep Batch: 468715** 

Spike LCS LCS %Rec Result Qualifier Added %Rec Limits Analyte Unit D Toxaphene 0.500 0.373 mg/Kg 75 54 - 141

LCS LCS Surrogate %Recovery Qualifier Limits 53 - 123 DCB Decachlorobiphenyl 81 Tetrachloro-m-xylene 87 48 - 123

**Client Sample ID: Lab Control Sample** Lab Sample ID: LCS 580-468715/6-A **Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 469041 **Prep Batch: 468715** Spike LCS LCS %Rec

Added Result Qualifier Limits **Analyte** Unit D %Rec 2,4'-DDD 0.0200 39 - 126 0.0153 mg/Kg 77 mg/Kg 2.4'-DDE 0.0200 0.0147 74 31 - 130 2,4'-DDT 0.0200 0.0162 mg/Kg 81 36 - 125

LCS LCS Surrogate %Recovery Qualifier Limits 53 - 123 DCB Decachlorobiphenyl 75 48 - 123 Tetrachloro-m-xylene 85

Lab Sample ID: LCSD 580-468715/5-A **Client Sample ID: Lab Control Sample Dup** Prep Type: Total/NA

**Matrix: Solid** 

**Analysis Batch: 469041** 

**Prep Batch: 468715** LCSD LCSD Spike %Rec **RPD** Result Qualifier Limit Analyte Added Unit D %Rec Limits RPD Toxaphene 0.500 0.350 mg/Kg 70 54 - 141

LCSD LCSD Surrogate %Recovery Qualifier Limits DCB Decachlorobiphenyl 78 53 - 123 Tetrachloro-m-xylene 92 48 - 123

Lab Sample ID: LCSD 580-468715/7-A

**Matrix: Solid** 

Prep Type: Total/NA Analysis Batch: 469041 **Prep Batch: 468715** Spike LCSD LCSD %Rec **RPD** Analyte Added Result Qualifier Unit %Rec Limits **RPD** Limit

2.4'-DDD 0.0200 0.0180 mg/Kg 90 39 - 126 16 35 2,4'-DDE 0.0200 0.0166 mg/Kg 83 31 - 130 12 40 2,4'-DDT 0.0200 0.0290 \*+ \*1 mg/Kg 145 36 - 125 57 32

LCSD LCSD %Recovery Qualifier Surrogate Limits DCB Decachlorobiphenyl 83 53 - 123 Tetrachloro-m-xylene 90 48 - 123

**Eurofins Seattle** 

Client Sample ID: Lab Control Sample Dup

Project/Site: Arkema PDI Sampling

#### Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 570-471244/1-A

**Matrix: Solid** 

**Analysis Batch: 473202** 

**Client Sample ID: Method Blank** 

**Prep Type: Total/NA** 

**Prep Batch: 471244** 

	IVID	IVID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		10	3.7	ug/Kg		08/15/24 15:29	08/22/24 02:41	1
2,4,5-TP (Silvex)	ND		10	7.5	ug/Kg		08/15/24 15:29	08/22/24 02:41	1
2,4-D	ND		100	49	ug/Kg		08/15/24 15:29	08/22/24 02:41	1
2,4-DB	ND		100	100	ug/Kg		08/15/24 15:29	08/22/24 02:41	1
Dalapon	ND		250	72	ug/Kg		08/15/24 15:29	08/22/24 02:41	1
Dicamba	ND		10	4.7	ug/Kg		08/15/24 15:29	08/22/24 02:41	1
Dichlorprop	ND		100	49	ug/Kg		08/15/24 15:29	08/22/24 02:41	1
Dinoseb	ND		100	59	ug/Kg		08/15/24 15:29	08/22/24 02:41	1
MCPA	ND		10000	4900	ug/Kg		08/15/24 15:29	08/22/24 02:41	1
MCPP	ND		10000	6600	ug/Kg		08/15/24 15:29	08/22/24 02:41	1

MB MB

MD MD

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 08/15/24 15:29 08/22/24 02:41 2,4-Dichlorophenylacetic acid 58 20 - 163

Lab Sample ID: LCS 570-471244/2-A

**Matrix: Solid** 

Analysis Batch: 473202

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

Prep Batch: 471244

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
2,4,5-T	20.0	32.8		ug/Kg		164	26 - 180	
2,4,5-TP (Silvex)	20.0	20.6		ug/Kg		103	10 - 180	
2,4-D	200	248	p	ug/Kg		124	13 - 180	
2,4-DB	200	282		ug/Kg		141	10 - 180	
Dalapon	500	413		ug/Kg		83	10 - 176	
Dicamba	20.0	24.8		ug/Kg		124	21 - 164	
Dichlorprop	200	170		ug/Kg		85	10 - 175	
Dinoseb	100	125		ug/Kg		125	10 - 180	
MCPA	20000	27700		ug/Kg		139	22 - 180	
MCPP	20000	20000	р	ug/Kg		100	18 - 180	

LCS LCS

Surrogate %Recovery Qualifier Limits 20 - 163 2,4-Dichlorophenylacetic acid 76 p

Lab Sample ID: LCSD 570-471244/3-A

**Matrix: Solid** 

**Analysis Batch: 473202** 

**Client Sample ID: Lab Control Sample Dup** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2,4,5-T	20.0	29.1		ug/Kg		146	26 - 180	12	40
2,4,5-TP (Silvex)	20.0	15.3		ug/Kg		77	10 - 180	30	40
2,4-D	200	157	p *1	ug/Kg		78	13 - 180	45	40
2,4-DB	200	162		ug/Kg		81	10 - 180	25	40
Dalapon	500	350		ug/Kg		70	10 - 176	16	40
Dicamba	20.0	19.0		ug/Kg		95	21 - 164	27	40
Dichlorprop	200	127		ug/Kg		64	10 - 175	29	40
Dinoseb	100	100		ug/Kg		100	10 - 180	13	40
MCPA	20000	19600		ug/Kg		98	22 - 180	35	40
MCPP	20000	14700	р	ug/Kg		73	18 - 180	30	40

**Eurofins Seattle** 

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Prep Type: Total/NA **Prep Batch: 471244** 

Project/Site: Arkema PDI Sampling

Method: 8151A - Herbicides (GC) (Continued)

LCSD LCSD

Surrogate %Recovery Qualifier Limits 2,4-Dichlorophenylacetic acid 20 - 163 57 p

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-468240/1-A

**Matrix: Solid** 

Analysis Batch: 468338

Client Sample ID: Method Blank Prep Type: Total/NA

**Prep Batch: 468240** 

MB MB Analyte Result Qualifier RL **MDL** Unit Prepared Analyzed Dil Fac #2 Diesel (C10-C24) ND 50 12 mg/Kg 08/14/24 16:12 08/15/24 20:04 Motor Oil (>C24-C36) ND 50 18 mg/Kg 08/14/24 16:12 08/15/24 20:04

MB MB

Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac o-Terphenyl 61 50 - 150 08/14/24 16:12 08/15/24 20:04

Lab Sample ID: LCS 580-468240/2-A **Client Sample ID: Lab Control Sample** 

**Matrix: Solid** 

**Analysis Batch: 468338** 

Prep Type: Total/NA

**Prep Batch: 468240** 

LCS LCS %Rec Spike Analyte Added Result Qualifier Unit D %Rec Limits #2 Diesel (C10-C24) 500 70 - 125 398 mg/Kg 80 Motor Oil (>C24-C36) 500 426 mg/Kg 85 70 - 129

LCS LCS

%Recovery Qualifier Limits Surrogate 50 - 150 o-Terphenyl

Lab Sample ID: LCSD 580-468240/3-A Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** 

**Analysis Batch: 468338** 

Prep Type: Total/NA

**Prep Batch: 468240** 

LCSD LCSD %Rec Spike **RPD** Added Result Qualifier Limits RPD Limit Unit D %Rec Analyte 500 70 - 125 2 #2 Diesel (C10-C24) 390 mg/Kg 78 16 Motor Oil (>C24-C36) 500 427 mg/Kg 85 70 - 129 16

LCSD LCSD

Surrogate %Recovery Qualifier Limits 50 - 150 o-Terphenyl 74

Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

Lab Sample ID: MB 320-791789/1-A

**Matrix: Solid** 

**Analysis Batch: 792237** 

Client Sample ID: Method Blank Prep Type: Total/NA

**Prep Batch: 791789** 

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	ND		0.80	0.20	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
Perfluoropentanoic acid (PFPeA)	ND		0.40	0.10	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
Perfluorohexanoic acid (PFHxA)	ND		0.20	0.058	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
Perfluoroheptanoic acid (PFHpA)	ND		0.20	0.050	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
Perfluorooctanoic acid (PFOA)	ND		0.20	0.050	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
Perfluorononanoic acid (PFNA)	ND		0.20	0.058	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
Perfluorodecanoic acid (PFDA)	ND		0.20	0.055	ug/Kg		08/16/24 11:43	08/18/24 01:33	1

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

# Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: MB 320-791789/1-A

**Matrix: Solid** 

**Analysis Batch: 792237** 

FTCA)

**Client Sample ID: Method Blank** 

**Prep Type: Total/NA Prep Batch: 791789** 

	-	MB	MB						•	
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Perfluoroundecanoic acid (PFUnA)	ND		0.20	0.050	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
	Perfluorododecanoic acid (PFDoA)	ND		0.20	0.050	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
	Perfluorotridecanoic acid (PFTrDA)	ND		0.20	0.050	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
	Perfluorotetradecanoic acid (PFTeDA)	ND		0.20	0.056	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
	Perfluorobutanesulfonic acid (PFBS)	ND		0.20	0.050	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
	Perfluoropentanesulfonic acid	ND		0.20	0.065			08/16/24 11:43	08/18/24 01:33	1
	(PFPeS)									
	Perfluorohexanesulfonic acid (PFHxS)	ND		0.20	0.050	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
	Perfluoroheptanesulfonic acid	ND		0.20	0.050	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
	(PFHpS)									
	Perfluorooctanesulfonic acid (PFOS)	ND		0.20	0.062				08/18/24 01:33	1
	Perfluorononanesulfonic acid (PFNS)	ND		0.20	0.063				08/18/24 01:33	1
	Perfluorodecanesulfonic acid (PFDS)	ND		0.20	0.057				08/18/24 01:33	1
	Perfluorododecanesulfonic acid	ND		0.20	0.059	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
	(PFDoS)	ND		0.80	0.00	/1/		00/16/04 11:40	00/40/04 04:22	1
	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	ND		0.80	0.20	ug/Kg		06/16/24 11:43	08/18/24 01:33	1
	1H,1H,2H,2H-Perfluorooctane sulfonic	ND		0.80	0.20	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
	acid (6:2 FTS)			0.00	0.20	~g/. tg		00, 10,2 1 11110	30, 10, 2 1 3 1103	•
	1H,1H,2H,2H-Perfluorodecane	ND		0.80	0.20	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
	sulfonic acid (8:2 FTS)									
	Perfluorooctanesulfonamide (PFOSA)	ND		0.20	0.050	ug/Kg			08/18/24 01:33	1
	N-methylperfluorooctane sulfonamide	ND		0.20	0.050	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
	(NMeFOSA)	ND						00/40/04 44 40	00/40/04 04 00	
	N-ethylperfluorooctane sulfonamide	ND		0.20	0.052	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
	(NEtFOSA) N-ethylperfluorooctanesulfonamidoac	ND		0.20	0.054	ua/Ka		08/16/24 11:43	08/18/24 01:33	1
	etic acid (NEtFOSAA)	110		0.20	0.004	ug/itg		00/10/24 11:40	00/10/24 01:00	
	N-methylperfluorooctane	ND		2.0	0.50	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
	sulfonamidoethanol (NMeFOSE)									
	N-ethylperfluorooctane	ND		2.0	0.51	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
	sulfonamidoethanol (NEtFOSE)	ND		0.00	0.00			00/40/04 44 40	00/40/04 04 00	4
	Hexafluoropropylene Oxide Dimer	ND		0.80	0.22	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
	Acid (HFPO-DA) 4,8-Dioxa-3H-perfluorononanoic acid	ND		0.80	0.20	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
	(ADONA)	110		0.00	0.20	ug/itg		00/10/24 11:40	00/10/24 01:00	
	Perfluoro-3-methoxypropanoic acid	ND		0.40	0.10	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
	(PFMPA)									
	Perfluoro-4-methoxybutanoic acid	ND		0.40	0.10	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
	(PFMBA)	NB		0.40	0.44	"		00/40/04 44 40	00/40/04 04 00	
	Nonafluoro-3,6-dioxaheptanoic acid	ND		0.40	0.11	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
	(NFDHA) 9-Chlorohexadecafluoro-3-oxanonan	ND		0.80	0.24	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
	e-1-sulfonic acid(9Cl-PF3ONS)	IVD		0.00	0.24	ug/itg		00/10/24 11:43	00/10/24 01:00	'
	11-Chloroeicosafluoro-3-oxaundecan	ND		0.80	0.29	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
	e-1-sulfonic acid (11Cl-PF3OUdS)					0 0				
	Perfluoro (2-ethoxyethane) sulfonic	ND		0.40	0.11	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
	acid (PFEESA)									
	3-Perfluoropropylpropanoic acid (3:3	ND		1.0	0.29	ug/Kg		U8/16/24 11:43	08/18/24 01:33	1
	FTCA) 3-Perfluoropentylpropanoic acid (5:3	ND		5.0	17	ua/Ka		08/16/24 11:42	08/18/24 01:22	4
	FTCA)	טאו		5.0	1.7	ug/Kg		00/10/24 11.43	08/18/24 01:33	1
	3-Perfluoroheptylpropanoic acid (7:3	ND		5.0	1.9	ug/Kg		08/16/24 11:43	08/18/24 01:33	1
ı						5 -5				•

**Eurofins Seattle** 

Project/Site: Arkema PDI Sampling

# Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

	MB	MB				
Isotope Dilution	%Recovery	Qualifier Limits		Prepared	Analyzed	Dil Fac
13C4 PFBA	103	20 - 150	)	08/16/24 11:43	08/18/24 01:33	1
13C5 PFPeA	128	20 - 150	)	08/16/24 11:43	08/18/24 01:33	1
13C5 PFHxA	112	20 - 150	)	08/16/24 11:43	08/18/24 01:33	1
13C4 PFHpA	104	20 - 150	)	08/16/24 11:43	08/18/24 01:33	1
13C8 PFOA	117	20 - 150	)	08/16/24 11:43	08/18/24 01:33	1
13C9 PFNA	111	20 - 150	)	08/16/24 11:43	08/18/24 01:33	1
13C6 PFDA	109	20 - 150	)	08/16/24 11:43	08/18/24 01:33	1
13C7 PFUnA	103	20 - 150	)	08/16/24 11:43	08/18/24 01:33	1
13C2 PFDoA	103	20 - 150	)	08/16/24 11:43	08/18/24 01:33	1
13C2 PFTeDA	110	20 - 150	)	08/16/24 11:43	08/18/24 01:33	1
13C3 PFBS	118	20 - 150	)	08/16/24 11:43	08/18/24 01:33	1
13C3 PFHxS	120	20 - 150	)	08/16/24 11:43	08/18/24 01:33	1
13C8 PFOS	125	20 - 150	)	08/16/24 11:43	08/18/24 01:33	1
13C8 PFOSA	140	20 - 150	)	08/16/24 11:43	08/18/24 01:33	1
d5-NEtFOSAA	127	20 - 150	)	08/16/24 11:43	08/18/24 01:33	1
13C2 4:2 FTS	129	20 - 150	)	08/16/24 11:43	08/18/24 01:33	1
13C2 6:2 FTS	117	20 - 150	)	08/16/24 11:43	08/18/24 01:33	1
13C2 8:2 FTS	131	20 - 150	)	08/16/24 11:43	08/18/24 01:33	1
13C3 HFPO-DA	107	20 - 150	)	08/16/24 11:43	08/18/24 01:33	1
d7-N-MeFOSE-M	92.0	20 - 150	)	08/16/24 11:43	08/18/24 01:33	1
d9-N-EtFOSE-M	86.4	20 - 150	)	08/16/24 11:43	08/18/24 01:33	1
d5-NEtPFOSA	67.3	20 - 150	)	08/16/24 11:43	08/18/24 01:33	1
d3-NMePFOSA	81.0	20 - 150	)	08/16/24 11:43	08/18/24 01:33	1

Lab Sample ID: LCS 320-791789/3-A

Matrix: Solid

**Analysis Batch: 792237** 

Client S	ample	ID: I	Lab	Coi	ntro	l Samı	ole
			_	_			

Prep Type: Total/NA Prep Batch: 791789

Analysis Batch: 792237	Spike	ıcs	LCS				Prep Batch: 791789 %Rec
Analyte	Added		Qualifier	Unit	D	%Rec	Limits
Perfluorobutanoic acid (PFBA)	12.8	11.1		ug/Kg	_ =	87	40 - 150
Perfluoropentanoic acid (PFPeA)	6.40	5.43		ug/Kg		85	40 - 150
Perfluorohexanoic acid (PFHxA)	3.20	2.74		ug/Kg		86	40 - 150
Perfluoroheptanoic acid (PFHpA)	3.20	2.95		ug/Kg		92	40 - 150
Perfluorooctanoic acid (PFOA)	3.20	2.81		ug/Kg		88	40 - 150
Perfluorononanoic acid (PFNA)	3.20	2.73		ug/Kg		85	40 - 150
Perfluorodecanoic acid (PFDA)	3.20	3.05		ug/Kg		95	40 - 150
Perfluoroundecanoic acid (PFUnA)	3.20	2.87		ug/Kg		90	40 - 150
Perfluorododecanoic acid (PFDoA)	3.20	2.54		ug/Kg		79	40 - 150
Perfluorotridecanoic acid (PFTrDA)	3.20	2.19		ug/Kg		69	40 - 150
Perfluorotetradecanoic acid (PFTeDA)	3.20	2.27		ug/Kg		71	40 - 150
Perfluorobutanesulfonic acid (PFBS)	2.84	2.33		ug/Kg		82	40 - 150
Perfluoropentanesulfonic acid (PFPeS)	3.01	2.73		ug/Kg		91	40 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.92	2.16		ug/Kg		74	40 - 150
Perfluoroheptanesulfonic acid (PFHpS)	3.05	2.51		ug/Kg		82	40 - 150
Perfluorooctanesulfonic acid (PFOS)	2.98	2.42		ug/Kg		81	40 - 150

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-142896-1

LCS LCS

2.30

26.7

28.2

6.13

63.2

Result Qualifier

Unit

ug/Kg

ug/Kg

ug/Kg

ug/Kg

ug/Kg

Project/Site: Arkema PDI Sampling

#### Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Spike

Added

3 08

Lab Sample ID: LCS 320-791789/3-A

**Matrix: Solid** 

Analyte

**Analysis Batch: 792237** 

Perfluorononanesulfonic acid

doacetic acid (NEtFOSAA)

sulfonamidoethanol (NMeFOSE)

sulfonamidoethanol (NEtFOSE)

Nonafluoro-3,6-dioxaheptanoic

3-Perfluoroheptylpropanoic acid

N-methylperfluorooctane

N-ethylperfluorooctane

**Client Sample ID: Lab Control Sample** 

Limits

40 - 150

%Rec

75

83

88

96

76

74

79

40 - 150

40 - 150

40 - 150

40 - 150

40 - 150

40 - 150

Prep Type: Total/NA **Prep Batch: 791789** %Rec

(PFNS) Perfluorodecanesulfonic acid 3.08 2.28 ug/Kg 74 40 - 150 (PFDS) Perfluorododecanesulfonic acid 3.10 2.43 ug/Kg 78 40 - 150 (PFDoS) 1H,1H,2H,2H-Perfluorohexane 12.0 10.4 ug/Kg 86 40 - 150 sulfonic acid (4:2 FTS) 12.2 92 1H,1H,2H,2H-Perfluorooctane 11.2 ug/Kg 40 - 150 sulfonic acid (6:2 FTS) 12.3 10.7 87 40 - 150 1H,1H,2H,2H-Perfluorodecane ug/Kg sulfonic acid (8:2 FTS) Perfluorooctanesulfonamide 3.20 2.60 ug/Kg 81 40 - 150 (PFOSA) N-methylperfluorooctane 3.20 2.77 ug/Kg 40 - 150 sulfonamide (NMeFOSA) N-ethylperfluorooctane 3.20 2.80 ug/Kg 88 40 - 150 sulfonamide (NEtFOSA) 3.20 3.08 ug/Kg 96 40 - 150 N-ethylperfluorooctanesulfonami

Hexafluoropropylene Oxide 12.8 10.0 ug/Kg 78 40 - 150 Dimer Acid (HFPO-DA) 4,8-Dioxa-3H-perfluorononanoic 12.1 9.81 ug/Kg 81 40 - 150 acid (ADONA) Perfluoro-3-methoxypropanoic 6.40 5.60 ug/Kg 88 40 - 150 acid (PFMPA) Perfluoro-4-methoxybutanoic 6.40 5 41 ug/Kg 85 40 - 150 acid (PFMBA)

6.40

32.0

32.0

acid (NFDHA) 9.06 9-Chlorohexadecafluoro-3-oxan 12.0 ug/Kg onane-1-sulfonic acid(9CI-PF3ONS) 12.1 8.98 11-Chloroeicosafluoro-3-oxaund ug/Kg ecane-1-sulfonic acid

(11CI-PF3OUdS) 5.71 4.77 Perfluoro (2-ethoxyethane) ug/Kg 84 40 - 150 sulfonic acid (PFEESA) 3-Perfluoropropylpropanoic acid 16.0 13.5 ug/Kg 85 40 - 150 (3:3 FTCA) 79.9 67.1 40 - 150 3-Perfluoropentylpropanoic acid ug/Kg (5:3 FTCA)

79.9

(7:3 FTCA)

LCS LCS

Isotope Dilution	%Recovery	Qualifier	Limits
13C4 PFBA	96.3		20 - 150
13C5 PFPeA	116		20 - 150
13C5 PFHxA	104		20 - 150
13C4 PFHpA	96.1		20 - 150
13C8 PFOA	107		20 - 150

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

#### Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Limits

20 - 150

20 - 150

20 - 150

20 - 150

20 - 150

20 - 150

Lab Sample ID: LCS 320-791789/3-A

**Matrix: Solid** 

Isotope Dilution

13C9 PFNA

13C6 PFDA

**Analysis Batch: 792237** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA **Prep Batch: 791789** 

13C7 PFUnA 101 20 - 150 13C2 PFDoA 110 20 - 150 13C2 PFTeDA 20 - 150 110 13C3 PFBS 111 20 - 150 13C3 PFHxS 110 20 - 150 13C8 PFOS 111 20 - 150 13C8 PFOSA 120 20 - 150 d5-NEtFOSAA 103 20 - 150 13C2 4:2 FTS 108 20 - 150 13C2 6:2 FTS 104 20 - 150 13C2 8:2 FTS 109 20 - 150 13C3 HFPO-DA 102 20 - 150

LCS LCS

%Recovery Qualifier

104

100

81.3

73.8

59.8

67.4

Lab Sample ID: LLCS 320-791789/2-A

**Matrix: Solid** 

d7-N-MeFOSE-M

d9-N-EtFOSE-M

d5-NEtPFOSA

d3-NMePFOSA

**Analysis Batch: 792237** 

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

**Prep Batch: 791789** 

Analysis Batch. 192231	Spike	LLCS	LLCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
Perfluorobutanoic acid (PFBA)	1.28	1.00		ug/Kg		78	40 - 150
Perfluoropentanoic acid (PFPeA)	0.640	0.480		ug/Kg		75	40 - 150
Perfluorohexanoic acid (PFHxA)	0.320	0.261		ug/Kg		81	40 - 150
Perfluoroheptanoic acid (PFHpA)	0.320	0.257		ug/Kg		80	40 - 150
Perfluorooctanoic acid (PFOA)	0.320	0.322		ug/Kg		100	40 - 150
Perfluorononanoic acid (PFNA)	0.320	0.267		ug/Kg		83	40 - 150
Perfluorodecanoic acid (PFDA)	0.320	0.241		ug/Kg		75	40 - 150
Perfluoroundecanoic acid (PFUnA)	0.320	0.274		ug/Kg		86	40 - 150
Perfluorododecanoic acid (PFDoA)	0.320	0.266		ug/Kg		83	40 - 150
Perfluorotridecanoic acid (PFTrDA)	0.320	0.206		ug/Kg		64	40 - 150
Perfluorotetradecanoic acid (PFTeDA)	0.320	0.219		ug/Kg		69	40 - 150
Perfluorobutanesulfonic acid (PFBS)	0.284	0.232		ug/Kg		82	40 - 150
Perfluoropentanesulfonic acid (PFPeS)	0.301	0.226		ug/Kg		75	40 - 150
Perfluorohexanesulfonic acid (PFHxS)	0.292	0.209		ug/Kg		72	40 - 150
Perfluoroheptanesulfonic acid (PFHpS)	0.305	0.225		ug/Kg		74	40 - 150
Perfluorooctanesulfonic acid (PFOS)	0.298	0.227		ug/Kg		76	40 - 150
Perfluorononanesulfonic acid (PFNS)	0.308	0.199	J	ug/Kg		65	40 - 150

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-142896-1

LLCS LLCS

Project/Site: Arkema PDI Sampling

# Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Spike

Lab Sample ID: LLCS 320-791789/2-A

**Matrix: Solid** 

**Analysis Batch: 792237** 

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

**Prep Batch: 791789** %Rec

Analyte	Added	Result (	Qualifier Unit	. D	%Rec	Limits	
Perfluorodecanesulfonic acid	0.308	0.203	ug/k	(g	66	40 - 150	
(PFDS)							
Perfluorododecanesulfonic acid	0.310	0.162	J ug/k	ζg	52	40 - 150	
(PFDoS)							
1H,1H,2H,2H-Perfluorohexane	1.20	1.00	ug/k	ίg	83	40 - 150	
sulfonic acid (4:2 FTS)							
1H,1H,2H,2H-Perfluorooctane	1.22	1.08	ug/k	ίg	88	40 - 150	
sulfonic acid (6:2 FTS)							
1H,1H,2H,2H-Perfluorodecane	1.23	1.07	ug/k	(g	87	40 - 150	
sulfonic acid (8:2 FTS)							
Perfluorooctanesulfonamide	0.320	0.241	ug/k	ίg	75	40 - 150	
(PFOSA)							
N-methylperfluorooctane	0.320	0.236	ug/k	(g	74	40 - 150	
sulfonamide (NMeFOSA)							
N-ethylperfluorooctane	0.320	0.274	ug/k	(g	86	40 - 150	
sulfonamide (NEtFOSA)							
N-ethylperfluorooctanesulfonami	0.320	0.253	ug/k	(g	79	40 - 150	
doacetic acid (NEtFOSAA)							
N-methylperfluorooctane	3.20	2.42	ug/k	(g	76	40 - 150	
sulfonamidoethanol (NMeFOSE)							
N-ethylperfluorooctane	3.20	2.56	ug/k	(g	80	40 - 150	
sulfonamidoethanol (NEtFOSE)			_	_			
Hexafluoropropylene Oxide	1.28	1.11	ug/k	(g	87	40 - 150	
Dimer Acid (HFPO-DA)				_			
4,8-Dioxa-3H-perfluorononanoic	1.21	0.994	ug/k	(g	82	40 - 150	
acid (ADONA)							
Perfluoro-3-methoxypropanoic	0.640	0.524	ug/k	.g	82	40 - 150	
acid (PFMPA)	0.040	0.404		•	70	40 450	
Perfluoro-4-methoxybutanoic	0.640	0.464	ug/k	<b>.</b> g	72	40 - 150	
acid (PFMBA)	0.040	0.400		·	70	40 450	
Nonafluoro-3,6-dioxaheptanoic	0.640	0.499	ug/k	.g	78	40 - 150	
acid (NFDHA)	1.20	0.017		· · · · · · · · · · · · · · · · · · ·		40 450	
9-Chlorohexadecafluoro-3-oxan	1.20	0.917	ug/k	.g	77	40 - 150	
onane-1-sulfonic							
acid(9CI-PF3ONS) 11-Chloroeicosafluoro-3-oxaund	1.21	0.738	J ug/k	<b>.</b>	61	40 - 150	
ecane-1-sulfonic acid	1.21	0.730	ug/r	.g	01	40 - 130	
(11Cl-PF3OUdS)							
Perfluoro (2-ethoxyethane)	0.571	0.440	ug/k	'a	77	40 - 150	
sulfonic acid (PFEESA)	0.57 1	0.440	ug/r	<b>'</b> 9	11	40 - 150	
3-Perfluoropropylpropanoic acid	1.60	1.10	ug/k		69	40 - 150	
(3:3 FTCA)	1.00	1.10	ug/r	ษ	Uð	70 - 100	
3-Perfluoropentylpropanoic acid	7.99	5.72	ug/k	(a	72	40 - 150	
(5:3 FTCA)		J <b>L</b>	ag/i	-9	. –	.000	

LLCS LLCS

Isotope Dilution	%Recovery	Qualifier	Limits
13C4 PFBA	102		20 - 150
13C5 PFPeA	118		20 - 150
13C5 PFHxA	107		20 - 150
13C4 PFHpA	101		20 - 150
13C8 PFOA	97.6		20 - 150
13C9 PFNA	103		20 - 150

3-Perfluoroheptylpropanoic acid

(7:3 FTCA)

**Eurofins Seattle** 

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40 - 150

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7.99

5.51

ug/Kg

Project/Site: Arkema PDI Sampling

#### Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS (Continued)

Lab Sample ID: LLCS 320-791789/2-A **Client Sample ID: Lab Control Sample Matrix: Solid** Prep Type: Total/NA

Analysis Batch: 792237				Prep Batch: 791789
	LLCS	LLCS		
Isotope Dilution	%Recovery	Qualifier	Limits	
13C6 PFDA	95.7		20 - 150	
13C7 PFUnA	96.4		20 - 150	
13C2 PFDoA	87.5		20 - 150	
13C2 PFTeDA	86.0		20 - 150	
13C3 PFBS	104		20 - 150	
13C3 PFHxS	102		20 - 150	
13C8 PFOS	105		20 - 150	
13C8 PFOSA	109		20 - 150	
d5-NEtFOSAA	96.6		20 - 150	
13C2 4:2 FTS	102		20 - 150	
13C2 6:2 FTS	98.0		20 - 150	
13C2 8:2 FTS	104		20 - 150	
13C3 HFPO-DA	96.7		20 - 150	
d7-N-MeFOSE-M	60.5		20 - 150	
d9-N-EtFOSE-M	51.2		20 - 150	
d5-NEtPFOSA	47.2		20 - 150	
d3-NMePFOSA	56.6		20 - 150	
d3-NMePFOSA	56.6		20 - 150	

#### Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA

**Client Sample ID: Method Blank** Lab Sample ID: MB 320-791789/1-A **Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 792519 Prep Batch: 791789** 

MB MB RL **Analyte** Result Qualifier **MDL** Unit Prepared Analyzed Dil Fac

N-methylperfluorooctanesulfonamidoa ND 0.20

0.10 ug/Kg cetic acid (NMeFOSAA) - RA MB MB

Isotope Dilution %Recovery Qualifier Limits Prepared Analyzed d3-NMeFOSAA - RA 08/16/24 11:43 08/19/24 14:16 20 - 150 122

Lab Sample ID: LCS 320-791789/3-A **Client Sample ID: Lab Control Sample Matrix: Solid** 

**Analysis Batch: 792519 Prep Batch: 791789** 

Spike LCS LCS %Rec Analyte Added Result Qualifier Unit %Rec Limits 3.20 2.60 N-methylperfluorooctanesulfona ug/Kg 81

midoacetic acid (NMeFOSAA) -RA

Isotope Dilution %Recovery Qualifier Limits d3-NMeFOSAA - RA 20 - 150

LCS LCS

Lab Sample ID: LLCS 320-791789/2-A **Client Sample ID: Lab Control Sample** 

**Matrix: Solid** Prep Type: Total/NA **Analysis Batch: 792519** 

LLCS LLCS Spike %Rec Added Result Qualifier Unit D %Rec Limits 0.320 0.230 72 N-methylperfluorooctanesulfona ug/Kg

midoacetic acid (NMeFOSAA) -

RA

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Dil Fac

08/16/24 11:43 08/19/24 14:16

**Prep Batch: 791789** 

40 - 150

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

# Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS - RA (Continued)

LLCS LLCS

Isotope Dilution %Recovery Qualifier Limits d3-NMeFOSAA - RA 114 20 - 150

Method: 1613B - Dioxins and Furans (HRG
---

Lab Sample ID: MB 320-793238/1-A	Client Sample ID: Method Blank

Client Sample ID: Method Blank	
Prep Type: Total/NA	ī
<b>Prep Batch: 793238</b>	

Matrix: Solid Analysis Batch: 796419								Prep Type: To Prep Batch:	
Analysis Batch. 190419	MB	МВ						Piep Batcii.	793230
Analyte		Qualifier	RL	EDL	Unit	D	Prepared	Analyzed	Dil Fac
2,3,7,8-TCDD	ND		1.0	0.056	pg/g		08/21/24 15:11	09/04/24 19:51	1
2,3,7,8-TCDF	ND		1.0	0.057	pg/g		08/21/24 15:11	09/04/24 19:51	1
1,2,3,7,8-PeCDD	ND		5.0	0.059	pg/g		08/21/24 15:11	09/04/24 19:51	1
1,2,3,7,8-PeCDF	ND		5.0	0.052	pg/g		08/21/24 15:11	09/04/24 19:51	1
2,3,4,7,8-PeCDF	ND		5.0	0.061	pg/g		08/21/24 15:11	09/04/24 19:51	1
1,2,3,4,7,8-HxCDD	0.177	Jq	5.0	0.077	pg/g		08/21/24 15:11	09/04/24 19:51	1
1,2,3,6,7,8-HxCDD	ND		5.0	0.073	pg/g		08/21/24 15:11	09/04/24 19:51	1
1,2,3,7,8,9-HxCDD	ND		5.0	0.070	pg/g		08/21/24 15:11	09/04/24 19:51	1
1,2,3,4,7,8-HxCDF	ND		5.0	0.040	pg/g		08/21/24 15:11	09/04/24 19:51	1
1,2,3,6,7,8-HxCDF	ND		5.0	0.036			08/21/24 15:11	09/04/24 19:51	1
1,2,3,7,8,9-HxCDF	0.161	J	5.0	0.040	pg/g		08/21/24 15:11	09/04/24 19:51	1
2,3,4,6,7,8-HxCDF	ND		5.0	0.035	pg/g		08/21/24 15:11	09/04/24 19:51	1
1,2,3,4,6,7,8-HpCDD	ND		5.0	0.073	pg/g		08/21/24 15:11	09/04/24 19:51	1
1,2,3,4,6,7,8-HpCDF	0.220	J	5.0	0.059	pg/g		08/21/24 15:11	09/04/24 19:51	1
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.072			08/21/24 15:11	09/04/24 19:51	1
OCDD	2.13	J	10	0.15	pg/g		08/21/24 15:11	09/04/24 19:51	1
OCDF	0.254	Jq	10	0.076			08/21/24 15:11	09/04/24 19:51	1
	MB	MB							
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C-2,3,7,8-TCDD	79		25 - 164				08/21/24 15:11	09/04/24 19:51	1
13C-2,3,7,8-TCDF	69		24 - 169				08/21/24 15:11	09/04/24 19:51	1
13C-1,2,3,7,8-PeCDD	80		25 - 181				08/21/24 15:11	09/04/24 19:51	1
13C-1,2,3,7,8-PeCDF	75		24 - 185				08/21/24 15:11	09/04/24 19:51	1
13C-2,3,4,7,8-PeCDF	70		21 - 178				08/21/24 15:11	09/04/24 19:51	1
13C-1,2,3,4,7,8-HxCDD	76		32 - 141				08/21/24 15:11	09/04/24 19:51	1
13C-1,2,3,6,7,8-HxCDD	88		28 - 130				08/21/24 15:11	09/04/24 19:51	1
13C-1,2,3,4,7,8-HxCDF	75		26 - 152				08/21/24 15:11	09/04/24 19:51	1
13C-1,2,3,6,7,8-HxCDF	85		26 - 123				08/21/24 15:11	09/04/24 19:51	1
12C 2 2 4 6 7 9 HVCDE	02		20 126				00/21/24 15:11	00/04/24 10:51	

	• • • • • • • • • • • • • • • • • • • •	• •	00.2 00.0	
13C-1,2,3,7,8-PeCDD	80	25 - 181	08/21/24 15:11 09/04/24 19:51	1
13C-1,2,3,7,8-PeCDF	75	24 - 185	08/21/24 15:11 09/04/24 19:51	1
13C-2,3,4,7,8-PeCDF	70	21 - 178	08/21/24 15:11 09/04/24 19:51	1
13C-1,2,3,4,7,8-HxCDD	76	32 - 141	08/21/24 15:11 09/04/24 19:51	1
13C-1,2,3,6,7,8-HxCDD	88	28 - 130	08/21/24 15:11 09/04/24 19:51	1
13C-1,2,3,4,7,8-HxCDF	75	26 - 152	08/21/24 15:11 09/04/24 19:51	1
13C-1,2,3,6,7,8-HxCDF	85	26 - 123	08/21/24 15:11 09/04/24 19:51	1
13C-2,3,4,6,7,8-HxCDF	83	28 - 136	08/21/24 15:11 09/04/24 19:51	1
13C-1,2,3,7,8,9-HxCDF	75	29 - 147	08/21/24 15:11 09/04/24 19:51	1
13C-1,2,3,4,6,7,8-HpCDD	82	23 - 140	08/21/24 15:11 09/04/24 19:51	1
13C-1,2,3,4,6,7,8-HpCDF	76	28 - 143	08/21/24 15:11 09/04/24 19:51	1
13C-1,2,3,4,7,8,9-HpCDF	71	26 - 138	08/21/24 15:11 09/04/24 19:51	1
13C-OCDD	75	17 - 157	08/21/24 15:11 09/04/24 19:51	1
13C-OCDF	70	17 - 157	08/21/24 15:11 09/04/24 19:51	1

MB MB Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 37CI4-2,3,7,8-TCDD 82 35 - 197 08/21/24 15:11 09/04/24 19:51

**Eurofins Seattle** 

Project/Site: Arkema PDI Sampling

#### Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCS 320-793238/2-A

**Matrix: Solid** 

**Analysis Batch: 796419** 

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** Prep Batch: 793238

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D %F	Rec	Limits	
2,3,7,8-TCDD	20.0	16.8		pg/g		84	67 - 158	
2,3,7,8-TCDF	20.0	17.4		pg/g		87	75 - 158	
1,2,3,7,8-PeCDD	100	91.0		pg/g		91	70 - 142	
1,2,3,7,8-PeCDF	100	90.9		pg/g		91	80 - 134	
2,3,4,7,8-PeCDF	100	92.4		pg/g		92	68 - 160	
1,2,3,4,7,8-HxCDD	100	91.5		pg/g		91	70 - 164	
1,2,3,6,7,8-HxCDD	100	94.2		pg/g		94	76 - 134	
1,2,3,7,8,9-HxCDD	100	92.9		pg/g		93	64 - 162	
1,2,3,4,7,8-HxCDF	100	97.2		pg/g		97	72 - 134	
1,2,3,6,7,8-HxCDF	100	96.7		pg/g		97	84 - 130	
1,2,3,7,8,9-HxCDF	100	96.7		pg/g		97	78 - 130	
2,3,4,6,7,8-HxCDF	100	98.6		pg/g		99	70 - 156	
1,2,3,4,6,7,8-HpCDD	100	95.1		pg/g		95	70 - 140	
1,2,3,4,6,7,8-HpCDF	100	92.9		pg/g		93	82 - 122	
1,2,3,4,7,8,9-HpCDF	100	90.7		pg/g		91	78 - 138	
OCDD	200	198		pg/g		99	78 - 144	
OCDF	200	193		pg/g		97	63 - 170	
100 100								

	LCS	LCS	
Isotope Dilution	%Recovery	Qualifier	Limits
13C-2,3,7,8-TCDD	85		20 - 175
13C-2,3,7,8-TCDF	73		22 - 152
13C-1,2,3,7,8-PeCDD	81		21 - 227
13C-1,2,3,7,8-PeCDF	78		21 - 192
13C-2,3,4,7,8-PeCDF	76		13 - 328
13C-1,2,3,4,7,8-HxCDD	88		21 - 193
13C-1,2,3,6,7,8-HxCDD	93		25 - 163
13C-1,2,3,4,7,8-HxCDF	84		19 - 202
13C-1,2,3,6,7,8-HxCDF	90		21 - 159
13C-2,3,4,6,7,8-HxCDF	86		22 - 176
13C-1,2,3,7,8,9-HxCDF	76		17 - 205
13C-1,2,3,4,6,7,8-HpCDD	83		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	79		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	75		20 - 186
13C-OCDD	76		13 - 199
13C-OCDF	73		13 - 199

LCS LCS

Surrogate %Recovery Qualifier Limits 37CI4-2,3,7,8-TCDD 31 - 191

Lab Sample ID: LCSD 320-793238/3-A

**Matrix: Solid** 

**Analysis Batch: 796419** 

Client Sample	ID:	Lab	Control	Sampl	le Dup
			Dron T	vno: To	tal/NLA

Prep Type: Total/NA Prep Batch: 793238

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2,3,7,8-TCDD	20.0	17.4		pg/g		87	67 - 158	4	50
2,3,7,8-TCDF	20.0	17.0		pg/g		85	75 - 158	2	50
1,2,3,7,8-PeCDD	100	88.8		pg/g		89	70 - 142	2	50
1,2,3,7,8-PeCDF	100	87.9		pg/g		88	80 - 134	3	50

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Project/Site: Arkema PDI Sampling

#### Method: 1613B - Dioxins and Furans (HRGC/HRMS) (Continued)

Lab Sample ID: LCSD 320-793238/3-A

**Matrix: Solid** 

**Analysis Batch: 796419** 

**Client Sample ID: Lab Control Sample Dup** 

**Prep Type: Total/NA** Prep Batch: 793238

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2,3,4,7,8-PeCDF	100	88.2		pg/g		88	68 - 160	5	50
1,2,3,4,7,8-HxCDD	100	90.8		pg/g		91	70 - 164	1	50
1,2,3,6,7,8-HxCDD	100	90.7		pg/g		91	76 - 134	4	50
1,2,3,7,8,9-HxCDD	100	91.0		pg/g		91	64 - 162	2	50
1,2,3,4,7,8-HxCDF	100	93.9		pg/g		94	72 - 134	3	50
1,2,3,6,7,8-HxCDF	100	92.5		pg/g		93	84 - 130	4	50
1,2,3,7,8,9-HxCDF	100	95.9		pg/g		96	78 - 130	1	50
2,3,4,6,7,8-HxCDF	100	94.7		pg/g		95	70 - 156	4	50
1,2,3,4,6,7,8-HpCDD	100	91.3		pg/g		91	70 - 140	4	50
1,2,3,4,6,7,8-HpCDF	100	90.5		pg/g		90	82 - 122	3	50
1,2,3,4,7,8,9-HpCDF	100	87.1		pg/g		87	78 - 138	4	50
OCDD	200	190		pg/g		95	78 - 144	4	50
OCDF	200	190		pg/g		95	63 - 170	2	50

	LCSD	LCSD	
Isotope Dilution	%Recovery	Qualifier	Limits
13C-2,3,7,8-TCDD	87		20 - 175
13C-2,3,7,8-TCDF	74		22 - 152
13C-1,2,3,7,8-PeCDD	83		21 - 227
13C-1,2,3,7,8-PeCDF	79		21 - 192
13C-2,3,4,7,8-PeCDF	76		13 - 328
13C-1,2,3,4,7,8-HxCDD	86		21 - 193
13C-1,2,3,6,7,8-HxCDD	93		25 - 163
13C-1,2,3,4,7,8-HxCDF	84		19 - 202
13C-1,2,3,6,7,8-HxCDF	91		21 - 159
13C-2,3,4,6,7,8-HxCDF	88		22 - 176
13C-1,2,3,7,8,9-HxCDF	77		17 - 205
13C-1,2,3,4,6,7,8-HpCDD	86		26 - 166
13C-1,2,3,4,6,7,8-HpCDF	80		21 - 158
13C-1,2,3,4,7,8,9-HpCDF	74		20 - 186
13C-OCDD	77		13 - 199
13C-OCDF	72		13 - 199

LCSD LCSD

%Recovery Qualifier Surrogate Limits 37CI4-2,3,7,8-TCDD 31 - 191 85

Method: 2540G - SM 2540G

Lab Sample ID: 580-142896-6 DU

**Matrix: Solid** 

Analysis Batch: 468495

Client Sample ID: PDI-24-50-35.5-20240809
Prep Type: Total/NA

•	Sample	Sample	DU	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
Percent Solids	74.7		81.8		%		9	20
Percent Moisture	25.3		18.2	F3	%		33	20

**Eurofins Seattle** 

9/12/2024

Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Client Sample ID: RB-01-WQ-20240809

Lab Sample ID: 580-142896-1 Date Collected: 08/09/24 09:40

**Matrix: Water** 

Date Received: 08/13/24 13:25

Client: ERM-West

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	468430	JBT	EET SEA	08/15/24 22:57
Total/NA	Analysis	8260D	RA	1	468819	JBT	EET SEA	08/20/24 17:52

Client Sample ID: TB-01-WQ-20240809

Lab Sample ID: 580-142896-2

**Matrix: Water** 

Date Collected: 08/09/24 00:01 Date Received: 08/13/24 13:25

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	468430	JBT	EET SEA	08/15/24 22:35

Client Sample ID: TB-01-SO-20240809

Lab Sample ID: 580-142896-3

**Matrix: Solid** 

Date Collected: 08/09/24 00:01 Date Received: 08/13/24 13:25

Batch **Batch** Dilution **Batch** Prepared Method or Analyzed **Prep Type** Type Run **Factor** Number Analyst Lab 08/16/24 12:44 5035 Total/NA Prep 468455 BYM EET SEA Total/NA Analysis 8260D 468460 K1K **EET SEA** 08/16/24 16:13

Client Sample ID: PDI-21-SO-55.6-20240809

Lab Sample ID: 580-142896-4

**Matrix: Solid** 

Date Collected: 08/09/24 10:50 Date Received: 08/13/24 13:25

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	468496	MJ	EET SEA	08/16/24 10:33

Client Sample ID: PDI-21-SO-55.6-20240809

Lab Sample ID: 580-142896-4

Date Collected: 08/09/24 10:50

Date Received: 08/13/24 13:25

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			468455	BYM	EET SEA	08/16/24 12:44
Total/NA	Analysis	8260D		1	468460	K1K	EET SEA	08/16/24 18:01
Total/NA	Prep	5035	DL		468642	BYM	EET SEA	08/19/24 09:17
Total/NA	Analysis	8260D	DL	1	468647	AC	EET SEA	08/19/24 13:19

Client Sample ID: DUP-04-SQ-20240809

Lab Sample ID: 580-142896-5 Date Collected: 08/09/24 10:55

**Matrix: Solid** 

Date Received: 08/13/24 13:25

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	468496	MJ	EET SEA	08/16/24 10:33

**Eurofins Seattle** 

**Matrix: Solid** Percent Solids: 88.7

Client: ERM-West

Project/Site: Arkema PDI Sampling

Client Sample ID: DUP-04-SQ-20240809

Date Collected: 08/09/24 10:55 Date Received: 08/13/24 13:25 Lab Sample ID: 580-142896-5

Matrix: Solid

Percent Solids: 93.4

Job ID: 580-142896-1

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			468455	BYM	EET SEA	08/16/24 12:44
Total/NA	Analysis	8260D		1	468460	K1K	EET SEA	08/16/24 18:23
Total/NA	Prep	5035	DL		468642	BYM	EET SEA	08/19/24 09:17
Total/NA	Analysis	8260D	DL	1	468647	AC	EET SEA	08/19/24 13:41

Client Sample ID: PDI-24-SO-35.5-20240809

Date Collected: 08/09/24 16:10 Date Received: 08/13/24 13:25

Lab Sample ID: 580-142896-6

Lab Sample ID: 580-142896-6

Lab Sample ID: 580-142896-7

Lab Sample ID: 580-142896-8

**Matrix: Solid** 

**Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G	-	1	468495	AUA	EET SEA	08/16/24 10:39

Client Sample ID: PDI-24-SO-35.5-20240809

Date Collected: 08/09/24 16:10

**Matrix: Solid** Date Received: 08/13/24 13:25 Percent Solids: 74.7

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			468455	BYM	EET SEA	08/16/24 12:44
Total/NA	Analysis	8260D		1	468460	K1K	EET SEA	08/16/24 18:45
Total/NA	Prep	5035	DL		468642	BYM	EET SEA	08/19/24 09:17
Total/NA	Analysis	8260D	DL	1	468647	AC	EET SEA	08/19/24 14:03

Client Sample ID: PDI-24-SO-37.5-20240809

Date Collected: 08/09/24 16:15

Date Received: 08/13/24 13:25

<del>-</del>	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	468495	AUA	EET SEA	08/16/24 10:39

Client Sample ID: PDI-24-SO-37.5-20240809

Lab Sample ID: 580-142896-7 Date Collected: 08/09/24 16:15 **Matrix: Solid** 

Date Received: 08/13/24 13:25 Percent Solids: 86.0

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			468455	BYM	EET SEA	08/16/24 12:44
Total/NA	Analysis	8260D		1	468460	K1K	EET SEA	08/16/24 16:34

Client Sample ID: PDI-24-SO-23.1-20240809

Date Collected: 08/09/24 15:00

Date Received: 08/13/24 13:25

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	468495	AUA	EET SEA	08/16/24 10:39

**Eurofins Seattle** 

**Matrix: Solid** 

Client: ERM-West Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-24-SO-23.1-20240809

Date Collected: 08/09/24 15:00 Date Received: 08/13/24 13:25

Lab Sample ID: 580-142896-8

**Matrix: Solid** 

Percent Solids: 85.8

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	RA		469011	BYM	EET SEA	08/21/24 15:12
Total/NA	Analysis	8260D	RA	1	468961	BYM	EET SEA	08/21/24 19:44
Total/NA	Prep	5035			468642	BYM	EET SEA	08/19/24 09:17
Total/NA	Analysis	8260D		1	468647	AC	EET SEA	08/19/24 12:14
Total/NA	Prep	3546			468422	ER	EET SEA	08/15/24 16:45
Total/NA	Analysis	8270E		1	469291	T1L	EET SEA	08/23/24 23:52
Total/NA	Prep	3546	DL		468715	ER	EET SEA	08/19/24 15:56
Total/NA	Analysis	8081B	DL	50	469412	VLF	EET SEA	08/26/24 11:45
Total/NA	Prep	3546	DL		468715	ER	EET SEA	08/19/24 15:56
Total/NA	Analysis	8081B	DL	1000	469499	VLF	EET SEA	08/27/24 12:14
Total/NA	Prep	3546	DL2		468715	ER	EET SEA	08/19/24 15:56
Total/NA	Analysis	8081B	DL2	20000	469499	VLF	EET SEA	08/27/24 13:12
Total/NA	Prep	3546	DL		468715	ER	EET SEA	08/19/24 15:56
Total/NA	Analysis	8082A	DL	50	469408	VLF	EET SEA	08/26/24 11:27
Total/NA	Prep	8151A			471244	DVE6	EET CAL 4	08/15/24 15:29
Total/NA	Analysis	8151A		20	473873	ZE2W	EET CAL 4	08/23/24 21:31
Total/NA	Prep	3546			468240	EM	EET SEA	08/14/24 16:15
Total/NA	Analysis	NWTPH-Dx		1	468338	SW	EET SEA	08/16/24 03:36
Total/NA	Prep	1633 Shake			791789	MKC	EET SAC	08/16/24 11:43
Total/NA	Analysis	Draft-4 1633		1	792237	K1D	EET SAC	08/18/24 06:01
Total/NA	Prep	1633 Shake	RA		791789	MKC	EET SAC	08/16/24 11:43
Total/NA	Analysis	Draft-4 1633	RA	1	792519	K1S	EET SAC	08/19/24 19:06
Total/NA	Prep	HRMS-Sox			793238	BLR	EET SAC	08/21/24 15:11
Total/NA	Analysis	1613B		1	796419	СВ	EET SAC	09/05/24 05:19
Total/NA	Prep	HRMS-Sox	DL		793238	BLR	EET SAC	08/21/24 15:11
Total/NA	Analysis	1613B	DL	10	797506	СВ	EET SAC	09/09/24 07:19

Client Sample ID: PDI-24-SO-43-20240812

Date Collected: 08/12/24 08:45

Date Received: 08/13/24 13:25

Lab	Sam	ple	ID:	580	)-1	42	896	5-9	
							_		

**Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	468495	AUA	EET SEA	08/16/24 10:39

Client Sample ID: PDI-24-SO-43-20240812	Lab Sample ID: 580-142896-9
Date Collected: 08/12/24 08:45	Matrix: Solid
Date Received: 08/13/24 13:25	Percent Solids: 81.0

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	RA		469011	BYM	EET SEA	08/21/24 15:12
Total/NA	Analysis	8260D	RA	1	468961	BYM	EET SEA	08/21/24 20:05
Total/NA	Prep	5035			468642	BYM	EET SEA	08/19/24 09:17
Total/NA	Analysis	8260D		1	468647	AC	EET SEA	08/19/24 12:36

**Eurofins Seattle** 

#### **Lab Chronicle**

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-24-SO-44-20240812

Lab Sample ID: 580-142896-10 Date Collected: 08/12/24 08:50

**Matrix: Solid** 

Date Received: 08/13/24 13:25

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	468495	AUA	EET SEA	08/16/24 10:39

Client Sample ID: PDI-24-SO-44-20240812

Lab Sample ID: 580-142896-10

Date Collected: 08/12/24 08:50 **Matrix: Solid** Date Received: 08/13/24 13:25 Percent Solids: 83.0

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			468455	BYM	EET SEA	08/16/24 12:44
Total/NA	Analysis	8260D		1	468460	K1K	EET SEA	08/16/24 19:06
Total/NA	Prep	5035	RA		468642	BYM	EET SEA	08/19/24 09:17
Total/NA	Analysis	8260D	RA	1	468647	AC	EET SEA	08/19/24 12:57

Client Sample ID: PDI-24-SO-72.5-20240812

Lab Sample ID: 580-142896-11

**Matrix: Solid** 

Date Collected: 08/12/24 11:40 Date Received: 08/13/24 13:25

Batch **Batch** Dilution Batch **Prepared** Method Number Analyst or Analyzed **Prep Type** Type Run **Factor** Lab 08/16/24 10:39 Total/NA 2540G 468495 AUA EET SEA Analysis

Client Sample ID: PDI-24-SO-72.5-20240812

Lab Sample ID: 580-142896-11

Matrix: Solid

Date Collected: 08/12/24 11:40 Date Received: 08/13/24 13:25 Percent Solids: 83.3

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			468455	BYM	EET SEA	08/16/24 12:44
Total/NA	Analysis	8260D		1	468460	K1K	EET SEA	08/16/24 19:28

#### **Laboratory References:**

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

# **Accreditation/Certification Summary**

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

#### **Laboratory: Eurofins Seattle**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	<b>Expiration Date</b>
Oregon	NELAP	4167	07-07-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
2540G		Solid	Percent Solids
8270E	3546	Solid	2,4,6-Trichlorophenol
8270E	3546	Solid	2-Nitrophenol
8270E	3546	Solid	Bis(2-ethylhexyl) phthalate
8270E	3546	Solid	Butyl benzyl phthalate
8270E	3546	Solid	Hexachlorobutadiene
8270E	3546	Solid	Isophorone

#### **Laboratory: Eurofins Calscience**

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	<b>Expiration Date</b>
Arizona	State	AZ0830	11-16-24
Arkansas DEQ	State	88-0161	07-02-25
California	Los Angeles County Sanitation Districts	9257304	08-01-24 *
California	State	3082	07-31-26
Kansas	NELAP	E-10420	07-31-25
Nevada	State	CA00111	10-31-24
Oregon	NELAP	4175	02-02-25
USDA	US Federal Programs	P330-22-00059	06-08-26
Washington	State	C916-18	10-11-24

#### **Laboratory: Eurofins Sacramento**

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	<b>Expiration Date</b>
Alaska (UST)	State	17-020	02-20-27
ANAB	Dept. of Defense ELAP	L2468	01-20-27
ANAB	Dept. of Energy	L2468.01	01-20-27
ANAB	ISO/IEC 17025	L2468	01-20-27
Arizona	State	AZ0708	08-11-25
Arkansas DEQ	State	88-0691	05-18-25
California	State	2897	01-31-26
Colorado	State	CA00044	08-31-25
Florida	NELAP	E87570	06-30-25
Georgia	State	4040	01-29-25
Hawaii	State	<b>Eurofins Sacramento</b>	01-29-25
Illinois	NELAP	200060	09-09-24
Kansas	NELAP	E-10375	10-31-25
Louisiana	NELAP	01944	06-30-25
Louisiana (All)	NELAP	01944	06-30-25
Maine	State	CA00004	04-14-26
Michigan	State	9947	01-29-25
Nevada	State	CA00044	10-31-24
New Hampshire	NELAP	2997	04-19-25

<sup>\*</sup> Accreditation/Certification renewal pending - accreditation/certification considered valid.

**Eurofins Seattle** 

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# **Accreditation/Certification Summary**

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

#### **Laboratory: Eurofins Sacramento (Continued)**

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	<b>Expiration Date</b>
New Jersey	NELAP	CA005	06-30-25
New York	NELAP	11666	04-01-25
Ohio	State	41252	01-29-25
Oregon	NELAP	4040	01-29-25
Texas	NELAP	T104704399-23-17	05-31-25
US Fish & Wildlife	US Federal Programs	A22139	04-30-25
USDA	US Federal Programs	P330-18-00239	02-28-26
Utah	NELAP	CA000442023-16	02-28-25
Virginia	NELAP	460278	03-14-25
Washington	State	C581	05-05-25
West Virginia (DW)	State	9930C	01-31-25
Wisconsin	State	998204680	08-31-25
Wyoming	State Program	8TMS-L	01-28-19 *

**Eurofins Seattle** 

 $<sup>^{\</sup>star} \ \text{Accreditation/Certification renewal pending - accreditation/certification considered valid}.$ 

#### **Sample Summary**

Client: ERM-West

580-142896-10

580-142896-11

Project/Site: Arkema PDI Sampling

PDI-24-SO-44-20240812

PDI-24-SO-72.5-20240812

Lab Sample ID **Client Sample ID** Matrix Collected Received 580-142896-1 RB-01-WQ-20240809 08/09/24 09:40 08/13/24 13:25 Water TB-01-WQ-20240809 580-142896-2 Water 08/09/24 00:01 08/13/24 13:25 580-142896-3 TB-01-SO-20240809 Solid 08/09/24 00:01 08/13/24 13:25 580-142896-4 PDI-21-SO-55.6-20240809 Solid 08/09/24 10:50 08/13/24 13:25 580-142896-5 DUP-04-SQ-20240809 Solid 08/09/24 10:55 08/13/24 13:25 Solid 580-142896-6 PDI-24-SO-35.5-20240809 08/09/24 16:10 08/13/24 13:25 580-142896-7 PDI-24-SO-37.5-20240809 Solid 08/09/24 16:15 08/13/24 13:25 PDI-24-SO-23.1-20240809 08/09/24 15:00 08/13/24 13:25 580-142896-8 Solid 580-142896-9 PDI-24-SO-43-20240812 Solid 08/12/24 08:45 08/13/24 13:25

08/12/24 08:50 08/13/24 13:25

08/12/24 11:40 08/13/24 13:25

Solid

Solid

Job ID: 580-142896-1

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#### **Eurofins Seattle**

5755 8th Street East Tacoma, WA 98424 Phone (253) 922-2310

# **Chain of Custody Record**



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Environment Testing

Friorie (253) 922-2310	Complex							580	1.1.42	896 C	hain e	of Cur			Л		
Client Information Client Contact:	Sampler:				b PM: ruz, Sh	eri L		300	142	090 0	riairi (	or Cus	louy				COC No: 580-62781-19269,12
Avery Soplata	Phone:				Mail: heri.Cru	uz@et	euro	finsus	s.com			State	of Origin	ii.	Ī	7	Page:
Company. ERM-West			PWSID:														Job #:
Address:	Due Date Request	ed:							An	nalysi	s Ke	ques	ted			۱,	Preservation Codes:
1050 SW 6th Avenue Suite 1650 City:	TATE															F	F - MeOH E - NaHSO4
Portland	TAT Requested (d.		-														2 - Nanso4 A - HCL
State, Zip: OR, 97204	Compliance Project	week			-11			anks					2				
Phone:	PO #:	Jt. 1108	20110		-			ant bi					3				
Email:	0732436.301 WO#:				<u>ş</u>	푱		Hpm					12				
avery.soplata@erm.com	WO #.				10	g å	1 7	st equ	3		3	8151				,	
Project Name: Arkema - PDI Investigation	Project #: 58020754				ا څ	Yes of Wo ndard list MeOH	E SE	ard lis	0	برا		M (	5		liner	l lie	
Site:	SSOW#:				- 월	tand	standard list_LL	standard list equipment blanks	SVO	0	PLR.	2	Diox		container		Other:
					- S	88,8	S, S			2	A PCR	5.3	Dioxins		0		
			Sample	Matrix	fere	/olati	/olati	8260D - Volatiles,	3	TPH-DE	SORLA	Heppicides			ad n		
		Sample	Type (C=comp,	(W=water, S=solid, O=waste/oil,	P	9	ė	9	2	7 3	200	2	14.3B		N Z		
Sample Identification	Sample Date	Time	G=grab) a	T=Tissue, A=Ai	ir) Li	8260D	8260D	826	00	Fo	000	工	3:	-	Total	20	Special Instructions/Note:
		> <	Preservat	on Code:	X	F	E	Α									
RB-c1-WQ-20240809	08/09/24	0940	6	W				ス							3	3	
TB-01-WQ-20240809	14/19/80	-		W				X							1	1	
TB-01-50-20240809	07/19/24	•—		S		X									1		
PDT-21-50.55.6-20240809	08/09/24	1050	6	5		X			T						2	2	
DUP-04-5Q-20240809	08/09/24	1055	6	5		X									4	12	
PDI-24-SO-35.5-20240809	08/09/84	1610	G	5		X									9	_	
POI-24-50-37,5-20210809	08/09/24	1615	G	S		X									4		
PD1-24-50-23.1-20240809	1 /	1500	G	5	11	X			XX	CX	×	x	K X		1	2	
PDI-24-50-43-20240812		0845	G	5	T	K		ľ			Ť				7		
DD1-24-50-44-20240812	11.31	0850	6	5	T	X									12		
PDI-24-50-725-20240812		1140	6	5	$\dagger \dagger$	لم				+			-		2		
Possible Hazard Identification					S	ample	Disp	osal	(A fe	e may	be as	ssess	ed if sa	amples are			longer than 1 month)
Non-Hazard Flammable Skin Irritant Pois	on B Unknow	wn R	adiological					To C			S O	isposa	l By La	b C	Arch		
Deliverable Requested: I, II, III, IV, Other (specify)					S	pecial	Instru	uctions	s/QC	Requi	emen	ts:					
Empty Kit Relinquished by:	1	Date: 8 //	2/2024		Time	: (	7	30			_	N	lethod of	Shipment:			
Relinquished by:	Date/Time:			ompany	-	Rece	iyed by	y: ,	15	. /	11			Date/Time:	Tou	1	1150 Company - E.
Relinquished by:	Date/Tme:		Co	ompany		Recei	ver by	de	611		1			Date/Time:	11-24		1150 Company - E.
Relinquished by UM CM J	81324	13	25	M.	€.		-	X	V.	)				811	1317	4	1325 FIST
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Page 83 of 95

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#### **Eurofins Seattle**

5755 8th Street East Tacoma, WA 98424 Phone (252) 922 2310

# **Chain of Custody Record**



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Acc.			3

Environment Testing

Cruz, Sheri L   State of Origin:   State of Origi		
Sheri Cruz@et eurofinsus.com		
Analysis Requested   Preservation Codes:		
Due Date Requested:    Due Date Requested:		
Compilance Project: A Yes as No   Comp		
Portland    Compliance Project: A Yes as No		
Compliance Project:		
Sample Identification  PO#: 0732436.301  WO #: 0732		
Sample Identification  Sample Date  Sample D		
Sample Identification  Sample Date  Sample D		
Sample Identification  Sample Date  Sample Type (C=Comp, C=Comp, G=grab) Sample Date  Sample Time  Sample Type (C=Comp, C=comp, G=grab) Sample Date  Sample Type (C=Comp, C=comp, G=grab) Sample Date  Sample Type (C=Comp, C=solid, O=wasto/oil, S=T=Tissue, A=Air) Special Instructions/i		
Sample Identification  Sample Date  Sample Type (C=Comp., G=grab)   Sample Time   G=grab)   Sample Time   G=grab)   Sample Time   G=grab)   Sample Time   G=grab)   Sample Time   G=grab)   Sample Time   G=grab)   Sample Time   G=grab)   Sample Time   G=grab)   Sample Time   G=grab)   Sample Time   G=grab)   Sample Time   G=grab)   Sample Time   Sample		
Sample Identification  Sample Identification  Sample Identification  Sample Identification  Preservation Code:  F E A		
Sample Identification  Sample Date Time G-grad)   Statissus, A-Alify   L. L. & & & & & & & & & & & & & & & & &		
Sample Identification  Sample Date Time G-grad) [ST-Tissue, AAA/] L L & & & & & & & & & & & & & & & & &		
Sample Identification  Sample Identification  Sample Identification  Sample Identification  Preservation Code:  F E A	/N=4=+	
	Note:	
Q(3) and $Q(3)$ and		
ND-01-WG-26346364 635463646	***************************************	
TB-01-WQ-20240509 08/09/24 - W X		
TB-01-50-2=240609 07/9/24 S X		
PDT-21-50.55.6-20240809 08/09/24 1050 6 5 X	***************************************	
DUP-04-50-20240809 08/09/24/1055 6 5 X		
PPI-24-S0-35.5-20240809 08/09/24 1610 G S X		
POI-24-50-37,5-20210809, 08/09/24 1615 G S XX		
PDI-24-50-23.1-20240809 08/09/24 1500 G S X X X X X X X X X X X X X X X X X X		
PD1-24-50-43-26240812 1812/24 0845 G S K 2	Name and Associated Association (Associated Association (Associated Association (Associated Association (Associated Association (Association	
PDI-14-50-72.5-20240812 D812/24 II40 6 S Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		
Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological Return To Client Disposal By Lab Archive For Months		
Deliverable Requested: I, III, IV, Other (specify)  Special Instructions/QC Requirements:		
Empty Kit Relinquished by: Carcher Date: 8/12/2024 Time: 073 b Method of Shipment:		
telinquished by:    Date/Time:   Company   Received by:   Date/Time:   Date/T	1 -E.	
1/1/14 1/1/19 1325 M.E. (811)174 1325 M	4	
Relinquished by:  Date/Timel  Date/Timel  Date/Timel  Date/Timel  Date/Timel  DATE/DATE/DATE/DATE/DATE/DATE/DATE/DATE/	$\sim$	
	XSU	
Δ Yes Δ No Page 84 of 95 Ver: 04/02/		

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Eurofins Seattle 5755 8th Street East

و ما الما الما الما الما الما الما الما	Carrier Tracking No(s): COC No. 580-136026 1	State of Origin: Oregon	ed (See note):	Analysis Requested -				8.4	i enia?	noo to	, mmber	tal N	Special Instructions/Note:	The state of the s	2	3		Solder S	<	
Chain of Custody Record	Sampler Lab PM. Cruz, Sheri L	Phone: E-Mail: Shen Cruz@et.eurofinsus.com	Accreditations Required (See note) NELAP - Oregon	Due Date Requested 8/26/2024	TAT Requested (days)		(c)	Nethor	1633 I	3D (Ye	Sample	Sample (C=comp, o=wastelol, of the complete (C=comp, o=wastelol, o=wastelol, of the complete (C=comp)	G=grab) Br=Tissue, A=Air) E & &	Preservation Code:	8/9/24 15 00 Solid X X X	1	1	1 ) [		
Tacoma, WA 98424 Phone. 253-922-2310	ormation (Sub Contract Lab)		Company Eurofins Environment Testing Northern Ca	ess: Riverside Parkway, ,	ımento	35	73-5600(Tel) 916-372-1059(Fax)		Project Name: Arkema PDI Sampling	Site:	₩ j	i de la companya de l	Sample Identification - Client ID (Lab ID)	The second secon	PDI-24-SO-23 1-20240809 (580-142896-8)	1	i a	· · · · · · · · · · · · · · · · · · ·	Derive of	d.

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northwest, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratory or other instructions will be provided. Any changes to laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing Northwest, LLC alternition immediately. If all requested accreditation state, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northwest, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northwest, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northwest. LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northwest. LLC attention immediately.

	Possible Hazard Identification		<u> </u>	Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)	sed if samples are retained longer	than 1 month)
	Unconfirmed			Return To Client Dispo:	Disposal By Lab Archive For	Months
	Deliverable Requested 1, II, III, IV, Other (specify)	Primary Deliverable Rank: 2		Special Instructions/QC Requirements.		
	Empty Kit Relinquished by	Date:	Time.	G G	Method of Shipment	
	Relinquished by	Data/Time:	Company	Received by	Significant Con Commission	S SETEN
9	Relinquished by	Date/Time:	Company	Received by:	Date/Time:	Company
/12/	Relinquished by	Date/Time:	Company	Received by	Date/Time:	Company
202	Custody Seals Intact: Custody Seal No.  △ Yes △ No	多のうちゃ		Cooler Temperature(s) °C and Other Remarks:	35Y7 :	
4						Ver 04/02/2024

#### Eurofins Seattle

5755 8th Street East Tacoma, WA 98424 Phone: 253-922-2310

# Chain of Custody Record



💸 eurofins

Loc: 580 142896

Client Information (Sub Contract Lab)	Sampler.				b PM: uz, S	Sheri I	L					Can	ier Track	ing No(	s):		COC No: 580-136	6027.1		
Client Contact:	Phone:				Mail:			-					e of Origi	n:			Page:	.,		
Shipping/Receiving				Sh				rofinsu				Ore	gon				Page 1	of 1		
Company: Eurofins Environment Testing Southwest,							otions R	equired aon	(See r	note):							580-142	2896-1		
Address:	Due Date Request	ed:						3										ation Cod	ies:	
2841 Dow Avenue, Suite 100, ,	8/26/2024								A	nalys	is R	eque	sted				-			
City: Tustin	TAT Requested (da	ays):			17		Spike)													
State, Zip:	-						l Sp													
CA, 92780							Ē.									-1				
Phone: 714-895-5494(Tel)	PO #:						LIS(			-					71					
Fmail:	WO #:				or No		de								14	- 1				
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Project Name: Arkema PDI Sampling	Project #: 58020754	- 10		- 6	څ	ŏ	Ä H		-	19					1029	aine			*	
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AND THE PROPERTY OF THE PARTY O	- Carling Street	Sample	(C=Comp,	S=solid, O=waste/oil,		Perform	51A	1 5	1/5	100	- 1			5	15%	otal			ton gian	
Sample Identification - Client ID (Lab ID)	Sample Date	Time	G=grab) 8			امًا	2	See Ass	-	1,27		1		See all	A LANGE	ř	S	pecial In	structions	3/Note:
		<u>&gt;</u>	Preservati	on Code:	: X	$\forall \forall$	70 8			23	E P			7	1 2 2	X	-			
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lote: Since laboratory accreditations are subject to change, Eurofins Environme aboratory does not currently maintain accreditation in the State of Origin listed a	nt Testing Northwest,	LLC places th	e ownership of n	nethod, ana	alyte &	accre	ditation	complia	ance up	oon our	subcor	ntract lat	oratories	. This	sample :	shipment	is forwarde	d under ch	ain-of-custody	y. If the
ccreditation status should be brought to Eurofins Environment Testing Northwe	st, LLC attention imme	ediately. If all	requested accre	ditations an	e curre	ent to d	date, ret	tum the	signed	Chain	of Cust	tody atte	sting to s	aid con	pliance	to Eurofi	ns Environn	nent Testin	g Northwest,	LLC.
Possible Hazard Identification	+ 10+ 2+ - +		11.1	order st		San	npie D	ispos	al ( A	fee n	nay b	e asse	ssed if	samı	oles a	e retair	ned long	er than 1	month)	
Inconfirmed	lia-i			Acres a			Ret	urn To	Clier	nt		<sup>⊥</sup> Disp	osal By	Lab	1	Arc	hive For_		Months	s
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliver	able Rank:	2			Spe	cial In	structi	ons/C	C Re									-	
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Contacts Contacts and Contacts Contacts							0		W	4/	10::	. 0 .			0 11.	1107		-	-	
Custody Seals Intact: Custody Seal No.:	k-dy s		Dr. C	1			Cooler	Temper	ature(s	s) °C an	d Othe	r Remar	ks:		4		sin	3	6/3.	6

Client: ERM-West Job Number: 580-142896-1

Login Number: 142896 List Source: Eurofins Seattle

List Number: 1

Creator: Silva, Shawn 1

Radioactivity wasn't checked or is = background as measured by a survey meter.  The cooler's custody seals, if present, is intact.  True  Sample custody seals, if present, are intact.  True  The cooler or samples do not appear to have been compromised or tampered with.  Samples were received on ice.  Cooler Temperature is acceptable.  Cooler Temperature is recorded.  COC is present.  COC is filled out in ink and legible.  COC is filled out with all pertinent information.  Is the Field Sampler's name present on COC?  There are no discrepancies between the containers received and the COC.  Samples are received within Holding Time (excluding tests with immediate HTs)  Sample containers have legible labels.  Containers are not broken or leaking.  Sample collection date/times are provided.  Appropriate sample containers are used.  Sample Preservation Verified.  True  Sample Preservation Verified.  There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs  Containers requiring zero headspace have no headspace or bubble is <5mm (1/4").  Multiphasic samples are not present.  Samples do not require splitting or compositing.</th <th>Creator. Silva, Silawir i</th> <th></th> <th></th>	Creator. Silva, Silawir i		
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Sample collection date/times are provided.  Appropriate sample containers are used.  Sample bottles are completely filled.  Sample Preservation Verified.  True  There is sufficient vol. for all requested analyses, incl. any requested  MS/MSDs  Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").  Multiphasic samples are not present.  Samples do not require splitting or compositing.	Sample containers have legible labels.	True	
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MS/MSDs  Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").  Multiphasic samples are not present.  Samples do not require splitting or compositing.  True	Sample Preservation Verified.	True	
<6mm (1/4"). Multiphasic samples are not present. Samples do not require splitting or compositing. True		True	
Samples do not require splitting or compositing.	·	True	
	Multiphasic samples are not present.	True	
Residual Chlorine Checked N/A	Samples do not require splitting or compositing.	True	
residual officiales.	Residual Chlorine Checked.	N/A	

Client: ERM-West Job Number: 580-142896-1

Login Number: 142896

List Number: 2

Creator: Khana, Piyush

List Source: Eurofins Calscience List Creation: 08/14/24 03:53 PM

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	Seal present with no number.
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.6
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Client: ERM-West Job Number: 580-142896-1

Login Number: 142896
List Source: Eurofins Sacramento
List Number: 3
List Creation: 08/14/24 04:25 PM

Creator: Simmons, Jason C

Creator. Siminons, Jason C		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	2461289
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.4c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

580-142896 Field Sheet

# **Environment Testing**

Sacramento Sample Receiving Notes (SSRN)

Tracking # 746516311981
6
SO (PO) FO / SAT / 2-Day / Ground / UPS / CDO / Cou

SO (PO) FO / SAT / 2-Day / Ground / UPS / CDO / Courier GSL / OnTrac / Goldstreak / USPS / Other\_

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations. File in the job folder with the COC.

Therm. ID Corr. Factor (+/-) °C  Ice Wet Gel Other  Cooler Custody Seal Collected Cooler ID  Temp Observed C Corrected C	Notes:
Opening/Processing The Shipment Cooler compromised/tampered with?  Cooler Temperature is acceptable?  Frozen samples show signs of thaw?  Date  Date	
Unpacking/Labeling The Samples Containers are not broken or leaking? Samples compromised/tampered with? COC is complete w/o discrepancies Sample custody seal? Sample containers have legible labels? Sample date/times are provided? Appropriate containers are used? Sample bottles are completely filled? Sample preservatives verified? Is the Field Sampler's name on COC? Samples w/o discrepancies?	Ammonium Acetate Lot #(s)
Zero headspace?*  Alkalinity has no headspace?  Perchlorate has headspace? (Methods 314, 331, 6850)  Multiphasic samples are not present?  *Containers requirem zero headspace have no headspace, or bubble < 6 mm (1/4")  Initials  Date	Login Completion Receipt Temperature on COC? NCM Filed? Samples received within hold time? Log Release checked in TALS? Date Date

\\TACORP\CORP\QA\QA\_FACILITIES\\SACRAMENTO-QA\DOCUMENT-MANAGEMENT\FORM\S\QA-812 \SAMPLE RECEIVING NOTES DOC

#### **Isotope Dilution Summary**

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

# Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

**Matrix: Solid** Prep Type: Total/NA

								<u> </u>	
			Perc	ent Isotope	Dilution Re	ecovery (Ac	ceptance L	imits)	
		PFBA	PFPeA	13C5PHA	C4PFHA	C8PFOA	C9PFNA	C6PFDA	13C7PUA
Lab Sample ID	Client Sample ID	(20-150)	(20-150)	(20-150)	(20-150)	(20-150)	(20-150)	(20-150)	(20-150)
580-142896-8	PDI-24-SO-23.1-20240809	97.7	128	95.3	85.3	94.0 *3	115 *3	107 *3	113 *3
LCS 320-791789/3-A	Lab Control Sample	96.3	116	104	96.1	107	104	100	101
LLCS 320-791789/2-A	Lab Control Sample	102	118	107	101	97.6	103	95.7	96.4
MB 320-791789/1-A	Method Blank	103	128	112	104	117	111	109	103
			Perc	ent Isotope	Dilution Re	ecovery (Ac	ceptance L	imits)	
		PFDoA	PFTDA	C3PFBS	C3PFHS	C8PFOS	PFOSA	d5NEFOS	M242FTS
Lab Sample ID	Client Sample ID	(20-150)	(20-150)	(20-150)	(20-150)	(20-150)	(20-150)	(20-150)	(20-150)
580-142896-8	PDI-24-SO-23.1-20240809	223 *3	263 *3	174 *5+	143	156 *3	165 *3	56.9 *3	115
		*5+	*5+			*5+	*5+		
LCS 320-791789/3-A	Lab Control Sample	110	110	111	110	111	120	103	108
LLCS 320-791789/2-A	Lab Control Sample	87.5	86.0	104	102	105	109	96.6	102
MB 320-791789/1-A	Method Blank	103	110	118	120	125	140	127	129
			Perc	ent Isotope	Dilution Re	covery (Ac	ceptance L	imits)	
		M262FTS	M282FTS	HFPODA	NMFM	NEFM	d5NPFSA	d3NMFSA	
Lab Sample ID	Client Sample ID	(20-150)	(20-150)	(20-150)	(20-150)	(20-150)	(20-150)	(20-150)	
580-142896-8	PDI-24-SO-23.1-20240809	108	80.3	31.3	103 *3	67.0 *3	131 *3	96.1 *3	-
LCS 320-791789/3-A	Lab Control Sample	104	109	102	81.3	73.8	59.8	67.4	
LLCS 320-791789/2-A	Lab Control Sample	98.0	104	96.7	60.5	51.2	47.2	56.6	
MB 320-791789/1-A	Method Blank	117	131	107	92.0	86.4	67.3	81.0	

#### Surrogate Legend

PFBA = 13C4 PFBA

PFPeA = 13C5 PFPeA

13C5PHA = 13C5 PFHxA

C4PFHA = 13C4 PFHpA

C8PFOA = 13C8 PFOA

C9PFNA = 13C9 PFNA

C6PFDA = 13C6 PFDA

13C7PUA = 13C7 PFUnA

PFDoA = 13C2 PFDoA

PFTDA = 13C2 PFTeDA

C3PFBS = 13C3 PFBS

C3PFHS = 13C3 PFHxS C8PFOS = 13C8 PFOS

PFOSA = 13C8 PFOSA

d5NEFOS = d5-NEtFOSAA

M242FTS = 13C2 4:2 FTS

M262FTS = 13C2 6:2 FTS M282FTS = 13C2 8:2 FTS

HFPODA = 13C3 HFPO-DA

NMFM = d7-N-MeFOSE-M

NEFM = d9-N-EtFOSE-M

d5NPFSA = d5-NEtPFOSA

d3NMFSA = d3-NMePFOSA

**Eurofins Seattle** 

Job ID: 580-142896-1 Client: ERM-West

Project/Site: Arkema PDI Sampling

Method: Draft-4 1633 - Per- and Polyfluoroalkyl Substances by LC/MS/MS

**Matrix: Solid** Prep Type: Total/NA

_			Percent Isotope Dilution Recovery (Acceptance Limits)
		d3NMFOS	
Lab Sample ID	Client Sample ID	(20-150)	
580-142896-8 - RA	PDI-24-SO-23.1-20240809	46.0 *3	
LCS 320-791789/3-A - RA	Lab Control Sample	114	
LLCS 320-791789/2-A - RA	Lab Control Sample	114	
MB 320-791789/1-A - RA	Method Blank	122	
Surrogate Legend			
d3NMFOS = d3-NMeFOS	SAA		

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

**Matrix: Solid** Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)								
		HxCDD	HxDD	HxCDF	HxDF	13CHxCF	HxCF	HpCDD	HpCDF	
Lab Sample ID	Client Sample ID	(32-141)	(28-130)	(26-152)	(26-123)	(28-136)	(29-147)	(23-140)	(28-143)	
580-142896-8	PDI-24-SO-23.1-20240809	85	91	84	88	85	79	83	80	
			Perce	ent Isotope	Dilution Re	ecovery (Ac	ceptance L	imits)		
		HpCDF2	OCDD	OCDF						
Lab Sample ID	Client Sample ID	(26-138)	(17-157)	(17-157)						
580-142896-8	PDI-24-SO-23.1-20240809	26	79	72					-	

**Surrogate Legend** 

HxCDD = 13C-1,2,3,4,7,8-HxCDD HxDD = 13C-1,2,3,6,7,8-HxCDD HxCDF = 13C-1,2,3,4,7,8-HxCDF

HxDF = 13C-1,2,3,6,7,8-HxCDF

13CHxCF = 13C-2,3,4,6,7,8-HxCDF

HxCF = 13C-1,2,3,7,8,9-HxCDF

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD

HpCDF = 13C-1,2,3,4,6,7,8-HpCDF

HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF

OCDD = 13C-OCDD

OCDF = 13C-OCDF

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

**Matrix: Solid** Prep Type: Total/NA

_			Perce	ent Isotope	Dilution Re	ecovery (Acceptance Limits)	
		TCDD	PeCDD	PeCDF	PeCF		
Lab Sample ID	Client Sample ID	(25-164)	(25-181)	(24-185)	(21-178)		
580-142896-8 - DL	PDI-24-SO-23.1-20240809	116	124	115	112		

**Surrogate Legend** 

TCDD = 13C-2,3,7,8-TCDD

PeCDD = 13C-1,2,3,7,8-PeCDD

PeCDF = 13C-1,2,3,7,8-PeCDF

PeCF = 13C-2,3,4,7,8-PeCDF

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### **Isotope Dilution Summary**

Client: ERM-West Job ID: 580-142896-1

Project/Site: Arkema PDI Sampling

Method: 1613B - Dioxins and Furans (HRGC/HRMS)

**Matrix: Solid** Prep Type: Total/NA

			Perce	nt Isotope	Dilution Re	covery (Ac	ceptance L	imits)	
		TCDD	TCDF	PeCDD	PeCDF	PeCF	HxCDD	HxDD	HxCDF
Lab Sample ID	Client Sample ID	(20-175)	(22-152)	(21-227)	(21-192)	(13-328)	(21-193)	(25-163)	(19-202)
LCS 320-793238/2-A	Lab Control Sample	85	73	81	78	76	88	93	84
LCSD 320-793238/3-A	Lab Control Sample Dup	87	74	83	79	76	86	93	84
			Perce	ent Isotope	Dilution Re	covery (Ac	ceptance L	imits)	
		HxDF	13CHxCF	HxCF	HpCDD	HpCDF	HpCDF2	OCDD	OCDF
Lab Sample ID	Client Sample ID	(21-159)	(22-176)	(17-205)	(26-166)	(21-158)	(20-186)	(13-199)	(13-199)
LCS 320-793238/2-A	Lab Control Sample	90	86	76	83	79	75	76	73
LCSD 320-793238/3-A	Lab Control Sample Dup	91	88	77	86	80	74	77	72

#### Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD

TCDF = 13C-2,3,7,8-TCDF

PeCDD = 13C-1,2,3,7,8-PeCDD

PeCDF = 13C-1,2,3,7,8-PeCDF

PeCF = 13C-2,3,4,7,8-PeCDF

HxCDD = 13C-1,2,3,4,7,8-HxCDD

HxDD = 13C-1,2,3,6,7,8-HxCDD

HxCDF = 13C-1,2,3,4,7,8-HxCDF

HxDF = 13C-1,2,3,6,7,8-HxCDF

13CHxCF = 13C-2,3,4,6,7,8-HxCDF

HxCF = 13C-1,2,3,7,8,9-HxCDF

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD

HpCDF = 13C-1,2,3,4,6,7,8-HpCDF

HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF

OCDD = 13C-OCDD

OCDF = 13C-OCDF

#### Method: 1613B - Dioxins and Furans (HRGC/HRMS)

#### **Matrix: Solid Prep Type: Total/NA**

			Perce	ent Isotope	Dilution Re	covery (Ac	ceptance L	imits)	
Lab Sample ID	Client Comple ID	TCDD (25-164)	TCDF (24-169)	PeCDD (25-181)	PeCDF (24-185)	PeCF (21-178)	HxCDD (32-141)	HxDD (28-130)	HxCDF (26-152)
MB 320-793238/1-A	Client Sample ID  Method Blank	79	69	80	75	70	76	88	75
			Perce	ent Isotope	Dilution Re	covery (Ac	ceptance L	imits)	
		HxDF	13CHxCF	HxCF	HpCDD	HpCDF	HpCDF2	OCDD	OCDF
Lab Sample ID	Client Sample ID	(26-123)	(28-136)	(29-147)	(23-140)	(28-143)	(26-138)	(17-157)	(17-157)
MB 320-793238/1-A	Method Blank	85	83	75	82	76	71	75	70

#### Surrogate Legend

TCDD = 13C-2,3,7,8-TCDD

TCDF = 13C-2,3,7,8-TCDF

PeCDD = 13C-1.2.3.7.8-PeCDD

PeCDF = 13C-1,2,3,7,8-PeCDF

PeCF = 13C-2,3,4,7,8-PeCDF

HxCDD = 13C-1,2,3,4,7,8-HxCDD

HxDD = 13C-1,2,3,6,7,8-HxCDD

HxCDF = 13C-1,2,3,4,7,8-HxCDF

HxDF = 13C-1,2,3,6,7,8-HxCDF

13CHxCF = 13C-2,3,4,6,7,8-HxCDF

HxCF = 13C-1,2,3,7,8,9-HxCDF

HpCDD = 13C-1,2,3,4,6,7,8-HpCDD

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9/12/2024

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# **Isotope Dilution Summary**

Client: ERM-West

Project/Site: Arkema PDI Sampling HpCDF = 13C-1,2,3,4,6,7,8-HpCDF HpCDF2 = 13C-1,2,3,4,7,8,9-HpCDF

> OCDD = 13C-OCDD OCDF = 13C-OCDF

Job ID: 580-142896-1

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# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Avery Soplata ERM-West 1050 SW 6th Avenue Suite 1650 Portland, Oregon 97204 Generated 8/27/2024 2:07:38 PM

# **JOB DESCRIPTION**

Arkema PDI Sampling

## **JOB NUMBER**

580-143009-1

Eurofins Seattle 5755 8th Street East Tacoma WA 98424



# **Eurofins Seattle**

#### **Job Notes**

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### **Authorization**

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Client: ERM-West

Project/Site: Arkema PDI Sampling

Laboratory Job ID: 580-143009-1

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#### **Case Narrative**

Client: ERM-West Job ID: 580-143009-1

Project: Arkema PDI Sampling

Job Narrative 580-143009-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these
  situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise
  specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 8/16/2024 12:38 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.8°C.

#### GC/MS VOA

Job ID: 580-143009-1

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-468721 recovered outside acceptance criteria, low biased, for 1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene, 1,2-Dibromo-3-Chloropropane and Naphthalene. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8260D: The method blank for preparation batch 580-468710 and analytical batch 580-468721 contained Methylene Chloride above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **General Chemistry**

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

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#### **Definitions/Glossary**

Client: ERM-West Job ID: 580-143009-1

Project/Site: Arkema PDI Sampling

#### **Qualifiers**

#### **GC/MS VOA**

Qualifier Qualifier Description

B Compound was found in the blank and sample.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### **Glossary**

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery
CFL Contains Free Liquid
CFU Colony Forming Unit
CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

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Client: ERM-West Job ID: 580-143009-1

Project/Site: Arkema PDI Sampling

 Date Collected: 08/13/24 13:30
 Matrix: Solid

 Date Received: 08/16/24 12:38
 Percent Solids: 89.4

Method: SW846 8260D	- Volatile Organic	Compounds by GC/N	1S					
Analyte	_	Qualifier RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	0.022	0.0056	mg/Kg	— <u></u>	08/19/24 14:52	08/19/24 23:49	1
1,1,1-Trichloroethane	ND	0.045	0.0052	mg/Kg	₩	08/19/24 14:52	08/19/24 23:49	1
1,1,2,2-Tetrachloroethane	ND	0.022	0.0085	mg/Kg	₩	08/19/24 14:52	08/19/24 23:49	1
1,1,2-Trichloroethane	ND	0.022	0.0083	mg/Kg	₩	08/19/24 14:52	08/19/24 23:49	1
1,1-Dichloroethane	ND	0.045	0.010	mg/Kg	₩	08/19/24 14:52	08/19/24 23:49	1
1,1-Dichloroethene	ND	0.045	0.014	mg/Kg	₽	08/19/24 14:52	08/19/24 23:49	1
1,1-Dichloropropene	ND	0.045	0.0060	mg/Kg	☼	08/19/24 14:52	08/19/24 23:49	1
1,2,3-Trichlorobenzene	ND	0.090	0.045	mg/Kg	₽	08/19/24 14:52	08/19/24 23:49	1
1,2,3-Trichloropropane	ND	0.045	0.013	mg/Kg	₽	08/19/24 14:52	08/19/24 23:49	1
1,2,4-Trichlorobenzene	ND	0.090	0.048	mg/Kg		08/19/24 14:52	08/19/24 23:49	1
1,2,4-Trimethylbenzene	ND	0.045	0.015	mg/Kg	₩	08/19/24 14:52	08/19/24 23:49	1
1,2-Dibromo-3-Chloropropane	ND	0.067		mg/Kg	₽		08/19/24 23:49	1
1,2-Dibromoethane	ND	0.022	0.0043				08/19/24 23:49	1
1,2-Dichlorobenzene	ND	0.045	0.0098	0 0	₩		08/19/24 23:49	1
1,2-Dichloroethane	ND	0.022	0.0062	0 0	₩		08/19/24 23:49	1
1,2-Dichloropropane	ND	0.022	0.0074				08/19/24 23:49	· · · · · · · 1
1,3,5-Trimethylbenzene	ND	0.045	0.0085	0 0			08/19/24 23:49	1
1,3-Dichlorobenzene	ND	0.067		mg/Kg			08/19/24 23:49	1
1,3-Dichloropropane	ND	0.067	0.0063				08/19/24 23:49	· 1
1,4-Dichlorobenzene	0.017			mg/Kg	**		08/19/24 23:49	1
2,2-Dichloropropane	ND	0.045		mg/Kg	**		08/19/24 23:49	1
2-Chlorotoluene	ND	0.045	0.0099		<del></del> -		08/19/24 23:49	
4-Chlorotoluene	ND	0.045		mg/Kg	₩		08/19/24 23:49	1
4-Isopropyltoluene	ND	0.045		mg/Kg			08/19/24 23:49	1
Benzene	ND	0.043	0.0043		 		08/19/24 23:49	
Bromobenzene	ND	0.045	0.0043		₩		08/19/24 23:49	1
Bromochloromethane	ND ND	0.045			**		08/19/24 23:49	1
Bromodichloromethane			0.0070 0.0062		<del></del> -			
	ND ND	0.045			<del>1,2</del>		08/19/24 23:49	1
Bromoform	ND ND	0.045	0.0051				08/19/24 23:49	1
Bromomethane		0.11		mg/Kg	· · · · · ·		08/19/24 23:49	
Carbon tetrachloride	ND	0.022	0.0049		<b>*</b>		08/19/24 23:49	1
Chloroethane	ND	0.090		mg/Kg	<b>*</b>		08/19/24 23:49	1
Chloroform	ND	0.022	0.0047		<del></del>		08/19/24 23:49	1
Chloromethane	ND	0.067		mg/Kg	<b>*</b>		08/19/24 23:49	1
cis-1,2-Dichloroethene	ND	0.067		mg/Kg	₽		08/19/24 23:49	1
cis-1,3-Dichloropropene	ND	0.022	0.0045		<del>.</del>		08/19/24 23:49	1
Dibromochloromethane	ND	0.022	0.0055		₩		08/19/24 23:49	1
Dibromomethane	ND	0.045	0.0083		₩		08/19/24 23:49	1
Dichlorodifluoromethane	ND	0.28		mg/Kg			08/19/24 23:49	1
Ethylbenzene	ND	0.045		mg/Kg	☼		08/19/24 23:49	1
Hexachlorobutadiene	ND	0.11		mg/Kg	₩		08/19/24 23:49	1
Isopropylbenzene	ND	0.045	0.0097				08/19/24 23:49	1
Methyl tert-butyl ether	ND	0.045	0.0067		☼	08/19/24 14:52	08/19/24 23:49	1
Methylene Chloride	0.031	<b>J B</b> 0.28	0.029	mg/Kg	₩	08/19/24 14:52	08/19/24 23:49	1
m-Xylene & p-Xylene	ND	0.045	0.0080	mg/Kg	<b>*</b>	08/19/24 14:52	08/19/24 23:49	1
Naphthalene	ND	0.17	0.044	mg/Kg	₽	08/19/24 14:52	08/19/24 23:49	1
n-Butylbenzene	ND	0.045	0.021	mg/Kg	☼	08/19/24 14:52	08/19/24 23:49	1
N-Propylbenzene	ND	0.045	0.017	mg/Kg	≎		08/19/24 23:49	1
o-Xylene	ND	0.045	0.0056	mg/Kg	₩	08/19/24 14:52	08/19/24 23:49	1

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-143009-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-25-SO-54.5-20240813

Lab Sample ID: 580-143009-1 Date Collected: 08/13/24 13:30 **Matrix: Solid** 

Date Received: 08/16/24 12:38 Percent Solids: 89.4

Method: SW846 8260D - Vola Analyte	_	Qualifier	RL	MDL	nued) Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.045	0.0097		— <u>-</u>	08/19/24 14:52		1
Styrene	ND		0.045		mg/Kg	₩	08/19/24 14:52		1
t-Butylbenzene	ND		0.045	0.0087			08/19/24 14:52	08/19/24 23:49	1
Tetrachloroethene	ND		0.045	0.0060	mg/Kg	₩	08/19/24 14:52	08/19/24 23:49	1
Toluene	ND		0.067	0.015	mg/Kg	₩	08/19/24 14:52	08/19/24 23:49	1
trans-1,2-Dichloroethene	ND		0.067	0.016	mg/Kg		08/19/24 14:52	08/19/24 23:49	1
trans-1,3-Dichloropropene	ND		0.045	0.0079	mg/Kg	₩	08/19/24 14:52	08/19/24 23:49	1
Trichloroethene	ND		0.045	0.012	mg/Kg	₩	08/19/24 14:52	08/19/24 23:49	1
Trichlorofluoromethane	ND		0.090	0.029	mg/Kg	₩	08/19/24 14:52	08/19/24 23:49	1
Vinyl chloride	ND		0.11	0.021	mg/Kg	₽	08/19/24 14:52	08/19/24 23:49	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		80 - 121				08/19/24 14:52	08/19/24 23:49	1
4-Bromofluorobenzene (Surr)	97		80 - 120				08/19/24 14:52	08/19/24 23:49	1
Dibromofluoromethane (Surr)	100		80 - 120				08/19/24 14:52	08/19/24 23:49	1
Toluene-d8 (Surr)	104		80 - 120				08/19/24 14:52	08/19/24 23:49	1
Method: SW846 8260D - Vola	atile Organic	Compound	ds by GC/MS	- DL					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	25		0.97	0.12	mg/Kg	₽	08/21/24 15:12	08/21/24 20:46	1
Surrogate	0/	O lifia					Prepared	Analyzed	Dil Fac
•	%Recovery	Qualifier	Limits						
	<del>%Recovery</del> 98	Qualifier	80 - 121				08/21/24 15:12	08/21/24 20:46	1
1,2-Dichloroethane-d4 (Surr)		Quaimer						08/21/24 20:46 08/21/24 20:46	1 1
1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr)	98	Quaimer	80 - 121				08/21/24 15:12		-
1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr)	98 98	Quaimer	80 - 121 80 - 120				08/21/24 15:12 08/21/24 15:12	08/21/24 20:46	1
1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr)	98 98 101	Quaimer	80 - 121 80 - 120 80 - 120				08/21/24 15:12 08/21/24 15:12	08/21/24 20:46 08/21/24 20:46	1
1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)	98 98 101 100	Qualifier	80 - 121 80 - 120 80 - 120	RL	Unit	D	08/21/24 15:12 08/21/24 15:12	08/21/24 20:46 08/21/24 20:46	1
1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)  General Chemistry	98 98 101 100		80 - 121 80 - 120 80 - 120 80 - 120	<b>RL</b> 0.1	Unit %	<u>D</u>	08/21/24 15:12 08/21/24 15:12 08/21/24 15:12	08/21/24 20:46 08/21/24 20:46 08/21/24 20:46	1 1 1

Client: ERM-West Job ID: 580-143009-1

Project/Site: Arkema PDI Sampling

**Client Sample ID: TB-01-SO-20240813** 

Lab Sample ID: 580-143009-2

Date Collected: 08/13/24 00:01 **Matrix: Solid** Date Received: 08/16/24 12:38

Analyte	Result Qualifier	RL _	MDL	OTIL	D	Prepared	Analyzed	Dil F
1,1,1,2-Tetrachloroethane	ND	0.020	0.0050	mg/Kg		08/19/24 14:52	08/19/24 22:44	
1,1,1-Trichloroethane	ND	0.040	0.0046	mg/Kg		08/19/24 14:52	08/19/24 22:44	
1,1,2,2-Tetrachloroethane	ND	0.020	0.0076	mg/Kg		08/19/24 14:52	08/19/24 22:44	
1,1,2-Trichloroethane	ND	0.020	0.0074	mg/Kg		08/19/24 14:52	08/19/24 22:44	
1,1-Dichloroethane	ND	0.040	0.0092	mg/Kg		08/19/24 14:52	08/19/24 22:44	
1,1-Dichloroethene	ND	0.040	0.012	mg/Kg		08/19/24 14:52	08/19/24 22:44	
1,1-Dichloropropene	ND	0.040	0.0053	mg/Kg		08/19/24 14:52	08/19/24 22:44	
1,2,3-Trichlorobenzene	ND	0.080	0.040	mg/Kg		08/19/24 14:52	08/19/24 22:44	
1,2,3-Trichloropropane	ND	0.040	0.012	mg/Kg		08/19/24 14:52	08/19/24 22:44	
I,2,4-Trichlorobenzene	ND	0.080	0.043	mg/Kg		08/19/24 14:52	08/19/24 22:44	
1,2,4-Trimethylbenzene	ND	0.040	0.014	mg/Kg		08/19/24 14:52	08/19/24 22:44	
I,2-Dibromo-3-Chloropropane	ND	0.060	0.015	mg/Kg		08/19/24 14:52	08/19/24 22:44	
1,2-Dibromoethane	ND	0.020	0.0038	mg/Kg		08/19/24 14:52	08/19/24 22:44	
I,2-Dichlorobenzene	ND	0.040	0.0087			08/19/24 14:52	08/19/24 22:44	
I,2-Dichloroethane	ND	0.020	0.0055	mg/Kg		08/19/24 14:52	08/19/24 22:44	
,2-Dichloropropane	ND	0.020	0.0066			08/19/24 14:52	08/19/24 22:44	
I,3,5-Trimethylbenzene	ND	0.040	0.0076			08/19/24 14:52	08/19/24 22:44	
I,3-Dichlorobenzene	ND	0.060		mg/Kg		08/19/24 14:52	08/19/24 22:44	
I,3-Dichloropropane	ND	0.060	0.0056			08/19/24 14:52	08/19/24 22:44	
I,4-Dichlorobenzene	ND	0.060		mg/Kg		08/19/24 14:52	08/19/24 22:44	
2,2-Dichloropropane	ND	0.040		mg/Kg		08/19/24 14:52	08/19/24 22:44	
2-Chlorotoluene	ND	0.040	0.0088				08/19/24 22:44	
l-Chlorotoluene	ND	0.040	0.0098				08/19/24 22:44	
I-Isopropyltoluene	ND	0.040		mg/Kg			08/19/24 22:44	
Benzene	ND	0.020	0.0038				08/19/24 22:44	
Bromobenzene	ND	0.040	0.0042				08/19/24 22:44	
Bromochloromethane	ND	0.040	0.0062	0 0			08/19/24 22:44	
Bromodichloromethane	ND	0.040	0.0055				08/19/24 22:44	
Bromoform	ND	0.040	0.0045	0 0			08/19/24 22:44	
Bromomethane	ND	0.10		mg/Kg			08/19/24 22:44	
Carbon tetrachloride	ND	0.020	0.0044				08/19/24 22:44	
Chlorobenzene	ND	0.020	0.0044				08/19/24 22:44	
Chloroethane	ND	0.040		mg/Kg			08/19/24 22:44	
Chloroform	ND	0.020	0.0042				08/19/24 22:44	
Chloromethane	ND	0.020		mg/Kg			08/19/24 22:44	
cis-1,2-Dichloroethene	ND	0.060		mg/Kg			08/19/24 22:44	
		0.000	0.013					
cis-1,3-Dichloropropene Dibromochloromethane	ND ND						08/19/24 22:44 08/19/24 22:44	
	ND	0.020	0.0049					
Dibromomethane Dichlorodifluoromethane	ND	0.040	0.0074				08/19/24 22:44	
	ND	0.25		mg/Kg			08/19/24 22:44	
Ethylbenzene	ND	0.040	0.0091				08/19/24 22:44	
lexachlorobutadiene	ND	0.10		mg/Kg			08/19/24 22:44	
sopropylbenzene	ND	0.040	0.0086				08/19/24 22:44	
Methyl tert-butyl ether	ND	0.040	0.0060				08/19/24 22:44	
Methylene Chloride	0.030 JB	0.25		mg/Kg			08/19/24 22:44	
n-Xylene & p-Xylene	ND	0.040	0.0071				08/19/24 22:44	
Naphthalene	ND	0.15		mg/Kg			08/19/24 22:44	
n-Butylbenzene N-Propylbenzene	ND ND	0.040		mg/Kg mg/Kg		08/19/24 14:52	08/19/24 22:44	

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-143009-1

Project/Site: Arkema PDI Sampling

**Client Sample ID: TB-01-SO-20240813** 

Lab Sample ID: 580-143009-2 Date Collected: 08/13/24 00:01 **Matrix: Solid** 

Date Received: 08/16/24 12:38

Method: SW846 8260D - Vo	olatile Organic	Compoun	ds by GC/MS	(Conti	nued)				
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	MD		0.040	0.0050	mg/Kg		08/19/24 14:52	08/19/24 22:44	1
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		08/19/24 14:52	08/19/24 22:44	1
Styrene	ND		0.040	0.013	mg/Kg		08/19/24 14:52	08/19/24 22:44	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		08/19/24 14:52	08/19/24 22:44	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		08/19/24 14:52	08/19/24 22:44	1
Toluene	ND		0.060	0.014	mg/Kg		08/19/24 14:52	08/19/24 22:44	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		08/19/24 14:52	08/19/24 22:44	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		08/19/24 14:52	08/19/24 22:44	1
Trichloroethene	ND		0.040	0.010	mg/Kg		08/19/24 14:52	08/19/24 22:44	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		08/19/24 14:52	08/19/24 22:44	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		08/19/24 14:52	08/19/24 22:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		80 - 121				08/19/24 14:52	08/19/24 22:44	1
4-Bromofluorobenzene (Surr)	99		80 - 120				08/19/24 14:52	08/19/24 22:44	1
Dibromofluoromethane (Surr)	102		80 - 120				08/19/24 14:52	08/19/24 22:44	1
Toluene-d8 (Surr)	102		80 - 120				08/19/24 14:52	08/19/24 22:44	1

Client: ERM-West Job ID: 580-143009-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-26-SO-37.5-20240814

Lab Sample ID: 580-143009-3 Date Collected: 08/14/24 10:10 Matrix: Solid Date Received: 08/16/24 12:38 Percent Solids: 86.1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.024 0.0060 mg/Kg 08/19/24 14:52 08/20/24 00:11 ND 1.1.1-Trichloroethane 0.048 0.0055 mg/Kg 08/19/24 14:52 08/20/24 00:11 1,1,2,2-Tetrachloroethane ND 0.024 0.0092 mg/Kg 08/19/24 14:52 08/20/24 00:11 ND 0.0089 08/19/24 14:52 1,1,2-Trichloroethane 0.024 mg/Kg 08/20/24 00:11 0.048 0.011 mg/Kg 08/19/24 14:52 08/20/24 00:11 1.1-Dichloroethane ND 1,1-Dichloroethene ND 0.048 0.015 mg/Kg 08/19/24 14:52 08/20/24 00:11 1,1-Dichloropropene ND 0.048 0.0064 08/19/24 14:52 08/20/24 00:11 mg/Kg ND 0.096 0.048 08/19/24 14:52 08/20/24 00:11 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.048 0.014 mg/Kg 08/19/24 14:52 08/20/24 00:11 1,2,4-Trichlorobenzene ND 0.096 0.051 mg/Kg 08/19/24 14:52 08/20/24 00:11 1,2,4-Trimethylbenzene ND 0.048 0.016 mg/Kg 08/19/24 14:52 08/20/24 00:11 1.2-Dibromo-3-Chloropropane ND 0.072 0.018 ma/Ka 08/19/24 14:52 08/20/24 00:11 1 1,2-Dibromoethane ND 0.024 0.0046 mg/Kg 08/19/24 14:52 08/20/24 00:11 0.39 0.048 0.010 mg/Kg 08/19/24 14:52 08/20/24 00:11 1,2-Dichlorobenzene ND 0.024 0.0066 mg/Kg 08/19/24 14:52 08/20/24 00:11 1.2-Dichloroethane 0.0080 1,2-Dichloropropane ND 0.024 mg/Kg 08/19/24 14:52 08/20/24 00:11 1,3,5-Trimethylbenzene ND 0.048 0.0092 mg/Kg 08/19/24 14:52 08/20/24 00:11 0.072 0.016 mg/Kg 08/19/24 14:52 08/20/24 00:11 1.3-Dichlorobenzene 0.018 ND 0.072 0.0068 mg/Kg 08/19/24 14:52 08/20/24 00:11 1,3-Dichloropropane mg/Kg 1,4-Dichlorobenzene 1.2 0.072 0.013 08/19/24 14:52 08/20/24 00:11 2,2-Dichloropropane ND 0.048 0.015 mg/Kg ÷ 08/19/24 14:52 08/20/24 00:11 2-Chlorotoluene ND 0.048 0.011 mg/Kg 08/19/24 14:52 08/20/24 00:11 4-Chlorotoluene ND 0.012 mg/Kg 08/19/24 14:52 08/20/24 00:11 0.048 4-Isopropyltoluene ND 0.048 0.012 mg/Kg 08/19/24 14:52 08/20/24 00:11 Benzene ND 0.024 0.0046 mg/Kg 08/19/24 14:52 08/20/24 00:11 ND 0.0051 08/19/24 14:52 Bromobenzene 0.048 mg/Kg 08/20/24 00:11 Bromochloromethane ND 0.048 0.0075 mg/Kg 08/19/24 14:52 08/20/24 00:11 Bromodichloromethane 0.0066 08/19/24 14:52 ND 0.048 mg/Kg 08/20/24 00:11 0.0054 Bromoform ND 0.048 mg/Kg 08/19/24 14:52 08/20/24 00:11 0.046 ND 08/19/24 14:52 Bromomethane 0.12 mg/Kg 08/20/24 00:11 Carbon tetrachloride ND 0.024 0.0053 mg/Kg 08/19/24 14:52 08/20/24 00:11 Chloroethane ND 0.096 0.025 mg/Kg 08/19/24 14:52 08/20/24 00:11 0.024 0.0051 mg/Kg 08/19/24 14:52 08/20/24 00:11 Chloroform 0.10 0.012 08/19/24 14:52 08/20/24 00:11 Chloromethane ND 0.072 mg/Kg cis-1,2-Dichloroethene ND 0.072 0.015 mg/Kg 08/19/24 14:52 08/20/24 00:11 cis-1.3-Dichloropropene ND 0.024 0.0048 mg/Kg 08/19/24 14:52 08/20/24 00:11 0.0059 Dibromochloromethane ND 0.024 mg/Kg 08/19/24 14:52 08/20/24 00:11 Dibromomethane ND 0.048 0.0089 mg/Kg 08/19/24 14:52 08/20/24 00:11 Dichlorodifluoromethane ND 0.055 mg/Kg 08/19/24 14:52 0.30 08/20/24 00:11 Ethylbenzene ND 0.048 0.011 mg/Kg 08/19/24 14:52 08/20/24 00:11 Hexachlorobutadiene ND 0.12 0.029 mg/Kg 08/19/24 14:52 08/20/24 00:11 Isopropylbenzene ND 0.048 0.010 mg/Kg 08/19/24 14:52 08/20/24 00:11 0.0072 ND 08/19/24 14:52 Methyl tert-butyl ether 0.048 mg/Kg 08/20/24 00:11 0.031 08/19/24 14:52 08/20/24 00:11 **Methylene Chloride** 0.039 В 0.30 mg/Kg m-Xylene & p-Xylene ND 0.048 0.0086 mg/Kg 08/19/24 14:52 08/20/24 00:11 Naphthalene ND 0.18 0.047 mg/Kg 08/19/24 14:52 08/20/24 00:11 n-Butylbenzene ND 08/19/24 14:52 08/20/24 00:11 0.048 0.022 mg/Kg N-Propylbenzene ND 0.048 0.018 mg/Kg 08/19/24 14:52 08/20/24 00:11 08/20/24 00:11 o-Xylene ND 0.048 0.0060 mg/Kg 08/19/24 14:52

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Client: ERM-West Job ID: 580-143009-1

0.048

0.048

MDL Unit

0.010 mg/Kg

0.015 mg/Kg

Project/Site: Arkema PDI Sampling

Analyte

Styrene

sec-Butylbenzene

Client Sample ID: PDI-26-SO-37.5-20240814

Date Collected: 08/14/24 10:10 Date Received: 08/16/24 12:38

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

ND

ND

Result Qualifier

Lab Sample ID: 580-143009-3

□ 08/19/24

**Matrix: Solid Percent Solids: 86.1** 

•		
Prepared	Analyzed	Dil Fac
3/19/24 14:52	08/20/24 00:11	1
3/19/24 14:52	08/20/24 00:11	1
3/19/24 14:52	08/20/24 00:11	1
2/40/04 44 50	00/00/04 00 44	

t-Butylbenzene	ND		0.048	0.0093	ilig/itg	140	08/19/24 14:52	08/20/24 00:11	ı
Tetrachloroethene	0.25		0.048	0.0064	mg/Kg	₩	08/19/24 14:52	08/20/24 00:11	1
Toluene	ND		0.072	0.016	mg/Kg	☼	08/19/24 14:52	08/20/24 00:11	1
trans-1,2-Dichloroethene	ND		0.072	0.018	mg/Kg	⊅	08/19/24 14:52	08/20/24 00:11	1
trans-1,3-Dichloropropene	ND		0.048	0.0084	mg/Kg	☼	08/19/24 14:52	08/20/24 00:11	1
Trichloroethene	ND		0.048	0.012	mg/Kg	☼	08/19/24 14:52	08/20/24 00:11	1
Trichlorofluoromethane	ND		0.096	0.031	mg/Kg	⊅	08/19/24 14:52	08/20/24 00:11	1
Vinyl chloride	ND		0.12	0.023	mg/Kg	☼	08/19/24 14:52	08/20/24 00:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		80 - 121				08/19/24 14:52	08/20/24 00:11	1
4-Bromofluorobenzene (Surr)	102		80 - 120				08/19/24 14:52	08/20/24 00:11	1
Dibana and floor and and the area (Occurs)	101		80 - 120				08/19/24 14:52	08/20/24 00:11	1
Dibromofiuoromethane (Surr)									
Dibromofluoromethane (Surr) Toluene-d8 (Surr)	112		80 - 120				08/19/24 14:52	08/20/24 00:11	1
	tile Organic	Compound Qualifier		6 - DL MDL	Unit	D	08/19/24 14:52  Prepared	08/20/24 00:11  Analyzed	1 Dil Fac
Toluene-d8 (Surr)  Method: SW846 8260D - Vola	tile Organic	•	ds by GC/MS	MDL	Unit mg/Kg	<u>D</u>			Dil Fac
Method: SW846 8260D - Vola Analyte Chlorobenzene	tile Organic Result	Qualifier	ds by GC/MS	MDL			Prepared	Analyzed	Dil Fac  1  Dil Fac
Toluene-d8 (Surr)  Method: SW846 8260D - Volat Analyte	tile Organic Result 160	Qualifier	ds by GC/MS RL 1.0	MDL			Prepared 08/21/24 15:12	Analyzed 08/21/24 21:06	1
Method: SW846 8260D - Vola Analyte Chlorobenzene Surrogate	tile Organic Result 160 %Recovery	Qualifier	ds by GC/MS RL 1.0	MDL			Prepared 08/21/24 15:12  Prepared 08/21/24 15:12	Analyzed 08/21/24 21:06 Analyzed	1
Method: SW846 8260D - Volate Analyte Chlorobenzene Surrogate 1,2-Dichloroethane-d4 (Surr)	tile Organic Result 160  %Recovery 99	Qualifier	ds by GC/MS RL 1.0  Limits 80 - 121	MDL			Prepared 08/21/24 15:12  Prepared 08/21/24 15:12 08/21/24 15:12	Analyzed 08/21/24 21:06  Analyzed 08/21/24 21:06	1
Method: SW846 8260D - Volate Analyte Chlorobenzene Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr)	tile Organic Result 160 %Recovery 99 97	Qualifier	RL 1.0 Limits 80 - 121 80 - 120	MDL			Prepared 08/21/24 15:12  Prepared 08/21/24 15:12 08/21/24 15:12 08/21/24 15:12	Analyzed 08/21/24 21:06  Analyzed 08/21/24 21:06 08/21/24 21:06	1
Method: SW846 8260D - Volation Analyte Chlorobenzene Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr)	tile Organic Result 160 %Recovery 99 97 99	Qualifier	RL 1.0 Limits 80 - 121 80 - 120 80 - 120	MDL			Prepared 08/21/24 15:12  Prepared 08/21/24 15:12 08/21/24 15:12 08/21/24 15:12	Analyzed 08/21/24 21:06  Analyzed 08/21/24 21:06 08/21/24 21:06 08/21/24 21:06	1 Dil Fac 1 1 1
Toluene-d8 (Surr)  Method: SW846 8260D - Volat Analyte Chlorobenzene  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)	tile Organic Result 160 %Recovery 99 97 99 99	Qualifier	RL 1.0 Limits 80 - 121 80 - 120 80 - 120	MDL 0.12			Prepared 08/21/24 15:12  Prepared 08/21/24 15:12 08/21/24 15:12 08/21/24 15:12	Analyzed 08/21/24 21:06  Analyzed 08/21/24 21:06 08/21/24 21:06 08/21/24 21:06	1 Dil Fac 1 1 1
Method: SW846 8260D - Volate Analyte Chlorobenzene  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluoromethane (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)  General Chemistry	tile Organic Result 160 %Recovery 99 97 99 99	Qualifier  Qualifier	Limits 80 - 120 80 - 120	MDL 0.12	mg/Kg	<u></u>	Prepared 08/21/24 15:12  Prepared 08/21/24 15:12 08/21/24 15:12 08/21/24 15:12 08/21/24 15:12	Analyzed 08/21/24 21:06  Analyzed 08/21/24 21:06 08/21/24 21:06 08/21/24 21:06 08/21/24 21:06	1 Dil Fac 1 1 1 1

Client: ERM-West Job ID: 580-143009-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-26-SO-39-20240814

Lab Sample ID: 580-143009-4 Date Collected: 08/14/24 10:35 Matrix: Solid Date Received: 08/16/24 12:38 Percent Solids: 85.4

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.029 0.0072 mg/Kg 08/19/24 14:52 08/20/24 00:33 ND 0.058 1.1.1-Trichloroethane 0.0066 mg/Kg 08/19/24 14:52 08/20/24 00:33 1,1,2,2-Tetrachloroethane ND 0.029 0.011 mg/Kg 08/19/24 14:52 08/20/24 00:33 08/19/24 14:52 1,1,2-Trichloroethane ND 0.029 0.011 mg/Kg 08/20/24 00:33 0.058 0.013 mg/Kg 08/19/24 14:52 08/20/24 00:33 1.1-Dichloroethane ND 1,1-Dichloroethene ND 0.058 0.018 mg/Kg 08/19/24 14:52 08/20/24 00:33 1,1-Dichloropropene ND 0.058 0.0076 08/19/24 14:52 08/20/24 00:33 mg/Kg ND 0.057 08/19/24 14:52 08/20/24 00:33 1,2,3-Trichlorobenzene 0.12 mg/Kg 1,2,3-Trichloropropane ND 0.058 0.017 mg/Kg 08/19/24 14:52 08/20/24 00:33 1,2,4-Trichlorobenzene ND 0.12 0.061 mg/Kg 08/19/24 14:52 08/20/24 00:33 1,2,4-Trimethylbenzene ND 0.058 0.019 mg/Kg 08/19/24 14:52 08/20/24 00:33 mg/Kg 1.2-Dibromo-3-Chloropropane ND 0.086 0.022 08/19/24 14:52 08/20/24 00:33 1 1,2-Dibromoethane ND 0.029 0.0055 mg/Kg 08/19/24 14:52 08/20/24 00:33 0.025 0.058 0.013 mg/Kg 08/19/24 14:52 08/20/24 00:33 1,2-Dichlorobenzene ND 0.029 0.0079 mg/Kg 08/19/24 14:52 08/20/24 00:33 1.2-Dichloroethane 0.0095 1,2-Dichloropropane ND 0.029 mg/Kg 08/19/24 14:52 08/20/24 00:33 1,3,5-Trimethylbenzene ND 0.058 0.011 mg/Kg 08/19/24 14:52 08/20/24 00:33 0.086 0.019 mg/Kg 08/19/24 14:52 08/20/24 00:33 1.3-Dichlorobenzene 0.11 ND 0.086 0.0081 mg/Kg 08/19/24 14:52 08/20/24 00:33 1,3-Dichloropropane 0.016 1,4-Dichlorobenzene 0.10 0.086 mg/Kg 08/19/24 14:52 08/20/24 00:33 2,2-Dichloropropane ND 0.058 0.017 mg/Kg ÷ 08/19/24 14:52 08/20/24 00:33 2-Chlorotoluene ND 0.058 0.013 mg/Kg 08/19/24 14:52 08/20/24 00:33 4-Chlorotoluene ND mg/Kg 08/19/24 14:52 08/20/24 00:33 0.058 0.014 4-Isopropyltoluene ND 0.058 0.015 mg/Kg 08/19/24 14:52 08/20/24 00:33 Benzene ND 0.029 0.0055 mg/Kg 08/19/24 14:52 08/20/24 00:33 08/19/24 14:52 Bromobenzene ND 0.058 0.0060 mg/Kg 08/20/24 00:33 Bromochloromethane ND 0.058 0.0089 mg/Kg 08/19/24 14:52 08/20/24 00:33 Bromodichloromethane 0.0079 ND 0.058 mg/Kg 08/19/24 14:52 08/20/24 00:33 0.0065 Bromoform ND 0.058 mg/Kg 08/19/24 14:52 08/20/24 00:33 ND 0.054 08/19/24 14:52 Bromomethane 0.14 mg/Kg 08/20/24 00:33 Carbon tetrachloride ND 0.029 0.0063 mg/Kg 08/19/24 14:52 08/20/24 00:33 Chloroethane ND 0.12 0.030 mg/Kg 08/19/24 14:52 08/20/24 00:33 Chloroform 0.029 0.0060 mg/Kg 08/19/24 14:52 08/20/24 00:33 ND 0.015 Chloromethane ND 08/19/24 14:52 08/20/24 00:33 0.086 mg/Kg cis-1,2-Dichloroethene ND 0.086 0.018 mg/Kg 08/19/24 14:52 08/20/24 00:33 cis-1.3-Dichloropropene ND 0.029 0.0058 mg/Kg 08/19/24 14:52 08/20/24 00:33 Dibromochloromethane ND 0.029 0.0070 mg/Kg 08/19/24 14:52 08/20/24 00:33 Dibromomethane ND 0.058 0.011 mg/Kg 08/19/24 14:52 08/20/24 00:33 Dichlorodifluoromethane ND 0.066 mg/Kg 08/19/24 14:52 0.36 08/20/24 00:33 Ethylbenzene ND 0.058 0.013 mg/Kg 08/19/24 14:52 08/20/24 00:33 Hexachlorobutadiene ND 0.14 0.034 mg/Kg 08/19/24 14:52 08/20/24 00:33 Isopropylbenzene ND 0.058 0.012 mg/Kg 08/19/24 14:52 08/20/24 00:33 0.0086 08/19/24 14:52 08/20/24 00:33 Methyl tert-butyl ether ND 0.058 mg/Kg 0.037 08/19/24 14:52 08/20/24 00:33 **Methylene Chloride** 0.053 В 0.36 mg/Kg 0.058 m-Xylene & p-Xylene ND 0.010 mg/Kg 08/19/24 14:52 08/20/24 00:33 Naphthalene ND 0.22 0.056 mg/Kg 08/19/24 14:52 08/20/24 00:33 n-Butylbenzene ND 08/19/24 14:52 08/20/24 00:33 0.058 0.027 mg/Kg N-Propylbenzene ND 0.058 0.022 mg/Kg 08/19/24 14:52 08/20/24 00:33 o-Xylene ND 0.058 0.0072 mg/Kg 08/19/24 14:52 08/20/24 00:33

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143009-1

Project/Site: Arkema PDI Sampling

Percent Solids (SM22 2540G)

Percent Moisture (SM22 2540G)

85.4

14.6

Client Sample ID: PDI-26-SO-39-20240814

Date Collected: 08/14/24 10:35 Date Received: 08/16/24 12:38

Lab Sample ID: 580-143009-4

	Matrix: Solid
Percen	t Solids: 85.4

08/21/24 09:07

08/21/24 09:07

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.058	0.012	mg/Kg	— <u></u>	08/19/24 14:52	08/20/24 00:33	1
Styrene	ND		0.058	0.018	mg/Kg	₩	08/19/24 14:52	08/20/24 00:33	1
t-Butylbenzene	ND		0.058	0.011	mg/Kg	₩	08/19/24 14:52	08/20/24 00:33	1
Tetrachloroethene	ND		0.058	0.0076	mg/Kg	₩	08/19/24 14:52	08/20/24 00:33	1
Toluene	ND		0.086	0.019	mg/Kg	₩	08/19/24 14:52	08/20/24 00:33	1
trans-1,2-Dichloroethene	ND		0.086	0.021	mg/Kg	₩	08/19/24 14:52	08/20/24 00:33	1
trans-1,3-Dichloropropene	ND		0.058	0.010	mg/Kg	₩	08/19/24 14:52	08/20/24 00:33	1
Trichloroethene	ND		0.058	0.015	mg/Kg	₩	08/19/24 14:52	08/20/24 00:33	1
Trichlorofluoromethane	ND		0.12	0.037	mg/Kg	₩	08/19/24 14:52	08/20/24 00:33	1
Vinyl chloride	ND		0.14	0.027	mg/Kg	₽	08/19/24 14:52	08/20/24 00:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		80 - 121				08/19/24 14:52	08/20/24 00:33	1
4-Bromofluorobenzene (Surr)	100		80 - 120				08/19/24 14:52	08/20/24 00:33	1
Dibromofluoromethane (Surr)	100		80 - 120				08/19/24 14:52	08/20/24 00:33	1
Toluene-d8 (Surr)	102		80 - 120				08/19/24 14:52	08/20/24 00:33	1
Method: SW846 8260D - Vo	latile Organic	Compound	ds by GC/MS	- DL					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	22		0.62	0.074	mg/Kg	☼	08/21/24 15:12	08/21/24 20:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 121				08/21/24 15:12	08/21/24 20:25	1
4-Bromofluorobenzene (Surr)	99		80 - 120				08/21/24 15:12	08/21/24 20:25	1
Dibromofluoromethane (Surr)	101		80 - 120				08/21/24 15:12	08/21/24 20:25	1
Toluene-d8 (Surr)	100		80 - 120				08/21/24 15:12	08/21/24 20:25	1
General Chemistry									
Analyte		Qualifier	RL		Unit		Prepared	Analyzed	Dil Fac

0.1

0.1

0.1 %

0.1 %

Client: ERM-West Job ID: 580-143009-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-26-SO-53-20240814

Lab Sample ID: 580-143009-5 Date Collected: 08/14/24 13:35 Matrix: Solid Date Received: 08/16/24 12:38 Percent Solids: 83.5

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.024 0.0059 mg/Kg 08/19/24 14:52 08/20/24 00:55 ND 1.1.1-Trichloroethane 0.047 0.0054 mg/Kg 08/19/24 14:52 08/20/24 00:55 1,1,2,2-Tetrachloroethane ND 0.024 0.0089 mg/Kg 08/19/24 14:52 08/20/24 00:55 ND 08/19/24 14:52 1,1,2-Trichloroethane 0.024 0.0087 mg/Kg 08/20/24 00:55 0.047 0.011 mg/Kg 08/19/24 14:52 08/20/24 00:55 1 1-Dichloroethane ND 1,1-Dichloroethene ND 0.047 0.014 mg/Kg 08/19/24 14:52 08/20/24 00:55 1,1-Dichloropropene ND 0.047 0.0062 08/19/24 14:52 08/20/24 00:55 mg/Kg ND 0.094 0.047 08/19/24 14:52 08/20/24 00:55 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.047 0.014 mg/Kg 08/19/24 14:52 08/20/24 00:55 1,2,4-Trichlorobenzene ND 0.094 0.050 mg/Kg 08/19/24 14:52 08/20/24 00:55 1,2,4-Trimethylbenzene ND 0.047 0.016 mg/Kg 08/19/24 14:52 08/20/24 00:55 mg/Kg 1.2-Dibromo-3-Chloropropane ND 0.071 0.018 08/19/24 14:52 08/20/24 00:55 1 1,2-Dibromoethane ND 0.024 0.0045 mg/Kg 08/19/24 14:52 08/20/24 00:55 1,2-Dichlorobenzene ND 0.047 0.010 mg/Kg 08/19/24 14:52 08/20/24 00:55 ND 0.024 0.0065 mg/Kg 08/19/24 14:52 08/20/24 00:55 1.2-Dichloroethane 0.0078 1,2-Dichloropropane NΩ 0.024 mg/Kg 08/19/24 14:52 08/20/24 00:55 ND 0.0089 1,3,5-Trimethylbenzene 0.047 mg/Kg 08/19/24 14:52 08/20/24 00:55 1,3-Dichlorobenzene ND 0.071 0.016 mg/Kg 08/19/24 14:52 08/20/24 00:55 1,3-Dichloropropane NΩ 0.071 0.0066 mg/Kg 08/19/24 14:52 08/20/24 00:55 mg/Kg 1,4-Dichlorobenzene 0.026 0.071 0.013 08/19/24 14:52 08/20/24 00:55 0.014 2,2-Dichloropropane ND 0.047 mg/Kg ÷ 08/19/24 14:52 08/20/24 00:55 2-Chlorotoluene ND 0.047 0.010 mg/Kg 08/19/24 14:52 08/20/24 00:55 4-Chlorotoluene ND 0.012 mg/Kg 08/19/24 14:52 08/20/24 00:55 0.047 4-Isopropyltoluene ND 0.047 0.012 mg/Kg 08/19/24 14:52 08/20/24 00:55 Benzene ND 0.024 0.0045 mg/Kg 08/19/24 14:52 08/20/24 00:55 0.0049 08/19/24 14:52 Bromobenzene ND 0.047 mg/Kg 08/20/24 00:55 Bromochloromethane ND 0.047 0.0073 mg/Kg 08/19/24 14:52 08/20/24 00:55 Bromodichloromethane 0.0065 ND 0.047 mg/Kg 08/19/24 14:52 08/20/24 00:55 0.0053 Bromoform ND 0.047 mg/Kg 08/19/24 14:52 08/20/24 00:55 0.044 ND 08/19/24 14:52 Bromomethane 0.12 mg/Kg 08/20/24 00:55 Carbon tetrachloride ND 0.024 0.0052 mg/Kg 08/19/24 14:52 08/20/24 00:55 Chloroethane ND 0.094 0.025 mg/Kg 08/19/24 14:52 08/20/24 00:55 Chloroform 0.024 0.0049 mg/Kg 08/19/24 14:52 08/20/24 00:55 ND 0.012 Chloromethane ND 08/19/24 14:52 08/20/24 00:55 0.071 mg/Kg cis-1,2-Dichloroethene ND 0.071 0.015 mg/Kg 08/19/24 14:52 08/20/24 00:55 cis-1.3-Dichloropropene ND 0.024 0.0047 mg/Kg 08/19/24 14:52 08/20/24 00:55 Dibromochloromethane ND 0.024 0.0058 mg/Kg 08/19/24 14:52 08/20/24 00:55 Dibromomethane ND 0.047 0.0087 mg/Kg 08/19/24 14:52 08/20/24 00:55 Dichlorodifluoromethane ND 0.054 08/19/24 14:52 0.29 mg/Kg 08/20/24 00:55 Ethylbenzene ND 0.047 0.011 mg/Kg 08/19/24 14:52 08/20/24 00:55 Hexachlorobutadiene ND 0.12 0.028 mg/Kg 08/19/24 14:52 08/20/24 00:55 Isopropylbenzene ND 0.047 0.010 mg/Kg 08/19/24 14:52 08/20/24 00:55 ND 0.0071 08/19/24 14:52 08/20/24 00:55 Methyl tert-butyl ether 0.047 mg/Kg 0.031 08/19/24 14:52 08/20/24 00:55 **Methylene Chloride** 0.037 В 0.29 mg/Kg 08/20/24 00:55 m-Xylene & p-Xylene ND 0.047 0.0084 mg/Kg 08/19/24 14:52 Naphthalene ND 0.18 0.046 mg/Kg 08/19/24 14:52 08/20/24 00:55 n-Butylbenzene ND 0.047 08/19/24 14:52 08/20/24 00:55 0.022 mg/Kg N-Propylbenzene ND 0.047 0.018 mg/Kg 08/19/24 14:52 08/20/24 00:55 08/19/24 14:52 08/20/24 00:55 o-Xylene ND 0.047 0.0059 mg/Kg

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143009-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-26-SO-53-20240814

Date Collected: 08/14/24 13:35

Date Received: 08/16/24 12:38

Lab Sample ID: 580-143009-5

**Matrix: Solid** Percent Solids: 83.5

Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	(Conti	nued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.047	0.010	mg/Kg	<u></u>	08/19/24 14:52	08/20/24 00:55	1
Styrene	ND		0.047	0.015	mg/Kg	₩	08/19/24 14:52	08/20/24 00:55	1
t-Butylbenzene	ND		0.047	0.0091	mg/Kg	₩	08/19/24 14:52	08/20/24 00:55	1
Tetrachloroethene	ND		0.047	0.0062	mg/Kg	₩	08/19/24 14:52	08/20/24 00:55	1
Toluene	ND		0.071	0.016	mg/Kg	₩	08/19/24 14:52	08/20/24 00:55	1
trans-1,2-Dichloroethene	ND		0.071	0.017	mg/Kg	₩	08/19/24 14:52	08/20/24 00:55	1
trans-1,3-Dichloropropene	ND		0.047	0.0082	mg/Kg	₩	08/19/24 14:52	08/20/24 00:55	1
Trichloroethene	ND		0.047	0.012	mg/Kg	₩	08/19/24 14:52	08/20/24 00:55	1
Trichlorofluoromethane	ND		0.094	0.031	mg/Kg	₩	08/19/24 14:52	08/20/24 00:55	1
Vinyl chloride	ND		0.12	0.022	mg/Kg	₽	08/19/24 14:52	08/20/24 00:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		80 - 121				08/19/24 14:52	08/20/24 00:55	1
4-Bromofluorobenzene (Surr)	102		80 - 120				08/19/24 14:52	08/20/24 00:55	1
Dibromofluoromethane (Surr)	101		80 - 120				08/19/24 14:52	08/20/24 00:55	1
Toluene-d8 (Surr)	104		80 - 120				08/19/24 14:52	08/20/24 00:55	1
Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	- DL					
Analyte	_	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	30		1.0	0.12	mg/Kg	<u></u>	08/21/24 15:12	08/21/24 21:27	1

Welliou. 344046 6260D - 40	latile Organic	Compoun	us by GC/IVIS	- DL					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	30		1.0	0.12	mg/Kg	₩	08/21/24 15:12	08/21/24 21:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				08/21/24 15:12	08/21/24 21:27	1
4-Bromofluorobenzene (Surr)	97		80 - 120				08/21/24 15:12	08/21/24 21:27	1
Dibromofluoromethane (Surr)	103		80 - 120				08/21/24 15:12	08/21/24 21:27	1
Toluene-d8 (Surr)	101		80 - 120				08/21/24 15:12	08/21/24 21:27	1

General Chemistry							
Analyte	Result Qualifier	RL	RL Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	83.5	0.1	0.1 %			08/21/24 09:49	1
Percent Moisture (SM22 2540G)	16.5	0.1	0.1 %			08/21/24 09:49	1

Client: ERM-West Job ID: 580-143009-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-22-SO-43-20240815

Lab Sample ID: 580-143009-6 Date Collected: 08/15/24 12:50 Matrix: Solid Date Received: 08/16/24 12:38 Percent Solids: 87.1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.023 0.0058 mg/Kg 08/19/24 14:52 08/20/24 01:16 ND 1.1.1-Trichloroethane 0.046 0.0053 mg/Kg 08/19/24 14:52 08/20/24 01:16 1,1,2,2-Tetrachloroethane ND 0.023 0.0087 mg/Kg 08/19/24 14:52 08/20/24 01:16 0.0085 08/19/24 14:52 1,1,2-Trichloroethane ND 0.023 mg/Kg 08/20/24 01:16 0.046 0.011 mg/Kg 08/19/24 14:52 08/20/24 01:16 1.1-Dichloroethane ND 1,1-Dichloroethene ND 0.046 0.014 mg/Kg 08/19/24 14:52 08/20/24 01:16 1,1-Dichloropropene ND 0.046 0.0061 08/19/24 14:52 08/20/24 01:16 mg/Kg ND 0.092 0.046 08/19/24 14:52 08/20/24 01:16 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.046 0.013 mg/Kg 08/19/24 14:52 08/20/24 01:16 1,2,4-Trichlorobenzene ND 0.092 0.049 mg/Kg 08/19/24 14:52 08/20/24 01:16 1,2,4-Trimethylbenzene ND 0.046 0.016 mg/Kg 08/19/24 14:52 08/20/24 01:16 mg/Kg 1.2-Dibromo-3-Chloropropane ND 0.069 0.017 08/19/24 14:52 08/20/24 01:16 1 1,2-Dibromoethane ND 0.023 0.0044 mg/Kg 08/19/24 14:52 08/20/24 01:16 1,2-Dichlorobenzene ND 0.046 0.010 mg/Kg 08/19/24 14:52 08/20/24 01:16 ND 0.023 0.0063 mg/Kg 08/19/24 14:52 08/20/24 01:16 1.2-Dichloroethane 0.0076 1,2-Dichloropropane NΩ 0.023 mg/Kg 08/19/24 14:52 08/20/24 01:16 1,3,5-Trimethylbenzene ND 0.046 0.0087 mg/Kg 08/19/24 14:52 08/20/24 01:16 1,3-Dichlorobenzene ND 0.069 0.015 mg/Kg 08/19/24 14:52 08/20/24 01:16 ND 0.069 0.0064 mg/Kg 08/19/24 14:52 08/20/24 01:16 1,3-Dichloropropane mg/Kg 1,4-Dichlorobenzene ND 0.069 0.012 08/19/24 14:52 08/20/24 01:16 2,2-Dichloropropane ND 0.046 0.014 mg/Kg ÷ 08/19/24 14:52 08/20/24 01:16 2-Chlorotoluene ND 0.046 0.010 mg/Kg 08/19/24 14:52 08/20/24 01:16 4-Chlorotoluene ND mg/Kg 08/19/24 14:52 08/20/24 01:16 0.046 0.011 4-Isopropyltoluene ND 0.046 0.012 mg/Kg 08/19/24 14:52 08/20/24 01:16 Benzene ND 0.023 0.0044 mg/Kg 08/19/24 14:52 08/20/24 01:16 0.0048 08/19/24 14:52 Bromobenzene ND 0.046 mg/Kg 08/20/24 01:16 Bromochloromethane ND 0.046 0.0071 mg/Kg 08/19/24 14:52 08/20/24 01:16 Bromodichloromethane 0.0063 ND 0.046 mg/Kg 08/19/24 14:52 08/20/24 01:16 0.0052 Bromoform NΩ 0.046 mg/Kg 08/19/24 14:52 08/20/24 01:16 0.043 ND 08/19/24 14:52 Bromomethane 0.12 mg/Kg 08/20/24 01:16 Carbon tetrachloride ND 0.023 0.0051 mg/Kg 08/19/24 14:52 08/20/24 01:16 0.046 0.0055 mg/Kg 08/19/24 14:52 08/20/24 01:16 0.22 Chlorobenzene Chloroethane 0.092 0.024 08/19/24 14:52 08/20/24 01:16 ND mg/Kg Chloroform ND 08/19/24 14:52 08/20/24 01:16 0.023 0.0048 mg/Kg Chloromethane ND 0.069 0.012 mg/Kg 08/19/24 14:52 08/20/24 01:16 cis-1.2-Dichloroethene ND 0.069 0.014 mg/Kg 08/19/24 14:52 08/20/24 01:16 cis-1,3-Dichloropropene ND 0.023 0.0046 mg/Kg 08/19/24 14:52 08/20/24 01:16 Dibromochloromethane ND 0.023 0.0056 mg/Kg 08/19/24 14:52 08/20/24 01:16 Dibromomethane ND 0.0085 mg/Kg 08/19/24 14:52 0.046 08/20/24 01:16 Dichlorodifluoromethane ND 0.29 0.053 mg/Kg 08/19/24 14:52 08/20/24 01:16 Ethylbenzene ND 0.046 0.010 mg/Kg 08/19/24 14:52 08/20/24 01:16 Hexachlorobutadiene ND 0.12 0.027 mg/Kg 08/19/24 14:52 08/20/24 01:16 0.0099 ND 08/19/24 14:52 08/20/24 01:16 Isopropylbenzene 0.046 mg/Kg Methyl tert-butyl ether 0.046 0.0069 08/19/24 14:52 08/20/24 01:16 ND mg/Kg **Methylene Chloride** 0.034 0.29 0.030 mg/Kg 08/19/24 14:52 08/20/24 01:16 J B m-Xylene & p-Xylene ND 0.046 0.0082 mg/Kg 08/19/24 14:52 08/20/24 01:16 Naphthalene ND 08/19/24 14:52 08/20/24 01:16 0.17 0.045 mg/Kg n-Butylbenzene ND 0.046 0.021 mg/Kg 08/19/24 14:52 08/20/24 01:16 N-Propylbenzene ND 0.046 0.017 mg/Kg 08/19/24 14:52 08/20/24 01:16

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143009-1

Project/Site: Arkema PDI Sampling

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-22-SO-43-20240815

Lab Sample ID: 580-143009-6 Date Collected: 08/15/24 12:50

**Matrix: Solid** Date Received: 08/16/24 12:38 Percent Solids: 87.1

Method: SW846 8260D - Vola	_	•	•	(Conti	,				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.046	0.0058	mg/Kg	☼	08/19/24 14:52	08/20/24 01:16	1
sec-Butylbenzene	ND		0.046	0.0099	mg/Kg	☼	08/19/24 14:52	08/20/24 01:16	1
Styrene	ND		0.046	0.015	mg/Kg	₽	08/19/24 14:52	08/20/24 01:16	1
t-Butylbenzene	ND		0.046	0.0089	mg/Kg	☼	08/19/24 14:52	08/20/24 01:16	1
Tetrachloroethene	ND		0.046	0.0061	mg/Kg	☼	08/19/24 14:52	08/20/24 01:16	1
Toluene	ND		0.069	0.016	mg/Kg	⊅	08/19/24 14:52	08/20/24 01:16	1
trans-1,2-Dichloroethene	ND		0.069	0.017	mg/Kg	₩	08/19/24 14:52	08/20/24 01:16	1
trans-1,3-Dichloropropene	ND		0.046	0.0081	mg/Kg	☼	08/19/24 14:52	08/20/24 01:16	1
Trichloroethene	ND		0.046	0.012	mg/Kg	⊅	08/19/24 14:52	08/20/24 01:16	1
Trichlorofluoromethane	ND		0.092	0.030	mg/Kg	₩	08/19/24 14:52	08/20/24 01:16	1
Vinyl chloride	ND		0.12	0.022	mg/Kg	₩	08/19/24 14:52	08/20/24 01:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		80 - 121				08/19/24 14:52	08/20/24 01:16	1
4-Bromofluorobenzene (Surr)	101		80 - 120				08/19/24 14:52	08/20/24 01:16	1
Dibromofluoromethane (Surr)	100		80 - 120				08/19/24 14:52	08/20/24 01:16	1
Toluene-d8 (Surr)	103		80 - 120				08/19/24 14:52	08/20/24 01:16	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	87.1		0.1	0.1	%			08/21/24 09:49	

0.1

12.9

0.1 %

08/21/24 09:49

Client: ERM-West Job ID: 580-143009-1

Project/Site: Arkema PDI Sampling

Date Collected: 08/15/24 14:30 Matrix: Solid
Date Received: 08/16/24 12:38 Percent Solids: 93.0

Method: SW846 8260D - Vola	_	Qualifier	•	ME	l Ini4		Dropored	Analyzad	Dil Ea
Analyte		Qualifier	RL	MDL		_ D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND		0.020	0.0051	mg/Kg	₩.		08/20/24 01:38	
1,1,1-Trichloroethane	ND		0.041	0.0047				08/20/24 01:38	
1,1,2,2-Tetrachloroethane	ND		0.020	0.0077		<del>.</del>		08/20/24 01:38	
1,1,2-Trichloroethane	ND		0.020	0.0075	0 0	<b>*</b>		08/20/24 01:38	
1,1-Dichloroethane	ND		0.041	0.0093	0 0	Ď.		08/20/24 01:38	
1,1-Dichloroethene	ND		0.041		mg/Kg	<del>.</del> .		08/20/24 01:38	
1,1-Dichloropropene	ND		0.041	0.0054	0 0	<b>*</b>		08/20/24 01:38	
1,2,3-Trichlorobenzene	ND		0.081		mg/Kg	☼		08/20/24 01:38	
1,2,3-Trichloropropane	ND		0.041		mg/Kg	<del>.</del>		08/20/24 01:38	
1,2,4-Trichlorobenzene	ND		0.081		mg/Kg	₩		08/20/24 01:38	
1,2,4-Trimethylbenzene	ND		0.041		mg/Kg	₩		08/20/24 01:38	
1,2-Dibromo-3-Chloropropane	ND		0.061		mg/Kg		08/19/24 14:52	08/20/24 01:38	
1,2-Dibromoethane	ND		0.020	0.0039		☼	08/19/24 14:52	08/20/24 01:38	
1,2-Dichlorobenzene	ND		0.041	0.0088	mg/Kg	₩	08/19/24 14:52	08/20/24 01:38	
1,2-Dichloroethane	ND		0.020	0.0056	mg/Kg	₩	08/19/24 14:52	08/20/24 01:38	
1,2-Dichloropropane	ND		0.020	0.0067	mg/Kg	☼	08/19/24 14:52	08/20/24 01:38	
1,3,5-Trimethylbenzene	ND		0.041	0.0077	mg/Kg	☼	08/19/24 14:52	08/20/24 01:38	
1,3-Dichlorobenzene	ND		0.061	0.014	mg/Kg	☼	08/19/24 14:52	08/20/24 01:38	
1,3-Dichloropropane	ND		0.061	0.0057	mg/Kg	☼	08/19/24 14:52	08/20/24 01:38	
1,4-Dichlorobenzene	ND		0.061	0.011	mg/Kg	☼	08/19/24 14:52	08/20/24 01:38	
2,2-Dichloropropane	ND		0.041	0.012	mg/Kg	₩	08/19/24 14:52	08/20/24 01:38	
2-Chlorotoluene	ND		0.041	0.0089	mg/Kg	⊅	08/19/24 14:52	08/20/24 01:38	
I-Chlorotoluene	ND		0.041	0.0099	mg/Kg	₩	08/19/24 14:52	08/20/24 01:38	
1-Isopropyltoluene	ND		0.041	0.010	mg/Kg	☼	08/19/24 14:52	08/20/24 01:38	
Benzene	ND		0.020	0.0039	mg/Kg	₽	08/19/24 14:52	08/20/24 01:38	
Bromobenzene	ND		0.041	0.0043	mg/Kg	☼	08/19/24 14:52	08/20/24 01:38	
Bromochloromethane	ND		0.041	0.0063	mg/Kg	☼	08/19/24 14:52	08/20/24 01:38	
Bromodichloromethane	ND		0.041	0.0056			08/19/24 14:52	08/20/24 01:38	
Bromoform	ND		0.041	0.0046	mg/Kg	☆	08/19/24 14:52	08/20/24 01:38	
Bromomethane	ND		0.10		mg/Kg	₩	08/19/24 14:52	08/20/24 01:38	
Carbon tetrachloride	ND		0.020	0.0045			08/19/24 14:52	08/20/24 01:38	
- Chlorobenzene	0.88		0.041	0.0049	0 0	₩	08/19/24 14:52	08/20/24 01:38	
Chloroethane	ND		0.081	0.021	mg/Kg	₩		08/20/24 01:38	
Chloroform	0.0087		0.020	0.0043				08/20/24 01:38	
Chloromethane	ND		0.061		mg/Kg			08/20/24 01:38	
cis-1,2-Dichloroethene	ND		0.061		mg/Kg			08/20/24 01:38	
cis-1,3-Dichloropropene	ND		0.020	0.0041				08/20/24 01:38	
Dibromochloromethane	ND		0.020	0.0050		₩		08/20/24 01:38	
Dibromomethane	ND		0.020	0.0036		*		08/20/24 01:38	
Dichlorodifluoromethane	ND		0.041		mg/Kg			08/20/24 01:38	
				0.047					
Ethylbenzene	ND		0.041		0 0	<b>\$</b>		08/20/24 01:38	
Hexachlorobutadiene	ND		0.10		mg/Kg	· · · · · ·		08/20/24 01:38	
sopropylbenzene	ND		0.041	0.0087	0 0	<b>\$</b>		08/20/24 01:38	
Methyl tert-butyl ether	ND		0.041	0.0061		<b>*</b>		08/20/24 01:38	
Methylene Chloride	0.030	JB	0.25		mg/Kg	<del>.</del>		08/20/24 01:38	
n-Xylene & p-Xylene	ND		0.041	0.0072		₩		08/20/24 01:38	
Naphthalene	ND		0.15		mg/Kg	₩		08/20/24 01:38	
n-Butylbenzene	ND		0.041	0.019	mg/Kg	₩	08/19/24 14:52	08/20/24 01:38	
N-Propylbenzene	ND		0.041	0.015	mg/Kg	☼	08/19/24 14:52	08/20/24 01:38	

**Eurofins Seattle** 

8/27/2024

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Client: ERM-West Job ID: 580-143009-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-22-SO-46.2-20240815

Lab Sample ID: 580-143009-7 Date Collected: 08/15/24 14:30 **Matrix: Solid** 

Date Received: 08/16/24 12:38 Percent Solids: 93.0

Method: SW846 8260D - Vola	_	•	•	(Conti	•				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.041	0.0051	mg/Kg	₽	08/19/24 14:52	08/20/24 01:38	1
sec-Butylbenzene	ND		0.041	0.0087	mg/Kg	₩	08/19/24 14:52	08/20/24 01:38	1
Styrene	ND		0.041	0.013	mg/Kg	₩	08/19/24 14:52	08/20/24 01:38	1
t-Butylbenzene	ND		0.041	0.0078	mg/Kg	₽	08/19/24 14:52	08/20/24 01:38	1
Tetrachloroethene	ND		0.041	0.0054	mg/Kg	₽	08/19/24 14:52	08/20/24 01:38	1
Toluene	ND		0.061	0.014	mg/Kg	₩	08/19/24 14:52	08/20/24 01:38	1
trans-1,2-Dichloroethene	ND		0.061	0.015	mg/Kg	₩	08/19/24 14:52	08/20/24 01:38	1
trans-1,3-Dichloropropene	ND		0.041	0.0071	mg/Kg	₩	08/19/24 14:52	08/20/24 01:38	1
Trichloroethene	ND		0.041	0.010	mg/Kg	₩	08/19/24 14:52	08/20/24 01:38	1
Trichlorofluoromethane	ND		0.081	0.026	mg/Kg	₩	08/19/24 14:52	08/20/24 01:38	1
Vinyl chloride	ND		0.10	0.019	mg/Kg	₽	08/19/24 14:52	08/20/24 01:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	93		80 - 121				08/19/24 14:52	08/20/24 01:38	
4-Bromofluorobenzene (Surr)	98		80 - 120				08/19/24 14:52	08/20/24 01:38	
Dibromofluoromethane (Surr)	103		80 - 120				08/19/24 14:52	08/20/24 01:38	
Toluene-d8 (Surr)	102		80 - 120				08/19/24 14:52	08/20/24 01:38	
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	93.0		0.1	0.1	%			08/21/24 09:49	
Percent Moisture (SM22 2540G)	7.0		0.1	0.1	0/2			08/21/24 09:49	1

### **QC Sample Results**

Client: ERM-West Job ID: 580-143009-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS

MB MB

Lab Sample ID: MB 580-468710/3-A

**Matrix: Solid** 

**Analysis Batch: 468721** 

Client Sample ID: Method Blank **Prep Type: Total/NA** 

**Prep Batch: 468710** 

Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050	mg/Kg	_ <u>-</u>	<u> </u>	08/19/24 22:22	1
1,1,1-Trichloroethane	ND		0.040	0.0046				08/19/24 22:22	1
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076				08/19/24 22:22	1
1,1,2-Trichloroethane	ND		0.020	0.0074				08/19/24 22:22	1
1,1-Dichloroethane	ND		0.040	0.0092				08/19/24 22:22	1
1,1-Dichloroethene	ND		0.040		mg/Kg			08/19/24 22:22	1
1,1-Dichloropropene	ND		0.040	0.0053				08/19/24 22:22	1
1,2,3-Trichlorobenzene	ND		0.080		mg/Kg			08/19/24 22:22	1
1,2,3-Trichloropropane	ND		0.040		mg/Kg		08/19/24 14:51	08/19/24 22:22	1
1,2,4-Trichlorobenzene	ND		0.080		mg/Kg			08/19/24 22:22	1
1,2,4-Trimethylbenzene	ND		0.040		mg/Kg		08/19/24 14:51	08/19/24 22:22	1
1,2-Dibromo-3-Chloropropane	ND		0.060		mg/Kg			08/19/24 22:22	1
1,2-Dibromoethane	ND		0.020	0.0038				08/19/24 22:22	1
1,2-Dichlorobenzene	ND		0.040	0.0087	0 0			08/19/24 22:22	1
1,2-Dichloroethane	ND		0.020	0.0055				08/19/24 22:22	1
1,2-Dichloropropane	ND		0.020	0.0066				08/19/24 22:22	1
1,3,5-Trimethylbenzene	ND		0.040	0.0076				08/19/24 22:22	1
1,3-Dichlorobenzene	ND		0.060		mg/Kg			08/19/24 22:22	1
1,3-Dichloropropane	ND		0.060	0.0056				08/19/24 22:22	1
1,4-Dichlorobenzene	ND		0.060		mg/Kg			08/19/24 22:22	1
2,2-Dichloropropane	ND		0.040		mg/Kg			08/19/24 22:22	1
2-Chlorotoluene	ND		0.040	0.0088				08/19/24 22:22	
4-Chlorotoluene	ND		0.040	0.0098				08/19/24 22:22	1
4-Isopropyltoluene	ND		0.040		mg/Kg			08/19/24 22:22	1
Benzene	ND		0.020	0.0038				08/19/24 22:22	· · · · · · · · · · · · · · · · · · ·
Bromobenzene	ND		0.040	0.0042				08/19/24 22:22	1
Bromochloromethane	ND		0.040	0.0062				08/19/24 22:22	1
Bromodichloromethane	ND		0.040	0.0055				08/19/24 22:22	 1
Bromoform	ND		0.040	0.0045				08/19/24 22:22	1
Bromomethane	ND		0.10		mg/Kg			08/19/24 22:22	1
Carbon tetrachloride	ND		0.020	0.0044				08/19/24 22:22	
Chlorobenzene	ND		0.040	0.0048				08/19/24 22:22	1
Chloroethane	ND		0.080		mg/Kg			08/19/24 22:22	1
Chloroform	ND		0.020	0.0042				08/19/24 22:22	· · · · · · · · · · · · · · · · · · ·
Chloromethane	ND		0.060		mg/Kg			08/19/24 22:22	1
cis-1,2-Dichloroethene	ND		0.060		mg/Kg			08/19/24 22:22	1
cis-1,3-Dichloropropene	ND		0.020	0.0040				08/19/24 22:22	· · · · · · · · · · · · · · · · · · ·
Dibromochloromethane	ND		0.020	0.0049				08/19/24 22:22	1
Dibromomethane	ND		0.040	0.0074				08/19/24 22:22	1
Dichlorodifluoromethane	ND		0.25		mg/Kg			08/19/24 22:22	· · · · · · · · · · · · · · · · · · ·
Ethylbenzene	ND		0.040	0.0091				08/19/24 22:22	1
Hexachlorobutadiene	ND		0.10		mg/Kg			08/19/24 22:22	1
Isopropylbenzene	ND		0.040	0.0086				08/19/24 22:22	· · · · · · · · · · · · · · · · · · ·
Methyl tert-butyl ether	ND		0.040	0.0060				08/19/24 22:22	1
Methylene Chloride	0.0726	.l	0.040		mg/Kg			08/19/24 22:22	1
m-Xylene & p-Xylene	0.0720 ND		0.23	0.020				08/19/24 22:22	
Naphthalene	ND ND		0.040		mg/Kg			08/19/24 22:22	1
n-Butylbenzene	ND ND		0.13		mg/Kg			08/19/24 22:22	1

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143009-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-468710/3-A

Matrix: Solid

**Analysis Batch: 468721** 

**Client Sample ID: Method Blank** 

**Prep Type: Total/NA** 

**Prep Batch: 468710** 

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		0.040	0.015	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
o-Xylene	ND		0.040	0.0050	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Styrene	ND		0.040	0.013	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Toluene	ND		0.060	0.014	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Trichloroethene	ND		0.040	0.010	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		08/19/24 14:51	08/19/24 22:22	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		08/19/24 14:51	08/19/24 22:22	1

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95	80 - 121	08/19/24 14:51	08/19/24 22:22	1
4-Bromofluorobenzene (Surr)	98	80 - 120	08/19/24 14:51	08/19/24 22:22	1
Dibromofluoromethane (Surr)	104	80 - 120	08/19/24 14:51	08/19/24 22:22	1
Toluene-d8 (Surr)	101	80 - 120	08/19/24 14:51	08/19/24 22:22	1

Lab Sample ID: LCS 580-468710/1-A

**Matrix: Solid** 

Analysis Batch: 468721

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

**Prep Batch: 468710** 

•	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1,1,2-Tetrachloroethane	0.800	0.820		mg/Kg		103	79 - 128
1,1,1-Trichloroethane	0.800	0.789		mg/Kg		99	78 - 135
1,1,2,2-Tetrachloroethane	0.800	0.719		mg/Kg		90	77 - 122
1,1,2-Trichloroethane	0.800	0.755		mg/Kg		94	80 - 123
1,1-Dichloroethane	0.800	0.704		mg/Kg		88	78 - 126
1,1-Dichloroethene	0.800	0.771		mg/Kg		96	73 - 134
1,1-Dichloropropene	0.800	0.666		mg/Kg		83	76 - 140
1,2,3-Trichlorobenzene	0.800	0.813		mg/Kg		102	58 - 146
1,2,3-Trichloropropane	0.800	0.680		mg/Kg		85	77 - 127
1,2,4-Trichlorobenzene	0.800	0.712		mg/Kg		89	74 - 131
1,2,4-Trimethylbenzene	0.800	0.769		mg/Kg		96	73 - 138
1,2-Dibromo-3-Chloropropane	0.800	0.706		mg/Kg		88	64 - 129
1,2-Dibromoethane	0.800	0.735		mg/Kg		92	77 - 123
1,2-Dichlorobenzene	0.800	0.814		mg/Kg		102	78 - 126
1,2-Dichloroethane	0.800	0.715		mg/Kg		89	76 - 124
1,2-Dichloropropane	0.800	0.686		mg/Kg		86	73 - 130
1,3,5-Trimethylbenzene	0.800	0.843		mg/Kg		105	72 - 134
1,3-Dichlorobenzene	0.800	0.824		mg/Kg		103	78 - 132
1,3-Dichloropropane	0.800	0.673		mg/Kg		84	80 - 120
1,4-Dichlorobenzene	0.800	0.808		mg/Kg		101	77 - 123
2,2-Dichloropropane	0.800	0.702		mg/Kg		88	75 - 134
2-Chlorotoluene	0.800	0.844		mg/Kg		105	77 - 134
4-Chlorotoluene	0.800	0.746		mg/Kg		93	71 - 137
4-Isopropyltoluene	0.800	0.822		mg/Kg		103	71 - 142

**Eurofins Seattle** 

## **QC Sample Results**

Spike

Client: ERM-West Job ID: 580-143009-1

LCS LCS

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-468710/1-A

**Matrix: Solid** 

**Analysis Batch: 468721** 

**Client Sample ID: Lab Control Sample** 

%Rec

**Prep Type: Total/NA** 

**Prep Batch: 468710** 

Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Benzene	0.800	0.768		mg/Kg		96	79 - 135	
Bromobenzene	0.800	0.792		mg/Kg		99	78 - 126	
Bromochloromethane	0.800	0.707		mg/Kg		88	76 - 131	
Bromodichloromethane	0.800	0.712		mg/Kg		89	78 - 125	
Bromoform	0.800	0.702		mg/Kg		88	71 - 130	
Bromomethane	0.800	0.763		mg/Kg		95	55 - 150	
Carbon tetrachloride	0.800	0.700		mg/Kg		87	76 - 140	
Chlorobenzene	0.800	0.808		mg/Kg		101	80 - 125	
Chloroethane	0.800	0.858		mg/Kg		107	26 - 150	
Chloroform	0.800	0.778		mg/Kg		97	74 - 133	
Chloromethane	0.800	0.773		mg/Kg		97	52 - 142	
cis-1,2-Dichloroethene	0.800	0.716		mg/Kg		90	80 - 125	
cis-1,3-Dichloropropene	0.800	0.754		mg/Kg		94	80 - 122	
Dibromochloromethane	0.800	0.699		mg/Kg		87	75 - 125	
Dibromomethane	0.800	0.698		mg/Kg		87	72 - 130	
Dichlorodifluoromethane	0.800	0.992		mg/Kg		124	33 - 150	
Ethylbenzene	0.800	0.822		mg/Kg		103	80 - 135	
Hexachlorobutadiene	0.800	0.844		mg/Kg		106	65 - 145	
Isopropylbenzene	0.800	0.753		mg/Kg		94	80 - 131	
Methyl tert-butyl ether	0.800	0.727		mg/Kg		91	71 - 126	
Methylene Chloride	0.800	0.810		mg/Kg		101	56 - 140	
m-Xylene & p-Xylene	0.800	0.807		mg/Kg		101	80 - 132	
Naphthalene	0.800	0.816		mg/Kg		102	56 - 145	
n-Butylbenzene	0.800	0.835		mg/Kg		104	69 - 143	
N-Propylbenzene	0.800	0.768		mg/Kg		96	78 - 133	
o-Xylene	0.800	0.828		mg/Kg		103	80 - 132	
sec-Butylbenzene	0.800	0.855		mg/Kg		107	71 - 143	
Styrene	0.800	0.736		mg/Kg		92	79 - 129	
t-Butylbenzene	0.800	0.767		mg/Kg		96	72 - 144	
Tetrachloroethene	0.800	0.842		mg/Kg		105	75 - 141	
Toluene	0.800	0.812		mg/Kg		102	75 - 125	
trans-1,2-Dichloroethene	0.800	0.778		mg/Kg		97	77 - 134	
trans-1,3-Dichloropropene	0.800	0.713		mg/Kg		89	80 - 121	
Trichloroethene	0.800	0.713		mg/Kg		89	80 - 134	
Trichlorofluoromethane	0.800	0.700		mg/Kg		87	71 - 150	
Vinyl chloride	0.800	0.759		mg/Kg		95	62 - 144	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	93		80 - 121
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
Toluene-d8 (Surr)	104		80 - 120

### **QC Sample Results**

Spike

Added

Client: ERM-West Job ID: 580-143009-1

LCSD LCSD

Result Qualifier Unit

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-468710/2-A

**Matrix: Solid** 

Isopropylbenzene

Methyl tert-butyl ether

Methylene Chloride

Naphthalene

n-Butylbenzene

m-Xylene & p-Xylene

Analyte

Analysis Batch: 468721

Client Sample ID: Lab Control Sample Dup **Prep Type: Total/NA** 

D %Rec

%Rec

Limits

**Prep Batch: 468710** 

RPD

Analyte	Added	Result	Quaimer Unit	ט	%Rec	Limits	KPD	Limit
1,1,1,2-Tetrachloroethane	0.800	0.851	mg/Kg		106	79 - 128	4	20
1,1,1-Trichloroethane	0.800	0.841	mg/Kg		105	78 - 135	6	20
1,1,2,2-Tetrachloroethane	0.800	0.784	mg/Kg		98	77 - 122	9	20
1,1,2-Trichloroethane	0.800	0.766	mg/Kg		96	80 - 123	1	20
1,1-Dichloroethane	0.800	0.756	mg/Kg		94	78 - 126	7	20
1,1-Dichloroethene	0.800	0.838	mg/Kg		105	73 - 134	8	25
1,1-Dichloropropene	0.800	0.702	mg/Kg		88	76 - 140	5	20
1,2,3-Trichlorobenzene	0.800	0.905	mg/Kg		113	58 - 146	11	28
1,2,3-Trichloropropane	0.800	0.699	mg/Kg		87	77 - 127	3	20
1,2,4-Trichlorobenzene	0.800	0.762	mg/Kg		95	74 - 131	7	26
1,2,4-Trimethylbenzene	0.800	0.800	mg/Kg		100	73 - 138	4	22
1,2-Dibromo-3-Chloropropane	0.800	0.729	mg/Kg		91	64 - 129	3	40
1,2-Dibromoethane	0.800	0.762	mg/Kg		95	77 - 123	4	20
1,2-Dichlorobenzene	0.800	0.845	mg/Kg		106	78 - 126	4	20
1,2-Dichloroethane	0.800	0.725	mg/Kg		91	76 - 124	1	20
1,2-Dichloropropane	0.800	0.714	mg/Kg		89	73 - 130	4	20
1,3,5-Trimethylbenzene	0.800	0.881	mg/Kg		110	72 - 134	4	24
1,3-Dichlorobenzene	0.800	0.851	mg/Kg		106	78 - 132	3	20
1,3-Dichloropropane	0.800	0.696	mg/Kg		87	80 - 120	3	20
1,4-Dichlorobenzene	0.800	0.837	mg/Kg		105	77 - 123	4	20
2,2-Dichloropropane	0.800	0.765	mg/Kg		96	75 - 134	9	20
2-Chlorotoluene	0.800	0.866	mg/Kg		108	77 - 134	3	21
4-Chlorotoluene	0.800	0.762	mg/Kg		95	71 - 137	2	21
4-Isopropyltoluene	0.800	0.853	mg/Kg		107	71 - 142	4	29
Benzene	0.800	0.811	mg/Kg		101	79 - 135	5	20
Bromobenzene	0.800	0.804	mg/Kg		101	78 - 126	1	20
Bromochloromethane	0.800	0.768	mg/Kg		96	76 - 131	8	20
Bromodichloromethane	0.800	0.736	mg/Kg		92	78 - 125	3	20
Bromoform	0.800	0.749	mg/Kg		94	71 - 130	6	20
Bromomethane	0.800	0.767	mg/Kg		96	55 - 150	1	26
Carbon tetrachloride	0.800	0.752	mg/Kg		94	76 - 140	7	20
Chlorobenzene	0.800	0.839	mg/Kg		105	80 - 125	4	20
Chloroethane	0.800	0.946	mg/Kg		118	26 - 150	10	40
Chloroform	0.800	0.832	mg/Kg		104	74 - 133	7	20
Chloromethane	0.800	0.799	mg/Kg		100	52 - 142	3	40
cis-1,2-Dichloroethene	0.800	0.760	mg/Kg		95	80 - 125	6	20
cis-1,3-Dichloropropene	0.800	0.753	mg/Kg		94	80 - 122	0	20
Dibromochloromethane	0.800	0.735	mg/Kg		92	75 - 125	5	20
Dibromomethane	0.800	0.740	mg/Kg		93	72 - 130	6	40
Dichlorodifluoromethane	0.800	1.04	mg/Kg		130	33 - 150	4	31
Ethylbenzene	0.800	0.855	mg/Kg		107	80 - 135	4	20
Hexachlorobutadiene	0.800	0.896	mg/Kg		112	65 - 145	6	36
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**Eurofins Seattle** 

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0.800

0.800

0.800

0.800

0.800

0.800

0.771

0.772

0.863

0.833

0.894

0.858

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

96

96

108

104

112

107

80 - 131

71 - 126

56 - 140

80 - 132

56 - 145

69 - 143

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RPD

Limit

Client: ERM-West Job ID: 580-143009-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-468710/2-A

**Matrix: Solid** 

Analysis Batch: 468721

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

**Prep Batch: 468710** 

Spike	LCSD	LCSD				%Rec		RPD
Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
0.800	0.796		mg/Kg		99	78 - 133	4	24
0.800	0.845		mg/Kg		106	80 - 132	2	20
0.800	0.869		mg/Kg		109	71 - 143	2	29
0.800	0.755		mg/Kg		94	79 - 129	3	20
0.800	0.788		mg/Kg		99	72 - 144	3	27
0.800	0.874		mg/Kg		109	75 - 141	4	20
0.800	0.829		mg/Kg		104	75 - 125	2	20
0.800	0.856		mg/Kg		107	77 - 134	10	20
0.800	0.744		mg/Kg		93	80 - 121	4	20
0.800	0.737		mg/Kg		92	80 - 134	3	20
0.800	0.750		mg/Kg		94	71 - 150	7	30
0.800	0.814		mg/Kg		102	62 - 144	7	20
	Added  0.800  0.800  0.800  0.800  0.800  0.800  0.800  0.800  0.800  0.800  0.800  0.800	Added         Result           0.800         0.796           0.800         0.845           0.800         0.869           0.800         0.755           0.800         0.788           0.800         0.874           0.800         0.829           0.800         0.856           0.800         0.744           0.800         0.737           0.800         0.750	Added         Result         Qualifier           0.800         0.796           0.800         0.845           0.800         0.869           0.800         0.755           0.800         0.788           0.800         0.874           0.800         0.829           0.800         0.856           0.800         0.744           0.800         0.737           0.800         0.750	Added         Result         Qualifier         Unit           0.800         0.796         mg/Kg           0.800         0.845         mg/Kg           0.800         0.869         mg/Kg           0.800         0.755         mg/Kg           0.800         0.788         mg/Kg           0.800         0.874         mg/Kg           0.800         0.829         mg/Kg           0.800         0.856         mg/Kg           0.800         0.744         mg/Kg           0.800         0.737         mg/Kg           0.800         0.750         mg/Kg	Added         Result         Qualifier         Unit         D           0.800         0.796         mg/Kg         mg/Kg           0.800         0.845         mg/Kg           0.800         0.869         mg/Kg           0.800         0.755         mg/Kg           0.800         0.788         mg/Kg           0.800         0.874         mg/Kg           0.800         0.829         mg/Kg           0.800         0.856         mg/Kg           0.800         0.744         mg/Kg           0.800         0.737         mg/Kg           0.800         0.750         mg/Kg	Added         Result         Qualifier         Unit         D         %Rec           0.800         0.796         mg/Kg         99           0.800         0.845         mg/Kg         106           0.800         0.869         mg/Kg         94           0.800         0.755         mg/Kg         94           0.800         0.788         mg/Kg         99           0.800         0.874         mg/Kg         109           0.800         0.829         mg/Kg         104           0.800         0.856         mg/Kg         93           0.800         0.744         mg/Kg         93           0.800         0.737         mg/Kg         92           0.800         0.750         mg/Kg         94	Added         Result         Qualifier         Unit         D         %Rec         Limits           0.800         0.796         mg/Kg         99         78 - 133           0.800         0.845         mg/Kg         106         80 - 132           0.800         0.869         mg/Kg         109         71 - 143           0.800         0.755         mg/Kg         94         79 - 129           0.800         0.788         mg/Kg         99         72 - 144           0.800         0.874         mg/Kg         109         75 - 141           0.800         0.829         mg/Kg         104         75 - 125           0.800         0.856         mg/Kg         107         77 - 134           0.800         0.744         mg/Kg         93         80 - 121           0.800         0.737         mg/Kg         92         80 - 134           0.800         0.750         mg/Kg         94         71 - 150	Added         Result         Qualifier         Unit         D         %Rec         Limits         RPD           0.800         0.796         mg/Kg         99         78 - 133         4           0.800         0.845         mg/Kg         106         80 - 132         2           0.800         0.869         mg/Kg         109         71 - 143         2           0.800         0.755         mg/Kg         94         79 - 129         3           0.800         0.788         mg/Kg         99         72 - 144         3           0.800         0.874         mg/Kg         109         75 - 141         4           0.800         0.829         mg/Kg         104         75 - 125         2           0.800         0.856         mg/Kg         107         77 - 134         10           0.800         0.744         mg/Kg         93         80 - 121         4           0.800         0.737         mg/Kg         92         80 - 134         3           0.800         0.750         mg/Kg         94         71 - 150         7

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	93		80 - 121
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	103		80 - 120
Toluene-d8 (Surr)	103		80 - 120

Lab Sample ID: MB 580-469011/3-A

**Matrix: Solid** 

Analysis Batch: 468961

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

**Prep Batch: 469011** 

MB MB

	Analyte	Result	Qualifier	KL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
	Chlorobenzene	ND		0.040	0.0048	mg/Kg		08/21/24 15:12	08/21/24 16:19	1	
П											

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		80 - 121	08/21/24 15:12	08/21/24 16:19	1
4-Bromofluorobenzene (Surr)	100		80 - 120	08/21/24 15:12	08/21/24 16:19	1
Dibromofluoromethane (Surr)	104		80 - 120	08/21/24 15:12	08/21/24 16:19	1
Toluene-d8 (Surr)	98		80 - 120	08/21/24 15:12	08/21/24 16:19	1

Lab Sample ID: LCS 580-469011/1-A

**Matrix: Solid** 

Analysis Batch: 468961

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA **Prep Batch: 469011** 

%Rec

LCS LCS Spike Analyte Added Result Qualifier Unit D %Rec Limits Chlorobenzene 0.800 0.958 120 80 - 125 mg/Kg

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		80 - 121
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	98		80 - 120
Toluene-d8 (Surr)	100		80 - 120

# **QC Sample Results**

Client: ERM-West Job ID: 580-143009-1

Project/Site: Arkema PDI Sampling

# Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-469011/2-A	Client Sample ID: Lab Control Sample Dup
Matrix: Solid	Prep Type: Total/NA

Analysis Batch: 468961 Prep Batch: 468901

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chlorobenzene	0.800	0.816		mg/Kg		102	80 - 125	16	20

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		80 - 121
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	97		80 - 120
Toluene-d8 (Surr)	100		80 - 120

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Job ID: 580-143009-1

Project/Site: Arkema PDI Sampling

Client: ERM-West

Client Sample ID: PDI-25-SO-54.5-20240813

Lab Sample ID: 580-143009-1 Date Collected: 08/13/24 13:30

Matrix: Solid

Date Received: 08/16/24 12:38

Date Collected: 08/13/24 13:30

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	468928	AUA	EET SEA	08/21/24 09:07

Client Sample ID: PDI-25-SO-54.5-20240813

5035

8260D

Lab Sample ID: 580-143009-1

**Matrix: Solid** Percent Solids: 89.4

**EET SEA** 

**EET SEA** 

Date Received: 08/16/24 12:38 Batch Batch Dilution Batch **Prepared Prep Type** Type Method Run Factor Number Analyst Lab or Analyzed Total/NA Prep 5035 DI 469011 BYM EET SEA 08/21/24 15:12 Total/NA Analysis 8260D DL 468961 BYM **EET SEA** 08/21/24 20:46

Client Sample ID: TB-01-SO-20240813

Prep

Analysis

Lab Sample ID: 580-143009-2

Lab Sample ID: 580-143009-3

08/19/24 14:52

08/19/24 23:49

**Matrix: Solid** 

Date Collected: 08/13/24 00:01 Date Received: 08/16/24 12:38

Total/NA

Total/NA

Batch Batch Dilution Batch **Prepared Prep Type** Method Number Analyst or Analyzed Type Run **Factor** Lab 08/19/24 14:52 Total/NA Prep 5035 468710 BYM EET SEA Total/NA Analysis 8260D 468721 BYM **EET SEA** 08/19/24 22:44

Client Sample ID: PDI-26-SO-37.5-20240814

Lab Sample ID: 580-143009-3 Date Collected: 08/14/24 10:10 **Matrix: Solid** 

468710 BYM

468721 BYM

Date Received: 08/16/24 12:38

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	468928	AUA	EET SEA	08/21/24 09:07

Client Sample ID: PDI-26-SO-37.5-20240814

Date Collected: 08/14/24 10:10 **Matrix: Solid** 

Date Received: 08/16/24 12:38 **Percent Solids: 86.1** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	DL		469011	BYM	EET SEA	08/21/24 15:12
Total/NA	Analysis	8260D	DL	1	468961	BYM	EET SEA	08/21/24 21:06
Total/NA	Prep	5035			468710	BYM	EET SEA	08/19/24 14:52
Total/NA	Analysis	8260D		1	468721	BYM	EET SEA	08/20/24 00:11

Client Sample ID: PDI-26-SO-39-20240814

Lab Sample ID: 580-143009-4 Date Collected: 08/14/24 10:35 Matrix: Solid

Date Received: 08/16/24 12:38

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	468928	AUA	EET SEA	08/21/24 09:07

**Eurofins Seattle** 

Job ID: 580-143009-1

Client: ERM-West

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-26-SO-39-20240814

Date Collected: 08/14/24 10:35 Date Received: 08/16/24 12:38

Lab Sample ID: 580-143009-4

**Matrix: Solid** 

Percent Solids: 85.4

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	DL		469011	BYM	EET SEA	08/21/24 15:12
Total/NA	Analysis	8260D	DL	1	468961	BYM	EET SEA	08/21/24 20:25
Total/NA	Prep	5035			468710	BYM	EET SEA	08/19/24 14:52
Total/NA	Analysis	8260D		1	468721	BYM	EET SEA	08/20/24 00:33

Client Sample ID: PDI-26-SO-53-20240814

Date Collected: 08/14/24 13:35

Date Received: 08/16/24 12:38

Lab Sample ID: 580-143009-5

**Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	468932	AUA	EET SEA	08/21/24 09:49

Client Sample ID: PDI-26-SO-53-20240814

Date Collected: 08/14/24 13:35

Date Received: 08/16/24 12:38

Lab Sample ID: 580-143009-5 **Matrix: Solid** 

Percent Solids: 83.5

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	DL		469011	BYM	EET SEA	08/21/24 15:12
Total/NA	Analysis	8260D	DL	1	468961	BYM	EET SEA	08/21/24 21:27
Total/NA	Prep	5035			468710	BYM	EET SEA	08/19/24 14:52
Total/NA	Analysis	8260D		1	468721	BYM	EET SEA	08/20/24 00:55

Client Sample ID: PDI-22-SO-43-20240815

Date Collected: 08/15/24 12:50

Date Received: 08/16/24 12:38

Lab	Sample	e ID:	<b>58</b>	0-	14	30	09	)-(	3
							_		

**Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	468932	AUA	EET SEA	08/21/24 09:49

Client Sample ID: PDI-22-SO-43-20240815

Date Collected: 08/15/24 12:50

Date Received: 08/16/24 12:38

Lab Sample ID: 580-143009-6

**Matrix: Solid** 

Percent Solids: 87.1

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			468710	BYM	EET SEA	08/19/24 14:52
Total/NA	Analysis	8260D		1	468721	BYM	EET SEA	08/20/24 01:16

Client Sample ID: PDI-22-SO-46.2-20240815

Date Collected: 08/15/24 14:30

Date Received: 08/16/24 12:38

**Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	468932	AUA	EET SEA	08/21/24 09:49

#### **Lab Chronicle**

Client: ERM-West Job ID: 580-143009-1

Project/Site: Arkema PDI Sampling

Date Collected: 08/15/24 14:30 Matrix: Solid
Date Received: 08/16/24 12:38 Percent Solids: 93.0

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			468710	BYM	EET SEA	08/19/24 14:52
Total/NA	Analysis	8260D		1	468721	BYM	EET SEA	08/20/24 01:38

#### **Laboratory References:**

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

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# **Accreditation/Certification Summary**

Client: ERM-West Job ID: 580-143009-1

Project/Site: Arkema PDI Sampling

### **Laboratory: Eurofins Seattle**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Progra	am	Identification Number	<b>Expiration Date</b>
Oregon	NELA	ס	4167	07-07-25
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	are included in this report, but the laboratory is not certified by the governing			
The following analyte	s are included in this repo	rt, but the laboratory is r	not certified by the governing author	ity. This list may includ
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# **Sample Summary**

Client: ERM-West

Project/Site: Arkema PDI Sampling

Job ID: 580-143009-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-143009-1	PDI-25-SO-54.5-20240813	Solid	08/13/24 13:30	08/16/24 12:38
580-143009-2	TB-01-SO-20240813	Solid	08/13/24 00:01	08/16/24 12:38
580-143009-3	PDI-26-SO-37.5-20240814	Solid	08/14/24 10:10	08/16/24 12:38
580-143009-4	PDI-26-SO-39-20240814	Solid	08/14/24 10:35	08/16/24 12:38
580-143009-5	PDI-26-SO-53-20240814	Solid	08/14/24 13:35	08/16/24 12:38
580-143009-6	PDI-22-SO-43-20240815	Solid	08/15/24 12:50	08/16/24 12:38
580-143009-7	PDI-22-SO-46 2-20240815	Solid	08/15/24 14:30	08/16/24 12:38

#### **Eurofins Seattle**

5755 8th Street East Tacoma, WA 98424 Phone (253) 922-2310

# **Chain of Custody Record**

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Environment Testing

Phone (253) 922-2310								egampedestrona		10-		ing No(a):		- 1/	COC No:		
Client Information	Sampler:	Ston	e	Lab F Cruz	∘м։ z, Sheri	L				Ca	rrier i rack	ing No(s):			580-62781-19269.	.12	
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Possible Hazard Identification  ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Po	ison B Unkno	D,	Radiological		Sé		<b>Dispos</b> turn To				i <b>essea i</b> posal Bj				e <mark>d longer than 1 i</mark> ive For	Months	
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Client: ERM-West Job Number: 580-143009-1

Login Number: 143009 List Source: Eurofins Seattle

List Number: 1

Creator: Fenimore, Justin 1

Creator: Fenimore, Justin 1		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

**Eurofins Seattle** 

# **ANALYTICAL REPORT**

# PREPARED FOR

Attn: Avery Soplata ERM-West 1050 SW 6th Avenue Suite 1650 Portland, Oregon 97204 Generated 8/30/2024 1:05:22 PM

# **JOB DESCRIPTION**

Arkema PDI Sampling

### **JOB NUMBER**

580-143092-1

Eurofins Seattle 5755 8th Street East Tacoma WA 98424



## **Eurofins Seattle**

### **Job Notes**

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

### **Authorization**

Generated 8/30/2024 1:05:22 PM

Authorized for release by Sheri Cruz, Project Manager I Sheri.Cruz@et.eurofinsus.com (253)922-2310

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Client: ERM-West

Project/Site: Arkema PDI Sampling

Laboratory Job ID: 580-143092-1

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#### **Case Narrative**

Client: ERM-West Job ID: 580-143092-1

Project: Arkema PDI Sampling

Job ID: 580-143092-1 Eurofins Seattle

Job Narrative 580-143092-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these
  situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise
  specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 8/20/2024 12:23 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.4°C.

#### GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-469072 recovered outside acceptance criteria, low biased, for 1,2,3-Trichlorobenzene, 1,2-Dibromo-3-Chloropropane, 1,2-Dichlorobenzene, 4-Isopropyltoluene, Chloromethane, Dichlorodifluoromethane, Methylene Chloride, Naphthalene, n-Butylbenzene, sec-Butylbenzene and Vinyl chloride. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-469194 recovered outside acceptance criteria, low biased, for 1,2,4-Trichlorobenzene, 1,4-Dichlorobenzene, cis-1,3-Dichloropropene and Hexachlorobutadiene. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analytes, the data are reported.

Method 8260D: The method blank for preparation batch 580-469247 and analytical batch 580-469194 contained Hexachlorobutadiene above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL) in the method blank; therefore, re-extraction or re-analysis of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **General Chemistry**

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**Eurofins Seattle** 

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### **Definitions/Glossary**

Client: ERM-West Job ID: 580-143092-1

Project/Site: Arkema PDI Sampling

#### **Qualifiers**

#### **GC/MS VOA**

Qualifier Qualifier Description

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### **Glossary**

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery
CFL Contains Free Liquid
CFU Colony Forming Unit
CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent
POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

**Eurofins Seattle** 

Page 5 of 28 8/30/2024

Client: ERM-West Job ID: 580-143092-1

Project/Site: Arkema PDI Sampling

Date Collected: 08/16/24 11:10

Matrix: Solid
Date Received: 08/20/24 12:23

Matrix: Solid
Percent Solids: 81.4

Analyte	atile Organic Compour Result Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND -	0.025	0.0062	mg/Kg	<u></u>	<u>-</u>	08/22/24 11:55	
1,1,1-Trichloroethane	ND	0.050	0.0057	mg/Kg	₽	08/22/24 11:02	08/22/24 11:55	
1,1,2,2-Tetrachloroethane	ND	0.025	0.0095	mg/Kg	₽	08/22/24 11:02	08/22/24 11:55	
1,1,2-Trichloroethane	ND	0.025	0.0092	mg/Kg	₩	08/22/24 11:02	08/22/24 11:55	
1,1-Dichloroethane	ND	0.050	0.011	mg/Kg	≎	08/22/24 11:02	08/22/24 11:55	
1,1-Dichloroethene	ND	0.050		mg/Kg	☼	08/22/24 11:02	08/22/24 11:55	
1,1-Dichloropropene	ND	0.050	0.0066		 \$	08/22/24 11:02	08/22/24 11:55	
1,2,3-Trichlorobenzene	ND	0.10		mg/Kg	₽	08/22/24 11:02	08/22/24 11:55	
1,2,3-Trichloropropane	ND	0.050		mg/Kg	₽	08/22/24 11:02	08/22/24 11:55	
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg		08/22/24 11:02		
1,2-Dibromo-3-Chloropropane	ND	0.075		mg/Kg	₩	08/22/24 11:02		
1,2-Dibromoethane	ND	0.025	0.0047		₩	08/22/24 11:02	08/22/24 11:55	
1,2-Dichlorobenzene	ND	0.050	0.011	mg/Kg	 ∰	08/22/24 11:02	08/22/24 11:55	
1,2-Dichloroethane	ND	0.025	0.0068		₩		08/22/24 11:55	
1,2-Dichloropropane	ND	0.025	0.0082				08/22/24 11:55	
1,3,5-Trimethylbenzene	ND	0.050	0.0095				08/22/24 11:55	
1,3-Dichlorobenzene	ND	0.075		mg/Kg	₩		08/22/24 11:55	
1,3-Dichloropropane	ND	0.075	0.0070	0 0	*		08/22/24 11:55	
2,2-Dichloropropane	ND	0.050		mg/Kg	۳  بر		08/22/24 11:55	
2-Chlorotoluene	ND ND	0.050		mg/Kg	₩		08/22/24 11:55	
4-Chlorotoluene	ND ND	0.050		mg/Kg	₩ ₩		08/22/24 11:55	
	ND	0.050		mg/Kg			08/22/24 11:55	
4-Isopropyltoluene	ND ND				*			
Benzene Bramahanzana		0.025	0.0047				08/22/24 11:55	
Bromobenzene	ND ND	0.050	0.0052		· · · · ·		08/22/24 11:55	
Bromochloromethane		0.050	0.0077		₩.	08/22/24 11:02	08/22/24 11:55	
Bromodichloromethane	ND	0.050	0.0068	0 0	<b>*</b>	08/22/24 11:02		
Bromoform	ND	0.050	0.0056		<u>.</u> .		08/22/24 11:55	
3romomethane	ND	0.12		mg/Kg	₽		08/22/24 11:55	
Carbon tetrachloride	ND	0.025	0.0055	0 0	<b>‡</b>		08/22/24 11:55	
Chlorobenzene	ND	0.050	0.0060		<del>.</del>		08/22/24 11:55	
Chloroethane	ND	0.10		mg/Kg	<b>‡</b>		08/22/24 11:55	
Chloroform	ND	0.025	0.0052		☼		08/22/24 11:55	
Chloromethane	ND	0.075		mg/Kg			08/22/24 11:55	
cis-1,2-Dichloroethene	ND	0.075		mg/Kg	₩		08/22/24 11:55	
Dibromochloromethane	ND	0.025		mg/Kg	≎	08/22/24 11:02	08/22/24 11:55	
Dibromomethane	ND	0.050	0.0092			08/22/24 11:02		
Dichlorodifluoromethane	ND	0.31	0.057	mg/Kg	₩	08/22/24 11:02	08/22/24 11:55	
Ethylbenzene	ND	0.050	0.011	mg/Kg	≎	08/22/24 11:02	08/22/24 11:55	
sopropylbenzene	ND	0.050	0.011	mg/Kg	₩	08/22/24 11:02	08/22/24 11:55	
Methyl tert-butyl ether	ND	0.050	0.0075	mg/Kg	₽	08/22/24 11:02	08/22/24 11:55	
Methylene Chloride	ND	0.31	0.032	mg/Kg	☼	08/22/24 11:02	08/22/24 11:55	
m-Xylene & p-Xylene	ND	0.050	0.0088	mg/Kg	≎	08/22/24 11:02	08/22/24 11:55	
Naphthalene	ND	0.19	0.049	mg/Kg	≎	08/22/24 11:02	08/22/24 11:55	
n-Butylbenzene	ND	0.050	0.023	mg/Kg	₽	08/22/24 11:02	08/22/24 11:55	
N-Propylbenzene	ND	0.050	0.019	mg/Kg	₩	08/22/24 11:02	08/22/24 11:55	
o-Xylene	ND	0.050	0.0062	mg/Kg	≎	08/22/24 11:02	08/22/24 11:55	
sec-Butylbenzene	ND	0.050		mg/Kg	₽	08/22/24 11:02	08/22/24 11:55	
Styrene	ND	0.050	0.016	mg/Kg	₽	08/22/24 11:02	08/22/24 11:55	
t-Butylbenzene	ND	0.050		mg/Kg	 ☆	08/22/24 11:02	08/22/24 11:55	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143092-1

Project/Site: Arkema PDI Sampling

Dibromofluoromethane (Surr)

Client Sample ID: PDI-22-SO-88.2-20240816

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Lab Sample ID: 580-143092-1 Date Collected: 08/16/24 11:10 **Matrix: Solid** Date Received: 08/20/24 12:23 Percent Solids: 81.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		0.050	0.0066	mg/Kg	— <u>-</u>	08/22/24 11:02	08/22/24 11:55	1
Toluene	ND		0.075	0.017	mg/Kg	₩	08/22/24 11:02	08/22/24 11:55	1
trans-1,2-Dichloroethene	ND		0.075	0.018	mg/Kg	₽	08/22/24 11:02	08/22/24 11:55	1
trans-1,3-Dichloropropene	ND		0.050	0.0087	mg/Kg	₽	08/22/24 11:02	08/22/24 11:55	1
Trichloroethene	ND		0.050	0.013	mg/Kg	☼	08/22/24 11:02	08/22/24 11:55	1
Trichlorofluoromethane	ND		0.10	0.032	mg/Kg	₽	08/22/24 11:02	08/22/24 11:55	1
Vinyl chloride	ND		0.12		mg/Kg	₩	08/22/24 11:02	08/22/24 11:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101	-	80 - 121				08/22/24 11:02	08/22/24 11:55	1
4-Bromofluorobenzene (Surr)	98		80 - 120				08/22/24 11:02	08/22/24 11:55	1
Dibromofluoromethane (Surr)	103		80 - 120				08/22/24 11:02	08/22/24 11:55	1
Toluene-d8 (Surr)	98		80 - 120				08/22/24 11:02	08/22/24 11:55	1
Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.10	0.053	mg/Kg	<del>-</del>	08/23/24 09:00	08/23/24 15:41	1
1,4-Dichlorobenzene	ND		0.075	0.013	mg/Kg	₽	08/23/24 09:00	08/23/24 15:41	1
cis-1,3-Dichloropropene	ND		0.025	0.0050	mg/Kg	≎	08/23/24 09:00	08/23/24 15:41	1
Hexachlorobutadiene	ND		0.12	0.030	mg/Kg	≎	08/23/24 09:00	08/23/24 15:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				08/23/24 09:00	08/23/24 15:41	1
			80 - 120				08/23/24 09:00	08/23/24 15:41	

Toluene-d8 (Surr)	98	80 - 120		08/23/24 09:0	0 08/23/24 15:41	1
General Chemistry Analyte	Result Qualifier	RL	RL Unit	D Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	81.4	0.1	0.1 %		08/22/24 08:23	1
Percent Moisture (SM22 2540G)	18.6	0.1	0.1 %		08/22/24 08:23	1

80 - 120

8/30/2024

08/23/24 09:00 08/23/24 15:41 08/23/24 09:00 08/23/24 15:41

Client: ERM-West Job ID: 580-143092-1

Project/Site: Arkema PDI Sampling

Client Sample ID: TB-01-SO-2-20240816

Lab Sample ID: 580-143092-2

Date Collected: 08/16/24 00:01 Matrix: Solid Date Received: 08/20/24 12:23

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050	mg/Kg		08/22/24 11:02	08/22/24 11:34	
1,1,1-Trichloroethane	ND		0.040	0.0046	mg/Kg		08/22/24 11:02	08/22/24 11:34	
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076	mg/Kg		08/22/24 11:02	08/22/24 11:34	
1,1,2-Trichloroethane	ND		0.020	0.0074	mg/Kg		08/22/24 11:02	08/22/24 11:34	
1,1-Dichloroethane	ND		0.040	0.0092	mg/Kg		08/22/24 11:02	08/22/24 11:34	
1,1-Dichloroethene	ND		0.040	0.012	mg/Kg		08/22/24 11:02	08/22/24 11:34	
1,1-Dichloropropene	ND		0.040	0.0053			08/22/24 11:02	08/22/24 11:34	
1,2,3-Trichlorobenzene	ND		0.080	0.040	mg/Kg		08/22/24 11:02	08/22/24 11:34	
1,2,3-Trichloropropane	ND		0.040		mg/Kg		08/22/24 11:02	08/22/24 11:34	
1,2,4-Trimethylbenzene	ND		0.040	0.014	mg/Kg		08/22/24 11:02	08/22/24 11:34	
1,2-Dibromo-3-Chloropropane	ND		0.060		mg/Kg		08/22/24 11:02	08/22/24 11:34	
1,2-Dibromoethane	ND		0.020	0.0038	0 0			08/22/24 11:34	
1,2-Dichlorobenzene	ND		0.040	0.0087				08/22/24 11:34	
1,2-Dichloroethane	ND		0.020	0.0055			08/22/24 11:02		
1,2-Dichloropropane	ND		0.020	0.0066			08/22/24 11:02		
1,3,5-Trimethylbenzene	ND		0.040	0.0076			08/22/24 11:02		
1,3-Dichlorobenzene	ND		0.060		mg/Kg		08/22/24 11:02		
1,3-Dichloropropane	ND		0.060	0.0056			08/22/24 11:02	08/22/24 11:34	
2,2-Dichloropropane	ND		0.040		mg/Kg		08/22/24 11:02	08/22/24 11:34	
2-Chlorotoluene	ND		0.040	0.0088				08/22/24 11:34	
4-Chlorotoluene	ND		0.040	0.0098				08/22/24 11:34	
4-Isopropyltoluene	ND		0.040		mg/Kg			08/22/24 11:34	
Benzene	ND		0.020	0.0038				08/22/24 11:34	
Bromobenzene	ND		0.040	0.0042				08/22/24 11:34	
Bromochloromethane	ND		0.040	0.0042				08/22/24 11:34	
Bromodichloromethane	ND		0.040	0.0055				08/22/24 11:34	
Bromoform	ND		0.040	0.0035	0 0			08/22/24 11:34	
Bromomethane	ND		0.10					08/22/24 11:34	
Carbon tetrachloride	ND ND		0.10	0.038	mg/Kg			08/22/24 11:34	
	0.019		0.020	0.0044				08/22/24 11:34	
Chlorobenzene Chloroethane	0.019 ND		0.040	0.0048	mg/Kg			08/22/24 11:34	
Chloroform	ND ND		0.020					08/22/24 11:34	
Chloromethane	ND ND			0.0042					
			0.060		mg/Kg			08/22/24 11:34	
cis-1,2-Dichloroethene	ND		0.060		mg/Kg			08/22/24 11:34	
Dibromochloromethane	ND		0.020	0.0049	0 0			08/22/24 11:34	
Dibromomethane	ND		0.040	0.0074			08/22/24 11:02	08/22/24 11:34	
Dichlorodifluoromethane	ND		0.25		mg/Kg			08/22/24 11:34	
Ethylbenzene 	ND		0.040	0.0091	0 0			08/22/24 11:34	
Isopropylbenzene	ND		0.040	0.0086	7 7			08/22/24 11:34	
Methyl tert-butyl ether	ND		0.040	0.0060				08/22/24 11:34	
Methylene Chloride	ND		0.25		mg/Kg			08/22/24 11:34	
m-Xylene & p-Xylene	ND		0.040	0.0071			08/22/24 11:02		
Naphthalene	ND		0.15		mg/Kg		08/22/24 11:02		
n-Butylbenzene	ND		0.040		mg/Kg		08/22/24 11:02		
N-Propylbenzene	ND		0.040		mg/Kg			08/22/24 11:34	
o-Xylene	ND		0.040	0.0050			08/22/24 11:02		
sec-Butylbenzene	ND		0.040	0.0086				08/22/24 11:34	
Styrene	ND		0.040		mg/Kg		08/22/24 11:02	08/22/24 11:34	
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		08/22/24 11:02	08/22/24 11:34	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143092-1

Project/Site: Arkema PDI Sampling

Client Sample ID: TB-01-SO-2-20240816

Date Collected: 08/16/24 00:01

Date Received: 08/20/24 12:23

Dibromofluoromethane (Surr)

Toluene-d8 (Surr)

Lab Sample ID: 580-143092-2

08/23/24 09:00 08/23/24 15:20

08/23/24 09:00 08/23/24 15:20

Matrix: Solid

Method: SW846 8260D - V	olatile Organic	Compoun	ds by GC/MS	(Conti	inued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		08/22/24 11:02	08/22/24 11:34	1
Toluene	ND		0.060	0.014	mg/Kg		08/22/24 11:02	08/22/24 11:34	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		08/22/24 11:02	08/22/24 11:34	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		08/22/24 11:02	08/22/24 11:34	1
Trichloroethene	ND		0.040	0.010	mg/Kg		08/22/24 11:02	08/22/24 11:34	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		08/22/24 11:02	08/22/24 11:34	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		08/22/24 11:02	08/22/24 11:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		80 - 121				08/22/24 11:02	08/22/24 11:34	1
4-Bromofluorobenzene (Surr)	99		80 - 120				08/22/24 11:02	08/22/24 11:34	1
Dibromofluoromethane (Surr)	106		80 - 120				08/22/24 11:02	08/22/24 11:34	1
Toluene-d8 (Surr)	100		80 - 120				08/22/24 11:02	08/22/24 11:34	1

Method: SW846 8260D - Vo	olatile Organic	Compound	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	MD		0.080	0.043	mg/Kg		08/23/24 09:00	08/23/24 15:20	1
1,4-Dichlorobenzene	ND		0.060	0.011	mg/Kg		08/23/24 09:00	08/23/24 15:20	1
cis-1,3-Dichloropropene	ND		0.020	0.0040	mg/Kg		08/23/24 09:00	08/23/24 15:20	1
Hexachlorobutadiene	ND		0.10	0.024	mg/Kg		08/23/24 09:00	08/23/24 15:20	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		80 - 121				08/23/24 09:00	08/23/24 15:20	1
4-Bromofluorobenzene (Surr)	98		80 - 120				08/23/24 09:00	08/23/24 15:20	1

80 - 120 80 - 120

105

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Client: ERM-West Job ID: 580-143092-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-23-SO-41.5-20240819

Lab Sample ID: 580-143092-3 Date Collected: 08/19/24 10:45 **Matrix: Solid** Date Received: 08/20/24 12:23 Percent Solids: 92.0

	tile Organic Compoun	•		11	_	<b>.</b> .	• •	B.: -
Analyte	Result Qualifier	RL _	MDL		<u>D</u>	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND	0.022	0.0055	0 0	₽	08/22/24 11:02		
1,1,1-Trichloroethane	ND	0.044	0.0051	0 0	₩		08/22/24 12:57	
1,1,2,2-Tetrachloroethane	ND	0.022	0.0084				08/22/24 12:57	
1,1,2-Trichloroethane	ND	0.022	0.0082	0 0	☼		08/22/24 12:57	
1,1-Dichloroethane	ND	0.044		mg/Kg	☼		08/22/24 12:57	
1,1-Dichloroethene	ND	0.044		mg/Kg			08/22/24 12:57	
1,1-Dichloropropene	ND	0.044	0.0059		₩		08/22/24 12:57	
1,2,3-Trichlorobenzene	ND	0.088	0.044	mg/Kg	☼	08/22/24 11:02	08/22/24 12:57	
1,2,3-Trichloropropane	ND	0.044	0.013		≎	08/22/24 11:02	08/22/24 12:57	
1,2,4-Trimethylbenzene	ND	0.044	0.015	mg/Kg	≎	08/22/24 11:02	08/22/24 12:57	
1,2-Dibromo-3-Chloropropane	ND	0.066	0.017	mg/Kg	≎	08/22/24 11:02	08/22/24 12:57	
1,2-Dibromoethane	ND	0.022	0.0042	mg/Kg	≎	08/22/24 11:02	08/22/24 12:57	
1,2-Dichlorobenzene	ND	0.044	0.0096	mg/Kg	₽	08/22/24 11:02	08/22/24 12:57	
1,2-Dichloroethane	ND	0.022	0.0061	mg/Kg	₩	08/22/24 11:02	08/22/24 12:57	
1,2-Dichloropropane	ND	0.022	0.0073	mg/Kg	☼	08/22/24 11:02	08/22/24 12:57	
1,3,5-Trimethylbenzene	ND	0.044	0.0084	mg/Kg	≎	08/22/24 11:02	08/22/24 12:57	
1,3-Dichlorobenzene	ND	0.066	0.015	mg/Kg	≎	08/22/24 11:02	08/22/24 12:57	
1,3-Dichloropropane	ND	0.066	0.0062	mg/Kg	₩	08/22/24 11:02	08/22/24 12:57	
2,2-Dichloropropane	ND	0.044	0.013	mg/Kg	₩	08/22/24 11:02	08/22/24 12:57	
2-Chlorotoluene	ND	0.044	0.0097		≎	08/22/24 11:02	08/22/24 12:57	
4-Chlorotoluene	ND	0.044		mg/Kg	☼	08/22/24 11:02	08/22/24 12:57	
4-Isopropyltoluene	ND	0.044		mg/Kg		08/22/24 11:02	08/22/24 12:57	
Benzene	ND	0.022	0.0042		₽	08/22/24 11:02	08/22/24 12:57	
Bromobenzene	ND	0.044	0.0046		☆	08/22/24 11:02		
Bromochloromethane	ND	0.044	0.0068	7 7	∴		08/22/24 12:57	
Bromodichloromethane	ND	0.044	0.0061	0 0	₩	08/22/24 11:02		
Bromoform	ND	0.044	0.0050	0 0	₩		08/22/24 12:57	
Bromomethane	ND	0.11		mg/Kg			08/22/24 12:57	
Carbon tetrachloride	ND	0.022	0.0049				08/22/24 12:57	
Chloroethane	ND	0.088		mg/Kg			08/22/24 12:57	
Chloroform	ND	0.022	0.0046				08/22/24 12:57	
Chloromethane	ND	0.066		mg/Kg	₩		08/22/24 12:57	
cis-1,2-Dichloroethene	ND	0.066		mg/Kg	₩		08/22/24 12:57	
Dibromochloromethane	ND	0.022	0.0054			08/22/24 11:02		
Dibromomethane	ND	0.022	0.0034	0 0	₩		08/22/24 12:57	
Dichlorodifluoromethane	ND	0.044		mg/Kg	₩	08/22/24 11:02		
	ND	0.28				08/22/24 11:02		
Ethylbenzene				mg/Kg	ψ.			
Isopropylbenzene	ND ND	0.044		mg/Kg			08/22/24 12:57	
Methyl tert-butyl ether	ND	0.044	0.0066	7 7	<del></del>		08/22/24 12:57	
Methylene Chloride	ND	0.28		mg/Kg	<b>*</b>		08/22/24 12:57	
m-Xylene & p-Xylene	ND	0.044	0.0078	0 0	<b>‡</b>		08/22/24 12:57	
Naphthalene	ND	0.17		mg/Kg	<del>.</del>		08/22/24 12:57	
n-Butylbenzene	ND	0.044		mg/Kg	₽		08/22/24 12:57	
N-Propylbenzene	ND	0.044		mg/Kg	₽		08/22/24 12:57	
o-Xylene	ND	0.044	0.0055				08/22/24 12:57	
sec-Butylbenzene	ND	0.044	0.0095		₩		08/22/24 12:57	
Styrene	ND	0.044		mg/Kg	≎		08/22/24 12:57	
t-Butylbenzene	ND	0.044	0.0085		☼	08/22/24 11:02	08/22/24 12:57	
Tetrachloroethene	0.026 J	0.044	0.0059	mg/Kg	₩	08/22/24 11:02	08/22/24 12:57	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143092-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-23-SO-41.5-20240819

Lab Sample ID: 580-143092-3 Date Collected: 08/19/24 10:45 **Matrix: Solid** Date Received: 08/20/24 12:23 Percent Solids: 92.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		0.066	0.015	mg/Kg	<u></u>	08/22/24 11:02	08/22/24 12:57	1
trans-1,2-Dichloroethene	ND		0.066	0.016	mg/Kg	₩	08/22/24 11:02	08/22/24 12:57	1
trans-1,3-Dichloropropene	ND		0.044	0.0077	mg/Kg	₽	08/22/24 11:02	08/22/24 12:57	1
Trichloroethene	ND		0.044	0.011	mg/Kg	₩	08/22/24 11:02	08/22/24 12:57	1
Trichlorofluoromethane	ND		0.088	0.029	mg/Kg	₩	08/22/24 11:02	08/22/24 12:57	1
Vinyl chloride	ND		0.11	0.021	mg/Kg	☼	08/22/24 11:02	08/22/24 12:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				08/22/24 11:02	08/22/24 12:57	1
4-Bromofluorobenzene (Surr)	97		80 - 120				08/22/24 11:02	08/22/24 12:57	1
Dibromofluoromethane (Surr)	100		80 - 120				08/22/24 11:02	08/22/24 12:57	1
Toluene-d8 (Surr)	100		80 - 120				08/22/24 11:02	08/22/24 12:57	1
- Method: SW846 8260D - Volatile	Organic	Compound	ds by GC/MS	- DL					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	13		0.48	0.057	mg/Kg	<u></u>	08/22/24 11:02	08/22/24 16:43	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				08/22/24 11:02	08/22/24 16:43	1
4-Bromofluorobenzene (Surr)	99		80 - 120					08/22/24 16:43	

Chlorobenzene	13	0.48	0.057 mg/Kg	© 08/22/24 11:02	08/22/24 16:43	1
Surrogate	%Recovery Qualifier	Limits		Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99	80 - 121		08/22/24 11:02	08/22/24 16:43	1
4-Bromofluorobenzene (Surr)	99	80 - 120		08/22/24 11:02	08/22/24 16:43	1
Dibromofluoromethane (Surr)	103	80 - 120		08/22/24 11:02	08/22/24 16:43	1
Toluene-d8 (Surr)	99	80 - 120		08/22/24 11:02	08/22/24 16:43	1

Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.95	0.51	mg/Kg	<del>-</del>	08/23/24 09:00	08/23/24 18:05	1
1,4-Dichlorobenzene	ND		0.71	0.13	mg/Kg	☼	08/23/24 09:00	08/23/24 18:05	1
cis-1,3-Dichloropropene	ND		0.24	0.048	mg/Kg	₽	08/23/24 09:00	08/23/24 18:05	1
Hexachlorobutadiene	ND		1.2	0.28	mg/Kg	☼	08/23/24 09:00	08/23/24 18:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		80 - 121				08/23/24 09:00	08/23/24 18:05	1
4-Bromofluorobenzene (Surr)	100		80 - 120				08/23/24 09:00	08/23/24 18:05	1
Dibromofluoromethane (Surr)	101		80 - 120				08/23/24 09:00	08/23/24 18:05	1
Toluene-d8 (Surr)	97		80 - 120				08/23/24 09:00	08/23/24 18:05	1

General Chemistry Analyte	Result Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	92.0	0.1	0.1	%			08/23/24 10:23	1
Percent Moisture (SM22 2540G)	8.0	0.1	0.1	%			08/23/24 10:23	1

Client: ERM-West Job ID: 580-143092-1

Project/Site: Arkema PDI Sampling

Date Collected: 08/19/24 11:15

Matrix: Solid

Date Received: 08/20/24 12:23

Percent Solids: 95.3

Method: SW846 8260D - Vola		•	•	5					
Analyte	Result	Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND		0.021	0.0052	mg/Kg	<del>-</del>	08/22/24 11:02	08/22/24 12:15	
1,1,1-Trichloroethane	ND		0.042	0.0048	mg/Kg	☼	08/22/24 11:02	08/22/24 12:15	
1,1,2,2-Tetrachloroethane	ND		0.021	0.0080	mg/Kg	☼	08/22/24 11:02	08/22/24 12:15	
1,1,2-Trichloroethane	ND		0.021	0.0078	mg/Kg	₩	08/22/24 11:02	08/22/24 12:15	
I,1-Dichloroethane	ND		0.042	0.0097	mg/Kg	₩	08/22/24 11:02	08/22/24 12:15	
I,1-Dichloroethene	ND		0.042	0.013	mg/Kg	₩	08/22/24 11:02	08/22/24 12:15	
I,1-Dichloropropene	ND		0.042	0.0056	mg/Kg	₩	08/22/24 11:02	08/22/24 12:15	
,2,3-Trichlorobenzene	ND		0.084	0.042	mg/Kg	₩	08/22/24 11:02	08/22/24 12:15	
I,2,3-Trichloropropane	ND		0.042	0.012	mg/Kg	₩	08/22/24 11:02	08/22/24 12:15	
I,2,4-Trimethylbenzene	ND		0.042	0.014	mg/Kg	₽	08/22/24 11:02	08/22/24 12:15	
1,2-Dibromo-3-Chloropropane	ND		0.063	0.016	mg/Kg	₩	08/22/24 11:02	08/22/24 12:15	
I,2-Dibromoethane	ND		0.021	0.0040	mg/Kg	₩	08/22/24 11:02	08/22/24 12:15	
I,2-Dichlorobenzene	ND		0.042	0.0091	mg/Kg		08/22/24 11:02	08/22/24 12:15	
l,2-Dichloroethane	ND		0.021	0.0058	0 0	₩	08/22/24 11:02	08/22/24 12:15	
l,2-Dichloropropane	ND		0.021	0.0069	mg/Kg	₩	08/22/24 11:02	08/22/24 12:15	
I,3,5-Trimethylbenzene	ND		0.042	0.0080				08/22/24 12:15	
I,3-Dichlorobenzene	ND		0.063		mg/Kg	₩		08/22/24 12:15	
,3-Dichloropropane	ND		0.063	0.0059	0 0	₩.		08/22/24 12:15	
2,2-Dichloropropane	ND		0.042		mg/Kg			08/22/24 12:15	
2-Chlorotoluene	ND		0.042	0.0092		₩.		08/22/24 12:15	
I-Chlorotoluene	ND		0.042		mg/Kg	₩		08/22/24 12:15	
-Isopropyltoluene	ND		0.042		mg/Kg			08/22/24 12:15	
Benzene	ND		0.042	0.0040		~ ☆		08/22/24 12:15	
Bromobenzene	ND ND		0.021	0.0040		₩		08/22/24 12:15	
Bromochloromethane	ND		0.042	0.0044				08/22/24 12:15	
						Ψ.			
romodichloromethane Bromoform	ND		0.042	0.0058	0 0	φ.		08/22/24 12:15	
	ND		0.042	0.0047		· · · · · · · · · · · · · · · · · · ·		08/22/24 12:15	
Bromomethane	ND		0.10		mg/Kg	₩.		08/22/24 12:15	
Carbon tetrachloride	ND		0.021	0.0046		₩.		08/22/24 12:15	
Chlorobenzene	1.9		0.042	0.0050		<del></del>		08/22/24 12:15	
Chloroethane	ND		0.084		mg/Kg	<b>*</b>		08/22/24 12:15	
Chloroform	ND		0.021	0.0044		<b>*</b>		08/22/24 12:15	
Chloromethane	ND		0.063		mg/Kg	<del>.</del>		08/22/24 12:15	
sis-1,2-Dichloroethene	ND		0.063		mg/Kg	☼		08/22/24 12:15	
Dibromochloromethane	ND		0.021	0.0051		₩		08/22/24 12:15	
Dibromomethane	ND		0.042	0.0078				08/22/24 12:15	
Dichlorodifluoromethane	ND		0.26		mg/Kg	₩		08/22/24 12:15	
Ethylbenzene	ND		0.042	0.0095		₩		08/22/24 12:15	
sopropylbenzene	ND		0.042	0.0090		₩		08/22/24 12:15	
Methyl tert-butyl ether	ND		0.042	0.0063	mg/Kg	₩	08/22/24 11:02	08/22/24 12:15	
Methylene Chloride	ND		0.26	0.027	mg/Kg	₩	08/22/24 11:02	08/22/24 12:15	
n-Xylene & p-Xylene	ND		0.042	0.0074		₩	08/22/24 11:02	08/22/24 12:15	
Naphthalene	ND		0.16	0.041	mg/Kg	₩	08/22/24 11:02	08/22/24 12:15	
-Butylbenzene	ND		0.042	0.019	mg/Kg	☼	08/22/24 11:02	08/22/24 12:15	
N-Propylbenzene	ND		0.042	0.016	mg/Kg	₩	08/22/24 11:02	08/22/24 12:15	
-Xylene	ND		0.042	0.0052	mg/Kg	₩	08/22/24 11:02	08/22/24 12:15	
sec-Butylbenzene	ND		0.042	0.0090	mg/Kg	₩	08/22/24 11:02	08/22/24 12:15	
Styrene	ND		0.042	0.013	mg/Kg	₽	08/22/24 11:02	08/22/24 12:15	
-Butylbenzene	ND		0.042	0.0081		₩	08/22/24 11:02	08/22/24 12:15	

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Client: ERM-West Job ID: 580-143092-1

Project/Site: Arkema PDI Sampling

Analyte

Percent Solids (SM22 2540G)

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-23-SO-43.5-20240819

Lab Sample ID: 580-143092-4 Date Collected: 08/19/24 11:15 **Matrix: Solid** 

Date Received: 08/20/24 12:23 Percent Solids: 95.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		0.042	0.0056	mg/Kg	— <u>~</u>	08/22/24 11:02	08/22/24 12:15	1
Toluene	ND		0.063	0.014	mg/Kg	☼	08/22/24 11:02	08/22/24 12:15	1
trans-1,2-Dichloroethene	ND		0.063	0.015	mg/Kg	₩	08/22/24 11:02	08/22/24 12:15	1
trans-1,3-Dichloropropene	ND		0.042	0.0073	mg/Kg	☼	08/22/24 11:02	08/22/24 12:15	1
Trichloroethene	ND		0.042	0.011	mg/Kg	☼	08/22/24 11:02	08/22/24 12:15	1
Trichlorofluoromethane	ND		0.084	0.027	mg/Kg	₩	08/22/24 11:02	08/22/24 12:15	1
Vinyl chloride	ND		0.10	0.020	mg/Kg	₽	08/22/24 11:02	08/22/24 12:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		80 - 121				08/22/24 11:02	08/22/24 12:15	-
4-Bromofluorobenzene (Surr)	99		80 - 120				08/22/24 11:02	08/22/24 12:15	1
Dibromofluoromethane (Surr)	103		80 - 120				08/22/24 11:02	08/22/24 12:15	1
Toluene-d8 (Surr)	99		80 - 120				08/22/24 11:02	08/22/24 12:15	
Method: SW846 8260D - Vo	olatile Organic	Compound	ds by GC/MS	- RA					
Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.084	0.045	mg/Kg	— <u></u>	08/23/24 09:00	08/23/24 16:01	
1,4-Dichlorobenzene	ND		0.063	0.011	mg/Kg	☼	08/23/24 09:00	08/23/24 16:01	1
cis-1,3-Dichloropropene	ND		0.021	0.0042	mg/Kg	☼	08/23/24 09:00	08/23/24 16:01	1
Hexachlorobutadiene	ND		0.10	0.025	mg/Kg	₩	08/23/24 09:00	08/23/24 16:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
	101		80 - 121				08/23/24 09:00	08/23/24 16:01	
1,2-Dichloroethane-d4 (Surr)			80 - 120				08/23/24 09:00	08/23/24 16:01	1
1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr)	97						08/23/24 09:00	09/22/24 16:01	
	100		80 - 120				00/23/24 03.00	00/23/24 10.01	

RL

0.1

0.1

RL Unit

0.1 %

0.1 %

Prepared

Result Qualifier

95.3

4.7

Dil Fac

Analyzed

08/23/24 10:23

08/23/24 10:23

Client: ERM-West Job ID: 580-143092-1

Project/Site: Arkema PDI Sampling

Date Collected: 08/19/24 16:20

Matrix: Solid

Date Received: 08/20/24 12:23

Percent Solids: 95.8

Method: SW846 8260D - Vola Analyte	Result Qualifie	•	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND Quality	0.018	0.0044		— <u>-</u>	08/22/24 11:02		1
1,1,1-Trichloroethane	ND	0.035	0.0041	mg/Kg	₩	08/22/24 11:02	08/22/24 12:36	1
1,1,2,2-Tetrachloroethane	ND	0.018	0.0067		₩	08/22/24 11:02	08/22/24 12:36	1
1,1,2-Trichloroethane	ND	0.018	0.0066		 ☆	08/22/24 11:02	08/22/24 12:36	1
1,1-Dichloroethane	ND	0.035	0.0082		₩	08/22/24 11:02	08/22/24 12:36	1
, 1,1-Dichloroethene	ND	0.035	0.011	mg/Kg	Ď.		08/22/24 12:36	1
1,1-Dichloropropene	ND	0.035	0.0047				08/22/24 12:36	1
1,2,3-Trichlorobenzene	ND	0.071		mg/Kg	₩		08/22/24 12:36	1
1,2,3-Trichloropropane	ND	0.035		mg/Kg	Ď.	08/22/24 11:02	08/22/24 12:36	1
1,2,4-Trimethylbenzene	ND	0.035		mg/Kg	 .☆		08/22/24 12:36	1
1,2-Dibromo-3-Chloropropane	ND	0.053		mg/Kg	₩		08/22/24 12:36	1
1,2-Dibromoethane	ND	0.018	0.0034		Ť Ŭ		08/22/24 12:36	1
1,2-Dichlorobenzene	ND	0.035	0.0077				08/22/24 12:36	· · · · · · · · · · · · · · · · · · ·
1,2-Dichloroethane	ND	0.018	0.0049				08/22/24 12:36	1
1,2-Dichloropropane	ND	0.018	0.0058	0 0	Ď.		08/22/24 12:36	1
1,3,5-Trimethylbenzene	ND	0.035	0.0067				08/22/24 12:36	
1,3-Dichlorobenzene	ND	0.053		mg/Kg	₩		08/22/24 12:36	1
1,3-Dichloropropane	ND	0.053	0.0050		*		08/22/24 12:36	4
2,2-Dichloropropane	ND	0.035	0.011		 		08/22/24 12:36	
2-Chlorotoluene	ND	0.035	0.0078	0 0	₩		08/22/24 12:36	,
4-Chlorotoluene	ND	0.035	0.0078	0 0			08/22/24 12:36	
	ND				· · · · · · 🌣			
1-Isopropyltoluene		0.035	0.0090	0 0	<b>☆</b>		08/22/24 12:36	1
Benzene	ND	0.018	0.0034		₩.		08/22/24 12:36	1
Bromobenzene	ND	0.035	0.0037				08/22/24 12:36	1
Bromochloromethane	ND	0.035	0.0055		<b>*</b>		08/22/24 12:36	1
3romodichloromethane	ND	0.035	0.0049	0 0	<b>*</b>		08/22/24 12:36	1
3romoform	ND	0.035	0.0040		<u>.</u> .		08/22/24 12:36	1
Bromomethane	ND	0.089		mg/Kg	☼		08/22/24 12:36	1
Carbon tetrachloride	ND	0.018		0 0	☼		08/22/24 12:36	1
Chlorobenzene	ND	0.035	0.0043		<del>.</del>		08/22/24 12:36	1
Chloroethane	ND	0.071		mg/Kg	₩		08/22/24 12:36	1
Chloroform	ND	0.018	0.0037		₩	08/22/24 11:02	08/22/24 12:36	1
Chloromethane	ND	0.053	0.0090	mg/Kg			08/22/24 12:36	1
cis-1,2-Dichloroethene	ND	0.053	0.011	mg/Kg	₩		08/22/24 12:36	1
Dibromochloromethane	ND	0.018	0.0043		₩	08/22/24 11:02	08/22/24 12:36	1
Dibromomethane	ND	0.035	0.0066		<b>*</b>		08/22/24 12:36	1
Dichlorodifluoromethane	ND	0.22	0.041	mg/Kg	₩	08/22/24 11:02	08/22/24 12:36	1
Ethylbenzene	ND	0.035	0.0081	mg/Kg	☼	08/22/24 11:02	08/22/24 12:36	1
Isopropylbenzene	ND	0.035	0.0076		₩	08/22/24 11:02	08/22/24 12:36	1
Methyl tert-butyl ether	ND	0.035	0.0053	mg/Kg	₽	08/22/24 11:02	08/22/24 12:36	1
Methylene Chloride	ND	0.22	0.023	mg/Kg	☼	08/22/24 11:02	08/22/24 12:36	1
m-Xylene & p-Xylene	ND	0.035	0.0063	mg/Kg	☼	08/22/24 11:02	08/22/24 12:36	1
Naphthalene	ND	0.13	0.035	mg/Kg	₽	08/22/24 11:02	08/22/24 12:36	1
n-Butylbenzene	ND	0.035	0.016	mg/Kg	☼	08/22/24 11:02	08/22/24 12:36	1
N-Propylbenzene	ND	0.035	0.013	mg/Kg	₽	08/22/24 11:02	08/22/24 12:36	1
o-Xylene	ND	0.035	0.0044	mg/Kg	☼	08/22/24 11:02	08/22/24 12:36	1
sec-Butylbenzene	ND	0.035	0.0076		₽	08/22/24 11:02	08/22/24 12:36	1
Styrene	ND	0.035	0.011	mg/Kg	₩	08/22/24 11:02	08/22/24 12:36	1
t-Butylbenzene	ND	0.035	0.0068			08/22/24 11:02	08/22/24 12:36	1

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Client: ERM-West Job ID: 580-143092-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-23-SO-80-20240819

Date Collected: 08/19/24 16:20

Date Received: 08/20/24 12:23

Lab Sample ID: 580-143092-5

**Matrix: Solid** Percent Solids: 95.8

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		0.035	0.0047	mg/Kg	<u></u>	08/22/24 11:02	08/22/24 12:36	1
Toluene	ND		0.053	0.012	mg/Kg	₩	08/22/24 11:02	08/22/24 12:36	1
trans-1,2-Dichloroethene	ND		0.053	0.013	mg/Kg	₩	08/22/24 11:02	08/22/24 12:36	1
trans-1,3-Dichloropropene	ND		0.035	0.0062	mg/Kg	₩	08/22/24 11:02	08/22/24 12:36	1
Trichloroethene	ND		0.035	0.0091	mg/Kg	₩	08/22/24 11:02	08/22/24 12:36	1
Trichlorofluoromethane	ND		0.071	0.023	mg/Kg	₩	08/22/24 11:02	08/22/24 12:36	1
Vinyl chloride	ND		0.089	0.017	mg/Kg	₩	08/22/24 11:02	08/22/24 12:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		80 - 121				08/22/24 11:02	08/22/24 12:36	1
4-Bromofluorobenzene (Surr)	98		80 - 120				08/22/24 11:02	08/22/24 12:36	1
Dibromofluoromethane (Surr)	105		80 - 120				08/22/24 11:02	08/22/24 12:36	1
Toluene-d8 (Surr)	99		80 - 120				08/22/24 11:02	08/22/24 12:36	1

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND ND	0.071	0.038	mg/Kg	<u></u>	08/23/24 09:00	08/23/24 16:22	1
1,4-Dichlorobenzene	ND	0.053	0.0096	mg/Kg	₩	08/23/24 09:00	08/23/24 16:22	1
cis-1,3-Dichloropropene	ND	0.018	0.0035	mg/Kg	₩	08/23/24 09:00	08/23/24 16:22	1
Hexachlorobutadiene	ND	0.089	0.021	mg/Kg	₽	08/23/24 09:00	08/23/24 16:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		80 - 121	08/23/24 09:00	08/23/24 16:22	1
4-Bromofluorobenzene (Surr)	97		80 - 120	08/23/24 09:00	08/23/24 16:22	1
Dibromofluoromethane (Surr)	104		80 - 120	08/23/24 09:00	08/23/24 16:22	1
Toluene-d8 (Surr)	99		80 - 120	08/23/24 09:00	08/23/24 16:22	1

General Chemistry Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	95.8		0.1	0.1	%		-	08/23/24 10:23	1
Percent Moisture (SM22 2540G)	4.3		0.1	0.1	%			08/23/24 10:23	1

## **QC Sample Results**

Client: ERM-West Job ID: 580-143092-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-469071/3-A

**Matrix: Solid** 

**Analysis Batch: 469072** 

Client Sample ID: Method Blank **Prep Type: Total/NA** 

		Prep Batch:	469071
D	Prepared	Analyzed	Dil Fac
_	08/22/24 08:44	08/22/24 10:21	1

Amalista	MB		<b>F</b> :		11-24	_	D	A	D.: -
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050				08/22/24 10:21	1
1,1,1-Trichloroethane	ND		0.040	0.0046				08/22/24 10:21	1
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076				08/22/24 10:21	
1,1,2-Trichloroethane	ND		0.020	0.0074				08/22/24 10:21	1
1,1-Dichloroethane	ND		0.040	0.0092				08/22/24 10:21	1
1,1-Dichloroethene	ND		0.040		mg/Kg			08/22/24 10:21	1
1,1-Dichloropropene	ND		0.040	0.0053				08/22/24 10:21	1
1,2,3-Trichlorobenzene	ND		0.080		mg/Kg			08/22/24 10:21	1
1,2,3-Trichloropropane	ND		0.040		mg/Kg			08/22/24 10:21	1
1,2,4-Trimethylbenzene	ND		0.040		mg/Kg		08/22/24 08:44	08/22/24 10:21	1
1,2-Dibromo-3-Chloropropane	ND		0.060		mg/Kg		08/22/24 08:44	08/22/24 10:21	1
1,2-Dibromoethane	ND		0.020	0.0038	mg/Kg		08/22/24 08:44	08/22/24 10:21	1
1,2-Dichlorobenzene	ND		0.040	0.0087	mg/Kg		08/22/24 08:44	08/22/24 10:21	1
1,2-Dichloroethane	ND		0.020	0.0055	0 0		08/22/24 08:44	08/22/24 10:21	1
1,2-Dichloropropane	ND		0.020	0.0066			08/22/24 08:44	08/22/24 10:21	1
1,3,5-Trimethylbenzene	ND		0.040	0.0076	mg/Kg		08/22/24 08:44	08/22/24 10:21	1
1,3-Dichlorobenzene	ND		0.060	0.013	mg/Kg		08/22/24 08:44	08/22/24 10:21	1
1,3-Dichloropropane	ND		0.060	0.0056	mg/Kg		08/22/24 08:44	08/22/24 10:21	1
2,2-Dichloropropane	ND		0.040	0.012	mg/Kg		08/22/24 08:44	08/22/24 10:21	1
2-Chlorotoluene	ND		0.040	0.0088	mg/Kg		08/22/24 08:44	08/22/24 10:21	1
4-Chlorotoluene	ND		0.040	0.0098	mg/Kg		08/22/24 08:44	08/22/24 10:21	1
4-Isopropyltoluene	ND		0.040	0.010	mg/Kg		08/22/24 08:44	08/22/24 10:21	1
Benzene	ND		0.020	0.0038	mg/Kg		08/22/24 08:44	08/22/24 10:21	1
Bromobenzene	ND		0.040	0.0042	mg/Kg		08/22/24 08:44	08/22/24 10:21	1
Bromochloromethane	ND		0.040	0.0062	mg/Kg		08/22/24 08:44	08/22/24 10:21	1
Bromodichloromethane	ND		0.040	0.0055	mg/Kg		08/22/24 08:44	08/22/24 10:21	1
Bromoform	ND		0.040	0.0045	mg/Kg		08/22/24 08:44	08/22/24 10:21	1
Bromomethane	ND		0.10		mg/Kg		08/22/24 08:44	08/22/24 10:21	1
Carbon tetrachloride	ND		0.020	0.0044			08/22/24 08:44	08/22/24 10:21	1
Chlorobenzene	ND		0.040	0.0048			08/22/24 08:44	08/22/24 10:21	1
Chloroethane	ND		0.080		mg/Kg		08/22/24 08:44	08/22/24 10:21	1
Chloroform	ND		0.020	0.0042			08/22/24 08:44	08/22/24 10:21	1
Chloromethane	ND		0.060		mg/Kg		08/22/24 08:44	08/22/24 10:21	1
cis-1,2-Dichloroethene	ND		0.060		mg/Kg			08/22/24 10:21	1
Dibromochloromethane	ND		0.020	0.0049				08/22/24 10:21	1
Dibromomethane	ND		0.040	0.0074	0 0			08/22/24 10:21	1
Dichlorodifluoromethane	ND		0.25		mg/Kg			08/22/24 10:21	
Ethylbenzene	ND		0.040	0.0091				08/22/24 10:21	1
Isopropylbenzene	ND		0.040	0.0086				08/22/24 10:21	. 1
Methyl tert-butyl ether	ND		0.040	0.0060				08/22/24 10:21	
Methylene Chloride	ND		0.25		mg/Kg			08/22/24 10:21	. 1
m-Xylene & p-Xylene	ND		0.23	0.0071				08/22/24 10:21	1
Naphthalene	ND		0.15		mg/Kg			08/22/24 10:21	
n-Butylbenzene	ND		0.13		mg/Kg			08/22/24 10:21	1
N-Propylbenzene	ND ND		0.040					08/22/24 10:21	1
					mg/Kg			08/22/24 10:21	
o-Xylene	ND		0.040	0.0050					1
sec-Butylbenzene	ND		0.040	0.0086				08/22/24 10:21	1
Styrene	ND		0.040	0.013	mg/Kg		08/22/24 08:44	08/22/24 10:21	1

**Eurofins Seattle** 

### **QC Sample Results**

Client: ERM-West Job ID: 580-143092-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-469071/3-A

**Matrix: Solid** 

**Analysis Batch: 469072** 

**Client Sample ID: Method Blank** 

**Prep Type: Total/NA** 

**Prep Batch: 469071** 

	IVID	IVID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		08/22/24 08:44	08/22/24 10:21	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		08/22/24 08:44	08/22/24 10:21	1
Toluene	ND		0.060	0.014	mg/Kg		08/22/24 08:44	08/22/24 10:21	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		08/22/24 08:44	08/22/24 10:21	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		08/22/24 08:44	08/22/24 10:21	1
Trichloroethene	ND		0.040	0.010	mg/Kg		08/22/24 08:44	08/22/24 10:21	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		08/22/24 08:44	08/22/24 10:21	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		08/22/24 08:44	08/22/24 10:21	1

MB MB Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1,2-Dichloroethane-d4 (Surr) 103 80 - 121 08/22/24 08:44 08/22/24 10:21 4-Bromofluorobenzene (Surr) 98 80 - 120 08/22/24 08:44 08/22/24 10:21 Dibromofluoromethane (Surr) 104 80 - 120 08/22/24 08:44 08/22/24 10:21 101 80 - 120 08/22/24 08:44 08/22/24 10:21 Toluene-d8 (Surr)

Lab Sample ID: LCS 580-469071/1-A

**Matrix: Solid** 

**Analysis Batch: 469072** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA **Prep Batch: 469071** 

Analysis Balcii. 403072	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1,1,2-Tetrachloroethane	0.800	0.692		mg/Kg		86	79 - 128
1,1,1-Trichloroethane	0.800	0.663		mg/Kg		83	78 - 135
1,1,2,2-Tetrachloroethane	0.800	0.662		mg/Kg		83	77 - 122
1,1,2-Trichloroethane	0.800	0.692		mg/Kg		86	80 - 123
1,1-Dichloroethane	0.800	0.651		mg/Kg		81	78 - 126
1,1-Dichloroethene	0.800	0.657		mg/Kg		82	73 - 134
1,1-Dichloropropene	0.800	0.644		mg/Kg		80	76 - 140
1,2,3-Trichlorobenzene	0.800	0.509		mg/Kg		64	58 - 146
1,2,3-Trichloropropane	0.800	0.681		mg/Kg		85	77 - 127
1,2,4-Trimethylbenzene	0.800	0.660		mg/Kg		82	73 - 138
1,2-Dibromo-3-Chloropropane	0.800	0.568		mg/Kg		71	64 - 129
1,2-Dibromoethane	0.800	0.687		mg/Kg		86	77 - 123
1,2-Dichlorobenzene	0.800	0.624		mg/Kg		78	78 - 126
1,2-Dichloroethane	0.800	0.646		mg/Kg		81	76 - 124
1,2-Dichloropropane	0.800	0.652		mg/Kg		81	73 - 130
1,3,5-Trimethylbenzene	0.800	0.668		mg/Kg		84	72 - 134
1,3-Dichlorobenzene	0.800	0.642		mg/Kg		80	78 - 132
1,3-Dichloropropane	0.800	0.673		mg/Kg		84	80 - 120
2,2-Dichloropropane	0.800	0.642		mg/Kg		80	75 - 134
2-Chlorotoluene	0.800	0.640		mg/Kg		80	77 - 134
4-Chlorotoluene	0.800	0.635		mg/Kg		79	71 - 137
4-Isopropyltoluene	0.800	0.600		mg/Kg		75	71 - 142
Benzene	0.800	0.664		mg/Kg		83	79 - 135
Bromobenzene	0.800	0.638		mg/Kg		80	78 - 126
Bromochloromethane	0.800	0.663		mg/Kg		83	76 - 131
Bromodichloromethane	0.800	0.669		mg/Kg		84	78 - 125
Bromoform	0.800	0.647		mg/Kg		81	71 - 130
Bromomethane	0.800	0.721		mg/Kg		90	55 - 150

**Eurofins Seattle** 

Spike

Client: ERM-West Job ID: 580-143092-1

LCS LCS

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-469071/1-A

**Matrix: Solid** 

**Analysis Batch: 469072** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA Prep Batch: 469071 %Rec

	Opino				/01100	
Analyte	Added	Result	Qualifier Unit	D %Rec	Limits	
Carbon tetrachloride	0.800	0.679	mg/Kg	85	76 - 140	
Chlorobenzene	0.800	0.652	mg/Kg	82	80 - 125	
Chloroethane	0.800	0.643	mg/Kg	80	26 - 150	
Chloroform	0.800	0.664	mg/Kg	83	74 - 133	
Chloromethane	0.800	0.487	mg/Kg	61	52 - 142	
cis-1,2-Dichloroethene	0.800	0.667	mg/Kg	83	80 - 125	
Dibromochloromethane	0.800	0.672	mg/Kg	84	75 - 125	
Dibromomethane	0.800	0.679	mg/Kg	85	72 - 130	
Dichlorodifluoromethane	0.800	0.577	mg/Kg	72	33 - 150	
Ethylbenzene	0.800	0.689	mg/Kg	86	80 - 135	
Isopropylbenzene	0.800	0.731	mg/Kg	91	80 - 131	
Methyl tert-butyl ether	0.800	0.660	mg/Kg	83	71 - 126	
Methylene Chloride	0.800	0.614	mg/Kg	77	56 - 140	
m-Xylene & p-Xylene	0.800	0.656	mg/Kg	82	80 - 132	
Naphthalene	0.800	0.541	mg/Kg	68	56 - 145	
n-Butylbenzene	0.800	0.604	mg/Kg	75	69 - 143	
N-Propylbenzene	0.800	0.625	mg/Kg	78	78 - 133	
o-Xylene	0.800	0.673	mg/Kg	84	80 - 132	
sec-Butylbenzene	0.800	0.605	mg/Kg	76	71 - 143	
Styrene	0.800	0.685	mg/Kg	86	79 - 129	
t-Butylbenzene	0.800	0.621	mg/Kg	78	72 - 144	
Tetrachloroethene	0.800	0.671	mg/Kg	84	75 - 141	
Toluene	0.800	0.648	mg/Kg	81	75 - 125	
trans-1,2-Dichloroethene	0.800	0.639	mg/Kg	80	77 - 134	
trans-1,3-Dichloropropene	0.800	0.693	mg/Kg	87	80 - 121	
Trichloroethene	0.800	0.677	mg/Kg	85	80 - 134	
Trichlorofluoromethane	0.800	0.678	mg/Kg	85	71 - 150	
Vinyl chloride	0.800	0.658	mg/Kg	82	62 - 144	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	87		80 - 121
4-Bromofluorobenzene (Surr)	88		80 - 120
Dibromofluoromethane (Surr)	86		80 - 120
Toluene-d8 (Surr)	89		80 - 120

Lab Sample ID: LCSD 580-469071/2-A

**Matrix: Solid** 

Analysis Batch: 469072

Client Sample	ID: L	ab	Contro	I San	nple	Dup
			Pren 1	vne:	Tota	I/N A

Prep Batch: 469071

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	0.800	0.729		mg/Kg		91	79 - 128	5	20
1,1,1-Trichloroethane	0.800	0.707		mg/Kg		88	78 - 135	6	20
1,1,2,2-Tetrachloroethane	0.800	0.722		mg/Kg		90	77 - 122	9	20
1,1,2-Trichloroethane	0.800	0.720		mg/Kg		90	80 - 123	4	20
1,1-Dichloroethane	0.800	0.686		mg/Kg		86	78 - 126	5	20
1,1-Dichloroethene	0.800	0.677		mg/Kg		85	73 - 134	3	25
1,1-Dichloropropene	0.800	0.685		mg/Kg		86	76 - 140	6	20
1,2,3-Trichlorobenzene	0.800	0.541		mg/Kg		68	58 - 146	6	28

**Eurofins Seattle** 

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### **QC Sample Results**

Client: ERM-West Job ID: 580-143092-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-469071/2-A

**Matrix: Solid** 

Vinyl chloride

**Analysis Batch: 469072** 

**Client Sample ID: Lab Control Sample Dup** 

**Prep Type: Total/NA** 

**Prep Batch: 469071** 

Analysis Batch: 469072	Cuile	LCCD	LCCD				Prep Batch: 469071 %Rec RPD			
Analyte	Spike Added		LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
1,2,3-Trichloropropane	0.800	0.728		mg/Kg	_ =	91	77 - 127	7	20	
1,2,4-Trimethylbenzene	0.800	0.696		mg/Kg		87	73 - 138	5	22	
1,2-Dibromo-3-Chloropropane	0.800	0.569		mg/Kg		71	64 - 129	0	40	
1,2-Dibromoethane	0.800	0.741		mg/Kg		93	77 - 123	8	20	
1,2-Dichlorobenzene	0.800	0.677		mg/Kg		85	78 - 126	8	20	
1,2-Dichloroethane	0.800	0.668		mg/Kg		84	76 - 124	3	20	
1,2-Dichloropropane	0.800	0.684		mg/Kg		85	73 - 130	5	20	
1,3,5-Trimethylbenzene	0.800	0.715		mg/Kg		89	72 - 134	7	24	
1,3-Dichlorobenzene	0.800	0.664		mg/Kg		83	78 - 132	3	20	
1,3-Dichloropropane	0.800	0.699		mg/Kg		87	80 - 120	4	20	
2,2-Dichloropropane	0.800	0.684		mg/Kg		85	75 - 134	6	20	
2-Chlorotoluene	0.800	0.688		mg/Kg		86	77 - 134	7	21	
4-Chlorotoluene	0.800	0.682		mg/Kg		85	71 - 137	7	21	
4-Isopropyltoluene	0.800	0.640		mg/Kg		80	71 - 142	6	29	
Benzene	0.800	0.709		mg/Kg		89	79 - 135	7	20	
Bromobenzene	0.800	0.660		mg/Kg		82	78 - 126	3	20	
Bromochloromethane	0.800	0.691		mg/Kg		86	76 - 131	4	20	
Bromodichloromethane	0.800	0.698		mg/Kg		87	78 - 125	4	20	
Bromoform	0.800	0.693		mg/Kg		87	71 - 130	7	20	
Bromomethane	0.800	0.768		mg/Kg		96	55 - 150	6	26	
Carbon tetrachloride	0.800	0.706		mg/Kg		88	76 - 140	4	20	
Chlorobenzene	0.800	0.686		mg/Kg		86	80 - 125	5	20	
Chloroethane	0.800	0.700		mg/Kg		87	26 - 150	8	40	
Chloroform	0.800	0.697		mg/Kg		87	74 - 133	5	20	
Chloromethane	0.800	0.518		mg/Kg		65	52 - 142	6	40	
cis-1,2-Dichloroethene	0.800	0.701		mg/Kg		88	80 - 125	5	20	
Dibromochloromethane	0.800	0.696		mg/Kg		87	75 - 125	4	20	
Dibromomethane	0.800	0.695		mg/Kg		87	72 - 130	2	40	
Dichlorodifluoromethane	0.800	0.609		mg/Kg		76	33 - 150	5	31	
Ethylbenzene	0.800	0.719		mg/Kg		90	80 - 135	4	20	
Isopropylbenzene	0.800	0.781		mg/Kg		98	80 - 131	7	20	
Methyl tert-butyl ether	0.800	0.701		mg/Kg		88	71 - 126	6	20	
Methylene Chloride	0.800	0.655		mg/Kg		82	56 - 140	6	20	
m-Xylene & p-Xylene	0.800	0.695		mg/Kg		87	80 - 132	6	20	
Naphthalene	0.800	0.583		mg/Kg		73	56 - 145	7	25	
n-Butylbenzene	0.800	0.649		mg/Kg		81	69 - 143	7	31	
N-Propylbenzene	0.800	0.664		mg/Kg		83	78 - 133	6	24	
o-Xylene	0.800	0.716		mg/Kg		90	80 - 132	6	20	
sec-Butylbenzene	0.800	0.653		mg/Kg		82	71 - 143	8	29	
Styrene	0.800	0.724		mg/Kg		91	79 - 129	6	20	
t-Butylbenzene	0.800	0.671		mg/Kg		84	72 - 144	8	27	
Tetrachloroethene	0.800	0.703		mg/Kg		88	75 - 141	5	20	
Toluene	0.800	0.686		mg/Kg		86	75 - 125	6	20	
trans-1,2-Dichloroethene	0.800	0.656		mg/Kg		82	77 - 134	3	20	
trans-1,3-Dichloropropene	0.800	0.729		mg/Kg		91	80 - 121	5	20	
Trichloroethene	0.800	0.701		mg/Kg		88	80 - 134	3	20	
Trichlorofluoromethane	0.800	0.720		mg/Kg		90	71 - 150	6	30	
3.P.	0.000	0=0						3		

**Eurofins Seattle** 

8/30/2024

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62 - 144

0.695

mg/Kg

0.800

Client: ERM-West

Project/Site: Arkema PDI Sampling

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

MR MR

Lab Sample ID: LCSD 580-469071/2-A

**Matrix: Solid** 

**Analysis Batch: 469072** 

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

Job ID: 580-143092-1

Prep Batch: 469071

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	86		80 - 121
4-Bromofluorobenzene (Surr)	88		80 - 120
Dibromofluoromethane (Surr)	87		80 - 120
Toluene-d8 (Surr)	88		80 - 120

Client Sample ID: Method Blank

Prep Type: Total/NA

**Prep Batch: 469247** 

Lab Sample ID: MB 580-469247/3-A

Matrix: Solid

Analysis Batch: 469194

	IVID	IVID							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		0.080	0.043	mg/Kg		08/23/24 09:00	08/23/24 11:11	1
1,4-Dichlorobenzene	ND		0.060	0.011	mg/Kg		08/23/24 09:00	08/23/24 11:11	1
cis-1,3-Dichloropropene	ND		0.020	0.0040	mg/Kg		08/23/24 09:00	08/23/24 11:11	1
Hexachlorobutadiene	0.0338	J	0.10	0.024	mg/Kg		08/23/24 09:00	08/23/24 11:11	1

MB MB Surrogate %Recovery Qualifier Limits Prepared Analyzed Dil Fac 1,2-Dichloroethane-d4 (Surr) 101 80 - 121 08/23/24 09:00 08/23/24 11:11 4-Bromofluorobenzene (Surr) 99 80 - 120 08/23/24 09:00 08/23/24 11:11 Dibromofluoromethane (Surr) 102 80 - 120 08/23/24 09:00 08/23/24 11:11 Toluene-d8 (Surr) 104 80 - 120 08/23/24 09:00 08/23/24 11:11

Lab Sample ID: LCS 580-469247/1-A

**Matrix: Solid** 

**Analysis Batch: 469194** 

Client Sample ID: Lab Control Sample Prep Type: Total/NA

Prep Batch: 469247

Spike LCS LCS %Rec Added Result Qualifier Limits Analyte Unit D %Rec 1,2,4-Trichlorobenzene 0.800 0.610 mg/Kg 76 74 - 131 1,4-Dichlorobenzene 0.800 0.627 mg/Kg 78 77 - 123cis-1,3-Dichloropropene 0.800 0.700 mg/Kg 88 80 - 122 Hexachlorobutadiene 0.800 0.551 mg/Kg 65 - 145

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	89		80 - 121
4-Bromofluorobenzene (Surr)	92		80 - 120
Dibromofluoromethane (Surr)	91		80 - 120
Toluene-d8 (Surr)	91		80 - 120

Lab Sample ID: LCSD 580-469247/2-A Client Sample ID: Lab Control Sample Dup

**Matrix: Solid** 

Analysis Batch: 469194

Prep Batch: 469247

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D 9	%Rec	Limits	RPD	Limit
1,2,4-Trichlorobenzene	0.800	0.645		mg/Kg		81	74 - 131	6	26
1,4-Dichlorobenzene	0.800	0.708		mg/Kg		89	77 - 123	12	20
cis-1,3-Dichloropropene	0.800	0.747		mg/Kg		93	80 - 122	6	20
Hexachlorobutadiene	0.800	0.592		mg/Kg		74	65 - 145	7	36

**Eurofins Seattle** 

## **QC Sample Results**

Client: ERM-West Job ID: 580-143092-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-469247/2-A

Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Analysis Batch: 469194

Prep Type: Total/NA

**Prep Batch: 469247** 

LCSD LCSD %Recovery Qualifier Limits Surrogate 1,2-Dichloroethane-d4 (Surr) 90 80 - 121 4-Bromofluorobenzene (Surr) 93 80 - 120 Dibromofluoromethane (Surr) 91 80 - 120 Toluene-d8 (Surr) 92 80 - 120

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#### **Lab Chronicle**

Client: ERM-West Job ID: 580-143092-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-22-SO-88.2-20240816

Lab Sample ID: 580-143092-1 Date Collected: 08/16/24 11:10 **Matrix: Solid** 

Date Received: 08/20/24 12:23

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G			469079	AUA	EET SEA	08/22/24 08:23

Client Sample ID: PDI-22-SO-88.2-20240816

Lab Sample ID: 580-143092-1 Date Collected: 08/16/24 11:10 **Matrix: Solid** 

Date Received: 08/20/24 12:23 Percent Solids: 81.4

	Batch	Batch	_	Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			469071	BYM	EET SEA	08/22/24 11:02
Total/NA	Analysis	8260D		1	469072	AC	EET SEA	08/22/24 11:55
Total/NA	Prep	5035	RA		469247	BYM	EET SEA	08/23/24 09:00
Total/NA	Analysis	8260D	RA	1	469194	AC	EET SEA	08/23/24 15:41

Client Sample ID: TB-01-SO-2-20240816

Lab Sample ID: 580-143092-2 Date Collected: 08/16/24 00:01 **Matrix: Solid** 

Date Received: 08/20/24 12:23

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			469071	BYM	EET SEA	08/22/24 11:02
Total/NA	Analysis	8260D		1	469072	AC	EET SEA	08/22/24 11:34
Total/NA	Prep	5035	RA		469247	BYM	EET SEA	08/23/24 09:00
Total/NA	Analysis	8260D	RA	1	469194	AC	EET SEA	08/23/24 15:20

Client Sample ID: PDI-23-SO-41.5-20240819

Lab Sample ID: 580-143092-3 Date Collected: 08/19/24 10:45 **Matrix: Solid** 

Date Received: 08/20/24 12:23

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	469231	FCG	EET SEA	08/23/24 10:23

Client Sample ID: PDI-23-SO-41.5-20240819 Lab Sample ID: 580-143092-3

Date Collected: 08/19/24 10:45 **Matrix: Solid** Date Received: 08/20/24 12:23 Percent Solids: 92.0

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			469071	BYM	EET SEA	08/22/24 11:02
Total/NA	Analysis	8260D		1	469072	AC	EET SEA	08/22/24 12:57
Total/NA	Prep	5035	DL		469071	BYM	EET SEA	08/22/24 11:02
Total/NA	Analysis	8260D	DL	1	469072	AC	EET SEA	08/22/24 16:43
Total/NA	Prep	5035	RA		469247	BYM	EET SEA	08/23/24 09:00
Total/NA	Analysis	8260D	RA	1	469194	AC	EET SEA	08/23/24 18:05

**Eurofins Seattle** 

#### **Lab Chronicle**

Client: ERM-West Job ID: 580-143092-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-23-SO-43.5-20240819

Lab Sample ID: 580-143092-4 Date Collected: 08/19/24 11:15

**Matrix: Solid** 

Date Received: 08/20/24 12:23

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	469231	FCG	EET SEA	08/23/24 10:23

Client Sample ID: PDI-23-SO-43.5-20240819

Lab Sample ID: 580-143092-4

**Matrix: Solid** 

Date Collected: 08/19/24 11:15 Date Received: 08/20/24 12:23 Percent Solids: 95.3

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	<del></del> -		469071	BYM	EET SEA	08/22/24 11:02
Total/NA	Analysis	8260D		1	469072	AC	EET SEA	08/22/24 12:15
Total/NA	Prep	5035	RA		469247	BYM	EET SEA	08/23/24 09:00
Total/NA	Analysis	8260D	RA	1	469194	AC	EET SEA	08/23/24 16:01

Client Sample ID: PDI-23-SO-80-20240819

Lab Sample ID: 580-143092-5

**Matrix: Solid** 

Date Collected: 08/19/24 16:20 Date Received: 08/20/24 12:23

Date Collected: 08/19/24 16:20

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	469231	FCG	EET SEA	08/23/24 10:23

Client Sample ID: PDI-23-SO-80-20240819

Lab Sample ID: 580-143092-5

**Matrix: Solid** 

Date Received: 08/20/24 12:23

Percent Solids: 95.8

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			469071	BYM	EET SEA	08/22/24 11:02
Total/NA	Analysis	8260D		1	469072	AC	EET SEA	08/22/24 12:36
Total/NA	Prep	5035	RA		469247	BYM	EET SEA	08/23/24 09:00
Total/NA	Analysis	8260D	RA	1	469194	AC	EET SEA	08/23/24 16:22

#### **Laboratory References:**

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

**Eurofins Seattle** 

## **Accreditation/Certification Summary**

Client: ERM-West Job ID: 580-143092-1

Project/Site: Arkema PDI Sampling

### **Laboratory: Eurofins Seattle**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Progra	am	Identification Number	Expiration Date			
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## **Sample Summary**

Client: ERM-West

Project/Site: Arkema PDI Sampling

Job ID: 580-143092-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-143092-1	PDI-22-SO-88.2-20240816	Solid	08/16/24 11:10	08/20/24 12:23
580-143092-2	TB-01-SO-2-20240816	Solid	08/16/24 00:01	08/20/24 12:23
580-143092-3	PDI-23-SO-41.5-20240819	Solid	08/19/24 10:45	08/20/24 12:23
580-143092-4	PDI-23-SO-43.5-20240819	Solid	08/19/24 11:15	08/20/24 12:23
580-143092-5	PDI-23-SO-80-20240819	Solid	08/19/24 16:20	08/20/24 12:23

#### **Eurofins Seattle**

5755 8th Street East Tacoma, WA 98424

## **Chain of Custody Record**



Environment Testing

Phone (253) 922-2310													Environment less
Client Information	Sampler: Pau I	VanN	evel		PM: Jz, She	ri L				Carrier '	Tracking No(s):		COC No: 580-62781-19269.12
Client Contact: Avery Soplata	Phone:	755-13	98	E-M Sh		@et.	eurof	insus.con	1	State of	Origin:		Page:
Company: ERM-West			PWSID:					А	nalysis R	equeste	ed		Job#:
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mail:	0732436.301				<u>o</u>	E		ipment					
very.soplata@erm.com	WO #:				No or	it Me	크	st equi				90	
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Eurofins Seattle 5755 8th Street East facoma, WA 98424 Phone (253) 922-2310	(	Chain (	of Cus	tody F	Reco	ord										,	€§ (	eurofins	nvironment Ti	esting
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Ver: 04/02/2024

Client: ERM-West Job Number: 580-143092-1

Login Number: 143092 List Source: Eurofins Seattle

List Number: 1

Creator: O'Connell, Jason I

Creator: O Conneil, Jason I		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# **ANALYTICAL REPORT**

## PREPARED FOR

Attn: Avery Soplata ERM-West 1050 SW 6th Avenue Suite 1650 Portland, Oregon 97204

Generated 9/5/2024 4:23:40 PM

## **JOB DESCRIPTION**

Arkema PDI Sampling

## **JOB NUMBER**

580-143177-1

Eurofins Seattle 5755 8th Street East Tacoma WA 98424

## **Eurofins Seattle**

### **Job Notes**

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

### **Authorization**

Generated 9/5/2024 4:23:40 PM

Authorized for release by Sheri Cruz, Project Manager I Sheri.Cruz@et.eurofinsus.com (253)922-2310

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Client: ERM-West

Project/Site: Arkema PDI Sampling

Laboratory Job ID: 580-143177-1

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QC Sample Results	27
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#### **Case Narrative**

Client: ERM-West Job ID: 580-143177-1
Project: Arkema PDI Sampling

Job ID: 580-143177-1 Eurofins Seattle

## Job Narrative 580-143177-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these
  situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise
  specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 8/22/2024 11:15 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.0°C.

#### GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-469359 recovered outside acceptance criteria, low biased, for 1,2-Dibromo-3-Chloropropane. A reporting limit (RL) standard was analyzed, and the target analyte is detected. Since the associated samples were non-detect for the analyte, the data are reported.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-469359 recovered above the upper control limit for Dichlorodifluoromethane. The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-469703 recovered outside acceptance criteria, low biased, for Hexachlorobutadiene. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8260D: The method blank for analytical batch 580-469703 contained 1,2,4-Trichlorobenzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or reanalysis of samples was not performed.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-469995 recovered above the upper control limit for Methyl tert-butyl ether. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: TB-01-WQ-20240820 (580-143177-5) and (CCVIS 580-469995/3).

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-469995 recovered outside acceptance criteria, low biased, for 1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene and Naphthalene. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8260D: The CCV associated with analytical batch 580-469995 was outside of control limits low for 1,2,4-Trichlorobenzene. No more volume remains for re-analysis, therefore, results are reported. The following samples are affected: TB-01-WQ-20240820 (580-143177-5) and (CCVIS 580-469995/3)

Method 8260D: The method blank for analytical batch 580-469995 contained 1,2,4-Trichlorobenzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or reanalysis of samples was not performed.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-470147 recovered above the upper control limit for Chloroethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8260D: The method blank for preparation batch 580-470152 and analytical batch 580-470147 contained Hexachlorobutadiene above the method detection limit. This target analyte concentration was less than half the reporting limit

**Eurofins Seattle** 

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#### **Case Narrative**

Client: ERM-West Job ID: 580-143177-1

Project: Arkema PDI Sampling

### Job ID: 580-143177-1 (Continued)

**Eurofins Seattle** 

(1/2RL) in the method blank; therefore, re-extraction of samples was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**General Chemistry**No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**Eurofins Seattle** 

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### **Definitions/Glossary**

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

#### **Qualifiers**

#### **GC/MS VOA**

Qualifier Qualifier Description

B Compound was found in the blank and sample.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### **Glossary**

Abbreviation These commonly used abbreviations may or may not be present in this report.

Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery
CFL Contains Free Liquid
CFU Colony Forming Unit
CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent
POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

**Client Sample ID: TB-01-SO-20240820** 

Lab Sample ID: 580-143177-1

Date Collected: 08/20/24 00:01 **Matrix: Solid** Date Received: 08/22/24 11:15

Analyte	Result Qualifier	RL	MDL	OTIL	D	Prepared	Analyzed	Dil F
1,1,1,2-Tetrachloroethane	ND	0.020	0.0050	mg/Kg		08/26/24 12:48	08/26/24 14:04	
1,1,1-Trichloroethane	ND	0.040	0.0046			08/26/24 12:48	08/26/24 14:04	
1,1,2,2-Tetrachloroethane	ND	0.020	0.0076	mg/Kg		08/26/24 12:48	08/26/24 14:04	
1,1,2-Trichloroethane	ND	0.020	0.0074	mg/Kg		08/26/24 12:48	08/26/24 14:04	
1,1-Dichloroethane	ND	0.040	0.0092	mg/Kg		08/26/24 12:48	08/26/24 14:04	
1,1-Dichloroethene	ND	0.040	0.012	mg/Kg		08/26/24 12:48	08/26/24 14:04	
1,1-Dichloropropene	ND	0.040	0.0053	mg/Kg		08/26/24 12:48	08/26/24 14:04	
,2,3-Trichlorobenzene	ND	0.080	0.040	mg/Kg		08/26/24 12:48	08/26/24 14:04	
,2,3-Trichloropropane	ND	0.040	0.012	mg/Kg		08/26/24 12:48	08/26/24 14:04	
,2,4-Trichlorobenzene	ND	0.080	0.043	mg/Kg		08/26/24 12:48	08/26/24 14:04	
1,2,4-Trimethylbenzene	ND	0.040	0.014	mg/Kg		08/26/24 12:48	08/26/24 14:04	
1,2-Dibromo-3-Chloropropane	ND	0.060	0.015	mg/Kg		08/26/24 12:48	08/26/24 14:04	
1,2-Dibromoethane	ND	0.020	0.0038	mg/Kg		08/26/24 12:48	08/26/24 14:04	
1,2-Dichlorobenzene	ND	0.040	0.0087	mg/Kg		08/26/24 12:48	08/26/24 14:04	
I,2-Dichloroethane	ND	0.020	0.0055			08/26/24 12:48	08/26/24 14:04	
I,2-Dichloropropane	ND	0.020	0.0066	mg/Kg		08/26/24 12:48	08/26/24 14:04	
I,3,5-Trimethylbenzene	ND	0.040	0.0076			08/26/24 12:48	08/26/24 14:04	
I,3-Dichlorobenzene	ND	0.060		mg/Kg		08/26/24 12:48	08/26/24 14:04	
,3-Dichloropropane	ND	0.060	0.0056			08/26/24 12:48	08/26/24 14:04	
,4-Dichlorobenzene	ND	0.060		mg/Kg			08/26/24 14:04	
2,2-Dichloropropane	ND	0.040		mg/Kg			08/26/24 14:04	
2-Chlorotoluene	ND	0.040	0.0088				08/26/24 14:04	
-Chlorotoluene	ND	0.040	0.0098				08/26/24 14:04	
l-Isopropyltoluene	ND	0.040		mg/Kg			08/26/24 14:04	
Benzene	ND	0.020	0.0038				08/26/24 14:04	
Bromobenzene	ND	0.040	0.0042				08/26/24 14:04	
Bromochloromethane	ND	0.040	0.0062	0 0			08/26/24 14:04	
Bromodichloromethane	ND	0.040	0.0055				08/26/24 14:04	
Bromoform	ND	0.040	0.0045				08/26/24 14:04	
Bromomethane	ND	0.10		mg/Kg			08/26/24 14:04	
Carbon tetrachloride	ND	0.020	0.0044				08/26/24 14:04	
Chlorobenzene	0.019 J	0.020	0.0044				08/26/24 14:04	
Chloroform	0.019 3 ND	0.020	0.0042				08/26/24 14:04	
Chloromethane	ND	0.020		mg/Kg			08/26/24 14:04	
cis-1,2-Dichloroethene	ND	0.060		mg/Kg			08/26/24 14:04	
cis-1,3-Dichloropropene	ND	0.000	0.0040	0 0			08/26/24 14:04	
Dibromochloromethane	ND ND	0.020	0.0040				08/26/24 14:04	
Dibromomethane	ND ND	0.020					08/26/24 14:04	
Dichlorodifluoromethane	ND ND	0.040	0.0074				08/26/24 14:04	
		0.25	0.046	mg/Kg			08/26/24 14:04	
Ethylbenzene	ND ND							
sopropylbenzene	ND	0.040	0.0086				08/26/24 14:04	
Methyl tert-butyl ether	ND	0.040	0.0060				08/26/24 14:04	
Methylene Chloride	ND	0.25		mg/Kg			08/26/24 14:04	
m-Xylene & p-Xylene	ND	0.040	0.0071				08/26/24 14:04	
Naphthalene	ND	0.15		mg/Kg			08/26/24 14:04	
n-Butylbenzene	ND	0.040		mg/Kg			08/26/24 14:04	
N-Propylbenzene	ND	0.040		mg/Kg			08/26/24 14:04	
o-Xylene sec-Butylbenzene	ND ND	0.040 0.040	0.0050 0.0086				08/26/24 14:04 08/26/24 14:04	

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Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

**Client Sample ID: TB-01-SO-20240820** 

Lab Sample ID: 580-143177-1 Date Collected: 08/20/24 00:01

Date Received: 08/22/24 11:15

Method: SW846 8260D - V	/olatile Organic Compounds by G		ds by GC/MS	(Continued)					
Analyte		Qualifier	RL	-	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.040	0.013	mg/Kg		08/26/24 12:48	08/26/24 14:04	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		08/26/24 12:48	08/26/24 14:04	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		08/26/24 12:48	08/26/24 14:04	1
Toluene	ND		0.060	0.014	mg/Kg		08/26/24 12:48	08/26/24 14:04	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		08/26/24 12:48	08/26/24 14:04	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		08/26/24 12:48	08/26/24 14:04	1
Trichloroethene	ND		0.040	0.010	mg/Kg		08/26/24 12:48	08/26/24 14:04	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		08/26/24 12:48	08/26/24 14:04	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		08/26/24 12:48	08/26/24 14:04	1
	0/5								

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	115		80 - 121	08/26/24 12:48	08/26/24 14:04	1
4-Bromofluorobenzene (Surr)	108		80 - 120	08/26/24 12:48	08/26/24 14:04	1
Dibromofluoromethane (Surr)	112		80 - 120	08/26/24 12:48	08/26/24 14:04	1
Toluene-d8 (Surr)	105		80 - 120	08/26/24 12:48	08/26/24 14:04	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		0.080	0.021	mg/Kg		09/03/24 14:59	09/03/24 22:03	1
Hexachlorobutadiene	ND		0.10	0.024	mg/Kg		09/03/24 14:59	09/03/24 22:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				09/03/24 14:59	09/03/24 22:03	1
4-Bromofluorobenzene (Surr)	102		80 - 120				09/03/24 14:59	09/03/24 22:03	1
Dibromofluoromethane (Surr)	101		80 - 120				09/03/24 14:59	09/03/24 22:03	1
	101		80 - 120				09/03/24 14:59	09/03/24 22:03	

**Matrix: Solid** 

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-31-35.2-SO-20240820

Date Collected: 08/20/24 15:15
Date Received: 08/22/24 11:15

Lab Sample ID: 580-143177-2

Matrix: Solid Percent Solids: 83.9

Analyte	Result Qualifi	er RL	MDL	Unit	D	Prepared	Analyzed	Dil F
1,1,1,2-Tetrachloroethane	ND ND	0.021	0.0053	mg/Kg	— <u>=</u>		08/26/24 15:47	
1,1,1-Trichloroethane	ND	0.042	0.0033	mg/Kg	₩	08/26/24 12:48	08/26/24 15:47	
1,1,2,2-Tetrachloroethane	ND	0.021		mg/Kg	~ #	08/26/24 12:48		
1,1,2-Trichloroethane	ND	0.021		mg/Kg			08/26/24 15:47	
1,1-Dichloroethane	ND	0.042	0.0070		₩	08/26/24 12:48	08/26/24 15:47	
1,1-Dichloroethene	ND	0.042		mg/Kg	₩			
1,1-Dichloropropene	ND	0.042	0.0056		¥. ₩		08/26/24 15:47	
I,2,3-Trichlorobenzene	ND ND	0.042		mg/Kg	₩ #		08/26/24 15:47	
1,2,3-Trichloropenzene	ND ND	0.083		mg/Kg	₩ ₩		08/26/24 15:47	
<u> </u>	ND							
I,2,4-Trichlorobenzene		0.085		mg/Kg	±		08/26/24 15:47	
I,2,4-Trimethylbenzene	ND	0.042		mg/Kg	<b>*</b>		08/26/24 15:47	
,2-Dibromo-3-Chloropropane	ND	0.064		mg/Kg	<del></del>		08/26/24 15:47	
,2-Dibromoethane	ND	0.021	0.0040	0 0	<b>☆</b>		08/26/24 15:47	
1,2-Dichlorobenzene	ND	0.042	0.0092			08/26/24 12:48	08/26/24 15:47	
,2-Dichloroethane	ND	0.021	0.0058		<del></del>		08/26/24 15:47	
,2-Dichloropropane	ND	0.021	0.0070		₩		08/26/24 15:47	
,3,5-Trimethylbenzene	ND	0.042		mg/Kg	₩			
,3-Dichlorobenzene	ND	0.064		mg/Kg		08/26/24 12:48		
,3-Dichloropropane	ND	0.064	0.0059		₩	08/26/24 12:48	08/26/24 15:47	
,4-Dichlorobenzene	ND	0.064	0.011	mg/Kg	☼	08/26/24 12:48	08/26/24 15:47	
,2-Dichloropropane	ND	0.042	0.013	mg/Kg	≎	08/26/24 12:48	08/26/24 15:47	
-Chlorotoluene	ND	0.042	0.0093	mg/Kg	≎	08/26/24 12:48	08/26/24 15:47	
-Chlorotoluene	ND	0.042	0.010	mg/Kg	☼	08/26/24 12:48	08/26/24 15:47	
-Isopropyltoluene	ND	0.042	0.011	mg/Kg	≎	08/26/24 12:48	08/26/24 15:47	
Benzene	ND	0.021	0.0040	mg/Kg	₽	08/26/24 12:48	08/26/24 15:47	
romobenzene	ND	0.042	0.0044	mg/Kg	₩	08/26/24 12:48	08/26/24 15:47	
Bromochloromethane	ND	0.042	0.0066	mg/Kg	☼	08/26/24 12:48	08/26/24 15:47	
Bromodichloromethane	ND	0.042	0.0058	mg/Kg	≎	08/26/24 12:48	08/26/24 15:47	
Bromoform	ND	0.042	0.0048	mg/Kg	≎	08/26/24 12:48	08/26/24 15:47	
Bromomethane	ND	0.11	0.040	mg/Kg	≎	08/26/24 12:48	08/26/24 15:47	
Carbon tetrachloride	ND	0.021	0.0047	mg/Kg	₩	08/26/24 12:48	08/26/24 15:47	
Chlorobenzene	0.45	0.042	0.0051	mg/Kg	₩	08/26/24 12:48	08/26/24 15:47	
Chloroform	ND	0.021	0.0044	mg/Kg	₩	08/26/24 12:48	08/26/24 15:47	
Chloromethane	ND	0.064	0.011	mg/Kg		08/26/24 12:48	08/26/24 15:47	
is-1,2-Dichloroethene	ND	0.064	0.013	mg/Kg	☼	08/26/24 12:48	08/26/24 15:47	
is-1,3-Dichloropropene	ND	0.021	0.0042		₽	08/26/24 12:48	08/26/24 15:47	
Dibromochloromethane	ND	0.021	0.0052			08/26/24 12:48	08/26/24 15:47	
Dibromomethane	ND	0.042	0.0078		☆		08/26/24 15:47	
Dichlorodifluoromethane	ND	0.26		mg/Kg	₩		08/26/24 15:47	
thylbenzene	ND	0.042	0.0096				08/26/24 15:47	
sopropylbenzene	ND	0.042	0.0091		₩		08/26/24 15:47	
lethyl tert-butyl ether	ND	0.042	0.0064		₩		08/26/24 15:47	
lethylene Chloride	ND	0.26		mg/Kg			08/26/24 15:47	
n-Xylene & p-Xylene	ND	0.042	0.0075		☆		08/26/24 15:47	
laphthalene	ND	0.16		mg/Kg	₩		08/26/24 15:47	
-Butylbenzene	ND	0.042		mg/Kg	**		08/26/24 15:47	
I-Dutylbenzene I-Propylbenzene	ND ND	0.042		mg/Kg	☆		08/26/24 15:47	
n-Xylene	ND ND	0.042	0.0053				08/26/24 15:47	
ec-Butylbenzene	ND	0.042	0.0053				08/26/24 15:47	

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Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-31-35.2-SO-20240820

Date Collected: 08/20/24 15:15 Date Received: 08/22/24 11:15

Toluene-d8 (Surr)

Lab Sample ID: 580-143177-2

09/03/24 14:59 09/03/24 23:05

**Matrix: Solid** 

Percent Solids: 83.9

Method: SW846 8260D - Vo	olatile Organic	Compoun	ds by GC/MS	(Conti	inued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.042	0.013	mg/Kg	≎	08/26/24 12:48	08/26/24 15:47	1
t-Butylbenzene	ND		0.042	0.0081	mg/Kg	☼	08/26/24 12:48	08/26/24 15:47	1
Tetrachloroethene	ND		0.042	0.0056	mg/Kg	₽	08/26/24 12:48	08/26/24 15:47	1
Toluene	ND		0.064	0.014	mg/Kg	☼	08/26/24 12:48	08/26/24 15:47	1
trans-1,2-Dichloroethene	ND		0.064	0.015	mg/Kg	☼	08/26/24 12:48	08/26/24 15:47	1
trans-1,3-Dichloropropene	ND		0.042	0.0074	mg/Kg	₽	08/26/24 12:48	08/26/24 15:47	1
Trichloroethene	ND		0.042	0.011	mg/Kg	₽	08/26/24 12:48	08/26/24 15:47	1
Trichlorofluoromethane	ND		0.085	0.028	mg/Kg	₩	08/26/24 12:48	08/26/24 15:47	1
Vinyl chloride	ND		0.11	0.020	mg/Kg	≎	08/26/24 12:48	08/26/24 15:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		80 - 121				08/26/24 12:48	08/26/24 15:47	1
4-Bromofluorobenzene (Surr)	108		80 - 120				08/26/24 12:48	08/26/24 15:47	1
Dibromofluoromethane (Surr)	114		80 - 120				08/26/24 12:48	08/26/24 15:47	1
Toluene-d8 (Surr)	106		80 - 120				08/26/24 12:48	08/26/24 15:47	1
- Method: SW846 8260D - Vo	olatile Organic	Compoun	ds by GC/MS	- RA					
Analyte	_	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		0.085	0.022	mg/Kg	<u></u>	09/03/24 14:59	09/03/24 23:05	1
Hexachlorobutadiene	ND		0.11	0.025	mg/Kg	₩	09/03/24 14:59	09/03/24 23:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				09/03/24 14:59	09/03/24 23:05	1
4-Bromofluorobenzene (Surr)	102		80 - 120				09/03/24 14:59	09/03/24 23:05	1
Dibromofluoromethane (Surr)	104		80 - 120				09/03/24 14:59	09/03/24 23:05	1

General Chemistry							
Analyte	Result Qualifier	RL	RL Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	83.9	0.1	0.1 %			08/28/24 13:25	1
Percent Moisture (SM22 2540G)	16.1	0.1	0.1 %			08/28/24 13:25	1

80 - 120

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

Client Sample ID: DUP-05-SQ-20240820

Date Collected: 08/20/24 15:20 Date Received: 08/22/24 11:15 Lab Sample ID: 580-143177-3

Matrix: Solid

Percent Solids: 87.3

Method: SW846 8260D - Vola Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050	mg/Kg	— <u></u>		08/26/24 16:07	1
1,1,1-Trichloroethane	ND		0.040	0.0046		₩	08/26/24 12:48	08/26/24 16:07	1
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076	mg/Kg	₩	08/26/24 12:48	08/26/24 16:07	1
1,1,2-Trichloroethane	ND		0.020	0.0074	mg/Kg	₩	08/26/24 12:48	08/26/24 16:07	1
1,1-Dichloroethane	ND		0.040	0.0092		₩	08/26/24 12:48	08/26/24 16:07	1
1,1-Dichloroethene	ND		0.040	0.012	mg/Kg	₩	08/26/24 12:48	08/26/24 16:07	1
1,1-Dichloropropene	ND		0.040	0.0053	mg/Kg		08/26/24 12:48	08/26/24 16:07	1
1,2,3-Trichlorobenzene	ND		0.080		mg/Kg	₩	08/26/24 12:48	08/26/24 16:07	1
1,2,3-Trichloropropane	ND		0.040		mg/Kg	₩	08/26/24 12:48	08/26/24 16:07	1
1,2,4-Trichlorobenzene	ND		0.080		mg/Kg		08/26/24 12:48	08/26/24 16:07	1
1,2,4-Trimethylbenzene	ND		0.040		mg/Kg	₩	08/26/24 12:48	08/26/24 16:07	1
1,2-Dibromo-3-Chloropropane	ND		0.060		mg/Kg	₩		08/26/24 16:07	1
1,2-Dibromoethane	ND		0.020	0.0038		∴		08/26/24 16:07	1
1,2-Dichlorobenzene	ND		0.040	0.0087		₩		08/26/24 16:07	1
1,2-Dichloroethane	ND		0.020	0.0055				08/26/24 16:07	1
1,2-Dichloropropane	ND		0.020	0.0066				08/26/24 16:07	1
1,3,5-Trimethylbenzene	ND		0.040	0.0076	0 0			08/26/24 16:07	1
1,3-Dichlorobenzene	ND		0.060		mg/Kg	₩.		08/26/24 16:07	1
1,3-Dichloropropane	ND		0.060	0.0056		∴		08/26/24 16:07	 1
1,4-Dichlorobenzene	ND		0.060		mg/Kg	~ ☆		08/26/24 16:07	1
2.2-Dichloropropane	ND		0.040		mg/Kg	Ϋ́		08/26/24 16:07	1
2-Chlorotoluene	ND		0.040	0.0088				08/26/24 16:07	· · · · · · · · · · · · · · · · · · ·
4-Chlorotoluene	ND		0.040	0.0098		~ ☆		08/26/24 16:07	
I-Isopropyltoluene	ND		0.040		mg/Kg	Ď.		08/26/24 16:07	1
Benzene	ND		0.020	0.0038				08/26/24 16:07	'
Bromobenzene	ND		0.040	0.0030		₩		08/26/24 16:07	1
Bromochloromethane	ND ND		0.040	0.0042		** **		08/26/24 16:07	1
Bromodichloromethane	ND		0.040	0.0055		¥ ₩		08/26/24 16:07	
Bromoform	ND ND		0.040	0.0035	0 0	₩		08/26/24 16:07	
Bromomethane	ND ND		0.040		mg/Kg	¥ \$		08/26/24 16:07	1
Carbon tetrachloride	ND		0.020	0.0044	0 0	<b>☆</b>		08/26/24 16:07 08/26/24 16:07	1
Chlorobenzene	0.61		0.040	0.0048		φ.			1
Chloroform	ND		0.020	0.0042		<del></del>		08/26/24 16:07	1
Chloromethane	ND		0.060		mg/Kg	Ð.		08/26/24 16:07	1
cis-1,2-Dichloroethene	ND		0.060		mg/Kg	<b>*</b>		08/26/24 16:07	1
cis-1,3-Dichloropropene	ND		0.020	0.0040		<del>.</del>		08/26/24 16:07	1
Dibromochloromethane	ND		0.020	0.0049		<b>:</b>		08/26/24 16:07	1
Dibromomethane	ND		0.040	0.0074		<b>*</b>		08/26/24 16:07	1
Dichlorodifluoromethane	ND		0.25		mg/Kg	<del>.</del>		08/26/24 16:07	1
Ethylbenzene	ND		0.040	0.0091		☼		08/26/24 16:07	1
sopropylbenzene	ND		0.040	0.0086		☼			1
Methyl tert-butyl ether	ND		0.040	0.0060				08/26/24 16:07	1
Methylene Chloride	ND		0.25		mg/Kg	₩		08/26/24 16:07	1
n-Xylene & p-Xylene	ND		0.040	0.0071		₩		08/26/24 16:07	1
Naphthalene	ND		0.15		mg/Kg			08/26/24 16:07	1
n-Butylbenzene	ND		0.040		mg/Kg	₩		08/26/24 16:07	1
N-Propylbenzene	ND		0.040		mg/Kg	₩		08/26/24 16:07	1
o-Xylene	ND		0.040	0.0050	mg/Kg	₩	08/26/24 12:48	08/26/24 16:07	1

**Eurofins Seattle** 

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**5** 

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11

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

Client Sample ID: DUP-05-SQ-20240820

Date Collected: 08/20/24 15:20 Date Received: 08/22/24 11:15 Lab Sample ID: 580-143177-3

**Matrix: Solid** Percent Solids: 87.3

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.040	0.013	mg/Kg	<u></u>	08/26/24 12:48	08/26/24 16:07	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg	≎	08/26/24 12:48	08/26/24 16:07	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg	₽	08/26/24 12:48	08/26/24 16:07	1
Toluene	ND		0.060	0.013	mg/Kg	≎	08/26/24 12:48	08/26/24 16:07	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg	≎	08/26/24 12:48	08/26/24 16:07	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg	≎	08/26/24 12:48	08/26/24 16:07	1
Trichloroethene	ND		0.040	0.010	mg/Kg	≎	08/26/24 12:48	08/26/24 16:07	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg	☼	08/26/24 12:48	08/26/24 16:07	1
Vinyl chloride	ND		0.10	0.019	mg/Kg	☆	08/26/24 12:48	08/26/24 16:07	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			80 - 121				08/26/24 12:48	08/26/24 16:07	1
4-Bromofluorobenzene (Surr)	106		80 - 120				08/26/24 12:48	08/26/24 16:07	1
Dibromofluoromethane (Surr)	111		80 - 120				08/26/24 12:48	08/26/24 16:07	1
Toluene-d8 (Surr)	106		80 - 120				08/26/24 12:48	08/26/24 16:07	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		0.080	0.021	mg/Kg	<u></u>	09/03/24 14:59	09/03/24 23:25	1
Hexachlorobutadiene	ND		0.10	0.024	mg/Kg	₩	09/03/24 14:59	09/03/24 23:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				09/03/24 14:59	09/03/24 23:25	1
4-Bromofluorobenzene (Surr)	100		80 - 120				09/03/24 14:59	09/03/24 23:25	1
Dibromofluoromethane (Surr)	100		80 - 120				09/03/24 14:59	09/03/24 23:25	1
Toluene-d8 (Surr)	98		80 - 120				09/03/24 14:59	09/03/24 23:25	1

General Chemistry							
Analyte	Result Qualifier	RL	RL Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	87.3	0.1	0.1 %			08/28/24 13:25	1
Percent Moisture (SM22 2540G)	12.7	0.1	0.1 %			08/28/24 13:25	1

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

Date Received: 08/22/24 11:15

Client Sample ID: RB-05-WQ-20240820

Lab Sample ID: 580-143177-4 Date Collected: 08/20/24 15:40

**Matrix: Water** 

Analyte	Result	Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	MD		1.0	0.53	ug/L			08/29/24 04:04	1
Chloromethane	ND		1.0	0.28	ug/L			08/29/24 04:04	1
Vinyl chloride	ND		1.0	0.22	ug/L			08/29/24 04:04	1
Bromomethane	ND		1.0	0.21	ug/L			08/29/24 04:04	1
Chloroethane	ND		1.0	0.35	ug/L			08/29/24 04:04	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			08/29/24 04:04	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			08/29/24 04:04	1
Methylene Chloride	ND		5.0	1.4	ug/L			08/29/24 04:04	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			08/29/24 04:04	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			08/29/24 04:04	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			08/29/24 04:04	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			08/29/24 04:04	1
Bromochloromethane	ND		1.0	0.29	ug/L			08/29/24 04:04	1
Chloroform	ND		1.0	0.26	-			08/29/24 04:04	1
1,1,1-Trichloroethane	ND		1.0	0.39	-			08/29/24 04:04	1
Carbon tetrachloride	ND		1.0	0.30				08/29/24 04:04	1
1,1-Dichloropropene	ND		1.0	0.29	-			08/29/24 04:04	1
Benzene	ND		1.0	0.24	-			08/29/24 04:04	1
1,2-Dichloroethane	ND		1.0	0.42				08/29/24 04:04	1
Trichloroethene	ND		1.0	0.26	-			08/29/24 04:04	1
1,2-Dichloropropane	ND		1.0	0.18	-			08/29/24 04:04	1
Dibromomethane	ND		1.0	0.34				08/29/24 04:04	1
Bromodichloromethane	ND		1.0	0.29	-			08/29/24 04:04	1
cis-1,3-Dichloropropene	ND		1.0	0.42	-			08/29/24 04:04	1
Toluene	ND		1.0	0.39				08/29/24 04:04	1
trans-1,3-Dichloropropene	ND		1.0	0.41	-			08/29/24 04:04	1
1,1,2-Trichloroethane	ND		1.0	0.24	-			08/29/24 04:04	1
Tetrachloroethene	ND		1.0	0.41				08/29/24 04:04	1
1,3-Dichloropropane	ND		1.0	0.35	-			08/29/24 04:04	1
Dibromochloromethane	ND		1.0	0.43	-			08/29/24 04:04	1
1,2-Dibromoethane	ND		1.0	0.40				08/29/24 04:04	1
Chlorobenzene	ND		1.0	0.44	-			08/29/24 04:04	1
Ethylbenzene	ND		1.0	0.50	-			08/29/24 04:04	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18				08/29/24 04:04	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	-			08/29/24 04:04	1
m-Xylene & p-Xylene	ND		2.0	0.53	-			08/29/24 04:04	1
o-Xylene	ND		1.0		ug/L			08/29/24 04:04	
Styrene	ND		1.0		ug/L			08/29/24 04:04	1
Bromoform	ND		1.0		ug/L			08/29/24 04:04	1
Isopropylbenzene	ND ND		1.0		ug/L			08/29/24 04:04	1
Bromobenzene	ND		1.0		ug/L			08/29/24 04:04	1
N-Propylbenzene	ND ND		1.0		ug/L ug/L			08/29/24 04:04	1
1,2,3-Trichloropropane	ND		1.0		ug/L ug/L			08/29/24 04:04	1
2-Chlorotoluene	ND ND		1.0		ug/L ug/L			08/29/24 04:04	1
1,3,5-Trimethylbenzene	ND ND		1.0		ug/L ug/L			08/29/24 04:04	1
4-Chlorotoluene	ND				ug/L ug/L			08/29/24 04:04	
	ND ND		1.0 2.0		ug/L ug/L			08/29/24 04:04	1
t-Butylbenzene					-				1
1,2,4-Trimethylbenzene sec-Butylbenzene	ND ND		3.0 1.0		ug/L ug/L			08/29/24 04:04 08/29/24 04:04	1

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Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

Client Sample ID: RB-05-WQ-20240820

Lab Sample ID: 580-143177-4 Date Collected: 08/20/24 15:40 **Matrix: Water** 

Date Received: 08/22/24 11:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			08/29/24 04:04	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			08/29/24 04:04	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			08/29/24 04:04	1
n-Butylbenzene	ND		1.0	0.44	ug/L			08/29/24 04:04	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			08/29/24 04:04	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			08/29/24 04:04	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			08/29/24 04:04	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			08/29/24 04:04	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			08/29/24 04:04	1
Naphthalene	ND		3.0	0.93	ug/L			08/29/24 04:04	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			08/29/24 04:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120			-		08/29/24 04:04	1
4-Bromofluorobenzene (Surr)	97		80 - 120					08/29/24 04:04	1
Dibromofluoromethane (Surr)	106		80 - 120					08/29/24 04:04	1
1,2-Dichloroethane-d4 (Surr)	107		80 - 120					08/29/24 04:04	1

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

Client Sample ID: TB-01-WQ-20240820

Lab Sample ID: 580-143177-5

Date Collected: 08/20/24 00:01 **Matrix: Water** Date Received: 08/22/24 11:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Dichlorodifluoromethane	ND		1.0	0.53	ug/L		-	08/31/24 02:44	
Chloromethane	ND		1.0	0.28	ug/L			08/31/24 02:44	
Vinyl chloride	ND		1.0	0.22	-			08/31/24 02:44	
Bromomethane	ND		1.0	0.21				08/31/24 02:44	
Chloroethane	ND		1.0	0.35	-			08/31/24 02:44	
Trichlorofluoromethane	ND		1.0	0.36	_			08/31/24 02:44	
1,1-Dichloroethene	ND		1.0	0.28				08/31/24 02:44	
Methylene Chloride	ND		5.0		ug/L			08/31/24 02:44	
trans-1,2-Dichloroethene	ND		1.0	0.39	_			08/31/24 02:44	
1,1-Dichloroethane	ND		1.0	0.22				08/31/24 02:44	
2,2-Dichloropropane	ND		1.0	0.32	-			08/31/24 02:44	
cis-1,2-Dichloroethene	ND		1.0	0.35	-			08/31/24 02:44	
Bromochloromethane	ND		1.0	0.29				08/31/24 02:44	
Chloroform	ND		1.0	0.26	-			08/31/24 02:44	
1,1,1-Trichloroethane	ND ND		1.0	0.20	-			08/31/24 02:44	
Carbon tetrachloride	ND		1.0	0.30				08/31/24 02:44	
1,1-Dichloropropene	ND		1.0	0.30	-			08/31/24 02:44	
	ND ND		1.0	0.29	-			08/31/24 02:44	
Benzene									
1,2-Dichloroethane	ND		1.0	0.42	-			08/31/24 02:44	
Trichloroethene	ND		1.0	0.26	_			08/31/24 02:44	
1,2-Dichloropropane	ND		1.0	0.18				08/31/24 02:44	
Dibromomethane	ND		1.0	0.34	-			08/31/24 02:44	
Bromodichloromethane	ND		1.0	0.29	-			08/31/24 02:44	
cis-1,3-Dichloropropene	ND		1.0	0.42				08/31/24 02:44	
Toluene	ND		1.0	0.39	_			08/31/24 02:44	
trans-1,3-Dichloropropene	ND		1.0	0.41	-			08/31/24 02:44	
1,1,2-Trichloroethane	ND		1.0	0.24				08/31/24 02:44	
Tetrachloroethene	ND		1.0	0.41	-			08/31/24 02:44	
1,3-Dichloropropane	ND		1.0	0.35	-			08/31/24 02:44	
Dibromochloromethane	ND		1.0	0.43				08/31/24 02:44	
1,2-Dibromoethane	ND		1.0	0.40	ug/L			08/31/24 02:44	
Chlorobenzene	ND		1.0	0.44	ug/L			08/31/24 02:44	
Ethylbenzene	ND		1.0	0.50	ug/L			08/31/24 02:44	
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			08/31/24 02:44	
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			08/31/24 02:44	
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			08/31/24 02:44	
o-Xylene	ND		1.0	0.39	ug/L			08/31/24 02:44	
Styrene	ND		1.0	0.53	ug/L			08/31/24 02:44	
Bromoform	ND		1.0	0.51	ug/L			08/31/24 02:44	
Isopropylbenzene	ND		1.0	0.44	ug/L			08/31/24 02:44	
Bromobenzene	ND		1.0	0.43	ug/L			08/31/24 02:44	
N-Propylbenzene	ND		1.0	0.50	-			08/31/24 02:44	
1,2,3-Trichloropropane	ND		1.0	0.41				08/31/24 02:44	
2-Chlorotoluene	ND		1.0	0.51	-			08/31/24 02:44	
1,3,5-Trimethylbenzene	ND		1.0	0.55	-			08/31/24 02:44	
4-Chlorotoluene	ND		1.0	0.38				08/31/24 02:44	
t-Butylbenzene	ND		2.0	0.58	-			08/31/24 02:44	
1,2,4-Trimethylbenzene	ND		3.0	0.61	_			08/31/24 02:44	
sec-Butylbenzene	ND		1.0		ug/L			08/31/24 02:44	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

Date Received: 08/22/24 11:15

Client Sample ID: TB-01-WQ-20240820

Date Collected: 08/20/24 00:01

Lab Sample ID: 580-143177-5

**Matrix: Water** 

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L		-	08/31/24 02:44	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			08/31/24 02:44	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			08/31/24 02:44	1
n-Butylbenzene	ND		1.0	0.44	ug/L			08/31/24 02:44	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			08/31/24 02:44	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			08/31/24 02:44	1
1,2,4-Trichlorobenzene	0.35	J B	1.0	0.33	ug/L			08/31/24 02:44	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			08/31/24 02:44	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			08/31/24 02:44	1
Naphthalene	ND		3.0	0.93	ug/L			08/31/24 02:44	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			08/31/24 02:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		80 - 120					08/31/24 02:44	1
4-Bromofluorobenzene (Surr)	101		80 - 120					08/31/24 02:44	1
Dibromofluoromethane (Surr)	106		80 - 120					08/31/24 02:44	1
1,2-Dichloroethane-d4 (Surr)	107		80 - 120					08/31/24 02:44	1

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-31-SO-42.5-20240820

Lab Sample ID: 580-143177-6 Date Collected: 08/20/24 16:55 Matrix: Solid Date Received: 08/22/24 11:15 Percent Solids: 87.0

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.023 0.0058 mg/Kg 08/26/24 12:48 08/26/24 14:25 ND 1.1.1-Trichloroethane 0.047 0.0054 mg/Kg 08/26/24 12:48 08/26/24 14:25 1,1,2,2-Tetrachloroethane ND 0.023 0.0088 mg/Kg 08/26/24 12:48 08/26/24 14:25 ND 0.0086 08/26/24 14:25 1,1,2-Trichloroethane 0.023 mg/Kg 08/26/24 12:48 0.047 0.011 mg/Kg 08/26/24 12:48 08/26/24 14:25 1.1-Dichloroethane ND 1,1-Dichloroethene ND 0.047 0.014 mg/Kg 08/26/24 12:48 08/26/24 14:25 1,1-Dichloropropene ND 0.047 0.0062 08/26/24 12:48 08/26/24 14:25 mg/Kg ND 0.093 0.046 08/26/24 12:48 08/26/24 14:25 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.047 0.013 mg/Kg 08/26/24 12:48 08/26/24 14:25 1,2,4-Trichlorobenzene ND 0.093 0.050 mg/Kg 08/26/24 12:48 08/26/24 14:25 1,2,4-Trimethylbenzene ND 0.047 0.016 mg/Kg 08/26/24 12:48 08/26/24 14:25 1.2-Dibromo-3-Chloropropane ND 0.070 0.018 ma/Ka 08/26/24 12:48 08/26/24 14:25 1 1,2-Dibromoethane ND 0.023 0.0044 mg/Kg 08/26/24 12:48 08/26/24 14:25 1,2-Dichlorobenzene ND 0.047 0.010 mg/Kg 08/26/24 12:48 08/26/24 14:25 ND 0.023 0.0064 mg/Kg 08/26/24 12:48 08/26/24 14:25 1.2-Dichloroethane 0.0077 08/26/24 14:25 1,2-Dichloropropane NΩ 0.023 mg/Kg 08/26/24 12:48 ND 08/26/24 14:25 1,3,5-Trimethylbenzene 0.047 0.0088 mg/Kg 08/26/24 12:48 1,3-Dichlorobenzene ND 0.070 0.015 mg/Kg 08/26/24 12:48 08/26/24 14:25 1,3-Dichloropropane ND 0.070 0.0065 mg/Kg 08/26/24 12:48 08/26/24 14:25 mg/Kg 1,4-Dichlorobenzene ND 0.070 0.013 08/26/24 12:48 08/26/24 14:25 2,2-Dichloropropane ND 0.047 0.014 mg/Kg ť. 08/26/24 12:48 08/26/24 14:25 2-Chlorotoluene ND 0.047 0.010 mg/Kg 08/26/24 12:48 08/26/24 14:25 4-Chlorotoluene ND mg/Kg 08/26/24 12:48 08/26/24 14:25 0.047 0.011 4-Isopropyltoluene ND 0.047 0.012 mg/Kg 08/26/24 12:48 08/26/24 14:25 Benzene ND 0.023 0.0044 mg/Kg 08/26/24 12:48 08/26/24 14:25 0.0049 Bromobenzene ND 0.047 mg/Kg 08/26/24 12:48 08/26/24 14:25 Bromochloromethane ND 0.047 0.0072 mg/Kg 08/26/24 12:48 08/26/24 14:25 Bromodichloromethane 0.0064 08/26/24 14:25 ND 0.047 mg/Kg 08/26/24 12:48 0.0052 Bromoform NΩ 0.047 mg/Kg 08/26/24 12:48 08/26/24 14:25 ND 0.044 08/26/24 14:25 Bromomethane 0.12 mg/Kg ť 08/26/24 12:48 Carbon tetrachloride ND 0.023 0.0051 mg/Kg 08/26/24 12:48 08/26/24 14:25 0.047 0.0056 mg/Kg 08/26/24 12:48 08/26/24 14:25 0.054 Chlorobenzene Chloroform 0.023 0.0049 mg/Kg 08/26/24 12:48 08/26/24 14:25 ND 0.012 Chloromethane ND 08/26/24 12:48 08/26/24 14:25 0.070 mg/Kg cis-1,2-Dichloroethene ND 0.070 0.015 mg/Kg 08/26/24 12:48 08/26/24 14:25 cis-1.3-Dichloropropene ND 0.023 0.0047 mg/Kg 08/26/24 12:48 08/26/24 14:25 Dibromochloromethane ND 0.023 0.0057 mg/Kg 08/26/24 12:48 08/26/24 14:25 Dibromomethane ND 0.047 0.0086 mg/Kg 08/26/24 12:48 08/26/24 14:25 Dichlorodifluoromethane ND 0.053 mg/Kg 08/26/24 12:48 0.29 ₩ 08/26/24 14:25 Ethylbenzene ND 0.047 0.011 mg/Kg 08/26/24 12:48 08/26/24 14:25 Isopropylbenzene ND 0.047 0.010 mg/Kg 08/26/24 12:48 08/26/24 14:25 Methyl tert-butyl ether ND 0.047 0.0070 mg/Kg 08/26/24 12:48 08/26/24 14:25 ND 0.030 08/26/24 14:25 Methylene Chloride 0.29 mg/Kg 08/26/24 12:48 m-Xylene & p-Xylene 0.047 0.0083 08/26/24 12:48 08/26/24 14:25 ND mg/Kg Naphthalene ND 08/26/24 14:25 0.17 0.045 mg/Kg 08/26/24 12:48 n-Butylbenzene ND 0.047 0.022 mg/Kg 08/26/24 12:48 08/26/24 14:25 N-Propylbenzene ND 08/26/24 12:48 08/26/24 14:25 0.047 0.017 mg/Kg o-Xylene ND 0.047 0.0058 mg/Kg ₩ 08/26/24 12:48 08/26/24 14:25 sec-Butylbenzene ND 0.047 0.010 mg/Kg 08/26/24 12:48 08/26/24 14:25

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-31-SO-42.5-20240820

Date Collected: 08/20/24 16:55 Date Received: 08/22/24 11:15 Lab Sample ID: 580-143177-6

**Matrix: Solid** Percent Solids: 87.0

Method: SW846 8260D - Vo	latile Organic C	ompound	s by GC/MS	(Conti	nued)				
Analyte	Result (	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.047	0.015	mg/Kg	₽	08/26/24 12:48	08/26/24 14:25	1
t-Butylbenzene	ND		0.047	0.0090	mg/Kg	☼	08/26/24 12:48	08/26/24 14:25	1
Tetrachloroethene	ND		0.047	0.0062	mg/Kg	₽	08/26/24 12:48	08/26/24 14:25	1
Toluene	ND		0.070	0.016	mg/Kg	≎	08/26/24 12:48	08/26/24 14:25	1
trans-1,2-Dichloroethene	ND		0.070	0.017	mg/Kg	≎	08/26/24 12:48	08/26/24 14:25	1
trans-1,3-Dichloropropene	ND		0.047	0.0081	mg/Kg	≎	08/26/24 12:48	08/26/24 14:25	1
Trichloroethene	ND		0.047	0.012	mg/Kg	≎	08/26/24 12:48	08/26/24 14:25	1
Trichlorofluoromethane	ND		0.093	0.030	mg/Kg	☼	08/26/24 12:48	08/26/24 14:25	1
Vinyl chloride	ND		0.12	0.022	mg/Kg	☆	08/26/24 12:48	08/26/24 14:25	1
Surrogate	%Recovery (	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			80 - 121				08/26/24 12:48	08/26/24 14:25	1
4-Bromofluorobenzene (Surr)	108		80 - 120				08/26/24 12:48	08/26/24 14:25	1
Dibromofluoromethane (Surr)	114		80 - 120				08/26/24 12:48	08/26/24 14:25	1
Toluene-d8 (Surr)	107		80 - 120				08/26/24 12:48	08/26/24 14:25	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		0.093	0.024	mg/Kg	<u></u>	09/03/24 14:59	09/04/24 02:30	1
Hexachlorobutadiene	ND		0.12	0.028	mg/Kg	₩	09/03/24 14:59	09/04/24 02:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				09/03/24 14:59	09/04/24 02:30	1
4-Bromofluorobenzene (Surr)	102		80 - 120				09/03/24 14:59	09/04/24 02:30	1
Dibromofluoromethane (Surr)	102		80 - 120				09/03/24 14:59	09/04/24 02:30	1
Toluene-d8 (Surr)	98		80 - 120				09/03/24 14:59	09/04/24 02:30	1

General Chemistry							
Analyte	Result Qualifier	RL	RL Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	87.0	0.1	0.1 %			08/28/24 13:25	1
Percent Moisture (SM22 2540G)	13.0	0.1	0.1 %			08/28/24 13:25	1

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-31-SO-53.7-20240821

Lab Sample ID: 580-143177-7 Date Collected: 08/21/24 08:40 Matrix: Solid Date Received: 08/22/24 11:15 Percent Solids: 90.0

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.020 0.0051 mg/Kg 08/26/24 12:48 08/26/24 16:28 ND 1.1.1-Trichloroethane 0.041 0.0047 mg/Kg 08/26/24 12:48 08/26/24 16:28 1,1,2,2-Tetrachloroethane ND 0.020 0.0078 mg/Kg 08/26/24 12:48 08/26/24 16:28 0.0076 08/26/24 16:28 1,1,2-Trichloroethane ND 0.020 mg/Kg 08/26/24 12:48 0.041 0.0094 mg/Kg 08/26/24 12:48 08/26/24 16:28 1 1-Dichloroethane ND 1,1-Dichloroethene ND 0.041 0.013 mg/Kg 08/26/24 12:48 08/26/24 16:28 1,1-Dichloropropene ND 0.041 0.0054 08/26/24 12:48 08/26/24 16:28 mg/Kg ND 0.082 0.041 08/26/24 12:48 08/26/24 16:28 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.041 0.012 mg/Kg 08/26/24 12:48 08/26/24 16:28 1,2,4-Trichlorobenzene ND 0.082 0.044 mg/Kg 08/26/24 12:48 08/26/24 16:28 1,2,4-Trimethylbenzene ND 0.041 0.014 mg/Kg 08/26/24 12:48 08/26/24 16:28 1.2-Dibromo-3-Chloropropane ND 0.061 0.016 ma/Ka 08/26/24 12:48 08/26/24 16:28 1 1,2-Dibromoethane ND 0.020 0.0039 mg/Kg 08/26/24 12:48 08/26/24 16:28 1,2-Dichlorobenzene ND 0.041 0.0089 mg/Kg 08/26/24 12:48 08/26/24 16:28 ND 0.020 0.0056 mg/Kg 08/26/24 12:48 08/26/24 16:28 1.2-Dichloroethane 08/26/24 16:28 1,2-Dichloropropane NΩ 0.020 0.0067 mg/Kg 08/26/24 12:48 0.0078 08/26/24 16:28 1,3,5-Trimethylbenzene ND 0.041 mg/Kg 08/26/24 12:48 1,3-Dichlorobenzene ND 0.061 0.014 mg/Kg 08/26/24 12:48 08/26/24 16:28 1,3-Dichloropropane ND 0.061 0.0057 mg/Kg 08/26/24 12:48 08/26/24 16:28 mg/Kg 1,4-Dichlorobenzene ND 0.061 0.011 08/26/24 12:48 08/26/24 16:28 2,2-Dichloropropane ND 0.041 0.012 mg/Kg ť. 08/26/24 12:48 08/26/24 16:28 2-Chlorotoluene ND 0.041 0.0090 mg/Kg 08/26/24 12:48 08/26/24 16:28 4-Chlorotoluene ND 0.010 mg/Kg 08/26/24 12:48 08/26/24 16:28 0.041 4-Isopropyltoluene ND 0.041 0.010 mg/Kg 08/26/24 12:48 08/26/24 16:28 Benzene ND 0.020 0.0039 mg/Kg 08/26/24 12:48 08/26/24 16:28 0.0043 Bromobenzene ND 0.041 mg/Kg 08/26/24 12:48 08/26/24 16:28 Bromochloromethane ND 0.041 0.0063 mg/Kg 08/26/24 12:48 08/26/24 16:28 Bromodichloromethane 0.0056 08/26/24 16:28 ND 0.041 mg/Kg 08/26/24 12:48 0.0046 Bromoform ND 0.041 mg/Kg 08/26/24 12:48 08/26/24 16:28 0.039 ND 08/26/24 16:28 Bromomethane 0.10 mg/Kg 08/26/24 12:48 Carbon tetrachloride ND 0.020 0.0045 mg/Kg 08/26/24 12:48 08/26/24 16:28 Chlorobenzene ND 0.041 0.0049 mg/Kg 08/26/24 12:48 08/26/24 16:28 Chloroform 0.020 0.0043 mg/Kg 08/26/24 12:48 08/26/24 16:28 ND 0.010 Chloromethane ND 08/26/24 12:48 08/26/24 16:28 0.061 mg/Kg cis-1,2-Dichloroethene ND 0.061 0.013 mg/Kg 08/26/24 12:48 08/26/24 16:28 cis-1.3-Dichloropropene ND 0.020 0.0041 mg/Kg 08/26/24 12:48 08/26/24 16:28 Dibromochloromethane ND 0.020 0.0050 mg/Kg 08/26/24 12:48 08/26/24 16:28 Dibromomethane ND 0.041 0.0076 mg/Kg 08/26/24 12:48 08/26/24 16:28 Dichlorodifluoromethane ND 0.26 0.047 mg/Kg 08/26/24 12:48 08/26/24 16:28 Ethylbenzene ND 0.041 0.0093 mg/Kg 08/26/24 12:48 08/26/24 16:28 Isopropylbenzene ND 0.041 0.0088 mg/Kg 08/26/24 12:48 08/26/24 16:28 Methyl tert-butyl ether ND 0.041 0.0061 mg/Kg 08/26/24 12:48 08/26/24 16:28 ND 0.027 08/26/24 16:28 Methylene Chloride 0.26 mg/Kg 08/26/24 12:48 m-Xylene & p-Xylene 0.041 0.0073 08/26/24 12:48 08/26/24 16:28 ND mg/Kg Naphthalene ND 08/26/24 16:28 0.15 0.040 mg/Kg 08/26/24 12:48 n-Butylbenzene ND 0.041 0.019 mg/Kg 08/26/24 12:48 08/26/24 16:28 N-Propylbenzene ND 08/26/24 12:48 08/26/24 16:28 0.041 0.015 mg/Kg o-Xylene ND 0.041 0.0051 mg/Kg 08/26/24 12:48 08/26/24 16:28 sec-Butylbenzene ND 0.041 0.0088 mg/Kg 08/26/24 12:48 08/26/24 16:28

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-31-SO-53.7-20240821

Lab Sample ID: 580-143177-7 Date Collected: 08/21/24 08:40 **Matrix: Solid** Date Received: 08/22/24 11:15

Percent Solids: 90.0

Method: SW846 8260D - Vo	latile Organic (	Compoun	ds by GC/MS	(Conti	nued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.041	0.013	mg/Kg	<del>-</del>	08/26/24 12:48	08/26/24 16:28	1
t-Butylbenzene	ND		0.041	0.0079	mg/Kg	☼	08/26/24 12:48	08/26/24 16:28	1
Tetrachloroethene	ND		0.041	0.0054	mg/Kg	₽	08/26/24 12:48	08/26/24 16:28	1
Toluene	ND		0.061	0.014	mg/Kg	₽	08/26/24 12:48	08/26/24 16:28	1
trans-1,2-Dichloroethene	ND		0.061	0.015	mg/Kg	₩	08/26/24 12:48	08/26/24 16:28	1
trans-1,3-Dichloropropene	ND		0.041	0.0072	mg/Kg	₽	08/26/24 12:48	08/26/24 16:28	1
Trichloroethene	ND		0.041	0.011	mg/Kg	₩	08/26/24 12:48	08/26/24 16:28	1
Trichlorofluoromethane	ND		0.082	0.027	mg/Kg	₩	08/26/24 12:48	08/26/24 16:28	1
Vinyl chloride	ND		0.10	0.019	mg/Kg	≎	08/26/24 12:48	08/26/24 16:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			80 - 121				08/26/24 12:48	08/26/24 16:28	1
4-Bromofluorobenzene (Surr)	110		80 - 120				08/26/24 12:48	08/26/24 16:28	1
Dibromofluoromethane (Surr)	112		80 - 120				08/26/24 12:48	08/26/24 16:28	1
Toluene-d8 (Surr)	108		80 - 120				08/26/24 12:48	08/26/24 16:28	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		0.082	0.021	mg/Kg	<u></u>	09/03/24 14:59	09/03/24 23:46	1
Hexachlorobutadiene	ND		0.10	0.024	mg/Kg	₩	09/03/24 14:59	09/03/24 23:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				09/03/24 14:59	09/03/24 23:46	1
4-Bromofluorobenzene (Surr)	102		80 - 120				09/03/24 14:59	09/03/24 23:46	1
Dibromofluoromethane (Surr)	100		80 - 120				09/03/24 14:59	09/03/24 23:46	1
Toluene-d8 (Surr)	101		80 - 120				00/03/24 14:50	09/03/24 23:46	1

General Chemistry Analyte	Result Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	90.0	0.1	0.1	%			08/28/24 13:25	1
Percent Moisture (SM22 2540G)	10.0	0.1	0.1	%			08/28/24 13:25	1

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-30-SO-12.4-20240821

Lab Sample ID: 580-143177-8 Date Collected: 08/21/24 11:05 Matrix: Solid Date Received: 08/22/24 11:15 Percent Solids: 90.5

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.020 0.0049 mg/Kg 08/26/24 12:48 08/26/24 16:48 0.039 ND 1.1.1-Trichloroethane 0.0045 mg/Kg 08/26/24 12:48 08/26/24 16:48 1,1,2,2-Tetrachloroethane ND 0.020 0.0074 mg/Kg 08/26/24 12:48 08/26/24 16:48 1,1,2-Trichloroethane ND 0.020 0.0072 mg/Kg 08/26/24 12:48 08/26/24 16:48 0.0090 mg/Kg 08/26/24 12:48 08/26/24 16:48 1 1-Dichloroethane ND 0.039 1,1-Dichloroethene ND 0.039 0.012 mg/Kg 08/26/24 12:48 08/26/24 16:48 1,1-Dichloropropene ND 0.039 0.0052 08/26/24 12:48 08/26/24 16:48 mg/Kg ND 0.078 0.039 08/26/24 12:48 08/26/24 16:48 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.039 0.011 mg/Kg 08/26/24 12:48 08/26/24 16:48 1,2,4-Trichlorobenzene ND 0.078 0.042 mg/Kg 08/26/24 12:48 08/26/24 16:48 1,2,4-Trimethylbenzene ND 0.039 0.013 mg/Kg 08/26/24 12:48 08/26/24 16:48 mg/Kg 1.2-Dibromo-3-Chloropropane ND 0.059 0.015 08/26/24 12:48 08/26/24 16:48 1 1,2-Dibromoethane ND 0.020 0.0037 mg/Kg 08/26/24 12:48 08/26/24 16:48 1,2-Dichlorobenzene ND 0.039 0.0085 mg/Kg 08/26/24 12:48 08/26/24 16:48 ND 0.020 0.0054 mg/Kg 08/26/24 12:48 08/26/24 16:48 1.2-Dichloroethane 1,2-Dichloropropane NΩ 0.020 0.0065 mg/Kg 08/26/24 12:48 08/26/24 16:48 08/26/24 16:48 1,3,5-Trimethylbenzene ND 0.039 0.0074 mg/Kg 08/26/24 12:48 1,3-Dichlorobenzene ND 0.059 0.013 mg/Kg 08/26/24 12:48 08/26/24 16:48 0.0055 ND 0.059 mg/Kg 08/26/24 12:48 08/26/24 16:48 1,3-Dichloropropane mg/Kg 1,4-Dichlorobenzene ND 0.059 0.011 08/26/24 12:48 08/26/24 16:48 2,2-Dichloropropane ND 0.039 0.012 mg/Kg ť. 08/26/24 12:48 08/26/24 16:48 2-Chlorotoluene ND 0.039 0.0086 mg/Kg 08/26/24 12:48 08/26/24 16:48 4-Chlorotoluene ND 0.0096 08/26/24 12:48 08/26/24 16:48 0.039 mg/Kg 4-Isopropyltoluene ND 0.039 0.010 mg/Kg 08/26/24 12:48 08/26/24 16:48 Benzene ND 0.020 0.0037 mg/Kg 08/26/24 12:48 08/26/24 16:48 0.0041 Bromobenzene ND 0.039 mg/Kg 08/26/24 12:48 08/26/24 16:48 Bromochloromethane ND 0.039 0.0061 mg/Kg 08/26/24 12:48 08/26/24 16:48 Bromodichloromethane 0.0054 08/26/24 16:48 ND 0.039 mg/Kg 08/26/24 12:48 0.0044 Bromoform ND 0.039 mg/Kg 08/26/24 12:48 08/26/24 16:48 ND 0.037 Bromomethane 0.098 mg/Kg 08/26/24 12:48 08/26/24 16:48 Carbon tetrachloride ND 0.020 0.0043 mg/Kg 08/26/24 12:48 08/26/24 16:48 ND 0.039 0.0047 mg/Kg 08/26/24 12:48 08/26/24 16:48 Chlorobenzene Chloroform 0.020 0.0041 08/26/24 12:48 08/26/24 16:48 ND mg/Kg 0.0099 Chloromethane 08/26/24 12:48 08/26/24 16:48 ND 0.059 mg/Kg cis-1,2-Dichloroethene ND 0.059 0.012 mg/Kg 08/26/24 12:48 08/26/24 16:48 cis-1.3-Dichloropropene ND 0.020 0.0039 mg/Kg 08/26/24 12:48 08/26/24 16:48 Dibromochloromethane ND 0.020 0.0048 mg/Kg 08/26/24 12:48 08/26/24 16:48 Dibromomethane ND 0.039 0.0072 mg/Kg 08/26/24 12:48 08/26/24 16:48 Dichlorodifluoromethane ND 0.045 mg/Kg 08/26/24 12:48 0.24 ₩ 08/26/24 16:48 Ethylbenzene ND 0.039 0.0089 mg/Kg 08/26/24 12:48 08/26/24 16:48 Isopropylbenzene ND 0.039 0.0084 mg/Kg 08/26/24 12:48 08/26/24 16:48 Methyl tert-butyl ether ND 0.039 0.0059 mg/Kg 08/26/24 12:48 08/26/24 16:48 ND 0.025 08/26/24 16:48 Methylene Chloride 0.24 mg/Kg 08/26/24 12:48 m-Xylene & p-Xylene 0.039 0.0070 08/26/24 12:48 08/26/24 16:48 ND mg/Kg Naphthalene ND 0.15 0.038 mg/Kg 08/26/24 12:48 08/26/24 16:48 n-Butylbenzene ND 0.039 0.018 mg/Kg 08/26/24 12:48 08/26/24 16:48 N-Propylbenzene ND 08/26/24 12:48 0.039 0.015 mg/Kg 08/26/24 16:48 o-Xylene ND 0.039 0.0049 mg/Kg ₩ 08/26/24 12:48 08/26/24 16:48 0.0084 mg/Kg sec-Butylbenzene ND 0.039 08/26/24 12:48 08/26/24 16:48

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-30-SO-12.4-20240821

Date Collected: 08/21/24 11:05 Date Received: 08/22/24 11:15 Lab Sample ID: 580-143177-8

**Matrix: Solid** 

	Percent Solids: 90.5									Percent Solids: 90.5								
5	Dil Fac	Analyzed	ed															
	1	08/26/24 16:48	2:48															
	1	08/26/24 16:48	2:48															
	1	08/26/24 16:48	2:48															
	1	08/26/24 16:48	2:48															

Method: SW846 8260D - Vola Analyte		Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.039	0.012	mg/Kg	<u></u>	08/26/24 12:48	08/26/24 16:48	1
t-Butylbenzene	ND		0.039	0.0075	mg/Kg	₽	08/26/24 12:48	08/26/24 16:48	1
Tetrachloroethene	ND		0.039	0.0052	mg/Kg	₽	08/26/24 12:48	08/26/24 16:48	1
Toluene	ND		0.059	0.013	mg/Kg	₽	08/26/24 12:48	08/26/24 16:48	1
trans-1,2-Dichloroethene	ND		0.059	0.014	mg/Kg	☼	08/26/24 12:48	08/26/24 16:48	1
trans-1,3-Dichloropropene	ND		0.039	0.0069	mg/Kg	₽	08/26/24 12:48	08/26/24 16:48	1
Trichloroethene	ND		0.039	0.010	mg/Kg	☼	08/26/24 12:48	08/26/24 16:48	1
Trichlorofluoromethane	ND		0.078	0.025	mg/Kg	≎	08/26/24 12:48	08/26/24 16:48	1
Vinyl chloride	ND		0.098	0.018	mg/Kg	₩	08/26/24 12:48	08/26/24 16:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	111		80 - 121				08/26/24 12:48	08/26/24 16:48	1
4-Bromofluorobenzene (Surr)	108		80 - 120				08/26/24 12:48	08/26/24 16:48	1
Dibromofluoromethane (Surr)	113		80 - 120				08/26/24 12:48	08/26/24 16:48	1
_Toluene-d8 (Surr) _	105		80 - 120				08/26/24 12:48	08/26/24 16:48	1
- -		Compoun		- RA			08/26/24 12:48	08/26/24 16:48	1
loluene-d8 (Surr) 	tile Organic	Compoun Qualifier			Unit	D	08/26/24 12:48 Prepared	08/26/24 16:48 Analyzed	1 Dil Fac
Method: SW846 8260D - Vola	tile Organic		ds by GC/MS			<u>D</u>			
Method: SW846 8260D - Vola Analyte	tile Organic Result		ds by GC/MS	MDL 0.020			Prepared	Analyzed	
Method: SW846 8260D - Vola Analyte Chloroethane	tile Organic Result	Qualifier	ds by GC/MS RL 0.078	MDL 0.020	mg/Kg	<u></u>	Prepared 09/03/24 14:59	Analyzed 09/04/24 00:06	Dil Fac
Method: SW846 8260D - Vola Analyte Chloroethane Hexachlorobutadiene	tile Organic Result ND ND	Qualifier	ds by GC/MS RL 0.078 0.098	MDL 0.020	mg/Kg	<u></u>	Prepared 09/03/24 14:59 09/03/24 14:59	Analyzed 09/04/24 00:06 09/04/24 00:06	Dil Fac
Method: SW846 8260D - Vola Analyte Chloroethane Hexachlorobutadiene Surrogate	tile Organic Result ND ND %Recovery	Qualifier	ds by GC/MS RL 0.078 0.098	MDL 0.020	mg/Kg	<u></u>	Prepared 09/03/24 14:59 09/03/24 14:59 Prepared	Analyzed 09/04/24 00:06 09/04/24 00:06 Analyzed	Dil Fac
Method: SW846 8260D - Vola Analyte Chloroethane Hexachlorobutadiene  Surrogate 1,2-Dichloroethane-d4 (Surr)	tile Organic Result ND ND ND %Recovery 103	Qualifier	ds by GC/MS RL 0.078 0.098  Limits 80 - 121	MDL 0.020	mg/Kg	<u></u>	Prepared 09/03/24 14:59 09/03/24 14:59 Prepared 09/03/24 14:59	Analyzed 09/04/24 00:06 09/04/24 00:06  Analyzed 09/04/24 00:06	Dil Fac  1 1 Dil Fac
Method: SW846 8260D - Vola Analyte Chloroethane Hexachlorobutadiene  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr)	tile Organic Result ND ND ND %Recovery 103 102	Qualifier	0.078 0.098 Limits 80 - 121 80 - 120	MDL 0.020	mg/Kg	<u></u>	Prepared 09/03/24 14:59 09/03/24 14:59  Prepared 09/03/24 14:59 09/03/24 14:59	Analyzed 09/04/24 00:06 09/04/24 00:06  Analyzed 09/04/24 00:06 09/04/24 00:06 09/04/24 00:06	Dil Fac  1 1 1 Dil Fac
Method: SW846 8260D - Vola Analyte Chloroethane Hexachlorobutadiene  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr)	tile Organic Result ND ND 103 102 106	Qualifier	ds by GC/MS RL 0.078 0.098 Limits 80 - 121 80 - 120 80 - 120	MDL 0.020	mg/Kg	<u></u>	Prepared 09/03/24 14:59 09/03/24 14:59  Prepared 09/03/24 14:59 09/03/24 14:59 09/03/24 14:59	Analyzed 09/04/24 00:06 09/04/24 00:06  Analyzed 09/04/24 00:06 09/04/24 00:06 09/04/24 00:06	Dil Fac  1 1 1 Dil Fac 1 1 1 1
Method: SW846 8260D - Vola Analyte Chloroethane Hexachlorobutadiene  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)	tile Organic Result ND ND **Recovery 103 102 106 97	Qualifier	ds by GC/MS RL 0.078 0.098 Limits 80 - 121 80 - 120 80 - 120	MDL 0.020 0.023	mg/Kg	<u></u>	Prepared 09/03/24 14:59 09/03/24 14:59  Prepared 09/03/24 14:59 09/03/24 14:59 09/03/24 14:59	Analyzed 09/04/24 00:06 09/04/24 00:06  Analyzed 09/04/24 00:06 09/04/24 00:06 09/04/24 00:06	Dil Fac  1 1 1 Dil Fac 1 1 1 1
Method: SW846 8260D - Vola Analyte Chloroethane Hexachlorobutadiene  Surrogate 1,2-Dichloroethane-d4 (Surr) 4-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr) Toluene-d8 (Surr)  General Chemistry	tile Organic Result ND ND **Recovery 103 102 106 97	Qualifier  Qualifier	ds by GC/MS RL 0.078 0.098 Limits 80 - 121 80 - 120 80 - 120 80 - 120	MDL 0.020 0.023	mg/Kg mg/Kg	<u> </u>	Prepared 09/03/24 14:59 09/03/24 14:59  Prepared 09/03/24 14:59 09/03/24 14:59 09/03/24 14:59	Analyzed 09/04/24 00:06 09/04/24 00:06  Analyzed 09/04/24 00:06 09/04/24 00:06 09/04/24 00:06 09/04/24 00:06	Dil Fac  1 1 1  Dil Fac 1 1 1 1

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-30-SO-39.5-20240821

Lab Sample ID: 580-143177-9 Date Collected: 08/21/24 14:10 Matrix: Solid Date Received: 08/22/24 11:15 Percent Solids: 86.8

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 0.025 1,1,1,2-Tetrachloroethane ND 0.0063 mg/Kg 08/26/24 12:48 08/26/24 17:09 ND 0.051 1.1.1-Trichloroethane 0.0058 mg/Kg 08/26/24 12:48 08/26/24 17:09 1,1,2,2-Tetrachloroethane ND 0.025 0.0096 mg/Kg 08/26/24 12:48 08/26/24 17:09 ND 0.0094 1,1,2-Trichloroethane 0.025 mg/Kg ť 08/26/24 12:48 08/26/24 17:09 0.051 0.012 mg/Kg 08/26/24 12:48 08/26/24 17:09 1 1-Dichloroethane ND 1,1-Dichloroethene ND 0.051 0.016 mg/Kg 08/26/24 12:48 08/26/24 17:09 1,1-Dichloropropene ND 0.051 0.0067 08/26/24 12:48 08/26/24 17:09 mg/Kg ND 0.10 0.050 08/26/24 12:48 08/26/24 17:09 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.051 0.015 mg/Kg 08/26/24 12:48 08/26/24 17:09 1,2,4-Trichlorobenzene ND 0.10 0.054 mg/Kg 08/26/24 12:48 08/26/24 17:09 1,2,4-Trimethylbenzene ND 0.051 0.017 mg/Kg 08/26/24 12:48 08/26/24 17:09 1.2-Dibromo-3-Chloropropane ND 0.076 0.019 ma/Ka 08/26/24 12:48 08/26/24 17:09 1 1,2-Dibromoethane ND 0.025 0.0048 mg/Kg 08/26/24 12:48 08/26/24 17:09 1,2-Dichlorobenzene ND 0.051 0.011 mg/Kg 08/26/24 12:48 08/26/24 17:09 ND 0.025 0.0070 mg/Kg 08/26/24 12:48 08/26/24 17:09 1.2-Dichloroethane 0.0084 1,2-Dichloropropane NΩ 0.025 mg/Kg 08/26/24 12:48 08/26/24 17:09 ND 1,3,5-Trimethylbenzene 0.051 0.0096 mg/Kg 08/26/24 12:48 08/26/24 17:09 1,3-Dichlorobenzene ND 0.076 0.017 mg/Kg 08/26/24 12:48 08/26/24 17:09 1,3-Dichloropropane NΩ 0.076 0.0071 mg/Kg 08/26/24 12:48 08/26/24 17:09 1,4-Dichlorobenzene 0.029 0.076 0.014 mg/Kg 08/26/24 12:48 08/26/24 17:09 2,2-Dichloropropane ND 0.051 0.015 mg/Kg ť. 08/26/24 12:48 08/26/24 17:09 2-Chlorotoluene ND 0.051 0.011 mg/Kg 08/26/24 12:48 08/26/24 17:09 4-Chlorotoluene ND 0.051 0.012 mg/Kg 08/26/24 12:48 08/26/24 17:09 4-Isopropyltoluene ND 0.051 0.013 mg/Kg 08/26/24 12:48 08/26/24 17:09 Benzene ND 0.025 0.0048 mg/Kg 08/26/24 12:48 08/26/24 17:09 0.0053 Bromobenzene ND 0.051 mg/Kg 08/26/24 12:48 08/26/24 17:09 Bromochloromethane ND 0.051 0.0079 mg/Kg 08/26/24 12:48 08/26/24 17:09 Bromodichloromethane 0.0070 ND 0.051 mg/Kg 08/26/24 12:48 08/26/24 17:09 0.0057 Bromoform ND 0.051 mg/Kg 08/26/24 12:48 08/26/24 17:09 0.048 ND Bromomethane 0.13 mg/Kg 08/26/24 12:48 08/26/24 17:09 Carbon tetrachloride ND 0.025 0.0056 mg/Kg 08/26/24 12:48 08/26/24 17:09 0.051 0.0061 mg/Kg 08/26/24 12:48 08/26/24 17:09 Chlorobenzene 5.0 Chloroform 0.025 0.0053 08/26/24 12:48 08/26/24 17:09 ND mg/Kg 0.013 Chloromethane ND 08/26/24 12:48 08/26/24 17:09 0.076 mg/Kg cis-1,2-Dichloroethene ND 0.076 0.016 mg/Kg 08/26/24 12:48 08/26/24 17:09 cis-1.3-Dichloropropene ND 0.025 0.0051 mg/Kg 08/26/24 12:48 08/26/24 17:09 Dibromochloromethane ND 0.025 0.0062 mg/Kg 08/26/24 12:48 08/26/24 17:09 Dibromomethane ND 0.051 0.0094 mg/Kg 08/26/24 12:48 08/26/24 17:09 Dichlorodifluoromethane ND 0.058 mg/Kg 08/26/24 12:48 0.32 ₩ 08/26/24 17:09 Ethylbenzene ND 0.051 0.012 mg/Kg 08/26/24 12:48 08/26/24 17:09 Isopropylbenzene ND 0.051 0.011 mg/Kg 08/26/24 12:48 08/26/24 17:09 Methyl tert-butyl ether ND 0.051 0.0076 mg/Kg 08/26/24 12:48 08/26/24 17:09 0.033 ND 08/26/24 17:09 Methylene Chloride 0.32 mg/Kg 08/26/24 12:48 m-Xylene & p-Xylene 0.051 0.0090 08/26/24 12:48 08/26/24 17:09 ND mg/Kg Naphthalene ND 0.19 0.050 mg/Kg 08/26/24 12:48 08/26/24 17:09 n-Butylbenzene ND 0.051 0.023 mg/Kg 08/26/24 12:48 08/26/24 17:09 N-Propylbenzene ND 0.019 08/26/24 12:48 0.051 mg/Kg 08/26/24 17:09 o-Xylene ND 0.051 0.0063 mg/Kg ₩ 08/26/24 12:48 08/26/24 17:09 sec-Butylbenzene ND 0.051 0.011 mg/Kg 08/26/24 12:48 08/26/24 17:09

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-30-SO-39.5-20240821

Date Collected: 08/21/24 14:10

Date Received: 08/22/24 11:15

Lab Sample ID: 580-143177-9 **Matrix: Solid** 

Percent Solids: 86.8

Method: SW846 8260D - Vo	olatile Organic (	Compoun	ds by GC/MS	(Conti	nued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.051	0.016	mg/Kg	≎	08/26/24 12:48	08/26/24 17:09	1
t-Butylbenzene	ND		0.051	0.0098	mg/Kg	≎	08/26/24 12:48	08/26/24 17:09	1
Tetrachloroethene	ND		0.051	0.0067	mg/Kg	₽	08/26/24 12:48	08/26/24 17:09	1
Toluene	ND		0.076	0.017	mg/Kg	≎	08/26/24 12:48	08/26/24 17:09	1
trans-1,2-Dichloroethene	ND		0.076	0.019	mg/Kg	≎	08/26/24 12:48	08/26/24 17:09	1
trans-1,3-Dichloropropene	ND		0.051	0.0089	mg/Kg	≎	08/26/24 12:48	08/26/24 17:09	1
Trichloroethene	ND		0.051	0.013	mg/Kg	≎	08/26/24 12:48	08/26/24 17:09	1
Trichlorofluoromethane	ND		0.10	0.033	mg/Kg	☼	08/26/24 12:48	08/26/24 17:09	1
Vinyl chloride	ND		0.13	0.024	mg/Kg	☆	08/26/24 12:48	08/26/24 17:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			80 - 121				08/26/24 12:48	08/26/24 17:09	1
4-Bromofluorobenzene (Surr)	110		80 - 120				08/26/24 12:48	08/26/24 17:09	1
Dibromofluoromethane (Surr)	111		80 - 120				08/26/24 12:48	08/26/24 17:09	1
Toluene-d8 (Surr)	104		80 - 120				08/26/24 12:48	08/26/24 17:09	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		0.10	0.027	mg/Kg	<u></u>	09/03/24 14:59	09/04/24 00:27	1
Hexachlorobutadiene	ND		0.13	0.030	mg/Kg	₩	09/03/24 14:59	09/04/24 00:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				09/03/24 14:59	09/04/24 00:27	1
4-Bromofluorobenzene (Surr)	99		80 - 120				09/03/24 14:59	09/04/24 00:27	1
Dibromofluoromethane (Surr)	102		80 - 120				09/03/24 14:59	09/04/24 00:27	1
Toluene-d8 (Surr)	98		80 - 120				09/03/24 14:59	09/04/24 00:27	1

	General Chemistry									
١	Analyte	Result C	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Percent Solids (SM22 2540G)	86.8		0.1	0.1	%			08/28/24 13:25	1
	Percent Moisture (SM22 2540G)	13.2		0.1	0.1	%			08/28/24 13:25	1

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

Date Collected: 08/20/24 08:00 East Sample 15: 300-143177-10

Date Received: 08/22/24 11:15

General Chemistry							
Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310C)	10	1.5	0.38 mg/L			08/31/24 13:07	1

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Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

Client Sample ID: EB-082024-A Lab Sample ID: 580-143177-11

Date Collected: 08/20/24 08:00 Matrix: Water

Date Received: 08/22/24 11:15

General Chemistry									
Analyte	Result (	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon (SM 5310C)	1.6		1.5	0.38	mg/L			08/30/24 21:20	1

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44

Client: ERM-West Job ID: 580-143177-1

RL

0.040

0.040

**MDL** Unit

0.012 mg/Kg

0.0092 mg/Kg

0.010 mg/Kg

0.015 mg/Kg

0.011 mg/Kg

0.0050 mg/Kg

0.019 mg/Kg

0.0086 mg/Kg

0.0087 mg/Kg

0.013 mg/Kg

0.015 mg/Kg

0.0077 mg/Kg

0.043 mg/Kg

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS

MB MB

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

ND

Result Qualifier

Lab Sample ID: MB 580-469358/5-A

**Matrix: Solid** 

1,1-Dichloroethene

1,1-Dichloroethane

4-Isopropyltoluene

N-Propylbenzene

n-Butylbenzene

t-Butylbenzene

sec-Butylbenzene

1,2-Dichlorobenzene

1,2,4-Trichlorobenzene

1,2-Dibromo-3-Chloropropane

o-Xylene

1,4-Dichlorobenzene

Analyte

**Analysis Batch: 469359** 

Client Sample ID: Method Blank Prep Type: Total/NA

08/26/24 09:18 08/26/24 12:04

08/26/24 09:18 08/26/24 12:04

08/26/24 09:18 08/26/24 12:04

08/26/24 09:18 08/26/24 12:04

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08/26/24 09:18 08/26/24 12:04

08/26/24 09:18 08/26/24 12:04 08/26/24 09:18 08/26/24 12:04

	Prep Type: 1 Prep Batch:	
Prepared	Analyzed	Dil Fac

1,1,1-Trichloroethane	ND	0.040	0.0046 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
1,1-Dichloropropene	ND	0.040	0.0053 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
1,2-Dichloroethane	ND	0.020	0.0055 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
1,2-Dichloropropane	ND	0.020	0.0066 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
2,2-Dichloropropane	ND	0.040	0.012 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
Benzene	ND	0.020	0.0038 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
1,1,2-Trichloroethane	ND	0.020	0.0074 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
Bromochloromethane	ND	0.040	0.0062 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
1,3-Dichloropropane	ND	0.060	0.0056 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
Bromodichloromethane	ND	0.040	0.0055 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
1,2-Dibromoethane	ND	0.020	0.0038 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
Bromomethane	ND	0.10	0.038 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
Carbon tetrachloride	ND	0.020	0.0044 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
Chlorobenzene	ND	0.040	0.0048 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
1,1,1,2-Tetrachloroethane	ND	0.020	0.0050 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
1,1,2,2-Tetrachloroethane	ND	0.020	0.0076 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
Chloroform	ND	0.020	0.0042 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
Chloromethane	ND	0.060	0.010 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
cis-1,2-Dichloroethene	ND	0.060	0.013 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
cis-1,3-Dichloropropene	ND	0.020	0.0040 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
Bromoform	ND	0.040	0.0045 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
Dibromochloromethane	ND	0.020	0.0049 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
Bromobenzene	ND	0.040	0.0042 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
Dibromomethane	ND	0.040	0.0074 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
Dichlorodifluoromethane	ND	0.25	0.046 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
1,2,3-Trichloropropane	ND	0.040	0.012 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
Ethylbenzene	ND	0.040	0.0091 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
2-Chlorotoluene	ND	0.040	0.0088 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
1,3,5-Trimethylbenzene	ND	0.040	0.0076 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
Isopropylbenzene	ND	0.040	0.0086 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
4-Chlorotoluene	ND	0.040	0.0098 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
Methylene Chloride	ND	0.25	0.026 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
1,2,4-Trimethylbenzene	ND	0.040	0.014 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
m-Xylene & p-Xylene	ND	0.040	0.0071 mg/Kg	08/26/24 09:18 08/26/24 12:04	1
1,3-Dichlorobenzene	ND	0.060	0.013 mg/Kg	08/26/24 09:18 08/26/24 12:04	1

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0.040

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11

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-469358/5-A

**Matrix: Solid** 

**Analysis Batch: 469359** 

Client Sample ID: Method Blank

**Prep Type: Total/NA** 

**Prep Batch: 469358** 

3						
ıalifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
0.040	0.0053	mg/Kg		08/26/24 09:18	08/26/24 12:04	1
0.080	0.040	mg/Kg		08/26/24 09:18	08/26/24 12:04	1
0.060	0.014	mg/Kg		08/26/24 09:18	08/26/24 12:04	1
0.15	0.039	mg/Kg		08/26/24 09:18	08/26/24 12:04	1
0.060	0.015	mg/Kg		08/26/24 09:18	08/26/24 12:04	1
0.040	0.0070	mg/Kg		08/26/24 09:18	08/26/24 12:04	1
0.040	0.010	mg/Kg		08/26/24 09:18	08/26/24 12:04	1
0.080	0.026	mg/Kg		08/26/24 09:18	08/26/24 12:04	1
0.040	0.0060	mg/Kg		08/26/24 09:18	08/26/24 12:04	1
0.10	0.019	mg/Kg		08/26/24 09:18	08/26/24 12:04	1
Ī	0.040 0.080 0.060 0.15 0.060 0.040 0.040 0.080 0.040	RL         MDL           0.040         0.0053           0.080         0.040           0.060         0.014           0.15         0.039           0.060         0.015           0.040         0.0070           0.040         0.010           0.080         0.026           0.040         0.0060	RL         MDL         Unit           0.040         0.0053         mg/Kg           0.080         0.040         mg/Kg           0.060         0.014         mg/Kg           0.15         0.039         mg/Kg           0.060         0.015         mg/Kg           0.040         0.0070         mg/Kg           0.040         0.010         mg/Kg           0.080         0.026         mg/Kg           0.040         0.0060         mg/Kg	RL         MDL         Unit         D           0.040         0.0053         mg/Kg           0.080         0.040         mg/Kg           0.060         0.014         mg/Kg           0.15         0.039         mg/Kg           0.060         0.015         mg/Kg           0.040         0.0070         mg/Kg           0.040         0.010         mg/Kg           0.080         0.026         mg/Kg           0.040         0.0060         mg/Kg           0.040         0.0060         mg/Kg	Alifier         RL         MDL         Unit         D         Prepared           0.040         0.053         mg/Kg         08/26/24 09:18           0.080         0.040         mg/Kg         08/26/24 09:18           0.060         0.014         mg/Kg         08/26/24 09:18           0.15         0.039         mg/Kg         08/26/24 09:18           0.060         0.015         mg/Kg         08/26/24 09:18           0.040         0.0070         mg/Kg         08/26/24 09:18           0.040         0.010         mg/Kg         08/26/24 09:18           0.080         0.026         mg/Kg         08/26/24 09:18           0.040         0.0060         mg/Kg         08/26/24 09:18	Alifier         RL         MDL         Unit         D         Prepared         Analyzed           0.040         0.040         mg/Kg         08/26/24 09:18         08/26/24 12:04           0.080         0.040         mg/Kg         08/26/24 09:18         08/26/24 12:04           0.060         0.014         mg/Kg         08/26/24 09:18         08/26/24 12:04           0.15         0.039         mg/Kg         08/26/24 09:18         08/26/24 12:04           0.060         0.015         mg/Kg         08/26/24 09:18         08/26/24 12:04           0.040         0.0070         mg/Kg         08/26/24 09:18         08/26/24 12:04           0.040         0.010         mg/Kg         08/26/24 09:18         08/26/24 12:04           0.080         0.026         mg/Kg         08/26/24 09:18         08/26/24 12:04           0.040         0.0060         mg/Kg         08/26/24 09:18         08/26/24 12:04

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Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	108	80 - 120	08/26/24 09:18	08/26/24 12:04	1
4-Bromofluorobenzene (Surr)	109	80 - 120	08/26/24 09:18	08/26/24 12:04	1
Dibromofluoromethane (Surr)	112	80 - 120	08/26/24 09:18	08/26/24 12:04	1
1,2-Dichloroethane-d4 (Surr)	109	80 - 121	08/26/24 09:18	08/26/24 12:04	1

Lab Sample ID: LCS 580-469358/1-A

**Matrix: Solid** 

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

Analysis Batch: 469359							<b>Prep Batch: 469358</b>
	Spike		LCS				%Rec
Analyte	Added		Qualifier	Unit	_ D	%Rec	Limits
1,1-Dichloroethene	0.800	0.745		mg/Kg		93	73 - 134
1,1-Dichloroethane	0.800	0.813		mg/Kg		102	78 - 126
1,1,1-Trichloroethane	0.800	0.831		mg/Kg		104	78 - 135
1,1-Dichloropropene	0.800	0.843		mg/Kg		105	76 - 140
1,2-Dichloroethane	0.800	0.780		mg/Kg		98	76 - 124
1,2-Dichloropropane	0.800	0.808		mg/Kg		101	73 - 130
2,2-Dichloropropane	0.800	0.903		mg/Kg		113	75 - 134
Benzene	0.800	0.814		mg/Kg		102	79 - 135
1,1,2-Trichloroethane	0.800	0.807		mg/Kg		101	80 - 123
Bromochloromethane	0.800	0.822		mg/Kg		103	76 - 131
1,3-Dichloropropane	0.800	0.811		mg/Kg		101	80 - 120
Bromodichloromethane	0.800	0.843		mg/Kg		105	78 - 125
1,2-Dibromoethane	0.800	0.819		mg/Kg		102	77 - 123
Bromomethane	0.800	0.672		mg/Kg		84	55 - 150
Carbon tetrachloride	0.800	0.783		mg/Kg		98	76 - 140
Chlorobenzene	0.800	0.790		mg/Kg		99	80 - 125
1,1,1,2-Tetrachloroethane	0.800	0.856		mg/Kg		107	79 - 128
1,1,2,2-Tetrachloroethane	0.800	0.793		mg/Kg		99	77 - 122
Chloroform	0.800	0.832		mg/Kg		104	74 - 133
Chloromethane	0.800	0.679		mg/Kg		85	52 - 142
cis-1,2-Dichloroethene	0.800	0.816		mg/Kg		102	80 - 125
cis-1,3-Dichloropropene	0.800	0.870		mg/Kg		109	80 - 122
Bromoform	0.800	0.708		mg/Kg		89	71 - 130
Dibromochloromethane	0.800	0.718		mg/Kg		90	75 - 125
Bromobenzene	0.800	0.819		mg/Kg		102	78 - 126
Dibromomethane	0.800	0.797		mg/Kg		100	72 - 130

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-469358/1-A

**Matrix: Solid** 

**Analysis Batch: 469359** 

**Client Sample ID: Lab Control Sample** 

Prep	Type: Total/NA
<b>Prep</b>	Batch: 469358
%Rec	
I imits	

Analysis Baton. 400000	Spike	LCS L	cs		%Rec
Analyte	Added	Result Q	ualifier Unit	D %Rec	Limits
Dichlorodifluoromethane	0.800	0.781	mg/Kg	98	33 - 150
1,2,3-Trichloropropane	0.800	0.754	mg/Kg	94	77 - 127
Ethylbenzene	0.800	0.842	mg/Kg	105	80 - 135
2-Chlorotoluene	0.800	0.826	mg/Kg	103	77 - 134
1,3,5-Trimethylbenzene	0.800	0.813	mg/Kg	102	72 - 134
Isopropylbenzene	0.800	0.834	mg/Kg	104	80 - 131
4-Chlorotoluene	0.800	0.829	mg/Kg	104	71 - 137
Methylene Chloride	0.800	0.703	mg/Kg	88	56 - 140
1,2,4-Trimethylbenzene	0.800	0.819	mg/Kg	102	73 - 138
m-Xylene & p-Xylene	0.800	0.843	mg/Kg	105	80 - 132
1,3-Dichlorobenzene	0.800	0.813	mg/Kg	102	78 - 132
4-Isopropyltoluene	0.800	0.845	mg/Kg	106	71 - 142
N-Propylbenzene	0.800	0.846	mg/Kg	106	78 - 133
1,4-Dichlorobenzene	0.800	0.761	mg/Kg	95	77 - 123
o-Xylene	0.800	0.854	mg/Kg	107	80 - 132
n-Butylbenzene	0.800	0.835	mg/Kg	104	69 - 143
sec-Butylbenzene	0.800	0.869	mg/Kg	109	71 - 143
1,2-Dichlorobenzene	0.800	0.799	mg/Kg	100	78 - 126
Styrene	0.800	0.841	mg/Kg	105	79 - 129
1,2-Dibromo-3-Chloropropane	0.800	0.671	mg/Kg	84	64 - 129
t-Butylbenzene	0.800	0.841	mg/Kg	105	72 - 144
1,2,4-Trichlorobenzene	0.800	0.818	mg/Kg	102	74 - 131
Tetrachloroethene	0.800	0.824	mg/Kg	103	75 - 141
1,2,3-Trichlorobenzene	0.800	0.749	mg/Kg	94	58 - 146
Toluene	0.800	0.817	mg/Kg	102	75 - 125
Naphthalene	0.800	0.733	mg/Kg	92	56 - 145
trans-1,2-Dichloroethene	0.800	0.773	mg/Kg	97	77 - 134
trans-1,3-Dichloropropene	0.800	0.840	mg/Kg	105	80 - 121
Trichloroethene	0.800	0.816	mg/Kg	102	80 - 134
Trichlorofluoromethane	0.800	0.751	mg/Kg	94	71 - 150
Methyl tert-butyl ether	0.800	0.795	mg/Kg	99	71 - 126

0.800

0.688

mg/Kg

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	106		80 - 120
4-Bromofluorobenzene (Surr)	106		80 - 120
Dibromofluoromethane (Surr)	105		80 - 120
1,2-Dichloroethane-d4 (Surr)	102		80 - 121

Lab Sample ID: LCSD 580-469358/2-A

**Matrix: Solid** 

Vinyl chloride

Analysis Batch: 469359

	_				_
Cliont	Sample	ID: I ah	Control	Sample	Dun
CHEIL	Jailible	ID. Lab	COILLIO	Jailible	Dub

62 - 144

**Prep Type: Total/NA Prep Batch: 469358** 

_	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	0.800	0.730		mg/Kg		91	73 - 134	2	25
1,1-Dichloroethane	0.800	0.804		mg/Kg		100	78 - 126	1	20
1,1,1-Trichloroethane	0.800	0.819		mg/Kg		102	78 - 135	1	20
1,1-Dichloropropene	0.800	0.825		mg/Kg		103	76 - 140	2	20

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-469358/2-A

Matrix: Solid

Analysis Batch: 469359

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

**Prep Batch: 469358** 

Analysis Batch: 469359	Spike	I CSD	LCSD				%Rec	11C11. 4	RPD
Analyte	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,2-Dichloroethane	0.800	0.791	Guainici	mg/Kg	_ =	99	76 <sub>-</sub> 124	1	20
1,2-Dichloropropane	0.800	0.812		mg/Kg		101	73 - 130	0	20
2,2-Dichloropropane	0.800	0.875		mg/Kg		109	75 - 134	3	20
Benzene	0.800	0.807		mg/Kg		101	79 - 135	1	20
1,1,2-Trichloroethane	0.800	0.835		mg/Kg		104	80 - 123	3	20
Bromochloromethane	0.800	0.782		mg/Kg		98	76 - 131	5	20
1,3-Dichloropropane	0.800	0.840		mg/Kg		105	80 - 120	4	20
Bromodichloromethane	0.800	0.851		mg/Kg		106	78 <sub>-</sub> 125	1	20
1,2-Dibromoethane	0.800	0.835		mg/Kg		104	77 - 123	2	20
Bromomethane	0.800	0.650		mg/Kg		81	55 - 150	3	26
Carbon tetrachloride	0.800	0.768		mg/Kg		96	76 - 140	2	20
Chlorobenzene	0.800	0.788		mg/Kg		98	80 - 125	0	20
1,1,1,2-Tetrachloroethane	0.800	0.858		mg/Kg		107	79 - 128	0	20
1,1,2,2-Tetrachloroethane	0.800	0.857		mg/Kg		107	77 <sub>-</sub> 122	8	20
Chloroform	0.800	0.816		mg/Kg		102	74 - 133	2	20
Chloromethane	0.800	0.669		mg/Kg		84	52 <sub>-</sub> 142	1	40
cis-1,2-Dichloroethene	0.800	0.802		mg/Kg		100	80 - 125	2	20
cis-1,3-Dichloropropene	0.800	0.883		mg/Kg		110	80 - 122	<u>.</u> . 1	20
Bromoform	0.800	0.745		mg/Kg		93	71 - 130	5	20
Dibromochloromethane	0.800	0.743				96	75 - 125	7	20
Bromobenzene	0.800	0.771		mg/Kg mg/Kg		101	78 - 126	<u>'</u>	20
Dibromomethane	0.800	0.805				101	70 - 120	1	40
Dichlorodifluoromethane	0.800	0.803		mg/Kg mg/Kg		93	33 <sub>-</sub> 150	5	31
1,2,3-Trichloropropane	0.800	0.741				106	77 <sub>-</sub> 127	12	20
Ethylbenzene	0.800	0.838		mg/Kg mg/Kg		105	80 <sub>-</sub> 135	0	20
2-Chlorotoluene	0.800	0.809		mg/Kg		103	77 <sub>-</sub> 134	2	21
	0.800	0.783				98	72 - 134	4	24
1,3,5-Trimethylbenzene Isopropylbenzene	0.800	0.783		mg/Kg mg/Kg		104	80 <sub>-</sub> 131	0	20
4-Chlorotoluene	0.800	0.833		mg/Kg		104	71 - 137	2	21
Methylene Chloride	0.800	0.701				88	56 <sub>-</sub> 140	0	20
1,2,4-Trimethylbenzene	0.800	0.701		mg/Kg		98	73 - 138	4	22
	0.800			mg/Kg			80 - 132	3	20
m-Xylene & p-Xylene		0.815		mg/Kg		102	78 <sub>-</sub> 132		
1,3-Dichlorobenzene	0.800	0.808		mg/Kg		101	70 - 132 71 - 142	1	20
4-Isopropyltoluene	0.800	0.822		mg/Kg		103		3	29
N-Propylbenzene	0.800	0.806		mg/Kg		101	78 <sub>-</sub> 133	5	24
1,4-Dichlorobenzene	0.800	0.744		mg/Kg		93		_	
o-Xylene	0.800	0.843		mg/Kg		105	80 - 132 69 - 143	1	20
n-Butylbenzene	0.800	0.828		mg/Kg		103		1	31
sec-Butylbenzene	0.800	0.840		mg/Kg		105	71 - 143	3	29
1,2-Dichlorobenzene	0.800	0.808		mg/Kg		101	78 <sub>-</sub> 126	1	20
Styrene	0.800	0.844		mg/Kg		105	79 - 129	0	20
1,2-Dibromo-3-Chloropropane	0.800	0.753		mg/Kg		94	64 - 129	12	40
t-Butylbenzene	0.800	0.815		mg/Kg		102	72 - 144	3	27
1,2,4-Trichlorobenzene	0.800	0.891		mg/Kg		111	74 - 131		26
Tetrachloroethene	0.800	0.827		mg/Kg		103	75 - 141	0	20
1,2,3-Trichlorobenzene	0.800	0.785		mg/Kg		98	58 - 146	5	28
Toluene	0.800	0.826		mg/Kg		103	75 - 125	1	20
Naphthalene	0.800	0.815		mg/Kg		102	56 - 145	11	25
trans-1,2-Dichloroethene	0.800	0.767		mg/Kg		96	77 - 134	1	20

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-469358/2-A

Lab Sample ID: 580-143177-6 MS

Matrix: Solid

Matrix: Solid

**Analysis Batch: 469359** 

**Client Sample ID: Lab Control Sample Dup** 

**Prep Type: Total/NA** 

**Prep Batch: 469358** 

	ૅ	pike LCS	D FC2D				%Rec		KPD
Analyte	Ad	lded Resu	It Qualifier	Unit	D	%Rec	Limits	RPD	Limit
trans-1,3-Dichloropropene		.800 0.84	.9	mg/Kg	_	106	80 - 121	1	20
Trichloroethene	0	.800 0.81	0	mg/Kg		101	80 - 134	1	20
Trichlorofluoromethane	0	.800 0.73	2	mg/Kg		91	71 - 150	3	30
Methyl tert-butyl ether	0	.800 0.84	-6	mg/Kg		106	71 - 126	6	20
Vinyl chloride	0	.800 0.67	'9	mg/Kg		85	62 - 144	1	20

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	106		80 - 120
4-Bromofluorobenzene (Surr)	109		80 - 120
Dibromofluoromethane (Surr)	105		80 - 120
1,2-Dichloroethane-d4 (Surr)	103		80 - 121

Client Sample ID: PDI-31-SO-42.5-20240820

**Prep Type: Total/NA** 

Analysis Batch: 469359	Sample	Sample	Spike	MS	MS				Prep Batch: 469358 %Rec
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1,1,2-Tetrachloroethane	ND		0.972	1.07		mg/Kg	<del>-</del>	110	79 - 128
1,1,1-Trichloroethane	ND		0.972	1.09		mg/Kg	₩	112	78 - 135
1,1,2,2-Tetrachloroethane	ND		0.972	0.983		mg/Kg	☼	101	77 - 122
1,1,2-Trichloroethane	ND		0.972	1.05		mg/Kg	∌	108	80 - 123
1,1-Dichloroethane	ND		0.972	1.04		mg/Kg	₩	107	78 - 126
1,1-Dichloroethene	ND		0.972	1.00		mg/Kg	₩	103	73 - 134
1,1-Dichloropropene	ND		0.972	1.09		mg/Kg	₩	112	76 - 140
1,2,3-Trichlorobenzene	ND		0.972	0.928		mg/Kg	₩	96	58 - 146
1,2,3-Trichloropropane	ND		0.972	0.998		mg/Kg	☼	103	77 - 127
1,2,4-Trichlorobenzene	ND		0.972	1.02		mg/Kg	₩	105	74 - 131
1,2,4-Trimethylbenzene	ND		0.972	1.01		mg/Kg	₩	104	73 - 138
1,2-Dibromo-3-Chloropropane	ND		0.972	0.898		mg/Kg	☼	92	64 - 129
1,2-Dibromoethane	ND		0.972	1.04		mg/Kg	₩	107	77 - 123
1,2-Dichlorobenzene	ND		0.972	0.988		mg/Kg	☼	102	78 - 126
1,2-Dichloroethane	ND		0.972	0.978		mg/Kg	₩	101	76 - 124
1,2-Dichloropropane	ND		0.972	1.03		mg/Kg	☼	105	73 - 130
1,3,5-Trimethylbenzene	ND		0.972	1.01		mg/Kg	₩	104	72 - 134
1,3-Dichlorobenzene	ND		0.972	1.05		mg/Kg	₩	108	78 - 132
1,3-Dichloropropane	ND		0.972	1.04		mg/Kg	∌	107	80 - 120
1,4-Dichlorobenzene	ND		0.972	0.944		mg/Kg	₩	97	77 - 123
2,2-Dichloropropane	ND		0.972	1.13		mg/Kg	☼	116	75 - 134
2-Chlorotoluene	ND		0.972	1.03		mg/Kg	∌	106	77 - 134
4-Chlorotoluene	ND		0.972	1.05		mg/Kg	₩	108	71 - 137
4-Isopropyltoluene	ND		0.972	1.06		mg/Kg	☼	109	71 - 142
Benzene	ND		0.972	1.04		mg/Kg	⊅	107	79 - 135
Bromobenzene	ND		0.972	1.02		mg/Kg	₩	105	78 - 126
Bromochloromethane	ND		0.972	0.998		mg/Kg	☼	103	76 - 131
Bromodichloromethane	ND		0.972	1.07		mg/Kg	₩	110	78 - 125
Bromoform	ND		0.972	0.919		mg/Kg	☼	95	71 - 130
Bromomethane	ND		0.972	0.900		mg/Kg	☼	93	55 - 150
Carbon tetrachloride	ND		0.972	1.04		mg/Kg	₩	107	76 - 140

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 580-143177-6 MS

**Matrix: Solid** 

**Analysis Batch: 469359** 

Client Sample ID: PDI-31-SO-42.5-20240820

**Prep Type: Total/NA Prep Batch: 469358** 

ı	Analysis Batch. 400000									1 Tep Baten. 40	,555
		•	Sample	Spike	MS	MS				%Rec	
	Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	_ D	%Rec	Limits	
	Chlorobenzene	0.054		0.972	1.09		mg/Kg	☼	106	80 - 125	
	Chloroform	ND		0.972	1.06		mg/Kg	₩	109	74 - 133	
	Chloromethane	ND		0.972	0.906		mg/Kg	₽	93	52 - 142	
	cis-1,2-Dichloroethene	ND		0.972	1.03		mg/Kg	₩	106	80 - 125	
	cis-1,3-Dichloropropene	ND		0.972	1.09		mg/Kg	₩	113	80 - 122	
	Dibromochloromethane	ND		0.972	0.961		mg/Kg	₩	99	75 - 125	
	Dibromomethane	ND		0.972	1.03		mg/Kg	₩	106	72 - 130	
	Dichlorodifluoromethane	ND		0.972	1.05		mg/Kg	₩	108	33 - 150	
	Ethylbenzene	ND		0.972	1.10		mg/Kg	₽	113	80 - 135	
	Isopropylbenzene	ND		0.972	1.08		mg/Kg	₩	111	80 - 131	
	Methyl tert-butyl ether	ND		0.972	1.00		mg/Kg	₩	103	71 - 126	
	Methylene Chloride	ND		0.972	0.940		mg/Kg	₽	97	56 - 140	
	m-Xylene & p-Xylene	ND		0.972	1.05		mg/Kg	₩	108	80 - 132	
	Naphthalene	ND		0.972	0.967		mg/Kg	₩	99	56 - 145	
	n-Butylbenzene	ND		0.972	1.05		mg/Kg	₩	108	69 - 143	
	N-Propylbenzene	ND		0.972	1.05		mg/Kg	₩	108	78 - 133	
	o-Xylene	ND		0.972	1.07		mg/Kg	₩	110	80 - 132	
	sec-Butylbenzene	ND		0.972	1.09		mg/Kg	₩	112	71 - 143	
	Styrene	ND		0.972	1.08		mg/Kg	₩	111	79 - 129	
	t-Butylbenzene	ND		0.972	1.07		mg/Kg	₩	110	72 - 144	
	Tetrachloroethene	ND		0.972	1.06		mg/Kg	₩	109	75 - 141	
	Toluene	ND		0.972	1.05		mg/Kg	₩	108	75 - 125	
	trans-1,2-Dichloroethene	ND		0.972	1.02		mg/Kg	₩	105	77 - 134	
	trans-1,3-Dichloropropene	ND		0.972	1.04		mg/Kg	₽	107	80 - 121	
	Trichloroethene	ND		0.972	1.08		mg/Kg	☼	111	80 - 134	
	Trichlorofluoromethane	ND		0.972	1.04		mg/Kg	☼	107	71 - 150	
	Vinyl chloride	ND		0.972	0.917		mg/Kg	₽	94	62 - 144	

MS MS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	106		80 - 121
4-Bromofluorobenzene (Surr)	108		80 - 120
Dibromofluoromethane (Surr)	106		80 - 120
Toluene-d8 (Surr)	107		80 - 120

Lab Sample ID: 580-143177-6 MSD

**Matrix: Solid** 

**Analysis Batch: 469359** 

Client Sample ID: PDI-31-SO-42.5-20240820 **Prep Type: Total/NA** 

**Prep Batch: 469358** 

	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	ND		0.947	1.07		mg/Kg	☼	113	79 - 128	0	20
1,1,1-Trichloroethane	ND		0.947	1.07		mg/Kg	☼	113	78 - 135	2	20
1,1,2,2-Tetrachloroethane	ND		0.947	0.940		mg/Kg	☼	99	77 - 122	5	20
1,1,2-Trichloroethane	ND		0.947	1.01		mg/Kg	₽	106	80 - 123	4	20
1,1-Dichloroethane	ND		0.947	1.04		mg/Kg	☼	110	78 - 126	0	20
1,1-Dichloroethene	ND		0.947	1.01		mg/Kg	☼	106	73 - 134	0	25
1,1-Dichloropropene	ND		0.947	1.07		mg/Kg	☼	113	76 - 140	1	20
1,2,3-Trichlorobenzene	ND		0.947	0.986		mg/Kg	☼	104	58 - 146	6	28
1,2,3-Trichloropropane	ND		0.947	0.968		mg/Kg	☼	102	77 - 127	3	20

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 580-143177-6 MSD

**Matrix: Solid** 

Analysis Batch: 469359

Client Sample ID: PDI-31-SO-42.5-20240820

**Prep Type: Total/NA** 

**Prep Batch: 469358** 

•	Sample Qualifier	Spike  Added  0.947	Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPI Limi
ND ND	Qualifier			Qualifier	UIIIL		70KeC	LIIIIII	KFU	
ND			1.07		mg/Kg	<u></u>	113	74 - 131		2
		0.947	1.04		mg/Kg	~. ☆	110	73 - 138	3	2
		0.947	0.902		mg/Kg	₩	95	64 <sub>-</sub> 129	0	4
ND		0.947	1.02		mg/Kg		108	77 - 123		2
ND ND		0.947	1.02			₩	109	77 - 123 78 - 126	5	2
										2
										2
										2
										2
										2
										2
										2
										2
										2
										2
										2
										2
										2
						₩				2
		0.947				☆	94	71 - 130	4	2
		0.947					98	55 - 150	3	2
ND		0.947	1.02		mg/Kg	≎	108	76 - 140	1	2
		0.947			mg/Kg	≎	107	80 - 125	2	2
ND		0.947	1.04		mg/Kg	₩	110	74 - 133	1	2
ND		0.947	0.907		mg/Kg	≎	96	52 - 142	0	4
ND		0.947	1.05		mg/Kg	≎	111	80 - 125	1	2
ND		0.947	1.09		mg/Kg	≎	115	80 - 122	0	2
ND		0.947	0.932		mg/Kg	₩	98	75 - 125	3	2
ND		0.947	1.02		mg/Kg	≎	107	72 - 130	1	4
ND		0.947	1.04		mg/Kg	≎	110	33 - 150	1	3
ND		0.947	1.08		mg/Kg		114	80 - 135	2	2
ND		0.947	1.08		mg/Kg	₩	114	80 - 131	0	2
ND		0.947	0.978		mg/Kg	≎	103	71 - 126	2	2
ND		0.947	0.929				98	56 - 140	1	2
ND		0.947	1.04			₩	110	80 - 132	1	2
			0.997			₩	105	56 - 145	3	2
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   ND         0.947         1.00         mg/Kg           ND         0.947         0.982         mg/Kg           ND         0.947         1.07         mg/Kg           ND         0.947         1.07         mg/Kg           ND         0.947         1.07         mg/Kg           ND         0.947         1.07         mg/Kg           ND         0.947         1.00         mg/Kg           ND         0.947         1.01         mg/Kg           ND         0.947         1.03         mg/Kg           ND         0.947         1.03         mg/Kg           ND         0.947         1.05         mg/Kg           ND         0.947         1.05         mg/Kg           ND         0.947         1.05         mg/Kg           ND         0.947         1.07         mg/Kg           ND         0.947         1.04         mg/Kg	ND         0.947         0.971         mg/Kg           ND         0.947         1.01         mg/Kg           ND         0.947         1.04         mg/Kg           ND         0.947         1.02         mg/Kg           ND         0.947         1.00         mg/Kg           ND         0.947         1.00         mg/Kg           ND         0.947         1.00         mg/Kg           ND         0.947         1.03         mg/Kg           ND         0.947         1.07         mg/Kg           ND         0.947         1.07         mg/Kg           ND         0.947         1.03         mg/Kg           ND         0.947         1.03         mg/Kg           ND         0.947         1.04         mg/Kg           ND         0.947         1.05         mg/Kg           ND         0.947         1.05         mg/Kg           ND         0.947         1.05         mg/Kg           ND         0.947         1.05         mg/Kg           ND         0.947         1.02         mg/Kg           ND         0.947         1.04         mg/Kg	ND         0.947         0.971         mg/Kg         □ 103           ND         0.947         1.01         mg/Kg         □ 107           ND         0.947         1.04         mg/Kg         □ 108           ND         0.947         1.02         mg/Kg         □ 106           ND         0.947         1.00         mg/Kg         □ 106           ND         0.947         1.00         mg/Kg         □ 106           ND         0.947         1.00         mg/Kg         □ 104           ND         0.947         1.03         mg/Kg         □ 112           ND         0.947         1.07         mg/Kg         □ 113           ND         0.947         1.07         mg/Kg         □ 113           ND         0.947         1.07         mg/Kg         □ 116           ND         0.947         1.03         mg/Kg         □ 109           ND         0.947         1.03         mg/Kg         □ 109           ND         0.947         1.04         mg/Kg         □ 101           ND         0.947         1.05         mg/Kg         □ 111           ND         0.947         1.02         mg/Kg<	ND 0.947 0.971 mg/Kg 10 103 76-124 ND 0.947 1.01 mg/Kg 10 107 73-130 ND 0.947 1.04 mg/Kg 10 107 73-130 ND 0.947 1.02 mg/Kg 10 108 78-132 ND 0.947 1.00 mg/Kg 10 108 78-132 ND 0.947 1.00 mg/Kg 10 106 80-120 ND 0.947 1.03 mg/Kg 10 106 80-120 ND 0.947 1.07 mg/Kg 119 75-134 ND 0.947 1.07 mg/Kg 119 75-134 ND 0.947 1.07 mg/Kg 110 71-137 ND 0.947 1.07 mg/Kg 10 113 71-137 ND 0.947 1.00 mg/Kg 10 109 79-135 ND 0.947 1.03 mg/Kg 109 79-135 ND 0.947 1.04 mg/Kg 100 78-126 ND 0.947 1.05 mg/Kg 100 79-135 ND 0.947 1.06 mg/Kg 100 79-135 ND 0.947 1.07 mg/Kg 100 78-126 ND 0.947 1.087 mg/Kg 107 76-131 ND 0.947 1.05 mg/Kg 107 76-131 ND 0.947 1.06 mg/Kg 107 76-131 ND 0.947 1.07 mg/Kg 107 76-131 ND 0.947 1.087 mg/Kg 107 76-131 ND 0.947 1.087 mg/Kg 107 76-131 ND 0.947 0.925 mg/Kg 109 79-135 ND 0.947 1.02 mg/Kg 107 76-141 ND 0.947 1.09 mg/Kg 109 79-155 ND 0.947 1.09 mg/Kg 109 79-155 ND 0.947 1.09 mg/Kg 109 79-155 ND 0.947 1.09 mg/Kg 109 79-155 ND 0.947 1.09 mg/Kg 109 79-155 ND 0.947 1.09 mg/Kg 109 79-155 ND 0.947 1.09 mg/Kg 109 79-155 ND 0.947 1.09 mg/Kg 109 79-155 ND 0.947 1.09 mg/Kg 110 74-133 ND 0.947 1.09 mg/Kg 111 80-125 ND 0.947 1.09 mg/Kg 111 80-125 ND 0.947 1.09 mg/Kg 111 80-125 ND 0.947 1.09 mg/Kg 111 80-125 ND 0.947 1.09 mg/Kg 111 80-125 ND 0.947 1.09 mg/Kg 103 71-126 ND 0.947 1.09 mg/Kg 103 71-126 ND 0.947 1.09 mg/Kg 103 71-126 ND 0.947 1.09 mg/Kg 111 80-135 ND 0.947 1.09 mg/Kg 111 80-135 ND 0.947 1.09 mg/Kg 111 80-135 ND 0.947 1.09 mg/Kg 111 80-135 ND 0.947 1.09 mg/Kg 111 80-135 ND 0.947 1.09 mg/Kg 111 80-135 ND 0.947 1.09 mg/Kg 111 80-135 ND 0.947 1.09 mg/Kg 111 80-135 ND 0.947 1.09 mg/Kg 111 80-135 ND 0.947 1.09 mg/Kg 111 80-135 ND 0.947 1.09 mg/Kg 111 80-135 ND 0.947 1.09 mg/Kg 111 80-135 ND 0.947 1.09 mg/Kg 111 80-135 ND 0.947 1.09 mg/Kg 111 80-135 ND 0.947 1.09 mg/Kg 110 33-150 ND 0.947 1.09 mg/Kg 111 76-143 ND 0.947 1.09 mg/Kg 111 76-143 ND 0.947 1.09 mg/Kg 111 76-143 ND 0.947 1.09 mg/Kg 111 76-145 ND 0.947 1.09 mg/Kg 111 76-143 ND 0.947 1.09 mg/Kg 111 76-145 ND 0.947 1.09 mg/Kg 111 76-145 ND 0.947 1.09 mg/Kg 111 76-145	ND

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Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	104		80 - 121
4-Bromofluorobenzene (Surr)	108		80 - 120
Dibromofluoromethane (Surr)	107		80 - 120
Toluene-d8 (Surr)	108		80 - 120

Lab Sample ID: MB 580-469703/7

**Matrix: Water** 

**Analysis Batch: 469703** 

Client Sample ID: Method Blank Prep Type: Total/NA

	MB					_	_		<b></b> -
Analyte		Qualifier	RL _		Unit	<u>D</u> .	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.0	0.28	_			08/28/24 21:29	1
1,1-Dichloroethane	ND		1.0		ug/L			08/28/24 21:29	1
1,1,1-Trichloroethane	ND		1.0		ug/L			08/28/24 21:29	1
1,1-Dichloropropene	ND		1.0		ug/L			08/28/24 21:29	1
1,2-Dichloroethane	ND		1.0		ug/L			08/28/24 21:29	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			08/28/24 21:29	1
2,2-Dichloropropane	ND		1.0		ug/L			08/28/24 21:29	1
Benzene	ND		1.0	0.24	ug/L			08/28/24 21:29	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			08/28/24 21:29	1
Bromochloromethane	ND		1.0	0.29	ug/L			08/28/24 21:29	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			08/28/24 21:29	1
Bromodichloromethane	ND		1.0	0.29	ug/L			08/28/24 21:29	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			08/28/24 21:29	1
Bromomethane	ND		1.0	0.21	ug/L			08/28/24 21:29	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			08/28/24 21:29	1
Chlorobenzene	ND		1.0	0.44	ug/L			08/28/24 21:29	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			08/28/24 21:29	1
Chloroethane	ND		1.0	0.35	ug/L			08/28/24 21:29	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			08/28/24 21:29	1
Chloroform	ND		1.0	0.26	ug/L			08/28/24 21:29	1
Chloromethane	ND		1.0	0.28	ug/L			08/28/24 21:29	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			08/28/24 21:29	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			08/28/24 21:29	1
Bromoform	ND		1.0	0.51	ug/L			08/28/24 21:29	1
Dibromochloromethane	ND		1.0	0.43	ug/L			08/28/24 21:29	1
Bromobenzene	ND		1.0	0.43	ug/L			08/28/24 21:29	1
Dibromomethane	ND		1.0	0.34	ug/L			08/28/24 21:29	1
Dichlorodifluoromethane	ND		1.0	0.53	ug/L			08/28/24 21:29	1
1,2,3-Trichloropropane	ND		1.0		ug/L			08/28/24 21:29	1
Ethylbenzene	ND		1.0	0.50	_			08/28/24 21:29	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			08/28/24 21:29	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			08/28/24 21:29	1
Isopropylbenzene	ND		1.0		ug/L			08/28/24 21:29	1
4-Chlorotoluene	ND		1.0	0.38	ug/L			08/28/24 21:29	1
Methylene Chloride	ND		5.0	1.4	ug/L			08/28/24 21:29	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			08/28/24 21:29	1
m-Xylene & p-Xylene	ND		2.0		ug/L			08/28/24 21:29	1
1,3-Dichlorobenzene	ND		1.0		ug/L			08/28/24 21:29	1
4-Isopropyltoluene	ND		1.0		ug/L			08/28/24 21:29	1
N-Propylbenzene	ND		1.0		ug/L			08/28/24 21:29	
1,4-Dichlorobenzene	ND		1.0		ug/L			08/28/24 21:29	1

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Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-469703/7

**Matrix: Water** 

**Analysis Batch: 469703** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

	MR	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		1.0	0.39	ug/L			08/28/24 21:29	1
n-Butylbenzene	ND		1.0	0.44	ug/L			08/28/24 21:29	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			08/28/24 21:29	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			08/28/24 21:29	1
Styrene	ND		1.0	0.53	ug/L			08/28/24 21:29	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			08/28/24 21:29	1
t-Butylbenzene	ND		2.0	0.58	ug/L			08/28/24 21:29	1
1,2,4-Trichlorobenzene	0.340	J	1.0	0.33	ug/L			08/28/24 21:29	1
Tetrachloroethene	ND		1.0	0.41	ug/L			08/28/24 21:29	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			08/28/24 21:29	1
Toluene	ND		1.0	0.39	ug/L			08/28/24 21:29	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			08/28/24 21:29	1
Naphthalene	ND		3.0	0.93	ug/L			08/28/24 21:29	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			08/28/24 21:29	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			08/28/24 21:29	1
Trichloroethene	ND		1.0	0.26	ug/L			08/28/24 21:29	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			08/28/24 21:29	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			08/28/24 21:29	1
Vinyl chloride	ND		1.0	0.22	ug/L			08/28/24 21:29	1

MB MB

Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120	_		08/28/24 21:29	1
4-Bromofluorobenzene (Surr)	98		80 - 120			08/28/24 21:29	1
Dibromofluoromethane (Surr)	104		80 - 120			08/28/24 21:29	1
1,2-Dichloroethane-d4 (Surr)	106		80 - 120			08/28/24 21:29	1

Lab Sample ID: LCS 580-469703/4

**Matrix: Water** 

**Analysis Batch: 469703** 

Client Sample	D:	Lab (	Control	Samp	е
		<b>Prep</b>	Type:	Total/N	Α

•	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1-Dichloroethene	5.00	4.31		ug/L		86	70 - 129
1,1-Dichloroethane	5.00	4.55		ug/L		91	80 - 120
1,1,1-Trichloroethane	5.00	4.60		ug/L		92	74 - 130
1,1-Dichloropropene	5.00	4.55		ug/L		91	74 - 120
1,2-Dichloroethane	5.00	4.77		ug/L		95	69 - 126
1,2-Dichloropropane	5.00	4.66		ug/L		93	80 - 120
2,2-Dichloropropane	5.00	4.53		ug/L		91	66 - 126
Benzene	5.00	4.13		ug/L		83	80 - 122
1,1,2-Trichloroethane	5.00	4.44		ug/L		89	80 - 121
Bromochloromethane	5.00	4.71		ug/L		94	78 - 120
1,3-Dichloropropane	5.00	4.46		ug/L		89	79 - 120
Bromodichloromethane	5.00	4.61		ug/L		92	75 - 124
1,2-Dibromoethane	5.00	4.53		ug/L		91	79 - 126
Bromomethane	5.00	4.21		ug/L		84	36 - 150
Carbon tetrachloride	5.00	4.42		ug/L		88	72 - 129
Chlorobenzene	5.00	4.30		ug/L		86	80 - 120
1,1,1,2-Tetrachloroethane	5.00	4.44		ug/L		89	79 - 120

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Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-469703/4

**Matrix: Water** 

**Analysis Batch: 469703** 

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

Analyte	Spike Added		LCS Qualifier	Unit	D %Rec	%Rec Limits
Chloroethane	5.00	3.97		ug/L		38 - 150
1,1,2,2-Tetrachloroethane	5.00	4.14		ug/L	83	74 - 124
Chloroform	5.00	4.51		ug/L	90	78 - 127
Chloromethane	5.00	3.63		ug/L	73	25 - 150
cis-1,2-Dichloroethene	5.00	4.68		ug/L	94	76 - 120
cis-1,3-Dichloropropene	5.00	4.23		ug/L	85	77 - 120
Bromoform	5.00	3.88		ug/L	78	56 - 139
Dibromochloromethane	5.00	4.30		ug/L	86	73 - 125
Bromobenzene	5.00	4.16		ug/L	83	80 - 120
Dibromomethane	5.00	4.78		ug/L	96	80 - 120
Dichlorodifluoromethane	5.00	3.50		ug/L	70	20 - 150
1,2,3-Trichloropropane	5.00	4.36		ug/L	87	76 - 124
Ethylbenzene	5.00	4.53		ug/L	91	80 - 120
2-Chlorotoluene	5.00	4.39		ug/L	88	80 - 120
1,3,5-Trimethylbenzene	5.00	4.22		ug/L	84	80 - 122
Isopropylbenzene	5.00	4.51		ug/L	90	80 - 123
4-Chlorotoluene	5.00	4.73		ug/L	95	73 - 129
Methylene Chloride	5.00	4.31	J	ug/L	86	77 - 125
1,2,4-Trimethylbenzene	5.00	4.15		ug/L	83	80 - 120
n-Xylene & p-Xylene	5.00	4.48		ug/L	90	80 - 120
1,3-Dichlorobenzene	5.00	4.45		ug/L	89	77 - 127
4-Isopropyltoluene	5.00	4.02		ug/L	80	77 - 126
N-Propylbenzene	5.00	4.41		ug/L	88	80 - 122
1,4-Dichlorobenzene	5.00	4.28		ug/L	86	80 - 120
p-Xylene	5.00	4.35		ug/L	87	80 - 120
n-Butylbenzene	5.00	3.86		ug/L	77	57 - 133
sec-Butylbenzene	5.00	4.10		ug/L	82	78 - 122
1,2-Dichlorobenzene	5.00	4.39		ug/L	88	80 - 120
Styrene	5.00	4.30		ug/L	86	76 - 122
1,2-Dibromo-3-Chloropropane	5.00	4.11		ug/L ug/L	82	65 <sub>-</sub> 133
t-Butylbenzene	5.00	3.97		ug/L ug/L	79	75 <sub>-</sub> 123
1,2,4-Trichlorobenzene	5.00	4.15		ug/L ug/L	83	61 - 148
Tetrachloroethene	5.00	4.15		ug/L ug/L	83	76 <sub>-</sub> 125
1,2,3-Trichlorobenzene	5.00	3.85		-	77	65 <sub>-</sub> 150
Toluene	5.00	4.39		ug/L	88	80 - 120
	5.00			ug/L		
Hexachlorobutadiene		3.78		ug/L	76	74 <sub>-</sub> 131
Naphthalene	5.00	3.98		ug/L	80	63 - 150
trans-1,2-Dichloroethene	5.00	4.33		ug/L	87	75 <sub>-</sub> 120
trans-1,3-Dichloropropene	5.00	4.48		ug/L	90	76 <sub>-</sub> 122
Trichloroethene	5.00	4.59		ug/L	92	80 - 125
Trichlorofluoromethane	5.00	4.30		ug/L	86	45 - 148
Methyl tert-butyl ether	5.00	4.93		ug/L	99	72 - 120
Vinyl chloride	5.00	4.22		ug/L	84	31 - 150

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	98		80 - 120
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-469703/4

**Matrix: Water** 

**Analysis Batch: 469703** 

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

LCS LCS

Surrogate%RecoveryQualifierLimits1,2-Dichloroethane-d4 (Surr)10280 - 120

Client Sample ID: Lab Control Sample Dup

**Prep Type: Total/NA** 

Lab Sample ID: LCSD 580-469703/5 Matrix: Water

Analysis Batch: 469703

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	5.00	4.24		ug/L		85	70 - 129	2	23
1,1-Dichloroethane	5.00	4.60		ug/L		92	80 - 120	1	15
1,1,1-Trichloroethane	5.00	4.63		ug/L		93	74 - 130	0	19
1,1-Dichloropropene	5.00	4.65		ug/L		93	74 - 120	2	14
1,2-Dichloroethane	5.00	4.74		ug/L		95	69 - 126	0	11
1,2-Dichloropropane	5.00	4.69		ug/L		94	80 - 120	0	14
2,2-Dichloropropane	5.00	4.49		ug/L		90	66 - 126	1	22
Benzene	5.00	4.21		ug/L		84	80 - 122	2	14
1,1,2-Trichloroethane	5.00	4.42		ug/L		88	80 - 121	1	14
Bromochloromethane	5.00	4.65		ug/L		93	78 - 120	1	13
1,3-Dichloropropane	5.00	4.54		ug/L		91	79 - 120	2	19
Bromodichloromethane	5.00	4.67		ug/L		93	75 - 124	1	13
1,2-Dibromoethane	5.00	4.53		ug/L		91	79 - 126	0	12
Bromomethane	5.00	4.28		ug/L		86	36 - 150	2	33
Carbon tetrachloride	5.00	4.40		ug/L		88	72 - 129	0	19
Chlorobenzene	5.00	4.42		ug/L		88	80 - 120	3	10
1,1,1,2-Tetrachloroethane	5.00	4.42		ug/L		88	79 - 120	0	16
Chloroethane	5.00	4.20		ug/L		84	38 - 150	6	28
1,1,2,2-Tetrachloroethane	5.00	4.07		ug/L		81	74 - 124	2	25
Chloroform	5.00	4.57		ug/L		91	78 - 127	1	14
Chloromethane	5.00	3.66		ug/L		73	25 - 150	1	26
cis-1,2-Dichloroethene	5.00	4.73		ug/L		95	76 - 120	1	20
cis-1,3-Dichloropropene	5.00	4.31		ug/L		86	77 - 120	2	35
Bromoform	5.00	3.96		ug/L		79	56 - 139	2	21
Dibromochloromethane	5.00	4.26		ug/L		85	73 - 125	1	13
Bromobenzene	5.00	4.49		ug/L		90	80 - 120	7	24
Dibromomethane	5.00	4.65		ug/L		93	80 - 120	3	11
Dichlorodifluoromethane	5.00	3.55		ug/L		71	20 - 150	2	33
1,2,3-Trichloropropane	5.00	4.30		ug/L		86	76 - 124	1	26
Ethylbenzene	5.00	4.62		ug/L		92	80 - 120	2	14
2-Chlorotoluene	5.00	4.44		ug/L		89	80 - 120	1	20
1,3,5-Trimethylbenzene	5.00	4.31		ug/L		86	80 - 122	2	21
Isopropylbenzene	5.00	4.64		ug/L		93	80 - 123	3	19
4-Chlorotoluene	5.00	4.74		ug/L		95	73 - 129	0	29
Methylene Chloride	5.00	4.44	J	ug/L		89	77 - 125	3	18
1,2,4-Trimethylbenzene	5.00	4.29		ug/L		86	80 - 120	3	16
m-Xylene & p-Xylene	5.00	4.59		ug/L		92	80 - 120	3	14
1,3-Dichlorobenzene	5.00	4.68		ug/L		94	77 - 127	5	35
4-Isopropyltoluene	5.00	4.20		ug/L		84	77 - 126	5	20
N-Propylbenzene	5.00	4.51		ug/L		90	80 - 122	2	22
1,4-Dichlorobenzene	5.00	4.42		ug/L		88	80 - 120	3	17

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-469703/5

**Matrix: Water** 

**Analysis Batch: 469703** 

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
o-Xylene	5.00	4.42		ug/L		88	80 - 120	2	16
n-Butylbenzene	5.00	4.02		ug/L		80	57 - 133	4	14
sec-Butylbenzene	5.00	4.27		ug/L		85	78 - 122	4	15
1,2-Dichlorobenzene	5.00	4.62		ug/L		92	80 - 120	5	15
Styrene	5.00	4.32		ug/L		86	76 - 122	0	16
1,2-Dibromo-3-Chloropropane	5.00	3.99		ug/L		80	65 - 133	3	25
t-Butylbenzene	5.00	4.18		ug/L		84	75 - 123	5	21
1,2,4-Trichlorobenzene	5.00	4.15		ug/L		83	61 - 148	0	27
Tetrachloroethene	5.00	4.20		ug/L		84	76 - 125	1	13
1,2,3-Trichlorobenzene	5.00	3.79		ug/L		76	65 - 150	1	33
Toluene	5.00	4.51		ug/L		90	80 - 120	3	13
Hexachlorobutadiene	5.00	3.79		ug/L		76	74 - 131	0	22
Naphthalene	5.00	3.89		ug/L		78	63 - 150	2	33
trans-1,2-Dichloroethene	5.00	4.51		ug/L		90	75 - 120	4	21
trans-1,3-Dichloropropene	5.00	4.54		ug/L		91	76 - 122	1	20
Trichloroethene	5.00	4.57		ug/L		91	80 - 125	0	13
Trichlorofluoromethane	5.00	4.43		ug/L		89	45 - 148	3	35
Methyl tert-butyl ether	5.00	4.78		ug/L		96	72 - 120	3	18
Vinyl chloride	5.00	4.23		ug/L		85	31 - 150	0	26
I and the second									

LCSD LCSD

MB MB

ND

ND

ND

ND

ND

ND

ND

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 120
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	101		80 - 120

Lab Sample ID: MB 580-469995/7

**Matrix: Water** 

1,3-Dichloropropane

1,2-Dibromoethane

Carbon tetrachloride

1,1,1,2-Tetrachloroethane

Bromomethane

Chlorobenzene

Bromodichloromethane

**Analysis Batch: 469995** 

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	Result Qualifier	RL	MDL Unit	D Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND ND	1.0	0.28 ug/L		08/31/24 01:57	1
1,1-Dichloroethane	ND	1.0	0.22 ug/L		08/31/24 01:57	1
1,1,1-Trichloroethane	ND	1.0	0.39 ug/L		08/31/24 01:57	1
1,1-Dichloropropene	ND	1.0	0.29 ug/L		08/31/24 01:57	1
1,2-Dichloroethane	ND	1.0	0.42 ug/L		08/31/24 01:57	1
1,2-Dichloropropane	ND	1.0	0.18 ug/L		08/31/24 01:57	1
2,2-Dichloropropane	ND	1.0	0.32 ug/L		08/31/24 01:57	1
Benzene	ND	1.0	0.24 ug/L		08/31/24 01:57	1
1,1,2-Trichloroethane	ND	1.0	0.24 ug/L		08/31/24 01:57	1
Bromochloromethane	ND	1.0	0.29 ug/L		08/31/24 01:57	1

1.0

1.0

1.0

1.0

1.0

1.0

1.0

0.35 ug/L

0.29 ug/L

0.40 ug/L

0.21 ug/L

0.30 ug/L

0.44 ug/L

0.18 ug/L

08/31/24 01:57

08/31/24 01:57

08/31/24 01:57

08/31/24 01:57

08/31/24 01:57

08/31/24 01:57

08/31/24 01:57

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**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

MB MB

Lab Sample ID: MB 580-469995/7

Matrix: Water

Analysis Batch: 469995

**Client Sample ID: Method Blank** 

**Prep Type: Total/NA** 

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		1.0	0.35	ug/L			08/31/24 01:57	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			08/31/24 01:57	1
Chloroform	ND		1.0	0.26	ug/L			08/31/24 01:57	1
Chloromethane	ND		1.0	0.28	ug/L			08/31/24 01:57	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			08/31/24 01:57	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			08/31/24 01:57	1
Bromoform	ND		1.0	0.51	ug/L			08/31/24 01:57	1
Dibromochloromethane	ND		1.0	0.43	ug/L			08/31/24 01:57	1
Bromobenzene	ND		1.0	0.43	ug/L			08/31/24 01:57	1
Dibromomethane	ND		1.0	0.34	ug/L			08/31/24 01:57	1
Dichlorodifluoromethane	ND		1.0		ug/L			08/31/24 01:57	1
1,2,3-Trichloropropane	ND		1.0	0.41	-			08/31/24 01:57	1
Ethylbenzene	ND		1.0	0.50	-			08/31/24 01:57	1
2-Chlorotoluene	ND		1.0		ug/L			08/31/24 01:57	1
1,3,5-Trimethylbenzene	ND		1.0	0.55				08/31/24 01:57	1
Isopropylbenzene	ND		1.0		ug/L			08/31/24 01:57	1
4-Chlorotoluene	ND		1.0		ug/L			08/31/24 01:57	1
Methylene Chloride	ND		5.0		ug/L			08/31/24 01:57	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	-			08/31/24 01:57	1
m-Xylene & p-Xylene	ND		2.0		ug/L			08/31/24 01:57	1
1,3-Dichlorobenzene	ND		1.0	0.48	-			08/31/24 01:57	1
4-Isopropyltoluene	ND		1.0	0.28	-			08/31/24 01:57	1
N-Propylbenzene	ND		1.0		ug/L			08/31/24 01:57	1
1,4-Dichlorobenzene	ND		1.0		ug/L			08/31/24 01:57	1
o-Xylene	ND		1.0		ug/L			08/31/24 01:57	1
n-Butylbenzene	ND		1.0		ug/L			08/31/24 01:57	1
sec-Butylbenzene	ND		1.0	0.49	-			08/31/24 01:57	1
1,2-Dichlorobenzene	ND		1.0	0.46	-			08/31/24 01:57	1
Styrene	ND		1.0		ug/L			08/31/24 01:57	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	-			08/31/24 01:57	1
t-Butylbenzene	ND		2.0	0.58	-			08/31/24 01:57	1
1,2,4-Trichlorobenzene	0.369		1.0		ug/L			08/31/24 01:57	· · · · · · · 1
Tetrachloroethene	ND		1.0	0.41	-			08/31/24 01:57	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	-			08/31/24 01:57	1
Toluene	ND		1.0	0.39				08/31/24 01:57	1
Hexachlorobutadiene	ND		3.0	0.79	-			08/31/24 01:57	1
Naphthalene	ND		3.0	0.93	-			08/31/24 01:57	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			08/31/24 01:57	·
trans-1,3-Dichloropropene	ND		1.0		ug/L			08/31/24 01:57	1
Trichloroethene	ND		1.0		ug/L			08/31/24 01:57	1
Trichlorofluoromethane	ND		1.0		ug/L			08/31/24 01:57	· · · · · · · · 1
Methyl tert-butyl ether	ND		1.0		ug/L			08/31/24 01:57	1
Vinyl chloride	ND		1.0		ug/L			08/31/24 01:57	1
y. 3	.10		1.0	V	· · · · ·			30.0	•

МВ	MB
	IVID

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		80 - 120		08/31/24 01:57	1
4-Bromofluorobenzene (Surr)	103		80 - 120		08/31/24 01:57	1
Dibromofluoromethane (Surr)	105		80 - 120		08/31/24 01:57	1

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-469995/7

**Matrix: Water** 

**Analysis Batch: 469995** 

Client Sample ID: Method Blank

Prep Type: Total/NA

MB MB

%Recovery Qualifier Limits Dil Fac Surrogate Prepared Analyzed 1,2-Dichloroethane-d4 (Surr) 106 80 - 120 08/31/24 01:57

LCS LCS

Spike

Lab Sample ID: LCS 580-469995/4

**Matrix: Water** 

N-Propylbenzene

1,4-Dichlorobenzene

**Analysis Batch: 469995** 

Client Sample ID	: Lab Control Sample
	Pren Type: Total/NA

%Rec

	Opine	LOG	LOU		/01 <b>16</b> C	
Analyte	Added	Result	Qualifier Unit	D %Rec	Limits	
1,1-Dichloroethene	5.00	4.92	ug/L	98	70 - 129	
1,1-Dichloroethane	5.00	5.15	ug/L	103	80 - 120	
1,1,1-Trichloroethane	5.00	5.29	ug/L	106	74 - 130	
1,1-Dichloropropene	5.00	5.32	ug/L	106	74 - 120	
1,2-Dichloroethane	5.00	5.39	ug/L	108	69 - 126	
1,2-Dichloropropane	5.00	5.22	ug/L	104	80 - 120	
2,2-Dichloropropane	5.00	4.99	ug/L	100	66 - 126	
Benzene	5.00	4.87	ug/L	97	80 - 122	
1,1,2-Trichloroethane	5.00	4.59	ug/L	92	80 - 121	
Bromochloromethane	5.00	5.25	ug/L	105	78 - 120	
1,3-Dichloropropane	5.00	4.75	ug/L	95	79 - 120	
Bromodichloromethane	5.00	5.31	ug/L	106	75 - 124	
1,2-Dibromoethane	5.00	4.78	ug/L	96	79 - 126	
Bromomethane	5.00	4.01	ug/L	80	36 - 150	
Carbon tetrachloride	5.00	5.12	ug/L	102	72 - 129	
Chlorobenzene	5.00	4.55	ug/L	91	80 - 120	
1,1,1,2-Tetrachloroethane	5.00	4.63	ug/L	93	79 - 120	
Chloroethane	5.00	4.99	ug/L	100	38 - 150	
1,1,2,2-Tetrachloroethane	5.00	4.28	ug/L	86	74 - 124	
Chloroform	5.00	5.12	ug/L	102	78 - 127	
Chloromethane	5.00	4.11	ug/L	82	25 - 150	
cis-1,2-Dichloroethene	5.00	5.25	ug/L	105	76 - 120	
cis-1,3-Dichloropropene	5.00	4.50	ug/L	90	77 - 120	
Bromoform	5.00	4.13	ug/L	83	56 - 139	
Dibromochloromethane	5.00	4.54	ug/L	91	73 - 125	
Bromobenzene	5.00	4.63	ug/L	93	80 - 120	
Dibromomethane	5.00	5.39	ug/L	108	80 - 120	
Dichlorodifluoromethane	5.00	3.79	ug/L	76	20 - 150	
1,2,3-Trichloropropane	5.00	4.51	ug/L	90	76 - 124	
Ethylbenzene	5.00	4.88	ug/L	98	80 - 120	
2-Chlorotoluene	5.00	4.79	ug/L	96	80 - 120	
1,3,5-Trimethylbenzene	5.00	4.74	ug/L	95	80 - 122	
Isopropylbenzene	5.00	5.06	ug/L	101	80 - 123	
4-Chlorotoluene	5.00	5.00	ug/L	100	73 - 129	
Methylene Chloride	5.00	4.69	_	94	77 - 125	
1,2,4-Trimethylbenzene	5.00	4.77	ug/L	95	80 - 120	
m-Xylene & p-Xylene	5.00	5.06	ug/L	101	80 - 120	
1,3-Dichlorobenzene	5.00	4.85	ug/L	97	77 - 127	
4-Isopropyltoluene	5.00	4.59	ug/L	92	77 - 126	
			· · · · ·			

**Eurofins Seattle** 

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4.92

4.47

ug/L

ug/L

98

80 - 122

80 - 120

5.00

5.00

Spike

5.00

5.00

5.00

5.00

5.00

5.00

5.00

5.00

5.00

5.00

5.00

4.53

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3.86

5.03

4.80

5.18

4.79

5.65

4.64

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-469995/4

**Matrix: Water** 

Analyte

o-Xylene

Styrene

Toluene

Naphthalene

Trichloroethene

Vinyl chloride

n-Butylbenzene

t-Butylbenzene

Tetrachloroethene

sec-Butylbenzene

1,2-Dichlorobenzene

1,2,4-Trichlorobenzene

1,2,3-Trichlorobenzene

Hexachlorobutadiene

trans-1,2-Dichloroethene

trans-1,3-Dichloropropene

Trichlorofluoromethane

Methyl tert-butyl ether

1,2-Dibromo-3-Chloropropane

**Analysis Batch: 469995** 

**Client Sample ID: Lab Control Sample** 

91

79

97

86

77

101

96

104

96

113

93

%Rec

76 - 125

65 - 150

80 - 120

74 - 131

63 - 150

75 - 120

76 - 122

80 - 125

45 - 148

72 - 120

31 - 150

**Prep Type: Total/NA** 

LCS LCS Added Result Qualifier Unit %Rec Limits 5.00 4.75 ug/L 95 80 - 120 5.00 4.32 ug/L 86 57 - 133 5.00 4.60 ug/L 92 78 - 122 5.00 4.69 ug/L 94 80 - 120 5.00 4.54 ug/L 91 76 - 122 5.00 4.36 ug/L 87 65 - 1335.00 4.57 ug/L 91 75 - 123 5.00 86 4.28 ug/L 61 - 148

ug/L

ug/L

ug/L

ug/L

ug/L

ug/L

ug/L

ug/L

ug/L

ug/L

ug/L

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Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	95		80 - 120
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	105		80 - 120
1,2-Dichloroethane-d4 (Surr)	103		80 - 120

Lab Sample ID: LCSD 580-469995/5

**Matrix: Water** 

Analysis Batch: 469995

**Client Sample ID: Lab Control Sample Dup** Prep Type: Total/NA

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	5.00	4.90		ug/L		98	70 - 129	0	23
1,1-Dichloroethane	5.00	5.13		ug/L		103	80 - 120	1	15
1,1,1-Trichloroethane	5.00	5.25		ug/L		105	74 - 130	1	19
1,1-Dichloropropene	5.00	5.28		ug/L		106	74 - 120	1	14
1,2-Dichloroethane	5.00	5.44		ug/L		109	69 - 126	1	11
1,2-Dichloropropane	5.00	5.35		ug/L		107	80 - 120	2	14
2,2-Dichloropropane	5.00	4.83		ug/L		97	66 - 126	3	22
Benzene	5.00	4.78		ug/L		96	80 - 122	2	14
1,1,2-Trichloroethane	5.00	4.46		ug/L		89	80 - 121	3	14
Bromochloromethane	5.00	5.03		ug/L		101	78 - 120	4	13
1,3-Dichloropropane	5.00	4.73		ug/L		95	79 - 120	0	19
Bromodichloromethane	5.00	5.39		ug/L		108	75 - 124	2	13
1,2-Dibromoethane	5.00	4.70		ug/L		94	79 - 126	2	12
Bromomethane	5.00	4.22		ug/L		84	36 - 150	5	33
Carbon tetrachloride	5.00	5.17		ug/L		103	72 - 129	1	19
Chlorobenzene	5.00	4.53		ug/L		91	80 - 120	0	10
1,1,1,2-Tetrachloroethane	5.00	4.62		ug/L		92	79 - 120	0	16

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-469995/5

**Matrix: Water** 

**Analysis Batch: 469995** 

**Client Sample ID: Lab Control Sample Dup** 

**Prep Type: Total/NA** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloroethane	5.00	5.06		ug/L		101	38 - 150	1	28
1,1,2,2-Tetrachloroethane	5.00	4.33		ug/L		87	74 - 124	1	25
Chloroform	5.00	5.12		ug/L		102	78 - 127	0	14
Chloromethane	5.00	4.08		ug/L		82	25 - 150	1	26
cis-1,2-Dichloroethene	5.00	5.25		ug/L		105	76 - 120	0	20
cis-1,3-Dichloropropene	5.00	4.54		ug/L		91	77 - 120	1	35
Bromoform	5.00	4.39		ug/L		88	56 - 139	6	21
Dibromochloromethane	5.00	4.51		ug/L		90	73 - 125	1	13
Bromobenzene	5.00	4.55		ug/L		91	80 - 120	2	24
Dibromomethane	5.00	5.42		ug/L		108	80 - 120	1	11
Dichlorodifluoromethane	5.00	3.75		ug/L		75	20 - 150	1	33
1,2,3-Trichloropropane	5.00	4.68		ug/L		94	76 - 124	4	26
Ethylbenzene	5.00	4.86		ug/L		97	80 - 120	0	14
2-Chlorotoluene	5.00	4.66		ug/L		93	80 - 120	3	20
1,3,5-Trimethylbenzene	5.00	4.55		ug/L		91	80 - 122	4	21
Isopropylbenzene	5.00	5.02		ug/L		100	80 - 123	1	19
4-Chlorotoluene	5.00	4.90		ug/L		98	73 - 129	2	29
Methylene Chloride	5.00	4.76	J	ug/L		95	77 - 125	1	18
1,2,4-Trimethylbenzene	5.00	4.53		ug/L		91	80 - 120	5	16
m-Xylene & p-Xylene	5.00	4.96		ug/L		99	80 - 120	2	14
1,3-Dichlorobenzene	5.00	4.62		ug/L		92	77 - 127	5	35
4-Isopropyltoluene	5.00	4.36		ug/L		87	77 - 126	5	20
N-Propylbenzene	5.00	4.78		ug/L		96	80 - 122	3	22
1,4-Dichlorobenzene	5.00	4.36		ug/L		87	80 - 120	2	17
o-Xylene	5.00	4.79		ug/L		96	80 - 120	1	16
n-Butylbenzene	5.00	4.02		ug/L		80	57 - 133	7	14
sec-Butylbenzene	5.00	4.41		ug/L		88	78 - 122	4	15
1,2-Dichlorobenzene	5.00	4.53		ug/L		91	80 - 120	3	15
Styrene	5.00	4.56		ug/L		91	76 - 122	0	16
1,2-Dibromo-3-Chloropropane	5.00	3.92		ug/L		78	65 - 133	11	25
t-Butylbenzene	5.00	4.34		ug/L		87	75 - 123	5	21
1,2,4-Trichlorobenzene	5.00	4.12		ug/L		82	61 - 148	4	27
Tetrachloroethene	5.00	4.32		ug/L		86	76 - 125	5	13
1,2,3-Trichlorobenzene	5.00	3.68		ug/L		74	65 - 150	7	33
Toluene	5.00	4.85		ug/L		97	80 - 120	0	13
Hexachlorobutadiene	5.00	4.02		ug/L		80	74 - 131	7	22
Naphthalene	5.00	3.72		ug/L		74	63 - 150	4	33
trans-1,2-Dichloroethene	5.00	4.95		ug/L		99	75 - 120	2	21
trans-1,3-Dichloropropene	5.00	4.72		ug/L		94	76 - 122	2	20
Trichloroethene	5.00	5.08		ug/L		102	80 - 125	2	13
Trichlorofluoromethane	5.00	4.72		ug/L		94	45 - 148	1	35
Methyl tert-butyl ether	5.00	5.86		ug/L		117	72 - 120	4	18
Vinyl chloride	5.00	4.79		ug/L		96	31 - 150	3	26

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	95		80 - 120
4-Bromofluorobenzene (Surr)	105		80 - 120
Dibromofluoromethane (Surr)	104		80 - 120

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-469995/5

**Matrix: Water** 

Analysis Batch: 469995

LCSD LCSD

%Recovery Qualifier Limits Surrogate 1,2-Dichloroethane-d4 (Surr) 104 80 - 120

Lab Sample ID: MB 580-470152/3-A

**Matrix: Solid** 

Analysis Batch: 470147

Client Sample ID: Method Blank

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

Prep Type: Total/NA

**Prep Batch: 470152** 

ı			14.10							
	Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Chloroethane	ND		0.080	0.021	mg/Kg		09/03/24 14:59	09/03/24 21:43	1
	Hexachlorobutadiene	0.0324	J	0.10	0.024	mg/Kg		09/03/24 14:59	09/03/24 21:43	1
ı										

MB MB

MR MR

Surrogate	%Recovery Qua	ıalifier Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100	80 - 120	09/03/24 14:59	09/03/24 21:43	1
4-Bromofluorobenzene (Surr)	104	80 - 120	09/03/24 14:59	09/03/24 21:43	1
Dibromofluoromethane (Surr)	105	80 - 120	09/03/24 14:59	09/03/24 21:43	1
1,2-Dichloroethane-d4 (Surr)	99	80 - 121	09/03/24 14:59	09/03/24 21:43	1

Lab Sample ID: LCS 580-470152/1-A

**Matrix: Solid** 

**Analysis Batch: 470147** 

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

**Prep Batch: 470152** %Rec

•	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chloroethane	0.800	0.699		mg/Kg		87	26 - 150	
Hexachlorobutadiene	0.800	0.736		mg/Kg		92	65 - 145	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	102		80 - 120
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	97		80 - 120
1,2-Dichloroethane-d4 (Surr)	94		80 - 121

Lab Sample ID: LCSD 580-470152/2-A

**Matrix: Solid** 

**Analysis Batch: 470147** 

**Client Sample ID: Lab Control Sample Dup** 

**Prep Batch: 470152** 0/ Boo

	Spike	LCSD	LCSD				70KeC		KPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloroethane	0.800	0.696		mg/Kg		87	26 - 150	0	40
Hexachlorobutadiene	0.800	0.802		mg/Kg		100	65 - 145	9	36

LCCD LCCD

Chika

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 120
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	97		80 - 120
1,2-Dichloroethane-d4 (Surr)	96		80 - 121

**Eurofins Seattle** 

**Prep Type: Total/NA** 

Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS - RA

Lab Sample ID: 580-143177-6 MS

**Matrix: Solid** 

Client: ERM-West

Analysis Batch: 470147

Client Sample ID: PDI-31-SO-42.5-20240820

Prep Type: Total/NA

**Prep Batch: 470152** 

Prep Type: Total/NA

**Prep Batch: 470152** 

MS MS %Recovery Qualifier Surrogate Limits 80 - 121 1,2-Dichloroethane-d4 (Surr) -95 4-Bromofluorobenzene (Surr) -101 80 - 120 RA Dibromofluoromethane (Surr) -100 80 - 120 RA Toluene-d8 (Surr) - RA 102 80 - 120

Lab Sample ID: 580-143177-6 MSD Client Sample ID: PDI-31-SO-42.5-20240820

**Matrix: Solid** 

**Analysis Batch: 470147** 

	MSD	MSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr) -	95		80 - 121
RA			
4-Bromofluorobenzene (Surr) -	100		80 - 120
RA			
Dibromofluoromethane (Surr) -	97		80 - 120
RA			
Toluene-d8 (Surr) - RA	100		80 - 120
_			

#### Method: SM 5310C - Dissolved Organic Carbon

Lab Sample ID: MB 580-470049/4

**Matrix: Water** 

**Analysis Batch: 470049** 

MR	MR

	Analyte	Result Qualifier	RL	MDL Unit	D	Prepared	Analyzed	Dil Fac	
ı	Total Organic Carbon	ND ND	1.5	0.38 mg/L			08/30/24 19:32	1	

Lab Sample ID: LCS 580-470049/5

**Matrix: Water** 

**Analysis Batch: 470049** 

	Spike	LCS LCS				%Rec	
Analyte	Added	Result Quali	fier Unit	D	%Rec	Limits	
Total Organic Carbon	25.0	25.3	ma/l		101	85 - 115	_

Lab Sample ID: LCSD 580-470049/6

**Matrix: Water** 

Analysis Batch: 470049

Allalysis Datell. 47 0045									
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Total Organic Carbon	 25.0	24.6		mg/L		99	85 - 115	2	20

Lab Sample ID: 580-143177-11 MS

**Matrix: Water** 

Analysis Batch: 470049										
_	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Total Organic Carbon	1.6		10.0	11.7		mg/L		101	85 - 115	 

**Eurofins Seattle** 

9/5/2024

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**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

Prep Type: Total/NA

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

## Method: SM 5310C - Dissolved Organic Carbon (Continued)

Result Qualifier

1.6

Analyte

Total Organic Carbon

Lab Sample ID: 580-143177-11 MSD  Matrix: Water						Client Sample ID: EB-082024- Prep Type: Total/N						
Analysis Batch: 470049										po. 100	WII/17 1	
_	Sample	Sample	Spike	MSD	MSD				%Rec		RPD	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit	
Total Organic Carbon	1.6		10.0	11.9		mg/L		103	85 - 115	2	20	

Lab Sample ID: 580-143177-11 DU  Matrix: Water		Client Sample ID: EB-082024-A Prep Type: Total/NA
Analysis Batch: 470049 Sample Sample	DU DU	RPD

Result Qualifier Unit

mg/L

1.59

RPD Limit 20

3

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Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

Client Sample ID: TB-01-SO-20240820

Date Collected: 08/20/24 00:01 Date Received: 08/22/24 11:15 Lab Sample ID: 580-143177-1

**Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			469358	BYM	EET SEA	08/26/24 12:48
Total/NA	Analysis	8260D		1	469359	BYM	EET SEA	08/26/24 14:04
Total/NA	Prep	5035	RA		470152	BYM	EET SEA	09/03/24 14:59
Total/NA	Analysis	8260D	RA	1	470147	K1K	EET SEA	09/03/24 22:03

Client Sample ID: PDI-31-35.2-SO-20240820

Date Collected: 08/20/24 15:15 Date Received: 08/22/24 11:15

Lab Sample ID: 580-143177-2

**Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	469667	MJ	EET SEA	08/28/24 13:25

Client Sample ID: PDI-31-35.2-SO-20240820

Date Collected: 08/20/24 15:15 Date Received: 08/22/24 11:15

Lab Sample ID: 580-143177-2 **Matrix: Solid** Percent Solids: 83.9

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			469358	BYM	EET SEA	08/26/24 12:48
Total/NA	Analysis	8260D		1	469359	BYM	EET SEA	08/26/24 15:47
Total/NA	Prep	5035	RA		470152	BYM	EET SEA	09/03/24 14:59
Total/NA	Analysis	8260D	RA	1	470147	K1K	EET SEA	09/03/24 23:05

Client Sample ID: DUP-05-SQ-20240820

Date Collected: 08/20/24 15:20 Date Received: 08/22/24 11:15

Lab Sample ID: 580-143177-3 **Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	469667	MJ	EET SEA	08/28/24 13:25

Client Sample ID: DUP-05-SQ-20240820

Date Collected: 08/20/24 15:20 Date Received: 08/22/24 11:15

Lab Sample ID: 580-143177-3 **Matrix: Solid** Percent Solids: 87.3

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	<del></del>		469358	BYM	EET SEA	08/26/24 12:48
Total/NA	Analysis	8260D		1	469359	BYM	EET SEA	08/26/24 16:07
Total/NA	Prep	5035	RA		470152	BYM	EET SEA	09/03/24 14:59
Total/NA	Analysis	8260D	RA	1	470147	K1K	EET SEA	09/03/24 23:25

Client Sample ID: RB-05-WQ-20240820

Lab Sample ID: 580-143177-4 Date Collected: 08/20/24 15:40 **Matrix: Water** Date Received: 08/22/24 11:15

	Batch	Batch		Dilution	Batch		Prepared
Prep Type	Type	Method	Run	Factor	Number Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	469703 AA	EET SEA	08/29/24 04:04

**Eurofins Seattle** 

Client: ERM-West Project/Site: Arkema PDI Sampling

Client Sample ID: TB-01-WQ-20240820

Date Collected: 08/20/24 00:01 Date Received: 08/22/24 11:15 Lab Sample ID: 580-143177-5

**Matrix: Water** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	469995	K1K	EET SEA	08/31/24 02:44

Client Sample ID: PDI-31-SO-42.5-20240820

Date Collected: 08/20/24 16:55

Lab Sample ID: 580-143177-6

Matrix: Solid

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	469667	MJ	EET SEA	08/28/24 13:25

Client Sample ID: PDI-31-SO-42.5-20240820

Date Collected: 08/20/24 16:55 Date Received: 08/22/24 11:15

Date Received: 08/22/24 11:15

Lab Sample ID: 580-143177-6 Matrix: Solid

Percent Solids: 87.0

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			469358	BYM	EET SEA	08/26/24 12:48
Total/NA	Analysis	8260D		1	469359	BYM	EET SEA	08/26/24 14:25
Total/NA	Prep	5035	RA		470152	BYM	EET SEA	09/03/24 14:59
Total/NA	Analysis	8260D	RA	1	470147	K1K	EET SEA	09/04/24 02:30

Client Sample ID: PDI-31-SO-53.7-20240821

Date Collected: 08/21/24 08:40

Date Received: 08/22/24 11:15

Lab Sample ID: 580-143177-7

**Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	469667	MJ	EET SEA	08/28/24 13:25

Client Sample ID: PDI-31-SO-53.7-20240821

Date Collected: 08/21/24 08:40

Date Received: 08/22/24 11:15

Lab Sample ID: 580-143177-7 **Matrix: Solid** Percent Solids: 90.0

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			469358	BYM	EET SEA	08/26/24 12:48
Total/NA	Analysis	8260D		1	469359	BYM	EET SEA	08/26/24 16:28
Total/NA	Prep	5035	RA		470152	BYM	EET SEA	09/03/24 14:59
Total/NA	Analysis	8260D	RA	1	470147	K1K	EET SEA	09/03/24 23:46

Client Sample ID: PDI-30-SO-12.4-20240821

Date Collected: 08/21/24 11:05

Date Received: 08/22/24 11:15

2.4-20240821	Lab Sample ID: 580-143177-8
	Matrix: Solid

	Batch	Batch		Dilution	Batch	Prepared			
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed	
Total/NA	Analysis	2540G			469667	MJ	EET SEA	08/28/24 13:25	

Project/Site: Arkema PDI Sampling

Client: ERM-West

Client Sample ID: PDI-30-SO-12.4-20240821

Date Collected: 08/21/24 11:05 Date Received: 08/22/24 11:15 Lab Sample ID: 580-143177-8

**Matrix: Solid** 

Percent Solids: 90.5

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			469358	BYM	EET SEA	08/26/24 12:48
Total/NA	Analysis	8260D		1	469359	BYM	EET SEA	08/26/24 16:48
Total/NA	Prep	5035	RA		470152	BYM	EET SEA	09/03/24 14:59
Total/NA	Analysis	8260D	RA	1	470147	K1K	EET SEA	09/04/24 00:06

Client Sample ID: PDI-30-SO-39.5-20240821

Date Collected: 08/21/24 14:10 Date Received: 08/22/24 11:15 Lab Sample ID: 580-143177-9

**Matrix: Solid** 

l		Batch	Batch		Dilution	Batch			Prepared
	Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
١	Total/NA	Analysis	2540G		1	469667	MJ	EET SEA	08/28/24 13:25

Client Sample ID: PDI-30-SO-39.5-20240821

Date Collected: 08/21/24 14:10 Date Received: 08/22/24 11:15

Lab Sample ID: 580-143177-9 **Matrix: Solid** 

Percent Solids: 86.8

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			469358	BYM	EET SEA	08/26/24 12:48
Total/NA	Analysis	8260D		1	469359	BYM	EET SEA	08/26/24 17:09
Total/NA	Prep	5035	RA		470152	BYM	EET SEA	09/03/24 14:59
Total/NA	Analysis	8260D	RA	1	470147	K1K	EET SEA	09/04/24 00:27

Client Sample ID: PDI-23-SO-41.5-20240819

Date Collected: 08/20/24 08:00

Date Received: 08/22/24 11:15

Lab Sample	ID:	580-143177-10
_		Matrix: Water

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	SM 5310C		1	470049	AUA	EET SEA	08/31/24 13:07

Client Sample ID: EB-082024-A

Date Collected: 08/20/24 08:00

Date Received: 08/22/24 11:15

Lab Samu	JA ID.	EOA A	142477	1 4 4
Lab Sami	ne ID:	อดบ-	1451 <i>11</i>	-11

**Matrix: Water** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	SM 5310C		1	470049	AUA	EET SEA	08/30/24 21:20

**Laboratory References:** 

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

### **Accreditation/Certification Summary**

Client: ERM-West Job ID: 580-143177-1

Project/Site: Arkema PDI Sampling

### **Laboratory: Eurofins Seattle**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Progra	am	Identification Number	Expiration Date	
Oregon	NELA	ס	4167	07-07-25	
The following analyte	e are included in this reno	rt but the laboratory is a	not certified by the governing author	ity. This list may include and	
,	•	,	not certified by the governing author	ity. This list may include and	
,	s are included in this repo does not offer certification	,	not certified by the governing author	ity. This list may include ana	
,	•	,	not certified by the governing author  Analyte	ity. This list may include and	

**Eurofins Seattle** 

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### **Sample Summary**

Client: ERM-West

580-143177-11

Project/Site: Arkema PDI Sampling

EB-082024-A

Lab Sample ID **Client Sample ID** Matrix Collected Received 580-143177-1 TB-01-SO-20240820 08/20/24 00:01 08/22/24 11:15 Solid PDI-31-35.2-SO-20240820 580-143177-2 Solid 08/20/24 15:15 08/22/24 11:15 580-143177-3 DUP-05-SQ-20240820 08/20/24 15:20 08/22/24 11:15 Solid 580-143177-4 RB-05-WQ-20240820 Water 08/20/24 15:40 08/22/24 11:15 580-143177-5 TB-01-WQ-20240820 Water 08/20/24 00:01 08/22/24 11:15 Solid 580-143177-6 PDI-31-SO-42.5-20240820 08/20/24 16:55 08/22/24 11:15 580-143177-7 PDI-31-SO-53.7-20240821 Solid 08/21/24 08:40 08/22/24 11:15 PDI-30-SO-12.4-20240821 580-143177-8 Solid 08/21/24 11:05 08/22/24 11:15 580-143177-9 PDI-30-SO-39.5-20240821 Solid 08/21/24 14:10 08/22/24 11:15 PDI-23-SO-41.5-20240819 08/20/24 08:00 08/22/24 11:15 580-143177-10 Water

Water

08/20/24 08:00 08/22/24 11:15

1

Job ID: 580-143177-1

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### **Eurofins Seattle**

5755 8th Street East Tacoma, WA 98424 Phone (253) 922-2310

## **Chain of Custody Record**



Environment Testing

Client Information	Sampler:				.ab PM: Cruz, Sh	eri L				Carrier Track	ing No(s):	COC No: 580-62781-192	269.12
lient Contact: very Soplata	Phone:				-Mail: Sheri Cru	ız@et	eurof	nsus.com		State of Origin	1:	Page:	
ompany:			PWSID:		1	2000	Curon					Page of Job#:	
RM-West	Due Date Request	lad:					_	An	alysis R	equested			
050 SW 6th Avenue Suite 1650	Due Date Nequesi	ieu.										Preservation Co F - MeOH	odes:
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ione:	PO#: 0732436.301								1 1		100000000		1 11101 11011 (MA)( 1001 1001
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/ery.soplata@erm.com oject Name:	Project #:					1 2	list_LL	list e				101101111111111111111111111111111111111	
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e:	SSOW#:				Ē	stan A	, stanc	standard			580-14317	7 Chain of Custo	ody
			Sample Type	Matrix (w=water S=solid,		- Volatiles	- Volatiles	- Volatiles			Numbe		
imple Identification	Sample Date	Sample Time	(C=comp, G≖grab)	O=waste/ol		8260D	8260D	8260D -			Total	Special I	nstructions/Note:
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)UP-05-5Q-2024UB20	08/20/24	1520	6	5		X					a		
4B-05-WQ-20240820	08/20/24		6	W				X.			3		
B-01-WQ-20240820	08/20/24	NA	6	101				x			1		
DI-31-50-4425-20210820	08/20/24	1655	G	S	1	X					4		
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VX-30-50-12.4-20240821	08/21/24		6	5		X		11			2		
05-464-34-5	10010				#	1							
DI-30-50-39.5-20240321	08/21/24	1410	G	S	11	×					2		
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ssible Hazard Identification					Se	mple	Disp		e may be a	assessed if s	amples are retaine	d longer than 1	month)
Non-Hazard Flammable Skin Irritant P	oison B Unkno	wn LR	adiological			$\square_{R}$	eturn	To Client		Disposal By La		ve For	Months
iverable Requested: (1) III, IV, Other (specify)					Sp	ecial	nstru	tions/QC	Requireme	nts:			
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#### **Eurofins Seattle**

5755 8th Street East Tacoma, WA 98424 Phone (253) 922 2310

### **Chain of Custody Record**



**Environment Testing** 

lient Information	Sampler:				PM: Iz, She	eri L						Carrie	Trackin	g NO(s):			COC No: 580-62781-19269.12
ient Contact: very Soplata	Рһоле:			E-M She		ız@et	euro	finsus	.com			State o	of Origin:				Page: Page of 2
ompany: RM-West			PWSID:		T					alysis	Ren	Upet	ed				Job #:
idress: 050 SW 6th Avenue Suite 1650	Due Date Reques	ted:					Г										Preservation Codes: F - MeOH
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one:	PO#:		3.10		Ш	ı		ent b									
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		Sample	Sample Type (C=comp,	Matrix (w=water, S=solid, O=waste/oil,	eld Filtere	8260D - Volat	8260D - Volatiles,	8260D - Volatiles,	Doc							Total Numb	
mple Identification	Sample Date	Time		BT=Tiesue, A=Air		8 8	E 82	8 A	7							L <sub>2</sub>	Special Instructions/Note:
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ssible Hazard Identification	NAI .				S					e may							d longer than 1 month)
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pty Kit Relinquished by:		Date:			Time	:						IM	ethod of	Shipme	nt:		
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nquished by:	Date/Time:			Company		Rece	ived b	y:				-		Date/T	ime:		Company
Custody Seals Intact: Custody Seal No.:						Cook	er Tem	peratui	e(s) °C	and Oth	her Rem	arks:					
Δ Yes Δ No				age 52													Ver: 04/02/2024

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Client: ERM-West Job Number: 580-143177-1

Login Number: 143177 List Source: Eurofins Seattle

List Number: 1

Creator: O'Connell, Jason I

Graden: G Common, Gucon I		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

**ANALYTICAL REPORT** 

### PREPARED FOR

Attn: Avery Soplata ERM-West 1050 SW 6th Avenue Suite 1650 Portland, Oregon 97204

Generated 9/11/2024 11:14:09 AM

### **JOB DESCRIPTION**

Arkema PDI Sampling

### **JOB NUMBER**

580-143296-1

Eurofins Seattle 5755 8th Street East Tacoma WA 98424



### **Eurofins Seattle**

### **Job Notes**

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### **Authorization**

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Authorized for release by Sheri Cruz, Project Manager I Sheri.Cruz@et.eurofinsus.com (253)922-2310

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Client: ERM-West

Project/Site: Arkema PDI Sampling

Laboratory Job ID: 580-143296-1

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QC Sample Results	26
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Sample Summary	41
Chain of Custody	42
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#### **Case Narrative**

Client: ERM-West Job ID: 580-143296-1

Project: Arkema PDI Sampling

Job ID: 580-143296-1 Eurofins Seattle

### Job Narrative 580-143296-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these
  situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise
  specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed
  unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 8/27/2024 1:16 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.5°C.

#### GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-470219 recovered outside acceptance criteria, low biased, for Hexachlorobutadiene. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8260D: The method blank for preparation batch 580-470215 and analytical batch 580-470219 contained Benzene and Tetrachloroethene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-470452 recovered above the upper control limit for Dichlorodifluoromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: PDI-30-SO-42-20240822 (580-143296-1), PDI-30-SO-48.6-20240822 (580-143296-2), TB-01-SO-20240822 (580-143296-3), PDI-29-SO-35-20240822 (580-143296-4), PDI-29-SO-36.5-20240822 (580-143296-5), PDI-29-SO-39.5-20240822 (580-143296-6), PDI-29-SO-42-20240822 (580-143296-7), PDI-29-SO-51-20240822 (580-143296-8), PDI-28-SO-41-20240822 (580-143296-9), PDI-28-SO-55.1-20240822 (580-143296-10) and (CCVIS 580-470452/3).

Method 8260D: The method blank for preparation batch 580-470443 and analytical batch 580-470452 contained Hexachlorobutadiene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8260D: Reanalysis of the following samples were performed outside of the analytical holding time due to dilution for target analytes: PDI-29-SO-36.5-20240822 (580-143296-5) and PDI-29-SO-39.5-20240822 (580-143296-6).

Method 8260D: Surrogate recovery for the following sample was outside the upper control limit: PDI-29-SO-39.5-20240822 (580-143296-6). Chemically associated targets analytes with detections are not reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **General Chemistry**

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**Eurofins Seattle** 

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#### **Definitions/Glossary**

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

#### **Qualifiers**

GU	1410	VOA

Qualifier	Qualifier Description
В	Compound was found in the blank and sample.
Н	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.

#### Glossary

DL, RA, RE, IN

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)

Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent
POS Positive / Present
PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

#### Client Sample ID: PDI-30-SO-42-20240822

Lab Sample ID: 580-143296-1 Date Collected: 08/22/24 13:00 Matrix: Solid Date Received: 08/27/24 13:16 Percent Solids: 91.8

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Result RL MDL Unit D Prepared Analyzed Dil Fac ND 0.022 0.0055 mg/Kg ₩ 09/05/24 14:19 1,1,1,2-Tetrachloroethane 09/05/24 17:13 1,1,1-Trichloroethane ND 0.044 0.0050 mg/Kg ₩ 09/05/24 14:19 09/05/24 17:13 1,1,2,2-Tetrachloroethane ND 0.022 0.0083 mg/Kg ġ 09/05/24 14:19 09/05/24 17:13 1,1,2-Trichloroethane ND 0.022 0.0081 mg/Kg 09/05/24 14:19 09/05/24 17:13 1.1-Dichloroethane ND 0.044 0.010 mg/Kg ₩ 09/05/24 14:19 09/05/24 17:13 1,1-Dichloroethene ND 0.044 0.014 mg/Kg ä 09/05/24 14:19 09/05/24 17:13 1,1-Dichloropropene ND 0.044 0.0058 mg/Kg 09/05/24 14:19 09/05/24 17:13 ND 0.088 0.044 09/05/24 14:19 09/05/24 17:13 1.2.3-Trichlorobenzene mg/Kg ä 1,2,3-Trichloropropane ND 0.044 0.013 mg/Kg 09/05/24 14:19 09/05/24 17:13 1,2,4-Trichlorobenzene ND 0.088 0.047 ġ 09/05/24 14:19 09/05/24 17:13 mg/Kg 1,2,4-Trimethylbenzene 09/05/24 14:19 09/05/24 17:13 ND 0.044 0.015 mg/Kg ND 0.017 09/05/24 14:19 1,2-Dibromo-3-Chloropropane 0.066 mg/Kg ₩ 09/05/24 17:13 1,2-Dibromoethane ND 0.022 0.0042 ġ 09/05/24 14:19 09/05/24 17:13 ma/Ka ND 09/05/24 17:13 1.2-Dichlorobenzene 0.044 0.0095 mg/Kg ġ 09/05/24 14:19 1.2-Dichloroethane ND 0.022 0.0060 mg/Kg 09/05/24 14:19 09/05/24 17:13 1,2-Dichloropropane ND 0.022 0.0072 ma/Ka ä 09/05/24 14:19 09/05/24 17:13 1,3,5-Trimethylbenzene ND 0.044 0.0083 mg/Kg 09/05/24 14:19 09/05/24 17:13 1,3-Dichlorobenzene ND 0.066 0.015 mg/Kg 09/05/24 14:19 09/05/24 17:13 09/05/24 17:13 1.3-Dichloropropane ND 0.066 0.0061 mg/Kg ä 09/05/24 14:19 1,4-Dichlorobenzene ND 0.066 0.012 mg/Kg 09/05/24 14:19 09/05/24 17:13 09/05/24 14:19 ND 0.044 0.013 ť 2,2-Dichloropropane mg/Kg 09/05/24 17:13 ND 0.044 0.0097 ₽ 09/05/24 14:19 09/05/24 17:13 2-Chlorotoluene mg/Kg 4-Chlorotoluene ND 0.044 0.011 mg/Kg ġ 09/05/24 14:19 09/05/24 17:13 4-Isopropyltoluene ND 0.044 09/05/24 14:19 09/05/24 17:13 0.011 mg/Kg ND 0.022 0.0042 09/05/24 14:19 09/05/24 17:13 Benzene ma/Ka ä Bromobenzene ND 0.044 0.0046 ma/Ka ₽ 09/05/24 14:19 09/05/24 17:13 Bromochloromethane ND 0.044 0.0068 mg/Kg ġ 09/05/24 14:19 09/05/24 17:13 Bromodichloromethane ND 0.044 0.0060 mg/Kg ġ 09/05/24 14:19 09/05/24 17:13 Bromoform ND 0.044 0.0049 ä 09/05/24 14:19 09/05/24 17:13 ma/Ka Bromomethane ND 0.11 0.041 mg/Kg 09/05/24 14:19 09/05/24 17:13 Carbon tetrachloride ND 0.022 0.0048 ġ 09/05/24 14:19 09/05/24 17:13 mg/Kg 0.044 0.0053 09/05/24 17:13 Chlorobenzene 3.7 mg/Kg ď 09/05/24 14:19 Chloroethane ND 880.0 0.023 mg/Kg 09/05/24 14:19 09/05/24 17:13 Chloroform NΠ 0.022 0.0046 ť 09/05/24 14:19 09/05/24 17:13 mg/Kg Chloromethane ND 0.066 09/05/24 14:19 09/05/24 17:13 ma/Ka ₩ cis-1 2-Dichloroethene ND 0.066 09/05/24 14:19 09/05/24 17:13 0.014 mg/Kg ä cis-1,3-Dichloropropene ND 0.022 0.0044 mg/Kg # 09/05/24 14:19 09/05/24 17:13 Dibromochloromethane ND 0.022 0.0054 09/05/24 14:19 09/05/24 17:13 mg/Kg Dibromomethane ND 0.044 0.0081 mg/Kg ₽ 09/05/24 14:19 09/05/24 17:13 Dichlorodifluoromethane ND ġ 09/05/24 14:19 09/05/24 17:13 0.27 0.050 mg/Kg Ethylbenzene ND 0.044 0.010 mg/Kg 09/05/24 14:19 09/05/24 17:13 Hexachlorobutadiene ND 0.11 0.026 mg/Kg ä 09/05/24 14:19 09/05/24 17:13 Isopropylbenzene ND 0.044 0.0094 mg/Kg 09/05/24 14:19 09/05/24 17:13 Methyl tert-butyl ether ND 0.044 0.0066 mg/Kg 09/05/24 14:19 09/05/24 17:13 Methylene Chloride ND 0.27 0.029 ä 09/05/24 14:19 09/05/24 17:13 mg/Kg m-Xylene & p-Xylene ND 0.044 0.0078 mg/Kg 09/05/24 14:19 09/05/24 17:13 ND Naphthalene 0.16 0.043 mg/Kg 09/05/24 14:19 09/05/24 17:13 n-Butylbenzene ND 0.044 0.020 mg/Kg ġ 09/05/24 14:19 09/05/24 17:13 N-Propylbenzene ND 0.044 09/05/24 14:19 09/05/24 17:13 0.016 mg/Kg

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-30-SO-42-20240822

Lab Sample ID: 580-143296-1 Date Collected: 08/22/24 13:00 Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
o-Xylene	ND		0.044	0.0055	mg/Kg	— <u></u>	09/05/24 14:19	09/05/24 17:13	
sec-Butylbenzene	ND		0.044	0.0094	mg/Kg	₽	09/05/24 14:19	09/05/24 17:13	
Styrene	ND		0.044	0.014	mg/Kg	₩	09/05/24 14:19	09/05/24 17:13	
t-Butylbenzene	ND		0.044	0.0085	mg/Kg	₩	09/05/24 14:19	09/05/24 17:13	
Tetrachloroethene	ND		0.044	0.0058	mg/Kg	₽	09/05/24 14:19	09/05/24 17:13	
Toluene	ND		0.066	0.015	mg/Kg	₩	09/05/24 14:19	09/05/24 17:13	
trans-1,2-Dichloroethene	ND		0.066	0.016	mg/Kg	₽	09/05/24 14:19	09/05/24 17:13	
trans-1,3-Dichloropropene	ND		0.044	0.0077	mg/Kg	₩	09/05/24 14:19	09/05/24 17:13	
Trichloroethene	ND		0.044	0.011	mg/Kg		09/05/24 14:19	09/05/24 17:13	
Trichlorofluoromethane	ND		0.088	0.029	mg/Kg	☼	09/05/24 14:19	09/05/24 17:13	
Vinyl chloride	ND		0.11	0.021	mg/Kg	₽	09/05/24 14:19	09/05/24 17:13	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	104		80 - 121				09/05/24 14:19	09/05/24 17:13	
4-Bromofluorobenzene (Surr)	100		80 - 120				09/05/24 14:19	09/05/24 17:13	
Dibromofluoromethane (Surr)	107		80 - 120				09/05/24 14:19	09/05/24 17:13	
Toluene-d8 (Surr)	100		80 - 120				09/05/24 14:19	09/05/24 17:13	
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fa
Percent Solids (SM22 2540G)	91.8		0.1	0.1	%			09/05/24 12:55	
Percent Moisture (SM22 2540G)	8.2		0.1	0.1	%			09/05/24 12:55	

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

#### Client Sample ID: PDI-30-SO-48.6-20240822

Lab Sample ID: 580-143296-2 Date Collected: 08/22/24 15:00 Matrix: Solid Date Received: 08/27/24 13:16 Percent Solids: 91.0

Analyte	Result (	Qualifier RI	. MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND	0.024	0.0059	mg/Kg	— <u></u>	09/05/24 14:19	09/05/24 17:34	
1,1,1-Trichloroethane	ND	0.04	0.0054	mg/Kg	₽	09/05/24 14:19	09/05/24 17:34	
1,1,2,2-Tetrachloroethane	ND	0.024	0.0089	mg/Kg	₽	09/05/24 14:19	09/05/24 17:34	
1,1,2-Trichloroethane	ND	0.024	0.0087	mg/Kg		09/05/24 14:19	09/05/24 17:34	
1,1-Dichloroethane	ND	0.04			₩	09/05/24 14:19	09/05/24 17:34	
1,1-Dichloroethene	ND	0.04		mg/Kg	₽	09/05/24 14:19	09/05/24 17:34	
1,1-Dichloropropene	ND	0.04		mg/Kg		09/05/24 14:19	09/05/24 17:34	
I,2,3-Trichlorobenzene	ND	0.094			₩	09/05/24 14:19	09/05/24 17:34	
1,2,3-Trichloropropane	ND	0.04		mg/Kg	₽	09/05/24 14:19	09/05/24 17:34	
I,2,4-Trichlorobenzene	ND	0.094				09/05/24 14:19	09/05/24 17:34	
I,2,4-Trimethylbenzene	ND	0.04			₩	09/05/24 14:19	09/05/24 17:34	
I,2-Dibromo-3-Chloropropane	ND	0.07			₩	09/05/24 14:19	09/05/24 17:34	
I,2-Dibromoethane	ND	0.02		mg/Kg		09/05/24 14:19	09/05/24 17:34	
I.2-Dichlorobenzene	ND	0.02			₩	09/05/24 14:19	09/05/24 17:34	
1,2-Dichloropenzene	ND ND	0.04		mg/Kg	₩	09/05/24 14:19	09/05/24 17:34	
,2-Dichloropropane	ND	0.024		mg/Kg		09/05/24 14:19	09/05/24 17:34	
I,3,5-Trimethylbenzene		0.02						
•	ND ND			mg/Kg	*	09/05/24 14:19	09/05/24 17:34	
I,3-Dichlorobenzene		0.07		mg/Kg		09/05/24 14:19	09/05/24 17:34	
,3-Dichloropropane	ND	0.07		mg/Kg	<b>*</b>	09/05/24 14:19	09/05/24 17:34	
,4-Dichlorobenzene	ND	0.07		mg/Kg	*	09/05/24 14:19	09/05/24 17:34	
2,2-Dichloropropane	ND	0.04		mg/Kg	<del>.</del> .	09/05/24 14:19	09/05/24 17:34	
2-Chlorotoluene	ND	0.04		mg/Kg	₽	09/05/24 14:19	09/05/24 17:34	
4-Chlorotoluene	ND	0.04		mg/Kg	₽	09/05/24 14:19	09/05/24 17:34	
1-Isopropyltoluene	ND	0.04		mg/Kg		09/05/24 14:19	09/05/24 17:34	
Benzene	ND	0.024		mg/Kg	₩	09/05/24 14:19	09/05/24 17:34	
Bromobenzene	ND	0.04		mg/Kg	₽	09/05/24 14:19	09/05/24 17:34	
Bromochloromethane	ND	0.04	0.0073		<del>.</del>	09/05/24 14:19	09/05/24 17:34	
Bromodichloromethane	ND	0.04	0.0065	mg/Kg	₩	09/05/24 14:19	09/05/24 17:34	
Bromoform	ND	0.04	0.0053	mg/Kg	₩	09/05/24 14:19	09/05/24 17:34	
Bromomethane	ND	0.12	0.044	mg/Kg		09/05/24 14:19	09/05/24 17:34	
Carbon tetrachloride	ND	0.024	0.0052	mg/Kg	₽	09/05/24 14:19	09/05/24 17:34	
Chlorobenzene	0.036	J 0.04	0.0056	mg/Kg	₩	09/05/24 14:19	09/05/24 17:34	
Chloroethane	ND	0.094	0.025	mg/Kg	₩	09/05/24 14:19	09/05/24 17:34	
Chloroform	ND	0.024	0.0049	mg/Kg	₩	09/05/24 14:19	09/05/24 17:34	
Chloromethane	ND	0.07	0.012	mg/Kg	₽	09/05/24 14:19	09/05/24 17:34	
cis-1,2-Dichloroethene	ND	0.07	0.015	mg/Kg	₽	09/05/24 14:19	09/05/24 17:34	
cis-1,3-Dichloropropene	ND	0.024	0.0047	mg/Kg	₩	09/05/24 14:19	09/05/24 17:34	
Dibromochloromethane	ND	0.024	0.0058	mg/Kg	₩	09/05/24 14:19	09/05/24 17:34	
Dibromomethane	ND	0.04	0.0087	mg/Kg	₽	09/05/24 14:19	09/05/24 17:34	
Dichlorodifluoromethane	ND	0.29	0.054	mg/Kg	₽	09/05/24 14:19	09/05/24 17:34	
Ethylbenzene	ND	0.04	0.011	mg/Kg	₩	09/05/24 14:19	09/05/24 17:34	
	ND	0.13		mg/Kg	₩	09/05/24 14:19	09/05/24 17:34	
sopropylbenzene	ND	0.04		mg/Kg		09/05/24 14:19	09/05/24 17:34	
Methyl tert-butyl ether	ND	0.04		mg/Kg	₽	09/05/24 14:19	09/05/24 17:34	
Methylene Chloride	ND	0.29		mg/Kg		09/05/24 14:19	09/05/24 17:34	
m-Xylene & p-Xylene	ND	0.04		mg/Kg		09/05/24 14:19	09/05/24 17:34	
Naphthalene	ND	0.04		mg/Kg	₩	09/05/24 14:19	09/05/24 17:34	
n-Butylbenzene	ND	0.04		mg/Kg	₩	09/05/24 14:19	09/05/24 17:34	
N-Propylbenzene	ND	0.04		mg/Kg	¥ 	09/05/24 14:19	09/05/24 17:34	

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-30-SO-48.6-20240822

Lab Sample ID: 580-143296-2 Date Collected: 08/22/24 15:00 Matrix: Solid Date Received: 08/27/24 13:16

Percent Solids: 91.0

Method: SW846 8260D - Volatile	•	_	•	,	11-14	_	Duamanad	Analyses	D:: F
Analyte		Qualifier	RL _		Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.047	0.0059	mg/Kg	₩	09/05/24 14:19	09/05/24 17:34	1
sec-Butylbenzene	ND		0.047	0.010	mg/Kg	₽	09/05/24 14:19	09/05/24 17:34	1
Styrene	ND		0.047	0.015	mg/Kg	₩	09/05/24 14:19	09/05/24 17:34	1
t-Butylbenzene	ND		0.047	0.0090	mg/Kg	₽	09/05/24 14:19	09/05/24 17:34	1
Tetrachloroethene	ND		0.047	0.0062	mg/Kg	₽	09/05/24 14:19	09/05/24 17:34	1
Toluene	ND		0.071	0.016	mg/Kg	₽	09/05/24 14:19	09/05/24 17:34	1
trans-1,2-Dichloroethene	ND		0.071	0.017	mg/Kg	₽	09/05/24 14:19	09/05/24 17:34	1
trans-1,3-Dichloropropene	ND		0.047	0.0082	mg/Kg	₽	09/05/24 14:19	09/05/24 17:34	1
Trichloroethene	ND		0.047	0.012	mg/Kg	₽	09/05/24 14:19	09/05/24 17:34	1
Trichlorofluoromethane	ND		0.094	0.031	mg/Kg	₽	09/05/24 14:19	09/05/24 17:34	1
Vinyl chloride	ND		0.12	0.022	mg/Kg	₩	09/05/24 14:19	09/05/24 17:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			80 - 121				09/05/24 14:19	09/05/24 17:34	1
4-Bromofluorobenzene (Surr)	103		80 - 120				09/05/24 14:19	09/05/24 17:34	1
Dibromofluoromethane (Surr)	111		80 - 120				09/05/24 14:19	09/05/24 17:34	1
Toluene-d8 (Surr)	97		80 - 120				09/05/24 14:19	09/05/24 17:34	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	91.0		0.1	0.1	%			09/05/24 12:55	1
Percent Moisture (SM22 2540G)	9.0		0.1	0.1	%			09/05/24 12:55	1

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

Client Sample ID: TB-01-SO-20240822

Lab Sample ID: 580-143296-3 Date Collected: 08/22/24 23:59 Matrix: Solid

Date Received: 08/27/24 13:16

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050	mg/Kg		09/05/24 14:19	09/05/24 16:52	
1,1,1-Trichloroethane	ND		0.040	0.0046	mg/Kg		09/05/24 14:19	09/05/24 16:52	
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076	mg/Kg		09/05/24 14:19	09/05/24 16:52	
1,1,2-Trichloroethane	ND		0.020	0.0074	mg/Kg		09/05/24 14:19	09/05/24 16:52	
1,1-Dichloroethane	ND		0.040	0.0092			09/05/24 14:19	09/05/24 16:52	
1,1-Dichloroethene	ND		0.040		mg/Kg		09/05/24 14:19	09/05/24 16:52	
1,1-Dichloropropene	ND		0.040	0.0053			09/05/24 14:19	09/05/24 16:52	
1,2,3-Trichlorobenzene	ND		0.080	0.040	mg/Kg		09/05/24 14:19	09/05/24 16:52	
I,2,3-Trichloropropane	ND		0.040	0.012	mg/Kg		09/05/24 14:19	09/05/24 16:52	
I,2,4-Trichlorobenzene	ND		0.080		mg/Kg		09/05/24 14:19	09/05/24 16:52	
I,2,4-Trimethylbenzene	ND		0.040	0.014			09/05/24 14:19	09/05/24 16:52	
1,2-Dibromo-3-Chloropropane	ND		0.060		mg/Kg		09/05/24 14:19	09/05/24 16:52	
I,2-Dibromoethane	ND		0.020	0.0038			09/05/24 14:19	09/05/24 16:52	
I,2-Dichlorobenzene	ND		0.040	0.0087			09/05/24 14:19	09/05/24 16:52	
1,2-Dichloroethane	ND		0.020	0.0055			09/05/24 14:19	09/05/24 16:52	
1,2-Dichloropropane	ND		0.020	0.0066			09/05/24 14:19	09/05/24 16:52	
I,3,5-Trimethylbenzene	ND		0.020	0.0076			09/05/24 14:19	09/05/24 16:52	
1,3-Dichlorobenzene	ND ND		0.040		mg/Kg		09/05/24 14:19	09/05/24 16:52	
							09/05/24 14:19	09/05/24 16:52	
,3-Dichloropropane	ND		0.060	0.0056					
,4-Dichlorobenzene	ND		0.060		mg/Kg		09/05/24 14:19	09/05/24 16:52	
2,2-Dichloropropane	ND		0.040		mg/Kg		09/05/24 14:19	09/05/24 16:52	
2-Chlorotoluene	ND		0.040	0.0088			09/05/24 14:19	09/05/24 16:52	
4-Chlorotoluene	ND		0.040		mg/Kg		09/05/24 14:19	09/05/24 16:52	
1-Isopropyltoluene	ND		0.040		mg/Kg		09/05/24 14:19	09/05/24 16:52	
Benzene	ND		0.020	0.0038	mg/Kg		09/05/24 14:19	09/05/24 16:52	
Bromobenzene	ND		0.040	0.0042			09/05/24 14:19	09/05/24 16:52	
3romochloromethane	ND		0.040	0.0062			09/05/24 14:19	09/05/24 16:52	
Bromodichloromethane	ND		0.040	0.0055			09/05/24 14:19	09/05/24 16:52	
Bromoform	ND		0.040	0.0045	mg/Kg		09/05/24 14:19	09/05/24 16:52	
Bromomethane	ND		0.10		mg/Kg		09/05/24 14:19	09/05/24 16:52	
Carbon tetrachloride	ND		0.020	0.0044	mg/Kg		09/05/24 14:19	09/05/24 16:52	
Chlorobenzene	ND		0.040	0.0048	mg/Kg		09/05/24 14:19	09/05/24 16:52	
Chloroethane	ND		0.080	0.021	mg/Kg		09/05/24 14:19	09/05/24 16:52	
Chloroform	ND		0.020	0.0042	mg/Kg		09/05/24 14:19	09/05/24 16:52	
Chloromethane	ND		0.060	0.010	mg/Kg		09/05/24 14:19	09/05/24 16:52	
cis-1,2-Dichloroethene	ND		0.060	0.013	mg/Kg		09/05/24 14:19	09/05/24 16:52	
cis-1,3-Dichloropropene	ND		0.020	0.0040	mg/Kg		09/05/24 14:19	09/05/24 16:52	
Dibromochloromethane	ND		0.020	0.0049	mg/Kg		09/05/24 14:19	09/05/24 16:52	
Dibromomethane	ND		0.040	0.0074	mg/Kg		09/05/24 14:19	09/05/24 16:52	
Dichlorodifluoromethane	ND		0.25	0.046	mg/Kg		09/05/24 14:19	09/05/24 16:52	
Ethylbenzene	ND		0.040	0.0091	mg/Kg		09/05/24 14:19	09/05/24 16:52	
- Hexachlorobutadiene	0.038	JB	0.10	0.024	mg/Kg		09/05/24 14:19	09/05/24 16:52	
sopropylbenzene	ND		0.040	0.0086			09/05/24 14:19	09/05/24 16:52	
Methyl tert-butyl ether	ND		0.040	0.0060			09/05/24 14:19	09/05/24 16:52	
Methylene Chloride	ND		0.25		mg/Kg		09/05/24 14:19	09/05/24 16:52	
m-Xylene & p-Xylene	ND		0.040	0.0071			09/05/24 14:19	09/05/24 16:52	
Naphthalene	ND		0.15		mg/Kg		09/05/24 14:19	09/05/24 16:52	
n-Butylbenzene	ND		0.040		mg/Kg		09/05/24 14:19	09/05/24 16:52	
N-Propylbenzene	ND		0.040		mg/Kg		09/05/24 14:19	09/05/24 16:52	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

Client Sample ID: TB-01-SO-20240822

Lab Sample ID: 580-143296-3 Date Collected: 08/22/24 23:59

Matrix: Solid

Date Received: 08/27/24 13:16

Method: SW846 8260D - Volati	le Organic Comp	ounds by G	C/MS (Contir	nued)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	MD		0.040	0.0050	mg/Kg		09/05/24 14:19	09/05/24 16:52	1
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		09/05/24 14:19	09/05/24 16:52	1
Styrene	ND		0.040	0.013	mg/Kg		09/05/24 14:19	09/05/24 16:52	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		09/05/24 14:19	09/05/24 16:52	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		09/05/24 14:19	09/05/24 16:52	1
Toluene	ND		0.060	0.014	mg/Kg		09/05/24 14:19	09/05/24 16:52	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		09/05/24 14:19	09/05/24 16:52	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		09/05/24 14:19	09/05/24 16:52	1
Trichloroethene	ND		0.040	0.010	mg/Kg		09/05/24 14:19	09/05/24 16:52	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		09/05/24 14:19	09/05/24 16:52	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		09/05/24 14:19	09/05/24 16:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		80 - 121				09/05/24 14:19	09/05/24 16:52	1
4-Bromofluorobenzene (Surr)	102		80 - 120				09/05/24 14:19	09/05/24 16:52	1
Dibromofluoromethane (Surr)	111		80 - 120				09/05/24 14:19	09/05/24 16:52	1
Toluene-d8 (Surr)	95		80 - 120				09/05/24 14:19	09/05/24 16:52	1

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-29-SO-35-20240822

Lab Sample ID: 580-143296-4 Date Collected: 08/23/24 10:55 Matrix: Solid Date Received: 08/27/24 13:16 Percent Solids: 89.3

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Result RL MDL Unit D Prepared Analyzed Dil Fac ND 0.022 0.0056 mg/Kg ₩ 09/05/24 14:19 1,1,1,2-Tetrachloroethane 09/05/24 17:54 1,1,1-Trichloroethane ND 0.045 0.0051 mg/Kg ₩ 09/05/24 14:19 09/05/24 17:54 1,1,2,2-Tetrachloroethane ND 0.022 0.0085 mg/Kg ġ 09/05/24 14:19 09/05/24 17:54 1,1,2-Trichloroethane ND 0.022 0.0083 mg/Kg 09/05/24 14:19 09/05/24 17:54 1.1-Dichloroethane ND 0.045 0.010 mg/Kg ₩ 09/05/24 14:19 09/05/24 17:54 1,1-Dichloroethene ND 0.045 0.014 mg/Kg ä 09/05/24 14:19 09/05/24 17:54 1,1-Dichloropropene ND 0.045 0.0059 mg/Kg 09/05/24 14:19 09/05/24 17:54 ND 0.089 0.044 09/05/24 14:19 09/05/24 17:54 1.2.3-Trichlorobenzene mg/Kg ä 1,2,3-Trichloropropane ND 0.045 0.013 mg/Kg 09/05/24 14:19 09/05/24 17:54 ND 0.089 0.048 ġ 09/05/24 14:19 09/05/24 17:54 1,2,4-Trichlorobenzene mg/Kg 1,2,4-Trimethylbenzene 09/05/24 14:19 09/05/24 17:54 ND 0.045 0.015 mg/Kg ND 0.017 09/05/24 14:19 1,2-Dibromo-3-Chloropropane 0.067 mg/Kg ₩ 09/05/24 17:54 1,2-Dibromoethane ND 0.022 0.0042 ġ 09/05/24 14:19 09/05/24 17:54 ma/Ka ND 09/05/24 17:54 1.2-Dichlorobenzene 0.045 0.0097 mg/Kg ġ 09/05/24 14:19 1.2-Dichloroethane ND 0.022 0.0062 mg/Kg 09/05/24 14:19 09/05/24 17:54 1,2-Dichloropropane ND 0.022 0.0074 ma/Ka ä 09/05/24 14:19 09/05/24 17:54 1,3,5-Trimethylbenzene ND 0.045 0.0085 mg/Kg 09/05/24 14:19 09/05/24 17:54 1,3-Dichlorobenzene ND 0.067 0.015 mg/Kg 09/05/24 14:19 09/05/24 17:54 09/05/24 17:54 1.3-Dichloropropane ND 0.067 0.0063 mg/Kg ä 09/05/24 14:19 1,4-Dichlorobenzene ND 0.067 0.012 mg/Kg 09/05/24 14:19 09/05/24 17:54 09/05/24 14:19 ND 0.045 0.014 ť 09/05/24 17:54 2,2-Dichloropropane mg/Kg ND 0.045 0.0098 ₽ 09/05/24 14:19 09/05/24 17:54 2-Chlorotoluene mg/Kg 4-Chlorotoluene ND 0.045 0.011 mg/Kg ġ 09/05/24 14:19 09/05/24 17:54 4-Isopropyltoluene ND 0.045 09/05/24 14:19 09/05/24 17:54 0.011 mg/Kg ND 0.022 0.0042 09/05/24 14:19 09/05/24 17:54 Benzene ma/Ka ä Bromobenzene ND 0.045 0.0047 ma/Ka ₽ 09/05/24 14:19 09/05/24 17:54 Bromochloromethane ND 0.045 0.0069 mg/Kg ġ 09/05/24 14:19 09/05/24 17:54 Bromodichloromethane ND 0.045 0.0062 mg/Kg ġ 09/05/24 14:19 09/05/24 17:54 Bromoform ND 0.045 0.0050 ä 09/05/24 14:19 09/05/24 17:54 ma/Ka Bromomethane ND 0.11 0.042 mg/Kg 09/05/24 14:19 09/05/24 17:54 Carbon tetrachloride ND 0.022 0.0049 ġ 09/05/24 14:19 09/05/24 17:54 mg/Kg 09/05/24 17:54 0.0054 Chlorobenzene 0.045 mg/Kg ď 09/05/24 14:19 1.9 Chloroethane ND 0.089 0.023 mg/Kg 09/05/24 14:19 09/05/24 17:54 0.022 0.0047 ť 09/05/24 14:19 09/05/24 17:54 Chloroform 0.017 mg/Kg ND 0.067 09/05/24 14:19 09/05/24 17:54 Chloromethane ma/Ka ₩ ND 0.067 09/05/24 14:19 09/05/24 17:54 cis-1 2-Dichloroethene 0.014 mg/Kg ä cis-1,3-Dichloropropene ND 0.022 0.0045 mg/Kg # 09/05/24 14:19 09/05/24 17:54 Dibromochloromethane ND 0.022 0.0055 09/05/24 14:19 09/05/24 17:54 mg/Kg Dibromomethane ND 0.045 0.0083 mg/Kg ₽ 09/05/24 14:19 09/05/24 17:54 Dichlorodifluoromethane ND 0.28 ġ 09/05/24 14:19 09/05/24 17:54 0.051 mg/Kg Ethylbenzene ND 0.045 0.010 mg/Kg 09/05/24 14:19 09/05/24 17:54 Hexachlorobutadiene ND 0.11 0.027 mg/Kg ä 09/05/24 14:19 09/05/24 17:54 Isopropylbenzene ND 0.045 0.0096 mg/Kg 09/05/24 14:19 09/05/24 17:54 Methyl tert-butyl ether ND 0.045 0.0067 mg/Kg 09/05/24 14:19 09/05/24 17:54 Methylene Chloride ND 0.28 0.029 ä 09/05/24 14:19 09/05/24 17:54 mg/Kg m-Xylene & p-Xylene ND 0.045 0.0079 mg/Kg 09/05/24 14:19 09/05/24 17:54 ND Naphthalene 0.17 0.044 mg/Kg 09/05/24 14:19 09/05/24 17:54 n-Butylbenzene ND 0.045 0.021 mg/Kg ġ 09/05/24 14:19 09/05/24 17:54 N-Propylbenzene ND 0.045 09/05/24 14:19 09/05/24 17:54 0.017 mg/Kg

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-29-SO-35-20240822

Lab Sample ID: 580-143296-4 Date Collected: 08/23/24 10:55 Matrix: Solid

Pate Received: 08/27/24 13:16						Percent Solids: 89			
Method: SW846 8260D - Volatile	Organic Comp	ounds by GC	/MS (Contir	ued)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
o-Xylene	ND		0.045	0.0056	mg/Kg	<del>*</del>	09/05/24 14:19	09/05/24 17:54	
sec-Butylbenzene	ND		0.045	0.0096	mg/Kg	₽	09/05/24 14:19	09/05/24 17:54	
Styrene	ND		0.045	0.014	mg/Kg	₽	09/05/24 14:19	09/05/24 17:54	
t-Butylbenzene	ND		0.045	0.0086	mg/Kg	₩	09/05/24 14:19	09/05/24 17:54	
Tetrachloroethene	ND		0.045	0.0059	mg/Kg	₩	09/05/24 14:19	09/05/24 17:54	
Toluene	ND		0.067	0.015	mg/Kg	₽	09/05/24 14:19	09/05/24 17:54	
trans-1,2-Dichloroethene	ND		0.067	0.016	mg/Kg	₩	09/05/24 14:19	09/05/24 17:54	
trans-1,3-Dichloropropene	ND		0.045	0.0078	mg/Kg	₩	09/05/24 14:19	09/05/24 17:54	
Trichloroethene	ND		0.045	0.012	mg/Kg	₩	09/05/24 14:19	09/05/24 17:54	
Trichlorofluoromethane	ND		0.089	0.029	mg/Kg	₩	09/05/24 14:19	09/05/24 17:54	
Vinyl chloride	ND		0.11	0.021	mg/Kg	₽	09/05/24 14:19	09/05/24 17:54	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	108		80 - 121				09/05/24 14:19	09/05/24 17:54	
4-Bromofluorobenzene (Surr)	104		80 - 120				09/05/24 14:19	09/05/24 17:54	
Dibromofluoromethane (Surr)	109		80 - 120				09/05/24 14:19	09/05/24 17:54	
Toluene-d8 (Surr)	100		80 - 120				09/05/24 14:19	09/05/24 17:54	
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fa
Percent Solids (SM22 2540G)	89.3		0.1	0.1	%			09/05/24 12:55	
Percent Moisture (SM22 2540G)	10.7		0.1	0.1	%			09/05/24 12:55	

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Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

### Client Sample ID: PDI-29-SO-36.5-20240822

Lab Sample ID: 580-143296-5 Date Collected: 08/23/24 11:30 Matrix: Solid Date Received: 08/27/24 13:16 Percent Solids: 87.5

Method: SW846 8260D - Volatile Or	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
,1,1,2-Tetrachloroethane	ND	Qualifier	0.028	0.0071	mg/Kg	— <del>"</del>	09/05/24 14:19	09/05/24 18:15	DII FA
,1,1-Trichloroethane	ND ND		0.028			*	09/05/24 14:19	09/05/24 18:15	
	ND ND		0.037	0.0065			09/05/24 14:19		
,1,2,2-Tetrachloroethane					mg/Kg	· · · · ·		09/05/24 18:15	
,1,2-Trichloroethane	ND		0.028		mg/Kg	φ.	09/05/24 14:19	09/05/24 18:15	
,1-Dichloroethane	ND		0.057		mg/Kg	₩.	09/05/24 14:19	09/05/24 18:15	
,1-Dichloroethene	ND		0.057		mg/Kg	<del>.</del>	09/05/24 14:19	09/05/24 18:15	
,1-Dichloropropene	ND		0.057	0.0075		*	09/05/24 14:19	09/05/24 18:15	
,2,3-Trichlorobenzene	ND		0.11		mg/Kg	*	09/05/24 14:19	09/05/24 18:15	
,2,3-Trichloropropane	ND		0.057		mg/Kg		09/05/24 14:19	09/05/24 18:15	
,2,4-Trichlorobenzene	ND		0.11		mg/Kg	₽	09/05/24 14:19	09/05/24 18:15	
,2,4-Trimethylbenzene	ND		0.057		mg/Kg	₩	09/05/24 14:19	09/05/24 18:15	
,2-Dibromo-3-Chloropropane	ND		0.085		mg/Kg	<del>.</del>	09/05/24 14:19	09/05/24 18:15	
,2-Dibromoethane	ND		0.028	0.0054		₩	09/05/24 14:19	09/05/24 18:15	
,2-Dichlorobenzene	0.099		0.057	0.012	mg/Kg	☼	09/05/24 14:19	09/05/24 18:15	
,2-Dichloroethane	ND		0.028	0.0078	mg/Kg		09/05/24 14:19	09/05/24 18:15	
,2-Dichloropropane	ND		0.028	0.0094	mg/Kg	₽	09/05/24 14:19	09/05/24 18:15	
,3,5-Trimethylbenzene	ND		0.057	0.011	mg/Kg	₽	09/05/24 14:19	09/05/24 18:15	
,3-Dichlorobenzene	ND		0.085	0.019	mg/Kg	₩	09/05/24 14:19	09/05/24 18:15	
,3-Dichloropropane	ND		0.085	0.0080	mg/Kg	₽	09/05/24 14:19	09/05/24 18:15	
,4-Dichlorobenzene	0.22		0.085	0.015	mg/Kg	₩	09/05/24 14:19	09/05/24 18:15	
,2-Dichloropropane	ND		0.057	0.017	mg/Kg	₽	09/05/24 14:19	09/05/24 18:15	
-Chlorotoluene	ND		0.057	0.013	mg/Kg		09/05/24 14:19	09/05/24 18:15	
-Chlorotoluene	ND		0.057	0.014	mg/Kg	₽	09/05/24 14:19	09/05/24 18:15	
-IsopropyItoluene	0.026	J	0.057		mg/Kg	₽	09/05/24 14:19	09/05/24 18:15	
enzene	ND		0.028	0.0054			09/05/24 14:19	09/05/24 18:15	
romobenzene	ND		0.057	0.0060		₩	09/05/24 14:19	09/05/24 18:15	
romochloromethane	ND		0.057	0.0088		₩	09/05/24 14:19	09/05/24 18:15	
Bromodichloromethane	ND		0.057	0.0078		∴	09/05/24 14:19	09/05/24 18:15	
Bromoform	ND		0.057	0.0064			09/05/24 14:19	09/05/24 18:15	
Bromomethane	ND		0.14		mg/Kg		09/05/24 14:19	09/05/24 18:15	
Carbon tetrachloride	ND		0.028	0.0063			09/05/24 14:19	09/05/24 18:15	
Chloroethane	ND		0.11	0.030	mg/Kg		09/05/24 14:19	09/05/24 18:15	
Chloroform	0.081		0.028	0.0060	mg/Kg	₩	09/05/24 14:19	09/05/24 18:15	
Chloromethane	ND		0.085		mg/Kg		09/05/24 14:19	09/05/24 18:15	
is-1,2-Dichloroethene	ND ND		0.085		mg/Kg	*	09/05/24 14:19	09/05/24 18:15	
•	ND		0.003	0.0057			09/05/24 14:19		
is-1,3-Dichloropropene						· · · · ·		09/05/24 18:15	
Dibromochloromethane	ND		0.028	0.0070		₽	09/05/24 14:19	09/05/24 18:15	
Dibromomethane	ND		0.057		mg/Kg	<b>*</b>	09/05/24 14:19	09/05/24 18:15	
Dichlorodifluoromethane	ND		0.36		mg/Kg	<del>.</del>	09/05/24 14:19	09/05/24 18:15	
Ethylbenzene	ND		0.057		mg/Kg	₽	09/05/24 14:19	09/05/24 18:15	
lexachlorobutadiene 	ND		0.14		mg/Kg	₽	09/05/24 14:19	09/05/24 18:15	
sopropylbenzene	ND		0.057		mg/Kg		09/05/24 14:19	09/05/24 18:15	
Methyl tert-butyl ether	ND		0.057	0.0085		₽	09/05/24 14:19	09/05/24 18:15	
lethylene Chloride	ND		0.36		mg/Kg	₽	09/05/24 14:19	09/05/24 18:15	
n-Xylene & p-Xylene	ND		0.057	0.010	mg/Kg		09/05/24 14:19	09/05/24 18:15	
laphthalene	0.21		0.21	0.056	mg/Kg	≎	09/05/24 14:19	09/05/24 18:15	
-Butylbenzene	ND		0.057	0.026	mg/Kg	₽	09/05/24 14:19	09/05/24 18:15	
					mg/Kg				

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-29-SO-36.5-20240822

Lab Sample ID: 580-143296-5 Date Collected: 08/23/24 11:30 Matrix: Solid

Date Received: 08/27/24 13:16 Percent Solids: 87.5

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.057	0.012	mg/Kg	<del>-</del>	09/05/24 14:19	09/05/24 18:15	1
Styrene	ND		0.057	0.018	mg/Kg	₽	09/05/24 14:19	09/05/24 18:15	1
t-Butylbenzene	ND		0.057	0.011	mg/Kg	₩	09/05/24 14:19	09/05/24 18:15	1
Tetrachloroethene	0.15		0.057	0.0075	mg/Kg	₩	09/05/24 14:19	09/05/24 18:15	1
Toluene	ND		0.085	0.019	mg/Kg	₽	09/05/24 14:19	09/05/24 18:15	1
trans-1,2-Dichloroethene	ND		0.085	0.021	mg/Kg	₽	09/05/24 14:19	09/05/24 18:15	1
trans-1,3-Dichloropropene	ND		0.057	0.0099	mg/Kg	₽	09/05/24 14:19	09/05/24 18:15	1
Trichloroethene	ND		0.057	0.015	mg/Kg	₽	09/05/24 14:19	09/05/24 18:15	1
Trichlorofluoromethane	ND		0.11	0.037	mg/Kg	₽	09/05/24 14:19	09/05/24 18:15	1
Vinyl chloride	ND		0.14	0.027	mg/Kg	₩	09/05/24 14:19	09/05/24 18:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		80 - 121				09/05/24 14:19	09/05/24 18:15	1
4-Bromofluorobenzene (Surr)	101		80 - 120				09/05/24 14:19	09/05/24 18:15	1
Dibromofluoromethane (Surr)	103		80 - 120				09/05/24 14:19	09/05/24 18:15	1
Toluene-d8 (Surr)	103		80 - 120				09/05/24 14:19	09/05/24 18:15	1
Method: SW846 8260D - Volatile	Organic Comp	ounds by G	C/MS - DL						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	130	Н	6.1	0.73	mg/Kg	₩	09/07/24 10:48	09/07/24 18:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		80 - 121				09/07/24 10:48	09/07/24 18:06	1
4-Bromofluorobenzene (Surr)	106		80 - 120				09/07/24 10:48	09/07/24 18:06	1
Dibromofluoromethane (Surr)	101		80 - 120				09/07/24 10:48	09/07/24 18:06	1
T / 10 /0 )	101		80 - 120				09/07/24 10:48	09/07/24 18:06	1
Toluene-d8 (Surr)									
Toluene-d8 (Surr) : General Chemistry									
	Result	Qualifier	RL	RL	Unit	<u>D</u>	Prepared	Analyzed	Dil Fac
General Chemistry	Result 87.5	Qualifier	RL 0.1	RL 0.1	Unit %	<u>D</u>	Prepared	<b>Analyzed</b> 09/05/24 12:55	Dil Fac

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

### Client Sample ID: PDI-29-SO-39.5-20240822

Lab Sample ID: 580-143296-6 Date Collected: 08/23/24 11:45 Matrix: Solid Date Received: 08/27/24 13:16 Percent Solids: 89.2

Method: SW846 8260D - Volatile Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND		2.7		mg/Kg	— <u>-</u>	09/04/24 11:59	09/04/24 13:58	
I,1,1-Trichloroethane	ND		5.4		mg/Kg	₩	09/04/24 11:59	09/04/24 13:58	
I,1,2,2-Tetrachloroethane	ND		2.7		mg/Kg	₽	09/04/24 11:59	09/04/24 13:58	
,1,2-Trichloroethane	ND		2.7	0.99	mg/Kg		09/04/24 11:59	09/04/24 13:58	
,1-Dichloroethane	ND		5.4		mg/Kg	₩	09/04/24 11:59	09/04/24 13:58	
,1-Dichloroethene	ND		5.4		mg/Kg	₩	09/04/24 11:59	09/04/24 13:58	
,1-Dichloropropene	ND		5.4	0.71	mg/Kg		09/04/24 11:59	09/04/24 13:58	
,2,3-Trichlorobenzene	ND		11	5.3		₩	09/04/24 11:59	09/04/24 13:58	
,2,3-Trichloropropane	ND		5.4	1.5		₩	09/04/24 11:59	09/04/24 13:58	
,2,4-Trichlorobenzene	ND		11	5.7			09/04/24 11:59	09/04/24 13:58	
I,2,4-Trimethylbenzene	ND		5.4	1.8	mg/Kg		09/04/24 11:59	09/04/24 13:58	
,2-Dibromo-3-Chloropropane	ND		8.0	2.0	mg/Kg	₩	09/04/24 11:59	09/04/24 13:58	
,2-Dibromoethane	ND		2.7	0.51			09/04/24 11:59	09/04/24 13:58	
			5.4		mg/Kg	₩	09/04/24 11:59	09/04/24 13:58	
1,2-Dichlorobenzene 1,2-Dichloroethane	<b>30</b> ND		2.7		mg/Kg	₩	09/04/24 11:59	09/04/24 13:58	
I,2-Dichloropropane	ND		2.7		mg/Kg		09/04/24 11:59	09/04/24 13:58	
	ND ND		5.4	1.0		₩	09/04/24 11:59	09/04/24 13:58	
,3,5-Trimethylbenzene			8.0		mg/Kg mg/Kg	₩	09/04/24 11:59		
1,3-Dichlorobenzene	3.5							09/04/24 13:58	
,3-Dichloropropane	ND		8.0		mg/Kg	*	09/04/24 11:59	09/04/24 13:58	
I,4-Dichlorobenzene	130		8.0		mg/Kg	₩	09/04/24 11:59	09/04/24 13:58	
2,2-Dichloropropane	ND		5.4		mg/Kg	<del>.</del>	09/04/24 11:59	09/04/24 13:58	
2-Chlorotoluene	ND		5.4		mg/Kg	₩	09/04/24 11:59	09/04/24 13:58	
I-Chlorotoluene	ND		5.4		mg/Kg	*	09/04/24 11:59	09/04/24 13:58	
1-Isopropyltoluene	ND		5.4		mg/Kg		09/04/24 11:59	09/04/24 13:58	
Benzene	3.1		2.7	0.51		₩	09/04/24 11:59	09/04/24 13:58	
Bromobenzene	1.9	J	5.4	0.56	mg/Kg	₩	09/04/24 11:59	09/04/24 13:58	
Bromochloromethane	ND		5.4		mg/Kg		09/04/24 11:59	09/04/24 13:58	
Bromodichloromethane	ND		5.4		mg/Kg	₩	09/04/24 11:59	09/04/24 13:58	
Bromoform	ND		5.4	0.60	mg/Kg	₩	09/04/24 11:59	09/04/24 13:58	
Carbon tetrachloride	0.97	J	2.7	0.59	mg/Kg		09/04/24 11:59	09/04/24 13:58	
Chloroform	20		2.7	0.56	mg/Kg	₽	09/04/24 11:59	09/04/24 13:58	
Chloromethane	ND		8.0	1.4	mg/Kg	₽	09/04/24 11:59	09/04/24 13:58	
cis-1,2-Dichloroethene	ND		8.0	1.7	mg/Kg		09/04/24 11:59	09/04/24 13:58	
cis-1,3-Dichloropropene	ND		2.7	0.54	mg/Kg	₩	09/04/24 11:59	09/04/24 13:58	
Dibromochloromethane	ND		2.7	0.66	mg/Kg	₩	09/04/24 11:59	09/04/24 13:58	
Dibromomethane	ND		5.4		mg/Kg		09/04/24 11:59	09/04/24 13:58	
Dichlorodifluoromethane	ND		34	6.2	mg/Kg	₽	09/04/24 11:59	09/04/24 13:58	
Ethylbenzene	ND		5.4	1.2	mg/Kg	₩	09/04/24 11:59	09/04/24 13:58	
Hexachlorobutadiene	ND		13	3.2	mg/Kg	₩	09/04/24 11:59	09/04/24 13:58	
sopropylbenzene	ND		5.4	1.2	mg/Kg	₩	09/04/24 11:59	09/04/24 13:58	
Methyl tert-butyl ether	ND		5.4	0.80	mg/Kg	₽	09/04/24 11:59	09/04/24 13:58	
Methylene Chloride	ND		34	3.5	mg/Kg	₽	09/04/24 11:59	09/04/24 13:58	
n-Xylene & p-Xylene	ND		5.4	0.95	mg/Kg	₩	09/04/24 11:59	09/04/24 13:58	
Naphthalene	ND		20	5.2	mg/Kg	₩	09/04/24 11:59	09/04/24 13:58	
-Butylbenzene	ND		5.4	2.5	mg/Kg	₽	09/04/24 11:59	09/04/24 13:58	
	ND		5.4		mg/Kg		09/04/24 11:59	09/04/24 13:58	
p-Xylene	ND		5.4		mg/Kg	₩	09/04/24 11:59	09/04/24 13:58	
sec-Butylbenzene	ND		5.4		mg/Kg	₽	09/04/24 11:59	09/04/24 13:58	
Styrene	ND		5.4		mg/Kg		09/04/24 11:59	09/04/24 13:58	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

Toluene-d8 (Surr)

Client Sample ID: PDI-29-SO-39.5-20240822

Lab Sample ID: 580-143296-6 Date Collected: 08/23/24 11:45 Matrix: Solid

Date Received: 08/27/24 13:16 Percent Solids: 89.2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
t-Butylbenzene	ND		5.4	1.0	mg/Kg	<del></del>	09/04/24 11:59	09/04/24 13:58	1
Toluene	3.9	J	8.0	1.8	mg/Kg	₽	09/04/24 11:59	09/04/24 13:58	1
trans-1,2-Dichloroethene	ND		8.0	2.0	mg/Kg	₽	09/04/24 11:59	09/04/24 13:58	1
trans-1,3-Dichloropropene	ND		5.4	0.94	mg/Kg	₽	09/04/24 11:59	09/04/24 13:58	1
Trichloroethene	ND		5.4	1.4	mg/Kg	₽	09/04/24 11:59	09/04/24 13:58	1
Trichlorofluoromethane	ND		11	3.5	mg/Kg	₽	09/04/24 11:59	09/04/24 13:58	1
Vinyl chloride	ND		13	2.5	mg/Kg	₽	09/04/24 11:59	09/04/24 13:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		80 - 121				09/04/24 11:59	09/04/24 13:58	1
4-Bromofluorobenzene (Surr)	105		80 - 120				09/04/24 11:59	09/04/24 13:58	1
Dibromofluoromethane (Surr)	100		80 - 120				09/04/24 11:59	09/04/24 13:58	1
Toluene-d8 (Surr)	147	S1+	80 - 120				09/04/24 11:59	09/04/24 13:58	1
Method: SW846 8260D - Volati	ile Organic Comp	ounds by G	C/MS - DL						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	ND		130	51	mg/Kg	<del>*</del>	09/05/24 14:19	09/05/24 22:01	1
Chlorobenzene	150	Н	50	6.0	mg/Kg	₽	09/07/24 10:48	09/07/24 18:27	1000
Chloroethane	ND		110	28	mg/Kg	₽	09/05/24 14:19	09/05/24 22:01	1
Tetrachloroethene	31	J	54	7.1	mg/Kg	₽	09/05/24 14:19	09/05/24 22:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac

Tetrachloroethene	31	J	54	7.1 mg/Kg	₩	09/05/24 14:19	09/05/24 22:01	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121			09/05/24 14:19	09/05/24 22:01	1
1,2-Dichloroethane-d4 (Surr)	103		80 - 121			09/07/24 10:48	09/07/24 18:27	1000
4-Bromofluorobenzene (Surr)	99		80 - 120			09/05/24 14:19	09/05/24 22:01	1
4-Bromofluorobenzene (Surr)	105		80 - 120			09/07/24 10:48	09/07/24 18:27	1000
Dibromofluoromethane (Surr)	104		80 - 120			09/05/24 14:19	09/05/24 22:01	1
Dibromofluoromethane (Surr)	101		80 - 120			09/07/24 10:48	09/07/24 18:27	1000
Toluene-d8 (Surr)	101		80 - 120			09/05/24 14:19	09/05/24 22:01	1

General Chemistry Analyte	Result Qualifier	r RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	89.2	0.1	0.1	%			09/05/24 12:55	1
Percent Moisture (SM22 2540G)	10.8	0.1	0.1	%			09/05/24 12:55	1

80 - 120

102

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

#### Client Sample ID: PDI-29-SO-42-20240822

Lab Sample ID: 580-143296-7 Date Collected: 08/23/24 12:50 Matrix: Solid Date Received: 08/27/24 13:16 Percent Solids: 89.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Result RL MDL Unit D Prepared Analyzed Dil Fac 0.023 0.0056 mg/Kg ₩ 09/05/24 14:19 1,1,1,2-Tetrachloroethane ND 09/05/24 18:35 1,1,1-Trichloroethane ND 0.045 0.0052 mg/Kg ₩ 09/05/24 14:19 09/05/24 18:35 1,1,2,2-Tetrachloroethane ND 0.023 0.0086 mg/Kg ġ 09/05/24 14:19 09/05/24 18:35 1,1,2-Trichloroethane ND 0.023 0.0084 mg/Kg 09/05/24 14:19 09/05/24 18:35 1,1-Dichloroethane ND 0.045 0.010 mg/Kg ₩ 09/05/24 14:19 09/05/24 18:35 1,1-Dichloroethene ND 0.045 0.014 mg/Kg ä 09/05/24 14:19 09/05/24 18:35 1,1-Dichloropropene ND 0.045 0.0060 mg/Kg 09/05/24 14:19 09/05/24 18:35 ND 0.090 0.045 09/05/24 14:19 09/05/24 18:35 1.2.3-Trichlorobenzene mg/Kg ä 1,2,3-Trichloropropane ND 0.045 0.013 mg/Kg 09/05/24 14:19 09/05/24 18:35 ND 0.048 ġ 09/05/24 14:19 09/05/24 18:35 1,2,4-Trichlorobenzene 0.090 mg/Kg 1,2,4-Trimethylbenzene 09/05/24 14:19 09/05/24 18:35 ND 0.045 0.015 mg/Kg ND 0.017 09/05/24 14:19 1,2-Dibromo-3-Chloropropane 0.068 mg/Kg ₩ 09/05/24 18:35 1,2-Dibromoethane ND 0.023 0.0043 ġ 09/05/24 14:19 09/05/24 18:35 ma/Ka ND 09/05/24 18:35 1.2-Dichlorobenzene 0.045 0.0098 mg/Kg ġ 09/05/24 14:19 1,2-Dichloroethane ND 0.023 0.0062 mg/Kg 09/05/24 14:19 09/05/24 18:35 1,2-Dichloropropane ND 0.023 0.0075 ma/Ka ä 09/05/24 14:19 09/05/24 18:35 1,3,5-Trimethylbenzene ND 0.045 0.0086 mg/Kg 09/05/24 14:19 09/05/24 18:35 1,3-Dichlorobenzene ND 0.068 0.015 mg/Kg 09/05/24 14:19 09/05/24 18:35 09/05/24 18:35 1.3-Dichloropropane ND 0.068 0.0063 mg/Kg ä 09/05/24 14:19 1,4-Dichlorobenzene ND 0.068 0.012 mg/Kg 09/05/24 14:19 09/05/24 18:35 09/05/24 14:19 ND 0.045 0.014 ť 2,2-Dichloropropane mg/Kg 09/05/24 18:35 ND 0.045 0.0099 ₽ 09/05/24 14:19 09/05/24 18:35 2-Chlorotoluene mg/Kg 4-Chlorotoluene ND 0.045 0.011 mg/Kg ġ 09/05/24 14:19 09/05/24 18:35 ND 0.045 09/05/24 14:19 09/05/24 18:35 4-Isopropyltoluene 0.012 mg/Kg ND 0.023 0.0043 09/05/24 14:19 09/05/24 18:35 Benzene ma/Ka ä Bromobenzene ND 0.045 0.0047 ma/Ka ₽ 09/05/24 14:19 09/05/24 18:35 Bromochloromethane ND 0.045 0.0070 mg/Kg ġ 09/05/24 14:19 09/05/24 18:35 Bromodichloromethane ND 0.045 0.0062 mg/Kg ġ 09/05/24 14:19 09/05/24 18:35 Bromoform ND 0.045 0.0051 ä 09/05/24 14:19 09/05/24 18:35 ma/Ka Bromomethane ND 0.11 0.043 mg/Kg 09/05/24 14:19 09/05/24 18:35 Carbon tetrachloride ND 0.023 0.0050 ġ 09/05/24 14:19 09/05/24 18:35 mg/Kg 0.0054 09/05/24 18:35 Chlorobenzene 1.8 0.045 mg/Kg ď 09/05/24 14:19 Chloroethane ND 0.090 0.024 mg/Kg 09/05/24 14:19 09/05/24 18:35 Chloroform NΠ 0.023 0.0047 ť 09/05/24 14:19 09/05/24 18:35 mg/Kg ND 0.068 09/05/24 14:19 09/05/24 18:35 Chloromethane ma/Ka ₩ cis-1 2-Dichloroethene ND 0.068 0.014 09/05/24 14:19 09/05/24 18:35 mg/Kg ä cis-1,3-Dichloropropene ND 0.023 0.0045 mg/Kg # 09/05/24 14:19 09/05/24 18:35 Dibromochloromethane ND 0.0055 09/05/24 14:19 0.023 mg/Kg 09/05/24 18:35 Dibromomethane ND 0.045 0.0084 mg/Kg ₽ 09/05/24 14:19 09/05/24 18:35 Dichlorodifluoromethane ND ġ 09/05/24 14:19 09/05/24 18:35 0.28 0.052 mg/Kg Ethylbenzene ND 0.045 0.010 mg/Kg 09/05/24 14:19 09/05/24 18:35 Hexachlorobutadiene ND 0.11 0.027 mg/Kg ä 09/05/24 14:19 09/05/24 18:35 Isopropylbenzene ND 0.045 0.0097 mg/Kg 09/05/24 14:19 09/05/24 18:35 Methyl tert-butyl ether ND 0.045 0.0068 mg/Kg 09/05/24 14:19 09/05/24 18:35 Methylene Chloride ND 0.28 0.029 ä 09/05/24 14:19 09/05/24 18:35 mg/Kg m-Xylene & p-Xylene ND 0.045 0.0080 mg/Kg 09/05/24 14:19 09/05/24 18:35 ND Naphthalene 0.17 0.044 mg/Kg 09/05/24 14:19 09/05/24 18:35 n-Butylbenzene ND 0.045 0.021 mg/Kg ġ 09/05/24 14:19 09/05/24 18:35 N-Propylbenzene ND 0.045 09/05/24 14:19 09/05/24 18:35 0.017 mg/Kg

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-29-SO-42-20240822

Lab Sample ID: 580-143296-7 Date Collected: 08/23/24 12:50 Matrix: Solid

Method: SW846 8260D - Volatile	<b>Organic Comp</b>	ounds by G	C/MS (Contir	ued)					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.045	0.0056	mg/Kg	<del></del>	09/05/24 14:19	09/05/24 18:35	1
sec-Butylbenzene	ND		0.045	0.0097	mg/Kg	₽	09/05/24 14:19	09/05/24 18:35	1
Styrene	ND		0.045	0.014	mg/Kg	₽	09/05/24 14:19	09/05/24 18:35	1
t-Butylbenzene	ND		0.045	0.0087	mg/Kg	₽	09/05/24 14:19	09/05/24 18:35	1
Tetrachloroethene	ND		0.045	0.0060	mg/Kg	₽	09/05/24 14:19	09/05/24 18:35	1
Toluene	ND		0.068	0.015	mg/Kg	₩	09/05/24 14:19	09/05/24 18:35	1
trans-1,2-Dichloroethene	ND		0.068	0.016	mg/Kg	₩	09/05/24 14:19	09/05/24 18:35	1
trans-1,3-Dichloropropene	ND		0.045	0.0079	mg/Kg	₩	09/05/24 14:19	09/05/24 18:35	1
Trichloroethene	ND		0.045	0.012	mg/Kg	₩	09/05/24 14:19	09/05/24 18:35	1
Trichlorofluoromethane	ND		0.090	0.029	mg/Kg	₩	09/05/24 14:19	09/05/24 18:35	1
Vinyl chloride	ND		0.11	0.021	mg/Kg	₽	09/05/24 14:19	09/05/24 18:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		80 - 121				09/05/24 14:19	09/05/24 18:35	1
4-Bromofluorobenzene (Surr)	102		80 - 120				09/05/24 14:19	09/05/24 18:35	1
Dibromofluoromethane (Surr)	109		80 - 120				09/05/24 14:19	09/05/24 18:35	1
Toluene-d8 (Surr)	101		80 - 120				09/05/24 14:19	09/05/24 18:35	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	89.9		0.1	0.1	%			09/05/24 12:55	1
Percent Moisture (SM22 2540G)	10.1		0.1	0.1	%			09/05/24 12:55	1

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

#### Client Sample ID: PDI-29-SO-51-20240822

Lab Sample ID: 580-143296-8 Date Collected: 08/23/24 15:00 Matrix: Solid Date Received: 08/27/24 13:16 Percent Solids: 86.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Result RL MDL Unit D Prepared Analyzed Dil Fac 0.0031 0.00079 mg/Kg ₩ 09/05/24 14:19 1,1,1,2-Tetrachloroethane ND 09/05/24 18:56 1,1,1-Trichloroethane ND 0.0063 0.00072mg/Kg ₩ 09/05/24 14:19 09/05/24 18:56 1,1,2,2-Tetrachloroethane ND 0.0031 0.0012 mg/Kg ġ 09/05/24 14:19 09/05/24 18:56 1,1,2-Trichloroethane ND 0.0031 0.0012 mg/Kg 09/05/24 14:19 09/05/24 18:56 1.1-Dichloroethane ND 0.0063 0.0014 mg/Kg ₩ 09/05/24 14:19 09/05/24 18:56 1,1-Dichloroethene ND 0.0063 0.0019 mg/Kg ä 09/05/24 14:19 09/05/24 18:56 0.00083 09/05/24 14:19 1,1-Dichloropropene ND 0.0063 mg/Kg 09/05/24 18:56 ND 0.013 0.0062 09/05/24 14:19 09/05/24 18:56 1.2.3-Trichlorobenzene ma/Ka ä 0.0018 1,2,3-Trichloropropane ND 0.0063 mg/Kg 09/05/24 14:19 09/05/24 18:56 1,2,4-Trichlorobenzene ND 0.0067 ġ 09/05/24 14:19 09/05/24 18:56 0.013 mg/Kg 1,2,4-Trimethylbenzene 0.0063 09/05/24 14:19 09/05/24 18:56 ND 0.0021 mg/Kg ND 0.0094 09/05/24 14:19 1,2-Dibromo-3-Chloropropane 0.0024 mg/Kg ₩ 09/05/24 18:56 1,2-Dibromoethane ND 0.0031 0.00060 ġ 09/05/24 14:19 09/05/24 18:56 ma/Ka ND 09/05/24 18:56 1.2-Dichlorobenzene 0.0063 0.0014 mg/Kg ġ 09/05/24 14:19 1.2-Dichloroethane ND 0.0031 0.00087 mg/Kg 09/05/24 14:19 09/05/24 18:56 1,2-Dichloropropane ND 0.0031 0.0010 ma/Ka ä 09/05/24 14:19 09/05/24 18:56 ND 1,3,5-Trimethylbenzene 0.0063 0.0012 mg/Kg 09/05/24 14:19 09/05/24 18:56 1,3-Dichlorobenzene ND 0.0094 0.0021 mg/Kg 09/05/24 14:19 09/05/24 18:56 0.0094 09/05/24 18:56 1.3-Dichloropropane ND 0.00088 mg/Kg ä 09/05/24 14:19 1,4-Dichlorobenzene ND 0.0094 0.0017 mg/Kg 09/05/24 14:19 09/05/24 18:56 ND 0.0063 0.0019 ť 09/05/24 14:19 09/05/24 18:56 2,2-Dichloropropane mg/Kg 0.0014 ND 0.0063 ₽ 09/05/24 14:19 09/05/24 18:56 2-Chlorotoluene mg/Kg 4-Chlorotoluene ND 0.0063 0.0015 mg/Kg ġ 09/05/24 14:19 09/05/24 18:56 4-Isopropyltoluene ND 0.0063 0.0016 09/05/24 14:19 09/05/24 18:56 mg/Kg ND 0.0031 0.00060 mg/Kg 09/05/24 14:19 09/05/24 18:56 Benzene ä Bromobenzene ND 0.0063 0.00066 ₽ 09/05/24 14:19 09/05/24 18:56 Bromochloromethane ND 0.0063 0.00098 mg/Kg ₽ 09/05/24 14:19 09/05/24 18:56 Bromodichloromethane ND 0.0063 0.00087 mg/Kg ġ 09/05/24 14:19 09/05/24 18:56 Bromoform ND 0.0063 0.00071 ä 09/05/24 14:19 09/05/24 18:56 ma/Ka Bromomethane ND 0.016 0.0059 mg/Kg 09/05/24 14:19 09/05/24 18:56 Carbon tetrachloride ND 0.0031 0.00069 ġ 09/05/24 14:19 09/05/24 18:56 mg/Kg 0.0063 0.00076 09/05/24 18:56 Chlorobenzene 0.62 mg/Kg ď 09/05/24 14:19 Chloroethane ND 0.013 0.0033 mg/Kg 09/05/24 14:19 09/05/24 18:56 Chloroform NΠ 0.0031 0.00066 ť 09/05/24 14:19 09/05/24 18:56 mg/Kg Chloromethane ND 0.0094 0.0016 09/05/24 14:19 09/05/24 18:56 ma/Ka ₩ cis-1 2-Dichloroethene ND 0.0094 0.0020 09/05/24 14:19 09/05/24 18:56 mg/Kg ä cis-1,3-Dichloropropene ND 0.0031 0.00063 mg/Kg # 09/05/24 14:19 09/05/24 18:56 Dibromochloromethane ND 0.0031 0.00077 ġ 09/05/24 14:19 09/05/24 18:56 mg/Kg Dibromomethane ND 0.0063 0.0012 mg/Kg ₽ 09/05/24 14:19 09/05/24 18:56 Dichlorodifluoromethane ND 0.039 ġ 09/05/24 14:19 09/05/24 18:56 0.0072 mg/Kg Ethylbenzene ND 0.0063 0.0014 mg/Kg 09/05/24 14:19 09/05/24 18:56 Hexachlorobutadiene ND 0.016 0.0038 mg/Kg ä 09/05/24 14:19 09/05/24 18:56 Isopropylbenzene ND 0.0063 0.0014 mg/Kg 09/05/24 14:19 09/05/24 18:56 Methyl tert-butyl ether ND 0.0063 0.00094 mg/Kg 09/05/24 14:19 09/05/24 18:56 Methylene Chloride ND 0.039 0.0041 ä 09/05/24 14:19 09/05/24 18:56 mg/Kg m-Xylene & p-Xylene ND 0.0063 0.0011 mg/Kg 09/05/24 14:19 09/05/24 18:56 ND 09/05/24 18:56 Naphthalene 0.024 0.0062 mg/Kg 09/05/24 14:19 n-Butylbenzene ND 0.0063 0.0029 mg/Kg ġ 09/05/24 14:19 09/05/24 18:56 0.0063 N-Propylbenzene ND 0.0024 09/05/24 14:19 09/05/24 18:56 ma/Ka

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-29-SO-51-20240822

Lab Sample ID: 580-143296-8 Date Collected: 08/23/24 15:00 Matrix: Solid

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.0063	0.00079	mg/Kg	<del></del>	09/05/24 14:19	09/05/24 18:56	1
sec-Butylbenzene	ND		0.0063	0.0014	mg/Kg	₽	09/05/24 14:19	09/05/24 18:56	1
Styrene	ND		0.0063	0.0020	mg/Kg	₽	09/05/24 14:19	09/05/24 18:56	1
t-Butylbenzene	ND		0.0063	0.0012	mg/Kg	₽	09/05/24 14:19	09/05/24 18:56	1
Tetrachloroethene	ND		0.0063	0.00083	mg/Kg	₽	09/05/24 14:19	09/05/24 18:56	1
Toluene	ND		0.0094	0.0021	mg/Kg	₩	09/05/24 14:19	09/05/24 18:56	1
trans-1,2-Dichloroethene	ND		0.0094	0.0023	mg/Kg	₩	09/05/24 14:19	09/05/24 18:56	1
trans-1,3-Dichloropropene	ND		0.0063	0.0011	mg/Kg	₩	09/05/24 14:19	09/05/24 18:56	1
Trichloroethene	ND		0.0063	0.0016	mg/Kg	₩	09/05/24 14:19	09/05/24 18:56	1
Trichlorofluoromethane	ND		0.013	0.0041	mg/Kg	₩	09/05/24 14:19	09/05/24 18:56	1
Vinyl chloride	ND		0.016	0.0029	mg/Kg	\$	09/05/24 14:19	09/05/24 18:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		80 - 121				09/05/24 14:19	09/05/24 18:56	1
4-Bromofluorobenzene (Surr)	102		80 - 120				09/05/24 14:19	09/05/24 18:56	1
Dibromofluoromethane (Surr)	108		80 - 120				09/05/24 14:19	09/05/24 18:56	1
Toluene-d8 (Surr)	99		80 - 120				09/05/24 14:19	09/05/24 18:56	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	86.6		0.1	0.1	%			09/05/24 12:55	1
Percent Moisture (SM22 2540G)	13.4		0.1	0.1	%			09/05/24 12:55	1

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

#### Client Sample ID: PDI-28-SO-41-20240822

Lab Sample ID: 580-143296-9 Date Collected: 08/26/24 13:15 **Matrix: Solid** Date Received: 08/27/24 13:16 Percent Solids: 90.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Result RL MDL Unit D Prepared Analyzed Dil Fac ND 0.021 0.0053 mg/Kg ₩ 09/05/24 14:19 1,1,1,2-Tetrachloroethane 09/05/24 19:16 1,1,1-Trichloroethane ND 0.042 0.0049 mg/Kg ₩ 09/05/24 14:19 09/05/24 19:16 1,1,2,2-Tetrachloroethane ND 0.021 0.0080 mg/Kg ġ 09/05/24 14:19 09/05/24 19:16 1,1,2-Trichloroethane ND 0.021 0.0078 mg/Kg 09/05/24 14:19 09/05/24 19:16 1.1-Dichloroethane ND 0.042 0.0097 mg/Kg ₩ 09/05/24 14:19 09/05/24 19:16 1,1-Dichloroethene ND 0.042 0.013 mg/Kg ä 09/05/24 14:19 09/05/24 19:16 1,1-Dichloropropene ND 0.042 0.0056 mg/Kg 09/05/24 14:19 09/05/24 19:16 ND 0.084 0.042 09/05/24 14:19 09/05/24 19:16 1.2.3-Trichlorobenzene mg/Kg ä 1,2,3-Trichloropropane ND 0.042 0.012 mg/Kg 09/05/24 14:19 09/05/24 19:16 ND 0.084 0.045 ġ 09/05/24 14:19 09/05/24 19:16 1,2,4-Trichlorobenzene mg/Kg 1,2,4-Trimethylbenzene 09/05/24 14:19 09/05/24 19:16 ND 0.042 0.014 mg/Kg ND 09/05/24 14:19 1,2-Dibromo-3-Chloropropane 0.063 0.016 mg/Kg ₩ 09/05/24 19:16 1,2-Dibromoethane ND 0.021 0.0040 ġ 09/05/24 14:19 09/05/24 19:16 ma/Ka ND 09/05/24 19:16 1.2-Dichlorobenzene 0.042 0.0092 mg/Kg ġ 09/05/24 14:19 1.2-Dichloroethane ND 0.021 0.0058 mg/Kg 09/05/24 14:19 09/05/24 19:16 1,2-Dichloropropane ND 0.021 0.0070 ma/Ka ä 09/05/24 14:19 09/05/24 19:16 1,3,5-Trimethylbenzene ND 0.042 0.0080 mg/Kg 09/05/24 14:19 09/05/24 19:16 1,3-Dichlorobenzene ND 0.063 0.014 mg/Kg 09/05/24 14:19 09/05/24 19:16 09/05/24 19:16 1.3-Dichloropropane ND 0.063 0.0059 mg/Kg ä 09/05/24 14:19 1,4-Dichlorobenzene ND 0.063 0.011 mg/Kg 09/05/24 14:19 09/05/24 19:16 09/05/24 14:19 ND 0.042 0.013 ť 2,2-Dichloropropane mg/Kg 09/05/24 19:16 ND 0.042 0.0093 ₽ 09/05/24 14:19 09/05/24 19:16 2-Chlorotoluene mg/Kg 4-Chlorotoluene ND 0.042 0.010 mg/Kg ġ 09/05/24 14:19 09/05/24 19:16 ND 0.042 09/05/24 14:19 09/05/24 19:16 4-Isopropyltoluene 0.011 mg/Kg ND 0.021 0.0040 mg/Kg 09/05/24 14:19 09/05/24 19:16 Benzene ä Bromobenzene ND 0.042 0.0044 ma/Ka ₽ 09/05/24 14:19 09/05/24 19:16 Bromochloromethane ND 0.042 0.0065 mg/Kg ġ 09/05/24 14:19 09/05/24 19:16 Bromodichloromethane ND 0.042 0.0058 mg/Kg ġ 09/05/24 14:19 09/05/24 19:16 Bromoform ND 0.042 0.0048 ä 09/05/24 14:19 09/05/24 19:16 ma/Ka Bromomethane ND 0.11 0.040 mg/Kg 09/05/24 14:19 09/05/24 19:16 Carbon tetrachloride ND 0.021 0.0046 ġ 09/05/24 14:19 09/05/24 19:16 mg/Kg 09/05/24 19:16 0.0051 Chlorobenzene 3.1 0.042 mg/Kg 09/05/24 14:19 Chloroethane ND 0.084 0.022 mg/Kg 09/05/24 14:19 09/05/24 19:16 Chloroform NΠ 0.021 0.0044 ť 09/05/24 14:19 09/05/24 19:16 mg/Kg Chloromethane ND 0.063 09/05/24 14:19 09/05/24 19:16 ma/Ka ₩ cis-1 2-Dichloroethene ND 0.063 09/05/24 14:19 09/05/24 19:16 0.013 mg/Kg ä cis-1,3-Dichloropropene ND 0.021 0.0042 mg/Kg # 09/05/24 14:19 09/05/24 19:16 Dibromochloromethane ND 0.0052 09/05/24 14:19 0.021 mg/Kg 09/05/24 19:16 Dibromomethane ND 0.042 0.0078 mg/Kg ₽ 09/05/24 14:19 09/05/24 19:16 Dichlorodifluoromethane ND ġ 09/05/24 14:19 09/05/24 19:16 0.26 0.048 mg/Kg Ethylbenzene ND 0.042 0.0096 mg/Kg 09/05/24 14:19 09/05/24 19:16 Hexachlorobutadiene ND 0.11 0.025 mg/Kg ä 09/05/24 14:19 09/05/24 19:16 Isopropylbenzene ND 0.042 0.0091 mg/Kg 09/05/24 14:19 09/05/24 19:16 Methyl tert-butyl ether ND 0.042 0.0063 mg/Kg 09/05/24 14:19 09/05/24 19:16 Methylene Chloride ND 0.26 0.027 ä 09/05/24 14:19 09/05/24 19:16 mg/Kg m-Xylene & p-Xylene ND 0.042 0.0075 mg/Kg 09/05/24 14:19 09/05/24 19:16 ND Naphthalene 0.16 0.041 mg/Kg 09/05/24 14:19 09/05/24 19:16 n-Butylbenzene ND 0.042 0.020 mg/Kg ġ 09/05/24 14:19 09/05/24 19:16 N-Propylbenzene ND 0.042 09/05/24 14:19 09/05/24 19:16 0.016 mg/Kg

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-28-SO-41-20240822

Lab Sample ID: 580-143296-9 Date Collected: 08/26/24 13:15 Matrix: Solid Date Received: 08/27/24 13:16 Percent Solids: 90.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.042	0.0053	mg/Kg	₩	09/05/24 14:19	09/05/24 19:16	1
sec-Butylbenzene	ND		0.042	0.0091	mg/Kg	₽	09/05/24 14:19	09/05/24 19:16	1
Styrene	ND		0.042	0.013	mg/Kg	₽	09/05/24 14:19	09/05/24 19:16	1
t-Butylbenzene	ND		0.042	0.0081	mg/Kg	₩	09/05/24 14:19	09/05/24 19:16	1
Tetrachloroethene	ND		0.042	0.0056	mg/Kg	₽	09/05/24 14:19	09/05/24 19:16	1
Toluene	ND		0.063	0.014	mg/Kg	₽	09/05/24 14:19	09/05/24 19:16	1
trans-1,2-Dichloroethene	ND		0.063	0.015	mg/Kg	₩	09/05/24 14:19	09/05/24 19:16	1
trans-1,3-Dichloropropene	ND		0.042	0.0074	mg/Kg	₩	09/05/24 14:19	09/05/24 19:16	1
Trichloroethene	ND		0.042	0.011	mg/Kg	☼	09/05/24 14:19	09/05/24 19:16	1
Trichlorofluoromethane	ND		0.084	0.027	mg/Kg	₩	09/05/24 14:19	09/05/24 19:16	1
Vinyl chloride	ND		0.11	0.020	mg/Kg	₽	09/05/24 14:19	09/05/24 19:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		80 - 121				09/05/24 14:19	09/05/24 19:16	1
4-Bromofluorobenzene (Surr)	99		80 - 120				09/05/24 14:19	09/05/24 19:16	1
Dibromofluoromethane (Surr)	109		80 - 120				09/05/24 14:19	09/05/24 19:16	1
Toluene-d8 (Surr)	100		80 - 120				09/05/24 14:19	09/05/24 19:16	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	90.6		0.1	0.1	%			09/05/24 12:55	

0.1

9.4

0.1 %

09/05/24 12:55

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

#### Client Sample ID: PDI-28-SO-55.1-20240822

Lab Sample ID: 580-143296-10 Date Collected: 08/26/24 16:45 **Matrix: Solid** Date Received: 08/27/24 13:16 Percent Solids: 90.6

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Result RL MDL Unit D Prepared Analyzed Dil Fac ND 0.024 0.0060 mg/Kg ₩ 09/05/24 14:19 1,1,1,2-Tetrachloroethane 09/05/24 19:37 1,1,1-Trichloroethane ND 0.048 0.0055 mg/Kg ₩ 09/05/24 14:19 09/05/24 19:37 1,1,2,2-Tetrachloroethane ND 0.024 0.0091 mg/Kg ġ 09/05/24 14:19 09/05/24 19:37 1,1,2-Trichloroethane ND 0.024 0.0089 mg/Kg 09/05/24 14:19 09/05/24 19:37 1.1-Dichloroethane ND 0.048 0.011 mg/Kg ₩ 09/05/24 14:19 09/05/24 19:37 1,1-Dichloroethene ND 0.048 0.015 mg/Kg ä 09/05/24 14:19 09/05/24 19:37 1,1-Dichloropropene ND 0.048 0.0063 mg/Kg 09/05/24 14:19 09/05/24 19:37 ND 0.096 0.048 09/05/24 14:19 09/05/24 19:37 1.2.3-Trichlorobenzene mg/Kg ä 1,2,3-Trichloropropane ND 0.048 0.014 mg/Kg 09/05/24 14:19 09/05/24 19:37 ND 0.051 ġ 09/05/24 14:19 09/05/24 19:37 1,2,4-Trichlorobenzene 0.096 mg/Kg 1,2,4-Trimethylbenzene 09/05/24 14:19 09/05/24 19:37 ND 0.048 0.016 mg/Kg ND 0.018 09/05/24 14:19 1,2-Dibromo-3-Chloropropane 0.072 mg/Kg ₩ 09/05/24 19:37 1,2-Dibromoethane ND 0.024 0.0045 ġ 09/05/24 14:19 09/05/24 19:37 ma/Ka ND 09/05/24 19:37 1.2-Dichlorobenzene 0.048 0.010 mg/Kg ġ 09/05/24 14:19 1.2-Dichloroethane ND 0.024 0.0066 mg/Kg 09/05/24 14:19 09/05/24 19:37 1,2-Dichloropropane ND 0.024 0.0079 ma/Ka ä 09/05/24 14:19 09/05/24 19:37 1,3,5-Trimethylbenzene ND 0.048 0.0091 mg/Kg 09/05/24 14:19 09/05/24 19:37 1,3-Dichlorobenzene ND 0.072 0.016 mg/Kg 09/05/24 14:19 09/05/24 19:37 0.072 09/05/24 19:37 1.3-Dichloropropane ND 0.0067 mg/Kg ä 09/05/24 14:19 1,4-Dichlorobenzene ND 0.072 0.013 mg/Kg 09/05/24 14:19 09/05/24 19:37 0.048 09/05/24 14:19 ND 0.014 ť 2,2-Dichloropropane mg/Kg 09/05/24 19:37 ND 0.048 0.011 ₽ 09/05/24 14:19 09/05/24 19:37 2-Chlorotoluene mg/Kg 4-Chlorotoluene ND 0.048 0.012 mg/Kg ġ 09/05/24 14:19 09/05/24 19:37 4-Isopropyltoluene ND 0.048 0.012 09/05/24 14:19 09/05/24 19:37 mg/Kg ND 0.024 0.0045 09/05/24 14:19 09/05/24 19:37 Benzene ma/Ka ä Bromobenzene ND 0.048 0.0050 ma/Ka ₽ 09/05/24 14:19 09/05/24 19:37 Bromochloromethane ND 0.048 0.0074 mg/Kg ġ 09/05/24 14:19 09/05/24 19:37 Bromodichloromethane ND 0.048 0.0066 mg/Kg ġ 09/05/24 14:19 09/05/24 19:37 Bromoform ND 0.048 0.0054 ä 09/05/24 14:19 09/05/24 19:37 ma/Ka Bromomethane ND 0.12 0.045 mg/Kg 09/05/24 14:19 09/05/24 19:37 Carbon tetrachloride ND 0.024 0.0053 ġ 09/05/24 14:19 09/05/24 19:37 mg/Kg 0.0057 09/05/24 19:37 Chlorobenzene 8.1 0.048 mg/Kg 09/05/24 14:19 Chloroethane ND 0.096 0.025 mg/Kg 09/05/24 14:19 09/05/24 19:37 0.024 0.0050 ť 09/05/24 14:19 09/05/24 19:37 Chloroform 0.018 mg/Kg ND 0.072 0.012 09/05/24 14:19 09/05/24 19:37 Chloromethane ma/Ka ₩ ND 0.072 09/05/24 14:19 09/05/24 19:37 cis-1 2-Dichloroethene 0.015 mg/Kg ä cis-1,3-Dichloropropene ND 0.024 0.0048 mg/Kg # 09/05/24 14:19 09/05/24 19:37 Dibromochloromethane ND 0.024 0.0059 09/05/24 14:19 mg/Kg 09/05/24 19:37 Dibromomethane ND 0.048 0.0089 mg/Kg ₽ 09/05/24 14:19 09/05/24 19:37 0.055 Dichlorodifluoromethane ND 0.30 ġ 09/05/24 14:19 09/05/24 19:37 mg/Kg Ethylbenzene ND 0.048 0.011 mg/Kg 09/05/24 14:19 09/05/24 19:37 Hexachlorobutadiene ND 0.12 0.029 mg/Kg ä 09/05/24 14:19 09/05/24 19:37 Isopropylbenzene ND 0.048 0.010 mg/Kg 09/05/24 14:19 09/05/24 19:37 Methyl tert-butyl ether ND 0.048 0.0072 mg/Kg 09/05/24 14:19 09/05/24 19:37 Methylene Chloride ND 0.30 0.031 ä 09/05/24 14:19 09/05/24 19:37 mg/Kg m-Xylene & p-Xylene ND 0.048 0.0085 mg/Kg 09/05/24 14:19 09/05/24 19:37 ND Naphthalene 0.18 0.047 mg/Kg 09/05/24 14:19 09/05/24 19:37 n-Butylbenzene ND 0.048 0.022 mg/Kg ġ 09/05/24 14:19 09/05/24 19:37 N-Propylbenzene ND 0.048 09/05/24 14:19 09/05/24 19:37 0.018 mg/Kg

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-28-SO-55.1-20240822

Lab Sample ID: 580-143296-10 Date Collected: 08/26/24 16:45 Matrix: Solid Date Received: 08/27/24 13:16

Percent Solids: 90.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.048	0.0060	mg/Kg	<u></u>	09/05/24 14:19	09/05/24 19:37	
sec-Butylbenzene	ND		0.048	0.010	mg/Kg	₩	09/05/24 14:19	09/05/24 19:37	,
Styrene	ND		0.048	0.015	mg/Kg	₽	09/05/24 14:19	09/05/24 19:37	
t-Butylbenzene	ND		0.048	0.0092	mg/Kg	₩	09/05/24 14:19	09/05/24 19:37	,
Tetrachloroethene	ND		0.048	0.0063	mg/Kg	☼	09/05/24 14:19	09/05/24 19:37	
Toluene	ND		0.072	0.016	mg/Kg	₩	09/05/24 14:19	09/05/24 19:37	
trans-1,2-Dichloroethene	ND		0.072	0.017	mg/Kg	₩	09/05/24 14:19	09/05/24 19:37	
trans-1,3-Dichloropropene	ND		0.048	0.0084	mg/Kg	₩	09/05/24 14:19	09/05/24 19:37	
Trichloroethene	ND		0.048	0.012	mg/Kg		09/05/24 14:19	09/05/24 19:37	
Trichlorofluoromethane	ND		0.096	0.031	mg/Kg	₩	09/05/24 14:19	09/05/24 19:37	
Vinyl chloride	ND		0.12	0.022	mg/Kg	₽	09/05/24 14:19	09/05/24 19:37	•
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	108		80 - 121				09/05/24 14:19	09/05/24 19:37	
4-Bromofluorobenzene (Surr)	106		80 - 120				09/05/24 14:19	09/05/24 19:37	
Dibromofluoromethane (Surr)	109		80 - 120				09/05/24 14:19	09/05/24 19:37	
Toluene-d8 (Surr)	100		80 - 120				09/05/24 14:19	09/05/24 19:37	
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fa
Percent Solids (SM22 2540G)	90.6		0.1	0.1	%			09/05/24 12:55	
Percent Moisture (SM22 2540G)	9.4		0.1	0.1	%			09/05/24 12:55	

### **QC Sample Results**

Client: ERM-West Job ID: 580-143296-1

RL

MDL Unit

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS

MB MB

Result Qualifier

Lab Sample ID: MB 580-470215/5-A

**Matrix: Solid** 

Analyte

Analysis Batch: 470219

Client Sample ID: Method Blank Prep Type: Total/NA

Analyzed

Prepared

Prep Type: Total/NA Prep Batch: 470215

Dil Fac

8

10

Analyte	ixesuit	Qualifier	KL	MDL	Unit	_	Prepared	Analyzea	DII Fac
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
1,1,1-Trichloroethane	ND		0.040	0.0046	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
1,1,2-Trichloroethane	ND		0.020	0.0074	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
1,1-Dichloroethane	ND		0.040	0.0092	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
1,1-Dichloroethene	ND		0.040	0.012	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
1,1-Dichloropropene	ND		0.040	0.0053	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
1,2,3-Trichlorobenzene	ND		0.080	0.040	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
1,2,3-Trichloropropane	ND		0.040	0.012	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
1,2,4-Trichlorobenzene	ND		0.080	0.043	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
1,2,4-Trimethylbenzene	ND		0.040	0.014	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
1,2-Dibromo-3-Chloropropane	ND		0.060	0.015	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
1,2-Dibromoethane	ND		0.020	0.0038	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
1,2-Dichlorobenzene	ND		0.040	0.0087	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
1,2-Dichloroethane	ND		0.020	0.0055	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
1,2-Dichloropropane	ND		0.020	0.0066	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
1,3,5-Trimethylbenzene	ND		0.040	0.0076	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
1,3-Dichlorobenzene	ND		0.060	0.013	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
1,3-Dichloropropane	ND		0.060	0.0056	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
1,4-Dichlorobenzene	ND		0.060		mg/Kg		09/04/24 07:24	09/04/24 11:20	1
2,2-Dichloropropane	ND		0.040		mg/Kg		09/04/24 07:24	09/04/24 11:20	1
2-Chlorotoluene	ND		0.040	0.0088			09/04/24 07:24	09/04/24 11:20	1
4-Chlorotoluene	ND		0.040		mg/Kg		09/04/24 07:24	09/04/24 11:20	1
4-Isopropyltoluene	ND		0.040		mg/Kg		09/04/24 07:24	09/04/24 11:20	1
Benzene	0.00686	J	0.020	0.0038			09/04/24 07:24	09/04/24 11:20	1
Bromobenzene	ND		0.040	0.0042			09/04/24 07:24	09/04/24 11:20	1
Bromochloromethane	ND		0.040	0.0062			09/04/24 07:24	09/04/24 11:20	1
Bromodichloromethane	ND		0.040	0.0055			09/04/24 07:24	09/04/24 11:20	1
Bromoform	ND		0.040	0.0045			09/04/24 07:24	09/04/24 11:20	1
Carbon tetrachloride	ND		0.020	0.0044			09/04/24 07:24	09/04/24 11:20	1
Chlorobenzene	ND		0.040		mg/Kg		09/04/24 07:24	09/04/24 11:20	1
Chloroform	ND		0.020	0.0042			09/04/24 07:24	09/04/24 11:20	1
Chloromethane	ND		0.060		mg/Kg		09/04/24 07:24	09/04/24 11:20	1
cis-1,2-Dichloroethene	ND		0.060		mg/Kg		09/04/24 07:24	09/04/24 11:20	1
cis-1,3-Dichloropropene	ND		0.020	0.0040	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
Dibromochloromethane	ND		0.020	0.0049			09/04/24 07:24	09/04/24 11:20	1
Dibromomethane	ND		0.040	0.0074			09/04/24 07:24	09/04/24 11:20	1
Dichlorodifluoromethane	ND		0.25		mg/Kg		09/04/24 07:24	09/04/24 11:20	1
Ethylbenzene	ND		0.040	0.0091			09/04/24 07:24	09/04/24 11:20	1
Hexachlorobutadiene	ND		0.10		mg/Kg		09/04/24 07:24	09/04/24 11:20	1
Isopropylbenzene	ND		0.040	0.0086			09/04/24 07:24	09/04/24 11:20	1
Methyl tert-butyl ether	ND		0.040	0.0060			09/04/24 07:24	09/04/24 11:20	1
Methylene Chloride	ND		0.25		mg/Kg		09/04/24 07:24	09/04/24 11:20	1
m-Xylene & p-Xylene	ND ND		0.23	0.020			09/04/24 07:24	09/04/24 11:20	1
Naphthalene	ND ND		0.040		mg/Kg		09/04/24 07:24	09/04/24 11:20	1
n-Butylbenzene	ND		0.040		mg/Kg		09/04/24 07:24	09/04/24 11:20	1
N-Propylbenzene	ND ND		0.040		mg/Kg		09/04/24 07:24	09/04/24 11:20	1
o-Xylene	ND ND		0.040	0.0050			09/04/24 07:24	09/04/24 11:20	1

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-470215/5-A

**Matrix: Solid** 

Analysis Batch: 470219

Client Sample ID: Method Blank

**Prep Type: Total/NA** 

Prep Batch: 470215

	MB	MR							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
Styrene	ND		0.040	0.013	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
Tetrachloroethene	0.00820	J	0.040	0.0053	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
Toluene	ND		0.060	0.014	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
Trichloroethene	ND		0.040	0.010	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		09/04/24 07:24	09/04/24 11:20	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		09/04/24 07:24	09/04/24 11:20	1

мв мв

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		80 - 121	09/04/24 07:24	09/04/24 11:20	1
4-Bromofluorobenzene (Surr)	106		80 - 120	09/04/24 07:24	09/04/24 11:20	1
Dibromofluoromethane (Surr)	100		80 - 120	09/04/24 07:24	09/04/24 11:20	1
Toluene-d8 (Surr)	99		80 - 120	09/04/24 07:24	09/04/24 11:20	1

Lab Sample ID: LCS 580-470215/1-A

**Matrix: Solid** 

Analysis Batch: 470219

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

Prep Batch: 470215

Analysis Daton. 470213						i lep Datell. 470213
	Spike	LCS	LCS			%Rec
Analyte	Added	Result	Qualifier Ur	it D	%Rec	Limits
1,1,1,2-Tetrachloroethane	0.800	0.750	m	J/Kg	94	79 - 128
1,1,1-Trichloroethane	0.800	0.803	mç	ı/Kg	100	78 - 135
1,1,2,2-Tetrachloroethane	0.800	0.732	mç	ı/Kg	92	77 - 122
1,1,2-Trichloroethane	0.800	0.723	mç	ı/Kg	90	80 - 123
1,1-Dichloroethane	0.800	0.778	mç	ı/Kg	97	78 - 126
1,1-Dichloroethene	0.800	0.697	mç	ı/Kg	87	73 - 134
1,1-Dichloropropene	0.800	0.736	mç	ı/Kg	92	76 - 140
1,2,3-Trichlorobenzene	0.800	0.544	mç	ı/Kg	68	58 - 146
1,2,3-Trichloropropane	0.800	0.769	mç	ı/Kg	96	77 - 127
1,2,4-Trichlorobenzene	0.800	0.604	mç	ı/Kg	76	74 - 131
1,2,4-Trimethylbenzene	0.800	0.743	mç	ı/Kg	93	73 - 138
1,2-Dibromo-3-Chloropropane	0.800	0.633	mç	ı/Kg	79	64 - 129
1,2-Dibromoethane	0.800	0.708	mç	ı/Kg	89	77 - 123
1,2-Dichlorobenzene	0.800	0.704	mç	ı/Kg	88	78 - 126
1,2-Dichloroethane	0.800	0.792	mç	ı/Kg	99	76 - 124
1,2-Dichloropropane	0.800	0.772	mç	ı/Kg	96	73 - 130
1,3,5-Trimethylbenzene	0.800	0.748	mç	ı/Kg	93	72 - 134
1,3-Dichlorobenzene	0.800	0.716	mç	ı/Kg	89	78 - 132
1,3-Dichloropropane	0.800	0.752	mç	ı/Kg	94	80 - 120
1,4-Dichlorobenzene	0.800	0.740	mç	ı/Kg	92	77 - 123
2,2-Dichloropropane	0.800	0.736	mç	ı/Kg	92	75 - 134
2-Chlorotoluene	0.800	0.754	mç	ı/Kg	94	77 - 134
4-Chlorotoluene	0.800	0.754	mç	ı/Kg	94	71 - 137
4-Isopropyltoluene	0.800	0.700	mç	ı/Kg	87	71 - 142
Benzene	0.800	0.759	mç	ı/Kg	95	79 - 135
Bromobenzene	0.800	0.803	mç	ı/Kg	100	78 - 126

**Eurofins Seattle** 

Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-470215/1-A

**Matrix: Solid** 

Client: ERM-West

Analysis Batch: 470219

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

Prep Batch: 470215

Analysis Daten. 470213	0	1.00			-	atcii. 4702
Amelida	Spike	LCS I		D 0/ D	%Rec	
Analyte	Added	Result	<u> </u>	D %Rec	Limits	
Bromochloromethane	0.800	0.688	mg/Kg	86	76 - 131	
Bromodichloromethane	0.800	0.782	mg/Kg	98	78 - 125	
Bromoform	0.800	0.743	mg/Kg	93	71 - 130	
Carbon tetrachloride	0.800	0.798	mg/Kg	100	76 - 140	
Chlorobenzene	0.800	0.684	mg/Kg	85	80 - 125	
Chloroform	0.800	0.763	mg/Kg	95	74 - 133	
Chloromethane	0.800	0.734	mg/Kg	92	52 - 142	
cis-1,2-Dichloroethene	0.800	0.709	mg/Kg	89	80 _ 125	
cis-1,3-Dichloropropene	0.800	0.680	mg/Kg	85	80 - 122	
Dibromochloromethane	0.800	0.707	mg/Kg	88	75 - 125	
Dibromomethane	0.800	0.737	mg/Kg	92	72 - 130	
Dichlorodifluoromethane	0.800	0.765	mg/Kg	96	33 - 150	
Ethylbenzene	0.800	0.707	mg/Kg	88	80 - 135	
Hexachlorobutadiene	0.800	0.570	mg/Kg	71	65 - 145	
Isopropylbenzene	0.800	0.788	mg/Kg	98	80 - 131	
Methyl tert-butyl ether	0.800	0.776	mg/Kg	97	71 - 126	
Methylene Chloride	0.800	0.786	mg/Kg	98	56 - 140	
m-Xylene & p-Xylene	0.800	0.717	mg/Kg	90	80 - 132	
Naphthalene	0.800	0.602	mg/Kg	75	56 - 145	
n-Butylbenzene	0.800	0.690	mg/Kg	86	69 - 143	
N-Propylbenzene	0.800	0.757	mg/Kg	95	78 - 133	
o-Xylene	0.800	0.722	mg/Kg	90	80 - 132	
sec-Butylbenzene	0.800	0.723	mg/Kg	90	71 - 143	
Styrene	0.800	0.724	mg/Kg	90	79 - 129	
t-Butylbenzene	0.800	0.722	mg/Kg	90	72 - 144	
Tetrachloroethene	0.800	0.658	mg/Kg	82	75 - 141	
Toluene	0.800	0.687	mg/Kg	86	75 - 125	
trans-1,2-Dichloroethene	0.800	0.699	mg/Kg	87	77 - 134	
trans-1,3-Dichloropropene	0.800	0.759	mg/Kg	95	80 - 121	
Trichloroethene	0.800	0.724	mg/Kg	90	80 - 134	
Trichlorofluoromethane	0.800	0.910	mg/Kg	114	71 - 150	
Vinyl chloride	0.800	0.875	mg/Kg	109	62 - 144	

Surrogate	%Recovery	Qualifier	Limits		
1,2-Dichloroethane-d4 (Surr)	114		80 - 121		
4-Bromofluorobenzene (Surr)	105		80 - 120		
Dibromofluoromethane (Surr)	102		80 - 120		
Toluene-d8 (Surr)	97		80 - 120		

Lab Sample ID: LCSD 580-470215/2-A

**Matrix: Solid** 

Analysis Batch: 470219

Client Sample	ID:	Lab (	Control	Samp	le C	)up
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**Prep Type: Total/NA** 

**Prep Batch: 470215** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	0.800	0.758		mg/Kg		95	79 - 128	1	20
1,1,1-Trichloroethane	0.800	0.802		mg/Kg		100	78 - 135	0	20
1,1,2,2-Tetrachloroethane	0.800	0.763		mg/Kg		95	77 - 122	4	20
1,1,2-Trichloroethane	0.800	0.736		mg/Kg		92	80 - 123	2	20

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### **QC Sample Results**

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-470215/2-A

**Matrix: Solid** 

Tetrachloroethene

Toluene

Analysis Batch: 470219

Client Sample ID: Lab Control Sample Dup **Prep Type: Total/NA** Prep Batch: 470215

Analysis Batom 470210	Spike	LCSD	LCSD				%Rec	Buton: 4	RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethane	0.800	0.781		mg/Kg		98	78 - 126		20
1,1-Dichloroethene	0.800	0.715		mg/Kg		89	73 - 134	3	25
1,1-Dichloropropene	0.800	0.744		mg/Kg		93	76 - 140	1	20
1,2,3-Trichlorobenzene	0.800	0.629		mg/Kg		79	58 - 146	14	28
1,2,3-Trichloropropane	0.800	0.761		mg/Kg		95	77 - 127	1	20
1,2,4-Trichlorobenzene	0.800	0.672		mg/Kg		84	74 - 131	11	26
1,2,4-Trimethylbenzene	0.800	0.758		mg/Kg		95	73 - 138	2	22
1,2-Dibromo-3-Chloropropane	0.800	0.644		mg/Kg		80	64 - 129	2	40
1,2-Dibromoethane	0.800	0.755		mg/Kg		94	77 - 123	6	20
1,2-Dichlorobenzene	0.800	0.737		mg/Kg		92	78 - 126	5	20
1,2-Dichloroethane	0.800	0.789		mg/Kg		99	76 - 124	0	20
1,2-Dichloropropane	0.800	0.775		mg/Kg		97	73 - 130	0	20
1,3,5-Trimethylbenzene	0.800	0.762		mg/Kg		95	72 - 134	2	24
1,3-Dichlorobenzene	0.800	0.739		mg/Kg		92	78 - 132	3	20
1,3-Dichloropropane	0.800	0.781		mg/Kg		98	80 - 120	4	20
1,4-Dichlorobenzene	0.800	0.763		mg/Kg		95	77 - 123	3	20
2,2-Dichloropropane	0.800	0.748		mg/Kg		94	75 - 134	2	20
2-Chlorotoluene	0.800	0.774		mg/Kg		97	77 - 134	3	21
4-Chlorotoluene	0.800	0.756		mg/Kg		94	71 - 137	0	21
4-Isopropyltoluene	0.800	0.729		mg/Kg		91	71 - 142	4	29
Benzene	0.800	0.777		mg/Kg		97	79 - 135	2	20
Bromobenzene	0.800	0.811		mg/Kg		101	78 - 126	1	20
Bromochloromethane	0.800	0.721		mg/Kg		90	76 - 131	5	20
Bromodichloromethane	0.800	0.788		mg/Kg		99	78 - 125	1	20
Bromoform	0.800	0.748		mg/Kg		93	71 - 130	1	20
Carbon tetrachloride	0.800	0.805		mg/Kg		101	76 - 140	1	20
Chlorobenzene	0.800	0.716		mg/Kg		89	80 - 125	5	20
Chloroform	0.800	0.774		mg/Kg		97	74 - 133	1	20
Chloromethane	0.800	0.724		mg/Kg		90	52 - 142	1	40
cis-1,2-Dichloroethene	0.800	0.711		mg/Kg		89	80 - 125	0	20
cis-1,3-Dichloropropene	0.800	0.697		mg/Kg		87	80 - 122	2	20
Dibromochloromethane	0.800	0.735		mg/Kg		92	75 - 125	4	20
Dibromomethane	0.800	0.743		mg/Kg		93	72 - 130	1	40
Dichlorodifluoromethane	0.800	0.772		mg/Kg		96	33 - 150	1	31
Ethylbenzene	0.800	0.738		mg/Kg		92	80 - 135	4	20
Hexachlorobutadiene	0.800	0.624		mg/Kg		78	65 - 145	9	36
Isopropylbenzene	0.800	0.805		mg/Kg		101	80 - 131	2	20
Methyl tert-butyl ether	0.800	0.786		mg/Kg		98	71 - 126	1	20
Methylene Chloride	0.800	0.792		mg/Kg		99	56 - 140	1	20
m-Xylene & p-Xylene	0.800	0.733		mg/Kg		92	80 - 132	2	20
Naphthalene	0.800	0.684		mg/Kg		85	56 - 145	13	25
n-Butylbenzene	0.800	0.706		mg/Kg		88	69 - 143	2	31
N-Propylbenzene	0.800	0.763		mg/Kg		95	78 - 133	1	24
o-Xylene	0.800	0.747		mg/Kg		93	80 - 132	3	20
sec-Butylbenzene	0.800	0.744		mg/Kg		93	71 - 143	3	29
Styrene	0.800	0.745		mg/Kg		93	79 - 129	3	20
t-Butylbenzene	0.800	0.748		mg/Kg		94	72 - 144	4	27
Totrachlaraethana	0.800	0.600					75 444		

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87

90

75 - 141

75 - 125

0.692

0.717

mg/Kg

mg/Kg

0.800

0.800

# **QC Sample Results**

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-470215/2-A

**Matrix: Solid** 

Analysis Batch: 470219

Client Sample ID: Lab Control Sample Dup **Prep Type: Total/NA** 

Prep Batch: 470215

	Spike	LCSD	LCSD			%Rec		RPD
Analyte	Added	Result	Qualifier Unit	D	%Rec	Limits	RPD	Limit
trans-1,2-Dichloroethene	0.800	0.702	mg/k		88	77 - 134	0	20
trans-1,3-Dichloropropene	0.800	0.773	mg/k	.g	97	80 - 121	2	20
Trichloroethene	0.800	0.753	mg/k	(g	94	80 - 134	4	20
Trichlorofluoromethane	0.800	0.902	mg/k	.g	113	71 - 150	1	30
Vinyl chloride	0.800	0.858	mg/k	(g	107	62 - 144	2	20
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LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	108		80 - 121
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
Toluene-d8 (Surr)	99		80 - 120

Lab Sample ID: MB 580-470443/3-A

**Matrix: Solid** 

Analysis Batch: 470452

Client Sample ID: Method Blank

**Prep Type: Total/NA** 

Prep Batch: 470443

	MB	MB						-	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
1,1,1-Trichloroethane	ND		0.040	0.0046	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
1,1,2-Trichloroethane	ND		0.020	0.0074	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
1,1-Dichloroethane	ND		0.040	0.0092	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
1,1-Dichloroethene	ND		0.040	0.012	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
1,1-Dichloropropene	ND		0.040	0.0053	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
1,2,3-Trichlorobenzene	ND		0.080	0.040	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
1,2,3-Trichloropropane	ND		0.040	0.012	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
1,2,4-Trichlorobenzene	ND		0.080	0.043	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
1,2,4-Trimethylbenzene	ND		0.040	0.014	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
1,2-Dibromo-3-Chloropropane	ND		0.060	0.015	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
1,2-Dibromoethane	ND		0.020	0.0038	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
1,2-Dichlorobenzene	ND		0.040	0.0087	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
1,2-Dichloroethane	ND		0.020	0.0055	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
1,2-Dichloropropane	ND		0.020	0.0066	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
1,3,5-Trimethylbenzene	ND		0.040	0.0076	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
1,3-Dichlorobenzene	ND		0.060	0.013	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
1,3-Dichloropropane	ND		0.060	0.0056	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
1,4-Dichlorobenzene	ND		0.060	0.011	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
2,2-Dichloropropane	ND		0.040	0.012	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
2-Chlorotoluene	ND		0.040	0.0088	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
4-Chlorotoluene	ND		0.040	0.0098	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
4-Isopropyltoluene	ND		0.040	0.010	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Benzene	ND		0.020	0.0038	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Bromobenzene	ND		0.040	0.0042	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Bromochloromethane	ND		0.040	0.0062	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Bromodichloromethane	ND		0.040	0.0055	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Bromoform	ND		0.040	0.0045	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Bromomethane	ND		0.10	0.038	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Carbon tetrachloride	ND		0.020	0.0044	mg/Kg		09/05/24 10:20	09/05/24 15:10	1

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Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-470443/3-A

**Matrix: Solid** 

Client: ERM-West

Analysis Batch: 470452

Client Sample ID: Method Blank

Prep Type: Total/NA Prep Batch: 470443

	МВ	MB						•	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		0.040	0.0048	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Chloroethane	ND		0.080	0.021	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Chloroform	ND		0.020	0.0042	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Chloromethane	ND		0.060	0.010	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
cis-1,2-Dichloroethene	ND		0.060	0.013	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
cis-1,3-Dichloropropene	ND		0.020	0.0040	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Dibromochloromethane	ND		0.020	0.0049	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Dibromomethane	ND		0.040	0.0074	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Dichlorodifluoromethane	ND		0.25	0.046	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Ethylbenzene	ND		0.040	0.0091	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Hexachlorobutadiene	0.0394	J	0.10	0.024	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Isopropylbenzene	ND		0.040	0.0086	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Methyl tert-butyl ether	ND		0.040	0.0060	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Methylene Chloride	ND		0.25	0.026	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
m-Xylene & p-Xylene	ND		0.040	0.0071	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Naphthalene	ND		0.15	0.039	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
n-Butylbenzene	ND		0.040	0.019	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
N-Propylbenzene	ND		0.040	0.015	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
o-Xylene	ND		0.040	0.0050	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Styrene	ND		0.040	0.013	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Toluene	ND		0.060	0.014	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Trichloroethene	ND		0.040	0.010	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		09/05/24 10:20	09/05/24 15:10	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		09/05/24 10:20	09/05/24 15:10	1

MB	MR	
IVID	IVID	

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		80 - 121	09/05/24 10:20	09/05/24 15:10	1
4-Bromofluorobenzene (Surr)	102		80 - 120	09/05/24 10:20	09/05/24 15:10	1
Dibromofluoromethane (Surr)	109		80 - 120	09/05/24 10:20	09/05/24 15:10	1
Toluene-d8 (Surr)	99		80 - 120	09/05/24 10:20	09/05/24 15:10	1

Lab Sample ID: LCS 580-470443/1-A

Matrix: Solid

Analysis Batch: 470452

Client	Sample	ID:	Lab	Contr	ol Sample	
			_	_		

Prep Type: Total/NA

Prep Batch: 470443

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1,1,2-Tetrachloroethane	0.800	0.855		mg/Kg		107	79 - 128	
1,1,1-Trichloroethane	0.800	0.846		mg/Kg		106	78 - 135	
1,1,2,2-Tetrachloroethane	0.800	0.791		mg/Kg		99	77 - 122	
1,1,2-Trichloroethane	0.800	0.840		mg/Kg		105	80 - 123	
1,1-Dichloroethane	0.800	0.791		mg/Kg		99	78 - 126	
1,1-Dichloroethene	0.800	0.885		mg/Kg		111	73 - 134	
1,1-Dichloropropene	0.800	0.852		mg/Kg		106	76 - 140	

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### **QC Sample Results**

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-470443/1-A

**Matrix: Solid** 

Styrene

Toluene

t-Butylbenzene

Tetrachloroethene

trans-1,2-Dichloroethene

Analysis Batch: 470452

**Client Sample ID: Lab Control Sample Prep Type: Total/NA** 

Prep Batch: 470443

Analyte	Spike Added		LCS Qualifier Unit	D	%Rec	%Rec	311. 4 <i>7</i> 044
1,2,3-Trichlorobenzene	0.800	0.817	mg/Kg		102	58 - 146	
1,2,3-Trichloropropane	0.800	0.832	mg/Kg		104	77 - 127	
1,2,4-Trichlorobenzene	0.800	0.858	mg/Kg		107	74 - 131	
1,2,4-Trimethylbenzene	0.800	0.816	mg/Kg		102	73 - 138	
1,2-Dibromo-3-Chloropropane	0.800	0.991	mg/Kg		124	64 - 129	
1,2-Dibromoethane	0.800	0.832	mg/Kg		104	77 - 123	
1,2-Dichlorobenzene	0.800	0.777	mg/Kg		97	78 - 126	
1,2-Dichloroethane	0.800	0.760	mg/Kg		95	76 - 124	
1,2-Dichloropropane	0.800	0.756	mg/Kg		94	73 - 130	
1,3,5-Trimethylbenzene	0.800	0.838	mg/Kg		105	72 - 134	
1,3-Dichlorobenzene	0.800	0.846	mg/Kg		106	78 - 132	
1,3-Dichloropropane	0.800	0.821	mg/Kg		103	80 - 120	
1,4-Dichlorobenzene	0.800	0.729	mg/Kg		91	77 - 123	
2,2-Dichloropropane	0.800	0.841	mg/Kg		105	75 - 134	
2-Chlorotoluene	0.800	0.785	mg/Kg		98	77 - 134	
4-Chlorotoluene	0.800	0.765	mg/Kg		96	71 - 137	
4-Isopropyltoluene	0.800	0.822	mg/Kg		103	71 - 142	
Benzene	0.800	0.794	mg/Kg		99	79 - 135	
Bromobenzene	0.800	0.820	mg/Kg		103	78 - 126	
Bromochloromethane	0.800	0.831	mg/Kg		104	76 - 131	
Bromodichloromethane	0.800	0.843	mg/Kg		105	78 - 125	
Bromoform	0.800	0.824	mg/Kg		103	71 - 130	
Bromomethane	0.800	0.936	mg/Kg		117	55 - 150	
Carbon tetrachloride	0.800	0.900	mg/Kg		112	76 - 140	
Chlorobenzene	0.800	0.767	mg/Kg		96	80 - 125	
Chloroethane	0.800	0.842	mg/Kg		105	26 - 150	
Chloroform	0.800	0.804	mg/Kg		101	74 - 133	
Chloromethane	0.800	0.816	mg/Kg		102	52 - 142	
cis-1,2-Dichloroethene	0.800	0.811	mg/Kg		101	80 - 125	
cis-1,3-Dichloropropene	0.800	0.847	mg/Kg		106	80 - 122	
Dibromochloromethane	0.800	0.912	mg/Kg		114	75 - 125	
Dibromomethane	0.800	0.807	mg/Kg		101	72 - 130	
Dichlorodifluoromethane	0.800	1.16	mg/Kg		145	33 _ 150	
Ethylbenzene	0.800	0.825	mg/Kg		103	80 - 135	
Hexachlorobutadiene	0.800	0.827	mg/Kg		103	65 - 145	
Isopropylbenzene	0.800	0.847	mg/Kg		106	80 - 131	
Methyl tert-butyl ether	0.800	0.868	mg/Kg		109	71 - 126	
Methylene Chloride	0.800	0.809	mg/Kg		101	56 - 140	
m-Xylene & p-Xylene	0.800	0.841	mg/Kg		105	80 - 132	
Naphthalene	0.800	0.791	mg/Kg		99	56 - 145	
n-Butylbenzene	0.800	0.776	mg/Kg		97	69 - 143	
N-Propylbenzene	0.800	0.805	mg/Kg		101	78 - 133	
o-Xylene	0.800	0.826	mg/Kg		103	80 - 132	
sec-Butylbenzene	0.800	0.813	mg/Kg		102	71 - 143	
			59				

**Eurofins Seattle** 

79 - 129

72 - 144

75 - 141

75 - 125

77 - 134

109

102

106

100

110

0.869

0.817

0.846

0.798

0.881

mg/Kg

mg/Kg

mg/Kg

mg/Kg

mg/Kg

0.800

0.800

0.800

0.800

0.800

Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-470443/1-A

Lab Sample ID: LCSD 580-470443/2-A

**Matrix: Solid** 

Matrix: Solid

Client: ERM-West

Analysis Batch: 470452

**Client Sample ID: Lab Control Sample Prep Type: Total/NA** 

Prep Batch: 470443

	<b>Spike</b>	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
trans-1,3-Dichloropropene	0.800	0.770		mg/Kg		96	80 - 121	
Trichloroethene	0.800	0.808		mg/Kg		101	80 - 134	
Trichlorofluoromethane	0.800	0.933		mg/Kg		117	71 - 150	
Vinyl chloride	0.800	0.845		mg/Kg		106	62 - 144	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		80 - 121
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120
Toluene-d8 (Surr)	99		80 - 120

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

matrix. Cond								ypc. io	
Analysis Batch: 470452							Prep I	Batch: 4	70443
	Spike		LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	0.800	0.834		mg/Kg		104	79 - 128	2	20
1,1,1-Trichloroethane	0.800	0.833		mg/Kg		104	78 - 135	2	20
1,1,2,2-Tetrachloroethane	0.800	0.814		mg/Kg		102	77 - 122	3	20
1,1,2-Trichloroethane	0.800	0.808		mg/Kg		101	80 - 123	4	20
1,1-Dichloroethane	0.800	0.775		mg/Kg		97	78 - 126	2	20
1,1-Dichloroethene	0.800	0.871		mg/Kg		109	73 - 134	2	25
1,1-Dichloropropene	0.800	0.831		mg/Kg		104	76 - 140	2	20
1,2,3-Trichlorobenzene	0.800	0.900		mg/Kg		112	58 - 146	10	28
1,2,3-Trichloropropane	0.800	0.866		mg/Kg		108	77 - 127	4	20
1,2,4-Trichlorobenzene	0.800	0.858		mg/Kg		107	74 - 131	0	26
1,2,4-Trimethylbenzene	0.800	0.842		mg/Kg		105	73 - 138	3	22
1,2-Dibromo-3-Chloropropane	0.800	1.03		mg/Kg		129	64 - 129	4	40
1,2-Dibromoethane	0.800	0.825		mg/Kg		103	77 - 123	1	20
1,2-Dichlorobenzene	0.800	0.815		mg/Kg		102	78 - 126	5	20
1,2-Dichloroethane	0.800	0.753		mg/Kg		94	76 - 124	1	20
1,2-Dichloropropane	0.800	0.737		mg/Kg		92	73 - 130	2	20
1,3,5-Trimethylbenzene	0.800	0.875		mg/Kg		109	72 - 134	4	24
1,3-Dichlorobenzene	0.800	0.817		mg/Kg		102	78 - 132	4	20
1,3-Dichloropropane	0.800	0.811		mg/Kg		101	80 - 120	1	20
1,4-Dichlorobenzene	0.800	0.772		mg/Kg		97	77 - 123	6	20
2,2-Dichloropropane	0.800	0.814		mg/Kg		102	75 - 134	3	20
2-Chlorotoluene	0.800	0.827		mg/Kg		103	77 - 134	5	21
4-Chlorotoluene	0.800	0.813		mg/Kg		102	71 - 137	6	21
4-Isopropyltoluene	0.800	0.865		mg/Kg		108	71 - 142	5	29
Benzene	0.800	0.772		mg/Kg		96	79 - 135	3	20
Bromobenzene	0.800	0.827		mg/Kg		103	78 - 126	1	20
Bromochloromethane	0.800	0.811		mg/Kg		101	76 - 131	2	20
Bromodichloromethane	0.800	0.840		mg/Kg		105	78 - 125	0	20
Bromoform	0.800	0.781		mg/Kg		98	71 - 130	5	20
Bromomethane	0.800	0.936		mg/Kg		117	55 - 150	0	26
Carbon tetrachloride	0.800	0.845		mg/Kg		106	76 - 140	6	20
Chlorobenzene	0.800	0.745		mg/Kg		93	80 - 125	3	20

**Eurofins Seattle** 

9/11/2024

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-470443/2-A

**Matrix: Solid** 

Analysis Batch: 470452

Client Sample ID: Lab Control Sample Dup **Prep Type: Total/NA** 

Prep Batch: 470443

Allaryolo Batoli. 47 0402	<b>.</b>						-	Jutoii. 4	
	Spike		LCSD		_		%Rec		RPD
Analyte	Added		Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chloroethane	0.800	0.817		mg/Kg		102	26 - 150	3	40
Chloroform	0.800	0.770		mg/Kg		96	74 - 133	4	20
Chloromethane	0.800	0.801		mg/Kg		100	52 - 142	2	40
cis-1,2-Dichloroethene	0.800	0.790		mg/Kg		99	80 - 125	3	20
cis-1,3-Dichloropropene	0.800	0.843		mg/Kg		105	80 - 122	1	20
Dibromochloromethane	0.800	0.873		mg/Kg		109	75 - 125	4	20
Dibromomethane	0.800	0.803		mg/Kg		100	72 - 130	1	40
Dichlorodifluoromethane	0.800	1.14		mg/Kg		142	33 - 150	2	31
Ethylbenzene	0.800	0.790		mg/Kg		99	80 - 135	4	20
Hexachlorobutadiene	0.800	0.874		mg/Kg		109	65 - 145	6	36
Isopropylbenzene	0.800	0.830		mg/Kg		104	80 - 131	2	20
Methyl tert-butyl ether	0.800	0.857		mg/Kg		107	71 - 126	1	20
Methylene Chloride	0.800	0.814		mg/Kg		102	56 - 140	1	20
m-Xylene & p-Xylene	0.800	0.808		mg/Kg		101	80 - 132	4	20
Naphthalene	0.800	0.837		mg/Kg		105	56 - 145	6	25
n-Butylbenzene	0.800	0.807		mg/Kg		101	69 - 143	4	31
N-Propylbenzene	0.800	0.851		mg/Kg		106	78 - 133	6	24
o-Xylene	0.800	0.810		mg/Kg		101	80 - 132	2	20
sec-Butylbenzene	0.800	0.840		mg/Kg		105	71 - 143	3	29
Styrene	0.800	0.835		mg/Kg		104	79 - 129	4	20
t-Butylbenzene	0.800	0.849		mg/Kg		106	72 - 144	4	27
Tetrachloroethene	0.800	0.831		mg/Kg		104	75 - 141	2	20
Toluene	0.800	0.793		mg/Kg		99	75 - 125	1	20
trans-1,2-Dichloroethene	0.800	0.846		mg/Kg		106	77 - 134	4	20
trans-1,3-Dichloropropene	0.800	0.756		mg/Kg		95	80 - 121	2	20
Trichloroethene	0.800	0.787		mg/Kg		98	80 - 134	3	20
Trichlorofluoromethane	0.800	0.919		mg/Kg		115	71 - 150	1	30
Vinyl chloride	0.800	0.831		mg/Kg		104	62 - 144	2	20

LCSD LCSD

мв мв

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		80 - 121
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120
Toluene-d8 (Surr)	97		80 - 120

Lab Sample ID: MB 580-470646/3-A

**Matrix: Solid** 

Analysis Batch: 470644

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

**Prep Batch: 470646** 

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		0.040	0.0048	mg/Kg		09/07/24 10:00	09/07/24 11:11	1
	МВ	MB							
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		80 - 121				09/07/24 10:00	09/07/24 11:11	1
4-Bromofluorobenzene (Surr)	104		80 - 120				09/07/24 10:00	09/07/24 11:11	1
Dibromofluoromethane (Surr)	104		80 - 120				09/07/24 10:00	09/07/24 11:11	1
Toluene-d8 (Surr)	100		80 - 120				09/07/24 10:00	09/07/24 11:11	1

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### **QC Sample Results**

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

80 - 120

80 - 120

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

100

101

Dibromofluoromethane (Surr)

Lab Sample ID: LCSD 580-470646/2-A

Toluene-d8 (Surr)

Lab Sample ID: LCS 580-47064	ab Sample ID: LCS 580-470646/1-A									
Matrix: Solid							Prep Type: Total/			
Analysis Batch: 470644									Prep E	Batch: 470646
			Spike	LCS	LCS				%Rec	
Analyte			Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chlorobenzene			0.800	0.785		mg/Kg		98	80 - 125	
	LCS	LCS								
Surrogate	%Recovery	Qualifier	Limits							
1,2-Dichloroethane-d4 (Surr)	101		80 - 121							
4-Bromofluorobenzene (Surr)	100		80 - 120							

Matrix: Solid							Prep <sup>•</sup>	Type: To	tal/NA
Analysis Batch: 470644							Prep	Batch: 4	70646
	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chlorobenzene	0.800	0.757		mg/Kg		95	80 - 125	4	20

Chlorobenzene			0.800	0.757	mg/Kg	95	80 - 125	4	20
	LCSD	LCSD							
Surrogate	%Recovery	Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	102		80 - 121						
4-Bromofluorobenzene (Surr)	101		80 - 120						
Dibromofluoromethane (Surr)	101		80 - 120						
Toluene-d8 (Surr)	99		80 - 120						

Client Sample ID: Lab Control Sample Dup

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-30-SO-42-20240822

Date Collected: 08/22/24 13:00 Date Received: 08/27/24 13:16 Lab Sample ID: 580-143296-1

Lab Sample ID: 580-143296-3

Matrix: Solid

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	470434	MJ	EET SEA	09/05/24 12:55

Client Sample ID: PDI-30-SO-42-20240822

Lab Sample ID: 580-143296-1 Date Collected: 08/22/24 13:00 **Matrix: Solid** 

Date Received: 08/27/24 13:16 Percent Solids: 91.8

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			470443	BYM	EET SEA	09/05/24 14:19
Total/NA	Analysis	8260D		1	470452	K1K	EET SEA	09/05/24 17:13

Client Sample ID: PDI-30-SO-48.6-20240822

Lab Sample ID: 580-143296-2

Date Collected: 08/22/24 15:00 **Matrix: Solid** Date Received: 08/27/24 13:16

Dilution Batch Batch Batch Prepared Method Prep Type Туре Run Factor **Number Analyst** Lab or Analyzed

09/05/24 12:55 2540G 470434 MJ Total/NA Analysis EET SEA

Client Sample ID: PDI-30-SO-48.6-20240822 Lab Sample ID: 580-143296-2 Date Collected: 08/22/24 15:00 **Matrix: Solid** 

Date Received: 08/27/24 13:16 Percent Solids: 91.0

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			470443	BYM	EET SEA	09/05/24 14:19
Total/NA	Analysis	8260D		1	470452	K1K	EET SEA	09/05/24 17:34

Client Sample ID: TB-01-SO-20240822

Date Collected: 08/22/24 23:59 Matrix: Solid

Date Received: 08/27/24 13:16

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	-		470443	BYM	EET SEA	09/05/24 14:19
Total/NA	Analysis	8260D		1	470452	K1K	EET SEA	09/05/24 16:52

Client Sample ID: PDI-29-SO-35-20240822 Lab Sample ID: 580-143296-4

Date Collected: 08/23/24 10:55 **Matrix: Solid** 

Date Received: 08/27/24 13:16

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	470434	MJ	EET SEA	09/05/24 12:55

**Eurofins Seattle** 

Client: ERM-West

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-29-SO-35-20240822

Date Collected: 08/23/24 10:55 Date Received: 08/27/24 13:16 Lab Sample ID: 580-143296-4

**Matrix: Solid** Percent Solids: 89.3

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			470443	BYM	EET SEA	09/05/24 14:19
Total/NA	Analysis	8260D		1	470452	K1K	EET SEA	09/05/24 17:54

Client Sample ID: PDI-29-SO-36.5-20240822 Lab Sample ID: 580-143296-5

Date Collected: 08/23/24 11:30 Date Received: 08/27/24 13:16

**Matrix: Solid** 

		Batch	Batch		Dilution	Batch			Prepared
	Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Į	Total/NA	Analysis	2540G		1	470434	MJ	EET SEA	09/05/24 12:55

Client Sample ID: PDI-29-SO-36.5-20240822

Date Collected: 08/23/24 11:30 Date Received: 08/27/24 13:16 Lab Sample ID: 580-143296-5

**Matrix: Solid** 

Percent Solids: 87.5

_	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			470443	BYM	EET SEA	09/05/24 14:19
Total/NA	Analysis	8260D		1	470452	K1K	EET SEA	09/05/24 18:15
Total/NA	Prep	5035	DL		470646	BYM	EET SEA	09/07/24 10:48
Total/NA	Analysis	8260D	DL	1	470644	AC	EET SEA	09/07/24 18:06

Client Sample ID: PDI-29-SO-39.5-20240822

Date Collected: 08/23/24 11:45

Date Received: 08/27/24 13:16

Lab Sample	ID:	580-143296-6
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**Matrix: Solid** 

	Batch	Batch		Dilution	Batch		Prepared
Prep Type	Type	Method	Run	Factor	Number Analy	st Lab	or Analyzed
Total/NA	Analysis	2540G		1	470434 MJ	EET SEA	09/05/24 12:55

Client Sample ID: PDI-29-SO-39.5-20240822

Date Collected: 08/23/24 11:45

Date Received: 08/27/24 13:16

Lab Sample ID: 580-143296-6 **Matrix: Solid** 

Percent Solids: 89.2

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	DL		470443	BYM	EET SEA	09/05/24 14:19
Total/NA	Analysis	8260D	DL	1	470452	K1K	EET SEA	09/05/24 22:01
Total/NA	Prep	5035			470215	BYM	EET SEA	09/04/24 11:59
Total/NA	Analysis	8260D		1	470219	BYM	EET SEA	09/04/24 13:58
Total/NA	Prep	5035	DL		470646	BYM	EET SEA	09/07/24 10:48
Total/NA	Analysis	8260D	DL	1000	470644	AC	EET SEA	09/07/24 18:27

Client Sample ID: PDI-29-SO-42-20240822

Date Collected: 08/23/24 12:50

Date Received: 08/27/24 13:16

Lab Sample ID: 580-143296-7

**Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	470434	MJ	EET SEA	09/05/24 12:55

**Eurofins Seattle** 

Client: ERM-West

### Client Sample ID: PDI-29-SO-42-20240822

Date Collected: 08/23/24 12:50 Date Received: 08/27/24 13:16 Lab Sample ID: 580-143296-7

Matrix: Solid Percent Solids: 89.9

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			470443	BYM	EET SEA	09/05/24 14:19
Total/NA	Analysis	8260D		1	470452	K1K	EET SEA	09/05/24 18:35

Client Sample ID: PDI-29-SO-51-20240822 Lab Sample ID: 580-143296-8

Date Collected: 08/23/24 15:00 Date Received: 08/27/24 13:16

Date Collected: 08/23/24 15:00

Matrix: Solid

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	470434	MJ	EET SEA	09/05/24 12:55

Client Sample ID: PDI-29-SO-51-20240822

8260D

Lab Sample ID: 580-143296-8

**Matrix: Solid** 

Date Received: 08/27/24 13:16 Percent Solids: 86.6

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			470443	BYM	EET SEA	09/05/24 14:19
Total/NA	Analysis	8260D		1	470452	K1K	EET SEA	09/05/24 18:56

Client Sample ID: PDI-28-SO-41-20240822 Lab Sample ID: 580-143296-9

Date Collected: 08/26/24 13:15 **Matrix: Solid** 

Date Received: 08/27/24 13:16

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	470434	MJ	EET SEA	09/05/24 12:55

Client Sample ID: PDI-28-SO-41-20240822 Lab Sample ID: 580-143296-9

Date Collected: 08/26/24 13:15 Date Received: 08/27/24 13:16

Matrix: Solid Percent Solids: 90.6

09/05/24 19:16

EET SEA

Batch Batch Dilution Batch Prepared Method or Analyzed Prep Type Type Run Factor Number Analyst Lab 5035 09/05/24 14:19 Total/NA Prep 470443 BYM **EET SEA** 

1 Client Sample ID: PDI-28-SO-55.1-20240822 Lab Sample ID: 580-143296-10

470452 K1K

Date Collected: 08/26/24 16:45 **Matrix: Solid** 

Date Received: 08/27/24 13:16

Analysis

Total/NA

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	470434	MJ	EET SEA	09/05/24 12:55

**Eurofins Seattle** 

### **Lab Chronicle**

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-28-SO-55.1-20240822

Lab Sample ID: 580-143296-10 Date Collected: 08/26/24 16:45 Matrix: Solid

Date Received: 08/27/24 13:16 Percent Solids: 90.6

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			470443	BYM	EET SEA	09/05/24 14:19
Total/NA	Analysis	8260D		1	470452	K1K	EET SEA	09/05/24 19:37

#### **Laboratory References:**

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

# **Accreditation/Certification Summary**

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

#### **Laboratory: Eurofins Seattle**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority		am	Identification Number	<b>Expiration Date</b>	
Oregon	NELAF	P	4167	07-07-25	
<del>-</del> 1 6 11 1 1 1 1					
The following analytes	are included in this report, but	it the laboratory is not certif	fied by the governing authority. This lis	t may include analyte	
0 ,	are included in this report, bu oes not offer certification.	it the laboratory is not certif	fied by the governing authority. This lis	t may include analyte	
0 ,	' '	it the laboratory is not certif Matrix	fied by the governing authority. This lis  Analyte	t may include analyte	

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# **Sample Summary**

Client: ERM-West Job ID: 580-143296-1

Project/Site: Arkema PDI Sampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-143296-1	PDI-30-SO-42-20240822	Solid	08/22/24 13:00	08/27/24 13:16
580-143296-2	PDI-30-SO-48.6-20240822	Solid	08/22/24 15:00	08/27/24 13:16
580-143296-3	TB-01-SO-20240822	Solid	08/22/24 23:59	08/27/24 13:16
580-143296-4	PDI-29-SO-35-20240822	Solid	08/23/24 10:55	08/27/24 13:16
580-143296-5	PDI-29-SO-36.5-20240822	Solid	08/23/24 11:30	08/27/24 13:16
580-143296-6	PDI-29-SO-39.5-20240822	Solid	08/23/24 11:45	08/27/24 13:16
580-143296-7	PDI-29-SO-42-20240822	Solid	08/23/24 12:50	08/27/24 13:16
580-143296-8	PDI-29-SO-51-20240822	Solid	08/23/24 15:00	08/27/24 13:16
580-143296-9	PDI-28-SO-41-20240822	Solid	08/26/24 13:15	08/27/24 13:16
580-143296-10	PDI-28-SO-55.1-20240822	Solid	08/26/24 16:45	08/27/24 13:16

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# **Chain of Custody Record**

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**Environment Testing** 

Phone (253) 922-2310 580-143296 Chain of Custody				Lab PM:					Carrier	Tracking No(s):		COC No: 580-62781-19269	.12
				Cruz, S	Sheri L				State o	f Origin:		Page:	
Client Information Client Contact:	rnone.			E-Mail:	Cruz@	et.eur	ofinsus.c	om	0.0.0			Page of	
Avery Soplata			PWSID:	Sileii.C	JIUZU	J						Job#:	
Company:			FWSID.					Analysis	Request	ed		Preservation Code	es:
ERM-West	Due Date Requeste	d:										F - MeOH E - NaHSO4	
1050 SW 6th Avenue Suite 1650												A - HCL	
City:	TAT Requested (day		(				on l						
Portland State, Zip:		Welk					blanks						
OR, 97204	Compliance Project	: A Yes A	No		j j		뒽						
Phone:	PO#: 0732436.301			2	9	I	list_LL list equipment					l	
	WO#:				<b>Ž</b>	8	그 중				2		
Email: avery.soplata@erm.com					8	standard list MeOH	list equ				in in		
Project Name:	Project #:			3	3	dard	standard				containe	Other:	
Arkema - PDI Investigation	58020754 SSOW#:				ă E	tan	stan				200		
Site:	33044				8						) ž		
			Sample	Matrix	20	- Volatiles,	8260D - Volatiles, 8260D - Volatiles,				T T		
			Type	W=water, S=solid,	É	ž					7		
		Sample	(C=Comp, o	=waste/oil,	Fleld	8260D	8260D 8260D		-		Total	Special li	nstructions/Note:
Sample Identification	Sample Date	Time	G=grab) BT=				E A						
		$\geq$	Preservation	Code.	$\rightarrow$	1	= ^		++-		O		
PDI -30-50-42-20240822	08/23/24	1300	6 6	5		X							
				5		X					e	4	
PDT-30-50-48.6-20240822	08/22/24	1500	19		$H^-$						1		
TB-01-50-20240822	045/23/24		6	5	$\sqcup$	X				+++-			
DN: 26 (0.25 202140913	03/23/2024		6	5		X							
DD1-29-50-35-20240823				0		×						4	
PD1-29-50-34.5-70240873	(13/2024		6	2	-			<del>                                     </del>	_	111		2 × high.	Si Wate*
D1-29-50-395-20240823	08/23/2-24	1145	6	5		X			$\rightarrow$		<del>                                     </del>	-	
201-1-10-3-13-13-13-13-13-13-13-13-13-13-13-13-1	08/23/2024		. (	1		X						2	
101-29-50-42-20240823				2	++	-		111				2	
PD1-29-50-51-20240823	0812312024	15:00	4	5	$\sqcup$	X		1-1-1		++-	+ + + +	2	
	02/24/2024		G	S		X				111	1-1-1		
205-28-50-41-20240876				S	11	X						2	
POI-28-50-55.1-20240826	18/24/201	11642	G	5	++-	+	-	+		++-			
											les are ref:	nined longer than	1 month)
Possible Hazard Identification					S	ampl	e Dispos	al ( A fee r	nay be ass	essea it samp	, as a e , eu	rchive For	Months
Non-Hazard Gentification  Non-Hazard Flagmable Skin Irritant Poi	ison B Unkr	own ===	Radiological			ر ا	Return To	Client		oosal By Lab	A	OTHER DESIGNATION	
Deliverable Requested: I, II, III, IV, Other (specify)					S	Specia	I Instructi	ions/QC Re	quirements				
		In-A			Time	e:				Method of Shi	pment:		
Empty Kit Relinquished by:		Date:	16	emnor:	Time		cejyed,by;	-	11	Da	te/Time:	211 116	5 Company E
Relinquished by:	Date/Time:	Li o	905	ompany		1.00	1/1/1	VIA.	///		0127		Company
David Stone	9/27/3	71		ompany	_	Re	celed by:		20	D	127 /2	4 13:11	company
Relinquished by:	Date/Time:	24	13/0	M.	E	1	124	MMUS			ate/Time:		Company
Relinquished by:	Date/Time:			ompany		Re	pelved by:						
· · · · · · · · · · · · · · · · · · ·						Co	oler Tempe	erature(s) °C a	nd Other Rem	arks:	ODI	5/12	
Custody Seals Intact: Custody Seal No.:				4.0				2.	6 /2	9	11/1	101	Ver: 04/02/2024 9/11/
Δ Yes Δ No			- Pag	<del>je 42 o</del>	<del>rt 43</del>								9/11/

### **Login Sample Receipt Checklist**

Client: ERM-West Job Number: 580-143296-1

Login Number: 143296 List Source: Eurofins Seattle

List Number: 1

Creator: Fenimore, Justin 1

oreator. I emmore, ousum i	
Question	Answer Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td>	N/A
The cooler's custody seal, if present, is intact.	True
Sample custody seals, if present, are intact.	True
The cooler or samples do not appear to have been compromised or tampered with.	True
Samples were received on ice.	True
Cooler Temperature is acceptable.	True
Cooler Temperature is recorded.	True
COC is present.	True
COC is filled out in ink and legible.	True
COC is filled out with all pertinent information.	True
s the Field Sampler's name present on COC?	False
here are no discrepancies between the containers received and the COC.	True
Samples are received within Holding Time (excluding tests with immediate HTs)	True
Sample containers have legible labels.	True
Containers are not broken or leaking.	True
Sample collection date/times are provided.	True
Appropriate sample containers are used.	True
Sample bottles are completely filled.	True
Sample Preservation Verified.	True
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True
Containers requiring zero headspace have no headspace or bubble is 6mm (1/4").	True
flultiphasic samples are not present.	True
Samples do not require splitting or compositing.	True
Residual Chlorine Checked.	N/A

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PREPARED FOR

**ANALYTICAL REPORT** 

Attn: Avery Soplata ERM-West 1050 SW 6th Avenue Suite 1650 Portland, Oregon 97204

Generated 9/9/2024 7:58:45 PM

# **JOB DESCRIPTION**

Arkema PDI Sampling

# **JOB NUMBER**

580-143405-1

Eurofins Seattle 5755 8th Street East Tacoma WA 98424

# **Eurofins Seattle**

### **Job Notes**

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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### **Authorization**

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Authorized for release by Sheri Cruz, Project Manager I Sheri.Cruz@et.eurofinsus.com (253)922-2310

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Client: ERM-West

Project/Site: Arkema PDI Sampling

Laboratory Job ID: 580-143405-1

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QC Sample Results	
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#### **Case Narrative**

Client: ERM-West Job ID: 580-143405-1

Project: Arkema PDI Sampling

Job ID: 580-143405-1 Eurofins Seattle

# Job Narrative 580-143405-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these
  situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise
  specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed
  unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 8/30/2024 12:34 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.4°C.

#### GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-470179 recovered above the upper control limit for Dichlorodifluoromethane, Chloroethane, 1,1-Dichloroethene, cis-1,2-Dichloroethene, Carbon tetrachloride, 1,1-Dichloropropene and Methyl tert-butyl ether. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: RB-06-WQ-20240829 (580-143405-15), TB-01-WQ-20240829 (580-143405-16) and (CCVIS 580-470179/3).

Method 8260D: The method blank for analytical batch 580-470179 contained 1,2,4-Trichlorobenzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or reanalysis of samples was not performed.

Method 8260D: The laboratory control sample (LCS) for analytical batch 580-470179 recovered outside control limits for the following analytes: Methyl tert-butyl ether. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 580-470179 recovered outside control limits for the following analytes: Chloroethane.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-470179 recovered outside acceptance criteria, low biased, for 1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene, Hexachlorobutadiene and Naphthalene. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-470459 recovered above the upper control limit for Bromomethane, Chloroethane and Trichlorofluoromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: PDI-27-SO-37.4-20240827 (580-143405-1), TB-01-SO-20240827 (580-143405-2), PDI-27-SO-41.5-20240827 (580-143405-3), PDI-27-SO-49.5-20240827 (580-143405-4), PDI-32-SO-38.3-20240828 (580-143405-5), PDI-32-SO-35.4-20240828 (580-143405-6), PDI-32-SO-29.6-20240828 (580-143405-7), PDI-32-SO-42.5-20240828 (580-143405-8), PDI-32-SO-57.5-20240828 (580-143405-9), PDI-32-SO-68-20240828 (580-143405-10), PDI-33-SO-37.2-20240828 (580-143405-11), DUP-06-SQ-20240829 (580-143405-12), PDI-33-SO-29-20240829 (580-143405-13), PDI-33-SO-49-20240829 (580-143405-14), PDI-33-SO-56.5-20240829 (580-143405-17), PDI-33-SO-78-20240829 (580-143405-18) and (CCVIS 580-470459/3).

Method 8260D: The method blank for preparation batch 580-470444 and analytical batch 580-470459 contained Hexachlorobutadiene and Chlorobenzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8260D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 580-470444 and analytical batch 580-470459 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

**Eurofins Seattle** 

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#### **Case Narrative**

Client: ERM-West Job ID: 580-143405-1

Project: Arkema PDI Sampling

### Job ID: 580-143405-1 (Continued)

**Eurofins Seattle** 

Method 8260D: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for preparation batch 580-470444 and analytical batch 580-470459 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **General Chemistry**

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**Eurofins Seattle** 

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### **Definitions/Glossary**

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

### **Qualifiers**

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Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
В	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

DL, RA, RE, IN

DLC

Glossary	
Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)

Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Conta

MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)

Decision Level Concentration (Radiochemistry)

MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present

PQL **Practical Quantitation Limit** 

**PRES** Presumptive QC **Quality Control** 

Relative Error Ratio (Radiochemistry) RER

Reporting Limit or Requested Limit (Radiochemistry) RL

Relative Percent Difference, a measure of the relative difference between two points RPD

TEF Toxicity Equivalent Factor (Dioxin) **TEQ** Toxicity Equivalent Quotient (Dioxin)

**TNTC** Too Numerous To Count

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-27-SO-37.4-20240827

Lab Sample ID: 580-143405-1 Date Collected: 08/27/24 11:35 Matrix: Solid Date Received: 08/30/24 12:34 Percent Solids: 86.7

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.024 0.0060 mg/Kg 09/05/24 14:25 09/06/24 03:09 ND 1.1.1-Trichloroethane 0.048 0.0055 mg/Kg 09/05/24 14:25 09/06/24 03:09 1,1,2,2-Tetrachloroethane ND 0.024 0.0091 mg/Kg 09/05/24 14:25 09/06/24 03:09 ND 0.0088 1,1,2-Trichloroethane 0.024 mg/Kg 09/05/24 14:25 09/06/24 03:09 0.048 0.011 mg/Kg 09/05/24 14:25 09/06/24 03:09 1 1-Dichloroethane ND 09/06/24 03:09 1,1-Dichloroethene ND 0.048 0.015 mg/Kg 09/05/24 14:25 1,1-Dichloropropene ND 0.048 0.0063 09/05/24 14:25 09/06/24 03:09 mg/Kg ND 0.096 0.047 09/05/24 14:25 09/06/24 03:09 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.048 0.014 mg/Kg 09/05/24 14:25 09/06/24 03:09 1,2,4-Trichlorobenzene ND 0.096 0.051 mg/Kg 09/05/24 14:25 09/06/24 03:09 1,2,4-Trimethylbenzene ND 0.048 0.016 mg/Kg 09/05/24 14:25 09/06/24 03:09 1.2-Dibromo-3-Chloropropane ND 0.072 0.018 ma/Ka 09/05/24 14:25 09/06/24 03:09 1 1,2-Dibromoethane ND 0.024 0.0045 mg/Kg 09/05/24 14:25 09/06/24 03:09 0.032 J 0.048 0.010 mg/Kg 09/05/24 14:25 09/06/24 03:09 1,2-Dichlorobenzene ND 0.024 0.0066 mg/Kg 09/05/24 14:25 09/06/24 03:09 1.2-Dichloroethane 0.0079 1,2-Dichloropropane ND 0.024 mg/Kg 09/05/24 14:25 09/06/24 03:09 ND 1,3,5-Trimethylbenzene 0.048 0.0091 mg/Kg 09/05/24 14:25 09/06/24 03:09 1,3-Dichlorobenzene ND 0.072 0.016 mg/Kg 09/05/24 14:25 09/06/24 03:09 1,3-Dichloropropane ND 0.072 0.0067 mg/Kg 09/05/24 14:25 09/06/24 03:09 mg/Kg 1,4-Dichlorobenzene 0.11 0.072 0.013 09/05/24 14:25 09/06/24 03:09 2,2-Dichloropropane ND 0.048 0.014 mg/Kg ÷ 09/05/24 14:25 09/06/24 03:09 2-Chlorotoluene ND 0.048 0.011 mg/Kg 09/05/24 14:25 09/06/24 03:09 4-Chlorotoluene ND 0.012 mg/Kg 09/05/24 14:25 09/06/24 03:09 0.048 4-Isopropyltoluene ND 0.048 0.012 mg/Kg 09/05/24 14:25 09/06/24 03:09 Benzene ND 0.024 0.0045 mg/Kg 09/05/24 14:25 09/06/24 03:09 09/05/24 14:25 ND 0.0050 Bromobenzene 0.048 mg/Kg 09/06/24 03:09 Bromochloromethane ND 0.048 0.0074 mg/Kg 09/05/24 14:25 09/06/24 03:09 Bromodichloromethane 0.0066 09/05/24 14:25 ND 0.048 mg/Kg 09/06/24 03:09 0.0054 Bromoform ND 0.048 mg/Kg 09/05/24 14:25 09/06/24 03:09 0.045 09/05/24 14:25 ND Bromomethane 0.12 mg/Kg 09/06/24 03:09 Carbon tetrachloride ND 0.024 0.0053 mg/Kg 09/05/24 14:25 09/06/24 03:09 Chloroethane ND 0.096 0.025 mg/Kg 09/05/24 14:25 09/06/24 03:09 0.020 0.024 0.0050 mg/Kg 09/05/24 14:25 09/06/24 03:09 Chloroform 0.012 ND 09/05/24 14:25 09/06/24 03:09 Chloromethane 0.072 mg/Kg cis-1,2-Dichloroethene ND 0.072 0.015 mg/Kg 09/05/24 14:25 09/06/24 03:09 cis-1.3-Dichloropropene ND 0.024 0.0048 mg/Kg 09/05/24 14:25 09/06/24 03:09 0.0059 Dibromochloromethane ND 0.024 mg/Kg 09/05/24 14:25 09/06/24 03:09 Dibromomethane ND 0.048 0.0088 mg/Kg 09/05/24 14:25 09/06/24 03:09 Dichlorodifluoromethane ND 0.055 mg/Kg 0.30 Ö 09/05/24 14:25 09/06/24 03:09 Ethylbenzene ND 0.048 0.011 mg/Kg 09/05/24 14:25 09/06/24 03:09 Hexachlorobutadiene 0.051 0.12 0.029 mg/Kg 09/05/24 14:25 09/06/24 03:09 Isopropylbenzene ND 0.048 0.010 mg/Kg 09/05/24 14:25 09/06/24 03:09 0.0072 ND 09/05/24 14:25 09/06/24 03:09 Methyl tert-butyl ether 0.048 mg/Kg Methylene Chloride 0.031 09/05/24 14:25 09/06/24 03:09 ND 0.30 mg/Kg ND m-Xylene & p-Xylene 0.048 0.0085 mg/Kg 09/05/24 14:25 09/06/24 03:09 Naphthalene ND 0.18 0.047 mg/Kg 09/05/24 14:25 09/06/24 03:09 n-Butylbenzene ND 09/05/24 14:25 0.048 0.022 mg/Kg 09/06/24 03:09 N-Propylbenzene ND 0.048 0.018 mg/Kg ₩ 09/05/24 14:25 09/06/24 03:09 o-Xylene ND 0.048 0.0060 mg/Kg 09/05/24 14:25 09/06/24 03:09

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-27-SO-37.4-20240827

Date Collected: 08/27/24 11:35 Date Received: 08/30/24 12:34

Percent Moisture (SM22 2540G)

Lab Sample ID: 580-143405-1

**Matrix: Solid** 

Percent Solids: 86.7

Method: SW846 8260D - Vol	_	•	•	(Conti	/	_			
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fa
sec-Butylbenzene	ND		0.048		mg/Kg	₩	09/05/24 14:25	09/06/24 03:09	•
Styrene	ND		0.048		mg/Kg	₩	09/05/24 14:25	09/06/24 03:09	
t-Butylbenzene	ND		0.048	0.0092	mg/Kg	₩	09/05/24 14:25	09/06/24 03:09	1
Tetrachloroethene	0.033	J	0.048	0.0063	mg/Kg	₩	09/05/24 14:25	09/06/24 03:09	1
Toluene	ND		0.072	0.016	mg/Kg	₩	09/05/24 14:25	09/06/24 03:09	1
trans-1,2-Dichloroethene	ND		0.072	0.017	mg/Kg	₩	09/05/24 14:25	09/06/24 03:09	1
trans-1,3-Dichloropropene	ND		0.048	0.0084	mg/Kg	₩	09/05/24 14:25	09/06/24 03:09	1
Trichloroethene	ND		0.048	0.012	mg/Kg	₩	09/05/24 14:25	09/06/24 03:09	1
Trichlorofluoromethane	ND		0.096	0.031	mg/Kg	₩	09/05/24 14:25	09/06/24 03:09	1
Vinyl chloride	ND		0.12	0.022	mg/Kg	₽	09/05/24 14:25	09/06/24 03:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		80 - 121				09/05/24 14:25	09/06/24 03:09	1
4-Bromofluorobenzene (Surr)	101		80 - 120				09/05/24 14:25	09/06/24 03:09	1
Dibromofluoromethane (Surr)	106		80 - 120				09/05/24 14:25	09/06/24 03:09	1
Toluene-d8 (Surr)	99		80 - 120				09/05/24 14:25	09/06/24 03:09	1
Method: SW846 8260D - Vol	atile Organic	Compoun	ds by GC/MS	- DL					
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	43		0.51	0.062	mg/Kg	<del>-</del>	09/06/24 08:14	09/06/24 17:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	106		80 - 121				09/06/24 08:14	09/06/24 17:15	1
4-Bromofluorobenzene (Surr)	103		80 - 120				09/06/24 08:14	09/06/24 17:15	1
Dibromofluoromethane (Surr)	106		80 - 120				09/06/24 08:14	09/06/24 17:15	1
Toluene-d8 (Surr)	102		80 - 120				09/06/24 08:14	09/06/24 17:15	
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	86.7		0.1	0.1	%			09/09/24 15:45	1

0.1

0.1 %

13.3

09/09/24 15:45

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

**Client Sample ID: TB-01-SO-20240827** 

Lab Sample ID: 580-143405-2 Matrix: Solid

Date Collected: 08/27/24 23:59 Date Received: 08/30/24 12:34

Analyte	Result	Qualifier	RL MDL	. Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND	0.0	0.0050	mg/Kg		09/05/24 14:25	09/06/24 01:05	
1,1,1-Trichloroethane	ND	0.0	0.0046	mg/Kg		09/05/24 14:25	09/06/24 01:05	
1,1,2,2-Tetrachloroethane	ND	0.0	0.0076	mg/Kg		09/05/24 14:25	09/06/24 01:05	
1,1,2-Trichloroethane	ND	0.0	0.0074	l mg/Kg		09/05/24 14:25	09/06/24 01:05	
1,1-Dichloroethane	ND	0.0	0.0092	2 mg/Kg		09/05/24 14:25	09/06/24 01:05	
1,1-Dichloroethene	ND	0.0	0.012	2 mg/Kg		09/05/24 14:25	09/06/24 01:05	
1,1-Dichloropropene	ND	0.0	0.0053	3 mg/Kg		09/05/24 14:25	09/06/24 01:05	
1,2,3-Trichlorobenzene	ND	0.0	0.040	) mg/Kg		09/05/24 14:25	09/06/24 01:05	
1,2,3-Trichloropropane	ND	0.0	0.012	2 mg/Kg		09/05/24 14:25	09/06/24 01:05	
1,2,4-Trichlorobenzene	ND	0.0	0.043	3 mg/Kg		09/05/24 14:25	09/06/24 01:05	
1,2,4-Trimethylbenzene	ND	0.0		l mg/Kg		09/05/24 14:25	09/06/24 01:05	
1,2-Dibromo-3-Chloropropane	ND	0.0	060 0.015	mg/Kg		09/05/24 14:25	09/06/24 01:05	
1,2-Dibromoethane	ND	0.0		3 mg/Kg		09/05/24 14:25	09/06/24 01:05	
1,2-Dichlorobenzene	ND			mg/Kg			09/06/24 01:05	
1,2-Dichloroethane	ND			mg/Kg			09/06/24 01:05	
1,2-Dichloropropane	ND			mg/Kg			09/06/24 01:05	
1,3,5-Trimethylbenzene	ND	0.0		mg/Kg		09/05/24 14:25	09/06/24 01:05	
1,3-Dichlorobenzene	ND			B mg/Kg		09/05/24 14:25	09/06/24 01:05	
1,3-Dichloropropane	ND			mg/Kg		09/05/24 14:25	09/06/24 01:05	
1,4-Dichlorobenzene	ND		060 0.011				09/06/24 01:05	
2,2-Dichloropropane	ND			2 mg/Kg			09/06/24 01:05	
2-Chlorotoluene	ND			B mg/Kg			09/06/24 01:05	
4-Chlorotoluene	ND			3 mg/Kg			09/06/24 01:05	
4-Isopropyltoluene	ND			) mg/Kg			09/06/24 01:05	
Benzene	ND			B mg/Kg			09/06/24 01:05	
Bromobenzene	ND			2 mg/Kg			09/06/24 01:05	
Bromochloromethane	ND			mg/Kg			09/06/24 01:05	
Bromodichloromethane	ND			mg/Kg			09/06/24 01:05	
Bromoform	ND			mg/Kg			09/06/24 01:05	
Bromomethane	ND			B mg/Kg			09/06/24 01:05	
Carbon tetrachloride	ND			l mg/Kg			09/06/24 01:05	
Chlorobenzene	ND			mg/Kg			09/06/24 01:05	
Chloroethane	ND		080 0.021				09/06/24 01:05	
Chloroform	ND			mg/Kg			09/06/24 01:05	
Chloromethane	ND			mg/Kg			09/06/24 01:05	
cis-1,2-Dichloroethene	ND			mg/Kg		09/05/24 14:25	09/06/24 01:05	
cis-1,3-Dichloropropene	ND			) mg/Kg			09/06/24 01:05	
Dibromochloromethane	ND			mg/Kg			09/06/24 01:05	
Dibromomethane	ND			mg/Kg			09/06/24 01:05	
Dichlorodifluoromethane	ND			mg/Kg			09/06/24 01:05	
Ethylbenzene	ND			mg/Kg			09/06/24 01:05	
Hexachlorobutadiene	ND			l mg/Kg			09/06/24 01:05	
sopropylbenzene	ND			mg/Kg			09/06/24 01:05	
Methyl tert-butyl ether	ND ND			mg/Kg			09/06/24 01:05	
•				mg/Kg mg/Kg			09/06/24 01:05	
Methylene Chloride	ND							
m-Xylene & p-Xylene	ND			mg/Kg			09/06/24 01:05	
Naphthalene	ND			mg/Kg			09/06/24 01:05	
n-Butylbenzene N-Propylbenzene	ND ND			mg/Kg mg/Kg			09/06/24 01:05 09/06/24 01:05	

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

**Client Sample ID: TB-01-SO-20240827** 

Date Collected: 08/27/24 23:59

Date Received: 08/30/24 12:34

Toluene-d8 (Surr)

Lab Sample ID: 580-143405-2

09/05/24 14:25 09/06/24 01:05

**Matrix: Solid** 

Method: SW846 8260D - Vo	latile Organic	Compound	ds by GC/MS	(Conti	nued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.040	0.0050	mg/Kg		09/05/24 14:25	09/06/24 01:05	1
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		09/05/24 14:25	09/06/24 01:05	1
Styrene	ND		0.040	0.013	mg/Kg		09/05/24 14:25	09/06/24 01:05	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		09/05/24 14:25	09/06/24 01:05	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		09/05/24 14:25	09/06/24 01:05	1
Toluene	ND		0.060	0.014	mg/Kg		09/05/24 14:25	09/06/24 01:05	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		09/05/24 14:25	09/06/24 01:05	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		09/05/24 14:25	09/06/24 01:05	1
Trichloroethene	ND		0.040	0.010	mg/Kg		09/05/24 14:25	09/06/24 01:05	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		09/05/24 14:25	09/06/24 01:05	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		09/05/24 14:25	09/06/24 01:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			80 - 121				09/05/24 14:25	09/06/24 01:05	1
4-Bromofluorobenzene (Surr)	101		80 - 120				09/05/24 14:25	09/06/24 01:05	1
Dibromofluoromethane (Surr)	112		80 - 120				09/05/24 14:25	09/06/24 01:05	1

80 - 120

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-27-SO-41.5-20240827

Date Collected: 08/27/24 12:50
Date Received: 08/30/24 12:34

Lab Sample ID: 580-143405-3

Matrix: Solid Percent Solids: 92.6

Analyte	Result Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND	0.019	0.0048	mg/Kg	☼	09/05/24 14:25	09/06/24 03:29	
1,1,1-Trichloroethane	ND	0.038	0.0044	mg/Kg	☼	09/05/24 14:25	09/06/24 03:29	
1,1,2,2-Tetrachloroethane	ND	0.019	0.0073	mg/Kg	₩	09/05/24 14:25	09/06/24 03:29	
1,1,2-Trichloroethane	ND	0.019	0.0071	mg/Kg	₩	09/05/24 14:25	09/06/24 03:29	
1,1-Dichloroethane	ND	0.038	0.0088	mg/Kg	☼	09/05/24 14:25	09/06/24 03:29	
1,1-Dichloroethene	ND	0.038	0.012	mg/Kg	☼	09/05/24 14:25	09/06/24 03:29	
1,1-Dichloropropene	ND	0.038	0.0051	mg/Kg	₩	09/05/24 14:25	09/06/24 03:29	
1,2,3-Trichlorobenzene	ND	0.077	0.038	mg/Kg	☼	09/05/24 14:25	09/06/24 03:29	
1,2,3-Trichloropropane	ND	0.038	0.011	mg/Kg	☼	09/05/24 14:25	09/06/24 03:29	
1,2,4-Trichlorobenzene	ND	0.077	0.041	mg/Kg	₩	09/05/24 14:25	09/06/24 03:29	
1,2,4-Trimethylbenzene	ND	0.038	0.013	mg/Kg	₩	09/05/24 14:25	09/06/24 03:29	
1,2-Dibromo-3-Chloropropane	ND	0.057	0.015	mg/Kg	☆	09/05/24 14:25	09/06/24 03:29	
1,2-Dibromoethane	ND	0.019	0.0036	mg/Kg	₩	09/05/24 14:25	09/06/24 03:29	
1,2-Dichlorobenzene	ND	0.038	0.0083	mg/Kg	₽	09/05/24 14:25	09/06/24 03:29	
1,2-Dichloroethane	ND	0.019	0.0053	mg/Kg	₽	09/05/24 14:25	09/06/24 03:29	
1,2-Dichloropropane	ND	0.019	0.0063			09/05/24 14:25	09/06/24 03:29	
1,3,5-Trimethylbenzene	ND	0.038	0.0073		☆	09/05/24 14:25	09/06/24 03:29	
1,3-Dichlorobenzene	ND	0.057		mg/Kg	☆	09/05/24 14:25	09/06/24 03:29	
1,3-Dichloropropane	ND	0.057	0.0054	mg/Kg		09/05/24 14:25	09/06/24 03:29	
1,4-Dichlorobenzene	0.043 J	0.057		mg/Kg	₩	09/05/24 14:25	09/06/24 03:29	
2,2-Dichloropropane	ND	0.038		mg/Kg	Ϋ́	09/05/24 14:25		
2-Chlorotoluene	ND	0.038	0.0084				09/06/24 03:29	
4-Chlorotoluene	ND	0.038	0.0094	0 0	₩	09/05/24 14:25		
4-Isopropyltoluene	ND	0.038	0.0098	0 0	ά		09/06/24 03:29	
Benzene	ND	0.019	0.0036	7 7	T.	09/05/24 14:25		
Bromobenzene	ND	0.038	0.0040		ά	09/05/24 14:25	09/06/24 03:29	
Bromochloromethane	ND	0.038	0.0059	0 0	Ď.	09/05/24 14:25		
Bromodichloromethane	ND	0.038	0.0053		T.	09/05/24 14:25	09/06/24 03:29	
Bromoform	ND	0.038	0.0043	0 0	Ť	09/05/24 14:25		
Bromomethane	ND	0.096		mg/Kg	Ť	09/05/24 14:25		
Carbon tetrachloride	ND	0.019	0.0042			09/05/24 14:25		
Chloroethane	ND	0.077		mg/Kg	₩	09/05/24 14:25		
Chloroform	ND	0.017	0.0040		**	09/05/24 14:25		
Chloromethane	ND	0.019	0.0040		· · · · · · · · · · · · · · · · · · ·			
	ND ND	0.057		mg/Kg			09/06/24 03:29	
cis-1,2-Dichloroethene cis-1,3-Dichloropropene	ND	0.037	0.0038		**		09/06/24 03:29	
			0.0038		1\(\frac{1}{2}\)			
Dibromochloromethane	ND	0.019			14		09/06/24 03:29	
Dibromomethane	ND	0.038	0.0071	0 0	₩.		09/06/24 03:29	
Dichlorodifluoromethane	ND	0.24		mg/Kg	:Ω:		09/06/24 03:29	
Ethylbenzene	ND	0.038	0.0087		: <del>Q</del> :		09/06/24 03:29	
Hexachlorobutadiene 	ND	0.096		mg/Kg	☼		09/06/24 03:29	
sopropylbenzene	ND	0.038	0.0082		<del>.</del> .		09/06/24 03:29	
Methyl tert-butyl ether	ND	0.038	0.0057		₩		09/06/24 03:29	
Methylene Chloride	ND	0.24		mg/Kg	₩		09/06/24 03:29	
n-Xylene & p-Xylene	ND	0.038	0.0068				09/06/24 03:29	
Naphthalene	ND	0.14		mg/Kg	₩		09/06/24 03:29	
n-Butylbenzene	ND	0.038		mg/Kg	₩		09/06/24 03:29	
N-Propylbenzene	ND	0.038	0.014	mg/Kg	₩	09/05/24 14:25	09/06/24 03:29	

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-27-SO-41.5-20240827

Date Collected: 08/27/24 12:50 Date Received: 08/30/24 12:34

Lab Sample ID: 580-143405-3

**Matrix: Solid** Percent Solids: 92.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.038	0.0082	mg/Kg	— <u></u>	09/05/24 14:25	09/06/24 03:29	1
Styrene	ND		0.038	0.012	mg/Kg	₽	09/05/24 14:25	09/06/24 03:29	1
t-Butylbenzene	ND		0.038	0.0074	mg/Kg	₩	09/05/24 14:25	09/06/24 03:29	1
Tetrachloroethene	ND		0.038	0.0051	mg/Kg	₽	09/05/24 14:25	09/06/24 03:29	1
Toluene	ND		0.057	0.013	mg/Kg	₩	09/05/24 14:25	09/06/24 03:29	1
trans-1,2-Dichloroethene	ND		0.057	0.014	mg/Kg	₽	09/05/24 14:25	09/06/24 03:29	1
trans-1,3-Dichloropropene	ND		0.038	0.0067	mg/Kg	₩	09/05/24 14:25	09/06/24 03:29	1
Trichloroethene	ND		0.038	0.0099	mg/Kg	₩	09/05/24 14:25	09/06/24 03:29	1
Trichlorofluoromethane	ND		0.077	0.025	mg/Kg	₩	09/05/24 14:25	09/06/24 03:29	1
Vinyl chloride	ND		0.096	0.018	mg/Kg	₩	09/05/24 14:25	09/06/24 03:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		80 - 121				09/05/24 14:25	09/06/24 03:29	1
4-Bromofluorobenzene (Surr)	100		80 - 120				09/05/24 14:25	09/06/24 03:29	1
Dibromofluoromethane (Surr)	107		80 - 120				09/05/24 14:25	09/06/24 03:29	1
Toluene-d8 (Surr)	96		80 - 120				09/05/24 14:25	09/06/24 03:29	1

Method: SW846 8260D - Vo	Method: SW846 8260D - Volatile Organic Compounds by GC/MS - DL											
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac			
Chlorobenzene	21		0.41	0.049	mg/Kg	₩	09/06/24 08:14	09/06/24 17:36	1			
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac			
1,2-Dichloroethane-d4 (Surr)	106		80 - 121				09/06/24 08:14	09/06/24 17:36	1			
4-Bromofluorobenzene (Surr)	102		80 - 120				09/06/24 08:14	09/06/24 17:36	1			
Dibromofluoromethane (Surr)	109		80 - 120				09/06/24 08:14	09/06/24 17:36	1			
Toluene-d8 (Surr)	100		80 - 120				09/06/24 08:14	09/06/24 17:36	1			

General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	92.6		0.1	0.1	%			09/09/24 15:45	1
Percent Moisture (SM22 2540G)	7.4		0.1	0.1	%			09/09/24 15:45	1

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-27-SO-49.5-20240827

Date Collected: 08/27/24 15:35
Date Received: 08/30/24 12:34

Lab Sample ID: 580-143405-4

Matrix: Solid Percent Solids: 92.2

Analyte	Result Q	ompounds by GC/MS ualifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND ND	0.017	0.0044	mg/Kg	— <del>-</del>	09/05/24 14:25	09/06/24 03:50	DII F
1,1,1-Trichloroethane	ND	0.035		mg/Kg	₩			
1,1,2,2-Tetrachloroethane	ND	0.033	0.0040		₩		09/06/24 03:50	
1,1,2-Trichloroethane	ND	0.017	0.0065				09/06/24 03:50	
1,1-Dichloroethane	ND ND	0.017	0.0080	0 0	¥ Ø		09/06/24 03:50	
1.1-Dichloroethene	ND	0.035		mg/Kg	*		09/06/24 03:50	
1,1-Dichloropropene	ND	0.035			12		09/06/24 03:50	
1,2,3-Trichlorobenzene	ND ND	0.035	0.0046	mg/Kg	<b>₽</b>	09/05/24 14:25	09/06/24 03:50	
	ND ND	0.070			¥ \$		09/06/24 03:50	
1,2,3-Trichloropropane	ND	0.033		mg/Kg	¥ ⋭		09/06/24 03:50	
l,2,4-Trichlorobenzene	ND ND			mg/Kg		09/05/24 14:25		
1,2,4-Trimethylbenzene		0.035		mg/Kg	₩			
1,2-Dibromo-3-Chloropropane	ND	0.052		mg/Kg	<u></u> .	09/05/24 14:25	09/06/24 03:50	
1,2-Dibromoethane	ND	0.017	0.0033		₩		09/06/24 03:50	
I,2-Dichlorobenzene	ND	0.035	0.0076	0 0	₩		09/06/24 03:50	
1,2-Dichloroethane	ND	0.017	0.0048				09/06/24 03:50	
1,2-Dichloropropane	ND	0.017	0.0058	0 0	<b>*</b>		09/06/24 03:50	
I,3,5-Trimethylbenzene	ND	0.035	0.0066	0 0	<b>*</b>		09/06/24 03:50	
I,3-Dichlorobenzene	ND	0.052		mg/Kg	<u>.</u> .		09/06/24 03:50	
I,3-Dichloropropane	ND	0.052	0.0049	0 0	<b>*</b>		09/06/24 03:50	
,4-Dichlorobenzene	ND	0.052	0.0094		₩		09/06/24 03:50	
2,2-Dichloropropane	ND	0.035		mg/Kg	<del>.</del>		09/06/24 03:50	
2-Chlorotoluene	ND	0.035	0.0077		₩		09/06/24 03:50	
l-Chlorotoluene	ND	0.035	0.0086		₩		09/06/24 03:50	
l-Isopropyltoluene	ND	0.035	0.0089	mg/Kg			09/06/24 03:50	
Benzene	ND	0.017	0.0033		₩			
Bromobenzene	ND	0.035	0.0037		₩	09/05/24 14:25	09/06/24 03:50	
Bromochloromethane	ND	0.035	0.0054		<del>.</del>	09/05/24 14:25	09/06/24 03:50	
Bromodichloromethane	ND	0.035	0.0048		₩		09/06/24 03:50	
Bromoform	ND	0.035		mg/Kg	₩	09/05/24 14:25	09/06/24 03:50	
Bromomethane	ND	0.087	0.033	mg/Kg	₩	09/05/24 14:25	09/06/24 03:50	
Carbon tetrachloride	ND	0.017	0.0038		₩	09/05/24 14:25	09/06/24 03:50	
Chlorobenzene	0.46 B	0.035	0.0042	mg/Kg	₩	09/05/24 14:25	09/06/24 03:50	
Chloroethane	ND	0.070	0.018	mg/Kg	₩	09/05/24 14:25	09/06/24 03:50	
Chloroform	ND	0.017	0.0037		₩	09/05/24 14:25	09/06/24 03:50	
Chloromethane	ND	0.052	0.0088		₩	09/05/24 14:25	09/06/24 03:50	
cis-1,2-Dichloroethene	ND	0.052	0.011	mg/Kg	₩	09/05/24 14:25	09/06/24 03:50	
sis-1,3-Dichloropropene	ND	0.017	0.0035	mg/Kg	₽	09/05/24 14:25	09/06/24 03:50	
Dibromochloromethane	ND	0.017	0.0043	mg/Kg	₩	09/05/24 14:25	09/06/24 03:50	
Dibromomethane	ND	0.035	0.0065	mg/Kg	₩	09/05/24 14:25	09/06/24 03:50	
Dichlorodifluoromethane	ND	0.22	0.040	mg/Kg	₩	09/05/24 14:25	09/06/24 03:50	
Ethylbenzene	ND	0.035	0.0080	mg/Kg	₩	09/05/24 14:25	09/06/24 03:50	
lexachlorobutadiene	ND	0.087	0.021	mg/Kg	₩	09/05/24 14:25	09/06/24 03:50	
sopropylbenzene	ND	0.035	0.0075	mg/Kg	₩	09/05/24 14:25	09/06/24 03:50	
Methyl tert-butyl ether	ND	0.035	0.0052	mg/Kg	₩	09/05/24 14:25	09/06/24 03:50	
Methylene Chloride	ND	0.22	0.023	mg/Kg	₩	09/05/24 14:25	09/06/24 03:50	
n-Xylene & p-Xylene	ND	0.035	0.0062	mg/Kg	₩	09/05/24 14:25	09/06/24 03:50	
Naphthalene	ND	0.13		mg/Kg	₽	09/05/24 14:25	09/06/24 03:50	
n-Butylbenzene	ND	0.035		mg/Kg	☼	09/05/24 14:25	09/06/24 03:50	
N-Propylbenzene	ND	0.035		mg/Kg			09/06/24 03:50	

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-27-SO-49.5-20240827

Date Collected: 08/27/24 15:35 Date Received: 08/30/24 12:34

Toluene-d8 (Surr)

Lab Sample ID: 580-143405-4

09/05/24 14:25 09/06/24 03:50

**Matrix: Solid** Percent Solids: 92.2

Method: SW846 8260D - Vo	latile Organic Compo	ounds by GC/MS	(Conti	nued)				
Analyte	Result Qualific	er RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND ND	0.035	0.0044	mg/Kg	— <u></u>	09/05/24 14:25	09/06/24 03:50	1
sec-Butylbenzene	ND	0.035	0.0075	mg/Kg	₩	09/05/24 14:25	09/06/24 03:50	1
Styrene	ND	0.035	0.011	mg/Kg	₩	09/05/24 14:25	09/06/24 03:50	1
t-Butylbenzene	ND	0.035	0.0067	mg/Kg	₩	09/05/24 14:25	09/06/24 03:50	1
Tetrachloroethene	ND	0.035	0.0046	mg/Kg	₩	09/05/24 14:25	09/06/24 03:50	1
Toluene	ND	0.052	0.012	mg/Kg	₩	09/05/24 14:25	09/06/24 03:50	1
trans-1,2-Dichloroethene	ND	0.052	0.013	mg/Kg	₩	09/05/24 14:25	09/06/24 03:50	1
trans-1,3-Dichloropropene	ND	0.035	0.0061	mg/Kg	₩	09/05/24 14:25	09/06/24 03:50	1
Trichloroethene	ND	0.035	0.0090	mg/Kg	₩	09/05/24 14:25	09/06/24 03:50	1
Trichlorofluoromethane	ND	0.070	0.023	mg/Kg	₩	09/05/24 14:25	09/06/24 03:50	1
Vinyl chloride	ND	0.087	0.016	mg/Kg	₩	09/05/24 14:25	09/06/24 03:50	1
Surrogate	%Recovery Qualific	er Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109	80 - 121				09/05/24 14:25	09/06/24 03:50	1
4-Bromofluorobenzene (Surr)	101	80 - 120				09/05/24 14:25	09/06/24 03:50	1
Dibromofluoromethane (Surr)	111	80 - 120				09/05/24 14:25	09/06/24 03:50	1

General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 25400	G) 92.2		0.1	0.1	%			09/09/24 15:45	1
Percent Moisture (SM22 254	10G) 7.8		0.1	0.1	%			09/09/24 15:45	1

80 - 120

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Date Collected: 08/28/24 11:05

Date Received: 08/30/24 12:34

Matrix: Solid
Percent Solids: 92.8

Method: SW846 8260D - Vola Analyte	_	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND	Quanner _	0.017	0.0043		— <del>-</del>	09/05/24 14:25	09/06/24 04:11	Dilla
1,1,1-Trichloroethane	ND		0.034	0.0040	mg/Kg	~ ☆	09/05/24 14:25	09/06/24 04:11	
1,1,2,2-Tetrachloroethane	ND		0.017	0.0045		~ ☆	09/05/24 14:25	09/06/24 04:11	
1,1,2-Trichloroethane	ND		0.017	0.0064			09/05/24 14:25	09/06/24 04:11	
1,1-Dichloroethane	ND		0.034	0.0079	mg/Kg	₩	09/05/24 14:25	09/06/24 04:11	
1,1-Dichloroethene	ND		0.034	0.0073		☆	09/05/24 14:25	09/06/24 04:11	
1,1-Dichloropropene	ND		0.034	0.0046		**	09/05/24 14:25	09/06/24 04:11	
1,2,3-Trichlorobenzene	ND		0.069		mg/Kg	₩	09/05/24 14:25	09/06/24 04:11	
1,2,3-Trichloropropane	0.023	1	0.034	0.0099		☆	09/05/24 14:25	09/06/24 04:11	
1,2,4-Trichlorobenzene	0.023 ND		0.069		mg/Kg		09/05/24 14:25	09/06/24 04:11	
1,2,4-Trimethylbenzene	ND		0.009		mg/Kg	☆	09/05/24 14:25	09/06/24 04:11	
1,2-Dibromo-3-Chloropropane	ND ND		0.054		mg/Kg	☆	09/05/24 14:25	09/06/24 04:11	
1,2-Dibromoethane	ND		0.032	0.0033			09/05/24 14:25	09/06/24 04:11	
			0.017			₩			
<b>1,2-Dichlorobenzene</b> 1,2-Dichloroethane	<b>0.050</b> ND		0.034	0.0075 0.0047		<b>☆</b>	09/05/24 14:25 09/05/24 14:25	09/06/24 04:11	
						· · · · · .		09/06/24 04:11	
1,2-Dichloropropane	ND		0.017	0.0057			09/05/24 14:25	09/06/24 04:11	
1,3,5-Trimethylbenzene	ND		0.034	0.0065			09/05/24 14:25	09/06/24 04:11	
1,3-Dichlorobenzene	ND		0.052	0.011		<u>.</u> .	09/05/24 14:25	09/06/24 04:11	
1,3-Dichloropropane	ND		0.052	0.0048		<b>*</b>	09/05/24 14:25	09/06/24 04:11	
I,4-Dichlorobenzene	0.14		0.052	0.0093	0 0	₩	09/05/24 14:25	09/06/24 04:11	
2,2-Dichloropropane	ND		0.034		mg/Kg		09/05/24 14:25	09/06/24 04:11	
2-Chlorotoluene	ND		0.034	0.0076		☼	09/05/24 14:25	09/06/24 04:11	
1-Chlorotoluene	ND		0.034	0.0084	0 0	₩	09/05/24 14:25	09/06/24 04:11	
1-Isopropyltoluene	0.014	J	0.034	0.0088			09/05/24 14:25	09/06/24 04:11	
Benzene	ND		0.017	0.0033		☼	09/05/24 14:25	09/06/24 04:11	
Bromobenzene	ND		0.034	0.0036		₩	09/05/24 14:25	09/06/24 04:11	
Bromochloromethane	ND		0.034	0.0053		₩	09/05/24 14:25	09/06/24 04:11	
Bromodichloromethane	ND		0.034	0.0047	mg/Kg	₩	09/05/24 14:25	09/06/24 04:11	
Bromoform	ND		0.034	0.0039	mg/Kg	₩	09/05/24 14:25	09/06/24 04:11	
Bromomethane	ND		0.086		mg/Kg	₩	09/05/24 14:25	09/06/24 04:11	
Carbon tetrachloride	ND		0.017	0.0038	mg/Kg	₩	09/05/24 14:25	09/06/24 04:11	
Chloroform	0.017		0.017	0.0036	mg/Kg	₩	09/05/24 14:25	09/06/24 04:11	
Chloromethane	ND		0.052	0.0087	mg/Kg	₩	09/05/24 14:25	09/06/24 04:11	
cis-1,2-Dichloroethene	ND		0.052	0.011	mg/Kg	₩	09/05/24 14:25	09/06/24 04:11	
cis-1,3-Dichloropropene	ND		0.017	0.0034	mg/Kg	☼	09/05/24 14:25	09/06/24 04:11	
Dibromochloromethane	ND		0.017	0.0042	mg/Kg	₩	09/05/24 14:25	09/06/24 04:11	
Dibromomethane	ND		0.034	0.0064	mg/Kg	₩	09/05/24 14:25	09/06/24 04:11	
Dichlorodifluoromethane	ND		0.21	0.039	mg/Kg	☼	09/05/24 14:25	09/06/24 04:11	
Ethylbenzene	ND		0.034	0.0078	mg/Kg	☼	09/05/24 14:25	09/06/24 04:11	
Hexachlorobutadiene	ND		0.086	0.021	mg/Kg	₩	09/05/24 14:25	09/06/24 04:11	
sopropylbenzene	ND		0.034	0.0074	mg/Kg	₽	09/05/24 14:25	09/06/24 04:11	
Methyl tert-butyl ether	ND		0.034	0.0052	mg/Kg	₩	09/05/24 14:25	09/06/24 04:11	
Methylene Chloride	ND		0.21		mg/Kg		09/05/24 14:25	09/06/24 04:11	
n-Xylene & p-Xylene	ND		0.034	0.0061		☼	09/05/24 14:25	09/06/24 04:11	
Naphthalene	0.044	J	0.13		mg/Kg	₩	09/05/24 14:25	09/06/24 04:11	
n-Butylbenzene	ND		0.034		mg/Kg		09/05/24 14:25	09/06/24 04:11	
N-Propylbenzene	ND		0.034		mg/Kg		09/05/24 14:25	09/06/24 04:11	
o-Xylene	ND		0.034	0.0043			09/05/24 14:25	09/06/24 04:11	
sec-Butylbenzene	ND		0.034	0.0074			09/05/24 14:25	09/06/24 04:11	

**Eurofins Seattle** 

9/9/2024

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Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-32-SO-38.3-20240828

Date Collected: 08/28/24 11:05

Date Received: 08/30/24 12:34

4-Bromofluorobenzene (Surr)

Dibromofluoromethane (Surr)

Toluene-d8 (Surr)

Lab Sample ID: 580-143405-5

09/06/24 08:14 09/06/24 17:56

09/06/24 08:14 09/06/24 17:56

09/06/24 08:14 09/06/24 17:56

Matrix: Solid

Percent Solids: 92.8

Method: SW846 8260D - Vo	liatile Organic	Compound	ds by GC/MS	(Conti	nuea)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.034	0.011	mg/Kg	<del>-</del>	09/05/24 14:25	09/06/24 04:11	1
t-Butylbenzene	ND		0.034	0.0066	mg/Kg	₩	09/05/24 14:25	09/06/24 04:11	1
Tetrachloroethene	0.079		0.034	0.0046	mg/Kg	₽	09/05/24 14:25	09/06/24 04:11	1
Toluene	ND		0.052	0.012	mg/Kg	₽	09/05/24 14:25	09/06/24 04:11	1
trans-1,2-Dichloroethene	ND		0.052	0.013	mg/Kg	₽	09/05/24 14:25	09/06/24 04:11	1
trans-1,3-Dichloropropene	ND		0.034	0.0060	mg/Kg	₽	09/05/24 14:25	09/06/24 04:11	1
Trichloroethene	ND		0.034	0.0089	mg/Kg	☼	09/05/24 14:25	09/06/24 04:11	1
Trichlorofluoromethane	ND		0.069	0.022	mg/Kg	☼	09/05/24 14:25	09/06/24 04:11	1
Vinyl chloride	ND		0.086	0.016	mg/Kg	₩	09/05/24 14:25	09/06/24 04:11	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		80 - 121				09/05/24 14:25	09/06/24 04:11	
4-Bromofluorobenzene (Surr)	100		80 - 120				09/05/24 14:25	09/06/24 04:11	
Dibromofluoromethane (Surr)	106		80 - 120				09/05/24 14:25	09/06/24 04:11	1
Toluene-d8 (Surr)	99		80 - 120				09/05/24 14:25	09/06/24 04:11	1
- Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	- DL					
Analyte	_	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	20		0.37	0.044	mg/Kg	<u></u>	09/06/24 08:14	09/06/24 17:56	
Chloroethane	ND		0.74	0.19	mg/Kg	₩	09/06/24 08:14	09/06/24 17:56	•
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)			80 - 121				09/06/24 08:14	09/06/24 17:56	

General Chemistry Analyte	Result Qualifi	er RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	92.8	0.1	0.1	%			09/09/24 15:45	1
Percent Moisture (SM22 2540G)	7.2	0.1	0.1	%			09/09/24 15:45	1

80 - 120

80 - 120

80 - 120

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Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-32-SO-35.4-20240828

Lab Sample ID: 580-143405-6 Date Collected: 08/28/24 11:10 **Matrix: Solid** Percent Solids: 85.5 Date Received: 08/30/24 12:34

Date Received: 06/30/24 12:34		•							5: 05.5
Method: SW846 8260D - Volatili Analyte	_	Compounds Qualifier	s by GC/MS RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.027	0.0067		— <u>=</u>		09/06/24 04:31	1
1,1,1-Trichloroethane	ND		0.053	0.0061		₩		09/06/24 04:31	1
1,1,2,2-Tetrachloroethane	ND		0.027		mg/Kg	₩		09/06/24 04:31	1
1,1,2-Trichloroethane	ND		0.027	0.0098				09/06/24 04:31	· · · · · · · · · · · · · · · · · · ·
1,1-Dichloroethane	ND		0.053		mg/Kg	₩	09/05/24 14:25		1
1.1-Dichloroethene	ND		0.053		mg/Kg			09/06/24 04:31	1
1,1-Dichloropropene	ND		0.053	0.0071				09/06/24 04:31	· · · · · · · · · · · · · · · · · · ·
1,2,3-Trichlorobenzene	ND		0.11		mg/Kg	₩		09/06/24 04:31	1
1,2,3-Trichloropropane	ND		0.053		mg/Kg	₩		09/06/24 04:31	1
1,2,4-Trichlorobenzene	ND		0.11		mg/Kg			09/06/24 04:31	· · · · · · · · · · · · · · · · · · ·
1,2,4-Trimethylbenzene	ND		0.053		mg/Kg	₩		09/06/24 04:31	1
1,2-Dibromo-3-Chloropropane	ND		0.080		mg/Kg	₩		09/06/24 04:31	1
1,2-Dibromoethane	ND		0.027	0.0051				09/06/24 04:31	· · · · · · · · · · · · · · · · · · ·
,	0.11		0.027		mg/Kg	₩		09/06/24 04:31	1
<b>1,2-Dichlorobenzene</b> 1,2-Dichloroethane	ND		0.033	0.012		₩		09/06/24 04:31	1
	ND		0.027	0.0073				09/06/24 04:31	
1,2-Dichloropropane					mg/Kg	*			
1,3,5-Trimethylbenzene	ND ND		0.053		0 0	φ.		09/06/24 04:31	1
1,3-Dichlorobenzene			0.080		mg/Kg	· · · · ·		09/06/24 04:31	
1,3-Dichloropropane	ND		0.080	0.0075	0 0	<b>‡</b>		09/06/24 04:31	1
1,4-Dichlorobenzene	0.34		0.080		mg/Kg	<b>‡</b>		09/06/24 04:31	1
2,2-Dichloropropane	ND		0.053		mg/Kg	<u>.</u> .		09/06/24 04:31	
2-Chlorotoluene	ND		0.053		mg/Kg	<b>‡</b>		09/06/24 04:31	1
4-Chlorotoluene	ND		0.053		mg/Kg	<b>‡</b>		09/06/24 04:31	1
4-Isopropyltoluene	ND		0.053		mg/Kg			09/06/24 04:31	
Benzene	ND		0.027	0.0051		₩		09/06/24 04:31	1
Bromobenzene	ND		0.053	0.0056	0 0	₩		09/06/24 04:31	1
Bromochloromethane	ND		0.053	0.0083				09/06/24 04:31	1
Bromodichloromethane	ND		0.053	0.0073		₩		09/06/24 04:31	1
Bromoform	ND		0.053	0.0060		₩		09/06/24 04:31	1
Bromomethane	ND		0.13	0.050	mg/Kg			09/06/24 04:31	1
Carbon tetrachloride	ND		0.027	0.0059	mg/Kg	☆		09/06/24 04:31	1
Chloroform	0.015	J	0.027	0.0056		☆		09/06/24 04:31	1
Chloromethane	ND		0.080	0.013	mg/Kg		09/05/24 14:25	09/06/24 04:31	1
cis-1,2-Dichloroethene	ND		0.080	0.017	0 0	₩	09/05/24 14:25	09/06/24 04:31	1
cis-1,3-Dichloropropene	ND		0.027	0.0053		☆	09/05/24 14:25	09/06/24 04:31	1
Dibromochloromethane	ND		0.027	0.0065		≎		09/06/24 04:31	1
Dibromomethane	ND		0.053	0.0098	mg/Kg	≎	09/05/24 14:25	09/06/24 04:31	1
Dichlorodifluoromethane	ND		0.33	0.061	mg/Kg	≎	09/05/24 14:25	09/06/24 04:31	1
Ethylbenzene	ND		0.053	0.012	mg/Kg	≎	09/05/24 14:25	09/06/24 04:31	1
Hexachlorobutadiene	ND		0.13	0.032	mg/Kg	≎	09/05/24 14:25	09/06/24 04:31	1
Isopropylbenzene	ND		0.053	0.011	mg/Kg	☆	09/05/24 14:25	09/06/24 04:31	1
Methyl tert-butyl ether	ND		0.053	0.0080	mg/Kg	☆	09/05/24 14:25	09/06/24 04:31	1
Methylene Chloride	ND		0.33		mg/Kg	₽	09/05/24 14:25	09/06/24 04:31	1
m-Xylene & p-Xylene	ND		0.053	0.0094	mg/Kg	☼	09/05/24 14:25	09/06/24 04:31	1
Naphthalene	ND		0.20	0.052	mg/Kg	₩	09/05/24 14:25	09/06/24 04:31	1
n-Butylbenzene	ND		0.053	0.025	mg/Kg	₩	09/05/24 14:25	09/06/24 04:31	1
N-Propylbenzene	ND		0.053	0.020	mg/Kg	☆	09/05/24 14:25	09/06/24 04:31	1
o-Xylene	ND		0.053	0.0067	mg/Kg	☆	09/05/24 14:25	09/06/24 04:31	1
sec-Butylbenzene	ND		0.053	0.011	mg/Kg	₩	09/05/24 14:25	09/06/24 04:31	1

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-32-SO-35.4-20240828

Date Collected: 08/28/24 11:10 Date Received: 08/30/24 12:34 Lab Sample ID: 580-143405-6

**Matrix: Solid** 

Percent Solids: 85.5

Method: SW846 8260D - Vo		-	•	(Conti	•	_			
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.053	0.017	mg/Kg	≎	09/05/24 14:25	09/06/24 04:31	1
t-Butylbenzene	ND		0.053	0.010	mg/Kg	☼	09/05/24 14:25	09/06/24 04:31	1
Tetrachloroethene	ND		0.053	0.0071	mg/Kg	₽	09/05/24 14:25	09/06/24 04:31	1
Toluene	ND		0.080	0.018	mg/Kg	☼	09/05/24 14:25	09/06/24 04:31	1
trans-1,2-Dichloroethene	ND		0.080	0.019	mg/Kg	₩	09/05/24 14:25	09/06/24 04:31	1
trans-1,3-Dichloropropene	ND		0.053	0.0093	mg/Kg	₽	09/05/24 14:25	09/06/24 04:31	1
Trichloroethene	0.021	J	0.053	0.014	mg/Kg	₽	09/05/24 14:25	09/06/24 04:31	1
Trichlorofluoromethane	ND		0.11	0.035	mg/Kg	₽	09/05/24 14:25	09/06/24 04:31	1
Vinyl chloride	ND		0.13	0.025	mg/Kg	₩	09/05/24 14:25	09/06/24 04:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		80 - 121				09/05/24 14:25	09/06/24 04:31	1
4-Bromofluorobenzene (Surr)	101		80 - 120				09/05/24 14:25	09/06/24 04:31	1
Dibromofluoromethane (Surr)	107		80 - 120				09/05/24 14:25	09/06/24 04:31	1
Toluene-d8 (Surr)	98		80 - 120				09/05/24 14:25	09/06/24 04:31	1
Method: SW846 8260D - Vo	olatile Organic	Compoun	ds by GC/MS	- DL					
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	23		0.57	0.069	mg/Kg	<del>-</del>	09/06/24 08:14	09/06/24 18:17	1
Chloroethane	2.0		1.1	0.30	mg/Kg	☼	09/06/24 08:14	09/06/24 18:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		80 - 121				09/06/24 08:14	09/06/24 18:17	1
4-Bromofluorobenzene (Surr)	102		80 - 120				09/06/24 08:14	09/06/24 18:17	1
Dibromofluoromethane (Surr)	111		80 - 120				09/06/24 08:14	09/06/24 18:17	1
Toluene-d8 (Surr)	99		80 - 120				09/06/24 08:14	09/06/24 18:17	1

General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	85.5		0.1	0.1	%			09/09/24 15:45	1
Percent Moisture (SM22 2540G)	14.5		0.1	0.1	%			09/09/24 15:45	1

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Date Collected: 08/28/24 11:15

Date Received: 08/30/24 12:34

Matrix: Solid
Percent Solids: 81.7

Analyte	tile Organic Compound Result Qualifier	RL	MDI	Unit	D	Prepared	Analyzed	Dil Fa
,1,1,2-Tetrachloroethane	ND Qualifici	0.026	0.0066		— <del>-</del>	09/05/24 14:25		
,1,1-Trichloroethane	ND	0.053	0.0061				09/06/24 04:52	
,1,2,2-Tetrachloroethane	ND	0.026		mg/Kg			09/06/24 04:52	
1,2-Trichloroethane	ND	0.026	0.0098				09/06/24 04:52	
,1-Dichloroethane	ND	0.053		mg/Kg	~ \$		09/06/24 04:52	
1-Dichloroethene	ND	0.053		mg/Kg	₩		09/06/24 04:52	
1-Dichloropropene	ND	0.053	0.0070				09/06/24 04:52	
2,3-Trichlorobenzene	ND	0.033		mg/Kg	~ \$		09/06/24 04:52	
2,3-Trichloropropane	ND	0.053		mg/Kg	₩		09/06/24 04:52	
2,4-Trichlorobenzene	ND	0.033		mg/Kg			09/06/24 04:52	
2,4-Trimethylbenzene	ND	0.053		mg/Kg	₩		09/06/24 04:52	
2-Dibromo-3-Chloropropane	ND ND	0.033		mg/Kg	₩		09/06/24 04:52	
2-Dibromoethane	ND ND	0.079	0.020				09/06/24 04:52	
					Ψ.			
2-Dichlorobenzene	<b>0.16</b> ND	0.053 0.026	0.011	mg/Kg	*		09/06/24 04:52 09/06/24 04:52	
2-Dichloroethane					· · · · · · · · · · · · · · · · · · ·			
2-Dichloropropane	ND	0.026	0.0087		₩.		09/06/24 04:52	
3,5-Trimethylbenzene	ND	0.053		mg/Kg	<b>*</b>		09/06/24 04:52	
3-Dichlorobenzene	ND	0.079		mg/Kg	<u>.</u> .		09/06/24 04:52	
3-Dichloropropane	ND	0.079	0.0074	0 0	☼		09/06/24 04:52	
4-Dichlorobenzene	0.52	0.079		mg/Kg	☼		09/06/24 04:52	
2-Dichloropropane	ND	0.053		mg/Kg	<del>.</del>		09/06/24 04:52	
Chlorotoluene	ND	0.053		mg/Kg	₩		09/06/24 04:52	
Chlorotoluene	ND	0.053		mg/Kg	₩		09/06/24 04:52	
Isopropyltoluene	ND	0.053		mg/Kg	<del>.</del> .		09/06/24 04:52	
enzene	ND	0.026	0.0050		₩		09/06/24 04:52	
omobenzene	ND	0.053	0.0055	0 0	₩		09/06/24 04:52	
omochloromethane	ND	0.053	0.0082			09/05/24 14:25	09/06/24 04:52	
omodichloromethane	ND	0.053	0.0073		₩	09/05/24 14:25	09/06/24 04:52	
romoform	ND	0.053	0.0059		₩	09/05/24 14:25	09/06/24 04:52	
omomethane	ND	0.13	0.050	mg/Kg	₩	09/05/24 14:25	09/06/24 04:52	
arbon tetrachloride	ND	0.026	0.0058	mg/Kg	☼	09/05/24 14:25	09/06/24 04:52	
nloroform	ND	0.026	0.0055	mg/Kg	☼	09/05/24 14:25	09/06/24 04:52	
nloromethane	ND	0.079	0.013	mg/Kg	☼	09/05/24 14:25	09/06/24 04:52	
s-1,2-Dichloroethene	ND	0.079	0.017	mg/Kg	₩	09/05/24 14:25	09/06/24 04:52	
s-1,3-Dichloropropene	ND	0.026	0.0053	mg/Kg	☼	09/05/24 14:25	09/06/24 04:52	
bromochloromethane	ND	0.026	0.0065	mg/Kg	☼	09/05/24 14:25	09/06/24 04:52	
bromomethane	ND	0.053	0.0098	mg/Kg	₩	09/05/24 14:25	09/06/24 04:52	
chlorodifluoromethane	ND	0.33	0.061	mg/Kg	₩	09/05/24 14:25	09/06/24 04:52	
hylbenzene	ND	0.053	0.012	mg/Kg	☼	09/05/24 14:25	09/06/24 04:52	
exachlorobutadiene	0.071 JB	0.13	0.032	mg/Kg	₽	09/05/24 14:25	09/06/24 04:52	
ppropylbenzene	ND	0.053	0.011	mg/Kg	₩	09/05/24 14:25	09/06/24 04:52	
ethyl tert-butyl ether	ND	0.053	0.0079	mg/Kg	☆	09/05/24 14:25	09/06/24 04:52	
ethylene Chloride	ND	0.33		mg/Kg		09/05/24 14:25	09/06/24 04:52	
Xylene & p-Xylene	ND	0.053	0.0094		₩		09/06/24 04:52	
aphthalene	ND	0.20		mg/Kg	₩		09/06/24 04:52	
Butylbenzene	ND	0.053		mg/Kg	 .⇔		09/06/24 04:52	
Propylbenzene	ND	0.053		mg/Kg			09/06/24 04:52	
Xylene	ND	0.053	0.0066				09/06/24 04:52	
ec-Butylbenzene	ND	0.053		mg/Kg			09/06/24 04:52	

**Eurofins Seattle** 

9/9/2024

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7

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Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-32-SO-29.6-20240828

Date Collected: 08/28/24 11:15

Date Received: 08/30/24 12:34

Percent Solids (SM22 2540G)

Percent Moisture (SM22 2540G)

Lab Sample ID: 580-143405-7

Matrix: Solid
Percent Solids: 81.7

09/09/24 15:45

09/09/24 15:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND	· <del></del>	0.053	0.017	mg/Kg	— <u></u>	09/05/24 14:25	09/06/24 04:52	1
t-Butylbenzene	ND		0.053	0.010	mg/Kg	☼	09/05/24 14:25	09/06/24 04:52	1
Tetrachloroethene	ND		0.053	0.0070	mg/Kg	₩	09/05/24 14:25	09/06/24 04:52	1
Toluene	ND		0.079	0.018	mg/Kg	≎	09/05/24 14:25	09/06/24 04:52	1
trans-1,2-Dichloroethene	ND		0.079	0.019	mg/Kg	₩	09/05/24 14:25	09/06/24 04:52	1
trans-1,3-Dichloropropene	ND		0.053	0.0092	mg/Kg	₩	09/05/24 14:25	09/06/24 04:52	1
Trichloroethene	ND		0.053	0.014	mg/Kg	☼	09/05/24 14:25	09/06/24 04:52	1
Trichlorofluoromethane	ND		0.11	0.034	mg/Kg	₩	09/05/24 14:25	09/06/24 04:52	1
Vinyl chloride	ND		0.13	0.025	mg/Kg	₩	09/05/24 14:25	09/06/24 04:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		80 - 121				09/05/24 14:25	09/06/24 04:52	1
4-Bromofluorobenzene (Surr)	103		80 - 120				09/05/24 14:25	09/06/24 04:52	1
Dibromofluoromethane (Surr)	111		80 - 120				09/05/24 14:25	09/06/24 04:52	1
Toluene-d8 (Surr)	99		80 - 120				09/05/24 14:25	09/06/24 04:52	1
Method: SW846 8260D - Vo	olatile Organic	Compound	ds by GC/MS	- RA					
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	8.1		0.053	0.0063	mg/Kg	<u></u>	09/06/24 08:14	09/06/24 15:32	1
Chloroethane	ND		0.11	0.028	mg/Kg	☼	09/06/24 08:14	09/06/24 15:32	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		80 - 121				09/06/24 08:14	09/06/24 15:32	1
4-Bromofluorobenzene (Surr)	102		80 - 120				09/06/24 08:14	09/06/24 15:32	1
Dibromofluoromethane (Surr)	107		80 - 120				09/06/24 08:14	09/06/24 15:32	1
Toluene-d8 (Surr)	98		80 - 120				09/06/24 08:14	09/06/24 15:32	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac

0.1

0.1

81.7

18.3

0.1 %

0.1 %

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-32-SO-42.5-20240828

Lab Sample ID: 580-143405-8 Date Collected: 08/28/24 12:45 Matrix: Solid Date Received: 08/30/24 12:34 Percent Solids: 93.4

Method: SW846 8260D - Volatile Organic Compounds by GC/MS **MDL** Unit Dil Fac Analyte Result Qualifier D Prepared Analyzed 0.017 1,1,1,2-Tetrachloroethane ND 0.0044 mg/Kg 09/05/24 14:25 09/06/24 05:12 ND 0.035 1.1.1-Trichloroethane 0.0040 mg/Kg 09/05/24 14:25 09/06/24 05:12 1,1,2,2-Tetrachloroethane ND 0.017 0.0066 mg/Kg 09/05/24 14:25 09/06/24 05:12 ND 0.0065 1,1,2-Trichloroethane 0.017 mg/Kg ť 09/05/24 14:25 09/06/24 05:12 0.035 0.0080 mg/Kg 09/05/24 14:25 09/06/24 05:12 1 1-Dichloroethane ND 1,1-Dichloroethene ND 0.035 0.011 mg/Kg 09/05/24 14:25 09/06/24 05:12 1,1-Dichloropropene ND 0.035 0.0046 09/05/24 14:25 09/06/24 05:12 mg/Kg ND 0.070 0.035 09/05/24 14:25 09/06/24 05:12 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.035 0.010 mg/Kg 09/05/24 14:25 09/06/24 05:12 1,2,4-Trichlorobenzene ND 0.070 0.037 mg/Kg ġ 09/05/24 14:25 09/06/24 05:12 1,2,4-Trimethylbenzene ND 0.035 0.012 mg/Kg 09/05/24 14:25 09/06/24 05:12 1.2-Dibromo-3-Chloropropane ND 0.052 0.013 ma/Ka 09/05/24 14:25 09/06/24 05:12 1 1,2-Dibromoethane ND 0.017 0.0033 mg/Kg 09/05/24 14:25 09/06/24 05:12 1,2-Dichlorobenzene ND 0.035 0.0076 mg/Kg 09/05/24 14:25 09/06/24 05:12 ND 0.017 0.0048 mg/Kg 09/05/24 14:25 09/06/24 05:12 1.2-Dichloroethane 0.0058 1,2-Dichloropropane NΩ 0.017 mg/Kg 09/05/24 14:25 09/06/24 05:12 ND 0.0066 1,3,5-Trimethylbenzene 0.035 mg/Kg 09/05/24 14:25 09/06/24 05:12 1,3-Dichlorobenzene ND 0.052 0.012 mg/Kg 09/05/24 14:25 09/06/24 05:12 1,3-Dichloropropane ND 0.052 0.0049 mg/Kg 09/05/24 14:25 09/06/24 05:12 1,4-Dichlorobenzene ND 0.052 0.0094 mg/Kg 09/05/24 14:25 09/06/24 05:12 2,2-Dichloropropane ND 0.035 0.011 mg/Kg ÷ 09/05/24 14:25 09/06/24 05:12 2-Chlorotoluene ND 0.035 0.0077 mg/Kg 09/05/24 14:25 09/06/24 05:12 4-Chlorotoluene ND 0.0086 mg/Kg 09/05/24 14:25 09/06/24 05:12 0.035 4-Isopropyltoluene ND 0.035 0.0089 mg/Kg 09/05/24 14:25 09/06/24 05:12 Benzene ND 0.017 0.0033 mg/Kg 09/05/24 14:25 09/06/24 05:12 ND 0.0037 Bromobenzene 0.035 mg/Kg 09/05/24 14:25 09/06/24 05:12 Bromochloromethane ND 0.035 0.0054 mg/Kg 09/05/24 14:25 09/06/24 05:12 Bromodichloromethane 0.0048 09/05/24 14:25 ND 0.035 mg/Kg 09/06/24 05:12 0.0039 Bromoform ND 0.035 mg/Kg 09/05/24 14:25 09/06/24 05:12 0.033 09/05/24 14:25 ND 09/06/24 05:12 Bromomethane 0.087 mg/Kg ť 0.017 Carbon tetrachloride ND 0.0038 mg/Kg 09/05/24 14:25 09/06/24 05:12 0.035 0.0042 mg/Kg 09/05/24 14:25 09/06/24 05:12 Chlorobenzene 3.8 Chloroethane 0.070 0.018 09/05/24 14:25 09/06/24 05:12 ND mg/Kg Chloroform ND 09/05/24 14:25 09/06/24 05:12 0.017 0.0037 mg/Kg Chloromethane ND 0.052 8800.0 mg/Kg 09/05/24 14:25 09/06/24 05:12 cis-1.2-Dichloroethene ND 0.052 0.011 mg/Kg 09/05/24 14:25 09/06/24 05:12 cis-1,3-Dichloropropene ND 0.017 0.0035 mg/Kg 09/05/24 14:25 09/06/24 05:12 Dibromochloromethane ND 0.017 0.0043 mg/Kg 09/05/24 14:25 09/06/24 05:12 Dibromomethane ND 0.035 0.0065 mg/Kg 09/05/24 14:25 Ö 09/06/24 05:12 Dichlorodifluoromethane ND 0.22 0.040 mg/Kg 09/05/24 14:25 09/06/24 05:12 09/06/24 05:12 Ethylbenzene ND 0.035 0.0079 mg/Kg 09/05/24 14:25 Hexachlorobutadiene ND 0.087 0.021 mg/Kg 09/05/24 14:25 09/06/24 05:12 0.0075 ND 09/05/24 14:25 09/06/24 05:12 Isopropylbenzene 0.035 mg/Kg Methyl tert-butyl ether 0.035 0.0052 09/05/24 14:25 09/06/24 05:12 ND mg/Kg ND 09/06/24 05:12 Methylene Chloride 0.22 0.023 mg/Kg 09/05/24 14:25 m-Xylene & p-Xylene ND 0.035 0.0062 mg/Kg 09/05/24 14:25 09/06/24 05:12 Naphthalene ND 09/05/24 14:25 09/06/24 05:12 0.13 0.034 mg/Kg n-Butylbenzene ND 0.035 0.016 mg/Kg ₩ 09/05/24 14:25 09/06/24 05:12 N-Propylbenzene ND 0.035 0.013 mg/Kg 09/05/24 14:25 09/06/24 05:12

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-32-SO-42.5-20240828

Lab Sample ID: 580-143405-8 Date Collected: 08/28/24 12:45

**Matrix: Solid** Date Received: 08/30/24 12:34 Percent Solids: 93.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.035	0.0044	mg/Kg	<u></u>	09/05/24 14:25	09/06/24 05:12	1
sec-Butylbenzene	ND		0.035	0.0075	mg/Kg	₩	09/05/24 14:25	09/06/24 05:12	1
Styrene	ND		0.035	0.011	mg/Kg	₩	09/05/24 14:25	09/06/24 05:12	1
t-Butylbenzene	ND		0.035	0.0067	mg/Kg	₩	09/05/24 14:25	09/06/24 05:12	1
Tetrachloroethene	ND		0.035	0.0046	mg/Kg	₩	09/05/24 14:25	09/06/24 05:12	1
Toluene	ND		0.052	0.012	mg/Kg	☼	09/05/24 14:25	09/06/24 05:12	1
trans-1,2-Dichloroethene	ND		0.052	0.013	mg/Kg	₩	09/05/24 14:25	09/06/24 05:12	1
trans-1,3-Dichloropropene	ND		0.035	0.0061	mg/Kg	₩	09/05/24 14:25	09/06/24 05:12	1
Trichloroethene	ND		0.035	0.0090	mg/Kg	₩	09/05/24 14:25	09/06/24 05:12	1
Trichlorofluoromethane	ND		0.070	0.023	mg/Kg	₩	09/05/24 14:25	09/06/24 05:12	1
Vinyl chloride	ND		0.087	0.016	mg/Kg	≎	09/05/24 14:25	09/06/24 05:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		80 - 121				09/05/24 14:25	09/06/24 05:12	1
4-Bromofluorobenzene (Surr)	103		80 - 120				09/05/24 14:25	09/06/24 05:12	1
Dibromofluoromethane (Surr)	111		80 - 120				09/05/24 14:25	09/06/24 05:12	1
Toluene-d8 (Surr)	100		80 - 120				09/05/24 14:25	09/06/24 05:12	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	93.4		0.1	0.1	%			09/09/24 15:45	1
Percent Moisture (SM22 2540G)	6.6		0.1	0.1	%			09/09/24 15:45	1

9/9/2024

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Method: SW846 8260D - Vola		-	•						
Analyte		Qualifier	RL _		Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND		0.021	0.0053		₩	09/05/24 14:25	09/06/24 05:33	
1,1,1-Trichloroethane	ND		0.042	0.0049		₩	09/05/24 14:25	09/06/24 05:33	
1,1,2,2-Tetrachloroethane	ND		0.021	0.0080		₩	09/05/24 14:25	09/06/24 05:33	
1,1,2-Trichloroethane	ND		0.021	0.0078	mg/Kg	₩	09/05/24 14:25	09/06/24 05:33	
1,1-Dichloroethane	ND		0.042	0.0097	mg/Kg	₩	09/05/24 14:25	09/06/24 05:33	
I,1-Dichloroethene	ND		0.042	0.013	mg/Kg	₩	09/05/24 14:25	09/06/24 05:33	
I,1-Dichloropropene	ND		0.042	0.0056	mg/Kg	₩	09/05/24 14:25	09/06/24 05:33	
1,2,3-Trichlorobenzene	ND		0.084	0.042	mg/Kg	₩	09/05/24 14:25	09/06/24 05:33	
,2,3-Trichloropropane	ND		0.042	0.012	mg/Kg	₩	09/05/24 14:25	09/06/24 05:33	
I,2,4-Trichlorobenzene	ND		0.084	0.045	mg/Kg	₩	09/05/24 14:25	09/06/24 05:33	
I,2,4-Trimethylbenzene	ND		0.042	0.014	mg/Kg	₩	09/05/24 14:25	09/06/24 05:33	
,2-Dibromo-3-Chloropropane	ND		0.063	0.016	mg/Kg	₩	09/05/24 14:25	09/06/24 05:33	
I,2-Dibromoethane	ND		0.021	0.0040	mg/Kg	₩	09/05/24 14:25	09/06/24 05:33	
,2-Dichlorobenzene	ND		0.042	0.0092	mg/Kg	₩	09/05/24 14:25	09/06/24 05:33	
l,2-Dichloroethane	ND		0.021	0.0058	0 0	₽		09/06/24 05:33	
,2-Dichloropropane	ND		0.021	0.0070			09/05/24 14:25	09/06/24 05:33	
,3,5-Trimethylbenzene	ND		0.042	0.0080	0 0	₩		09/06/24 05:33	
,3-Dichlorobenzene	ND		0.063		mg/Kg	₩		09/06/24 05:33	
,3-Dichloropropane	ND		0.063	0.0059		∷		09/06/24 05:33	
,4-Dichlorobenzene	ND		0.063		mg/Kg	₩		09/06/24 05:33	
2.2-Dichloropropane	ND		0.042		mg/Kg	₩.		09/06/24 05:33	
-Chlorotoluene	ND		0.042	0.0093		T ☆		09/06/24 05:33	
-Chlorotoluene	ND		0.042		mg/Kg	☆		09/06/24 05:33	
-Isopropyltoluene	ND		0.042		mg/Kg	₩		09/06/24 05:33	
Benzene	ND		0.042	0.0040				09/06/24 05:33	
Bromobenzene	ND		0.021	0.0040	0 0	₩		09/06/24 05:33	
Bromochloromethane	ND ND		0.042	0.0044	0 0			09/06/24 05:33	
Bromodichloromethane				0.0058		<u>.</u> .			
	ND		0.042			ψ.		09/06/24 05:33	
Bromoform	ND		0.042	0.0048	0 0	₩		09/06/24 05:33	
Bromomethane	ND		0.11		mg/Kg	<del></del>		09/06/24 05:33	
Carbon tetrachloride	ND		0.021	0.0046	0 0	<b>*</b>		09/06/24 05:33	
Chloroethane	ND		0.084		mg/Kg	₩.		09/06/24 05:33	
Chloroform	ND		0.021	0.0044		<del>.</del>		09/06/24 05:33	
Chloromethane	ND		0.063		mg/Kg	₩		09/06/24 05:33	
is-1,2-Dichloroethene	ND		0.063		mg/Kg	₩		09/06/24 05:33	
sis-1,3-Dichloropropene	ND		0.021	0.0042				09/06/24 05:33	
Dibromochloromethane	ND		0.021	0.0052		₩		09/06/24 05:33	
Dibromomethane	ND		0.042	0.0078		₩		09/06/24 05:33	
Dichlorodifluoromethane	ND		0.26	0.048	mg/Kg	₩		09/06/24 05:33	
Ethylbenzene	ND		0.042	0.0096	mg/Kg	₩	09/05/24 14:25	09/06/24 05:33	
Hexachlorobutadiene	ND		0.11	0.025	mg/Kg	₩	09/05/24 14:25	09/06/24 05:33	
sopropylbenzene	ND		0.042	0.0091		₩	09/05/24 14:25	09/06/24 05:33	
Methyl tert-butyl ether	ND		0.042	0.0063	mg/Kg	₩	09/05/24 14:25	09/06/24 05:33	
Nethylene Chloride	ND		0.26	0.027	mg/Kg	₩	09/05/24 14:25	09/06/24 05:33	
n-Xylene & p-Xylene	ND		0.042	0.0075	mg/Kg	₩	09/05/24 14:25	09/06/24 05:33	
Naphthalene	ND		0.16	0.041	mg/Kg	₽	09/05/24 14:25	09/06/24 05:33	
n-Butylbenzene	ND		0.042		mg/Kg	₽	09/05/24 14:25	09/06/24 05:33	
N-Propylbenzene	ND		0.042		mg/Kg	₩		09/06/24 05:33	
o-Xylene	ND		0.042	0.0053				09/06/24 05:33	

**Eurofins Seattle** 

9/9/2024

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Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-32-SO-57.5-20240828

Lab Sample ID: 580-143405-9 Date Collected: 08/28/24 15:30

**Matrix: Solid** Percent Solids: 88.6 Date Received: 08/30/24 12:34

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.042	0.0091	mg/Kg	— <u>-</u>	09/05/24 14:25	09/06/24 05:33	1
Styrene	ND		0.042		mg/Kg	₩	09/05/24 14:25	09/06/24 05:33	1
t-Butylbenzene	ND		0.042	0.0081	mg/Kg		09/05/24 14:25	09/06/24 05:33	1
Tetrachloroethene	ND		0.042	0.0056	mg/Kg	₩	09/05/24 14:25	09/06/24 05:33	1
Toluene	ND		0.063		mg/Kg	₩	09/05/24 14:25	09/06/24 05:33	1
trans-1,2-Dichloroethene	ND		0.063	0.015	mg/Kg	₩	09/05/24 14:25	09/06/24 05:33	1
trans-1,3-Dichloropropene	ND		0.042	0.0074	mg/Kg	₩	09/05/24 14:25	09/06/24 05:33	1
Trichloroethene	ND		0.042		mg/Kg	₩	09/05/24 14:25	09/06/24 05:33	1
Trichlorofluoromethane	ND		0.084	0.027	mg/Kg		09/05/24 14:25	09/06/24 05:33	1
Vinyl chloride	ND		0.11	0.020	mg/Kg	₩	09/05/24 14:25	09/06/24 05:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	110		80 - 121				09/05/24 14:25	09/06/24 05:33	1
4-Bromofluorobenzene (Surr)	102		80 - 120				09/05/24 14:25	09/06/24 05:33	1
Dibromofluoromethane (Surr)	109		80 - 120				09/05/24 14:25	09/06/24 05:33	1
Toluene-d8 (Surr)	101		80 - 120				09/05/24 14:25	09/06/24 05:33	1
- Method: SW846 8260D - Vol	atile Organic	Compound	ds by GC/MS	- RA					
Analyte	•	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	1.8		0.042	0.0051	mg/Kg	<del>-</del>	09/06/24 08:14	09/06/24 15:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		80 - 121				09/06/24 08:14	09/06/24 15:53	1
4-Bromofluorobenzene (Surr)	103		80 - 120				09/06/24 08:14	09/06/24 15:53	1
Dibromofluoromethane (Surr)	108		80 - 120				09/06/24 08:14	09/06/24 15:53	1
Toluene-d8 (Surr)	101		80 - 120				09/06/24 08:14	09/06/24 15:53	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	88.6		0.1	0.1	%			09/09/24 15:45	1

0.1

0.1 %

11.4

09/09/24 15:45

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-32-SO-68-20240828

Lab Sample ID: 580-143405-10 Date Collected: 08/28/24 15:35 Matrix: Solid Date Received: 08/30/24 12:34 Percent Solids: 93.1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.019 0.0047 mg/Kg 09/05/24 14:25 09/06/24 05:53 0.038 ND 1.1.1-Trichloroethane 0.0043 mg/Kg 09/05/24 14:25 09/06/24 05:53 1,1,2,2-Tetrachloroethane ND 0.019 0.0071 mg/Kg 09/05/24 14:25 09/06/24 05:53 ND 0.0069 1,1,2-Trichloroethane 0.019 mg/Kg 09/05/24 14:25 09/06/24 05:53 0.038 0.0086 mg/Kg 09/05/24 14:25 09/06/24 05:53 1 1-Dichloroethane ND 1,1-Dichloroethene ND 0.038 0.012 mg/Kg 09/05/24 14:25 09/06/24 05:53 1,1-Dichloropropene ND 0.038 0.0050 09/05/24 14:25 09/06/24 05:53 mg/Kg ND 0.075 0.037 09/05/24 14:25 09/06/24 05:53 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.038 0.011 mg/Kg 09/05/24 14:25 09/06/24 05:53 1,2,4-Trichlorobenzene ND 0.075 0.040 mg/Kg 09/05/24 14:25 09/06/24 05:53 1,2,4-Trimethylbenzene ND 0.038 0.013 mg/Kg 09/05/24 14:25 09/06/24 05:53 1.2-Dibromo-3-Chloropropane ND 0.056 0.014 ma/Ka 09/05/24 14:25 09/06/24 05:53 1 1,2-Dibromoethane ND 0.019 0.0036 mg/Kg 09/05/24 14:25 09/06/24 05:53 1,2-Dichlorobenzene ND 0.038 0.0082 mg/Kg 09/05/24 14:25 09/06/24 05:53 ND 0.0052 mg/Kg 09/05/24 14:25 09/06/24 05:53 1.2-Dichloroethane 0.019 0.0062 1,2-Dichloropropane NΩ 0.019 mg/Kg 09/05/24 14:25 09/06/24 05:53 09/06/24 05:53 1,3,5-Trimethylbenzene ND 0.038 0.0071 mg/Kg 09/05/24 14:25 1,3-Dichlorobenzene ND 0.056 0.012 mg/Kg 09/05/24 14:25 09/06/24 05:53 ND 0.056 0.0053 mg/Kg 09/05/24 14:25 09/06/24 05:53 1,3-Dichloropropane mg/Kg 1,4-Dichlorobenzene ND 0.056 0.010 09/05/24 14:25 09/06/24 05:53 2,2-Dichloropropane ND 0.038 0.011 mg/Kg ÷ 09/05/24 14:25 09/06/24 05:53 2-Chlorotoluene ND 0.038 0.0083 mg/Kg 09/05/24 14:25 09/06/24 05:53 4-Chlorotoluene ND 0.0092 mg/Kg 09/05/24 14:25 09/06/24 05:53 0.038 4-Isopropyltoluene ND 0.038 0.0096 mg/Kg 09/05/24 14:25 09/06/24 05:53 Benzene ND 0.019 0.0036 mg/Kg 09/05/24 14:25 09/06/24 05:53 0.0039 Bromobenzene ND 0.038 mg/Kg 09/05/24 14:25 09/06/24 05:53 Bromochloromethane ND 0.038 0.0058 mg/Kg 09/05/24 14:25 09/06/24 05:53 Bromodichloromethane 0.0052 ND 0.038 mg/Kg 09/05/24 14:25 09/06/24 05:53 0.0042 Bromoform NΩ 0.038 mg/Kg 09/05/24 14:25 09/06/24 05:53 ND 0.035 Bromomethane 0.094 mg/Kg ť 09/05/24 14:25 09/06/24 05:53 Carbon tetrachloride ND 0.019 0.0041 mg/Kg 09/05/24 14:25 09/06/24 05:53 0.038 0.0045 mg/Kg 09/05/24 14:25 09/06/24 05:53 Chlorobenzene 0.31 mg/Kg Chloroethane 0.075 0.020 09/05/24 14:25 09/06/24 05:53 ND Chloroform ND 09/05/24 14:25 09/06/24 05:53 0.019 0.0039 mg/Kg Chloromethane ND 0.056 0.0095 mg/Kg 09/05/24 14:25 09/06/24 05:53 cis-1.2-Dichloroethene ND 0.056 0.012 mg/Kg 09/05/24 14:25 09/06/24 05:53 cis-1,3-Dichloropropene ND 0.019 0.0038 mg/Kg 09/05/24 14:25 09/06/24 05:53 Dibromochloromethane ND 0.019 0.0046 mg/Kg 09/05/24 14:25 09/06/24 05:53 Dibromomethane ND 0.0069 mg/Kg 0.038 Ö 09/05/24 14:25 09/06/24 05:53 Dichlorodifluoromethane ND 0.23 0.043 mg/Kg 09/05/24 14:25 09/06/24 05:53 Ethylbenzene ND 0.038 0.0085 mg/Kg 09/05/24 14:25 09/06/24 05:53 Hexachlorobutadiene ND 0.094 0.022 mg/Kg 09/05/24 14:25 09/06/24 05:53 ND 0.0081 09/05/24 14:25 09/06/24 05:53 Isopropylbenzene 0.038 mg/Kg Methyl tert-butyl ether 0.0056 09/05/24 14:25 09/06/24 05:53 ND 0.038 mg/Kg ND 09/06/24 05:53 Methylene Chloride 0.23 0.024 mg/Kg 09/05/24 14:25 m-Xylene & p-Xylene ND 0.038 0.0067 mg/Kg 09/05/24 14:25 09/06/24 05:53 Naphthalene ND 09/05/24 14:25 09/06/24 05:53 0.14 0.037 mg/Kg n-Butylbenzene ND 0.038 0.017 mg/Kg ₩ 09/05/24 14:25 09/06/24 05:53 N-Propylbenzene ND 0.038 0.014 mg/Kg 09/05/24 14:25 09/06/24 05:53

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-32-SO-68-20240828

Lab Sample ID: 580-143405-10 Date Collected: 08/28/24 15:35 **Matrix: Solid** 

Date Received: 08/30/24 12:34 Percent Solids: 93.1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.038	0.0047	mg/Kg	— <u></u>	09/05/24 14:25	09/06/24 05:53	1
sec-Butylbenzene	ND		0.038	0.0081	mg/Kg	₩	09/05/24 14:25	09/06/24 05:53	1
Styrene	ND		0.038	0.012	mg/Kg	₩	09/05/24 14:25	09/06/24 05:53	1
t-Butylbenzene	ND		0.038	0.0072	mg/Kg	₩	09/05/24 14:25	09/06/24 05:53	1
Tetrachloroethene	ND		0.038	0.0050	mg/Kg	₩	09/05/24 14:25	09/06/24 05:53	1
Toluene	ND		0.056	0.013	mg/Kg	₩	09/05/24 14:25	09/06/24 05:53	1
trans-1,2-Dichloroethene	ND		0.056	0.014	mg/Kg	☆	09/05/24 14:25	09/06/24 05:53	1
trans-1,3-Dichloropropene	ND		0.038	0.0066	mg/Kg	₩	09/05/24 14:25	09/06/24 05:53	1
Trichloroethene	ND		0.038	0.0097	mg/Kg	₩	09/05/24 14:25	09/06/24 05:53	1
Trichlorofluoromethane	ND		0.075	0.024	mg/Kg	☆	09/05/24 14:25	09/06/24 05:53	1
Vinyl chloride	ND		0.094	0.018	mg/Kg	₩	09/05/24 14:25	09/06/24 05:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	115		80 - 121				09/05/24 14:25	09/06/24 05:53	1
4-Bromofluorobenzene (Surr)	102		80 - 120				09/05/24 14:25	09/06/24 05:53	1
Dibromofluoromethane (Surr)	114		80 - 120				09/05/24 14:25	09/06/24 05:53	1
Toluene-d8 (Surr)	101		80 - 120				09/05/24 14:25	09/06/24 05:53	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	93.1		0.1	0.1	%			09/09/24 15:45	1
Percent Moisture (SM22 2540G)	6.9		0.1	0.1	%			09/09/24 15:45	1

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-33-SO-37.2-20240828

Lab Sample ID: 580-143405-11 Date Collected: 08/29/24 10:05 Matrix: Solid Date Received: 08/30/24 12:34 Percent Solids: 89.4

Method: SW846 8260D - Volatile Organic Compounds by GC/MS **MDL** Unit Dil Fac Analyte Result Qualifier D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.020 0.0051 mg/Kg 09/05/24 14:25 09/06/24 06:14 ND 1.1.1-Trichloroethane 0.041 0.0047 mg/Kg 09/05/24 14:25 09/06/24 06:14 1,1,2,2-Tetrachloroethane ND 0.020 0.0077 mg/Kg 09/05/24 14:25 09/06/24 06:14 ND 0.0075 1,1,2-Trichloroethane 0.020 mg/Kg 09/05/24 14:25 09/06/24 06:14 1.1-Dichloroethane 0.041 0.0093 mg/Kg 09/05/24 14:25 09/06/24 06:14 ND 1,1-Dichloroethene ND 0.041 0.012 mg/Kg 09/05/24 14:25 09/06/24 06:14 1,1-Dichloropropene ND 0.041 0.0054 09/05/24 14:25 09/06/24 06:14 mg/Kg ND 0.081 0.040 09/05/24 14:25 09/06/24 06:14 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.041 0.012 mg/Kg 09/05/24 14:25 09/06/24 06:14 1,2,4-Trichlorobenzene ND 0.081 0.043 mg/Kg 09/05/24 14:25 09/06/24 06:14 1,2,4-Trimethylbenzene ND 0.041 0.014 mg/Kg 09/05/24 14:25 09/06/24 06:14 1.2-Dibromo-3-Chloropropane ND 0.061 0.015 ma/Ka 09/05/24 14:25 09/06/24 06:14 1 1,2-Dibromoethane ND 0.020 0.0039 mg/Kg 09/05/24 14:25 09/06/24 06:14 1,2-Dichlorobenzene ND 0.041 0.0088 mg/Kg 09/05/24 14:25 09/06/24 06:14 ND 0.020 0.0056 mg/Kg 09/05/24 14:25 09/06/24 06:14 1.2-Dichloroethane 1,2-Dichloropropane NΩ 0.020 0.0067 mg/Kg 09/05/24 14:25 09/06/24 06:14 ND 1,3,5-Trimethylbenzene 0.041 0.0077 mg/Kg 09/05/24 14:25 09/06/24 06:14 1,3-Dichlorobenzene ND 0.061 0.013 mg/Kg 09/05/24 14:25 09/06/24 06:14 1,3-Dichloropropane NΩ 0.061 0.0057 mg/Kg 09/05/24 14:25 09/06/24 06:14 mg/Kg 1,4-Dichlorobenzene 0.030 0.061 0.011 09/05/24 14:25 09/06/24 06:14 2,2-Dichloropropane ND 0.041 0.012 mg/Kg ÷ 09/05/24 14:25 09/06/24 06:14 2-Chlorotoluene ND 0.041 0.0089 mg/Kg 09/05/24 14:25 09/06/24 06:14 4-Chlorotoluene ND 0.0099 mg/Kg 09/05/24 14:25 09/06/24 06:14 0.041 4-Isopropyltoluene ND 0.041 0.010 mg/Kg 09/05/24 14:25 09/06/24 06:14 Benzene ND 0.020 0.0039 mg/Kg 09/05/24 14:25 09/06/24 06:14 09/05/24 14:25 ND 0.0043 Bromobenzene 0.041 mg/Kg 09/06/24 06:14 Bromochloromethane ND 0.041 0.0063 mg/Kg 09/05/24 14:25 09/06/24 06:14 Bromodichloromethane 0.0056 09/05/24 14:25 ND 0.041 mg/Kg 09/06/24 06:14 0.0046 Bromoform ND 0.041 mg/Kg 09/05/24 14:25 09/06/24 06:14 09/05/24 14:25 ND 0.038 Bromomethane 0.10 mg/Kg 09/06/24 06:14 Carbon tetrachloride ND 0.020 0.0045 mg/Kg 09/05/24 14:25 09/06/24 06:14 0.041 0.0049 mg/Kg 09/05/24 14:25 09/06/24 06:14 Chlorobenzene 4.9 Chloroform 0.020 0.0043 mg/Kg 09/05/24 14:25 09/06/24 06:14 ND 0.010 Chloromethane ND 09/05/24 14:25 09/06/24 06:14 0.061 mg/Kg cis-1,2-Dichloroethene ND 0.061 0.013 mg/Kg 09/05/24 14:25 09/06/24 06:14 cis-1.3-Dichloropropene ND 0.020 0.0041 mg/Kg 09/05/24 14:25 09/06/24 06:14 Dibromochloromethane ND 0.020 0.0050 mg/Kg 09/05/24 14:25 09/06/24 06:14 Dibromomethane ND 0.041 0.0075 mg/Kg 09/05/24 14:25 09/06/24 06:14 Dichlorodifluoromethane ND 0.25 0.047 mg/Kg Ö 09/05/24 14:25 09/06/24 06:14 Ethylbenzene ND 0.041 0.0092 mg/Kg 09/05/24 14:25 09/06/24 06:14 Hexachlorobutadiene ND 0.10 0.024 mg/Kg 09/05/24 14:25 09/06/24 06:14 Isopropylbenzene ND 0.041 0.0087 mg/Kg 09/05/24 14:25 09/06/24 06:14 ND 0.0061 09/05/24 14:25 09/06/24 06:14 Methyl tert-butyl ether 0.041 mg/Kg Methylene Chloride 0.026 09/05/24 14:25 09/06/24 06:14 ND 0.25 mg/Kg ND m-Xylene & p-Xylene 0.041 0.0072 mg/Kg 09/05/24 14:25 09/06/24 06:14 Naphthalene ND 0.15 0.040 mg/Kg 09/05/24 14:25 09/06/24 06:14 n-Butylbenzene ND 0.041 0.019 09/05/24 14:25 09/06/24 06:14 mg/Kg N-Propylbenzene ND 0.041 0.015 mg/Kg 09/05/24 14:25 09/06/24 06:14 09/06/24 06:14 o-Xylene ND 0.041 0.0051 mg/Kg 09/05/24 14:25

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-33-SO-37.2-20240828

Date Collected: 08/29/24 10:05 Date Received: 08/30/24 12:34

Percent Solids (SM22 2540G)

Percent Moisture (SM22 2540G)

89.4

10.6

Lab Sample ID: 580-143405-11

Matrix: Solid

Percent Solids: 89.4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.041	0.0087	mg/Kg	— <u></u>	09/05/24 14:25	09/06/24 06:14	
Styrene	ND		0.041	0.013	mg/Kg	☆	09/05/24 14:25	09/06/24 06:14	1
t-Butylbenzene	ND		0.041	0.0078			09/05/24 14:25	09/06/24 06:14	1
Tetrachloroethene	0.020	J	0.041	0.0054		☼	09/05/24 14:25	09/06/24 06:14	1
Toluene	ND		0.061	0.014	mg/Kg	₩	09/05/24 14:25	09/06/24 06:14	1
trans-1,2-Dichloroethene	ND		0.061		mg/Kg		09/05/24 14:25	09/06/24 06:14	1
trans-1,3-Dichloropropene	ND		0.041	0.0071	mg/Kg	₩	09/05/24 14:25	09/06/24 06:14	1
Trichloroethene	ND		0.041	0.010	mg/Kg	☼	09/05/24 14:25	09/06/24 06:14	1
Trichlorofluoromethane	ND		0.081	0.026	mg/Kg		09/05/24 14:25	09/06/24 06:14	1
Vinyl chloride	ND		0.10	0.019	mg/Kg	₩	09/05/24 14:25	09/06/24 06:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	112		80 - 121				09/05/24 14:25	09/06/24 06:14	1
4-Bromofluorobenzene (Surr)	102		80 - 120				09/05/24 14:25	09/06/24 06:14	1
Dibromofluoromethane (Surr)	112		80 - 120				09/05/24 14:25	09/06/24 06:14	1
Toluene-d8 (Surr)	99		80 - 120				09/05/24 14:25	09/06/24 06:14	
Method: SW846 8260D - V	olatile Organic	Compound	ds by GC/MS	- RA					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroethane	ND		0.081	0.021	mg/Kg	☼	09/06/24 08:14	09/06/24 16:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	108		80 - 121				09/06/24 08:14	09/06/24 16:13	1
4-Bromofluorobenzene (Surr)	104		80 - 120				09/06/24 08:14	09/06/24 16:13	
Dibromofluoromethane (Surr)	107		80 - 120				09/06/24 08:14	09/06/24 16:13	
Toluene-d8 (Surr)	99		80 - 120				09/06/24 08:14	09/06/24 16:13	
General Chemistry									

0.1

0.1

0.1 %

0.1 %

09/09/24 15:45

09/09/24 15:45

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: DUP-06-SQ-20240829

Lab Sample ID: 580-143405-12 Date Collected: 08/29/24 10:10 **Matrix: Solid** Date Received: 08/30/24 12:34

Percent Solids: 92.2

Method: SW846 8260D - Vola Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.018	0.0046	mg/Kg	— <u></u>	09/05/24 14:25	09/06/24 06:35	
1,1,1-Trichloroethane	ND		0.036	0.0042	mg/Kg	☼	09/05/24 14:25	09/06/24 06:35	1
1,1,2,2-Tetrachloroethane	ND		0.018	0.0069	mg/Kg	₩	09/05/24 14:25	09/06/24 06:35	1
1,1,2-Trichloroethane	ND		0.018	0.0067		₩	09/05/24 14:25	09/06/24 06:35	1
1,1-Dichloroethane	ND		0.036	0.0084		₩	09/05/24 14:25	09/06/24 06:35	1
1,1-Dichloroethene	ND		0.036	0.011	mg/Kg	₩	09/05/24 14:25	09/06/24 06:35	1
1,1-Dichloropropene	ND		0.036	0.0048			09/05/24 14:25	09/06/24 06:35	1
1,2,3-Trichlorobenzene	ND		0.073	0.036	mg/Kg	₩	09/05/24 14:25	09/06/24 06:35	
1,2,3-Trichloropropane	ND		0.036		mg/Kg	₩	09/05/24 14:25	09/06/24 06:35	
1,2,4-Trichlorobenzene	ND		0.073		mg/Kg		09/05/24 14:25	09/06/24 06:35	
1,2,4-Trimethylbenzene	ND		0.036		mg/Kg	₩	09/05/24 14:25	09/06/24 06:35	
1,2-Dibromo-3-Chloropropane	ND		0.055		mg/Kg	₩	09/05/24 14:25	09/06/24 06:35	
1,2-Dibromoethane	ND		0.018	0.0035		₩.	09/05/24 14:25	09/06/24 06:35	
1,2-Dichlorobenzene	ND		0.036		mg/Kg	₩		09/06/24 06:35	
1,2-Dichloroethane	ND		0.018		mg/Kg		09/05/24 14:25	09/06/24 06:35	
1,2-Dichloropropane	ND		0.018		mg/Kg			09/06/24 06:35	,
1,3,5-Trimethylbenzene	ND		0.036		mg/Kg	₩.		09/06/24 06:35	
1,3-Dichlorobenzene	ND		0.055		mg/Kg	₩.		09/06/24 06:35	
1,3-Dichloropropane	ND		0.055	0.0051	mg/Kg			09/06/24 06:35	
1,4-Dichlorobenzene	0.050		0.055	0.0098		~ ☆		09/06/24 06:35	
2,2-Dichloropropane	ND	•	0.036		mg/Kg	₩		09/06/24 06:35	
2-Chlorotoluene	ND		0.036	0.0080				09/06/24 06:35	
4-Chlorotoluene	ND		0.036	0.0089	0 0	₩		09/06/24 06:35	
4-Isopropyltoluene	ND ND		0.036	0.0009	0 0	₩		09/06/24 06:35	,
Benzene	ND		0.030	0.0095		¥. 		09/06/24 06:35	,
Bromobenzene	ND ND		0.016	0.0033				09/06/24 06:35	
Bromochloromethane	ND ND		0.036		0 0	<b>☆</b>		09/06/24 06:35	
Bromodichloromethane	ND		0.036	0.0056		· · · · · · · · · · · · · · ·	09/05/24 14:25		
				0.0050		φ.			
Bromoform	ND		0.036	0.0041		φ.	09/05/24 14:25	09/06/24 06:35	
Bromomethane	ND		0.091		mg/Kg	<u></u>		09/06/24 06:35	
Carbon tetrachloride	ND	_	0.018	0.0040		Ð.		09/06/24 06:35	
Chlorobenzene	9.3	В	0.036	0.0044		<b>*</b>	09/05/24 14:25	09/06/24 06:35	
Chloroethane	ND		0.073		mg/Kg	<u>.</u> .	09/05/24 14:25	09/06/24 06:35	
Chloroform	ND		0.018		mg/Kg	∵		09/06/24 06:35	
Chloromethane	ND		0.055	0.0092		₽	09/05/24 14:25		
cis-1,2-Dichloroethene	ND		0.055		mg/Kg	<del></del>		09/06/24 06:35	
cis-1,3-Dichloropropene	ND		0.018	0.0036		☼	09/05/24 14:25		
Dibromochloromethane	ND		0.018	0.0045		₩		09/06/24 06:35	
Dibromomethane	ND		0.036	0.0067		<del></del>	09/05/24 14:25		
Dichlorodifluoromethane	ND		0.23		mg/Kg	₩	09/05/24 14:25		•
Ethylbenzene	ND		0.036	0.0083		₩		09/06/24 06:35	
Hexachlorobutadiene	ND		0.091		mg/Kg	₩		09/06/24 06:35	
sopropylbenzene	ND		0.036	0.0078		₩		09/06/24 06:35	
Methyl tert-butyl ether	ND		0.036	0.0055		₩		09/06/24 06:35	
Methylene Chloride	ND		0.23	0.024	mg/Kg	₩		09/06/24 06:35	
m-Xylene & p-Xylene	ND		0.036	0.0065	mg/Kg	₩	09/05/24 14:25	09/06/24 06:35	
Naphthalene	ND		0.14	0.036	mg/Kg	☼	09/05/24 14:25	09/06/24 06:35	•
n-Butylbenzene	ND		0.036	0.017	mg/Kg	₩	09/05/24 14:25	09/06/24 06:35	1
N-Propylbenzene	ND		0.036	0.014	mg/Kg		09/05/24 14:25	09/06/24 06:35	1

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: DUP-06-SQ-20240829

Lab Sample ID: 580-143405-12 Date Collected: 08/29/24 10:10 **Matrix: Solid** 

Date Received: 08/30/24 12:34 Percent Solids: 92.2

Method: SW846 8260D - Vola	_	•	•	(Conti	•	_			
Analyte		Qualifier	RL	MDL		D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.036	0.0046		₩	09/05/24 14:25	09/06/24 06:35	1
sec-Butylbenzene	ND		0.036	0.0078	mg/Kg	₩	09/05/24 14:25	09/06/24 06:35	1
Styrene	ND		0.036	0.012	mg/Kg	₩	09/05/24 14:25	09/06/24 06:35	1
t-Butylbenzene	ND		0.036	0.0070	mg/Kg	₩	09/05/24 14:25	09/06/24 06:35	1
Tetrachloroethene	0.042		0.036	0.0048	mg/Kg	₩	09/05/24 14:25	09/06/24 06:35	1
Toluene	ND		0.055	0.012	mg/Kg	₩	09/05/24 14:25	09/06/24 06:35	1
trans-1,2-Dichloroethene	ND		0.055	0.013	mg/Kg	₩	09/05/24 14:25	09/06/24 06:35	1
trans-1,3-Dichloropropene	ND		0.036	0.0064	mg/Kg	₩	09/05/24 14:25	09/06/24 06:35	1
Trichloroethene	ND		0.036	0.0094	mg/Kg	₩	09/05/24 14:25	09/06/24 06:35	1
Trichlorofluoromethane	ND		0.073	0.024	mg/Kg	₩	09/05/24 14:25	09/06/24 06:35	1
Vinyl chloride	ND		0.091	0.017	mg/Kg	₽	09/05/24 14:25	09/06/24 06:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		80 - 121				09/05/24 14:25	09/06/24 06:35	
4-Bromofluorobenzene (Surr)	100		80 - 120				09/05/24 14:25	09/06/24 06:35	1
Dibromofluoromethane (Surr)	107		80 - 120				09/05/24 14:25	09/06/24 06:35	1
Toluene-d8 (Surr)	98		80 - 120				09/05/24 14:25	09/06/24 06:35	
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	92.2		0.1	0.1	%			09/09/24 15:45	1
Percent Moisture (SM22 2540G)	7.8		0.1	0.1	%			09/09/24 15:45	1

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-33-SO-29-20240829

Lab Sample ID: 580-143405-13 Date Collected: 08/29/24 10:15 Matrix: Solid Date Received: 08/30/24 12:34 Percent Solids: 87.7

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.022 0.0055 mg/Kg 09/05/24 14:25 09/06/24 06:55 ND 1.1.1-Trichloroethane 0.044 0.0051 mg/Kg 09/05/24 14:25 09/06/24 06:55 1,1,2,2-Tetrachloroethane ND 0.022 0.0084 mg/Kg 09/05/24 14:25 09/06/24 06:55 ND 0.0081 1,1,2-Trichloroethane 0.022 mg/Kg 09/05/24 14:25 09/06/24 06:55 0.044 0.010 mg/Kg 09/05/24 14:25 09/06/24 06:55 1 1-Dichloroethane ND 09/06/24 06:55 1,1-Dichloroethene ND 0.044 0.014 mg/Kg 09/05/24 14:25 1,1-Dichloropropene ND 0.044 0.0058 09/05/24 14:25 09/06/24 06:55 mg/Kg ND 0.088 0.044 09/05/24 14:25 09/06/24 06:55 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.044 0.013 mg/Kg 09/05/24 14:25 09/06/24 06:55 1,2,4-Trichlorobenzene ND 0.088 0.047 mg/Kg ġ 09/05/24 14:25 09/06/24 06:55 1,2,4-Trimethylbenzene ND 0.044 0.015 mg/Kg 09/05/24 14:25 09/06/24 06:55 1.2-Dibromo-3-Chloropropane ND 0.066 0.017 mg/Kg 09/05/24 14:25 09/06/24 06:55 1 1,2-Dibromoethane ND 0.022 0.0042 mg/Kg 09/05/24 14:25 09/06/24 06:55 1,2-Dichlorobenzene ND 0.044 0.0096 mg/Kg 09/05/24 14:25 09/06/24 06:55 ND 0.022 0.0060 mg/Kg 09/05/24 14:25 09/06/24 06:55 1.2-Dichloroethane 1,2-Dichloropropane NΩ 0.022 0.0073 mg/Kg 09/05/24 14:25 09/06/24 06:55 0.0084 ND 1,3,5-Trimethylbenzene 0.044 mg/Kg 09/05/24 14:25 09/06/24 06:55 1,3-Dichlorobenzene ND 0.066 0.015 mg/Kg 09/05/24 14:25 09/06/24 06:55 1,3-Dichloropropane NΩ 0.066 0.0062 mg/Kg 09/05/24 14:25 09/06/24 06:55 mg/Kg 1,4-Dichlorobenzene 0.024 0.066 0.012 09/05/24 14:25 09/06/24 06:55 0.013 2,2-Dichloropropane ND 0.044 mg/Kg ÷ 09/05/24 14:25 09/06/24 06:55 2-Chlorotoluene ND 0.044 0.0097 mg/Kg Ö 09/05/24 14:25 09/06/24 06:55 0.011 4-Chlorotoluene ND 09/05/24 14:25 09/06/24 06:55 0.044 mg/Kg 4-Isopropyltoluene ND 0.044 0.011 mg/Kg 09/05/24 14:25 09/06/24 06:55 Benzene ND 0.022 0.0042 mg/Kg 09/05/24 14:25 09/06/24 06:55 ND 0.0046 Bromobenzene 0.044 mg/Kg 09/05/24 14:25 09/06/24 06:55 Bromochloromethane ND 0.044 0.0068 mg/Kg 09/05/24 14:25 09/06/24 06:55 Bromodichloromethane 0.0060 ND 0.044 mg/Kg 09/05/24 14:25 09/06/24 06:55 0.0049 Bromoform ND 0.044 mg/Kg 09/05/24 14:25 09/06/24 06:55 ND 0.042 mg/Kg Bromomethane 0.11 09/05/24 14:25 09/06/24 06:55 Carbon tetrachloride ND 0.022 0.0048 mg/Kg 09/05/24 14:25 09/06/24 06:55 0.044 0.0053 mg/Kg 09/05/24 14:25 09/06/24 06:55 Chlorobenzene 1.7 Chloroethane 0.088 0.023 09/05/24 14:25 09/06/24 06:55 ND mg/Kg Chloroform ND 09/05/24 14:25 09/06/24 06:55 0.022 0.0046 mg/Kg Chloromethane ND 0.066 0.011 mg/Kg 09/05/24 14:25 09/06/24 06:55 cis-1.2-Dichloroethene ND 0.066 0.014 mg/Kg 09/05/24 14:25 09/06/24 06:55 cis-1,3-Dichloropropene ND 0.022 0.0044 mg/Kg 09/05/24 14:25 09/06/24 06:55 mg/Kg Dibromochloromethane ND 0.022 0.0054 09/05/24 14:25 09/06/24 06:55 Dibromomethane ND 0.0081 mg/Kg 0.044 Ö 09/05/24 14:25 09/06/24 06:55 Dichlorodifluoromethane ND 0.27 0.050 mg/Kg 09/05/24 14:25 09/06/24 06:55 Ethylbenzene ND 0.044 0.010 mg/Kg 09/05/24 14:25 09/06/24 06:55 Hexachlorobutadiene ND 0 11 0.026 mg/Kg 09/05/24 14:25 09/06/24 06:55 ND 0.0095 09/05/24 14:25 09/06/24 06:55 Isopropylbenzene 0.044 mg/Kg Methyl tert-butyl ether 0.044 0.0066 09/05/24 14:25 09/06/24 06:55 ND mg/Kg ND 09/06/24 06:55 Methylene Chloride 0.27 0.029 mg/Kg 09/05/24 14:25 m-Xylene & p-Xylene ND 0.044 0.0078 mg/Kg 09/05/24 14:25 09/06/24 06:55 Naphthalene ND 09/05/24 14:25 0.16 0.043 mg/Kg 09/06/24 06:55 n-Butylbenzene ND 0.044 0.020 mg/Kg ₩ 09/05/24 14:25 09/06/24 06:55 N-Propylbenzene ND 0.044 0.016 mg/Kg 09/05/24 14:25 09/06/24 06:55

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-33-SO-29-20240829

Lab Sample ID: 580-143405-13 Date Collected: 08/29/24 10:15 **Matrix: Solid** Date Received: 08/30/24 12:34

Percent Solids: 87.7

09/09/24 15:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.044	0.0055	mg/Kg	⊅	09/05/24 14:25	09/06/24 06:55	1
sec-Butylbenzene	ND		0.044	0.0095	mg/Kg	₩	09/05/24 14:25	09/06/24 06:55	1
Styrene	ND		0.044	0.014	mg/Kg	₽	09/05/24 14:25	09/06/24 06:55	1
t-Butylbenzene	ND		0.044	0.0085	mg/Kg	☼	09/05/24 14:25	09/06/24 06:55	1
Tetrachloroethene	ND		0.044	0.0058	mg/Kg	☼	09/05/24 14:25	09/06/24 06:55	1
Toluene	ND		0.066	0.015	mg/Kg	₽	09/05/24 14:25	09/06/24 06:55	1
trans-1,2-Dichloroethene	ND		0.066	0.016	mg/Kg	☼	09/05/24 14:25	09/06/24 06:55	1
trans-1,3-Dichloropropene	ND		0.044	0.0077	mg/Kg	☼	09/05/24 14:25	09/06/24 06:55	1
Trichloroethene	ND		0.044	0.011	mg/Kg	₽	09/05/24 14:25	09/06/24 06:55	1
Trichlorofluoromethane	ND		0.088	0.029	mg/Kg	☼	09/05/24 14:25	09/06/24 06:55	1
Vinyl chloride	ND		0.11	0.021	mg/Kg	≎	09/05/24 14:25	09/06/24 06:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			80 - 121				09/05/24 14:25	09/06/24 06:55	1
4-Bromofluorobenzene (Surr)	102		80 - 120				09/05/24 14:25	09/06/24 06:55	1
Dibromofluoromethane (Surr)	109		80 - 120				09/05/24 14:25	09/06/24 06:55	1
Toluene-d8 (Surr)	100		80 - 120				09/05/24 14:25	09/06/24 06:55	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	87.7		0.1	0.1	%			09/09/24 15:45	1

0.1

12.3

0.1 %

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-33-SO-49-20240829

Lab Sample ID: 580-143405-14 Date Collected: 08/29/24 11:25 Matrix: Solid Date Received: 08/30/24 12:34 Percent Solids: 94.2

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed F1 0.018 1,1,1,2-Tetrachloroethane ND 0.0045 mg/Kg 09/05/24 14:25 09/06/24 01:47 0.036 F1 1.1.1-Trichloroethane ND 0.0041 mg/Kg 09/05/24 14:25 09/06/24 01:47 1,1,2,2-Tetrachloroethane ND F1 0.018 0.0068 mg/Kg 09/05/24 14:25 09/06/24 01:47 ND F1 1,1,2-Trichloroethane 0.018 0.0066 mg/Kg ť 09/05/24 14:25 09/06/24 01:47 F1 0.036 0.0082 mg/Kg 09/05/24 14:25 09/06/24 01:47 1 1-Dichloroethane ND 1,1-Dichloroethene ND F1 0.036 0.011 mg/Kg 09/05/24 14:25 09/06/24 01:47 1,1-Dichloropropene F1 0.036 0.0047 09/05/24 14:25 09/06/24 01:47 ND mg/Kg ND 0.071 0.035 09/05/24 14:25 09/06/24 01:47 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND F1 0.036 0.010 mg/Kg 09/05/24 14:25 09/06/24 01:47 1,2,4-Trichlorobenzene ND F1 0.071 0.038 mg/Kg ġ 09/05/24 14:25 09/06/24 01:47 1,2,4-Trimethylbenzene ND F1 0.036 0.012 mg/Kg 09/05/24 14:25 09/06/24 01:47 1 1.2-Dibromo-3-Chloropropane ND F1 0.053 0.014 ma/Ka 09/05/24 14:25 09/06/24 01:47 1 1,2-Dibromoethane ND F1 0.018 0.0034 mg/Kg 09/05/24 14:25 09/06/24 01:47 1,2-Dichlorobenzene ND F1 0.036 0.0077 mg/Kg 09/05/24 14:25 09/06/24 01:47 ND F1 0.0049 mg/Kg 09/05/24 14:25 09/06/24 01:47 1.2-Dichloroethane 0.018 0.0059 1,2-Dichloropropane ND 0.018 mg/Kg 09/05/24 14:25 09/06/24 01:47 0.0068 1,3,5-Trimethylbenzene ND F1 0.036 mg/Kg 09/05/24 14:25 09/06/24 01:47 1,3-Dichlorobenzene ND F1 0.053 0.012 mg/Kg 09/05/24 14:25 09/06/24 01:47 F1 1,3-Dichloropropane 0.053 0.0050 mg/Kg 09/05/24 14:25 09/06/24 01:47 ND 1,4-Dichlorobenzene ND F1 0.053 0.0096 mg/Kg 09/05/24 14:25 09/06/24 01:47 ND 2,2-Dichloropropane 0.036 0.011 mg/Kg ÷ 09/05/24 14:25 09/06/24 01:47 2-Chlorotoluene ND F1 0.036 0.0078 mg/Kg Ö 09/05/24 14:25 09/06/24 01:47 4-Chlorotoluene 0.0087 09/05/24 14:25 09/06/24 01:47 ND 0.036 mg/Kg 4-Isopropyltoluene ND F1 0.036 0.0091 mg/Kg 09/05/24 14:25 09/06/24 01:47 Benzene ND F1 0.018 0.0034 mg/Kg 09/05/24 14:25 09/06/24 01:47 Bromobenzene ND F1 0.036 0.0037 mg/Kg 09/05/24 14:25 09/06/24 01:47 Bromochloromethane ND F1 0.036 0.0055 mg/Kg 09/05/24 14:25 09/06/24 01:47 Bromodichloromethane F1 0.0049 ND 0.036 mg/Kg 09/05/24 14:25 09/06/24 01:47 0.0040 Bromoform NΩ 0.036 mg/Kg 09/05/24 14:25 09/06/24 01:47 ND F1 0.034 09/05/24 14:25 Bromomethane 0.089 mg/Kg ť 09/06/24 01:47 Carbon tetrachloride ND F1 0.018 0.0039 mg/Kg 09/05/24 14:25 09/06/24 01:47 0.24 F2 F1 B 0.036 0.0043 mg/Kg 09/05/24 14:25 09/06/24 01:47 Chlorobenzene Chloroethane ND F2 F1 0.071 0.019 09/05/24 14:25 09/06/24 01:47 mg/Kg Chloroform 09/05/24 14:25 09/06/24 01:47 NΠ F1 0.018 0.0037 mg/Kg Chloromethane ND 0.053 0.0090 mg/Kg 09/05/24 14:25 09/06/24 01:47 cis-1.2-Dichloroethene F1 0.053 0.011 mg/Kg 09/05/24 14:25 09/06/24 01:47 ND F1 cis-1,3-Dichloropropene ND 0.018 0.0036 mg/Kg 09/05/24 14:25 09/06/24 01:47 mg/Kg Dibromochloromethane ND F1 0.018 0.0044 09/05/24 14:25 09/06/24 01:47 Dibromomethane F1 0.036 0.0066 mg/Kg ND Ö 09/05/24 14:25 09/06/24 01:47 Dichlorodifluoromethane ND F1 0.22 0.041 mg/Kg 09/05/24 14:25 09/06/24 01:47 Ethylbenzene ND F1 0.036 0.0081 mg/Kg 09/05/24 14:25 09/06/24 01:47 Hexachlorobutadiene ND F1 0.089 0.021 mg/Kg 09/05/24 14:25 09/06/24 01:47 0.0077 09/05/24 14:25 09/06/24 01:47 Isopropylbenzene ND F1 0.036 mg/Kg Methyl tert-butyl ether 0.036 0.0053 09/05/24 14:25 09/06/24 01:47 ND F1 mg/Kg 09/06/24 01:47 Methylene Chloride ND 0.22 0.023 mg/Kg 09/05/24 14:25 m-Xylene & p-Xylene ND F1 0.036 0.0063 mg/Kg 09/05/24 14:25 09/06/24 01:47 Naphthalene ND 09/05/24 14:25 09/06/24 01:47 0.13 0.035 mg/Kg n-Butylbenzene ND 0.036 0.016 mg/Kg 09/05/24 14:25 09/06/24 01:47 ND F1 N-Propylbenzene 0.036 0.013 mg/Kg 09/05/24 14:25 09/06/24 01:47

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Percent Moisture (SM22 2540G)

Client Sample ID: PDI-33-SO-49-20240829

Lab Sample ID: 580-143405-14 Date Collected: 08/29/24 11:25

**Matrix: Solid** Percent Solids: 94.2 Date Received: 08/30/24 12:34

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND	F1	0.036	0.0045	mg/Kg	<u></u>	09/05/24 14:25	09/06/24 01:47	1
sec-Butylbenzene	ND	F1	0.036	0.0077	mg/Kg	₩	09/05/24 14:25	09/06/24 01:47	1
Styrene	ND	F1	0.036	0.011	mg/Kg	₩	09/05/24 14:25	09/06/24 01:47	1
t-Butylbenzene	ND	F1	0.036	0.0069	mg/Kg	☆	09/05/24 14:25	09/06/24 01:47	1
Tetrachloroethene	ND	F1	0.036	0.0047	mg/Kg	☆	09/05/24 14:25	09/06/24 01:47	1
Toluene	ND	F1	0.053	0.012	mg/Kg	₩	09/05/24 14:25	09/06/24 01:47	1
trans-1,2-Dichloroethene	ND	F1	0.053	0.013	mg/Kg	☼	09/05/24 14:25	09/06/24 01:47	1
trans-1,3-Dichloropropene	ND	F1	0.036	0.0062	mg/Kg	₩	09/05/24 14:25	09/06/24 01:47	1
Trichloroethene	ND	F1	0.036	0.0092	mg/Kg	₩	09/05/24 14:25	09/06/24 01:47	1
Trichlorofluoromethane	ND	F1	0.071	0.023	mg/Kg	☆	09/05/24 14:25	09/06/24 01:47	1
Vinyl chloride	ND		0.089	0.017	mg/Kg	☼	09/05/24 14:25	09/06/24 01:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			80 - 121				09/05/24 14:25	09/06/24 01:47	1
4-Bromofluorobenzene (Surr)	102		80 - 120				09/05/24 14:25	09/06/24 01:47	1
Dibromofluoromethane (Surr)	113		80 - 120				09/05/24 14:25	09/06/24 01:47	1
Toluene-d8 (Surr)	100		80 - 120				09/05/24 14:25	09/06/24 01:47	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	94.3		0.1	0.1	%			09/09/24 15:45	1

0.1

**5.8** 

0.1 %

09/09/24 15:45

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: RB-06-WQ-20240829

Lab Sample ID: 580-143405-15 Date Collected: 08/29/24 14:15

**Matrix: Water** 

Date Received: 08/30/24 12:34

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0	0.53	ug/L			09/04/24 01:57	1
Chloromethane	ND		1.0	0.28	ug/L			09/04/24 01:57	1
Vinyl chloride	ND		1.0	0.22	ug/L			09/04/24 01:57	1
Bromomethane	ND		1.0	0.21	ug/L			09/04/24 01:57	1
Chloroethane	ND	*1	1.0		ug/L			09/04/24 01:57	1
Trichlorofluoromethane	ND		1.0		ug/L			09/04/24 01:57	1
1,1-Dichloroethene	ND		1.0		ug/L			09/04/24 01:57	1
Methylene Chloride	ND		5.0		ug/L			09/04/24 01:57	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			09/04/24 01:57	1
1,1-Dichloroethane	ND		1.0		ug/L			09/04/24 01:57	1
2,2-Dichloropropane	ND		1.0		ug/L			09/04/24 01:57	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			09/04/24 01:57	
Bromochloromethane	ND		1.0		ug/L			09/04/24 01:57	
Chloroform	ND		1.0		ug/L			09/04/24 01:57	
1,1,1-Trichloroethane	ND ND		1.0		ug/L ug/L			09/04/24 01:57	,
Carbon tetrachloride	ND		1.0		ug/L ug/L			09/04/24 01:57	
	ND ND		1.0		ug/L ug/L			09/04/24 01:57	,
1,1-Dichloropropene	ND ND				-				
Benzene			1.0		ug/L			09/04/24 01:57	
1,2-Dichloroethane	ND		1.0		ug/L			09/04/24 01:57	1
Trichloroethene	ND		1.0		ug/L			09/04/24 01:57	1
1,2-Dichloropropane	ND		1.0		ug/L			09/04/24 01:57	1
Dibromomethane	ND		1.0		ug/L			09/04/24 01:57	1
Bromodichloromethane	ND		1.0		ug/L			09/04/24 01:57	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			09/04/24 01:57	1
Toluene	ND		1.0		ug/L			09/04/24 01:57	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			09/04/24 01:57	1
1,1,2-Trichloroethane	ND		1.0		ug/L			09/04/24 01:57	1
Tetrachloroethene	ND		1.0	0.41	ug/L			09/04/24 01:57	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			09/04/24 01:57	1
Dibromochloromethane	ND		1.0	0.43	ug/L			09/04/24 01:57	1
1,2-Dibromoethane	ND		1.0	0.40	ug/L			09/04/24 01:57	1
Chlorobenzene	ND		1.0	0.44	ug/L			09/04/24 01:57	1
Ethylbenzene	ND		1.0	0.50	ug/L			09/04/24 01:57	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			09/04/24 01:57	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			09/04/24 01:57	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			09/04/24 01:57	1
o-Xylene	ND		1.0		ug/L			09/04/24 01:57	1
Styrene	ND		1.0		ug/L			09/04/24 01:57	1
Bromoform	ND		1.0		ug/L			09/04/24 01:57	1
Isopropylbenzene	ND		1.0		ug/L			09/04/24 01:57	1
Bromobenzene	ND		1.0		ug/L			09/04/24 01:57	1
N-Propylbenzene	ND		1.0		ug/L			09/04/24 01:57	1
1,2,3-Trichloropropane	ND		1.0		ug/L			09/04/24 01:57	
2-Chlorotoluene	ND ND		1.0		ug/L			09/04/24 01:57	-
1,3,5-Trimethylbenzene	ND ND		1.0		ug/L			09/04/24 01:57	1
4-Chlorotoluene	ND ND		1.0		ug/L ug/L			09/04/24 01:57	
	ND ND		2.0						
t-Butylbenzene					ug/L			09/04/24 01:57	1
1,2,4-Trimethylbenzene	ND		3.0		ug/L ug/L			09/04/24 01:57 09/04/24 01:57	1

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: RB-06-WQ-20240829

Lab Sample ID: 580-143405-15

Date Collected: 08/29/24 14:15 **Matrix: Water** Date Received: 08/30/24 12:34

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			09/04/24 01:57	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			09/04/24 01:57	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			09/04/24 01:57	1
n-Butylbenzene	ND		1.0	0.44	ug/L			09/04/24 01:57	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			09/04/24 01:57	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			09/04/24 01:57	1
1,2,4-Trichlorobenzene	0.35	JB	1.0	0.33	ug/L			09/04/24 01:57	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			09/04/24 01:57	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			09/04/24 01:57	1
Naphthalene	ND		3.0	0.93	ug/L			09/04/24 01:57	1
Methyl tert-butyl ether	ND	*+	1.0	0.44	ug/L			09/04/24 01:57	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	92		80 - 120			•		09/04/24 01:57	1
4-Bromofluorobenzene (Surr)	104		80 - 120					09/04/24 01:57	1
Dibromofluoromethane (Surr)	111		80 - 120					09/04/24 01:57	1
1,2-Dichloroethane-d4 (Surr)	110		80 - 120					09/04/24 01:57	1

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: TB-01-WQ-20240829

Lab Sample ID: 580-143405-16

Date Collected: 08/29/24 23:59 **Matrix: Water** Date Received: 08/30/24 12:34

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0	0.53	ug/L			09/04/24 01:34	1
Chloromethane	ND		1.0	0.28	ug/L			09/04/24 01:34	1
Vinyl chloride	ND		1.0	0.22	ug/L			09/04/24 01:34	1
Bromomethane	ND		1.0	0.21	ug/L			09/04/24 01:34	1
Chloroethane	ND	*1	1.0	0.35	ug/L			09/04/24 01:34	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			09/04/24 01:34	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			09/04/24 01:34	1
Methylene Chloride	ND		5.0	1.4	ug/L			09/04/24 01:34	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			09/04/24 01:34	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			09/04/24 01:34	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			09/04/24 01:34	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			09/04/24 01:34	1
Bromochloromethane	ND		1.0	0.29	ug/L			09/04/24 01:34	1
Chloroform	ND		1.0	0.26	ug/L			09/04/24 01:34	1
1,1,1-Trichloroethane	ND		1.0		ug/L			09/04/24 01:34	1
Carbon tetrachloride	ND		1.0		ug/L			09/04/24 01:34	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			09/04/24 01:34	1
Benzene	ND		1.0	0.24	ug/L			09/04/24 01:34	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			09/04/24 01:34	1
Trichloroethene	ND		1.0		ug/L			09/04/24 01:34	1
1,2-Dichloropropane	ND		1.0		ug/L			09/04/24 01:34	1
Dibromomethane	ND		1.0		ug/L			09/04/24 01:34	1
Bromodichloromethane	ND		1.0		ug/L			09/04/24 01:34	1
cis-1,3-Dichloropropene	ND		1.0		ug/L			09/04/24 01:34	1
Toluene	ND		1.0		ug/L			09/04/24 01:34	1
trans-1,3-Dichloropropene	ND		1.0		ug/L			09/04/24 01:34	1
1,1,2-Trichloroethane	ND		1.0		ug/L			09/04/24 01:34	1
Tetrachloroethene	ND		1.0		ug/L			09/04/24 01:34	1
1,3-Dichloropropane	ND		1.0		ug/L			09/04/24 01:34	1
Dibromochloromethane	ND		1.0		ug/L			09/04/24 01:34	1
1,2-Dibromoethane	ND		1.0		ug/L			09/04/24 01:34	1
Chlorobenzene	ND		1.0		ug/L			09/04/24 01:34	1
Ethylbenzene	ND		1.0		ug/L			09/04/24 01:34	1
1,1,2-Tetrachloroethane	ND		1.0		ug/L			09/04/24 01:34	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	-			09/04/24 01:34	1
m-Xylene & p-Xylene	ND		2.0	0.53	-			09/04/24 01:34	1
o-Xylene	ND		1.0		ug/L			09/04/24 01:34	1
Styrene	ND		1.0		ug/L			09/04/24 01:34	1
Bromoform	ND		1.0		ug/L			09/04/24 01:34	1
Isopropylbenzene	ND		1.0		ug/L			09/04/24 01:34	1
Bromobenzene	ND		1.0		ug/L			09/04/24 01:34	1
N-Propylbenzene	ND		1.0		ug/L			09/04/24 01:34	1
1,2,3-Trichloropropane	ND		1.0		ug/L			09/04/24 01:34	1
2-Chlorotoluene	ND		1.0		ug/L			09/04/24 01:34	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			09/04/24 01:34	1
4-Chlorotoluene	ND		1.0		ug/L			09/04/24 01:34	
t-Butylbenzene	ND		2.0		ug/L			09/04/24 01:34	1
1,2,4-Trimethylbenzene	ND		3.0		ug/L			09/04/24 01:34	. 1
sec-Butylbenzene	ND		1.0		ug/L			09/04/24 01:34	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: TB-01-WQ-20240829

Lab Sample ID: 580-143405-16 Date Collected: 08/29/24 23:59 **Matrix: Water** 

Date Received: 08/30/24 12:34

Method: SW846 8260D - Vo	latile Organic	Compoun	ds by GC/MS	(Conti	inued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			09/04/24 01:34	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			09/04/24 01:34	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			09/04/24 01:34	1
n-Butylbenzene	ND		1.0	0.44	ug/L			09/04/24 01:34	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			09/04/24 01:34	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			09/04/24 01:34	1
1,2,4-Trichlorobenzene	0.36	JB	1.0	0.33	ug/L			09/04/24 01:34	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			09/04/24 01:34	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			09/04/24 01:34	1
Naphthalene	ND		3.0	0.93	ug/L			09/04/24 01:34	1
Methyl tert-butyl ether	ND	*+	1.0	0.44	ug/L			09/04/24 01:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	90		80 - 120			•		09/04/24 01:34	1
4-Bromofluorobenzene (Surr)	101		80 - 120					09/04/24 01:34	1
Dibromofluoromethane (Surr)	110		80 - 120					09/04/24 01:34	1
1,2-Dichloroethane-d4 (Surr)	109		80 - 120					09/04/24 01:34	1

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Method: SW846 8260D - Vola	Result Qua	•	MD:	11		Due wl	A mal: : -!	Dire-
Analyte				Unit	_ D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND	0.020	0.0051	mg/Kg		09/05/24 14:25	09/06/24 07:16	
1,1,1-Trichloroethane	ND	0.041	0.0047		ψ.		09/06/24 07:16	
1,1,2,2-Tetrachloroethane	ND	0.020	0.0077		<del>.</del>		09/06/24 07:16	
1,1,2-Trichloroethane	ND	0.020	0.0075	0 0	<b>*</b>		09/06/24 07:16	
1,1-Dichloroethane	ND	0.041	0.0093		<b>*</b>		09/06/24 07:16	
1,1-Dichloroethene	ND	0.041		mg/Kg	· · · · · · ·		09/06/24 07:16	
1,1-Dichloropropene	ND	0.041	0.0054		₩		09/06/24 07:16	
1,2,3-Trichlorobenzene	ND	0.081		mg/Kg	₩	09/05/24 14:25		
1,2,3-Trichloropropane	ND	0.041		mg/Kg			09/06/24 07:16	
1,2,4-Trichlorobenzene	ND	0.081		mg/Kg	☼		09/06/24 07:16	
1,2,4-Trimethylbenzene	ND	0.041		mg/Kg	₩		09/06/24 07:16	
1,2-Dibromo-3-Chloropropane	ND	0.061		mg/Kg		09/05/24 14:25	09/06/24 07:16	
1,2-Dibromoethane	ND	0.020	0.0039		₩	09/05/24 14:25	09/06/24 07:16	
1,2-Dichlorobenzene	ND	0.041	0.0088	mg/Kg	☼	09/05/24 14:25	09/06/24 07:16	
1,2-Dichloroethane	ND	0.020	0.0056	mg/Kg	≎	09/05/24 14:25	09/06/24 07:16	
1,2-Dichloropropane	ND	0.020	0.0067	mg/Kg	₩	09/05/24 14:25	09/06/24 07:16	
1,3,5-Trimethylbenzene	ND	0.041	0.0077	mg/Kg	☼	09/05/24 14:25	09/06/24 07:16	
1,3-Dichlorobenzene	ND	0.061	0.014	mg/Kg	≎	09/05/24 14:25	09/06/24 07:16	
1,3-Dichloropropane	ND	0.061	0.0057	mg/Kg	₩	09/05/24 14:25	09/06/24 07:16	
1,4-Dichlorobenzene	ND	0.061	0.011	mg/Kg	₩	09/05/24 14:25	09/06/24 07:16	
2,2-Dichloropropane	ND	0.041	0.012	mg/Kg	≎	09/05/24 14:25	09/06/24 07:16	
2-Chlorotoluene	ND	0.041	0.0089	mg/Kg	₽	09/05/24 14:25	09/06/24 07:16	
1-Chlorotoluene	ND	0.041	0.010	mg/Kg	≎	09/05/24 14:25	09/06/24 07:16	
1-Isopropyltoluene	ND	0.041	0.010	mg/Kg	☼	09/05/24 14:25	09/06/24 07:16	
Benzene	ND	0.020	0.0039	mg/Kg	₩	09/05/24 14:25	09/06/24 07:16	
Bromobenzene	ND	0.041	0.0043	mg/Kg	₩	09/05/24 14:25	09/06/24 07:16	
Bromochloromethane	ND	0.041	0.0063		₩	09/05/24 14:25	09/06/24 07:16	
Bromodichloromethane	ND	0.041	0.0056		₩	09/05/24 14:25	09/06/24 07:16	
Bromoform	ND	0.041	0.0046		☼	09/05/24 14:25	09/06/24 07:16	
Bromomethane	ND	0.10		mg/Kg	₽	09/05/24 14:25	09/06/24 07:16	
Carbon tetrachloride	ND	0.020	0.0045		∴	09/05/24 14:25	09/06/24 07:16	
- Chlorobenzene	1.1 B	0.041			₩		09/06/24 07:16	
Chloroethane	ND	0.081	0.021	mg/Kg	₩		09/06/24 07:16	
Chloroform	ND	0.020	0.0043				09/06/24 07:16	
Chloromethane	ND	0.061		mg/Kg	₩		09/06/24 07:16	
cis-1,2-Dichloroethene	ND	0.061		mg/Kg			09/06/24 07:16	
cis-1,3-Dichloropropene	ND	0.020	0.0041				09/06/24 07:16	
Dibromochloromethane	ND	0.020	0.0050		₩		09/06/24 07:16	
Dibromomethane	ND	0.020	0.0036		₩		09/06/24 07:16	
Dichlorodifluoromethane	ND	0.25		mg/Kg			09/06/24 07:16	
			0.047					
Ethylbenzene	ND	0.041		0 0	ψ.		09/06/24 07:16	
Hexachlorobutadiene	ND	0.10		mg/Kg	· · · · · · · · · · · · · · · · · · ·		09/06/24 07:16	
sopropylbenzene	ND	0.041	0.0087	0 0	<b>‡</b>		09/06/24 07:16	
Methyl tert-butyl ether	ND	0.041	0.0061				09/06/24 07:16	
Methylene Chloride	ND	0.25		mg/Kg			09/06/24 07:16	
m-Xylene & p-Xylene	ND	0.041	0.0072		₽		09/06/24 07:16	
Naphthalene	ND	0.15		mg/Kg	₩		09/06/24 07:16	
n-Butylbenzene	ND	0.041	0.019	mg/Kg	≎	09/05/24 14:25	09/06/24 07:16	
N-Propylbenzene	ND	0.041	0.015	mg/Kg	₽	09/05/24 14:25	09/06/24 07:16	

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Percent Moisture (SM22 2540G)

13.9

Client Sample ID: PDI-33-SO-56.5-20240829

Date Collected: 08/29/24 15:05

**Matrix: Solid** Date Received: 08/30/24 12:34 Percent Solids: 86.1

Method: SW846 8260D - Vola	atile Organic	Compoun	ds bv GC/MS	(Conti	inued)				
Analyte	_	Qualifier	RL	MDL	,	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.041	0.0051	mg/Kg	<u></u>	09/05/24 14:25	09/06/24 07:16	1
sec-Butylbenzene	ND		0.041	0.0087	mg/Kg	₩	09/05/24 14:25	09/06/24 07:16	1
Styrene	ND		0.041	0.013	mg/Kg	₽	09/05/24 14:25	09/06/24 07:16	1
t-Butylbenzene	ND		0.041	0.0078	mg/Kg	₩	09/05/24 14:25	09/06/24 07:16	1
Tetrachloroethene	ND		0.041	0.0054	mg/Kg	₩	09/05/24 14:25	09/06/24 07:16	1
Toluene	ND		0.061	0.014	mg/Kg	₩	09/05/24 14:25	09/06/24 07:16	1
trans-1,2-Dichloroethene	ND		0.061	0.015	mg/Kg	₩	09/05/24 14:25	09/06/24 07:16	1
trans-1,3-Dichloropropene	ND		0.041	0.0071	mg/Kg	₩	09/05/24 14:25	09/06/24 07:16	1
Trichloroethene	ND		0.041	0.010	mg/Kg	₩	09/05/24 14:25	09/06/24 07:16	1
Trichlorofluoromethane	ND		0.081	0.026	mg/Kg	₩	09/05/24 14:25	09/06/24 07:16	1
Vinyl chloride	ND		0.10	0.019	mg/Kg	₽	09/05/24 14:25	09/06/24 07:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)			80 - 121				09/05/24 14:25	09/06/24 07:16	1
4-Bromofluorobenzene (Surr)	102		80 - 120				09/05/24 14:25	09/06/24 07:16	1
Dibromofluoromethane (Surr)	113		80 - 120				09/05/24 14:25	09/06/24 07:16	1
Toluene-d8 (Surr)	97		80 - 120				09/05/24 14:25	09/06/24 07:16	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	86.1		0.1	0.1	%			09/09/24 15:45	1

0.1

0.1 %

Lab Sample ID: 580-143405-17

09/09/24 15:45

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-33-SO-78-20240829

Lab Sample ID: 580-143405-18 Date Collected: 08/29/24 15:10 Matrix: Solid Date Received: 08/30/24 12:34 Percent Solids: 93.8

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 0.016 1,1,1,2-Tetrachloroethane ND 0.0041 mg/Kg 09/05/24 14:25 09/06/24 07:36 0.032 ND 1.1.1-Trichloroethane 0.0037 mg/Kg 09/05/24 14:25 09/06/24 07:36 1,1,2,2-Tetrachloroethane ND 0.016 0.0062 mg/Kg 09/05/24 14:25 09/06/24 07:36 ND 0.0060 1,1,2-Trichloroethane 0.016 mg/Kg 09/05/24 14:25 09/06/24 07:36 0.032 0.0075 mg/Kg 09/05/24 14:25 09/06/24 07:36 1 1-Dichloroethane ND 1,1-Dichloroethene ND 0.032 0.010 mg/Kg 09/05/24 14:25 09/06/24 07:36 1,1-Dichloropropene ND 0.032 0.0043 09/05/24 14:25 09/06/24 07:36 mg/Kg ND 0.065 0.032 09/05/24 14:25 09/06/24 07:36 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.032 0.0093 mg/Kg 09/05/24 14:25 09/06/24 07:36 1,2,4-Trichlorobenzene ND 0.065 0.035 mg/Kg ġ 09/05/24 14:25 09/06/24 07:36 1,2,4-Trimethylbenzene ND 0.032 0.011 mg/Kg 09/05/24 14:25 09/06/24 07:36 1.2-Dibromo-3-Chloropropane ND 0.049 0.012 mg/Kg 09/05/24 14:25 09/06/24 07:36 1 1,2-Dibromoethane ND 0.016 0.0031 mg/Kg 09/05/24 14:25 09/06/24 07:36 1,2-Dichlorobenzene ND 0.032 0.0071 mg/Kg 09/05/24 14:25 09/06/24 07:36 ND 0.016 0.0045 mg/Kg 09/05/24 14:25 09/06/24 07:36 1.2-Dichloroethane 1,2-Dichloropropane NΩ 0.016 0.0054 mg/Kg 09/05/24 14:25 09/06/24 07:36 ND 1,3,5-Trimethylbenzene 0.032 0.0062 mg/Kg 09/05/24 14:25 09/06/24 07:36 1,3-Dichlorobenzene ND 0.049 0.011 mg/Kg 09/05/24 14:25 09/06/24 07:36 0.0045 ND 0.049 mg/Kg 09/05/24 14:25 09/06/24 07:36 1,3-Dichloropropane 1,4-Dichlorobenzene ND 0.049 0.0088 mg/Kg 09/05/24 14:25 09/06/24 07:36 2,2-Dichloropropane ND 0.032 0.0098 mg/Kg ÷ 09/05/24 14:25 09/06/24 07:36 2-Chlorotoluene ND 0.032 0.0071 mg/Kg 09/05/24 14:25 09/06/24 07:36 4-Chlorotoluene ND 0.032 0.0080 09/05/24 14:25 09/06/24 07:36 mg/Kg 4-Isopropyltoluene ND 0.032 0.0083 mg/Kg 09/05/24 14:25 09/06/24 07:36 Benzene ND 0.016 0.0031 mg/Kg 09/05/24 14:25 09/06/24 07:36 Bromobenzene ND 0.032 0.0034 mg/Kg 09/05/24 14:25 09/06/24 07:36 Bromochloromethane ND 0.032 0.0050 mg/Kg 09/05/24 14:25 09/06/24 07:36 Bromodichloromethane 0.0045 ND 0.032 mg/Kg 09/05/24 14:25 09/06/24 07:36 0.0037 Bromoform NΩ 0.032 mg/Kg 09/05/24 14:25 09/06/24 07:36 ND 0.031 Bromomethane 0.081 mg/Kg 09/05/24 14:25 09/06/24 07:36 Carbon tetrachloride ND 0.016 0.0036 mg/Kg 09/05/24 14:25 09/06/24 07:36 0.032 0.0039 mg/Kg 09/05/24 14:25 09/06/24 07:36 0.098 Chlorobenzene Chloroethane 0.065 0.017 09/05/24 14:25 09/06/24 07:36 ND mg/Kg Chloroform ND 09/05/24 14:25 09/06/24 07:36 0.016 0.0034 mg/Kg Chloromethane ND 0.049 0.0082 mg/Kg 09/05/24 14:25 09/06/24 07:36 cis-1.2-Dichloroethene ND 0.049 0.010 mg/Kg 09/05/24 14:25 09/06/24 07:36 cis-1,3-Dichloropropene ND 0.016 0.0032 mg/Kg 09/05/24 14:25 09/06/24 07:36 Dibromochloromethane ND 0.016 0.0040 mg/Kg 09/05/24 14:25 09/06/24 07:36 Dibromomethane ND 0.0060 mg/Kg 0.032 Ö 09/05/24 14:25 09/06/24 07:36 Dichlorodifluoromethane ND 0.20 0.037 mg/Kg 09/05/24 14:25 09/06/24 07:36 Ethylbenzene ND 0.032 0.0074 mg/Kg 09/05/24 14:25 09/06/24 07:36 Hexachlorobutadiene ND 0.081 0.019 mg/Kg 09/05/24 14:25 09/06/24 07:36 0.0070 ND 0.032 09/06/24 07:36 Isopropylbenzene mg/Kg 09/05/24 14:25 Methyl tert-butyl ether 0.032 0.0049 09/05/24 14:25 09/06/24 07:36 ND mg/Kg ND Methylene Chloride 0.20 0.021 mg/Kg 09/05/24 14:25 09/06/24 07:36 m-Xylene & p-Xylene ND 0.032 0.0058 mg/Kg 09/05/24 14:25 09/06/24 07:36 Naphthalene ND 09/05/24 14:25 09/06/24 07:36 0.12 0.032 mg/Kg n-Butylbenzene ND 0.032 0.015 mg/Kg ₩ 09/05/24 14:25 09/06/24 07:36 N-Propylbenzene ND 0.032 0.012 mg/Kg 09/05/24 14:25 09/06/24 07:36

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-33-SO-78-20240829

Lab Sample ID: 580-143405-18 Date Collected: 08/29/24 15:10 **Matrix: Solid** 

Percent Solids: 93.8 Date Received: 08/30/24 12:34

Method: SW846 8260D - Volati Analyte	_	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.032	0.0041	mg/Kg	— <u>-</u>	09/05/24 14:25	09/06/24 07:36	1
sec-Butylbenzene	ND		0.032	0.0070	0 0	₩	09/05/24 14:25	09/06/24 07:36	1
Styrene	ND		0.032		mg/Kg		09/05/24 14:25	09/06/24 07:36	1
t-Butylbenzene	ND		0.032	0.0063		₩	09/05/24 14:25	09/06/24 07:36	1
Tetrachloroethene	ND		0.032	0.0043	mg/Kg	₩	09/05/24 14:25	09/06/24 07:36	1
Toluene	ND		0.049			₩	09/05/24 14:25	09/06/24 07:36	1
trans-1,2-Dichloroethene	ND		0.049	0.012	mg/Kg	₽	09/05/24 14:25	09/06/24 07:36	1
trans-1,3-Dichloropropene	ND		0.032	0.0057		₩	09/05/24 14:25	09/06/24 07:36	1
Trichloroethene	ND		0.032	0.0084	mg/Kg	₩	09/05/24 14:25	09/06/24 07:36	1
Trichlorofluoromethane	ND		0.065			₩	09/05/24 14:25	09/06/24 07:36	1
Vinyl chloride	ND		0.081	0.015	mg/Kg	₽	09/05/24 14:25	09/06/24 07:36	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		80 - 121				09/05/24 14:25	09/06/24 07:36	1
4-Bromofluorobenzene (Surr)	100		80 - 120				09/05/24 14:25	09/06/24 07:36	1
Dibromofluoromethane (Surr)	111		80 - 120				09/05/24 14:25	09/06/24 07:36	1
Toluene-d8 (Surr)	101		80 - 120				09/05/24 14:25	09/06/24 07:36	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	93.9		0.1	0.1	%			09/09/24 15:45	1
Percent Moisture (SM22 2540G)	6.2		0.1	0.1	%			09/09/24 15:45	1

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-470179/7

**Matrix: Water** 

**Analysis Batch: 470179** 

Client Sample ID: Method Blank Prep Type: Total/NA

	MB	MB							
Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.0	0.28	_			09/04/24 01:10	,
1,1-Dichloroethane	ND		1.0	0.22	-			09/04/24 01:10	•
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			09/04/24 01:10	
1,1-Dichloropropene	ND		1.0	0.29	ug/L			09/04/24 01:10	,
1,2-Dichloroethane	ND		1.0	0.42	ug/L			09/04/24 01:10	•
1,2-Dichloropropane	ND		1.0	0.18				09/04/24 01:10	
2,2-Dichloropropane	ND		1.0		ug/L			09/04/24 01:10	•
Benzene	ND		1.0	0.24	ug/L			09/04/24 01:10	•
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			09/04/24 01:10	•
Bromochloromethane	ND		1.0	0.29	ug/L			09/04/24 01:10	
1,3-Dichloropropane	ND		1.0	0.35	ug/L			09/04/24 01:10	•
Bromodichloromethane	ND		1.0	0.29	ug/L			09/04/24 01:10	•
1,2-Dibromoethane	ND		1.0	0.40	ug/L			09/04/24 01:10	
Bromomethane	ND		1.0	0.21	ug/L			09/04/24 01:10	•
Carbon tetrachloride	ND		1.0	0.30	ug/L			09/04/24 01:10	•
Chlorobenzene	ND		1.0	0.44	ug/L			09/04/24 01:10	
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			09/04/24 01:10	
Chloroethane	ND		1.0	0.35	ug/L			09/04/24 01:10	
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			09/04/24 01:10	
Chloroform	ND		1.0	0.26	-			09/04/24 01:10	
Chloromethane	ND		1.0	0.28	_			09/04/24 01:10	
cis-1,2-Dichloroethene	ND		1.0	0.35				09/04/24 01:10	
cis-1,3-Dichloropropene	ND		1.0	0.42	_			09/04/24 01:10	
Bromoform	ND		1.0	0.51	•			09/04/24 01:10	
Dibromochloromethane	ND		1.0	0.43				09/04/24 01:10	
Bromobenzene	ND		1.0	0.43	_			09/04/24 01:10	
Dibromomethane	ND		1.0	0.34	_			09/04/24 01:10	
Dichlorodifluoromethane	ND		1.0	0.53				09/04/24 01:10	,
1,2,3-Trichloropropane	ND		1.0	0.41	-			09/04/24 01:10	
Ethylbenzene	ND		1.0	0.50	-			09/04/24 01:10	
2-Chlorotoluene	ND		1.0	0.51				09/04/24 01:10	,
1,3,5-Trimethylbenzene	ND		1.0	0.55	-			09/04/24 01:10	
Isopropylbenzene	ND		1.0	0.44	-			09/04/24 01:10	
4-Chlorotoluene	ND		1.0	0.38				09/04/24 01:10	,
Methylene Chloride	ND		5.0		ug/L			09/04/24 01:10	
1,2,4-Trimethylbenzene	ND		3.0		ug/L			09/04/24 01:10	,
m-Xylene & p-Xylene	ND		2.0		ug/L			09/04/24 01:10	,
1,3-Dichlorobenzene	ND		1.0	0.48				09/04/24 01:10	,
4-Isopropyltoluene	ND		1.0		ug/L			09/04/24 01:10	,
N-Propylbenzene	ND		1.0		ug/L			09/04/24 01:10	,
1,4-Dichlorobenzene	ND		1.0	0.46				09/04/24 01:10	,
o-Xylene	ND ND		1.0		ug/L			09/04/24 01:10	,
n-Butylbenzene	ND		1.0		ug/L ug/L			09/04/24 01:10	,
sec-Butylbenzene	ND ND		1.0		ug/L ug/L			09/04/24 01:10	,
1,2-Dichlorobenzene	ND ND		1.0		-			09/04/24 01:10	,
					ug/L				
Styrene  1.2 Dibromo 3 Chloropropano	ND		1.0		ug/L			09/04/24 01:10	,
1,2-Dibromo-3-Chloropropane t-Butylbenzene	ND ND		3.0 2.0		ug/L ug/L			09/04/24 01:10 09/04/24 01:10	

**Eurofins Seattle** 

9/9/2024

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Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-470179/7

**Matrix: Water** 

**Analysis Batch: 470179** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

	MB MB	l e						
Analyte	Result Qu	alifier RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	0.360 J	1.0	0.33	ug/L			09/04/24 01:10	1
Tetrachloroethene	ND	1.0	0.41	ug/L			09/04/24 01:10	1
1,2,3-Trichlorobenzene	ND	2.0	0.43	ug/L			09/04/24 01:10	1
Toluene	ND	1.0	0.39	ug/L			09/04/24 01:10	1
Hexachlorobutadiene	ND	3.0	0.79	ug/L			09/04/24 01:10	1
Naphthalene	ND	3.0	0.93	ug/L			09/04/24 01:10	1
trans-1,2-Dichloroethene	ND	1.0	0.39	ug/L			09/04/24 01:10	1
trans-1,3-Dichloropropene	ND	1.0	0.41	ug/L			09/04/24 01:10	1
Trichloroethene	ND	1.0	0.26	ug/L			09/04/24 01:10	1
Trichlorofluoromethane	ND	1.0	0.36	ug/L			09/04/24 01:10	1
Methyl tert-butyl ether	ND	1.0	0.44	ug/L			09/04/24 01:10	1
Vinyl chloride	ND	1.0	0.22	ug/L			09/04/24 01:10	1

MB MB

Surrogate	%Recovery Qual	lifier Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	92	80 - 120		09/04/24 01:10	1
4-Bromofluorobenzene (Surr)	104	80 - 120		09/04/24 01:10	1
Dibromofluoromethane (Surr)	109	80 - 120		09/04/24 01:10	1
1,2-Dichloroethane-d4 (Surr)	109	80 - 120		09/04/24 01:10	1

Lab Sample ID: LCS 580-470179/4

**Matrix: Water** 

Analysis Batch: 470179

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA

Analysis Batch: 470179								
	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1-Dichloroethene	5.00	5.02		ug/L		100	70 - 129	
1,1-Dichloroethane	5.00	5.37		ug/L		107	80 - 120	
1,1,1-Trichloroethane	5.00	5.34		ug/L		107	74 - 130	
1,1-Dichloropropene	5.00	5.24		ug/L		105	74 - 120	
1,2-Dichloroethane	5.00	5.73		ug/L		115	69 - 126	
1,2-Dichloropropane	5.00	5.49		ug/L		110	80 - 120	
2,2-Dichloropropane	5.00	5.13		ug/L		103	66 - 126	
Benzene	5.00	5.15		ug/L		103	80 - 122	
1,1,2-Trichloroethane	5.00	4.63		ug/L		93	80 - 121	
Bromochloromethane	5.00	5.47		ug/L		109	78 - 120	
1,3-Dichloropropane	5.00	4.75		ug/L		95	79 - 120	
Bromodichloromethane	5.00	5.40		ug/L		108	75 - 124	
1,2-Dibromoethane	5.00	4.75		ug/L		95	79 - 126	
Bromomethane	5.00	3.84		ug/L		77	36 - 150	
Carbon tetrachloride	5.00	5.32		ug/L		106	72 - 129	
Chlorobenzene	5.00	4.39		ug/L		88	80 - 120	
1,1,1,2-Tetrachloroethane	5.00	4.62		ug/L		92	79 - 120	
Chloroethane	5.00	4.53		ug/L		91	38 - 150	
1,1,2,2-Tetrachloroethane	5.00	4.23		ug/L		85	74 - 124	
Chloroform	5.00	5.30		ug/L		106	78 - 127	
Chloromethane	5.00	3.95		ug/L		79	25 - 150	
cis-1,2-Dichloroethene	5.00	5.53		ug/L		111	76 - 120	
cis-1,3-Dichloropropene	5.00	4.39		ug/L		88	77 - 120	
Bromoform	5.00	4.35		ug/L		87	56 - 139	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-470179/4

**Matrix: Water** 

**Analysis Batch: 470179** 

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

Analysis Daten. 470173	Spike	LCS LCS			%Rec
Analyte	Added	Result Quali	fier Unit	D %Rec	Limits
Dibromochloromethane	5.00	4.56	ug/L	91	73 - 125
Bromobenzene	5.00	4.29	ug/L	86	80 - 120
Dibromomethane	5.00	5.66	ug/L	113	80 - 120
Dichlorodifluoromethane	5.00	3.55	ug/L	71	20 - 150
1,2,3-Trichloropropane	5.00	4.25	ug/L	85	76 - 124
Ethylbenzene	5.00	4.57	ug/L	91	80 - 120
2-Chlorotoluene	5.00	4.28	ug/L	86	80 - 120
1,3,5-Trimethylbenzene	5.00	4.18	ug/L	84	80 - 122
Isopropylbenzene	5.00	4.64	ug/L	93	80 - 123
4-Chlorotoluene	5.00	4.56	ug/L	91	73 - 129
Methylene Chloride	5.00	5.21	ug/L	104	77 - 125
1,2,4-Trimethylbenzene	5.00	4.12	ug/L	82	80 - 120
m-Xylene & p-Xylene	5.00	4.63	ug/L	93	80 - 120
1,3-Dichlorobenzene	5.00	4.41	ug/L	88	77 - 127
4-Isopropyltoluene	5.00	4.01	ug/L	80	77 - 126
N-Propylbenzene	5.00	4.34	ug/L	87	80 - 122
1,4-Dichlorobenzene	5.00	4.11	ug/L	82	80 - 120
o-Xylene	5.00	4.50	ug/L	90	80 - 120
n-Butylbenzene	5.00	3.77	ug/L	75	57 - 133
sec-Butylbenzene	5.00	4.13	ug/L	83	78 - 122
1,2-Dichlorobenzene	5.00	4.39	ug/L	88	80 - 120
Styrene	5.00	4.36	ug/L	87	76 - 122
1,2-Dibromo-3-Chloropropane	5.00	3.82	ug/L	76	65 - 133
t-Butylbenzene	5.00	3.95	ug/L	79	75 - 123
1,2,4-Trichlorobenzene	5.00	4.09	ug/L	82	61 - 148
Tetrachloroethene	5.00	4.18	ug/L	84	76 - 125
1,2,3-Trichlorobenzene	5.00	3.65	ug/L	73	65 - 150
Toluene	5.00	4.48	ug/L	90	80 - 120
Hexachlorobutadiene	5.00	3.82	ug/L	76	74 - 131
Naphthalene	5.00	3.74	ug/L	75	63 - 150
trans-1,2-Dichloroethene	5.00	5.17	ug/L	103	75 - 120
trans-1,3-Dichloropropene	5.00	4.71	ug/L	94	76 - 122
Trichloroethene	5.00	5.27	ug/L	105	80 - 125
Trichlorofluoromethane	5.00	4.69	ug/L	94	45 - 148
Methyl tert-butyl ether	5.00	6.09 *+	ug/L	122	72 - 120
Vinyl chloride	5.00	4.59	ug/L	92	31 - 150

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	91		80 - 120
4-Bromofluorobenzene (Surr)	104		80 - 120
Dibromofluoromethane (Surr)	108		80 - 120
1,2-Dichloroethane-d4 (Surr)	106		80 - 120

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

# Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-470179/5

**Matrix: Water** 

**Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA** 

Analysis Batch: 470179								<b>J</b> 0. 10.	
	Spike	_	LCSD		_	۰	%Rec		RPD
Analyte	Added 5.00	5.08	Qualifier	Unit	D	%Rec	70 - 129	RPD	Limit
1,1-Dichloroethene				ug/L		102	70 - 129 80 - 120	1	23
1,1-Dichloroethane	5.00	5.38		ug/L		108	74 - 130	0	15 19
1,1,1-Trichloroethane	5.00	5.37		ug/L		107		0	
1,1-Dichloropropene	5.00	5.42		ug/L		108	74 - 120	3	14
1,2-Dichloroethane	5.00	5.58		ug/L		112	69 - 126	3	11
1,2-Dichloropropane	5.00	5.44		ug/L		109	80 - 120	1	14
2,2-Dichloropropane	5.00	5.14		ug/L		103	66 - 126	0	22
Benzene	5.00	5.12		ug/L		102	80 - 122	1	14
1,1,2-Trichloroethane	5.00	4.30		ug/L		86	80 - 121	8	14
Bromochloromethane	5.00	5.44		ug/L		109	78 - 120	1	13
1,3-Dichloropropane	5.00	4.45		ug/L		89	79 - 120	7	19
Bromodichloromethane	5.00	5.55		ug/L		111	75 - 124	3	13
1,2-Dibromoethane	5.00	4.54		ug/L		91	79 - 126	4	12
Bromomethane	5.00	3.90		ug/L		78	36 - 150	1	33
Carbon tetrachloride	5.00	5.43		ug/L		109	72 - 129	2	19
Chlorobenzene	5.00	4.34		ug/L		87	80 - 120	1	10
1,1,1,2-Tetrachloroethane	5.00	4.50		ug/L		90	79 - 120	3	16
Chloroethane	5.00	7.50	*1	ug/L		150	38 - 150	49	28
1,1,2,2-Tetrachloroethane	5.00	3.93		ug/L		79	74 - 124	8	25
Chloroform	5.00	5.34		ug/L		107	78 - 127	1	14
Chloromethane	5.00	3.93		ug/L		79	25 - 150	1	26
cis-1,2-Dichloroethene	5.00	5.57		ug/L		111	76 - 120	1	20
cis-1,3-Dichloropropene	5.00	4.34		ug/L		87	77 - 120	1	35
Bromoform	5.00	4.15		ug/L		83	56 - 139	5	21
Dibromochloromethane	5.00	4.36		ug/L		87	73 - 125	4	13
Bromobenzene	5.00	4.27		ug/L		85	80 - 120	1	24
Dibromomethane	5.00	5.48		ug/L		110	80 - 120	3	11
Dichlorodifluoromethane	5.00	3.68		ug/L		74	20 - 150	3	33
1,2,3-Trichloropropane	5.00	4.31		ug/L		86	76 - 124	1	26
Ethylbenzene	5.00	4.59		ug/L		92	80 - 120	0	14
2-Chlorotoluene	5.00	4.34		ug/L		87	80 - 120	2	20
1,3,5-Trimethylbenzene	5.00	4.16		ug/L		83	80 - 122	1	21
Isopropylbenzene	5.00	4.64		ug/L		93	80 - 123	0	19
4-Chlorotoluene	5.00	4.59		ug/L		92	73 - 129	1	29
Methylene Chloride	5.00	5.07		ug/L		101	77 - 125	3	18
1,2,4-Trimethylbenzene	5.00	4.21		ug/L		84	80 - 120	2	16
m-Xylene & p-Xylene	5.00	4.56		ug/L		91	80 - 120	1	14
1,3-Dichlorobenzene	5.00	4.44		ug/L		89	77 - 127	1	35
4-Isopropyltoluene	5.00	3.99		ug/L		80	77 - 126	1	20
N-Propylbenzene	5.00	4.42		ug/L		88	80 - 122	2	22
1,4-Dichlorobenzene	5.00	4.06		ug/L		81	80 - 120	1	17
o-Xylene	5.00	4.51		ug/L		90	80 - 120	0	16
n-Butylbenzene	5.00	3.69		ug/L		74	57 - 133	2	14
sec-Butylbenzene	5.00	4.08		ug/L		82	78 - 122	1	15
1,2-Dichlorobenzene	5.00	4.36		ug/L		87	80 - 120	1	15
Styrene	5.00	4.31		ug/L		86	76 - 122	1	16
1,2-Dibromo-3-Chloropropane	5.00	3.62		ug/L		72	65 - 133	5	25
t-Butylbenzene	5.00	4.07		ug/L		81	75 - 123	3	21
2 23, 20, 20, 10	0.00	7.07		ug, ∟		0.	10-120	9	۲ ا

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-470179/5

**Matrix: Water** 

**Analysis Batch: 470179** 

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

	<b>Бріке</b>	LC2D	LC2D				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,2,4-Trichlorobenzene	5.00	3.99		ug/L		80	61 - 148	3	27
Tetrachloroethene	5.00	4.12		ug/L		82	76 - 125	2	13
1,2,3-Trichlorobenzene	5.00	3.58		ug/L		72	65 - 150	2	33
Toluene	5.00	4.49		ug/L		90	80 - 120	0	13
Hexachlorobutadiene	5.00	3.72		ug/L		74	74 - 131	3	22
Naphthalene	5.00	3.61		ug/L		72	63 - 150	4	33
trans-1,2-Dichloroethene	5.00	5.31		ug/L		106	75 - 120	3	21
trans-1,3-Dichloropropene	5.00	4.41		ug/L		88	76 - 122	7	20
Trichloroethene	5.00	5.25		ug/L		105	80 - 125	0	13
Trichlorofluoromethane	5.00	4.63		ug/L		93	45 - 148	1	35
Methyl tert-butyl ether	5.00	5.85		ug/L		117	72 - 120	4	18
Vinyl chloride	5.00	4.65		ug/L		93	31 - 150	1	26

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	91		80 - 120
4-Bromofluorobenzene (Surr)	106		80 - 120
Dibromofluoromethane (Surr)	107		80 - 120
1,2-Dichloroethane-d4 (Surr)	103		80 - 120

Lab Sample ID: MB 580-470444/3-A

**Matrix: Solid** 

Analysis Batch: 470459

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

**Prep Batch: 470444** 

	MB	MB						•	
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		0.040	0.012	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
1,1-Dichloroethane	ND		0.040	0.0092	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
1,1,1-Trichloroethane	ND		0.040	0.0046	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
1,1-Dichloropropene	ND		0.040	0.0053	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
1,2-Dichloroethane	ND		0.020	0.0055	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
1,2-Dichloropropane	ND		0.020	0.0066	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
2,2-Dichloropropane	ND		0.040	0.012	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
Benzene	ND		0.020	0.0038	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
1,1,2-Trichloroethane	ND		0.020	0.0074	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
Bromochloromethane	ND		0.040	0.0062	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
1,3-Dichloropropane	ND		0.060	0.0056	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
Bromodichloromethane	ND		0.040	0.0055	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
1,2-Dibromoethane	ND		0.020	0.0038	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
Bromomethane	ND		0.10	0.038	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
Carbon tetrachloride	ND		0.020	0.0044	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
Chlorobenzene	0.00541	J	0.040	0.0048	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
Chloroethane	ND		0.080	0.021	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
Chloroform	ND		0.020	0.0042	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
Chloromethane	ND		0.060	0.010	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
cis-1,2-Dichloroethene	ND		0.060	0.013	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
cis-1,3-Dichloropropene	ND		0.020	0.0040	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
Bromoform	ND		0.040	0.0045	mg/Kg		09/05/24 14:22	09/06/24 00:45	1

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Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-470444/3-A

Matrix: Solid

**Analysis Batch: 470459** 

**Client Sample ID: Method Blank** 

**Prep Type: Total/NA** 

**Prep Batch: 470444** 

Analyte  Dibromochloromethane  Bromobenzene  Dibromomethane	Result ND ND ND ND	Qualifier	0.020 0.040	0.0049	mg/Kg	D	Prepared 09/05/24 14:22	Analyzed 09/06/24 00:45	Dil Fac
Bromobenzene	ND ND ND		0.040				09/05/24 14:22	09/06/24 00:45	1
	ND ND			0.0042					
Dibromomothano	ND			0.0042	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
Dibiomometriane			0.040	0.0074	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
Dichlorodifluoromethane	ND		0.25	0.046	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
1,2,3-Trichloropropane	110		0.040	0.012	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
Ethylbenzene	ND		0.040	0.0091	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
2-Chlorotoluene	ND		0.040	0.0088	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
1,3,5-Trimethylbenzene	ND		0.040	0.0076	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
Isopropylbenzene	ND		0.040	0.0086	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
4-Chlorotoluene	ND		0.040	0.0098	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
Methylene Chloride	ND		0.25	0.026	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
1,2,4-Trimethylbenzene	ND		0.040	0.014	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
m-Xylene & p-Xylene	ND		0.040	0.0071	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
1,3-Dichlorobenzene	ND		0.060	0.013	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
4-Isopropyltoluene	ND		0.040	0.010	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
N-Propylbenzene	ND		0.040	0.015	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
1,4-Dichlorobenzene	ND		0.060	0.011	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
o-Xylene	ND		0.040	0.0050	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
n-Butylbenzene	ND		0.040	0.019	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
1,2-Dichlorobenzene	ND		0.040	0.0087	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
Styrene	ND		0.040	0.013	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
1,2-Dibromo-3-Chloropropane	ND		0.060	0.015	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
1,2,4-Trichlorobenzene	ND		0.080	0.043	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
1,2,3-Trichlorobenzene	ND		0.080	0.040	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
Toluene	ND		0.060	0.014	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
Hexachlorobutadiene	0.0411	J	0.10	0.024	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
Naphthalene	ND		0.15	0.039	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
Trichloroethene	ND		0.040	0.010	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
Trichlorofluoromethane	ND		0.080		mg/Kg		09/05/24 14:22	09/06/24 00:45	1
Methyl tert-butyl ether	ND		0.040	0.0060	mg/Kg		09/05/24 14:22	09/06/24 00:45	1
Vinyl chloride	ND		0.10		mg/Kg		09/05/24 14:22	09/06/24 00:45	1
	MD	MD							

Surrogate	%Recovery Qualifie	er Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96	80 - 120	09/05/24 14:22	09/06/24 00:45	1
4-Bromofluorobenzene (Surr)	99	80 - 120	09/05/24 14:22	09/06/24 00:45	1
Dibromofluoromethane (Surr)	113	80 - 120	09/05/24 14:22	09/06/24 00:45	1
1,2-Dichloroethane-d4 (Surr)	109	80 - 121	09/05/24 14:22	09/06/24 00:45	1

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-470444/1-A

**Matrix: Solid** 

Client Sample ID: La	b Control Sample
Pro	ep Type: Total/NA
Pr	ep Batch: 470444

Analysis Batch: 470459	Spike	LCS	LCS				Prep Batch: 47044
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1-Dichloroethene	0.800	0.863		mg/Kg		108	73 - 134
1,1-Dichloroethane	0.800	0.770		mg/Kg		96	78 - 126
1,1,1-Trichloroethane	0.800	0.854		mg/Kg		107	78 - 135
1,1-Dichloropropene	0.800	0.782		mg/Kg		98	76 - 140
1,2-Dichloroethane	0.800	0.763		mg/Kg		95	76 - 124
1,2-Dichloropropane	0.800	0.722		mg/Kg		90	73 - 130
2,2-Dichloropropane	0.800	0.748		mg/Kg		94	75 - 134
Benzene	0.800	0.767		mg/Kg		96	79 - 135
1,1,2-Trichloroethane	0.800	0.785		mg/Kg		98	80 - 123
Bromochloromethane	0.800	0.800		mg/Kg		100	76 - 131
1,3-Dichloropropane	0.800	0.793		mg/Kg		99	80 - 120
Bromodichloromethane	0.800	0.836		mg/Kg		105	78 - 125
1,2-Dibromoethane	0.800	0.805		mg/Kg		101	77 - 123
Bromomethane	0.800	1.06		mg/Kg		133	55 - 150
Carbon tetrachloride	0.800	0.847		mg/Kg		106	76 - 140
Chlorobenzene	0.800	0.768		mg/Kg		96	80 - 125
1,1,1,2-Tetrachloroethane	0.800	0.815		mg/Kg		102	79 - 128
Chloroethane	0.800	0.948		mg/Kg		118	26 - 150
1,1,2,2-Tetrachloroethane	0.800	0.677		mg/Kg		85	77 - 122
Chloroform	0.800	0.794		mg/Kg		99	74 - 133
Chloromethane	0.800	0.702		mg/Kg		88	52 - 142
cis-1,2-Dichloroethene	0.800	0.773		mg/Kg		97	80 - 125
cis-1,3-Dichloropropene	0.800	0.745		mg/Kg		93	80 - 122
Bromoform	0.800	0.748		mg/Kg		93	71 - 130
Dibromochloromethane	0.800	0.850		mg/Kg		106	75 - 125
Bromobenzene	0.800	0.806		mg/Kg		101	78 - 126
Dibromomethane	0.800	0.808		mg/Kg		101	72 - 130
Dichlorodifluoromethane	0.800	0.900		mg/Kg		112	33 - 150
1,2,3-Trichloropropane	0.800	0.793		mg/Kg		99	77 - 127
Ethylbenzene	0.800	0.808		mg/Kg		101	80 - 135
2-Chlorotoluene	0.800	0.793		mg/Kg		99	77 - 134
1,3,5-Trimethylbenzene	0.800	0.842		mg/Kg		105	72 - 134
Isopropylbenzene	0.800	0.925		mg/Kg		116	80 - 131
4-Chlorotoluene	0.800	0.756		mg/Kg		94	71 - 137
Methylene Chloride	0.800	0.803		mg/Kg		100	56 - 140
1,2,4-Trimethylbenzene	0.800	0.808		mg/Kg		101	73 - 138
m-Xylene & p-Xylene	0.800	0.828		mg/Kg		103	80 - 132
1,3-Dichlorobenzene	0.800	0.834		mg/Kg		104	78 - 132
4-Isopropyltoluene	0.800	0.803		mg/Kg		100	71 - 142
N-Propylbenzene	0.800	0.804		mg/Kg		101	78 - 133
1,4-Dichlorobenzene	0.800	0.746		mg/Kg		93	77 - 123
o-Xylene	0.800	0.841		mg/Kg		105	80 - 132
n-Butylbenzene	0.800	0.758		mg/Kg		95	69 - 143
sec-Butylbenzene	0.800	0.799		mg/Kg		100	71 - 143
1,2-Dichlorobenzene	0.800	0.781		mg/Kg		98	78 - 126
Styrene	0.800	0.861		mg/Kg		108	79 - 129
1,2-Dibromo-3-Chloropropane	0.800	0.839		mg/Kg		105	64 - 129
t-Butylbenzene	0.800	0.795		mg/Kg		99	72 - 144

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Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-470444/1-A

Matrix: Solid

**Matrix: Solid** 

Analysis Batch: 470459

**Analysis Batch: 470459** 

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

**Prep Batch: 470444** 

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,2,4-Trichlorobenzene	0.800	0.855		mg/Kg		107	74 - 131	
Tetrachloroethene	0.800	0.819		mg/Kg		102	75 - 141	
1,2,3-Trichlorobenzene	0.800	0.804		mg/Kg		101	58 - 146	
Toluene	0.800	0.775		mg/Kg		97	75 - 125	
Hexachlorobutadiene	0.800	0.872		mg/Kg		109	65 - 145	
Naphthalene	0.800	0.748		mg/Kg		93	56 - 145	
trans-1,2-Dichloroethene	0.800	0.803		mg/Kg		100	77 - 134	
trans-1,3-Dichloropropene	0.800	0.739		mg/Kg		92	80 - 121	
Trichloroethene	0.800	0.813		mg/Kg		102	80 - 134	
Trichlorofluoromethane	0.800	0.971		mg/Kg		121	71 - 150	
Methyl tert-butyl ether	0.800	0.798		mg/Kg		100	71 - 126	
Vinyl chloride	0.800	0.864		mg/Kg		108	62 - 144	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	105		80 - 120
1,2-Dichloroethane-d4 (Surr)	103		80 - 121

Lab Sample ID: LCSD 580-470444/2-A

**Client Sample ID: Lab Control Sample Dup** 

**Prep Type: Total/NA Prep Batch: 470444** 

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	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1-Dichloroethene	0.800	0.858		mg/Kg		107	73 - 134	1	25
1,1-Dichloroethane	0.800	0.759		mg/Kg		95	78 - 126	2	20
1,1,1-Trichloroethane	0.800	0.846		mg/Kg		106	78 - 135	1	20
1,1-Dichloropropene	0.800	0.776		mg/Kg		97	76 - 140	1	20
1,2-Dichloroethane	0.800	0.767		mg/Kg		96	76 - 124	0	20
1,2-Dichloropropane	0.800	0.730		mg/Kg		91	73 - 130	1	20
2,2-Dichloropropane	0.800	0.728		mg/Kg		91	75 - 134	3	20
Benzene	0.800	0.768		mg/Kg		96	79 - 135	0	20
1,1,2-Trichloroethane	0.800	0.794		mg/Kg		99	80 - 123	1	20
Bromochloromethane	0.800	0.807		mg/Kg		101	76 - 131	1	20
1,3-Dichloropropane	0.800	0.791		mg/Kg		99	80 - 120	0	20
Bromodichloromethane	0.800	0.831		mg/Kg		104	78 - 125	1	20
1,2-Dibromoethane	0.800	0.784		mg/Kg		98	77 - 123	3	20
Bromomethane	0.800	1.05		mg/Kg		132	55 - 150	1	26
Carbon tetrachloride	0.800	0.841		mg/Kg		105	76 - 140	1	20
Chlorobenzene	0.800	0.757		mg/Kg		95	80 - 125	1	20
1,1,1,2-Tetrachloroethane	0.800	0.829		mg/Kg		104	79 - 128	2	20
Chloroethane	0.800	0.915		mg/Kg		114	26 - 150	4	40
1,1,2,2-Tetrachloroethane	0.800	0.701		mg/Kg		88	77 - 122	4	20
Chloroform	0.800	0.789		mg/Kg		99	74 - 133	1	20
Chloromethane	0.800	0.695		mg/Kg		87	52 - 142	1	40
cis-1,2-Dichloroethene	0.800	0.773		mg/Kg		97	80 - 125	0	20
cis-1,3-Dichloropropene	0.800	0.748		mg/Kg		94	80 - 122	0	20
Bromoform	0.800	0.750		mg/Kg		94	71 - 130	0	20

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Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-470444/2-A

**Matrix: Solid** 

**Analysis Batch: 470459** 

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA Prep Batch: 470444

	Spike		LCSD		_		%Rec		RPD
Analyte	Added		Qualifier	Unit	_ D	%Rec	Limits	RPD	Limit
Dibromochloromethane	0.800	0.861		mg/Kg		108	75 - 125	1	20
Bromobenzene	0.800	0.812		mg/Kg		101	78 - 126	1	20
Dibromomethane	0.800	0.805		mg/Kg		101	72 - 130	0	40
Dichlorodifluoromethane	0.800	0.900		mg/Kg		113	33 - 150	0	31
1,2,3-Trichloropropane	0.800	0.799		mg/Kg		100	77 - 127	1	20
Ethylbenzene	0.800	0.773		mg/Kg		97	80 - 135	4	20
2-Chlorotoluene	0.800	0.778		mg/Kg		97	77 - 134	2	21
1,3,5-Trimethylbenzene	0.800	0.838		mg/Kg		105	72 - 134	1	24
Isopropylbenzene	0.800	0.916		mg/Kg		115	80 - 131	1	20
4-Chlorotoluene	0.800	0.754		mg/Kg		94	71 - 137	0	21
Methylene Chloride	0.800	0.804		mg/Kg		101	56 - 140	0	20
1,2,4-Trimethylbenzene	0.800	0.808		mg/Kg		101	73 - 138	0	22
m-Xylene & p-Xylene	0.800	0.824		mg/Kg		103	80 - 132	0	20
1,3-Dichlorobenzene	0.800	0.834		mg/Kg		104	78 - 132	0	20
4-Isopropyltoluene	0.800	0.798		mg/Kg		100	71 - 142	1	29
N-Propylbenzene	0.800	0.799		mg/Kg		100	78 - 133	1	24
1,4-Dichlorobenzene	0.800	0.747		mg/Kg		93	77 - 123	0	20
o-Xylene	0.800	0.826		mg/Kg		103	80 - 132	2	20
n-Butylbenzene	0.800	0.762		mg/Kg		95	69 - 143	1	31
sec-Butylbenzene	0.800	0.790		mg/Kg		99	71 - 143	1	29
1,2-Dichlorobenzene	0.800	0.777		mg/Kg		97	78 - 126	1	20
Styrene	0.800	0.868		mg/Kg		108	79 - 129	1	20
1,2-Dibromo-3-Chloropropane	0.800	0.899		mg/Kg		112	64 - 129	7	40
t-Butylbenzene	0.800	0.798		mg/Kg		100	72 - 144	0	27
1,2,4-Trichlorobenzene	0.800	0.866		mg/Kg		108	74 - 131	1	26
Tetrachloroethene	0.800	0.826		mg/Kg		103	75 - 141	1	20
1,2,3-Trichlorobenzene	0.800	0.819		mg/Kg		102	58 - 146	2	28
Toluene	0.800	0.778		mg/Kg		97	75 - 125	0	20
Hexachlorobutadiene	0.800	0.845		mg/Kg		106	65 - 145	3	36
Naphthalene	0.800	0.765		mg/Kg		96	56 - 145	2	25
trans-1,2-Dichloroethene	0.800	0.805		mg/Kg		101	77 - 134	0	20
trans-1,3-Dichloropropene	0.800	0.745		mg/Kg		93	80 - 121	1	20
Trichloroethene	0.800	0.821		mg/Kg		103	80 - 134	1	20
Trichlorofluoromethane	0.800	0.971		mg/Kg		121	71 - 150	0	30
Methyl tert-butyl ether	0.800	0.805		mg/Kg		101	71 - 126	1	20
Vinyl chloride	0.800	0.850		mg/Kg		106	62 - 144	2	20

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	97		80 - 120
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	103		80 - 120
1,2-Dichloroethane-d4 (Surr)	102		80 - 121

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Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 580-143405-14 MS

Matrix: Solid

**Analysis Batch: 470459** 

Client Sample ID: PDI-33-SO-49-20240829

Prep Type: Total/NA Prep Batch: 470444

Analysis Batch: 470459									Prep Batch: 4704
Amakata		Sample	Spike		MS	11	_	0/ <b>D</b> = =	%Rec
Analyte 1,1,1,2-Tetrachloroethane	ND	Qualifier	Added	0.973	Qualifier	Unit	— <del>D</del>	<b>%Rec</b> 132	Limits
1,1,1,2-Tetrachioroethane	ND ND		0.738	1.08		mg/Kg mg/Kg	≎	146	79 - 126 78 - 135
1,1,2,2-Tetrachloroethane	ND ND		0.738	0.836	ГІ	mg/Kg	<b>☆</b>	113	76 - 133 77 - 122
1,1,2-Trichloroethane	ND		0.738	0.030		mg/Kg	¥ 	124	80 - 123
1,1-Dichloroethane	ND ND		0.738	0.918		mg/Kg	⋫	129	78 <sub>-</sub> 126
1,1-Dichloroethene	ND ND		0.738	1.12		mg/Kg	<b>☆</b>	152	73 - 134
1,1-Dichloropropene	ND		0.738	1.03		mg/Kg	¥ 	140	76 - 140
1,2,3-Trichlorobenzene	ND ND	ГІ	0.738	0.923		mg/Kg	<b>☆</b>	125	58 <sub>-</sub> 146
1,2,3-Trichloropropane	ND	<b>⊑</b> 1	0.738	0.923		mg/Kg	⋫	125	77 <sub>-</sub> 127
1,2,4-Trichlorobenzene	ND		0.738	0.921		mg/Kg	¥ 	131	74 - 131
1,2,4-Trimethylbenzene	ND ND		0.738	1.01		mg/Kg	<b>☆</b>	137	73 - 138
1,2-Dibromo-3-Chloropropane	ND ND		0.738	1.01	E1	mg/Kg	⋫	139	64 <sub>-</sub> 129
1,2-Dibromoethane	ND		0.738	0.933			¥ 	127	77 - 123
1,2-Dichlorobenzene	ND ND		0.738	0.935		mg/Kg mg/Kg	₩	127	77 - 123 78 - 126
1,2-Dichloroethane	ND ND		0.738	0.933		mg/Kg	₩ ₩	127	76 - 120 76 - 124
1,2-Dichloropropane	ND		0.738	0.865	Г 1		¥ 	117	73 - 130
• •	ND ND	E1	0.738	1.04	E1	mg/Kg		141	73 - 130 72 - 134
1,3,5-Trimethylbenzene 1,3-Dichlorobenzene	ND		0.738	0.989		mg/Kg	ψ.	134	78 - 132
1,3-Dichloropropane	ND		0.738	0.909		mg/Kg	<del></del> .	125	80 - 120
1,4-Dichlorobenzene	ND ND		0.738	0.886	ГІ	mg/Kg	<b>‡</b>	120	77 <sub>-</sub> 123
2,2-Dichloropropane	ND ND	г	0.738	0.880		mg/Kg mg/Kg	<b>‡</b>	125	77 - 123 75 - 134
2-Chlorotoluene	ND		0.738	0.920		mg/Kg	 ∴	134	77 - 134
4-Chlorotoluene	ND ND	г	0.738	0.938		mg/Kg	<b>☆</b>	127	71 - 134 71 - 137
4-Isopropyltoluene	ND ND	E1	0.738	1.04		mg/Kg	⋫	140	71 - 137 71 - 142
Benzene	ND		0.738	0.950		mg/Kg	¥ 	129	79 - 135
Bromobenzene	ND		0.738	0.930	E1	mg/Kg	₩	133	78 - 126
Bromochloromethane	ND		0.738	0.982		mg/Kg	₩	133	76 - 120 76 - 131
Bromodichloromethane	ND		0.738	0.902		mg/Kg	· · · · ·	134	78 - 125
Bromoform	ND		0.738	0.853	1 1	mg/Kg	₩	116	71 - 130
Bromomethane	ND	F1	0.738	1.34	F1	mg/Kg	<b>☆</b>	182	55 <sub>-</sub> 150
Carbon tetrachloride	ND		0.738	1.14		mg/Kg	 ☆	154	76 - 140
Chlorobenzene		F2 F1 B	0.738	1.14		mg/Kg	<b>☆</b>	122	80 - 125
Chloroethane		F2 F1	0.738	2.99	F1	mg/Kg	~ ☆	405	26 - 150
Chloroform	ND		0.738	0.964		mg/Kg		131	74 - 133
Chloromethane	ND		0.738	0.953		mg/Kg	☆	129	52 - 142
cis-1,2-Dichloroethene	ND	F1	0.738	0.940	F1	mg/Kg	☆	127	80 - 125
cis-1,3-Dichloropropene	ND.		0.738	0.960		mg/Kg		130	80 - 122
Dibromochloromethane	ND		0.738	1.02		mg/Kg	☆	138	75 - 125
Dibromomethane	ND		0.738	0.943		mg/Kg	☆	128	72 - 130
Dichlorodifluoromethane	ND		0.738	1.25	F1	mg/Kg		170	33 - 150
Ethylbenzene	ND		0.738	0.992		mg/Kg	₩	134	80 - 135
Hexachlorobutadiene	ND		0.738	1.02		mg/Kg	<b>☆</b>	138	65 - 145
Isopropylbenzene	ND ND		0.738	1.04		mg/Kg	· · · · ·	140	80 - 131
Methyl tert-butyl ether	ND		0.738	0.941		mg/Kg	₩	128	71 - 126
Methylene Chloride	ND ND		0.738	0.941		mg/Kg	₩	135	56 - 140
m-Xylene & p-Xylene	ND		0.738	1.01		mg/Kg		138	80 - 132
Naphthalene	ND ND	1.1	0.738	0.870	1 1	mg/Kg	<b>☆</b>	118	56 - 145
	ND		0.738	0.870					69 - 143
n-Butylbenzene	ND		0.730	0.908		mg/Kg	₽	131	03 - 140

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Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 580-143405-14 MS

**Matrix: Solid** 

**Analysis Batch: 470459** 

Client Sample ID: PDI-33-SO-49-20240829

**Prep Type: Total/NA** 

**Prep Batch: 470444** 

	Sample	Sample	Spike	MS	MS				%Rec	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
N-Propylbenzene	ND	F1	0.738	1.03	F1	mg/Kg	<u></u>	139	78 - 133	
o-Xylene	ND	F1	0.738	1.00	F1	mg/Kg	☼	136	80 - 132	
sec-Butylbenzene	ND	F1	0.738	1.01		mg/Kg	☼	137	71 - 143	
Styrene	ND	F1	0.738	1.03	F1	mg/Kg	≎	140	79 - 129	
t-Butylbenzene	ND	F1	0.738	1.02		mg/Kg	☼	138	72 - 144	
Tetrachloroethene	ND	F1	0.738	1.06	F1	mg/Kg	☼	144	75 - 141	
Toluene	ND	F1	0.738	0.984	F1	mg/Kg	☼	133	75 - 125	
trans-1,2-Dichloroethene	ND	F1	0.738	1.05	F1	mg/Kg	☼	142	77 - 134	
trans-1,3-Dichloropropene	ND	F1	0.738	0.850		mg/Kg	☼	115	80 - 121	
Trichloroethene	ND	F1	0.738	0.963		mg/Kg	☼	131	80 - 134	
Trichlorofluoromethane	ND	F1	0.738	1.27	F1	mg/Kg	☼	172	71 - 150	
Vinyl chloride	ND		0.738	1.05		mg/Kg	☼	142	62 - 144	

MS MS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		80 - 121
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	105		80 - 120
Toluene-d8 (Surr)	98		80 - 120

Client Sample ID: PDI-33-SO-49-20240829

**Matrix: Solid** 

**Analysis Batch: 470459** 

Lab Sample ID: 580-143405-14 MSD

Prep Type: Total/NA **Prep Batch: 470444** 

Time Join Date in the 100											. •
	Sample	Sample	Spike	MSD	MSD				%Rec		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	ND	F1	0.728	1.07	F1	mg/Kg	<u></u>	146	79 - 128	9	20
1,1,1-Trichloroethane	ND	F1	0.728	1.11	F1	mg/Kg	☼	152	78 - 135	3	20
1,1,2,2-Tetrachloroethane	ND	F1	0.728	0.920	F1	mg/Kg	☼	126	77 - 122	10	20
1,1,2-Trichloroethane	ND	F1	0.728	0.964	F1	mg/Kg	₩	132	80 - 123	5	20
1,1-Dichloroethane	ND	F1	0.728	0.973	F1	mg/Kg	☼	134	78 - 126	3	20
1,1-Dichloroethene	ND	F1	0.728	1.10	F1	mg/Kg	☼	152	73 - 134	2	25
1,1-Dichloropropene	ND	F1	0.728	1.08	F1	mg/Kg	₩	148	76 - 140	4	20
1,2,3-Trichlorobenzene	ND		0.728	1.06		mg/Kg	☼	145	58 - 146	14	28
1,2,3-Trichloropropane	ND	F1	0.728	0.966	F1	mg/Kg	☼	133	77 - 127	5	20
1,2,4-Trichlorobenzene	ND	F1	0.728	1.06	F1	mg/Kg	₩	145	74 - 131	9	26
1,2,4-Trimethylbenzene	ND	F1	0.728	1.06	F1	mg/Kg	☼	145	73 - 138	4	22
1,2-Dibromo-3-Chloropropane	ND	F1	0.728	1.15	F1	mg/Kg	☼	158	64 - 129	12	40
1,2-Dibromoethane	ND	F1	0.728	0.997	F1	mg/Kg	₩	137	77 - 123	7	20
1,2-Dichlorobenzene	ND	F1	0.728	0.960	F1	mg/Kg	☼	132	78 - 126	3	20
1,2-Dichloroethane	ND	F1	0.728	0.947	F1	mg/Kg	☼	130	76 - 124	3	20
1,2-Dichloropropane	ND		0.728	0.921		mg/Kg	₩	127	73 - 130	6	20
1,3,5-Trimethylbenzene	ND	F1	0.728	1.09	F1	mg/Kg	☼	150	72 - 134	5	24
1,3-Dichlorobenzene	ND	F1	0.728	0.998	F1	mg/Kg	☼	137	78 - 132	1	20
1,3-Dichloropropane	ND	F1	0.728	0.972	F1	mg/Kg	₩	133	80 - 120	5	20
1,4-Dichlorobenzene	ND	F1	0.728	0.922	F1	mg/Kg	☼	127	77 - 123	4	20
2,2-Dichloropropane	ND		0.728	0.948		mg/Kg	☼	130	75 - 134	3	20
2-Chlorotoluene	ND	F1	0.728	1.01	F1	mg/Kg	₩	139	77 - 134	3	21
4-Chlorotoluene	ND		0.728	0.975		mg/Kg	₩	134	71 - 137	4	21
4-Isopropyltoluene	ND	F1	0.728	1.08	F1	mg/Kg	₩	148	71 - 142	4	29

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Spike

Client: ERM-West Job ID: 580-143405-1

MSD MSD

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Sample Sample

Lab Sample ID: 580-143405-14 MSD

**Matrix: Solid** 

**Analysis Batch: 470459** 

Client Sample ID: PDI-33-SO-49-20240829

%Rec

**Prep Type: Total/NA** 

**Prep Batch: 470444** 

l		Sample	Sample	<b>эріке</b>	MOD	MOD				%Rec		KPD
	Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
l	Benzene	ND	F1	0.728	0.997	F1	mg/Kg	₩	137	79 - 135	5	20
	Bromobenzene	ND	F1	0.728	1.01	F1	mg/Kg	₩	139	78 - 126	3	20
	Bromochloromethane	ND	F1	0.728	0.981	F1	mg/Kg	₩	135	76 - 131	0	20
l	Bromodichloromethane	ND	F1	0.728	1.03	F1	mg/Kg	₩	142	78 - 125	4	20
	Bromoform	ND		0.728	0.917		mg/Kg	₩	126	71 - 130	7	20
l	Bromomethane	ND	F1	0.728	1.31	F1	mg/Kg	₩	180	55 - 150	2	26
	Carbon tetrachloride	ND	F1	0.728	1.19	F1	mg/Kg	₩	163	76 - 140	4	20
	Chlorobenzene	0.24	F2 F1 B	0.728		F1 F2	mg/Kg	₩	182	80 - 125	32	20
	Chloroethane	ND	F2 F1	0.728	1.72	F1 F2	mg/Kg	₩	236	26 - 150	54	40
	Chloroform	ND	F1	0.728	0.988	F1	mg/Kg	₩	136	74 - 133	2	20
	Chloromethane	ND		0.728	0.909		mg/Kg	₩	125	52 - 142	5	40
	cis-1,2-Dichloroethene	ND	F1	0.728	0.955	F1	mg/Kg	₩	131	80 - 125	2	20
l	cis-1,3-Dichloropropene	ND	F1	0.728	0.986	F1	mg/Kg	₩	135	80 - 122	3	20
	Dibromochloromethane	ND	F1	0.728	1.07	F1	mg/Kg	₩	148	75 - 125	6	20
	Dibromomethane	ND	F1	0.728	0.982	F1	mg/Kg	₩	135	72 - 130	4	40
l	Dichlorodifluoromethane	ND	F1	0.728	1.16	F1	mg/Kg	₩	159	33 - 150	8	31
	Ethylbenzene	ND	F1	0.728	1.04	F1	mg/Kg	₩	143	80 - 135	5	20
	Hexachlorobutadiene	ND	F1	0.728	1.10	F1	mg/Kg	₩	152	65 - 145	8	36
İ	Isopropylbenzene	ND	F1	0.728	1.06	F1	mg/Kg	₩	146	80 - 131	3	20
	Methyl tert-butyl ether	ND	F1	0.728	1.01	F1	mg/Kg	₩	139	71 - 126	7	20
	Methylene Chloride	ND		0.728	0.995		mg/Kg	₩	137	56 - 140	0	20
l	m-Xylene & p-Xylene	ND	F1	0.728	1.07	F1	mg/Kg	₩	146	80 - 132	5	20
	Naphthalene	ND		0.728	0.950		mg/Kg	₩	131	56 - 145	9	25
	n-Butylbenzene	ND		0.728	1.03		mg/Kg	₩	142	69 - 143	6	31
	N-Propylbenzene	ND	F1	0.728	1.03	F1	mg/Kg	₩	141	78 - 133	0	24
	o-Xylene	ND	F1	0.728	1.05	F1	mg/Kg	₩	144	80 - 132	4	20
	sec-Butylbenzene	ND	F1	0.728	1.06	F1	mg/Kg	₩	146	71 - 143	5	29
İ	Styrene	ND	F1	0.728	1.07	F1	mg/Kg	₩	147	79 - 129	3	20
	t-Butylbenzene	ND	F1	0.728	1.06	F1	mg/Kg	₩	146	72 - 144	4	27
	Tetrachloroethene	ND	F1	0.728	1.10	F1	mg/Kg	₩	151	75 - 141	3	20
l	Toluene	ND	F1	0.728	1.01	F1	mg/Kg	₽	138	75 - 125	2	20
	trans-1,2-Dichloroethene	ND	F1	0.728	1.04	F1	mg/Kg	₩	143	77 - 134	1	20
ĺ	trans-1,3-Dichloropropene	ND	F1	0.728	0.885	F1	mg/Kg	₩	122	80 - 121	4	20
İ	Trichloroethene	ND	F1	0.728	1.02	F1	mg/Kg	₩	141	80 - 134	6	20
ĺ	Trichlorofluoromethane	ND	F1	0.728	1.24	F1	mg/Kg	₩	170	71 - 150	2	30
	Vinyl chloride	ND		0.728	1.00		mg/Kg	₩	138	62 - 144	5	20
т												

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	100		80 - 121
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120
Toluene-d8 (Surr)	99		80 - 120

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-470503/3-A

**Matrix: Solid** 

**Analysis Batch: 470493** 

**Client Sample ID: Method Blank** 

Prep Type: Total/NA

**Prep Batch: 470503** 

	IVID	MD							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
Chlorobenzene	ND		0.040	0.0048	mg/Kg		09/06/24 08:14	09/06/24 10:45	
Chloroethane	ND		0.080	0.021	mg/Kg		09/06/24 08:14	09/06/24 10:45	
	MD	MD							

MD MD

Analyzed Dil Fa	IC
9/06/24 10:45	1
9/06/24 10:45	1
9/06/24 10:45	1
9/06/24 10:45	1
9/0 9/0 9/0	06/24 10:45 06/24 10:45 06/24 10:45

Lab Sample ID: LCS 580-470503/1-A

**Matrix: Solid** 

**Analysis Batch: 470493** 

**Client Sample ID: Lab Control Sample** 

Prep Type: Total/NA **Prep Batch: 470503** 

	Spike	LCS	LCS				%Rec	
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	
Chlorobenzene	0.800	0.754		mg/Kg		94	80 - 125	
Chloroethane	0.800	0.916		mg/Kg		114	26 - 150	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 120
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	105		80 - 120
1,2-Dichloroethane-d4 (Surr)	106		80 - 121

Lab Sample ID: LCSD 580-470503/2-A

**Matrix: Solid** 

**Analysis Batch: 470493** 

Client Sample	ID: Lab	Control	<b>Sample Dup</b>

Prep Type: Total/NA **Prep Batch: 470503** 

Spike LCSD LCSD %Rec **RPD** Added Analyte Result Qualifier Limits RPD Limit Unit D %Rec Chlorobenzene 0.800 0.798 mg/Kg 100 80 - 125 6 20 0.800 Chloroethane 0.973 mg/Kg 122 26 - 150 40

LCSD LCSD

Sample Sample

86.7

13.3

Result Qualifier

Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	105		80 - 120
1,2-Dichloroethane-d4 (Surr)	105		80 - 121

Method: 2540G - SM 2540G

Lab Sample ID: 580-143405-1 DU

**Matrix: Solid** 

Percent Solids

Percent Moisture

Analyte

**Analysis Batch: 470812** 

Client Sample ID: PDI-27-SO-37.4-20240827
Prep Type: Total/NA

					RPD
lifier	Unit	D		RPD	Limit
	%			0.6	20

**Eurofins Seattle** 

9/9/2024

DU DU

%

Result Qual

86.2

13.8

20

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-27-SO-37.4-20240827

Lab Sample ID: 580-143405-1 Date Collected: 08/27/24 11:35 **Matrix: Solid** 

Date Received: 08/30/24 12:34

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	470812	JL	EET SEA	09/09/24 15:45

Client Sample ID: PDI-27-SO-37.4-20240827

Lab Sample ID: 580-143405-1 Date Collected: 08/27/24 11:35 **Matrix: Solid** Date Received: 08/30/24 12:34 Percent Solids: 86.7

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035	<del></del>		470444	BYM	EET SEA	09/05/24 14:25
Total/NA	Analysis	8260D		1	470459	BYM	EET SEA	09/06/24 03:09
Total/NA	Prep	5035	DL		470503	BYM	EET SEA	09/06/24 08:14
Total/NA	Analysis	8260D	DL	1	470493	K1K	EET SEA	09/06/24 17:15

Client Sample ID: TB-01-SO-20240827

Lab Sample ID: 580-143405-2 Date Collected: 08/27/24 23:59 **Matrix: Solid** 

Date Received: 08/30/24 12:34

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			470444	BYM	EET SEA	09/05/24 14:25
Total/NA	Analysis	8260D		1	470459	BYM	EET SEA	09/06/24 01:05

Client Sample ID: PDI-27-SO-41.5-20240827

Date Collected: 08/27/24 12:50 **Matrix: Solid** 

Date Received: 08/30/24 12:34

	Batch	Batch		Dilution	Batch		Prepared
Prep Type	Type	Method	Run	Factor	Number Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	470812 JL	EET SEA	09/09/24 15:45

Client Sample ID: PDI-27-SO-41.5-20240827 Lab Sample ID: 580-143405-3

Date Collected: 08/27/24 12:50 **Matrix: Solid** Date Received: 08/30/24 12:34 Percent Solids: 92.6

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			470444	BYM	EET SEA	09/05/24 14:25
Total/NA	Analysis	8260D		1	470459	BYM	EET SEA	09/06/24 03:29
Total/NA	Prep	5035	DL		470503	BYM	EET SEA	09/06/24 08:14
Total/NA	Analysis	8260D	DL	1	470493	K1K	EET SEA	09/06/24 17:36

Client Sample ID: PDI-27-SO-49.5-20240827 Lab Sample ID: 580-143405-4

Date Collected: 08/27/24 15:35 Date Received: 08/30/24 12:34

	Batch	Batch		Dilution	Batch		Prepared
Prep Type	Туре	Method	Run	Factor	Number Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	470812 JL	EET SEA	09/09/24 15:45

**Eurofins Seattle** 

**Matrix: Solid** 

Lab Sample ID: 580-143405-3

Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client: ERM-West

Client Sample ID: PDI-27-SO-49.5-20240827

Date Collected: 08/27/24 15:35 Date Received: 08/30/24 12:34

Lab Sample ID: 580-143405-4

Matrix: Solid

Percent Solids: 92.2

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			470444	BYM	EET SEA	09/05/24 14:25
Total/NA	Analysis	8260D		1	470459	BYM	EET SEA	09/06/24 03:50

Client Sample ID: PDI-32-SO-38.3-20240828

Date Collected: 08/28/24 11:05 Date Received: 08/30/24 12:34

Lab Sample ID: 580-143405-5

Matrix: Solid

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	470812	JL	EET SEA	09/09/24 15:45

Client Sample ID: PDI-32-SO-38.3-20240828

Date Collected: 08/28/24 11:05 Date Received: 08/30/24 12:34

Lab Sample ID: 580-143405-5

**Matrix: Solid** Percent Solids: 92.8

Dilution Batch **Batch** Batch Prepared **Prep Type** Type Method Run Factor Number Analyst Lab or Analyzed 09/05/24 14:25 Total/NA Prep 5035 470444 BYM EET SEA Total/NA Analysis 8260D 1 470459 BYM **EET SEA** 09/06/24 04:11 Total/NA 5035 470503 BYM EET SEA 09/06/24 08:14 Prep DL Total/NA Analysis 8260D DL 470493 K1K **EET SEA** 09/06/24 17:56

Client Sample ID: PDI-32-SO-35.4-20240828

Date Collected: 08/28/24 11:10

Date Received: 08/30/24 12:34

Lab Sample	ID: 580-143405-6
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**Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	470812	JL	EET SEA	09/09/24 15:45

Client Sample ID: PDI-32-SO-35.4-20240828

Date Collected: 08/28/24 11:10

Date Received: 08/30/24 12:34

Lab Sample ID: 580-143405-6 **Matrix: Solid** 

Percent Solids: 85.5

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			470444	BYM	EET SEA	09/05/24 14:25
Total/NA	Analysis	8260D		1	470459	BYM	EET SEA	09/06/24 04:31
Total/NA	Prep	5035	DL		470503	BYM	EET SEA	09/06/24 08:14
Total/NA	Analysis	8260D	DL	1	470493	K1K	EET SEA	09/06/24 18:17

Client Sample ID: PDI-32-SO-29.6-20240828

Date Collected: 08/28/24 11:15

Date Received: 08/30/24 12:34

Lab Sample ID: 580-143405-7

Matrix: Solid

	Batch	Batch		Dilution	Batch		Prepared
Prep Type	Type	Method	Run	Factor	Number Analys	t Lab	or Analyzed
Total/NA	Analysis	2540G		1	470812 JL	EET SEA	09/09/24 15:45

Matrix: Solid

Lab Sample ID: 580-143405-8

Lab Sample ID: 580-143405-9

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-32-SO-29.6-20240828

Lab Sample ID: 580-143405-7 Date Collected: 08/28/24 11:15 Date Received: 08/30/24 12:34 Percent Solids: 81.7

Batch Batch Dilution Batch Prepared Method Factor **Number Analyst** or Analyzed **Prep Type** Type Run Lab Total/NA 5035 470444 BYM EET SEA 09/05/24 14:25 Prep Total/NA 8260D Analysis 470459 BYM EET SEA 09/06/24 04:52 1 Total/NA Prep 5035 RA 470503 BYM **EET SEA** 09/06/24 08:14 Total/NA RA 470493 K1K EET SEA 09/06/24 15:32 Analysis 8260D 1

Client Sample ID: PDI-32-SO-42.5-20240828

Lab Sample ID: 580-143405-8 Date Collected: 08/28/24 12:45 **Matrix: Solid** 

Date Received: 08/30/24 12:34

Batch Dilution Prepared Ratch Batch Method or Analyzed Type Run **Factor Number Analyst Prep Type** Lab 09/09/24 15:45 Total/NA Analysis 2540G 470812 JL EET SEA

Client Sample ID: PDI-32-SO-42.5-20240828

Date Collected: 08/28/24 12:45 **Matrix: Solid** Date Received: 08/30/24 12:34 Percent Solids: 93.4

Batch Batch Dilution Batch **Prepared** Method **Number Analyst** or Analyzed **Prep Type** Type Run **Factor** Lab 09/05/24 14:25 Total/NA Prep 5035 470444 BYM FFT SFA Total/NA Analysis 8260D 470459 BYM EET SEA 09/06/24 05:12

Client Sample ID: PDI-32-SO-57.5-20240828

Date Collected: 08/28/24 15:30 **Matrix: Solid** 

Date Received: 08/30/24 12:34

Dilution Ratch Ratch Batch Prepared **Prep Type** Method Run Factor **Number Analyst** or Analyzed Type Lab EET SEA 09/09/24 15:45 Total/NA Analysis 2540G 470812 JL

Client Sample ID: PDI-32-SO-57.5-20240828

Lab Sample ID: 580-143405-9 Date Collected: 08/28/24 15:30 **Matrix: Solid** Date Received: 08/30/24 12:34 Percent Solids: 88.6

Batch Batch Dilution Batch Prepared **Prep Type** Type Method Run **Factor** Number Analyst or Analyzed Lab Total/NA 5035 BYM EET SEA 09/05/24 14:25 Prep 470444 Total/NA Analysis 8260D 470459 BYM **EET SEA** 09/06/24 05:33 1 Total/NA Prep 5035 RA 470503 BYM EET SEA 09/06/24 08:14 Total/NA 8260D RA 1 470493 K1K **EET SEA** 09/06/24 15:53 Analysis

Client Sample ID: PDI-32-SO-68-20240828 Lab Sample ID: 580-143405-10

Date Collected: 08/28/24 15:35

Date Received: 08/30/24 12:34

	Batch	Batch		Dilution	Batch		Prepared
Prep Type	Type	Method	Run	Factor	Number Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	470812 JL	EET SEA	09/09/24 15:45

**Eurofins Seattle** 

Matrix: Solid

#### Job ID: 580-143405-1

Client: ERM-West Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-32-SO-68-20240828

Date Collected: 08/28/24 15:35 Date Received: 08/30/24 12:34

Lab Sample ID: 580-143405-10 **Matrix: Solid** 

Percent Solids: 93.1

Batch Batch Dilution Batch Prepared Method Number Analyst or Analyzed **Prep Type** Type Run **Factor** Lab 09/05/24 14:25 Total/NA 5035 470444 BYM EET SEA Prep Total/NA 8260D 470459 BYM EET SEA 09/06/24 05:53 Analysis 1

Client Sample ID: PDI-33-SO-37.2-20240828

Lab Sample ID: 580-143405-11 Date Collected: 08/29/24 10:05

Matrix: Solid

Date Received: 08/30/24 12:34

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	470812	JL	EET SEA	09/09/24 15:45

Client Sample ID: PDI-33-SO-37.2-20240828

Lab Sample ID: 580-143405-11 Date Collected: 08/29/24 10:05

**Matrix: Solid** 

Lab Sample ID: 580-143405-12

Lab Sample ID: 580-143405-13

Date Received: 08/30/24 12:34 Percent Solids: 89.4

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			470444	BYM	EET SEA	09/05/24 14:25
Total/NA	Analysis	8260D		1	470459	BYM	EET SEA	09/06/24 06:14
Total/NA	Prep	5035	RA		470503	BYM	EET SEA	09/06/24 08:14
Total/NA	Analysis	8260D	RA	1	470493	K1K	EET SEA	09/06/24 16:13

Client Sample ID: DUP-06-SQ-20240829

Date Collected: 08/29/24 10:10 Matrix: Solid

Date Received: 08/30/24 12:34

	Batch	Batch		Dilution	Batch		Prepared
Prep Type	Type	Method	Run	Factor	Number Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G	<del></del>	1	470812 JL	EET SEA	09/09/24 15:45

Client Sample ID: DUP-06-SQ-20240829

Lab Sample ID: 580-143405-12 Date Collected: 08/29/24 10:10 **Matrix: Solid** 

Percent Solids: 92.2 Date Received: 08/30/24 12:34

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			470444	BYM	EET SEA	09/05/24 14:25
Total/NA	Analysis	8260D		1	470459	BYM	EET SEA	09/06/24 06:35

Client Sample ID: PDI-33-SO-29-20240829

Date Collected: 08/29/24 10:15 Matrix: Solid

Date Received: 08/30/24 12:34

	Batch	Batch		Dilution	Batch		Prepared
Prep Type	Type	Method	Run	Factor	Number Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G			470812 JL	EET SEA	09/09/24 15:45

Project/Site: Arkema PDI Sampling

Client: ERM-West

Client Sample ID: PDI-33-SO-29-20240829

Date Collected: 08/29/24 10:15

Lab Sample ID: 580-143405-13

Matrix: Solid

Job ID: 580-143405-1

Date Received: 08/30/24 12:34

Percent Solids: 87.7

		Batch	Batch		Dilution	Batch			Prepared
	Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
	Total/NA	Prep	5035			470444	BYM	EET SEA	09/05/24 14:25
Į	Total/NA	Analysis	8260D		1	470459	BYM	EET SEA	09/06/24 06:55

Lab Sample ID: 580-143405-14 Client Sample ID: PDI-33-SO-49-20240829

Date Collected: 08/29/24 11:25 Date Received: 08/30/24 12:34

Matrix: Solid

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	470812	JL	EET SEA	09/09/24 15:45

Client Sample ID: PDI-33-SO-49-20240829

Date Collected: 08/29/24 11:25 Date Received: 08/30/24 12:34

Lab Sample ID: 580-143405-14

**Matrix: Solid** Percent Solids: 94.2

Dilution Batch **Batch** Batch **Prepared Prep Type** Type Method Run Factor Number Analyst Lab or Analyzed Prep 09/05/24 14:25 Total/NA 5035 470444 BYM EET SEA 09/06/24 01:47 Total/NA Analysis 8260D 1 470459 BYM EET SEA

Client Sample ID: RB-06-WQ-20240829 Lab Sample ID: 580-143405-15

Date Collected: 08/29/24 14:15 **Matrix: Water** 

Date Received: 08/30/24 12:34

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D		1	470179	JBT	EET SEA	09/04/24 01:57

Client Sample ID: TB-01-WQ-20240829 Lab Sample ID: 580-143405-16

Date Collected: 08/29/24 23:59 **Matrix: Water** 

Date Received: 08/30/24 12:34

	Batch	Batch		Dilution	Batch		Prepared
Prep Type	Type	Method	Run	Factor	Number Analyst	Lab	or Analyzed
Total/NA	Analysis	8260D			470179 JBT	EET SEA	09/04/24 01:34

Client Sample ID: PDI-33-SO-56.5-20240829 Lab Sample ID: 580-143405-17

Date Collected: 08/29/24 15:05

Date Received: 08/30/24 12:34

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number A	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	470812 J	JL	EET SEA	09/09/24 15:45

Client Sample ID: PDI-33-SO-56.5-20240829 Lab Sample ID: 580-143405-17

Date Collected: 08/29/24 15:05 **Matrix: Solid** Date Received: 08/30/24 12:34 Percent Solids: 86.1

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			470444	BYM	EET SEA	09/05/24 14:25
Total/NA	Analysis	8260D		1	470459	BYM	EET SEA	09/06/24 07:16

**Eurofins Seattle** 

Matrix: Solid

#### **Lab Chronicle**

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-33-SO-78-20240829

Lab Sample ID: 580-143405-18 Date Collected: 08/29/24 15:10

**Matrix: Solid** 

Date Received: 08/30/24 12:34

Batch Batch Dilution Batch Prepared **Prep Type** Method **Factor** Number Analyst or Analyzed Type Run Lab 09/09/24 15:45 Total/NA Analysis 2540G 470812 JL EET SEA

Client Sample ID: PDI-33-SO-78-20240829 Lab Sample ID: 580-143405-18

Date Collected: 08/29/24 15:10 **Matrix: Solid** 

Percent Solids: 93.8 Date Received: 08/30/24 12:34

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			470444	BYM	EET SEA	09/05/24 14:25
Total/NA	Analysis	8260D		1	470459	BYM	EET SEA	09/06/24 07:36

**Laboratory References:** 

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

## **Accreditation/Certification Summary**

Client: ERM-West Job ID: 580-143405-1

Project/Site: Arkema PDI Sampling

## **Laboratory: Eurofins Seattle**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Progra	am	Identification Number	<b>Expiration Date</b>	
Oregon	NELA	<b>D</b>	4167	07-07-25	
9 ,	•	•	not certified by the governing author	ity. This list may include	
9 ,	s are included in this repo does not offer certification	•	not certified by the governing author	ity. This list may include	
9 ,	•	•	not certified by the governing author  Analyte	ity. This list may include	

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## **Sample Summary**

Client: ERM-West

580-143405-17

580-143405-18

Project/Site: Arkema PDI Sampling

PDI-33-SO-56.5-20240829

PDI-33-SO-78-20240829

Lab Sample ID Client Sample ID Matrix Collected Received 580-143405-1 PDI-27-SO-37.4-20240827 Solid 08/27/24 11:35 08/30/24 12:34 580-143405-2 TB-01-SO-20240827 Solid 08/27/24 23:59 08/30/24 12:34 580-143405-3 PDI-27-SO-41.5-20240827 Solid 08/27/24 12:50 08/30/24 12:34 580-143405-4 PDI-27-SO-49.5-20240827 Solid 08/27/24 15:35 08/30/24 12:34 580-143405-5 PDI-32-SO-38.3-20240828 Solid 08/28/24 11:05 08/30/24 12:34 580-143405-6 PDI-32-SO-35.4-20240828 Solid 08/28/24 11:10 08/30/24 12:34 580-143405-7 PDI-32-SO-29.6-20240828 Solid 08/28/24 11:15 08/30/24 12:34 580-143405-8 PDI-32-SO-42.5-20240828 Solid 08/28/24 12:45 08/30/24 12:34 580-143405-9 PDI-32-SO-57.5-20240828 Solid 08/28/24 15:30 08/30/24 12:34 Solid 580-143405-10 PDI-32-SO-68-20240828 08/28/24 15:35 08/30/24 12:34 580-143405-11 PDI-33-SO-37.2-20240828 Solid 08/29/24 10:05 08/30/24 12:34 580-143405-12 DUP-06-SQ-20240829 Solid 08/29/24 10:10 08/30/24 12:34 580-143405-13 PDI-33-SO-29-20240829 Solid 08/29/24 10:15 08/30/24 12:34 580-143405-14 PDI-33-SO-49-20240829 Solid 08/29/24 11:25 08/30/24 12:34 580-143405-15 RB-06-WQ-20240829 Water 08/29/24 14:15 08/30/24 12:34 580-143405-16 TB-01-WQ-20240829 Water 08/29/24 23:59 08/30/24 12:34

Solid

Solid

08/29/24 15:05 08/30/24 12:34

08/29/24 15:10 08/30/24 12:34

1

Job ID: 580-143405-1

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5755 8th Street East Tacoma, WA 98424 Phone (253) 922-2310

## **Chain of Custody Record**

eurofins	
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**Environment Testing** 

	Sampler:				PM:						Carrie	r Trackin	g No(s):		COC No:			
Client Information Client Contact:	Phone:			Cru E-M	ız, She	eri L					-				580-6278	1-19269.	.12	
Avery Soplata	Frione.					z@et.	eurofi	nsus.c	om		State	of Origin:			Page: Page of	2		
Company: ERM-West			PWSID:		T				Analy	oio D		4 a al			Job #:		-	
Address:	Due Date Request	ed:	<u> </u>				T		Analy	SIS R	eques	tea			Preservation	on Code		
1050 SW 6th Avenue Suite 1650					40	1									F - MeOH E - NaHSO4	/II Codes	<b>.</b>	
City: Portland	TAT Requested (d	ays):													A - HCL			
State, Zip:		PPK						ınks										
OR, 97204 Phone:	Compliance Project	ct: A Yes	ΔNo		-			nt ble										
	0732436.301				6	Ŧ		bme										
Email: avery.soplata@erm.com	WO #:				or Ro	MeOH	list_LL	standard list equipment blanks										
Project Name:	Project #:				8	H ist	1 list	Hist						containers				
Arkema - PDI Investigation	58020754				ब्रु ।	da	standard	ndan						ntai				
	SSOW#:				SD	, sta								of co	Other:			
			Sample	Matrix	ğ	- Volatiles	atiles	8260D - Volatiles,						ber				
			Type	(W=water,	2	,    -	- Volatil	- N						E				
580-143405 Chain of Custody	0	Sample	(C=Comp,	S=solid, O=waste/oil,	Field Filtered	8260D	8260D	G09						Total				
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5755 8th Street East Tacoma, WA 98424

# **Chain of Custody Record**



Phone (253) 922-2310													Environment Te
Client Information	Sampler:		*		ab PM: Cruz, Sh	eri I				Carrie	er Tracking No(s	s):	COC No:
Client Contact: Avery Soplata	Phone:			E	-Mail: Sheri.Cru		ourofi	2010		State	of Origin:		580-62781-19269.12 Page: Page:
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5755 8th Street East Tacoma, WA 98424 Phone (253) 922-2310

# **Chain of Custody Record**



Environment Testing

Phone (253) 922-2310									******							
Client Information	Sampler:				ь РМ: ruz, Sher	i L					Carrier	Tracking N	lo(s):		COC No: 580-62781-19269.12	
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avery.soplata@erm.com					No or	ist M	ist_L	list ec						25		
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5755 8th Street East Tacoma, WA 98424 Phone (253) 922-2310

## **Chain of Custody Record**

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Client: ERM-West Job Number: 580-143405-1

Login Number: 143405 List Source: Eurofins Seattle

List Number: 1

Creator: Fenimore, Justin 1

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Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

## PREPARED FOR

**ANALYTICAL REPORT** 

Attn: Avery Soplata ERM-West 1050 SW 6th Avenue Suite 1650 Portland, Oregon 97204 Generated 9/17/2024 1:49:57 PM

# **JOB DESCRIPTION**

Arkema PDI Sampling

## **JOB NUMBER**

580-143465-1

Eurofins Seattle 5755 8th Street East Tacoma WA 98424

#### **Job Notes**

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

#### **Authorization**

Generated 9/17/2024 1:49:57 PM

Authorized for release by Sheri Cruz, Project Manager I Sheri.Cruz@et.eurofinsus.com (253)922-2310

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Eurofins Seattle is a laboratory within Eurofins Environment Testing Northwest, LLC, a company within Eurofins Environment Testing Group of Companies

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Client: ERM-West

Project/Site: Arkema PDI Sampling

Laboratory Job ID: 580-143465-1

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Sample Summary	29
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Receint Checklists	31

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#### **Case Narrative**

Client: ERM-West Job ID: 580-143465-1

Project: Arkema PDI Sampling

Job ID: 580-143465-1 Eurofins Seattle

Job Narrative 580-143465-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these
  situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise
  specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed
  unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The samples were received on 9/3/2024 2:15 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.3°C.

#### GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-471105 recovered above the upper control limit for 1,2-Dibromo-3-Chloropropane and Naphthalene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: PDI-34-SO-34.5-20240830 (580-143465-1), PDI-34-SO-38.9-20240830 (580-143465-2), PDI-34-SO-39.5-20240830 (580-143465-3), PDI-34-SO-59.5-20240830 (580-143465-4), TB-01-SO-20240830 (580-143465-5), PDI-34-SO-46-20240830 (580-143465-6), PDI-34-SO-48-20240830 (580-143465-7) and (CCVIS 580-471105/3).

Method 8260D: The method blank for preparation batch 580-471075 and analytical batch 580-471105 contained 4-lsopropyltoluene, Hexachlorobutadiene, Methylene Chloride and n-Butylbenzene above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL) in the method blank; therefore, re-extraction and re-analysis of samples was not performed.

Method 8260D: The following sample was diluted to bring the concentration of target analytes within the calibration range: PDI-34-SO-59.5-20240830 (580-143465-4). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### **General Chemistry**

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

**Eurofins Seattle** 

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#### **Definitions/Glossary**

Client: ERM-West Job ID: 580-143465-1

Project/Site: Arkema PDI Sampling

#### **Qualifiers**

#### **GC/MS VOA**

Qualifier Qualifier Description

B Compound was found in the blank and sample.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### **Glossary**

Abbreviation These commonly used abbreviations may or may not be present in this report.

Example 2 Listed under the "D" column to designate that the result is reported on a dry weight basis

%R Percent Recovery
CFL Contains Free Liquid
CFU Colony Forming Unit
CNF Contains No Free Liquid

DER Duplicate Error Ratio (normalized absolute difference)

Dil Fac Dilution Factor

DL Detection Limit (DoD/DOE)

DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-143465-1

Project/Site: Arkema PDI Sampling

Date Collected: 08/30/24 09:10

Date Received: 09/03/24 14:15

Matrix: Solid
Percent Solids: 79.7

Method: SW846 8260D - Vola Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.026	0.0065		— <u>-</u>	09/11/24 12:50	09/11/24 21:35	1
1,1,1-Trichloroethane	ND		0.052	0.0060		₩	09/11/24 12:50	09/11/24 21:35	1
1,1,2,2-Tetrachloroethane	ND		0.026		mg/Kg	₩	09/11/24 12:50	09/11/24 21:35	1
1,1,2-Trichloroethane	ND		0.026	0.0097		∴	09/11/24 12:50	09/11/24 21:35	1
1,1-Dichloroethane	ND		0.052		mg/Kg	₩	09/11/24 12:50	09/11/24 21:35	1
1,1-Dichloroethene	ND		0.052		mg/Kg	₩	09/11/24 12:50	09/11/24 21:35	1
1,1-Dichloropropene	ND		0.052	0.0069			09/11/24 12:50	09/11/24 21:35	
1,2,3-Trichlorobenzene	ND		0.10		mg/Kg		09/11/24 12:50	09/11/24 21:35	1
1,2,3-Trichloropropane	ND		0.052		mg/Kg	₩.	09/11/24 12:50	09/11/24 21:35	1
1,2,4-Trichlorobenzene	ND		0.10		mg/Kg		09/11/24 12:50	09/11/24 21:35	· 1
1,2,4-Trimethylbenzene	ND		0.052		mg/Kg	₩	09/11/24 12:50	09/11/24 21:35	1
1,2-Dibromo-3-Chloropropane	ND		0.032		mg/Kg	₩	09/11/24 12:50	09/11/24 21:35	1
1,2-Dibromoethane	ND		0.076	0.0050			09/11/24 12:50	09/11/24 21:35	'
,	ND ND		0.020				09/11/24 12:50	09/11/24 21:35	1
1,2-Dichlorobenzene 1,2-Dichloroethane	ND ND		0.052	0.011	mg/Kg	<b>☆</b>	09/11/24 12:50	09/11/24 21:35	1
	ND		0.026	0.0072			09/11/24 12:50	09/11/24 21:35	1
1,2-Dichloropropane	ND ND		0.026			φ.			
1,3,5-Trimethylbenzene					mg/Kg	φ.	09/11/24 12:50	09/11/24 21:35	1
1,3-Dichlerence	ND		0.078		mg/Kg		09/11/24 12:50	09/11/24 21:35	
1,3-Dichloropropane	ND		0.078	0.0073		₩.	09/11/24 12:50	09/11/24 21:35	1
1,4-Dichlorobenzene	0.026	J	0.078		mg/Kg	<b>\$</b>	09/11/24 12:50	09/11/24 21:35	1
2,2-Dichloropropane	ND		0.052		mg/Kg	<u>.</u> .	09/11/24 12:50	09/11/24 21:35	
2-Chlorotoluene	ND		0.052		mg/Kg	☼	09/11/24 12:50	09/11/24 21:35	1
4-Chlorotoluene	ND		0.052		mg/Kg	☼	09/11/24 12:50	09/11/24 21:35	1
4-Isopropyltoluene	ND		0.052		mg/Kg	<del></del>	09/11/24 12:50	09/11/24 21:35	1
Benzene	ND		0.026	0.0050		☼	09/11/24 12:50	09/11/24 21:35	1
Bromobenzene	ND		0.052	0.0055	0 0	₩	09/11/24 12:50	09/11/24 21:35	1
Bromochloromethane	ND		0.052	0.0081		<del></del>	09/11/24 12:50	09/11/24 21:35	1
Bromodichloromethane	ND		0.052	0.0072		₩	09/11/24 12:50	09/11/24 21:35	1
Bromoform	ND		0.052	0.0059		₩	09/11/24 12:50	09/11/24 21:35	1
Bromomethane	ND		0.13		mg/Kg		09/11/24 12:50	09/11/24 21:35	1
Carbon tetrachloride	ND		0.026	0.0057		₩	09/11/24 12:50	09/11/24 21:35	1
Chlorobenzene	11		0.052	0.0063	mg/Kg	₩	09/11/24 12:50	09/11/24 21:35	1
Chloroethane	ND		0.10	0.027	mg/Kg	₩	09/11/24 12:50	09/11/24 21:35	1
Chloroform	0.019	J	0.026	0.0055		☼	09/11/24 12:50	09/11/24 21:35	1
Chloromethane	ND		0.078	0.013	mg/Kg	☼	09/11/24 12:50	09/11/24 21:35	1
cis-1,2-Dichloroethene	ND		0.078	0.016	mg/Kg	☼	09/11/24 12:50	09/11/24 21:35	1
cis-1,3-Dichloropropene	ND		0.026	0.0052	mg/Kg	₽	09/11/24 12:50	09/11/24 21:35	1
Dibromochloromethane	ND		0.026	0.0064	mg/Kg	₩	09/11/24 12:50	09/11/24 21:35	1
Dibromomethane	ND		0.052	0.0097	mg/Kg	₩	09/11/24 12:50	09/11/24 21:35	1
Dichlorodifluoromethane	ND		0.33	0.060	mg/Kg	₩	09/11/24 12:50	09/11/24 21:35	1
Ethylbenzene	ND		0.052	0.012	mg/Kg	₩	09/11/24 12:50	09/11/24 21:35	1
Hexachlorobutadiene	ND		0.13	0.031	mg/Kg	₩	09/11/24 12:50	09/11/24 21:35	1
Isopropylbenzene	ND		0.052	0.011	mg/Kg	₩	09/11/24 12:50	09/11/24 21:35	1
Methyl tert-butyl ether	ND		0.052	0.0078	mg/Kg	₩	09/11/24 12:50	09/11/24 21:35	1
Methylene Chloride	ND		0.33		mg/Kg	₩	09/11/24 12:50	09/11/24 21:35	1
m-Xylene & p-Xylene	ND		0.052	0.0093			09/11/24 12:50	09/11/24 21:35	1
Naphthalene	ND		0.20		mg/Kg	₽	09/11/24 12:50	09/11/24 21:35	1
n-Butylbenzene	ND		0.052		mg/Kg	₩	09/11/24 12:50	09/11/24 21:35	1
N-Propylbenzene	ND		0.052		mg/Kg		09/11/24 12:50	09/11/24 21:35	

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Client: ERM-West Job ID: 580-143465-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-34-SO-34.5-20240830

Date Collected: 08/30/24 09:10 Date Received: 09/03/24 14:15 Lab Sample ID: 580-143465-1

**Matrix: Solid** 

Percent Solids: 79.7

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.052	0.0065	mg/Kg	— <del>-</del>	09/11/24 12:50	09/11/24 21:35	1
sec-Butylbenzene	ND		0.052	0.011	mg/Kg	₩	09/11/24 12:50	09/11/24 21:35	1
Styrene	ND		0.052	0.017	mg/Kg	₩	09/11/24 12:50	09/11/24 21:35	1
t-Butylbenzene	ND		0.052	0.010	mg/Kg	₩	09/11/24 12:50	09/11/24 21:35	1
Tetrachloroethene	0.031	J	0.052	0.0069	mg/Kg	₽	09/11/24 12:50	09/11/24 21:35	1
Toluene	ND		0.078	0.018	mg/Kg	₩	09/11/24 12:50	09/11/24 21:35	1
trans-1,2-Dichloroethene	ND		0.078	0.019	mg/Kg	₩	09/11/24 12:50	09/11/24 21:35	1
trans-1,3-Dichloropropene	ND		0.052	0.0091	mg/Kg	₩	09/11/24 12:50	09/11/24 21:35	1
Trichloroethene	ND		0.052	0.013	mg/Kg	₩	09/11/24 12:50	09/11/24 21:35	1
Trichlorofluoromethane	ND		0.10	0.034	mg/Kg	₩	09/11/24 12:50	09/11/24 21:35	1
Vinyl chloride	ND		0.13	0.024	mg/Kg	₽	09/11/24 12:50	09/11/24 21:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				09/11/24 12:50	09/11/24 21:35	1
4-Bromofluorobenzene (Surr)	100		80 - 120				09/11/24 12:50	09/11/24 21:35	1
Dibromofluoromethane (Surr)	100		80 - 120				09/11/24 12:50	09/11/24 21:35	1
Toluene-d8 (Surr)	101		80 - 120				09/11/24 12:50	09/11/24 21:35	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	79.7		0.1	0.1	%			09/10/24 09:59	1
Percent Moisture (SM22 2540G)	20.3		0.1	0.1	%			09/10/24 09:59	1

Client: ERM-West Job ID: 580-143465-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-34-SO-38.9-20240830

Date Collected: 08/30/24 09:15
Date Received: 09/03/24 14:15
Percer

Lab Sample ID: 580-143465-2

Matrix: Solid Percent Solids: 81.0

Analyte	tile Organic C Result C	•	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND ND	0.023	0.0057		— <u>=</u>	09/11/24 12:50	09/11/24 21:56	
1,1,1-Trichloroethane	ND	0.046	0.0057		Ď.	09/11/24 12:50	09/11/24 21:56	
1,1,2,2-Tetrachloroethane	ND	0.023	0.0087		Ť	09/11/24 12:50	09/11/24 21:56	
1,1,2-Trichloroethane	ND	0.023	0.0085			09/11/24 12:50	09/11/24 21:56	
1,1-Dichloroethane	ND	0.046		mg/Kg	₩	09/11/24 12:50	09/11/24 21:56	
1,1-Dichloroethene	ND	0.046		mg/Kg	Ď.	09/11/24 12:50	09/11/24 21:56	
1,1-Dichloropropene	ND	0.046	0.0061		<sup>~</sup>	09/11/24 12:50	09/11/24 21:56	
1,2,3-Trichlorobenzene	ND ND	0.092		mg/Kg	₩	09/11/24 12:50	09/11/24 21:56	
1,2,3-Trichloropropane	ND	0.046		mg/Kg	☆	09/11/24 12:50	09/11/24 21:56	
,2,4-Trichlorobenzene	ND	0.092		mg/Kg		09/11/24 12:50	09/11/24 21:56	
	ND	0.046			☆	09/11/24 12:50	09/11/24 21:56	
I,2,4-Trimethylbenzene I,2-Dibromo-3-Chloropropane	ND ND	0.046		mg/Kg mg/Kg	₩	09/11/24 12:50	09/11/24 21:56	
I,2-Dibromoethane	ND	0.009			¥	09/11/24 12:50	09/11/24 21:56	
<i>'</i>			0.0044	mg/Kg		09/11/24 12:50	09/11/24 21:56	
,2-Dichlorobenzene	<b>0.035</b> J ND			0 0	<b>‡</b>	09/11/24 12:50		
1,2-Dichloroethane		0.023	0.0063		<del>.</del> .		09/11/24 21:56	
l ,2-Dichloropropane	ND	0.023	0.0076	0 0	<b>\$</b>	09/11/24 12:50	09/11/24 21:56	
I,3,5-Trimethylbenzene	ND	0.046	0.0087	0 0	₩.	09/11/24 12:50	09/11/24 21:56	
I,3-Dichlorobenzene	ND	0.069		mg/Kg	<del>.</del>	09/11/24 12:50	09/11/24 21:56	
I,3-Dichloropropane	ND	0.069	0.0064	0 0	<b>*</b>	09/11/24 12:50	09/11/24 21:56	
,4-Dichlorobenzene	0.12	0.069		mg/Kg	<b>*</b>	09/11/24 12:50	09/11/24 21:56	
2,2-Dichloropropane	ND	0.046		mg/Kg	<u>.</u>	09/11/24 12:50	09/11/24 21:56	
2-Chlorotoluene	ND	0.046		mg/Kg	☼	09/11/24 12:50	09/11/24 21:56	
l-Chlorotoluene	ND	0.046		mg/Kg	☼	09/11/24 12:50	09/11/24 21:56	
l-Isopropyltoluene	ND	0.046		mg/Kg	<u>.</u> .	09/11/24 12:50	09/11/24 21:56	
Benzene	ND	0.023	0.0044		☼	09/11/24 12:50	09/11/24 21:56	
Bromobenzene	ND	0.046		mg/Kg	☼	09/11/24 12:50	09/11/24 21:56	
Bromochloromethane	ND	0.046	0.0071	mg/Kg	<del>.</del>	09/11/24 12:50	09/11/24 21:56	
Bromodichloromethane	ND	0.046	0.0063		₩	09/11/24 12:50	09/11/24 21:56	
Bromoform	ND	0.046	0.0052		₩	09/11/24 12:50	09/11/24 21:56	
Bromomethane	ND	0.11		mg/Kg	₩	09/11/24 12:50	09/11/24 21:56	
Carbon tetrachloride	ND	0.023	0.0051	mg/Kg	₩	09/11/24 12:50	09/11/24 21:56	
Chlorobenzene	11	0.046	0.0055		☼	09/11/24 12:50	09/11/24 21:56	
Chloroethane	ND	0.092	0.024	mg/Kg		09/11/24 12:50	09/11/24 21:56	
Chloroform	ND	0.023	0.0048		₩	09/11/24 12:50	09/11/24 21:56	
Chloromethane	ND	0.069		mg/Kg	₩	09/11/24 12:50	09/11/24 21:56	
sis-1,2-Dichloroethene	ND	0.069		mg/Kg	☼	09/11/24 12:50	09/11/24 21:56	
sis-1,3-Dichloropropene	ND	0.023	0.0046	mg/Kg	₩	09/11/24 12:50	09/11/24 21:56	
Dibromochloromethane	ND	0.023	0.0056	mg/Kg	☼	09/11/24 12:50	09/11/24 21:56	
Dibromomethane	ND	0.046	0.0085	mg/Kg	☼	09/11/24 12:50	09/11/24 21:56	
Dichlorodifluoromethane	ND	0.29	0.053	mg/Kg	₽	09/11/24 12:50	09/11/24 21:56	
Ethylbenzene	ND	0.046	0.010	mg/Kg	☼	09/11/24 12:50	09/11/24 21:56	
Hexachlorobutadiene	ND	0.11	0.027	mg/Kg	₩	09/11/24 12:50	09/11/24 21:56	
sopropylbenzene	ND	0.046	0.0099	mg/Kg	₽	09/11/24 12:50	09/11/24 21:56	
Methyl tert-butyl ether	ND	0.046	0.0069	mg/Kg	☼	09/11/24 12:50	09/11/24 21:56	
Methylene Chloride	ND	0.29		mg/Kg	☼	09/11/24 12:50	09/11/24 21:56	
n-Xylene & p-Xylene	ND	0.046	0.0082			09/11/24 12:50	09/11/24 21:56	
Naphthalene	ND	0.17		mg/Kg	₽	09/11/24 12:50	09/11/24 21:56	
n-Butylbenzene	ND	0.046		mg/Kg	₩	09/11/24 12:50	09/11/24 21:56	
N-Propylbenzene	ND	0.046		mg/Kg		09/11/24 12:50	09/11/24 21:56	

**Eurofins Seattle** 

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Client: ERM-West Job ID: 580-143465-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-34-SO-38.9-20240830

Date Collected: 08/30/24 09:15 Date Received: 09/03/24 14:15

Lab Sample ID: 580-143465-2

**Matrix: Solid** 

Percent Solids: 81.0

Method: SW846 8260D - Vola	_	•	ds by GC/MS	(Conti	inued)				
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.046	0.0057	mg/Kg	<u></u>	09/11/24 12:50	09/11/24 21:56	1
sec-Butylbenzene	ND		0.046	0.0099	mg/Kg	₩	09/11/24 12:50	09/11/24 21:56	1
Styrene	ND		0.046	0.015	mg/Kg	₩	09/11/24 12:50	09/11/24 21:56	1
t-Butylbenzene	ND		0.046	0.0088	mg/Kg	₩	09/11/24 12:50	09/11/24 21:56	1
Tetrachloroethene	0.034	J	0.046	0.0061	mg/Kg	₩	09/11/24 12:50	09/11/24 21:56	1
Toluene	ND		0.069	0.016	mg/Kg	₩	09/11/24 12:50	09/11/24 21:56	1
trans-1,2-Dichloroethene	ND		0.069	0.017	mg/Kg	₩	09/11/24 12:50	09/11/24 21:56	1
trans-1,3-Dichloropropene	ND		0.046	0.0080	mg/Kg	₩	09/11/24 12:50	09/11/24 21:56	1
Trichloroethene	ND		0.046	0.012	mg/Kg	₩	09/11/24 12:50	09/11/24 21:56	1
Trichlorofluoromethane	ND		0.092	0.030	mg/Kg	₩	09/11/24 12:50	09/11/24 21:56	1
Vinyl chloride	ND		0.11	0.021	mg/Kg	₽	09/11/24 12:50	09/11/24 21:56	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				09/11/24 12:50	09/11/24 21:56	1
4-Bromofluorobenzene (Surr)	100		80 - 120				09/11/24 12:50	09/11/24 21:56	1
Dibromofluoromethane (Surr)	97		80 - 120				09/11/24 12:50	09/11/24 21:56	1
Toluene-d8 (Surr)	101		80 - 120				09/11/24 12:50	09/11/24 21:56	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	81.0		0.1	0.1	%			09/10/24 09:59	1
Percent Moisture (SM22 2540G)	19.0		0.1	0.1	%			09/10/24 09:59	1

Client: ERM-West Job ID: 580-143465-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-34-SO-39.5-20240830

Lab Sample ID: 580-143465-3 Date Collected: 08/30/24 09:20 Matrix: Solid Date Received: 09/03/24 14:15 Percent Solids: 92.0

Method: SW846 8260D - Volatile Organic Compounds by GC/MS **MDL** Unit Dil Fac Analyte Result Qualifier D Prepared Analyzed 0.018 mg/Kg 1,1,1,2-Tetrachloroethane ND 0.0045 09/11/24 12:50 09/11/24 22:16 0.036 ND 1.1.1-Trichloroethane 0.0041 mg/Kg 09/11/24 12:50 09/11/24 22:16 1,1,2,2-Tetrachloroethane ND 0.018 0.0068 mg/Kg 09/11/24 12:50 09/11/24 22:16 ND 0.0066 09/11/24 22:16 1,1,2-Trichloroethane 0.018 mg/Kg 09/11/24 12:50 1.1-Dichloroethane ND 0.036 0.0082 mg/Kg 09/11/24 12:50 09/11/24 22:16 1,1-Dichloroethene ND 0.036 0.011 mg/Kg 09/11/24 12:50 09/11/24 22:16 1,1-Dichloropropene ND 0.036 0.0047 09/11/24 12:50 09/11/24 22:16 mg/Kg ND 0.072 0.036 09/11/24 12:50 09/11/24 22:16 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.036 0.010 mg/Kg 09/11/24 12:50 09/11/24 22:16 1,2,4-Trichlorobenzene ND 0.072 0.038 mg/Kg ġ 09/11/24 12:50 09/11/24 22:16 1,2,4-Trimethylbenzene ND 0.036 0.012 mg/Kg 09/11/24 12:50 09/11/24 22:16 mg/Kg 1.2-Dibromo-3-Chloropropane ND 0.054 0.014 09/11/24 12:50 09/11/24 22:16 1 1,2-Dibromoethane ND 0.018 0.0034 mg/Kg 09/11/24 12:50 09/11/24 22:16 1,2-Dichlorobenzene ND 0.036 0.0078 mg/Kg 09/11/24 12:50 09/11/24 22:16 ND 0.018 0.0049 mg/Kg 09/11/24 12:50 09/11/24 22:16 1.2-Dichloroethane 0.0059 1,2-Dichloropropane NΩ 0.018 mg/Kg 09/11/24 12:50 09/11/24 22:16 ND 1,3,5-Trimethylbenzene 0.036 0.0068 mg/Kg 09/11/24 12:50 09/11/24 22:16 1,3-Dichlorobenzene ND 0.054 0.012 mg/Kg 09/11/24 12:50 09/11/24 22:16 1,3-Dichloropropane NΩ 0.054 0.0050 mg/Kg 09/11/24 12:50 09/11/24 22:16 1,4-Dichlorobenzene 0.028 0.054 0.0097 mg/Kg 09/11/24 12:50 09/11/24 22:16 2,2-Dichloropropane ND 0.036 0.011 mg/Kg ť. 09/11/24 12:50 09/11/24 22:16 2-Chlorotoluene ND 0.036 0.0079 mg/Kg 09/11/24 12:50 09/11/24 22:16 4-Chlorotoluene ND 0.0088 mg/Kg 09/11/24 12:50 09/11/24 22:16 0.036 4-Isopropyltoluene ND 0.036 0.0091 mg/Kg 09/11/24 12:50 09/11/24 22:16 Benzene ND 0.018 0.0034 mg/Kg 09/11/24 12:50 09/11/24 22:16 ND 0.0038 Bromobenzene 0.036 mg/Kg 09/11/24 12:50 09/11/24 22:16 Bromochloromethane ND 0.036 0.0056 mg/Kg 09/11/24 12:50 09/11/24 22:16 Bromodichloromethane 0.0049 ND 0.036 mg/Kg 09/11/24 12:50 09/11/24 22:16 0.0040 Bromoform ND 0.036 mg/Kg 09/11/24 12:50 09/11/24 22:16 ND 0.034 09/11/24 22:16 Bromomethane 0.090 mg/Kg 09/11/24 12:50 Carbon tetrachloride ND 0.018 0.0039 mg/Kg 09/11/24 12:50 09/11/24 22:16 0.036 0.0043 mg/Kg 09/11/24 12:50 09/11/24 22:16 Chlorobenzene 6.0 Chloroethane 0.072 0.019 mg/Kg 09/11/24 12:50 09/11/24 22:16 ND Chloroform ND 09/11/24 12:50 09/11/24 22:16 0.018 0.0038 mg/Kg Chloromethane ND 0.054 0.0090 mg/Kg 09/11/24 12:50 09/11/24 22:16 cis-1.2-Dichloroethene ND 0.054 0.011 mg/Kg 09/11/24 12:50 09/11/24 22:16 cis-1,3-Dichloropropene ND 0.018 0.0036 mg/Kg 09/11/24 12:50 09/11/24 22:16 Dibromochloromethane ND 0.018 0.0044 mg/Kg 09/11/24 12:50 09/11/24 22:16 Dibromomethane ND 0.036 0.0066 mg/Kg ₩ 09/11/24 12:50 09/11/24 22:16 Dichlorodifluoromethane ND 0.22 0.041 mg/Kg 09/11/24 12:50 09/11/24 22:16 Ethylbenzene ND 0.036 0.0082 mg/Kg 09/11/24 12:50 09/11/24 22:16 Hexachlorobutadiene ND 0.090 0.021 mg/Kg 09/11/24 12:50 09/11/24 22:16 0.0077 ND Isopropylbenzene 0.036 mg/Kg 09/11/24 12:50 09/11/24 22:16 Methyl tert-butyl ether 0.036 0.0054 09/11/24 12:50 09/11/24 22:16 ND mg/Kg ND Methylene Chloride 0.22 0.023 mg/Kg 09/11/24 12:50 09/11/24 22:16 m-Xylene & p-Xylene ND 0.036 0.0064 mg/Kg 09/11/24 12:50 09/11/24 22:16 Naphthalene ND 0.035 09/11/24 22:16 0.13 mg/Kg 09/11/24 12:50 n-Butylbenzene ND 0.036 0.017 mg/Kg ₹ 09/11/24 12:50 09/11/24 22:16 09/11/24 22:16 N-Propylbenzene ND 0.036 0.013 mg/Kg 09/11/24 12:50

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143465-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-34-SO-39.5-20240830

Lab Sample ID: 580-143465-3 Date Collected: 08/30/24 09:20

**Matrix: Solid** Date Received: 09/03/24 14:15 Percent Solids: 92.0

Method: SW846 8260D - Volati Analyte	_	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND	Qualifier	0.036	0.0045		— <u>=</u>	09/11/24 12:50	09/11/24 22:16	1
sec-Butvlbenzene	ND		0.036	0.0043	mg/Kg	₩	09/11/24 12:50	09/11/24 22:16	1
Styrene	ND		0.036	0.011	mg/Kg		09/11/24 12:50	09/11/24 22:16	
t-Butylbenzene	ND		0.036	0.0069	0 0	₩	09/11/24 12:50	09/11/24 22:16	1
Tetrachloroethene	0.0057	J	0.036	0.0047	0 0	☆	09/11/24 12:50	09/11/24 22:16	1
Toluene	ND		0.054		mg/Kg		09/11/24 12:50	09/11/24 22:16	1
trans-1,2-Dichloroethene	ND		0.054		mg/Kg	≎	09/11/24 12:50	09/11/24 22:16	1
trans-1,3-Dichloropropene	ND		0.036	0.0063	mg/Kg	☆	09/11/24 12:50	09/11/24 22:16	1
Trichloroethene	ND		0.036	0.0092	mg/Kg	≎	09/11/24 12:50	09/11/24 22:16	1
Trichlorofluoromethane	ND		0.072	0.023	mg/Kg	₩	09/11/24 12:50	09/11/24 22:16	1
Vinyl chloride	ND		0.090	0.017	mg/Kg	₩	09/11/24 12:50	09/11/24 22:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121				09/11/24 12:50	09/11/24 22:16	1
4-Bromofluorobenzene (Surr)	98		80 - 120				09/11/24 12:50	09/11/24 22:16	1
Dibromofluoromethane (Surr)	100		80 - 120				09/11/24 12:50	09/11/24 22:16	1
Toluene-d8 (Surr)	100		80 - 120				09/11/24 12:50	09/11/24 22:16	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	92.0		0.1	0.1	%			09/10/24 09:59	1
Percent Moisture (SM22 2540G)	8.0		0.1	0.1	%			09/10/24 09:59	1

Client: ERM-West Job ID: 580-143465-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-34-SO-59.5-20240830

Lab Sample ID: 580-143465-4 Date Collected: 08/30/24 12:55 Date Received: 09/03/24 14:15

Matrix: Solid Percent Solids: 94.0

Method: SW846 8260D - Volatile Organic Compounds by GC/MS **MDL** Unit Dil Fac Analyte Result Qualifier D Prepared Analyzed 0.016 1,1,1,2-Tetrachloroethane ND 0.0041 mg/Kg 09/11/24 12:50 09/11/24 22:37 ND 0.033 1.1.1-Trichloroethane 0.0038 mg/Kg 09/11/24 12:50 09/11/24 22:37 1,1,2,2-Tetrachloroethane ND 0.016 0.0062 mg/Kg 09/11/24 12:50 09/11/24 22:37 ND 0.0060 09/11/24 22:37 1,1,2-Trichloroethane 0.016 mg/Kg 09/11/24 12:50 1.1-Dichloroethane ND 0.033 0.0075 mg/Kg 09/11/24 12:50 09/11/24 22:37 1,1-Dichloroethene ND 0.033 0.010 mg/Kg 09/11/24 12:50 09/11/24 22:37 1,1-Dichloropropene ND 0.033 0.0043 mg/Kg 09/11/24 12:50 09/11/24 22:37 ND 0.065 0.032 09/11/24 12:50 09/11/24 22:37 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.033 0.0094 mg/Kg 09/11/24 12:50 09/11/24 22:37 1,2,4-Trichlorobenzene ND 0.065 0.035 mg/Kg ġ 09/11/24 12:50 09/11/24 22:37 1,2,4-Trimethylbenzene ND 0.033 0.011 mg/Kg 09/11/24 12:50 09/11/24 22:37 1.2-Dibromo-3-Chloropropane ND 0.049 0.012 mg/Kg 09/11/24 12:50 09/11/24 22:37 1 1,2-Dibromoethane ND 0.016 0.0031 mg/Kg 09/11/24 12:50 09/11/24 22:37 1,2-Dichlorobenzene ND 0.033 0.0071 mg/Kg 09/11/24 12:50 09/11/24 22:37 ND 0.016 0.0045 mg/Kg 09/11/24 12:50 09/11/24 22:37 1.2-Dichloroethane 0.0054 1,2-Dichloropropane NΩ 0.016 mg/Kg 09/11/24 12:50 09/11/24 22:37 ND 0.0062 1,3,5-Trimethylbenzene 0.033 mg/Kg 09/11/24 12:50 09/11/24 22:37 1,3-Dichlorobenzene ND 0.049 0.011 mg/Kg 09/11/24 12:50 09/11/24 22:37 1,3-Dichloropropane NΩ 0.049 0.0046 mg/Kg 09/11/24 12:50 09/11/24 22:37 1,4-Dichlorobenzene 0.015 J 0.049 0.0088 mg/Kg 09/11/24 12:50 09/11/24 22:37 2,2-Dichloropropane ND 0.033 0.0099 mg/Kg ť. 09/11/24 12:50 09/11/24 22:37 2-Chlorotoluene ND 0.033 0.0072 mg/Kg 09/11/24 12:50 09/11/24 22:37 4-Chlorotoluene ND 0.033 0.0080 mg/Kg 09/11/24 12:50 09/11/24 22:37 4-Isopropyltoluene ND 0.033 0.0083 mg/Kg 09/11/24 12:50 09/11/24 22:37 Benzene ND 0.016 0.0031 mg/Kg 09/11/24 12:50 09/11/24 22:37 ND 0.0034 Bromobenzene 0.033 mg/Kg 09/11/24 12:50 09/11/24 22:37 Bromochloromethane ND 0.033 0.0051 mg/Kg 09/11/24 12:50 09/11/24 22:37 Bromodichloromethane 0.0045 ND 0.033 mg/Kg 09/11/24 12:50 09/11/24 22:37 0.0037 Bromoform ND 0.033 mg/Kg 09/11/24 12:50 09/11/24 22:37 ND 0.031 09/11/24 22:37 Bromomethane 0.082 mg/Kg 09/11/24 12:50 Carbon tetrachloride ND 0.016 0.0036 mg/Kg 09/11/24 12:50 09/11/24 22:37 Chloroethane ND 0.065 0.017 mg/Kg 09/11/24 12:50 09/11/24 22:37 Chloroform ND 0.016 0.0034 mg/Kg 09/11/24 12:50 09/11/24 22:37 0.0083 Chloromethane ND 09/11/24 12:50 09/11/24 22:37 0.049 mg/Kg cis-1,2-Dichloroethene ND 0.049 0.010 mg/Kg 09/11/24 12:50 09/11/24 22:37 cis-1.3-Dichloropropene ND 0.016 0.0033 mg/Kg 09/11/24 12:50 09/11/24 22:37 Dibromochloromethane ND 0.016 0.0040 mg/Kg 09/11/24 12:50 09/11/24 22:37 Dibromomethane ND 0.033 0.0060 mg/Kg 09/11/24 12:50 09/11/24 22:37 Dichlorodifluoromethane ND 0.037 mg/Kg 0.20 ₩ 09/11/24 12:50 09/11/24 22:37 Ethylbenzene ND 0.033 0.0074 mg/Kg 09/11/24 12:50 09/11/24 22:37 Hexachlorobutadiene ND 0.082 0.020 mg/Kg 09/11/24 12:50 09/11/24 22:37 Isopropylbenzene ND 0.033 0.0070 mg/Kg 09/11/24 12:50 09/11/24 22:37 0.0049 09/11/24 12:50 ND Methyl tert-butyl ether 0.033 mg/Kg 09/11/24 22:37 Methylene Chloride 0.021 09/11/24 12:50 09/11/24 22:37 ND 0.20 mg/Kg ND 0.033 m-Xylene & p-Xylene 0.0058 mg/Kg 09/11/24 12:50 09/11/24 22:37 Naphthalene ND 0.12 0.032 mg/Kg 09/11/24 12:50 09/11/24 22:37 n-Butylbenzene ND 0.033 0.015 mg/Kg 09/11/24 22:37 09/11/24 12:50 N-Propylbenzene ND 0.033 0.012 mg/Kg ₹ 09/11/24 12:50 09/11/24 22:37 09/11/24 22:37 o-Xylene ND 0.033 0.0041 mg/Kg 09/11/24 12:50

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143465-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-34-SO-59.5-20240830

Lab Sample ID: 580-143465-4 Date Collected: 08/30/24 12:55 **Matrix: Solid** 

Date Received: 09/03/24 14:15 Percent Solids: 94.0

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
sec-Butylbenzene	ND		0.033	0.0070	mg/Kg	— <del>-</del>	09/11/24 12:50	09/11/24 22:37	1
Styrene	ND		0.033	0.010	mg/Kg	₩	09/11/24 12:50	09/11/24 22:37	1
t-Butylbenzene	ND		0.033	0.0063	mg/Kg	₩	09/11/24 12:50	09/11/24 22:37	1
Tetrachloroethene	ND		0.033	0.0043	mg/Kg	₩	09/11/24 12:50	09/11/24 22:37	1
Toluene	ND		0.049	0.011	mg/Kg	₩	09/11/24 12:50	09/11/24 22:37	1
trans-1,2-Dichloroethene	ND		0.049	0.012	mg/Kg	₩	09/11/24 12:50	09/11/24 22:37	1
trans-1,3-Dichloropropene	ND		0.033	0.0057	mg/Kg	₩	09/11/24 12:50	09/11/24 22:37	1
Trichloroethene	ND		0.033	0.0084	mg/Kg	₩	09/11/24 12:50	09/11/24 22:37	1
Trichlorofluoromethane	ND		0.065	0.021	mg/Kg	₩	09/11/24 12:50	09/11/24 22:37	1
Vinyl chloride	ND		0.082	0.015	mg/Kg	₽	09/11/24 12:50	09/11/24 22:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				09/11/24 12:50	09/11/24 22:37	1
4-Bromofluorobenzene (Surr)	99		80 - 120				09/11/24 12:50	09/11/24 22:37	1
Dibromofluoromethane (Surr)	101		80 - 120				09/11/24 12:50	09/11/24 22:37	1
Toluene-d8 (Surr)	98		80 - 120				09/11/24 12:50	09/11/24 22:37	1
Method: SW846 8260D - Vola	tile Organic	Compound	ds by GC/MS	- DL					
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	14		0.18	0.021	mg/Kg	<del>*</del>	09/12/24 09:06	09/12/24 12:30	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121				09/12/24 09:06	09/12/24 12:30	1
4-Bromofluorobenzene (Surr)	97		80 - 120				09/12/24 09:06	09/12/24 12:30	1
Dibromofluoromethane (Surr)	100		80 - 120				09/12/24 09:06	09/12/24 12:30	1
Toluene-d8 (Surr)	100		80 - 120				09/12/24 09:06	09/12/24 12:30	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	94.0		0.1	0.1	%			09/10/24 09:59	1

Client: ERM-West Job ID: 580-143465-1

Project/Site: Arkema PDI Sampling

**Client Sample ID: TB-01-SO-20240830** 

Lab Sample ID: 580-143465-5

Date Collected: 08/30/24 00:01 **Matrix: Solid** Date Received: 09/03/24 14:15

Method: SW846 8260D - Volati Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fa
1,1,1,2-Tetrachloroethane	ND	<u> </u>	0.020	0.0050	mg/Kg		09/11/24 12:50	09/11/24 20:54	
1,1,1-Trichloroethane	ND		0.040	0.0046			09/11/24 12:50	09/11/24 20:54	
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076	mg/Kg		09/11/24 12:50	09/11/24 20:54	
1,1,2-Trichloroethane	ND		0.020	0.0074	mg/Kg		09/11/24 12:50	09/11/24 20:54	
1,1-Dichloroethane	ND		0.040	0.0092			09/11/24 12:50	09/11/24 20:54	
I,1-Dichloroethene	ND		0.040		mg/Kg		09/11/24 12:50	09/11/24 20:54	
I,1-Dichloropropene	ND		0.040	0.0053			09/11/24 12:50	09/11/24 20:54	
,2,3-Trichlorobenzene	ND		0.080		mg/Kg		09/11/24 12:50	09/11/24 20:54	
,2,3-Trichloropropane	ND		0.040		mg/Kg		09/11/24 12:50	09/11/24 20:54	
1,2,4-Trichlorobenzene	ND		0.080		mg/Kg		09/11/24 12:50	09/11/24 20:54	
1,2,4-Trimethylbenzene	ND		0.040		mg/Kg		09/11/24 12:50	09/11/24 20:54	
I,2-Dibromo-3-Chloropropane	ND		0.060		mg/Kg		09/11/24 12:50	09/11/24 20:54	
1,2-Dibromoethane	ND		0.020	0.0038			09/11/24 12:50	09/11/24 20:54	
1.2-Dichlorobenzene	ND		0.040	0.0087			09/11/24 12:50	09/11/24 20:54	
I,2-Dichloroethane	ND		0.020	0.0055	0 0		09/11/24 12:50	09/11/24 20:54	
,2-Dichloropropane	ND		0.020	0.0066			09/11/24 12:50	09/11/24 20:54	
,3,5-Trimethylbenzene	ND		0.040	0.0076			09/11/24 12:50	09/11/24 20:54	
I,3-Dichlorobenzene	ND		0.060		mg/Kg		09/11/24 12:50	09/11/24 20:54	
,3-Dichloropropane	ND		0.060	0.0056			09/11/24 12:50	09/11/24 20:54	
,4-Dichlorobenzene	ND		0.060		mg/Kg		09/11/24 12:50	09/11/24 20:54	
2,2-Dichloropropane	ND		0.040		mg/Kg		09/11/24 12:50	09/11/24 20:54	
-Chlorotoluene	ND		0.040	0.0088			09/11/24 12:50	09/11/24 20:54	
-Chlorotoluene	ND ND		0.040	0.0098			09/11/24 12:50	09/11/24 20:54	
-Isopropyltoluene	ND ND		0.040		mg/Kg		09/11/24 12:50	09/11/24 20:54	
Renzene	ND		0.040	0.0038			09/11/24 12:50	09/11/24 20:54	
romobenzene	ND ND		0.020				09/11/24 12:50	09/11/24 20:54	
Bromochloromethane	ND ND		0.040	0.0042			09/11/24 12:50	09/11/24 20:54	
Bromodichloromethane				0.0062 0.0055					
	ND		0.040				09/11/24 12:50	09/11/24 20:54	
Bromoform	ND ND		0.040	0.0045	mg/Kg		09/11/24 12:50	09/11/24 20:54	
Bromomethane			0.10					09/11/24 20:54	
Carbon tetrachloride	ND		0.020	0.0044				09/11/24 20:54	
Chlorobenzene	ND		0.040	0.0048				09/11/24 20:54	
Chloroethane	ND		0.080		mg/Kg		09/11/24 12:50		
Chloroform	ND		0.020	0.0042			09/11/24 12:50	09/11/24 20:54	
Chloromethane	ND		0.060		mg/Kg		09/11/24 12:50		
is-1,2-Dichloroethene	ND		0.060		mg/Kg		09/11/24 12:50	09/11/24 20:54	
is-1,3-Dichloropropene	ND		0.020	0.0040			09/11/24 12:50	09/11/24 20:54	
Dibromochloromethane	ND		0.020	0.0049			09/11/24 12:50	09/11/24 20:54	
Dibromomethane	ND		0.040	0.0074			09/11/24 12:50	09/11/24 20:54	
Dichlorodifluoromethane	ND		0.25		mg/Kg		09/11/24 12:50	09/11/24 20:54	
Ethylbenzene	ND		0.040	0.0091	0 0		09/11/24 12:50	09/11/24 20:54	
lexachlorobutadiene	0.034	JB	0.10		mg/Kg		09/11/24 12:50	09/11/24 20:54	
sopropylbenzene	ND		0.040	0.0086			09/11/24 12:50	09/11/24 20:54	
Methyl tert-butyl ether	ND		0.040	0.0060			09/11/24 12:50	09/11/24 20:54	
Methylene Chloride	ND		0.25		mg/Kg		09/11/24 12:50	09/11/24 20:54	
n-Xylene & p-Xylene	ND		0.040	0.0071			09/11/24 12:50	09/11/24 20:54	
Naphthalene	ND		0.15	0.039	mg/Kg		09/11/24 12:50	09/11/24 20:54	
n-Butylbenzene	ND		0.040	0.019	mg/Kg		09/11/24 12:50	09/11/24 20:54	
N-Propylbenzene	ND		0.040	0.015	mg/Kg		09/11/24 12:50	09/11/24 20:54	

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143465-1

Project/Site: Arkema PDI Sampling

**Client Sample ID: TB-01-SO-20240830** 

Lab Sample ID: 580-143465-5

**Matrix: Solid** 

Date Collected: 08/30/24 00:01 Date Received: 09/03/24 14:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	MD		0.040	0.0050	mg/Kg		09/11/24 12:50	09/11/24 20:54	1
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		09/11/24 12:50	09/11/24 20:54	1
Styrene	ND		0.040	0.013	mg/Kg		09/11/24 12:50	09/11/24 20:54	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		09/11/24 12:50	09/11/24 20:54	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		09/11/24 12:50	09/11/24 20:54	1
Toluene	ND		0.060	0.014	mg/Kg		09/11/24 12:50	09/11/24 20:54	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		09/11/24 12:50	09/11/24 20:54	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		09/11/24 12:50	09/11/24 20:54	1
Trichloroethene	ND		0.040	0.010	mg/Kg		09/11/24 12:50	09/11/24 20:54	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		09/11/24 12:50	09/11/24 20:54	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		09/11/24 12:50	09/11/24 20:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		80 - 121				09/11/24 12:50	09/11/24 20:54	1
4-Bromofluorobenzene (Surr)	100		80 - 120				09/11/24 12:50	09/11/24 20:54	1
Dibromofluoromethane (Surr)	100		80 - 120				09/11/24 12:50	09/11/24 20:54	1
Toluene-d8 (Surr)	100		80 - 120				09/11/24 12:50	09/11/24 20:54	1

Client: ERM-West Job ID: 580-143465-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-34-SO-46-20240830

Date Collected: 08/30/24 13:05

**Matrix: Solid** Date Received: 09/03/24 14:15 Percent Solids: 92.6

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil F
1,1,1,2-Tetrachloroethane	ND		0.014		mg/Kg	— <u>-</u>	09/11/24 12:50	09/11/24 22:58	
1.1.1-Trichloroethane	ND		0.029	0.0033	0 0	₩	09/11/24 12:50	09/11/24 22:58	
1,1,2,2-Tetrachloroethane	ND		0.014	0.0055		₩	09/11/24 12:50	09/11/24 22:58	
1,1,2-Trichloroethane	ND		0.014	0.0054		∷ #	09/11/24 12:50	09/11/24 22:58	
1,1-Dichloroethane	ND		0.029	0.0067		₩.	09/11/24 12:50	09/11/24 22:58	
1.1-Dichloroethene	ND		0.029	0.0089	mg/Kg	Ď.	09/11/24 12:50	09/11/24 22:58	
1,1-Dichloropropene	ND		0.029	0.0038			09/11/24 12:50	09/11/24 22:58	
1,2,3-Trichlorobenzene	ND		0.058		mg/Kg	₩.	09/11/24 12:50	09/11/24 22:58	
1,2,3-Trichloropropane	ND		0.029	0.0083	0 0	₩	09/11/24 12:50	09/11/24 22:58	
1,2,4-Trichlorobenzene	ND		0.058		mg/Kg		09/11/24 12:50	09/11/24 22:58	
1,2,4-Trimethylbenzene	ND		0.029	0.0098		☆	09/11/24 12:50	09/11/24 22:58	
1,2-Dibromo-3-Chloropropane	ND		0.023		mg/Kg	₩	09/11/24 12:50	09/11/24 22:58	
1,2-Dibromoethane									
•	ND ND		0.014 0.029	0.0028 0.0063	0 0	<b>☆</b>	09/11/24 12:50 09/11/24 12:50	09/11/24 22:58 09/11/24 22:58	
1,2-Dichlorobenzene 1.2-Dichloroethane					0 0	<b>☆</b>			
	ND		0.014	0.0040	mg/Kg	· · · · · · · · · ·	09/11/24 12:50	09/11/24 22:58	
1,2-Dichloropropane	ND		0.014	0.0048		<b>*</b>	09/11/24 12:50	09/11/24 22:58	
1,3,5-Trimethylbenzene	ND		0.029	0.0055		<b>*</b>	09/11/24 12:50	09/11/24 22:58	
1,3-Dichlorobenzene	ND		0.043		mg/Kg	<del>.</del>	09/11/24 12:50	09/11/24 22:58	
I,3-Dichloropropane	ND		0.043	0.0041	mg/Kg	₩	09/11/24 12:50	09/11/24 22:58	
1,4-Dichlorobenzene	ND		0.043		mg/Kg	₩	09/11/24 12:50	09/11/24 22:58	
2,2-Dichloropropane	ND		0.029		mg/Kg		09/11/24 12:50	09/11/24 22:58	
2-Chlorotoluene	ND		0.029	0.0064	mg/Kg	₩	09/11/24 12:50	09/11/24 22:58	
-Chlorotoluene	ND		0.029	0.0071	mg/Kg	₩	09/11/24 12:50	09/11/24 22:58	
1-Isopropyltoluene	ND		0.029	0.0074	mg/Kg	₩	09/11/24 12:50	09/11/24 22:58	
Benzene	ND		0.014	0.0028	mg/Kg	₩	09/11/24 12:50	09/11/24 22:58	
Bromobenzene	ND		0.029	0.0030	mg/Kg	₩	09/11/24 12:50	09/11/24 22:58	
Bromochloromethane	ND		0.029	0.0045	mg/Kg	₩	09/11/24 12:50	09/11/24 22:58	
Bromodichloromethane	ND		0.029	0.0040	mg/Kg	₩	09/11/24 12:50	09/11/24 22:58	
Bromoform	ND		0.029	0.0033	mg/Kg	₩	09/11/24 12:50	09/11/24 22:58	
Bromomethane	ND		0.072	0.027	mg/Kg	₩	09/11/24 12:50	09/11/24 22:58	
Carbon tetrachloride	ND		0.014	0.0032	mg/Kg	₩	09/11/24 12:50	09/11/24 22:58	
Chlorobenzene	7.1		0.029	0.0035	mg/Kg	₩	09/11/24 12:50	09/11/24 22:58	
Chloroethane	ND		0.058	0.015	mg/Kg	₩	09/11/24 12:50	09/11/24 22:58	
Chloroform	ND		0.014	0.0030	mg/Kg		09/11/24 12:50	09/11/24 22:58	
Chloromethane	ND		0.043	0.0073	mg/Kg	₩	09/11/24 12:50	09/11/24 22:58	
sis-1,2-Dichloroethene	ND		0.043	0.0091	mg/Kg	₩	09/11/24 12:50	09/11/24 22:58	
sis-1,3-Dichloropropene	ND		0.014	0.0029			09/11/24 12:50	09/11/24 22:58	
Dibromochloromethane	ND		0.014	0.0035		₩	09/11/24 12:50	09/11/24 22:58	
Dibromomethane	ND		0.029	0.0054	0 0	₩	09/11/24 12:50	09/11/24 22:58	
Dichlorodifluoromethane	ND		0.18		mg/Kg		09/11/24 12:50	09/11/24 22:58	
Ethylbenzene	ND		0.029	0.0066			09/11/24 12:50	09/11/24 22:58	
Hexachlorobutadiene	ND		0.072		mg/Kg	~ ☆	09/11/24 12:50	09/11/24 22:58	
sopropylbenzene	ND		0.072	0.0062		<del>`</del> -	09/11/24 12:50	09/11/24 22:58	
Methyl tert-butyl ether	ND ND		0.029	0.0002		₩	09/11/24 12:50	09/11/24 22:58	
Methylene Chloride	ND ND		0.029		mg/Kg		09/11/24 12:50	09/11/24 22:58	
						· <del>*</del>			
n-Xylene & p-Xylene	ND		0.029	0.0051		ψ.	09/11/24 12:50	09/11/24 22:58	
laphthalene	ND		0.11		mg/Kg	<b>*</b>	09/11/24 12:50	09/11/24 22:58	
n-Butylbenzene	ND		0.029		mg/Kg mg/Kg	☆	09/11/24 12:50	09/11/24 22:58	

**Eurofins Seattle** 

Lab Sample ID: 580-143465-6

Client: ERM-West Job ID: 580-143465-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-34-SO-46-20240830

Date Collected: 08/30/24 13:05

Date Received: 09/03/24 14:15

Lab Sample ID: 580-143465-6

**Matrix: Solid** 

Percent Solids: 92.6

Method: SW846 8260D - Volat Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.029	0.0036	mg/Kg	— <u>=</u>	09/11/24 12:50	09/11/24 22:58	
sec-Butylbenzene	ND		0.029	0.0062	0 0	₽	09/11/24 12:50	09/11/24 22:58	1
Styrene	ND		0.029	0.0092	mg/Kg		09/11/24 12:50	09/11/24 22:58	1
t-Butylbenzene	ND		0.029	0.0056	mg/Kg	☼	09/11/24 12:50	09/11/24 22:58	
Tetrachloroethene	ND		0.029	0.0038	mg/Kg	☆	09/11/24 12:50	09/11/24 22:58	
Toluene	ND		0.043	0.0098	mg/Kg	₩	09/11/24 12:50	09/11/24 22:58	1
trans-1,2-Dichloroethene	ND		0.043	0.011	mg/Kg	☆	09/11/24 12:50	09/11/24 22:58	
trans-1,3-Dichloropropene	ND		0.029	0.0051	mg/Kg	₩	09/11/24 12:50	09/11/24 22:58	
Trichloroethene	ND		0.029	0.0075	mg/Kg	₩	09/11/24 12:50	09/11/24 22:58	
Trichlorofluoromethane	ND		0.058	0.019	mg/Kg	₩	09/11/24 12:50	09/11/24 22:58	
Vinyl chloride	ND		0.072	0.014	mg/Kg	₽	09/11/24 12:50	09/11/24 22:58	•
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fa
1,2-Dichloroethane-d4 (Surr)	99		80 - 121				09/11/24 12:50	09/11/24 22:58	
4-Bromofluorobenzene (Surr)	100		80 - 120				09/11/24 12:50	09/11/24 22:58	1
Dibromofluoromethane (Surr)	97		80 - 120				09/11/24 12:50	09/11/24 22:58	
Toluene-d8 (Surr)	103		80 - 120				09/11/24 12:50	09/11/24 22:58	
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	92.6		0.1	0.1	%			09/10/24 09:59	1
Percent Moisture (SM22 2540G)	7.4		0.1	0.1	%			09/10/24 09:59	1

Client: ERM-West Job ID: 580-143465-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-34-SO-48-20240830

Lab Sample ID: 580-143465-7 Date Collected: 08/30/24 13:35 Matrix: Solid Date Received: 09/03/24 14:15 Percent Solids: 86.9

Method: SW846 8260D - Volatile Organic Compounds by GC/MS Dil Fac Analyte Result Qualifier **MDL** Unit D Prepared Analyzed 1,1,1,2-Tetrachloroethane ND 0.020 0.0049 mg/Kg 09/11/24 12:50 09/11/24 23:18 ND 0.039 1.1.1-Trichloroethane 0.0045 mg/Kg 09/11/24 12:50 09/11/24 23:18 1,1,2,2-Tetrachloroethane ND 0.020 0.0075 mg/Kg 09/11/24 12:50 09/11/24 23:18 ND 0.0073 1,1,2-Trichloroethane 0.020 mg/Kg 09/11/24 12:50 09/11/24 23:18 0.039 0.0090 mg/Kg 09/11/24 12:50 09/11/24 23:18 1.1-Dichloroethane ND 1,1-Dichloroethene ND 0.039 0.012 mg/Kg 09/11/24 12:50 09/11/24 23:18 1,1-Dichloropropene ND 0.039 0.0052 09/11/24 12:50 09/11/24 23:18 mg/Kg ND 0.078 0.039 09/11/24 12:50 09/11/24 23:18 1,2,3-Trichlorobenzene mg/Kg 1,2,3-Trichloropropane ND 0.039 0.011 mg/Kg 09/11/24 12:50 09/11/24 23:18 1,2,4-Trichlorobenzene ND 0.078 0.042 mg/Kg ġ 09/11/24 12:50 09/11/24 23:18 1,2,4-Trimethylbenzene ND 0.039 0.013 mg/Kg 09/11/24 12:50 09/11/24 23:18 mg/Kg 1.2-Dibromo-3-Chloropropane ND 0.059 0.015 09/11/24 12:50 09/11/24 23:18 1 1,2-Dibromoethane ND 0.020 0.0037 mg/Kg 09/11/24 12:50 09/11/24 23:18 1,2-Dichlorobenzene ND 0.039 0.0085 mg/Kg 09/11/24 12:50 09/11/24 23:18 ND 0.020 0.0054 mg/Kg 09/11/24 12:50 09/11/24 23:18 1.2-Dichloroethane 1,2-Dichloropropane NΩ 0.020 0.0065 mg/Kg 09/11/24 12:50 09/11/24 23:18 0.0075 1,3,5-Trimethylbenzene ND 0.039 mg/Kg 09/11/24 12:50 09/11/24 23:18 1,3-Dichlorobenzene ND 0.059 0.013 mg/Kg 09/11/24 12:50 09/11/24 23:18 1,3-Dichloropropane ND 0.059 0.0055 mg/Kg 09/11/24 12:50 09/11/24 23:18 1,4-Dichlorobenzene ND 0.059 0.011 mg/Kg 09/11/24 12:50 09/11/24 23:18 2,2-Dichloropropane ND 0.039 0.012 mg/Kg ť. 09/11/24 12:50 09/11/24 23:18 2-Chlorotoluene ND 0.039 0.0086 mg/Kg 09/11/24 12:50 09/11/24 23:18 4-Chlorotoluene ND 0.0096 mg/Kg 09/11/24 12:50 09/11/24 23:18 0.039 4-Isopropyltoluene ND 0.039 0.010 mg/Kg 09/11/24 12:50 09/11/24 23:18 Benzene ND 0.020 0.0037 mg/Kg 09/11/24 12:50 09/11/24 23:18 ND 0.0041 Bromobenzene 0.039 mg/Kg 09/11/24 12:50 09/11/24 23:18 Bromochloromethane ND 0.039 0.0061 mg/Kg 09/11/24 12:50 09/11/24 23:18 Bromodichloromethane 0.0054 ND 0.039 mg/Kg 09/11/24 12:50 09/11/24 23:18 0.0044 Bromoform ND 0.039 mg/Kg 09/11/24 12:50 09/11/24 23:18 ND 0.037 Bromomethane 0.098 mg/Kg 09/11/24 12:50 09/11/24 23:18 Carbon tetrachloride ND 0.020 0.0043 mg/Kg 09/11/24 12:50 09/11/24 23:18 0.039 0.0047 mg/Kg 09/11/24 12:50 09/11/24 23:18 Chlorobenzene 9.3 Chloroethane 0.078 0.021 09/11/24 12:50 09/11/24 23:18 ND mg/Kg Chloroform ND 09/11/24 12:50 0.020 0.0041 mg/Kg 09/11/24 23:18 Chloromethane ND 0.059 0.0099 mg/Kg 09/11/24 12:50 09/11/24 23:18 cis-1.2-Dichloroethene ND 0.059 0.012 mg/Kg 09/11/24 12:50 09/11/24 23:18 cis-1,3-Dichloropropene ND 0.020 0.0039 mg/Kg 09/11/24 12:50 09/11/24 23:18 Dibromochloromethane ND 0.020 0.0048 mg/Kg 09/11/24 12:50 09/11/24 23:18 Dibromomethane ND 0.0073 mg/Kg 0.039 ₩ 09/11/24 12:50 09/11/24 23:18 Dichlorodifluoromethane ND 0.25 0.045 mg/Kg 09/11/24 12:50 09/11/24 23:18 Ethylbenzene ND 0.039 0.0089 mg/Kg 09/11/24 12:50 09/11/24 23:18 Hexachlorobutadiene ND 0.098 0.023 mg/Kg 09/11/24 12:50 09/11/24 23:18 0.0084 ND Isopropylbenzene 0.039 mg/Kg 09/11/24 12:50 09/11/24 23:18 Methyl tert-butyl ether 0.039 0.0059 09/11/24 12:50 09/11/24 23:18 ND mg/Kg ND Methylene Chloride 0.25 0.026 mg/Kg 09/11/24 12:50 09/11/24 23:18 m-Xylene & p-Xylene ND 0.039 0.0070 mg/Kg 09/11/24 12:50 09/11/24 23:18 Naphthalene ND 09/11/24 23:18 0.15 0.038 mg/Kg 09/11/24 12:50 n-Butylbenzene ND 0.039 0.018 mg/Kg ₩ 09/11/24 12:50 09/11/24 23:18 09/11/24 23:18 N-Propylbenzene ND 0.039 0.015 mg/Kg 09/11/24 12:50

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143465-1

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-34-SO-48-20240830

Lab Sample ID: 580-143465-7 Date Collected: 08/30/24 13:35

**Matrix: Solid** Date Received: 09/03/24 14:15 Percent Solids: 86.9

Method: SW846 8260D - Volati Analyte	_	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND	Qualifier	0.039	0.0049		— <u>=</u>	09/11/24 12:50	09/11/24 23:18	1
sec-Butvlbenzene	ND		0.039	0.0043		₩	09/11/24 12:50	09/11/24 23:18	1
Styrene	ND		0.039		mg/Kg			09/11/24 23:18	
t-Butylbenzene	ND		0.039	0.0076		₩.	09/11/24 12:50	09/11/24 23:18	1
Tetrachloroethene	ND		0.039	0.0052	0 0	₩	09/11/24 12:50	09/11/24 23:18	1
Toluene	ND		0.059		mg/Kg		09/11/24 12:50	09/11/24 23:18	1
trans-1,2-Dichloroethene	ND		0.059		mg/Kg	₩	09/11/24 12:50	09/11/24 23:18	1
trans-1,3-Dichloropropene	ND		0.039	0.0069	mg/Kg	₩	09/11/24 12:50	09/11/24 23:18	1
Trichloroethene	ND		0.039	0.010	mg/Kg		09/11/24 12:50	09/11/24 23:18	1
Trichlorofluoromethane	ND		0.078	0.026	mg/Kg	₩	09/11/24 12:50	09/11/24 23:18	1
Vinyl chloride	ND		0.098	0.018	mg/Kg	₽	09/11/24 12:50	09/11/24 23:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		80 - 121				09/11/24 12:50	09/11/24 23:18	1
4-Bromofluorobenzene (Surr)	98		80 - 120				09/11/24 12:50	09/11/24 23:18	1
Dibromofluoromethane (Surr)	97		80 - 120				09/11/24 12:50	09/11/24 23:18	1
Toluene-d8 (Surr)	102		80 - 120				09/11/24 12:50	09/11/24 23:18	1
General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids (SM22 2540G)	86.9		0.1	0.1	%			09/10/24 09:59	1
Percent Moisture (SM22 2540G)	13.1		0.1	0.1	%			09/10/24 09:59	1

## **QC Sample Results**

Client: ERM-West Job ID: 580-143465-1

Project/Site: Arkema PDI Sampling

## Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-471075/3-A

Matrix: Solid

Client Sample ID: Method Blank

Prep Type: Total/NA

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		1		

Analysis Batch: 471105	MR	MB						Prep Batch:	<del>-</del> , 10/5
Analyte		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.020	0.0050		_ <u>-</u>	09/11/24 12:48		1
1,1,1-Trichloroethane	ND		0.040	0.0046			09/11/24 12:48		1
1,1,2,2-Tetrachloroethane	ND		0.020	0.0076			09/11/24 12:48		1
1,1,2-Trichloroethane	ND		0.020	0.0074			09/11/24 12:48		· · · · · · · 1
1,1-Dichloroethane	ND		0.040	0.0092			09/11/24 12:48		1
1,1-Dichloroethene	ND		0.040		mg/Kg		09/11/24 12:48		1
1,1-Dichloropropene	ND		0.040	0.0053			09/11/24 12:48		
1,2,3-Trichlorobenzene	ND ND		0.040		mg/Kg		09/11/24 12:48		1
	ND		0.040				09/11/24 12:48		
1,2,3-Trichloropropane	ND		0.040		mg/Kg		09/11/24 12:48		1
1,2,4-Trichlorobenzene					mg/Kg				1
1,2,4-Trimethylbenzene	ND		0.040		mg/Kg		09/11/24 12:48		1
1,2-Dibromo-3-Chloropropane	ND		0.060		mg/Kg		09/11/24 12:48		1
1,2-Dibromoethane	ND		0.020	0.0038			09/11/24 12:48		1
1,2-Dichlorobenzene	ND		0.040	0.0087	0 0		09/11/24 12:48		1
1,2-Dichloroethane	ND		0.020	0.0055			09/11/24 12:48		
1,2-Dichloropropane	ND		0.020	0.0066			09/11/24 12:48		1
1,3,5-Trimethylbenzene	ND		0.040	0.0076			09/11/24 12:48		1
1,3-Dichlorobenzene	ND		0.060		mg/Kg		09/11/24 12:48	09/11/24 20:34	1
1,3-Dichloropropane	ND		0.060	0.0056			09/11/24 12:48	09/11/24 20:34	1
1,4-Dichlorobenzene	ND		0.060	0.011	mg/Kg		09/11/24 12:48	09/11/24 20:34	1
2,2-Dichloropropane	ND		0.040		mg/Kg		09/11/24 12:48	09/11/24 20:34	1
2-Chlorotoluene	ND		0.040	0.0088	mg/Kg		09/11/24 12:48	09/11/24 20:34	1
4-Chlorotoluene	ND		0.040	0.0098	mg/Kg		09/11/24 12:48	09/11/24 20:34	1
4-Isopropyltoluene	0.0126	J	0.040	0.010	mg/Kg		09/11/24 12:48	09/11/24 20:34	1
Benzene	ND		0.020	0.0038	mg/Kg		09/11/24 12:48	09/11/24 20:34	1
Bromobenzene	ND		0.040	0.0042	mg/Kg		09/11/24 12:48	09/11/24 20:34	1
Bromochloromethane	ND		0.040	0.0062	mg/Kg		09/11/24 12:48	09/11/24 20:34	1
Bromodichloromethane	ND		0.040	0.0055	mg/Kg		09/11/24 12:48	09/11/24 20:34	1
Bromoform	ND		0.040	0.0045	mg/Kg		09/11/24 12:48	09/11/24 20:34	1
Bromomethane	ND		0.10	0.038	mg/Kg		09/11/24 12:48	09/11/24 20:34	1
Carbon tetrachloride	ND		0.020	0.0044			09/11/24 12:48	09/11/24 20:34	1
Chlorobenzene	ND		0.040	0.0048			09/11/24 12:48		1
Chloroethane	ND		0.080		mg/Kg		09/11/24 12:48		1
Chloroform	ND		0.020	0.0042			09/11/24 12:48		1
Chloromethane	ND		0.060		mg/Kg		09/11/24 12:48		1
cis-1,2-Dichloroethene	ND		0.060		mg/Kg		09/11/24 12:48		1
cis-1,3-Dichloropropene	ND		0.020	0.0040			09/11/24 12:48		 1
Dibromochloromethane	ND		0.020	0.0049			09/11/24 12:48		1
Dibromomethane	ND		0.020	0.0074	0 0		09/11/24 12:48		1
Dichlorodifluoromethane	ND		0.25		mg/Kg		09/11/24 12:48		· · · · · · · · · · · · · · · · · · ·
Ethylbenzene	ND		0.040	0.0091			09/11/24 12:48		1
Hexachlorobutadiene	0.0428	1	0.10		0 0				1
					mg/Kg		09/11/24 12:48		
Isopropylbenzene Methyl text butyl other	ND		0.040	0.0086			09/11/24 12:48		1
Methylana Chlorida	ND		0.040	0.0060			09/11/24 12:48		1
Methylene Chloride	0.0597	J	0.25		mg/Kg		09/11/24 12:48		1
m-Xylene & p-Xylene	ND		0.040	0.0071			09/11/24 12:48		1
Naphthalene	ND		0.15		mg/Kg		09/11/24 12:48		1
n-Butylbenzene	0.0196	J	0.040	0.019	mg/Kg		09/11/24 12:48	09/11/24 20:34	1

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143465-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-471075/3-A

**Matrix: Solid** 

**Analysis Batch: 471105** 

Client Sample ID: Method Blank

**Prep Type: Total/NA** 

**Prep Batch: 471075** 

	MB	MB							
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	MD		0.040	0.015	mg/Kg		09/11/24 12:48	09/11/24 20:34	1
o-Xylene	ND		0.040	0.0050	mg/Kg		09/11/24 12:48	09/11/24 20:34	1
sec-Butylbenzene	ND		0.040	0.0086	mg/Kg		09/11/24 12:48	09/11/24 20:34	1
Styrene	ND		0.040	0.013	mg/Kg		09/11/24 12:48	09/11/24 20:34	1
t-Butylbenzene	ND		0.040	0.0077	mg/Kg		09/11/24 12:48	09/11/24 20:34	1
Tetrachloroethene	ND		0.040	0.0053	mg/Kg		09/11/24 12:48	09/11/24 20:34	1
Toluene	ND		0.060	0.014	mg/Kg		09/11/24 12:48	09/11/24 20:34	1
trans-1,2-Dichloroethene	ND		0.060	0.015	mg/Kg		09/11/24 12:48	09/11/24 20:34	1
trans-1,3-Dichloropropene	ND		0.040	0.0070	mg/Kg		09/11/24 12:48	09/11/24 20:34	1
Trichloroethene	ND		0.040	0.010	mg/Kg		09/11/24 12:48	09/11/24 20:34	1
Trichlorofluoromethane	ND		0.080	0.026	mg/Kg		09/11/24 12:48	09/11/24 20:34	1
Vinyl chloride	ND		0.10	0.019	mg/Kg		09/11/24 12:48	09/11/24 20:34	1
I and the second second second second second second second second second second second second second second se									

MB MB

Surrogate	%Recovery Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100	80 - 121	09/11/24 12:48	09/11/24 20:34	1
4-Bromofluorobenzene (Surr)	99	80 - 120	09/11/24 12:48	09/11/24 20:34	1
Dibromofluoromethane (Surr)	101	80 - 120	09/11/24 12:48	09/11/24 20:34	1
Toluene-d8 (Surr)	103	80 - 120	09/11/24 12:48	09/11/24 20:34	1

Lab Sample ID: LCS 580-471075/1-A

**Matrix: Solid** 

Analysis Batch: 471105

**Client Sample ID: Lab Control Sample** 

**Prep Type: Total/NA** 

**Prep Batch: 471075** 

Analysis Batch. 47 1100	Spike	LCS	LCS				%Rec
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits
1,1,1,2-Tetrachloroethane	0.800	0.864		mg/Kg		108	79 - 128
1,1,1-Trichloroethane	0.800	0.788		mg/Kg		99	78 - 135
1,1,2,2-Tetrachloroethane	0.800	0.907		mg/Kg		113	77 - 122
1,1,2-Trichloroethane	0.800	0.769		mg/Kg		96	80 - 123
1,1-Dichloroethane	0.800	0.744		mg/Kg		93	78 - 126
1,1-Dichloroethene	0.800	0.675		mg/Kg		84	73 - 134
1,1-Dichloropropene	0.800	0.806		mg/Kg		101	76 - 140
1,2,3-Trichlorobenzene	0.800	0.827		mg/Kg		103	58 - 146
1,2,3-Trichloropropane	0.800	0.943		mg/Kg		118	77 - 127
1,2,4-Trichlorobenzene	0.800	0.830		mg/Kg		104	74 - 131
1,2,4-Trimethylbenzene	0.800	0.852		mg/Kg		106	73 - 138
1,2-Dibromo-3-Chloropropane	0.800	0.884		mg/Kg		111	64 - 129
1,2-Dibromoethane	0.800	0.893		mg/Kg		112	77 - 123
1,2-Dichlorobenzene	0.800	0.782		mg/Kg		98	78 - 126
1,2-Dichloroethane	0.800	0.757		mg/Kg		95	76 - 124
1,2-Dichloropropane	0.800	0.763		mg/Kg		95	73 - 130
1,3,5-Trimethylbenzene	0.800	0.806		mg/Kg		101	72 - 134
1,3-Dichlorobenzene	0.800	0.725		mg/Kg		91	78 - 132
1,3-Dichloropropane	0.800	0.853		mg/Kg		107	80 - 120
1,4-Dichlorobenzene	0.800	0.748		mg/Kg		94	77 - 123
2,2-Dichloropropane	0.800	0.748		mg/Kg		94	75 - 134
2-Chlorotoluene	0.800	0.789		mg/Kg		99	77 - 134
4-Chlorotoluene	0.800	0.777		mg/Kg		97	71 - 137
4-Isopropyltoluene	0.800	0.811		mg/Kg		101	71 - 142

**Eurofins Seattle** 

## **QC Sample Results**

Spike

Client: ERM-West Job ID: 580-143465-1

LCS LCS

Project/Site: Arkema PDI Sampling

### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-471075/1-A

Matrix: Solid

Vinyl chloride

**Analysis Batch: 471105** 

**Client Sample ID: Lab Control Sample** 

1eh	Type. Total/NA
rep	Batch: 471075
∕₀Rec	

Analyte	Added	Result	Qualifier Unit	D %Rec	Limits	
Benzene	0.800	0.791	mg/Kg	99	79 - 135	
Bromobenzene	0.800	0.782	mg/Kg	98	78 - 126	
Bromochloromethane	0.800	0.750	mg/Kg	94	76 - 131	
Bromodichloromethane	0.800	0.839	mg/Kg	105	78 - 125	
Bromoform	0.800	0.825	mg/Kg	103	71 - 130	
Bromomethane	0.800	0.739	mg/Kg	92	55 - 150	
Carbon tetrachloride	0.800	0.685	mg/Kg	86	76 - 140	
Chlorobenzene	0.800	0.761	mg/Kg	95	80 - 125	
Chloroethane	0.800	0.657	mg/Kg	82	26 - 150	
Chloroform	0.800	0.760	mg/Kg	95	74 - 133	
Chloromethane	0.800	0.627	mg/Kg	78	52 - 142	
cis-1,2-Dichloroethene	0.800	0.750	mg/Kg	94	80 - 125	
cis-1,3-Dichloropropene	0.800	0.695	mg/Kg	87	80 - 122	
Dibromochloromethane	0.800	0.758	mg/Kg	95	75 - 125	
Dibromomethane	0.800	0.817	mg/Kg	102	72 - 130	
Dichlorodifluoromethane	0.800	0.653	mg/Kg	82	33 - 150	
Ethylbenzene	0.800	0.814	mg/Kg	102	80 - 135	
Hexachlorobutadiene	0.800	0.761	mg/Kg	95	65 - 145	
Isopropylbenzene	0.800	0.921	mg/Kg	115	80 - 131	
Methyl tert-butyl ether	0.800	0.901	mg/Kg	113	71 - 126	
Methylene Chloride	0.800	0.697	mg/Kg	87	56 - 140	
m-Xylene & p-Xylene	0.800	0.778	mg/Kg	97	80 - 132	
Naphthalene	0.800	0.985	mg/Kg	123	56 - 145	
n-Butylbenzene	0.800	0.791	mg/Kg	99	69 - 143	
N-Propylbenzene	0.800	0.803	mg/Kg	100	78 - 133	
o-Xylene	0.800	0.804	mg/Kg	101	80 - 132	
sec-Butylbenzene	0.800	0.804	mg/Kg	100	71 - 143	
Styrene	0.800	0.832	mg/Kg	104	79 - 129	
t-Butylbenzene	0.800	0.814	mg/Kg	102	72 - 144	
Tetrachloroethene	0.800	0.824	mg/Kg	103	75 - 141	
Toluene	0.800	0.749	mg/Kg	94	75 - 125	
trans-1,2-Dichloroethene	0.800	0.734	mg/Kg	92	77 - 134	
trans-1,3-Dichloropropene	0.800	0.767	mg/Kg	96	80 - 121	
Trichloroethene	0.800	0.830	mg/Kg	104	80 - 134	
Trichlorofluoromethane	0.800	0.689	mg/Kg	86	71 - 150	

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96		80 - 121
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	94		80 - 120
Toluene-d8 (Surr)	101		80 - 120

0.800

0.723

mg/Kg

90

62 - 144

## **QC Sample Results**

Spike

Client: ERM-West Job ID: 580-143465-1

LCSD LCSD

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-471075/2-A

**Matrix: Solid** 

Benzene

Bromobenzene

**Analysis Batch: 471105** 

Client Sample ID: Lab Control Sample Dup

108

113

mg/Kg

mg/Kg

79 - 135

78 - 126

%Rec

Prep Type: Total/NA

**RPD** 

20

20

20

20

20

26

20

20

40

20

40

20

20

20

40

31

20

36

14

**Prep Batch: 471075** 

Bromochloromethane 0.800 0.840 105 76 - 131 mg/Kg 11 0.908 Bromodichloromethane 0.800 mg/Kg 113 78 - 125 8 Bromoform 0.800 0.850 mg/Kg 106 71 - 130 Bromomethane 0.800 0.800 mg/Kg 100 55 - 150 mg/Kg Carbon tetrachloride 0.800 0.767 96 76 - 14011 Chlorobenzene 0.800 0.823 103 80 - 125 mg/Kg 91 Chloroethane 0.800 0.731 mg/Kg 26 - 150 11 Chloroform 0.800 0.854 mg/Kg 107 74 - 133 12 Chloromethane 0.800 0.678 85 52 - 142 8 mg/Kg cis-1,2-Dichloroethene 0.800 0.832 mg/Kg 104 80 - 125 10 cis-1,3-Dichloropropene 0.800 0.747 mg/Kg 93 80 - 122 7

0.864

0.901

0.800

0.800

Dibromochloromethane 0.800 0.802 mg/Kg 100 75 - 125 6 Dibromomethane 0.800 0.883 mg/Kg 110 72 - 1308 Dichlorodifluoromethane 0.800 0.699 mg/Kg 87 33 - 150 Ethylbenzene 0.800 0.868 mg/Kg 109 80 - 135 0.800 0.861 108 Hexachlorobutadiene mg/Kg 65 - 145 12 Isopropylbenzene 0.800 125 80 - 131 8 0.997 mg/Kg

20 Methyl tert-butyl ether 0.800 0.976 mg/Kg 122 71 - 1268 20 Methylene Chloride 0.800 0.754 mg/Kg 94 56 - 140 20 0.800 106 m-Xylene & p-Xylene 0.849 mg/Kg 80 - 132 9 20 Naphthalene 0.800 1.06 mg/Kg 133 56 - 145 8 25 0.890 n-Butylbenzene 0.800 mg/Kg 111 69 - 143 31

**Eurofins Seattle** 

Client: ERM-West Job ID: 580-143465-1

Project/Site: Arkema PDI Sampling

#### Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-471075/2-A

**Matrix: Solid** 

**Analysis Batch: 471105** 

**Client Sample ID: Lab Control Sample Dup** 

Prep Type: Total/NA

**Prep Batch: 471075** 

	Spike	LCSD	LCSD				%Rec		RPD
Analyte	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
N-Propylbenzene	0.800	0.909		mg/Kg		114	78 - 133	12	24
o-Xylene	0.800	0.888		mg/Kg		111	80 - 132	10	20
sec-Butylbenzene	0.800	0.923		mg/Kg		115	71 - 143	14	29
Styrene	0.800	0.907		mg/Kg		113	79 - 129	9	20
t-Butylbenzene	0.800	0.924		mg/Kg		116	72 - 144	13	27
Tetrachloroethene	0.800	0.863		mg/Kg		108	75 - 141	5	20
Toluene	0.800	0.814		mg/Kg		102	75 - 125	8	20
trans-1,2-Dichloroethene	0.800	0.809		mg/Kg		101	77 - 134	10	20
trans-1,3-Dichloropropene	0.800	0.823		mg/Kg		103	80 - 121	7	20
Trichloroethene	0.800	0.924		mg/Kg		116	80 - 134	11	20
Trichlorofluoromethane	0.800	0.764		mg/Kg		95	71 - 150	10	30
Vinyl chloride	0.800	0.776		mg/Kg		97	62 - 144	7	20

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		80 - 121
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	98		80 - 120
Toluene-d8 (Surr)	101		80 - 120

Lab Sample ID: MB 580-471184/3-A

**Matrix: Solid** 

**Analysis Batch: 471185** 

Client Sample ID: Method Blank

Prep Type: Total/NA

**Prep Batch: 471184** 

MB MB

Chlorobenzene         ND         0.040         0.040         mg/Kg         09/12/24 09:06         09/12/24 10	Analyte	Result Qualifier	KL	MDL	Unit	ט	Prepared	Anaiyzed	DII F
		ND ND	0.040	0.0048	mg/Kg		09/12/24 09:06	09/12/24 10:25	

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac	
1,2-Dichloroethane-d4 (Surr)	103		80 - 121	09/12/24 09:06	09/12/24 10:25	1	
4-Bromofluorobenzene (Surr)	99		80 - 120	09/12/24 09:06	09/12/24 10:25	1	
Dibromofluoromethane (Surr)	103		80 - 120	09/12/24 09:06	09/12/24 10:25	1	
Toluene-d8 (Surr)	100		80 - 120	09/12/24 09:06	09/12/24 10:25	1	

Lab Sample ID: LCS 580-471184/1-A

**Matrix: Solid** 

**Analysis Batch: 471185** 

**Client Sample ID: Lab Control Sample** Prep Type: Total/NA

**Prep Batch: 471184** 

%Rec

LCS LCS Spike Analyte Added Result Qualifier Unit D %Rec Limits Chlorobenzene 0.800 0.726 91 80 - 125 mg/Kg

LCS LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		80 - 121
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	96		80 - 120
Toluene-d8 (Surr)	100		80 - 120

**Eurofins Seattle** 

## **QC Sample Results**

Client: ERM-West Job ID: 580-143465-1

Project/Site: Arkema PDI Sampling

## Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-471184/2-A **Client Sample ID: Lab Control Sample Dup Prep Type: Total/NA** 

**Matrix: Solid** 

**Analysis Batch: 471185 Prep Batch: 471184** 

Spike	LCSD	LCSD				%Rec		RPD
Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
0.800	0.767		mg/Kg		96	80 - 125	6	20
		Added Result	Added Result Qualifier	Added Result Qualifier Unit	Added Result Qualifier Unit D	Added Result Qualifier Unit D %Rec	Added Result Qualifier Unit D %Rec Limits	Added Result Qualifier Unit D %Rec Limits RPD

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		80 - 121
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	95		80 - 120
Toluene-d8 (Surr)	101		80 - 120

Method: 2540G - SM 2540G

Lab Sample ID: 580-143465-1 DU Client Sample ID: PDI-34-SO-34.5-20240830 **Prep Type: Total/NA** 

**Matrix: Solid** 

**Analysis Batch: 470903** 

	Sample	Sample	DU	DU				RPD
Analyte	Result	Qualifier	Result	Qualifier	Unit	D	RPD	Limit
Percent Solids	79.7		75.1		%		 6	20
Percent Moisture	20.3		24.9		%		20	20

Client: ERM-West

Project/Site: Arkema PDI Sampling

Client Sample ID: PDI-34-SO-34.5-20240830

Date Collected: 08/30/24 09:10

Lab Sample ID: 580-143465-1

Lab Sample ID: 580-143465-3

Matrix: Solid

Job ID: 580-143465-1

Date Received: 09/03/24 14:15

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	470903	JL	EET SEA	09/10/24 09:59

Client Sample ID: PDI-34-SO-34.5-20240830

Lab Sample ID: 580-143465-1 Date Collected: 08/30/24 09:10

**Matrix: Solid** Date Received: 09/03/24 14:15 Percent Solids: 79.7

Batch Batch Dilution Batch **Prepared Prep Type** Type Method Run **Factor Number Analyst** Lab or Analyzed Total/NA Prep 5035 471075 BYM FFT SFA 09/11/24 12:50 EET SEA Total/NA Analysis 8260D 471105 K1K 09/11/24 21:35

Client Sample ID: PDI-34-SO-38.9-20240830

Lab Sample ID: 580-143465-2

Date Collected: 08/30/24 09:15 **Matrix: Solid** 

Date Received: 09/03/24 14:15

Dilution Batch Batch Prepared Batch Method Run Factor **Number Analyst** or Analyzed **Prep Type** Type Lab 09/10/24 09:59 Total/NA 2540G 470903 JL EET SEA Analysis

Client Sample ID: PDI-34-SO-38.9-20240830 Lab Sample ID: 580-143465-2 Date Collected: 08/30/24 09:15 Matrix: Solid

Date Received: 09/03/24 14:15 Percent Solids: 81.0

Batch Batch Dilution Batch Prepared Method Number Analyst Factor or Analyzed **Prep Type** Type Run Lab EET SEA 09/11/24 12:50 Total/NA 5035 471075 BYM Prep Total/NA Analysis 8260D 471105 K1K EET SEA 09/11/24 21:56 1

Client Sample ID: PDI-34-SO-39.5-20240830

Date Collected: 08/30/24 09:20 Matrix: Solid

Date Received: 09/03/24 14:15

Batch Batch Dilution Batch Prepared **Prep Type** Type Method Run Factor **Number Analyst** or Analyzed Lab 09/10/24 09:59 Total/NA 2540G 470903 JL EET SEA Analysis

Client Sample ID: PDI-34-SO-39.5-20240830 Lab Sample ID: 580-143465-3

Date Collected: 08/30/24 09:20 Matrix: Solid

Date Received: 09/03/24 14:15 Percent Solids: 92.0

Dilution Batch Batch Batch Prepared or Analyzed **Prep Type** Type Method Run Factor Number Analyst Lab 09/11/24 12:50 Total/NA Prep 5035 471075 BYM EET SEA Total/NA 8260D EET SEA 09/11/24 22:16 Analysis 1 471105 K1K

Client Sample ID: PDI-34-SO-59.5-20240830

Lab Sample ID: 580-143465-4 Date Collected: 08/30/24 12:55 Matrix: Solid

Date Received: 09/03/24 14:15

	Batch	Batch		Dilution	Batch			Prepared	
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed	
Total/NA	Analysis	2540G			470903	JL	EET SEA	09/10/24 09:59	

**Eurofins Seattle** 

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Job ID: 580-143465-1

Project/Site: Arkema PDI Sampling

Client: ERM-West

Client Sample ID: PDI-34-SO-59.5-20240830

Date Collected: 08/30/24 12:55 Date Received: 09/03/24 14:15 Lab Sample ID: 580-143465-4

**Matrix: Solid** 

Percent Solids: 94.0

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			471075	BYM	EET SEA	09/11/24 12:50
Total/NA	Analysis	8260D		1	471105	K1K	EET SEA	09/11/24 22:37
Total/NA	Prep	5035	DL		471184	BYM	EET SEA	09/12/24 09:06
Total/NA	Analysis	8260D	DL	1	471185	TL1	EET SEA	09/12/24 12:30

Client Sample ID: TB-01-SO-20240830

Date Collected: 08/30/24 00:01

Date Received: 09/03/24 14:15

Lab Sample ID: 580-143465-5

**Matrix: Solid** 

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			471075	BYM	EET SEA	09/11/24 12:50
Total/NA	Analysis	8260D		1	471105	K1K	EET SEA	09/11/24 20:54

Client Sample ID: PDI-34-SO-46-20240830

Date Collected: 08/30/24 13:05

**Matrix: Solid** Date Received: 09/03/24 14:15

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	470903	JL	EET SEA	09/10/24 09:59

Client Sample ID: PDI-34-SO-46-20240830

Date Collected: 08/30/24 13:05

Date Received: 09/03/24 14:15

Lab Sample	ID:	580-143465-6
------------	-----	--------------

Lab Sample ID: 580-143465-6

Percent Solids: 92.6

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035		<u> </u>	471075	BYM	EET SEA	09/11/24 12:50
Total/NA	Analysis	8260D		1	471105	K1K	EET SEA	09/11/24 22:58

Client Sample ID: PDI-34-SO-48-20240830

Date Collected: 08/30/24 13:35

Date Received: 09/03/24 14:15

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	2540G		1	470903	JL	EET SEA	09/10/24 09:59

Client Sample ID: PDI-34-SO-48-20240830

Date Collected: 08/30/24 13:35

Date Received: 09/03/24 14:15

Lab Sample ID:	580-143465-7
_	Matrix: Solid

Lab Sample ID: 580-143465-7

Percent Solids: 86.9

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Prep	5035			471075	BYM	EET SEA	09/11/24 12:50
Total/NA	Analysis	8260D		1	471105	K1K	EET SEA	09/11/24 23:18

Laboratory References:

EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

**Eurofins Seattle** 

**Matrix: Solid** 

**Matrix: Solid** 

# **Accreditation/Certification Summary**

Client: ERM-West Job ID: 580-143465-1

Project/Site: Arkema PDI Sampling

# **Laboratory: Eurofins Seattle**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	thority Program		Identification Number	Expiration Date
Oregon	NELA	)	4167	07-07-25
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9 ,	•	•	not certified by the governing author	ity. This list may include an
9 ,	s are included in this repo does not offer certification	•	not certified by the governing author	ity. This list may include an
9 ,	•	•	not certified by the governing author  Analyte	ity. This list may include an

**Eurofins Seattle** 

# **Sample Summary**

Client: ERM-West

580-143465-6

580-143465-7

Project/Site: Arkema PDI Sampling

PDI-34-SO-46-20240830

PDI-34-SO-48-20240830

Lab Sample ID **Client Sample ID** Matrix Collected Received 580-143465-1 PDI-34-SO-34.5-20240830 Solid 08/30/24 09:10 09/03/24 14:15 580-143465-2 PDI-34-SO-38.9-20240830 08/30/24 09:15 09/03/24 14:15 Solid 580-143465-3 PDI-34-SO-39.5-20240830 Solid 08/30/24 09:20 09/03/24 14:15 Solid 580-143465-4 PDI-34-SO-59.5-20240830 08/30/24 12:55 09/03/24 14:15 580-143465-5 TB-01-SO-20240830 Solid 08/30/24 00:01 09/03/24 14:15

Solid

Solid

08/30/24 13:05 09/03/24 14:15

08/30/24 13:35 09/03/24 14:15

Job ID: 580-143465-1

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# **Eurofins Seattle**

5755 8th Street East Tacoma, WA 98424

# **Chain of Custody Record**

eurotins		eurofins
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Client Information	Sampler:				PM:					Carrier Tr	acking No(s):		Ic	Environment Test
Client Contact: Avery Soplata	Phone:			E-A	Mail:	Sheri L				5	80-62781-19269.12			
Company: ERM-West			PWSID:	Sh	eri.Cruz@	et.e	ırofins	us.com		State of U	ngin:		P	age: Page of
Address:	Due Dete De							Analys	is Rec	uested				ob #:
1050 SW 6th Avenue Suite 1650 City:	Due Date Reque									ucoted		TI	P	reservation Codes:
Portland	TAT Requested	(days):										11	F.	- MeOH - NaHSO4
State, Zip: OR, 97204	Compliance						ks							- HCL
Phone:	Compliance Proj	ect: A Yes	Δ Νο				t blanks							
Email:	0732436.301 WO#:				9	. l	equipment		11					
avery.soplata@erm.com Project Name:	VVO #:				ž lo	MeOH	를 다							
Arkema - PDI Investigation	Project #: 58020754				38	ndard list Me	dist						E	
ite:	SSOW#:				훒	anda						Condelino		
	-				S I	88, 84	38, Sta					3	Oth	er:
			Sample	Matrix	ğ	Volatiles	Volatiles					Total Number of		
sample Identification		Sample	Type (C=comp,	(W=water, S=solid, O=waste/oil,	E P	, , ,						N Can		
	Sample Date	Time	G=grab)	BT=Tiesus, A=Air)	Field		8260D					otal		Special I
201-34-50-34,5-20240830	as la lau	20	0	tion Code:	XXF.	E	Α					X		Special Instructions/Note:
POT-34-S0-35.9-20140830	08/30/2024		6	S	12	1	$\sqcup$					2		
OI-34-50-39,5-20240830	08/30/2024		G	S	λ							2		
POT DIL CO TOF AND HAD SO	08/30/2024		G	S	X							2		
POT-34-50-59526240830	08/30/2024	1255	G	S	X					11	+++	2	-	
PDI 34-50 TB-01-50-10240830	08/30/2024			S	1				1	++	+-+-		-	
M-34-50-46-20140830	08/30/2024	1305	6	5	X					++	+++	1	-	
DT-34-50-48-20248830	58/30/2024		G	S	X	+-			-	+	+++	2		
	0-71900-1	1000	G.	2	1/	-				+	J   .	121		TO THE PART OF THE PARTY OF THE
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ssible Hazard Identification														of Custody
Non-Hazard Flammable Skin Irritant Poison	B Unknow	wn 🗆 Poo	dialogical		Sample	Disp	osal (	A fee may t	e asses	ssed if sa	mpies are i	retained	d long	ger tnan 1 month)
liverable Requested: I, II, III, IV, Other (specify)	Onniov	m Rac	uologicai			olu,,,	1000	ent /QC Require	LJISDO	sal By La	ь	Archive	e For	Months
pty Kit Relinquished by:	In	ate:		1=		əu u	Cuoris/	Require	ments:					1.1.1.10
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				Page 30		· Unip	(1)	o, Cand Other	remarks:	2	- 13.	3	D	DX S( )29/17/2

Client: ERM-West Job Number: 580-143465-1

Login Number: 143465 List Source: Eurofins Seattle

List Number: 1

Creator: O'Connell, Jason I

Grouter: G Common, Guesti I		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

**Eurofins Seattle** 



# APPENDIX C DATA VALIDATION MEMO





## **MFMO**

ТО	Sarah Seekins
FROM	Rachel James
DATE	2024-10-22
REFERENCE	0732445
SUBJECT	Data Review of Arkema, 2024 Pre-Design Investigation Samples. Samples Collected July-August 2024: Eurofins, Data Package(s) 580-141924-1, 580-141999-1, 580-142079-1, 580-142079-2, 580-142190-1 Rev(1), 580-142311-1, 580-142413-1, 580-142513-1, 580-142513-2, 580-142621-1, 580-142622-1 Rev(1), 580-142622-2, 580-142622-3, 580-142691-1, 580-142813-1, 580-142896-1, 580-143009-1, 580-143092-1, 580-143177-1, 580-143296-1, 580-143405-1, and 580-143465-1.

Environmental Resources Management, Inc. (ERM) assessed the data quality and applied any necessary qualifiers following the *USEPA National Functional Guidelines for Organic Superfund Methods Data Review*, November 2020 and *USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review*, November 2020. Field duplicates were assessed following *Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures*, September 2020.

ERM performed a Stage 2A data validation on 100 percent of the laboratory data.

ERM reviewed the following items as part of the data validation.

- Chain of Custody: The chains of custody were reviewed for proper completion and that the laboratory performed the requested methods and reported the requested target analytes for each sample.
- Dilutions and Reanalysis: Dilutions, calibration ranges, and reanalyses were reviewed as applicable. The best result was chosen when more than one result was reported as final.
- Case Narrative: The case narrative was reviewed for comments and any necessary qualifiers added.
- Sample Preservation: The appropriate temperature and chemical preservation requirements were reviewed. Headspace for volatile sample analysis was reviewed.
- **Holding Times**: The period of time between collection of the sample and preparation/analysis of the sample was evaluated.



- Laboratory Blank Samples: The preparation and analysis of reagent (contaminant-free) water was evaluated, along with the required frequency.
- **Field Blank Samples**: The collection and analysis of field blanks was evaluated. The reviewed data package(s) included the following associated field blanks: trip, equipment, and rinse.
- Laboratory Control Spike Samples: Laboratory control spike sample preparation frequency and recoveries were reviewed as applicable.
- Matrix Spike Samples: Matrix spike and post digestion spike sample preparation frequency and recoveries were reviewed as applicable.
- **Surrogate Spikes**: The addition of appropriate surrogates and their recoveries were evaluated.
- Isotope Dilution Analysis: The addition of appropriate isotopes and their recoveries were evaluated.
- Laboratory Duplicate Samples: Laboratory duplicate frequencies and recoveries were reviewed as applicable.
- **Field Duplicate Samples**: Field duplicate recoveries and/or absolute differences were reviewed as applicable.

Data validation findings are summarized in the sections below. As necessary, the following data quality flags were applied during validation. Professional judgment was used when multiple flags were applied to one result; therefore, the final flag may differ from the one presented in an individual table.

- J = estimated concentration
- J+ = the result is an estimated concentration, but may be biased high
- J- = the result is an estimated concentration, but may be biased low
- UJ = estimated reporting limit
- U = evaluated to be non-detected at the reporting limit
- R = rejected, data not usable
- NJ = tentative identification and estimated concentration

Validation outliers and any necessary data qualifications are summarized in tables at the end of this memo. The table below indicates the included validation tables with findings.

#### **List of Attached Tables**

Table 1: Samples with Non-Preferred Results



List of Attached Tables								
Table 2: Case Narrative Evaluation								
Table 3: Holding Time Evaluation								
Table 4: Laboratory Blank Evaluation								
Table 5: Field Blank Evaluation								
Table 6: Laboratory Control Spike Evaluation								
Table 7: Matrix Spike Evaluation								
Table 8: Surrogate Evaluation								
Table 9: Isotope Dilution Evaluation								
Table 10: Laboratory Duplicate Evaluation								
Table 11: Field Duplicate Evaluation								
Table 12: Calibration Range Evaluation								
Table 13: Professional Judgement Evaluation								

# CHAIN-OF-CUSTODY DISCREPANCIES

The laboratory did not note discrepancies between the chains-of-custody and the received sample containers, with the following exceptions.

- 580-142079-2 and 580-142622-3: ERM requested ignitability and pH analysis for samples PDI-03-SO-29.5-20240712, PDI-03-SO-39.5-20240712, PDI-19-SO-39-20240801, PDI-19-SO-42.4-20240801, and PDI-15-SO-38-20240725, which were not originally requested on the chain of custody. The laboratory performed the additional requested analyses.
- **580-142190-1 Rev(1)**: ERM requested dissolved organic carbon (DOC) for soil sample PDI-04-SO-35-20240716 with a variation to the method to filter a leachate batch. The laboratory was not set up to perform this analytical variation and the requested DOC analysis was cancelled.
- 580-142621-1, 580-142622-1 Rev(1), 580-142691-1, and 580-1431771: Dissolved organic carbon was requested for several samples in these data packages. ERM leached and filtered the samples in the field and submitted them preserved with sulfuric acid for analysis. Eurofins stated that they are not set up to filter preserved samples in the laboratory. They analyzed the samples as received and reported the results as total organic carbon.
- **580-142813-1**: Sample PDI-21-SO-20.2-20240808 was received, but was not listed on the chain of custody. The laboratory logged the sample in per the analyses noted on the containers.



### SAMPLES WITH NON-PREFERRED RESULTS

Samples referenced in Table 1 had more than one final result reported for a single analyte and method combination due to the following possible reasons.

- ND at higher reporting limit than secondary analysis
- · Lowest of two results, out of hold
- Out of hold
- Result exceeded calibration range

Non-preferred results are considered not reportable and should not be used for reporting or for decision making purposes. Non-preferred results have been excluded from the subsequent outlier tables in this report.

# CASE NARRATIVE EVALUATION

The laboratory observed additional issues encountered during sample preparation or analysis as noted in Table 2.

Case Narrative issues requiring additional professional judgement are detailed below.

• The laboratory noted in the case narrative for data package 580-142896-1 that significant matrix interferences prevented them from achieving a reportable result for 2,3,7,8-TCDF in sample PDI-24-SO-23.1-20240809.

# PRESERVATION EVALUATION

The laboratory received the sample shipments in good condition, within the method-prescribed temperature preservation requirements of less than 6°C, with acceptable sample pH values, and, as applicable, all vials for volatile analysis were received with no documented headspace.

#### HOLDING TIME EVALUATION

The samples were prepared and analyzed within the method-prescribed time period from the date of collection, with the exceptions and any necessary qualifications noted in Table 3.

Holding time situations requiring additional professional judgement are detailed below.

All volatile organic compound results except chlorobenzene for sample PDI-10-SO-37-20240730 in data package 580-142622-1 were qualified as out of hold by the laboratory; however, the sample was analyzed on the 14th day after collection. This meets the holding time of 14 days when counted by the day (the unit of the criterion) and the results were not qualified.



# LABORATORY BLANK EVALUATION

The laboratory blank sample results were non-detected for each of the target analytes, with the exceptions and any necessary qualifications noted in Table 4. The following criteria were taken into consideration when assessing blank contamination and applying any necessary qualifications:

- Non-detected results or results greater than five times the blank concentration (ten times for inorganics or common laboratory contaminants) were considered not affected by contamination and were not qualified.
- If results were associated with more than one blank, the greater of the two blank concentrations was used for applying qualifications.
- Results less than the reporting limit, as adjusted for dilution, were qualified as non-detect (U) at the sample reporting limit.
- Results within five times the blank concentration (ten times for inorganics or common laboratory contaminants), greater than the reporting limit, but less than the blank concentration, as adjusted for dilution, were qualified as nondetect (U) at the sample concentration.
- Results within five times the blank concentration (ten times for inorganics or common laboratory contaminants), greater than the reporting limit, and greater than the blank concentration, as adjusted for dilution, were qualified as estimates with a high bias (J+).

#### FIELD BLANK EVALUATION

The trip, equipment, and rinse blank sample results were non-detected for each of the target analytes, with the exceptions and any necessary qualifications noted in Table 5. Any field blank detections associated with laboratory blank contamination and qualified as non-detected (U) are not included in Table 5. The following criteria were taken into consideration when assessing blank contamination and applying any necessary qualifications:

- Non-detected results or results greater than five times the blank concentration (ten times for inorganics or common laboratory contaminants) were considered not affected by contamination and were not qualified.
- If results were associated with more than one blank, the greater of the two blank concentrations was used for applying qualifications.
- Results less than the reporting limit were qualified as non-detect (U) at the sample reporting limit.
- Results within five times the blank concentration (ten times for inorganics or common laboratory contaminants), greater than the reporting limit, but less



than the blank concentration were qualified as non-detect (U) at the sample concentration.

- Results within five times the blank concentration (ten times for inorganics or common laboratory contaminants), greater than the reporting limit, and greater than the blank concentration were qualified as estimates with a high bias (J+).
- Equipment and field blank results associated with method blank contamination were attributed to and qualified for laboratory introduced contamination. No additional qualifications were made to sample results based on the equipment and/or field blanks in these instances.

# LABORATORY CONTROL SPIKE EVALUATION

The laboratory control sample (LCS) recoveries and, if included, the laboratory control sample duplicate (LCSD) recoveries and relative percent differences (RPD) were within the laboratory's limits of acceptance, with the exceptions and any necessary qualifications noted in Table 6. Results were not qualified if the paired spiked sample recovery was acceptable, if high recoveries or RPDs were associated with non-detected results, or if the exception was not associated with reported results.

### MATRIX SPIKE EVALUATION

The matrix spike (MS) recoveries and, if included, the matrix spike duplicate (MSD) recoveries and RPDs were within the laboratory's limits of acceptance for target analytes for spiked project samples, with the exceptions and any necessary qualifications noted in Table 7. MS/MSDs performed on non-project parent samples, if included, are not representative of the matrix for this project and were therefore not reviewed or presented. Results were not qualified if the paired spiked sample recovery was acceptable, if high recoveries or RPDs were associated with non-detected results, if the parent sample result was greater than four times that of the spike, if the spike was diluted out, or if the exception was not associated with reported results.

#### SURROGATE EVALUATION

The surrogate recoveries were within the laboratory limits of acceptance, with the exceptions and any necessary qualifications noted in Table 8. Results were not qualified if the sample dilution factor was greater than or equal to 10, if high recoveries were associated with non-detected results, if only one acid or base/neutral surrogate for semivolatiles was out, if the affected surrogate was not associated with reported analytes, or if the affected sample was laboratory quality control.

Surrogate spike situations requiring additional professional judgement are detailed below.

• The pesticides surrogate tetrachloro-m-xylene was recovered within control limits for sample PDI-20-SO-9-20240807; therefore, the results were qualified



as estimated non-detects and were not rejected due to the zero percent decachlorobiphenyl surrogate recovery.

## ISOTOPE DILUTION EVALUATION

The isotope dilution standard recoveries were within the laboratory limits of acceptance, with the exceptions and any necessary qualifications noted in Table 9.

# LABORATORY DUPLICATE EVALUATION

The laboratory prepared project samples as laboratory duplicates. The RPDs between the primary sample and the duplicate were within laboratory control limits, with the exceptions and any necessary qualifications noted in Table 10. Results were not qualified if the results in the primary and/or duplicate sample were less than five times the reporting limit. Laboratory duplicates performed on non-project samples, if included, are not representative of the matrix for this project and were therefore not reviewed.

Laboratory duplicate situations requiring additional professional judgement are detailed below.

- The percent moisture results for samples PDI-06-SO-38.7-20240718, PDI-16-SO-52.5-20240726, PDI-12-SO-47.8-20240806, and PDI-24-SO-35.5-20240809 exceeded the laboratory duplicate RPD and should be considered estimates; therefore, the associated VOC results for these samples were qualified as estimates (J for detects and UJ for non-detects).
- The laboratory did not report duplicates for pH and ignitability samples in data package 580-142079-2 and for pH samples in data package 580-142622-3. The laboratory stated that they run a duplicate in every batch; however, if the parent sample is not from ERM's project, the duplicate results are not displayed.

#### FIELD DUPLICATE EVALUATION

One or more samples were submitted to the laboratory as field duplicates. RPDs or absolute differences were calculated as appropriate for detected results. When results were greater than or equal to five times the reporting limit, RPD control limits of 30 for an aqueous matrix or 50 for a non-aqueous matrix were used. When results were less than five times the reporting limit, difference limits of  $\pm$  two times the reporting limit for an aqueous matrix or  $\pm$  four times the reporting limit for a non-aqueous matrix were used. Control limits were not applicable if both results were less than the reporting limits. If one result was greater than the reporting limit and the other was not detected, the reporting limit for the non-detect result was used when calculating differences. Additionally, if the reporting limits were not the same between the parent and field duplicate samples, professional judgment was used to determine the difference control limit or if the calculation was meaningful. The RPDs and/or absolute



differences were within QAPP criteria or EPA Region 1 guidance, whichever is applicable, with any exceptions and necessary qualifications noted in Table 11.

# CALIBRATION RANGE EVALUATION

All results were reported within each instrument's calibration range, with the exceptions and any necessary qualifications noted in Table 12.

# PROFESSIONAL JUDGEMENT EVALUATION

Using the validator's professional judgement, additional qualifiers, if needed, as noted in Table 13 were assigned for the following reasons.

- Column RPD exceeded 40%, lower value reported
- Estimated maximum possible concentration
- Column RPD exceeded 40%, higher value reported

# **OVERALL ASSESSMENT**

Excluding rejected results, all data can be used for decision-making purposes; however, the limitation identified by the applied qualifier should be considered when using the data. The quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents.

Table 1 Samples with Non-Preferred Results 2024 Pre-Design Investigation Samples Arkema Portland, Oregon

Lab Package	Sample ID	Method	Analysis Date/Time	Reason	Analyte	Result	Units
			7/30/2024 3:53	ND at higher reporting limit than secondary analysis	Benzene Chlorobenzene Methyl tert-butyl ether m-Xylene & p-Xylene Naphthalene o-Xylene Tetrachloroethene	ND	mg/kg
	PDI-04-SO-32-20240716	8260D	8/2/2024 13:25	Lowest of two results, out of hold	Methylene chloride	ND	mg/kg
			8/2/2024 13:25	Out of hold	Remaining analytes except: 1,2-Dichloropropane Bromomethane Dichlorodifluoromethane	ND	mg/kg
580-142190-1 Rev(1)	PDI-04-SO-35-20240716  PDI-04-SO-38-20240716	8260D	7/31/2024 18:51	Out of hold	Chloromethane Vinyl chloride Trichlorofluoromethane	ND	mg/kg
			7/30/2024 1:10	Result exceeded calibration range	Chlorobenzene	2000	mg/kg
		8260D	7/31/2024 16:40	Out of hold	Chloromethane Vinyl chloride Trichlorofluoromethane	ND	mg/kg
			7/29/2024 23:37	Result exceeded calibration range	Chlorobenzene	180	mg/kg
	PDI-04-SO-40.5-20240716	8260D	7/31/2024 15:12	Out of hold	Chloromethane Vinyl chloride Trichlorofluoromethane	ND	mg/kg
	TB-02-SO-20240716	8260D	7/31/2024 13:22	Out of hold	Chloromethane Vinyl chloride Trichlorofluoromethane	ND	mg/kg

Table 1 Samples with Non-Preferred Results 2024 Pre-Design Investigation Samples Arkema Portland, Oregon

Lab Package	Sample ID	Method	Analysis Date/Time	Reason	Analyte	Result	Units
580-142190-1 Rev(1)	PDI-06-SO-38.7-20240718	8260D	7/30/2024 2:20	Result exceeded calibration range	Chlorobenzene	3000	mg/kg

Notes:

ND = not detected

mg/kg = milligrams per kilogram

Table 2
Case Narrative Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Analyte	Reason	ERM Qualifier
580-141999-1	PDI-02-SO-29-20240710	8260D	All	Sample amount provided was significantly different than required	Detects J
300 111333 1	PDI-02-SO-34.5-20240710	02000	, w.	by prep method; sample may not have been sufficiently preserved	Non-detects UJ
	None for qualification, samples ND	8260D	Bromomethane	Batch 580-465636 CCV high bias	
	PDI-03-SO-19.5-20240712				UJ
	PDI-03-SO-25.5-20240712				UJ
	PDI-03-SO-29.5-20240712	8260D	1,2,3-Trichlorobenzene	Batch 580-465636 CCV low bias	UJ
	PDI-03-SO-39.5-20240712	6200D	1,2,3-THCHIOTODEHZEHE	Batch 360-463636 CCV low bias	UJ
	PDI-03-SO-42-20240712				UJ
	TB-01-SO-20240716				UJ
580-142079-1	PDI-03-SO-25.5-20240712				J-
300-142079-1	PDI-03-SO-19.5-20240712		Chloroethane		UJ
	PDI-03-SO-29.5-20240712	8260D		Datab 500 465001 667/ Januaria	UJ
	PDI-03-SO-39.5-20240712			Batch 580-465991 CCV low bias	UJ
	PDI-03-SO-42-20240712				UJ
	TB-01-SO-20240716				UJ
				Sample amount provided was	
	PDI-03-SO-42-20240712	8260D	All	significantly different than required	Detects J
			All	by prep method; sample may not	Non-detects UJ
				have been sufficiently preserved	
580-142190-1	PDI-04-SO-32-20240716	02605	Bromomethane	Datab Foo Accord COVID- No.	UJ
Rev(1)	None for qualification, results non-preferred	8260D	Chloroethane	Batch 580-466931 CCV low bias	
	None for qualification,	8260D	Dichlorodifluoromethane	Batch 580-465981 CCV high bias	
580-142311-1	samples ND	02000	Hexachlorobutadiene	Batch 300-403901 CCV High bias	
300-142311-1	RB-01-WQ-20240719	8260D	Dichlorodifluoromethane	Batch 580-466053 CCV low bias	UJ
	TB-01-WQ-20240719	0200D	Dictilorodination	Datel 300-400033 CCV low bias	03
			1,2,3-Trichlorobenzene		
E90 142412 1	TB-01-SO-20240723	8260D	1,2,4-Trichlorobenzene	Batch 580-467136 CCV low bias	UJ
580-142413-1	10-01-30-20240/23	02000	Bromomethane	Daten 300-40/130 CCV low blas	O)
			Naphthalene		

Table 2
Case Narrative Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Analyte	Reason	ERM Qualifier	
580-142413-1	PDI-15-SO-48-20240725	8260D	All	Sample amount provided was significantly different than required by prep method; sample may not have been sufficiently preserved	Detects J Non-detects UJ	
	None for qualification,	None for qualification,	8260D	Dichlorodifluoromethane	Batch 580-467012 CCV high bias	
	samples ND	6200D	2,2-Dichloropropane	Batch 380-407012 CCV high bias		
	DUP-02-SO-20240726					
	PDI-16-SO-23-20240726					
	PDI-16-SO-37.7-20240726					
	PDI-16-SO-39.5-20240726				UJ	
	PDI-16-SO-44.6-20240726			Batch 580-467098 CCV low bias		
	PDI-16-SO-46-20240726	8260D	Bromomethane			
	PDI-16-SO-52.5-20240726					
	PDI-17-SO-33-20240729					
	PDI-17-SO-39-20240729					
	PDI-17-SO-52.5-20240729					
580-142513-1	TB-01-SO-20240726					
		8260D	Chloroethane	Batch 580-467136 CCV high bias		
		8260D	Methylene Chloride	Batch 580-467248 CCV high bias		
	None for qualification,		2,4-Dinitrophenol			
	samples ND		4-Nitrophenol			
	Sumples ND	8270E	Bis(2-ethylhexyl) phthalate	Batch 580-467450 CCV high bias		
			Di-n-octyl phthalate			
			Benzo[b]fluoranthene			
	PDI-15-SO-38-20240725	8270E	None for qualification, associated analytes ND	Perylene-d12 internal standard high bias		
	PDI-16-SO-46-20240726	8260D	All	Sample amount provided was significantly different than required	Detects J	
	PDI-16-SO-52.5-20240726	02000	All	by prep method; sample may not have been sufficiently preserved	Non-detects UJ	

Table 2
Case Narrative Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Analyte	Reason	ERM Qualifier
580-142513-2	PDI-15-SO-38-20240725	NWTPH-Dx	#2 Diesel (C10-C24) Motor Oil (>C24-C36)	Sample contained a hydrocarbon pattern in the diesel range; however, the elution pattern is not the typical diesel fuel pattern used by the laboratory for quantitative purposes	J
	None for qualification,	8260D	Bromomethane	Batch 580-467543 CCV high bias	
	samples ND	02000	Chloroethane	Butch 300 407343 CCV mgh blus	
	PDI-13-SO-11.2-20240731		Chloromethane 1,2,3-Trichlorobenzene		
	PDI-19-SO-39-20240801	8260D	1,2,4-Trichlorobenzene	Batch 580-467721 CCV low bias	UJ
	PDI-19-SO-42.4-20240801		1,2-Dibromo-3-Chloropropane Hexachlorobutadiene		
	None for qualification, samples ND	8260D	Chloroethane	Batch 580-467721 CCV high bias	
	PDI-10-SO-37-20240730	8260D	Methylene Chloride	Batch 580-468166 CCV low bias	UJ
580-142622-1 Rev(1)	None for qualification, results reported from column with passing CCV	8151A	МСРР	Batch 580-471336 CCV high bias on one column	
	None for qualification, results reported from column with	8081B	4,4'-DDT	Batch 580-469118 CCV out on one	
	passing CCV	00016	Decachlorobiphenyl (surrogate)	column	
	PDI-15-SO-38-20240725	8082A	All	Internal standard outside of acceptance limits; evidence of matrix interference	UJ
	PDI-10-SO-37-20240730	8260D	All	Sample amount provided was significantly different than required by prep method; sample may not have been sufficiently preserved	Detects J Non-detects UJ
580-142622-2	PDI-15-SO-38-20240725	1613B	Labeled compounds 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD	Retention time shift between initial calibration and CCV exceeded the method criterion for labeled compounds	None for qualification, identification of target analyte not affected

Table 2
Case Narrative Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Analyte	Reason	ERM Qualifier
			Dichlorodifluoromethane		
			Chloromethane		
	None for qualification,		Vinyl chloride		
	samples ND	8260D	Chloroethane	Batch 580-467579 CCV high bias	
	Jampies III		Trichlorofluoromethane		
			2,2-Dichloropropane		
			Methyl tert-butyl ether		
	PDI-14-SO-38.6-20240802		1,1-Dichloropropene 1,2,3-Trichloropropane		
	PDI-14-SO-33-20240802		1,2,4-Trichlorobenzene 1,2,4-Trimethylbenzene		
	TB-02-SO-20240802	8260D	1,2-Dichloropropane 1,3-Dichloropropane		
	PDI-14-SO-40.5-20240802		2,2-Dichloropropane Bromoform		
	PDI-11-SO-39.5-20240805		Chloromethane		UJ
580-142691-1	DUP-03-SQ-20240805		cis-1,3-Dichloropropene Dibromochloromethane		
	PDI-11-SO-44.5-20240805		Isopropylbenzene N-Propylbenzene		
	PDI-11-SO-49-20240805		Styrene t-Butylbenzene	Batch 580-467786 CCV low bias	
	PDI-12-SO-36-20240806		trans-1,3-Dichloropropene Vinyl chloride		
	PDI-14-SO-38.6-20240802				UJ
	PDI-14-SO-33-20240802				J-
	TB-02-SO-20240802				J-
	PDI-14-SO-40.5-20240802				UJ
	PDI-11-SO-39.5-20240805	8260D	1,2,3-Trichlorobenzene		UJ
	DUP-03-SQ-20240805				UJ
	PDI-11-SO-44.5-20240805				UJ
	PDI-11-SO-49-20240805				UJ
	PDI-12-SO-36-20240806				UJ

Table 2
Case Narrative Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Analyte	Reason	ERM Qualifier
	PDI-14-SO-38.6-20240802				J-
	PDI-14-SO-33-20240802				UJ
	TB-02-SO-20240802				UJ
	PDI-14-SO-40.5-20240802				UJ
	PDI-11-SO-39.5-20240805		4-Chlorotoluene		UJ
	DUP-03-SQ-20240805				UJ
	PDI-11-SO-44.5-20240805				UJ
	PDI-11-SO-49-20240805				UJ
	PDI-12-SO-36-20240806				UJ
	PDI-14-SO-38.6-20240802				J-
	PDI-14-SO-33-20240802				J-
	TB-02-SO-20240802				UJ
	PDI-14-SO-40.5-20240802				J-
580-142691-1	PDI-11-SO-39.5-20240805	8260D	Carbon tetrachloride	Batch 580-467786 CCV low bias	UJ
	DUP-03-SQ-20240805				UJ
	PDI-11-SO-44.5-20240805				UJ
	PDI-11-SO-49-20240805				UJ
	PDI-12-SO-36-20240806				UJ
	PDI-14-SO-38.6-20240802				UJ
	PDI-14-SO-33-20240802				J-
	TB-02-SO-20240802				UJ
	PDI-14-SO-40.5-20240802				J-
	PDI-11-SO-39.5-20240805		Naphthalene		UJ
	DUP-03-SQ-20240805				UJ
	PDI-11-SO-44.5-20240805				UJ
	PDI-11-SO-49-20240805				UJ
	PDI-12-SO-36-20240806				UJ

Table 2
Case Narrative Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Analyte	Reason	ERM Qualifier
	PDI-14-SO-38.6-20240802				J-
	PDI-14-SO-33-20240802				UJ
	TB-02-SO-20240802				UJ
	PDI-14-SO-40.5-20240802				J-
580-142691-1	PDI-11-SO-39.5-20240805	8260D	Trichloroethene	Batch 580-467786 CCV low bias	UJ
	DUP-03-SQ-20240805				UJ
	PDI-11-SO-44.5-20240805				UJ
	PDI-11-SO-49-20240805				UJ
	PDI-12-SO-36-20240806				UJ
	PDI-12-SO-47.8-20240806				
	PDI-18-SO-43.2-20240807				
	PDI-18-SO-48.5-20240807				
	PDI-20-SO-9-20240807				
	PDI-20-SO-38.1-20240808				
	PDI-20-SO-43-20240808		1,2,3-Trichlorobenzene		
	PDI-20-SO-48.2-20240808	8260D	Chloromethane	Batch 580-467888 CCV low bias	UJ
	PDI-20-SO-49-20240808	02000	Dichlorodifluoromethane		
580-142813-1	PDI-20-SO-52-20240808		Hexachlorobutadiene		
300-142013-1	PDI-20-SO-57.8-20240808				
	PDI-21-SO-19.8-20240808				
	PDI-21-SO-36.3-20240808				
	PDI-21-SO-39.5-20240808				
	TB-01-SO-20240808				
			1,2,3-Trichlorobenzene		
	PDI-18-SO-38.7-20240807	8260D	1,2,4-Trichlorobenzene	Batch 580-468721 CCV low bias	UJ
	FD1-10-30-30.7-20240007	02000	1,2-Dibromo-3-Chloropropane	Datch 300-400/21 CCV low bids	0,
			Naphthalene		

Table 2
Case Narrative Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Analyte	Reason	<b>ERM Qualifier</b>
			2-Nitrophenol		
	None for qualification,		Benzoic acid		
	samples ND	8270E	2,4-Dinitrophenol	Batch 580-468859 CCV high bias	
	Samples ND		4,6-Dinitro-2-methylphenol		
			Indeno[1,2,3-cd]pyrene		
			Dalapon		
			2,4-DB		
			2,4-Dichlorophenylacetic acid		
	None for qualification, results		2,4,5-T	Batch 580-473202 CCV high bias on	
	reported from column with	8151A	2,4,5-TP	one column	
	passing CCV		Dicamba		
			Dichlorprop		
			Dinoseb		
			МСРА		
580-142813-1	None for qualification, results		Decachlorobiphenyl		
	reported from column with	8081B	(surrogate)	Batch 580-469215 CCV out on one	
	passing CCV		Toxaphene	column	
	PDI-20-SO-9-20240807	8270E	None for qualification,	Internal standard high high	
	PD1-21-SO-20.2-20240808	02/UE	associated analytes ND	Internal standard high bias	<del></del>
	PDI-20-SO-9-20240807		None for qualification,		
	PDI-21-SO-36.3-20240808	8081B	associated results reported from column with passing	Internal standard response exceeded control limit on one column	
	PD1-21-SO-20.2-20240808		internal standard		
	DDI 20 CO 0 20240007			Sample contained a hydrocarbon	
	PDI-20-SO-9-20240807		#2 Diesel (C10-C24)	pattern in the diesel range; however, the elution pattern is	
	PD1-21-SO-20.2-20240808	NWTPH-Dx	Motor Oil (>C24-C36)	not the typical diesel fuel pattern used by the laboratory for quantitative purposes	J

Table 2
Case Narrative Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Analyte	Reason	ERM Qualifier	
580-142813-1	PDI-20-SO-9-20240807 PD1-21-SO-20.2-20240808	1613B	Labeled compounds 13C-1,2,3,4-TCDD and/or 13C-1,2,3,7,8,9-HxCDD	Retention time shift between initial calibration and CCV exceeded the method criterion for labeled compounds	None for qualification, identification of target analyte not affected	
300 112013 1	PDI-12-SO-47.8-20240806			Sample amount provided was		
	PDI-18-SO-48.5-20240807			significantly different than required	Detects J	
	PDI-20-SO-9-20240807	8260D	All	by prep method; sample may not	Non-detects UJ	
	PDI-20-SO-49-20240808			have been sufficiently preserved		
	TR 01 WO 20240800	02600	1,2,3-Trichlorobenzene	Batch 580-468430 CCV low bias	J-	
	TB-01-WQ-20240809	8260D	Naphthalene	Batch 580-468430 CCV low blas	UJ	
	TB-01-SO-20240809				UJ	
	PDI-21-SO-55.6-20240809				J-	
	DUP-04-SQ-20240809				UJ	
	PDI-24-SO-35.5-20240809		1,2,3-Trichlorobenzene		UJ	
	PDI-24-SO-37.5-20240809				UJ	
	PDI-24-SO-44-20240812				UJ	
580-142896-1	PDI-24-SO-72.5-20240812	8260D		Batch 580-468460 CCV low bias	UJ	
300 142030 1	TB-01-SO-20240809	02000		Batter 300 400400 CCV low bias		
	PDI-21-SO-55.6-20240809					
	DUP-04-SQ-20240809		1,2,4-Trichlorobenzene			
	PDI-24-SO-35.5-20240809		1,2-Dibromo-3-Chloropropane		UJ	
	PDI-24-SO-37.5-20240809					
	PDI-24-SO-44-20240812					
	PDI-24-SO-72.5-20240812					
	PDI-24-SO-23.1-20240809	8260D	1,2,3-Trichlorobenzene	Batch 580-468961 CCV low bias	UJ	
	PDI-24-SO-43-20240812	02005				

Table 2
Case Narrative Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Analyte	Reason	ERM Qualifier	
	None for qualification, results reported from column with	8151A	Dalapon	Batch 580-473202 CCV high bias on		
	passing CCV	OIJIA	Dicamba	one column		
	None for qualification, sample ND	8151A	2,4,5-TP	Batch 580-473873 CCV high bias		
	None for qualification, results reported from column with passing CCV		Decachlorobiphenyl (surrogate)	Batch 580-469499 CCV high bias on one column		
	PDI-24-SO-23.1-20240809	8270E	None for qualification, associated analytes ND	Internal standard high bias		
580-142896-1	PDI-24-SO-23.1-20240809	1633	None for qualification, affected internal standard not used to quantitate target analytes	Internal standard response exceeded control limit		
	PDI-24-SO-23.1-20240809 NWTPI		#2 Diesel (C10-C24) Motor Oil (>C24-C36)	Sample contained a hydrocarbon pattern in the diesel range; however, the elution pattern is not the typical diesel fuel pattern used by the laboratory for quantitative purposes	J	
	PDI-24-SO-23.1-20240809	1613B	Labeled compounds 13C-1,2,3,4-TCDD and 13C-1,2,3,7,8,9-HxCDD	Retention time shift between initial calibration and CCV exceeded the method criterion for labeled compounds	None for qualification, identification of target analyte not affected	
	PDI-22-SO-43-20240815					
	PDI-22-SO-46.2-20240815		1 2 2 Tuiskle element			
	PDI-25-SO-54.5-20240813		1,2,3-Trichlorobenzene 1,2,4-Trichlorobenzene			
580-143009-1	PDI-26-SO-37.5-20240814	8260D	1,2-Dibromo-3-Chloropropane	Batch 580-468721 CCV low bias	UJ	
	PDI-26-SO-39-20240814		Naphthalene			
	PDI-26-SO-53-20240814					
	TB-01-SO-20240813					

Table 2
Case Narrative Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Analyte	Reason	ERM Qualifier
	PDI-22-SO-88.2-20240816		1,2,3-Trichlorobenzene 1,2-Dibromo-3-Chloropropane		
	PDI-23-SO-41.5-20240819		1,2-Dichlorobenzene 4-Isopropyltoluene Chloromethane		
	PDI-23-SO-43.5-20240819	8260D	Dichlorodifluoromethane  Methylene chloride	Batch 580-469072 CCV low bias	UJ
580-143092-1	PDI-23-SO-80-20240819		Naphthalene n-Butylbenzene		
	TB-01-SO-2-20240816		sec-Butylbenzene Vinyl chloride		
	PDI-22-SO-88.2-20240816		1 2 4 Triable rehearens		
	PDI-23-SO-41.5-20240819		1,2,4-Trichlorobenzene 1,4-Dichlorobenzene		
	PDI-23-SO-43.5-20240819	8260D	cis-1,3-Dichloropropene	Batch 580-469194 CCV low bias	UJ
	PDI-23-SO-80-20240819		Hexachlorobutadiene		
	TB-01-SO-2-20240816				
	DUP-05-SQ-20240820				
	PDI-30-SO-12.4-20240821				
	PDI-30-SO-39.5-20240821			Batch 580-469359 CCV low bias	
	PDI-31-35.2-SO-20240820	8260D	1,2-Dibromo-3-Chloropropane		UJ
	PDI-31-SO-42.5-20240820				
	PDI-31-SO-53.7-20240821				
	TB-01-SO-20240820				
580-143177-1	None for qualification, samples ND	8260D	Dichlorodifluoromethane	Batch 580-469359 CCV high bias	
	RB-05-WQ-20240820	8260D	Hexachlorobutadiene	Batch 580-469703 CCV low bias	UJ
	None for qualification, sample ND	8260D	Methyl tert-butyl ether	Batch 580-469995 CCV high bias	
			1,2,3-Trichlorobenzene		UJ
	TB-01-WQ-20240820	8260D	1,2,4-Trichlorobenzene	Batch 580-469995 CCV low bias	J-
			Naphthalene		UJ
	None for qualification, samples ND	8260D	Chloroethane	Batch 580-470147 CCV high bias	

Table 2
Case Narrative Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Analyte	Reason	ERM Qualifier
	PDI-29-SO-39.5-20240822	8260D	Hexachlorobutadiene	Batch 580-470219 CCV low bias	UJ
580-143296-1	None for qualification, samples ND	8260D	Dichlorodifluoromethane	Batch 580-470452 CCV high bias	
			Dichlorodifluoromethane		
			Chloroethane		
	None for qualification,		1,1-Dichloroethene		
	samples ND	8260D	cis-1,2-Dichloroethene	Batch 580-470179 CCV high bias	
	Sumples ND		Carbon tetrachloride		
			1,1-Dichloropropene		
			Methyl tert-butyl ether		
580-143405-1	RB-06-WQ-20240829		1,2,3-Trichlorobenzene		
	TB-01-WQ-20240829	8260D	Hexachlorobutadiene Naphthalene	Batch 580-470179 CCV low bias	UJ
	RB-06-WQ-20240829		1,2,4-Trichlorobenzene		J-
	TB-01-WQ-20240829		1,2,4-THCHIOTODEHZENE		J-
	None for qualification		Bromomethane		
	None for qualification, samples ND	8260D	Chloroethane	Batch 580-470459 CCV high bias	
	Sumples ND		Trichlorofluoromethane		
580-143465-1	None for qualification,	8260D	1,2-Dibromo-3-Chloropropane	Batch 580-471105 CCV high bias	
200-142402-1	samples ND	02000	Naphthalene	batch 500-471105 CCV High bias	

#### Notes:

-- = not applicable; associated data not affected

CCV = continuing calibration verification

J = estimated detected result

J- = detected results are estimated with a low bias

ND = not detected

RB = rinse blank

TB = trip blank

UJ = non-detected, estimated report limit

Table 3 Holding Time Evaluation 2024 Pre-Design Investigation Samples Arkema Portland, Oregon

Lab Package	Sample ID	Method	Extraction Holding Time	Total Time	Analysis Holding Time	Total Time	Analyte	ERM Qualifier
580-142079-2	PDI-03-SO-29.5-20240712	9045D			Same day	59 days	pН	J
	PDI-03-SO-39.5-20240712	70430			Same day	59 days	рН	J
	PDI-04-SO-32-20240716 (analysis 8/2/24 13:25)	8260D			14 days	17 days	Benzene Chlorobenzene Methyl tert-butyl ether m-Xylene & p-Xylene Naphthalene o-Xylene Tetrachloroethene	J
							1,2-Dichloropropane Bromomethane Dichlorodifluoromethane	R
	PDI-04-SO-35-20240716 (analysis 8/1/24 13:27)					16 days	Chlorobenzene	J
580-142190-1 Rev(1)	PDI-04-SO-35-20240716 (analysis 7/31/24 18:51)	8260D			14 days	15 days	1,2-Dichloropropane Bromomethane Dichlorodifluoromethane	R
	PDI-04-SO-38-20240716 (analysis 8/1/24 13:05)					16 days	Chlorobenzene	J
	PDI-04-SO-38-20240716 (analysis 7/31/24 16:40)	8260D			14 days	15 days	1,2-Dichloropropane Bromomethane Dichlorodifluoromethane	R
	PDI-04-SO-40.5-20240716 (analysis 7/31/24 15:12)	8260D			14 days	15 days	1,2-Dichloropropane Bromomethane Dichlorodifluoromethane	R
	TB-02-SO-20240716 (analysis 7/31/24 13:22)	8260D			14 days	15 days	1,2-Dichloropropane Bromomethane Dichlorodifluoromethane	R

Table 3
Holding Time Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Extraction Holding Time	Total Time	Analysis Holding Time	Total Time	Analyte	ERM Qualifier
	PDI-07-SO-36.5-20240723					15 days	All analyzed 8/7/2024 17:53	Detects J Non-detects R
	PDI-07-SO-38.3-20240723					15 days	All analyzed 8/7/2024 18:15	Detects J Non-detects R
580-142413-1	PDI-07-SO-39.5-20240723	8260D			14 days	15 days	All analyzed 8/7/2024 15:19	Detects J Non-detects R
	PDI-07-SO-41-20240723					15 days	All analyzed 8/7/2024 15:41	Detects J Non-detects R
	PDI-07-SO-45.5-20240723					15 days	All analyzed 8/7/2024 16:03	Detects J Non-detects R
580-142513-2	PDI-15-SO-38-20240725	NWTPH-Dx	14 days	50 days	40 days	1 day	#2 Diesel (C10-C24) Motor Oil (>C24-C36)	J
580-142622-1 Rev(1)	PDI-15-SO-38-20240725	8081B	14 days	36 days	40 days	6 days	2,4'-DDD 2,4'-DDE 2,4'-DDT	J
	PDI-19-SO-39-20240801					39 days	рН	J
580-142622-3	PDI-19-SO-42.4-20240801	9045D			Same day	39 days	рН	J
	PDI-15-SO-38-20240725					46 days	рН	J
580-142813-1	PDI-15-SO-38-20240725	3550C			14 days	19 days	Percent Moisture Percent Solids	
		1633					All PFAS	UJ
580-143296-1	PDI-29-SO-36.5-20240822	8260D			14 days	15 days	Chlorobenzene	J
	PDI-29-SO-39.5-20240822	02000			17 days	15 days	Chlorobenzene	J

#### Notes:

<sup>-- =</sup> not applicable; associated data not affected

J = estimated detected result

R = The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria.

UJ = non-detected, estimated report limit

Table 4
Laboratory Blank Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Blank ID	Analyte	Reported Blank Conc.	Blank RL	Associated Sample	Assoc. Sample Result	Assoc. Sample RL	Units	ERM Qualifier
					PDI-03-SO-19.5-20240712	0.011	0.041	mg/kg	0.041 U
					PDI-03-SO-25.5-20240712	0.012	0.024	mg/kg	0.024 U
	MB 580-465638/5-A	Benzene	0.00456	0.020	PDI-03-SO-39.5-20240712	0.051	0.030	mg/kg	J+
580-142079-1					PDI-03-SO-42-20240712	0.0054	0.022	mg/kg	0.022 U
360-1420/9-1					TB-01-SO-20240716	0.0038	0.020	mg/kg	0.020 U
					PDI-03-SO-19.5-20240712	0.082	0.52	mg/kg	0.52 U
	MB 580-465985/3-A	Methylene Chloride	0.0492	0.25	PDI-03-SO-25.5-20240712	0.048	0.30	mg/kg	0.30 U
					TB-01-SO-20240716	0.039	0.25	mg/kg	0.25 U
					PDI-04-SO-32-20240716	480	520	mg/kg	520 U
					PDI-04-SO-35-20240716	29	35	mg/kg	35 U
					PDI-04-SO-38-20240716	2.4	3.0	mg/kg	3.0 U
					PDI-04-SO-40.5-20240716	0.27	0.29	mg/kg	0.29 U
					TB-02-SO-20240716	0.21	0.25	mg/kg	0.25 U
					PDI-05-SO-36.5-20240717	2.3	2.9	mg/kg	2.9 U
	MD 500 466430/2 A	Mathaulana Chlanida	0.165	0.25	PDI-05-SO-37-20240717	30	31	mg/kg	31 U
580-142190-1	MB 580-466429/3-A	3 580-466429/3-A Methylene Chloride	0.165	0.25	PDI-05-SO-40.5-20240717	2.7	2.9	mg/kg	2.9 U
Rev(1)					DUP-01-SQ-20240717	3.0	3.5	mg/kg	3.5 U
NCV(1)					PDI-05-SO-53-20240717	28	33	mg/kg	33 U
					PDI-06-SO-38.7-20240718	36	48	mg/kg	48 U
					PDI-06-SO-40.5-20240718	27	32	mg/kg	32 U
					PDI-06-SO-44.5-20240718	30	31	mg/kg	31 U
					PDI-06-SO-52-20240719	47	53	mg/kg	53 U
	MB 580-466779/5-A	Chlorobenzene	0.00734	0.040	None for qualification, samples > 5x blank			mg/kg	
	MB 580-466927/5-A	Benzene	0.00542	0.020	PDI-04-SO-32-20240716	0.25	0.42	mg/kg	0.42 U
					PDI-09-SO-38.6-20240719	0.039	0.29	mg/kg	0.29 U
		Methylene Chloride	0.0607	0.25	PDI-09-SO-39.5-20240719	0.033	0.25	mg/kg	0.25 U
580-142311-1	MB 580-465950/1-A	metriylerie Ciliofide	0.0607	0.25	PDI-09-SO-40.5-20240722	0.045	0.32	mg/kg	0.32 U
J00-142J11-1	1-10 200-403330/1-A				TB-02-SO-20240719	0.031	0.25	mg/kg	0.25 U
	,	Hexachlorobutadiene	0.0834	0.10	None for qualification, samples ND			mg/kg	

Table 4
Laboratory Blank Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Blank ID	Analyte	Reported Blank Conc.	Blank RL	Associated Sample	Assoc. Sample Result	Assoc. Sample RL	Units	ERM Qualifier
					PDI-07-SO-36.5-20240723	0.073	0.27	mg/kg	0.27 U
					PDI-07-SO-38.3-20240723	0.11	0.30	mg/kg	0.30 U
					PDI-07-SO-39.5-20240723	0.12	0.33	mg/kg	0.33 U
					PDI-07-SO-41-20240723	0.10	0.29	mg/kg	0.29 U
					PDI-07-SO-45.5-20240723	0.13	0.35	mg/kg	0.35 U
					PDI-07-SO-52.7-20240723	0.12	0.33	mg/kg	0.33 U
580-142413-1	MB 580-466320/5-A	Methylene Chloride	0.0599	0.25	PDI-08-SO-35.8-20240724	1.8	3.4	mg/kg	3.4 U
					PDI-08-SO-38-20240724	0.12	0.32	mg/kg	0.32 U
					PDI-15-SO-38-20240725	0.0021	0.0039	mg/kg	0.0039 U
					PDI-15-SO-38.5-20240725	0.13	0.33	mg/kg	0.33 U
					PDI-15-SO-48-20240725	0.12	0.29	mg/kg	0.29 U
					PDI-15-SO-53-20240725	0.12	0.29	mg/kg	0.29 U
					TB-01-SO-20240723	0.060	0.25	mg/kg	0.25 U
		1,2,4-Trichlorobenzene	0.00157	0.0020	None for qualification, samples ND			mg/kg	
	MB 580-466866/1-A	Hexachlorobutadiene	0.00195	0.0025	None for qualification, samples > 5x blank or ND			mg/kg	
580-142413-1		Naphthalene (8260D)	0.00130	0.0038	PDI-08-SO-38-20240724	0.073	0.19	mg/kg	0.19 U
	MB 580-467132/1-A	Tetrachloroethene	0.00597	0.040	None for qualification, analyte not reported from batch			mg/kg	
					PDI-16-SO-37.7-20240726	0.0048	0.020	mg/kg	0.020 U
					PDI-16-SO-39.5-20240726	0.0078	0.021	mg/kg	0.021 U
					PDI-16-SO-44.6-20240726	0.0058	0.020	mg/kg	0.020 U
					PDI-16-SO-46-20240726	0.0055	0.021	mg/kg	0.021 U
580-142513-1	MB 580-467094/3-A	Benzene	0.00539	0.020	PDI-16-SO-52.5-20240726	0.0048	0.018	mg/kg	0.018 U
					PDI-17-SO-33-20240729	0.0072	0.026	mg/kg	0.026 U
					PDI-17-SO-39-20240729	0.0049	0.020	mg/kg	0.020 U
					PDI-17-SO-52.5-20240729	0.011	0.036	mg/kg	0.036 U
					TB-01-SO-20240726	0.0058	0.020	mg/kg	0.020 U

Table 4
Laboratory Blank Evaluation
2024 Pre-Design Investigation Samples
Arkema
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Lab Package	Blank ID	Analyte	Reported Blank Conc.	Blank RL	Associated Sample	Assoc. Sample Result	Assoc. Sample RL	Units	ERM Qualifier
		Chlorobenzene	0.00747	0.040	PDI-16-SO-23-20240726	0.028	0.040	mg/kg	0.040 U
580-142513-1	MB 580-467094/3-A	Chioropenzene	0.00747	0.040	TB-01-SO-20240726	0.033	0.040	mg/kg	0.040 U
360-142313-1	MD 360-407094/3-A	1,2,3-Trichlorobenzene	0.0603	0.080	PDI-16-SO-23-20240726	0.075	0.080	mg/kg	0.080 U
		Hexachlorobutadiene	0.0440	0.10	PDI-16-SO-23-20240726	0.038	0.10	mg/kg	0.10 U
	MB 580-467541/3-A	n-Butylbenzene	0.0204	0.040	None for qualification,			mg/kg	
580-142622-1	MB 380-407 541/3-A	Hexachlorobutadiene	0.0545	0.10	samples ND			mg/kg	
Rev(1)	MB 580-467720/3-A	Hexachlorobutadiene	0.0357	0.10	samples ND			mg/kg	
Nev(1)	CCB batch 580-469118	4,4'-DDT	> RL	0.0020	None for qualification, sample > 5x blank			mg/kg	
		1,2,3,4,7,8-HxCDD	0.264	5.0	PDI-15-SO-38-20240725	5.4	43	pg/g	43 U
		1,2,3,6,7,8-HxCDD	0.0847	5.0	PDI-15-SO-38-20240725	3.5	43	pg/g	43 U
		1,2,3,7,8,9-HxCDD	0.140	5.0	PDI-15-SO-38-20240725	3.6	43	pg/g	43 U
		1,2,3,4,6,7,8-HpCDD	0.314	5.0	PDI-15-SO-38-20240725	20	43	pg/g	43 U
	22-2 MB 320-792800/1-A	1,2,3,7,8,9-HxCDF	0.195	5.0	None for qualification, sample ND			pg/g	
		2,3,7,8-TCDD	0.0657	1.0				pg/g	
580-142622-2		1,2,3,7,8-PeCDF	0.156	5.0				pg/g	
		1,2,3,4,7,8-HxCDF	0.172	5.0				pg/g	
		1,2,3,6,7,8-HxCDF	0.126	5.0	None for qualification,			pg/g	
		2,3,4,6,7,8-HxCDF	0.0972	5.0	sample > 5x blank			pg/g	
		1,2,3,4,6,7,8-HpCDF	0.251	5.0	sample > 3x blank			pg/g	
		1,2,3,4,7,8,9-HpCDF	0.236	5.0				pg/g	
		OCDD	1.20	10				pg/g	
		OCDF	0.545	10				pg/g	
					DUP-03-SQ-20240805	0.14	0.24	mg/kg	0.24 U
					PDI-11-SO-39.5-20240805	0.16	0.28	mg/kg	0.28 U
					PDI-11-SO-44.5-20240805	0.15	0.26	mg/kg	0.26 U
					PDI-11-SO-49-20240805	0.16	0.28	mg/kg	0.28 U
580-142691-1	MB 580-467783/3-A	Methylene Chloride	0.138	0.25	PDI-12-SO-36-20240806	0.14	0.24	mg/kg	0.24 U
					PDI-14-SO-33-20240802	0.19	0.31	mg/kg	0.31 U
					PDI-14-SO-38.6-20240802	4.8	8.5	mg/kg	8.5 U
					PDI-14-SO-40.5-20240802	0.15	0.26	mg/kg	0.26 U
					TB-02-SO-20240802	0.16	0.25	mg/kg	0.25 U

Table 4
Laboratory Blank Evaluation
2024 Pre-Design Investigation Samples
Arkema
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Lab Package	Blank ID	Analyte	Reported Blank Conc.	Blank RL	Associated Sample	Assoc. Sample Result	Assoc. Sample RL	Units	ERM Qualifier
580-142691-1	MB 580-467783/3-A	1,2,3-Trichlorobenzene	0.0776	0.080	PDI-14-SO-33-20240802	0.094	0.099	mg/kg	0.099 U
300 142031 1	11D 300 407703/3 A	1,2,5 Tricillorobenzene	0.0770	0.000	TB-02-SO-20240802	0.064	0.080	mg/kg	0.080 U
	MB 580-467929/1-A	Hexachlorobutadiene	0.0388	0.10	None for qualification, samples ND			mg/kg	
	MB 580-468710/3-A	Methylene Chloride	0.0726	0.25	PDI-18-SO-38.7-20240807	7.2	30	mg/kg	30 U
580-142813-1	MB 580-468715/1-A	4,4'-DDT	0.000705	0.0020	None for qualification, samples ND or > 5x blank			mg/kg	
	MB 580-469121/1-A	2,4'-DDT	0.00387	0.0050	PDI-21-SO-36.3-20240808	0.0019	0.0062	mg/kg	0.0062 U
	MB 320-793381/1-A	OCDD	1.98	10	None for qualification, samples > 5x blank			pg/g	
		1,2,3-Trichlorobenzene	2.02	2.0	TB-01-WQ-20240809	0.53	2.0	μg/L	2.0 U
		1,2,4-Trichlorobenzene	0.688	1.0				μg/L	
	MB 580-468430/7	Hexachlorobutadiene	0.809	3.0	None for qualification,			μg/L	
580-142896-1	5-1	Naphthalene (8260D)	1.29	3.0	samples ND			μg/L	
	MB 580-468715/1-A	4,4'-DDT	0.000705	0.0020	None for qualification, sample > 5x blank			mg/kg	
		1,2,3,4,7,8-HxCDD	0.177	5.0	PDI-24-SO-23.1-20240809	2.8	47	pg/g	47 U
		1,2,3,7,8,9-HxCDF	0.161	5.0	PDI-24-SO-23.1-20240809	12	47	pg/g	47 U
580-142896-1	MB 320-793238/1-A	1,2,3,4,6,7,8-HpCDF	0.220	5.0	None for qualification,			pg/g	
		OCDD	2.13	10	sample > 5x blank			pg/g	
		OCDF	0.254	10	Sumple > 5x blank			pg/g	
					PDI-25-SO-54.5-20240813	0.031	0.28	mg/kg	0.28 U
					TB-01-SO-20240813	0.030	0.25	mg/kg	0.25 U
					PDI-26-SO-37.5-20240814	0.039	0.30	mg/kg	0.30 U
580-143009-1	MB 580-468710/3-A	Methylene Chloride	0.0726	0.25	PDI-26-SO-39-20240814	0.053	0.36	mg/kg	0.36 U
					PDI-26-SO-53-20240814	0.037	0.29	mg/kg	0.29 U
					PDI-22-SO-43-20240815	0.034	0.29	mg/kg	0.29 U
					PDI-22-SO-46.2-20240815	0.030	0.25	mg/kg	0.25 U
580-143092-1	MB 580-469247/3-A	Hexachlorobutadiene	0.0338	0.10	None for qualification, samples ND			mg/kg	

Table 4
Laboratory Blank Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Blank ID	Analyte	Reported Blank Conc.	Blank RL	Associated Sample	Assoc. Sample Result	Assoc. Sample RL	Units	ERM Qualifier
	MB 580-469703/7	1,2,4-Trichlorobenzene	0.340	1.0	None for qualification, sample ND			μg/L	
580-143177-1	MB 580-469995/7	1,2,4-Trichlorobenzene	0.369	1.0	TB-01-WQ-20240820	0.35	1.0	μg/L	1.0 U
	MB 580-470152/3-A	Hexachlorobutadiene	0.0324	0.10	None for qualification, samples ND			mg/kg	
		Benzene	0.00686	0.020	None for qualification, sample > 5x blank			mg/kg	
580-143296-1	MB 580-470215/5-A	Tetrachloroethene	0.00820	0.040	None for qualification, analyte not reported from batch			mg/kg	
	MB 580-470443/3-A	Hexachlorobutadiene	0.0394	0.10	TB-01-SO-20240822	0.038	0.10	mg/kg	0.10 U
	MB 580-470179/7	1,2,4-Trichlorobenzene	0.360	1.0	RB-06-WQ-20240829	0.35	1.0	μg/L	1.0 U
	MB 380-470173/7	1,2,4-11101101010120112	0.300	1.0	TB-01-WQ-20240829	0.36	1.0	μg/L	1.0 U
580-143405-1	MD 500 470444/2 A	Chlorobenzene	0.00541	0.040	None for qualification, samples > 5x blank			mg/kg	
	MB 580-470444/3-A	Hexachlorobutadiene	0.0411	0.10	PDI-27-SO-37.4-20240827	0.051	0.12	mg/kg	0.12 U
		Tiexacilioi obditadiene	0.0411	0.10	PDI-32-SO-29.6-20240828	0.071	0.13	mg/kg	0.13 U
		4-Isopropyltoluene	0.0126	0.040	None for gualification			mg/kg	
580-143465-1	MB 580-471075/3-A	Methylene Chloride	0.0597	0.25	None for qualification, samples ND			mg/kg	
300-143403-1	700-4/10/3/3-A	n-Butylbenzene	0.0196	0.040	Samples ND			mg/kg	
		Hexachlorobutadiene	0.0428	0.10	TB-01-SO-20240830	0.034	0.10	mg/kg	0.10 U

#### Notes:

-- = not applicable; associated data not affected

CCB = continuing calibration blank

Conc. = concentration

J+ = detected results are estimated with a high bias

MB = method blank

 $\mu$ g/L = micrograms per liter

mg/kg = milligrams per kilogram

ND = not detected

pg/g = picograms per gram

RB = rinse blank

RL = reporting limit

TB = trip blank

U = non-detected

Table 5
Field Blank Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Blank ID	Analyte	Reported Blank Conc.	Blank RL	Associated Sample	Assoc. Sample Result	Assoc. Sample RL	Units	ERM Qualifier
580-141924-1	TB-01-SO-20240708	Ethylbenzene	0.021	0.038	PDI-01-SO-24-20240708	0.024	0.040	mg/kg	0.040 U
					PDI-01-SO-55-20240709	0.018	0.040	mg/kg	0.040 U
		m-Xylene & p-Xylene	0.15	0.038	PDI-01-SO-24-20240708	0.16	0.040	mg/kg	J+
					PDI-01-SO-55-20240709	0.12	0.040	mg/kg	0.12 U
		o-Xylene	0.031	0.038	PDI-01-SO-24-20240708	0.035	0.040	mg/kg	0.040 U
					PDI-01-SO-55-20240709	0.027	0.040	mg/kg	0.040 U
580-141999-1	TB-01-SO-20240710	1,2-Dichlorobenzene	0.026	0.037	None for qualification,			mg/kg	
		1,4-Dichlorobenzene	0.087	0.056	samples > 5x blank or ND			mg/kg	
		Ethylbenzene	0.020	0.037	PDI-02-SO-23-20240710	0.018	0.035	mg/kg	0.035 U
					PDI-02-SO-26.5-20240710	0.13	0.49	mg/kg	0.49 U
					PDI-02-SO-36-20240711	0.027	0.051	mg/kg	0.051 U
					PDI-02-SO-37-20240711	0.027	0.049	mg/kg	0.049 U
		m-Xylene & p-Xylene	0.13	0.037	PDI-02-SO-23-20240710	0.12	0.035	mg/kg	J+
					PDI-02-SO-36-20240711	0.17	0.051	mg/kg	J+
					PDI-02-SO-37-20240711	0.19	0.049	mg/kg	J+
		o-Xylene	0.026	0.037	PDI-02-SO-23-20240710	0.025	0.035	mg/kg	0.035 U
					PDI-02-SO-26.5-20240710	0.063	0.49	mg/kg	0.49 U
					PDI-02-SO-36-20240711	0.037	0.051	mg/kg	0.051 U
					PDI-02-SO-37-20240711	0.041	0.049	mg/kg	0.049 U
		Tetrachloroethene	0.010	0.037	PDI-02-SO-23-20240710	0.0067	0.035	mg/kg	0.035 U
					PDI-02-SO-29-20240710	0.35	0.39	mg/kg	0.39 U
					PDI-02-SO-34.5-20240710	0.20	0.38	mg/kg	0.38 U
					PDI-02-SO-36-20240711	0.014	0.051	mg/kg	0.051 U
					PDI-02-SO-37-20240711	0.0069	0.049	mg/kg	0.049 U
		Chlorobenzene	6.8	0.037	PDI-02-SO-23-20240710	0.026	0.035	mg/kg	0.035 U
580-142079-1	TB-01-SO-20240716	Ethylbenzene	0.024	0.040	PDI-03-SO-19.5-20240712	0.042	0.019	mg/kg	J+
					PDI-03-SO-25.5-20240712	0.029	0.011	mg/kg	J+
					PDI-03-SO-42-20240712	0.023	0.010	mg/kg	J+
		m-Xylene & p-Xylene	0.17	0.040	PDI-03-SO-19.5-20240712	0.28	0.083	mg/kg	J+
					PDI-03-SO-25.5-20240712	0.16	0.048	mg/kg	J+
					PDI-03-SO-42-20240712	0.14	0.045	mg/kg	J+

Table 5
Field Blank Evaluation
2024 Pre-Design Investigation Samples
Arkema
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Lab Package	Blank ID	Analyte	Reported Blank Conc.	Blank RL	Associated Sample	Assoc. Sample Result	Assoc. Sample RL	Units	ERM Qualifier
					PDI-03-SO-19.5-20240712	0.061	0.083	mg/kg	0.083 U
580-142079-1	TB-01-SO-20240716	o-Xylene	0.035	0.040	PDI-03-SO-25.5-20240712	0.033	0.048	mg/kg	0.048 U
500 112075 1	15 01 30 202 10710	o Aylene	0.055	0.010	PDI-03-SO-29.5-20240712	0.077	0.58	mg/kg	0.58 U
					PDI-03-SO-42-20240712	0.030	0.045	mg/kg	
		Ethylbenzene	0.024	0.040	PDI-04-SO-40.5-20240716	0.023	0.047	mg/kg	
		Ethylbenzene	0.024	0.040	PDI-05-SO-44.5-20240717	0.026	0.042	mg/kg	
					DUP-01-SQ-20240717	0.20	0.56	mg/kg	0.56 U
					PDI-04-SO-32-20240716	0.50	0.83	mg/kg	0.83 U
					PDI-04-SO-38-20240716	0.22	0.48	mg/kg	0.48 U
		m-Xylene & p-Xylene	0.17	0.040	PDI-04-SO-40.5-20240716	0.16	0.047	mg/kg	J+
580-142190-1					PDI-05-SO-36.5-20240717	0.15	0.47	mg/kg	0.47 U
Rev(1)	TB-02-SO-20240716				PDI-05-SO-40.5-20240717	0.16	0.46	mg/kg	0.46 U
1101(1)					PDI-05-SO-44.5-20240717	0.18	0.042	mg/kg	J+
		o-Xylene			PDI-04-SO-40.5-20240716	0.031	0.047	mg/kg	0.047 U
			0.035		PDI-05-SO-44.5-20240717	0.037	0.042	mg/kg	0.042 U
					PDI-04-SO-32-20240716	0.19	0.83	mg/kg	0.83 U
				0.040	PDI-04-SO-40.5-20240716	0.015	0.047	mg/kg	0.047 U
		Styrene	0.014		PDI-05-SO-44.5-20240717	0.015	0.042	mg/kg	0.042 U
					PDI-04-SO-38-20240716	0.15	0.48	mg/kg	0.48 U
580-142311-1	TB-02-SO-20240719	Benzene	0.0038	0.020	PDI-09-SO-39.5-20240719	0.0075	0.020	mg/kg	0.020 U
		Carbon tetrachloride	0.15	0.020	PDI-16-SO-23-20240726	0.020	0.020	mg/kg	0.020 U
		Carbon tetracinoriue	0.13	0.020	PDI-16-SO-52.5-20240726	0.0091	0.018	mg/kg	0.018 U
					PDI-16-SO-23-20240726	0.011	0.020	mg/kg	0.020 U
					PDI-16-SO-37.7-20240726	0.039	0.020	mg/kg	J+
		Chloroform	0.029	0.020	PDI-16-SO-39.5-20240726	0.077	0.021	mg/kg	J+
580-142513-1	TB-01-SO-20240726				PDI-16-SO-46-20240726	0.013	0.021	mg/kg	0.021 U
					PDI-16-SO-52.5-20240726	0.0071	0.018	mg/kg	0.018 U
					PDI-16-SO-37.7-20240726	0.011	0.039	mg/kg	0.039 U
		Tetrachloroethene	0.013	0.040	PDI-16-SO-46-20240726	0.0086	0.041	mg/kg	0.041 U
		i eti aciiioi detiielle	0.013	0.040	PDI-16-SO-52.5-20240726	0.0070	0.037	mg/kg	0.037 U
					PDI-16-SO-39.5-20240726	0.079	0.043	mg/kg	J+
580-142621-1	EB-080224	Total Organic Carbon	2.0	1.5	PDI-13-50-21-20240731	4.8	1.5	mg/L	J+
300-142021-1	LD-000224	Total Organic Carbon	2.0	1.5	PDI-10-50-20.8-20240730	5.8	1.5	mg/L	J+

# Table 5 Field Blank Evaluation 2024 Pre-Design Investigation Samples Arkema Portland, Oregon

Lab Package	Blank ID	Analyte	Reported Blank Conc.	Blank RL	Associated Sample	Assoc. Sample Result	Assoc. Sample RL	Units	ERM Qualifier
580-142691-1	EB-080524	Total Organic Carbon	1.6	1.5	PDI-14-SO-38.6-20240802	5.6	1.5	mg/L	J+
580-143092-1	TB-01-SO-2-20240816	Chlorobenzene	0.019	0.040	None for qualification, samples ND or > 5x blank			mg/kg	
580-143177-1	TB-01-SO-20240820	Chlorobenzene	0.019	0.040	PDI-31-SO-42.5-20240820	0.054	0.047	mg/kg	J+
300-1431/7-1	EB-082024-A	Total Organic Carbon	1.6	1.5	PDI-23-SO-41.5-20240819	10	1.5	mg/L	J+

#### Notes:

-- = not applicable; associated data not affected

Conc. = concentration

EB = equipment blank

J+ = detected results are estimated with a high bias

mg/kg = milligrams per kilogram

mg/L = milligrams per liter

RL = reporting limit

TB = trip blank

U = non-detected

Table 6
Laboratory Control Spike Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Spike Sample ID	Associated Sample	Analyte	Recovery (%)	Limit (%)	RPD	RPD Limit	Result	Units	ERM Qualifier
580-141924-1	LCS 580-464922/1-A	None for qualification,	Bromomethane	Pass/164	55-150	Pass	26			
580-141999-1	LCSD 580-464922/2-A	one recovery passes	Chloroethane	158/Pass	26-150	Pass	40			
	LCS 580-466321/1-A LCSD 580-466321/2-A	None for qualification, sample ND	Methyl tert-butyl ether	Pass/Pass	72-126	23	20			
F00 140100 1		PDI-04-SO-32-20240716						ND	mg/kg	UJ
580-142190-1	166 500 466430/1 4	PDI-04-SO-35-20240716						ND	mg/kg	UJ
Rev(1)	LCS 580-466429/1-A LCSD 580-466429/2-A	PDI-04-SO-38-20240716	Trichlorofluoromethane	59/59	71-150	Pass	30	ND	mg/kg	UJ
	LC3D 380-400429/2-A	PDI-04-SO-40.5-20240716						ND	mg/kg	UJ
		TB-02-SO-20240716						ND	mg/kg	UJ
	LCS 580-467132/2-A LCSD 580-467132/3-A	None for qualification, sample ND	1,2,3-Trichlorobenzene	Pass/Pass	58-146	30	28			
580-142413-1	LCS 580-467417/2-A	None for qualification, samples ND	1,2,3-Trichlorobenzene	Pass/Pass	58-146	36	28			
	LCSD 580-467417/3-A	None for qualification, samples ND	Naphthalene (8260D)	Pass/Pass	56-145	26	25			
	LCS 580-467012/4 LCSD 580-467012/5	TB-02-WQ-20240729	Methylene Chloride	71/70	77-125	Pass	18	ND	μg/L	UJ
580-142513-1	LCS 580-467132/2-A LCSD 580-467132/3-A	None for qualification, samples ND	Chloroethane	224/201	26-150	Pass	40			
	LCS 580-467248/5 LCSD 580-467248/6	None for qualification, sample ND	Methylene Chloride	134/129	77-125	Pass	18			
580-142622-1	LCS 580-468150/1-A LCSD 580-468150/2-A	None for qualification, one recovery passes	Methylene Chloride	Pass/54	56-140	Pass	20			
Rev(1)	LCS 570-468000/2-A	None for qualification,	Dichlorprop	Pass/Pass	10-175	43	40			
	LCSD 570-468000/3-A	sample ND	MCPA	219/208	22-180	Pass	40			
580-142691-1	LCS 580-467579/4 LCSD 580-467579/5	None for qualification, one recovery passes	Methylene Chloride	73/Pass	77-125	Pass	18			
	LCS 580-468642/1-A LCSD 580-468642/2-A	PDI-20-SO-9-20240807	Naphthalene (8260D)	Pass/Pass	56-145	53	25	0.72	mg/kg	J+
E00 1/2012 1	LCS 580-468715/2-A	None for qualification, samples ND	Endrin ketone	145	56-121					
580-142813-1	LCS 580-468715/6-A LCSD 580-468715/7-A	None for qualification, sample ND	2,4'-DDT	Pass/145	36-125		32			
	LCS 570-471244/2-A	None for qualification,	2,4-D	Pass/Pass	13-180	45	40			
	LCSD 570-471244/3-A	samples ND	Dinoseb	Pass/Pass	10-180	96	40			

Table 6
Laboratory Control Spike Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Spike Sample ID	Associated Sample	Analyte	Recovery (%)	Limit (%)	RPD	RPD Limit	Result	Units	ERM Qualifier
	LCS 580-468430/4	None for qualification,	1,2,3-Trichlorobenzene	160/Pass	65-150	Pass	33			
	LCSD 580-468430/5	one recovery passes	Naphthalene (8260D)	162/Pass	63-150	Pass	33			
	LCS 580-468455/1-A	PDI-21-SO-55.6-20240809	1,2,3-Trichlorobenzene	Pass/Pass	58-146	46	28	0.14	mg/kg	J+
	LCSD 580-468455/2-A	PDI-21-SO-55.6-20240809	Naphthalene	Pass/Pass 56-14		33	25	0.060	mg/kg	J+
	LC3D 300 400433/2 A	PDI-24-SO-35.5-20240809	(8260D)	rass/rass	30-143	ادد	23	0.082	mg/kg	J+
580-142896-1	LCS 580-468642/1-A LCSD 580-468642/2-A	None for qualification, samples ND	Naphthalene (8260D)	Pass/Pass	56-145	53	25			
	LCS 580-468715/6-A LCSD 580-468715/7-A	None for qualification, analyte not reported from batch	2,4'-DDT	Pass/145	36-125	57	32			
	LCS 570-471244/2-A LCSD 570-471244/3-A	None for qualification, sample ND	2,4-D	Pass/Pass	13-180	45	40			
580-1/3/05-1	LCS 580-470179/4	None for qualification, samples ND	Chloroethane	Pass/Pass	38-150	49	28			
J00-143403-1	580-143405-1 LCSD 580-470179/5	None for qualification, one recovery passes	Methyl tert-butyl ether	122/Pass	72-120	Pass	18			

-- = not applicable; associated data not affected

J+ = detected results are estimated with a high bias

LCS = laboratory control sample

LCSD = laboratory control sample duplicate

mg/kg = milligrams per kilogram

ND = not detected

RPD = relative percent difference

TB = trip blank

Table 7
Matrix Spike Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Spike Sample ID	Associated Sample	Analyte	Recovery (%)	Limit (%)	RPD	RPD Limit	Result	Units	ERM Qualifier
			1,2,4-Trichlorobenzene	142/133	74-131	Pass	26			
		None for qualification	1,4-Dichlorobenzene	173/168	77-123	Pass	20			
		None for qualification, parent sample ND	Hexachlorobutadiene	215/199	65-145	Pass	36			
580-142190-1	PDI-05-SO-44.5-20240717	parent sample ND	Bromomethane	185/237	55-150	Pass	26			
Rev(1)	MS/MSD		Chloroethane	189/211	26-150	Pass	40			
		PDI-05-SO-44.5-20240717	cis-1,3-Dichloropropene	75/77	80-122	Pass	20	ND	mg/kg	UJ
		None for qualification, one recovery passes	Trichlorofluoromethane	69/Pass	71-150	Pass	30			
		None for qualification, parent sample ND	1,2,3-Trichlorobenzene	Pass/Pass	58-146	35	28			
580-142513-1	PDI-17-SO-52.5-20240729 MS/MSD	None for qualification, result not reported from this run	Chlorobenzene	31/47	80-125	Pass	20			
		None for qualification, parent sample ND	Chloroethane	315/322	26-150	Pass	40			
	PDI-12-SO-36-20240806 MS/MSD	N	1,2,3-Trichlorobenzene	Pass/Pass	58-146	54	28			
		None for qualification, parent sample ND	1,2,4-Trichlorobenzene	Pass/Pass	74-131	35	26			
580-1/2601-1		parent sample ND	Naphthalene	Pass/Pass	56-145	53	25			
300-142031-1		None for qualification, one recovery passes	2,2-Dichloropropane	74/Pass	75-134	Pass	20			
		PDI-12-SO-36-20240806	Chlorobenzene	25/44	80-125	Pass	20	1.3	mg/kg	J-
			4,4'-DDD	703/1362	55-121	69	33			
		Name for any lift and in	4,4'-DDE	255/310	59-124	Pass	27			
		None for qualification, parent sample ND	Endosulfan II	170/192	20-125	Pass	37			
		parent sample ND	Endrin ketone	123/141	56-121	Pass	20			
			trans-Chlordane	931/1472	42-136	50	26			
			delta-BHC	Pass/45	47-120	Pass	40			
		None for qualification, one	Endosulfan sulfate	Pass/138	57-120	Pass	25			
	PDI-20-SO-9-20240807	recovery passes	Endrin	Pass/55	56-126	Pass	25			
580-142813-1	MS/MSD		Heptachlor epoxide	Pass/146	54-125	Pass	34			
	113,1135	None for qualification, one recovery passes and parent sample ND	Heptachlor	Pass/43	57-124	23	22			
			4,4'-DDT	36/0	42-132	NC	40	ND	mg/kg	UJ
			Endosulfan I	0/0	48-121	NC	25	ND	mg/kg	R
		PDI-20-SO-9-20240807	Methoxychlor	0/0	51-133	NC	30	ND	mg/kg	R
			PCB-1016	0/0	42-150	NC	17	ND	mg/kg	R
			PCB-1260	0/0	43-145	NC	13	ND	mg/kg	R

Table 7
Matrix Spike Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Spike Sample ID	Associated Sample	Analyte	Recovery (%)	Limit (%)	RPD	RPD Limit	Result	Units	ERM Qualifier
580-142813-1	PDI-15-SO-38-20240725 MS/MSD	None for qualification, parent sample ND	Perfluorohexanesulfonic acid (PFHxS)	402/387	40-150	Pass	30			
		None for qualification, one	1,2,3-Trichlorobenzene	56/Pass	58-146	68	28			
		recovery passes and parent sample ND	1,2,4-Trichlorobenzene	71/Pass	74-131	34	26			
	PDI-24-SO-37.5-20240809 MS/MSD	None for qualification, parent sample > 4x spike concentration	Chlorobenzene	26/67	80-125	Pass	20			
		None for qualification, parent sample ND	Naphthalene	Pass/Pass	56-145	65	25			
			3,3'-Dichlorobenzidine	0/0	41-137	NC	40	ND	μg/kg	R
			4-Nitroaniline	-171/-190	53-123	Pass	30	ND	μg/kg	R
			Butyl benzyl phthalate	0/0	58-150	NC	27	ND	μg/kg	R
		PDI-24-SO-23.1-20240809	Di-n-butyl phthalate	64/59	66-135	Pass	26	ND	μg/kg	UJ
580-142896-1		FD1-24-30-23.1-20240009	Fluoranthene	67/60	69-133	Pass	21	ND	μg/kg	UJ
			Pyrene	63/58	68-126	Pass	24	ND	μg/kg	UJ
			Bis(2-ethylhexyl) phthalate	NR/52	56-150	190	25	ND	μg/kg	UJ
	PDI-24-SO-23.1-20240809		Chrysene	NR/56	69-127	190	27	ND	μg/kg	UJ
	MS/MSD	None for qualification, parent sample ND	Benzo[a]anthracene	NR/Pass	60-135	190	21			
		None for qualification, one recovery passes	Benzo[b]fluoranthene	138/Pass	58-136	Pass	25			
			Benzo[g,h,i]perylene	188/177	50-130	Pass	26			
		Name for available	Benzo[k]fluoranthene	Pass/Pass	57-142	23	18			
		None for qualification, parent sample ND	Bis(2-chloroethyl)ether	159/156	61-120	Pass	30			
		parent sample ND	Dibenz(a,h)anthracene	164/166	51-139	Pass	29			
			Indeno[1,2,3-cd]pyrene	148/160	43-133	Pass	30			
		PDI-33-SO-49-20240829	Chlorobenzene	Pass/182	80-125	32	20	0.24	mg/kg	J
			Chloroethane	405/236	26-150	54	40			
			1,1,1,2-Tetrachloroethane	132/146	79-128	Pass	20			
			1,1,1-Trichloroethane	146/152	78-135	Pass	20			
580-143405-1	PDI-33-SO-49-20240829	Nama fau avalifiaati -	1,1,2-Trichloroethane	124/132	80-123	Pass	20			
	MS/MSD	None for qualification, parent sample ND	1,1-Dichloroethane	129/134	78-126	Pass	20			
		parent sample ND	1,1-Dichloroethene	152/152	73-134	Pass	25			
			1,2-Dibromo-3-Chloropropane	139/158	64-129	Pass	40			
			1,2-Dibromoethane	127/137	77-123	Pass	20			
		1,2-Dichlorobenzene	127/132	78-126	Pass	20				

Table 7
Matrix Spike Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Spike Sample ID	Associated Sample	Analyte	Recovery (%)	Limit (%)	RPD	RPD Limit	Result	Units	ERM Qualifier
			1,2-Dichloroethane	125/130	76-124	Pass	20			
			1,3,5-Trimethylbenzene	141/150	72-134	Pass	24			
			1,3-Dichlorobenzene	134/137	78-132	Pass	20			
			1,3-Dichloropropane	125/133	80-120	Pass	20			
			1,4-Dichlorobenzene	120/127	77-123	Pass	20			
			Bromobenzene	133/139	78-126	Pass	20			
			Bromochloromethane	133/135	76-131	Pass	20			
			Bromodichloromethane	134/142	78-125	Pass	20			
			Bromomethane	182/180	55-150	Pass	26			
			Carbon tetrachloride	154/163	76-140	Pass	20			
		None for qualification,	cis-1,2-Dichloroethene	127/131	80-125	Pass	20			
			cis-1,3-Dichloropropene	130/135	80-122	Pass	20			
		parent sample ND	Dibromochloromethane	138/148	75-125	Pass	20			
			Dichlorodifluoromethane	170/159	33-150	Pass	31			
			Isopropylbenzene	140/146	80-131	Pass	20			
			Methyl tert-butyl ether	128/139	71-126	Pass	20			
	PDI-33-SO-49-20240829		m-Xylene & p-Xylene	138/146	80-132	Pass	20			
580-143405-1	MS/MSD		N-Propylbenzene	139/141	78-133	Pass	24			
	113/1130		o-Xylene	136/144	80-132	Pass	20			
			Styrene	140/147	79-129	Pass	20			
			Tetrachloroethene	144/151	75-141	Pass	20			
			Toluene	133/138	75-125	Pass	20			
			trans-1,2-Dichloroethene	142/143	77-134	Pass	20			
			Trichlorofluoromethane	172/170	71-150	Pass	30			
			1,1,2,2-Tetrachloroethane	Pass/126	77-122	Pass	20			
			1,1-Dichloropropene	Pass/148	76-140	Pass	20			
			1,2,3-Trichloropropane	Pass/133	77-127	Pass	20			
			1,2,4-Trichlorobenzene	Pass/145	74-131	Pass	26			
		None for qualification,	1,2,4-Trimethylbenzene	Pass/145	73-138	Pass	22			
		one recovery passes	2-Chlorotoluene	Pass/139	77-134	Pass	21			
		one recovery passes	4-Isopropyltoluene	Pass/148	71-142	Pass	29			
			Benzene	Pass/137	79-135	Pass	20			
			Chloroform	Pass/136	74-133	Pass	20			
			Dibromomethane	Pass/135	72-130	Pass	40			
			Ethylbenzene	Pass/143	80-135	Pass	20			

## Table 7 Matrix Spike Evaluation 2024 Pre-Design Investigation Samples Arkema Portland, Oregon

Lab Package	Spike Sample ID	Associated Sample	Analyte	Recovery (%)	Limit (%)	RPD	RPD Limit	Result	Units	ERM Qualifier
			Hexachlorobutadiene	Pass/152	65-145	Pass	36			
	PDI-33-SO-49-20240829	Name 6 - 11 - 116 - 116 - 11	sec-Butylbenzene	Pass/146	71-143	Pass	29			
580-143405-1		None for qualification,	t-Butylbenzene	Pass/146	72-144	Pass	27			
	MS/MSD	one recovery passes	trans-1,3-Dichloropropene	Pass/122	80-121	Pass	20			
			Trichloroethene	Pass/141	80-134	Pass	20			

#### Notes:

-- = not applicable; associated data not affected

J = estimated detected result

J- = detected results are estimated with a low bias

MS = matrix spike

MSD = matrix spike duplicate

μg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

NC = not calculated

ND = not detected

NR = not reported

R = The data are unusable. The sample results are rejected due to serious deficiencies in meeting quality control criteria.

RPD = relative percent difference

Table 8
Surrogate Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Surrogate	Recovery (%)	Limit (%)	Affected Analyte	Dilution Factor	ERM Qualifier
	PDI-02-SO-29-20240710	8260D	Toluene-d8 (7/15/24 13:48 analysis)	139	80-120	Chlorobenzene Toluene	1	J+
580-141999-1	PDI-02-SO-26.5-20240710	8260D	Toluene-d8 (7/15/24 14:09 analysis)	340	80-120	Toluene	1	J+
	PDI-02-SO-34.5-20240710	8260D	Toluene-d8 (7/15/24 14:52 analysis)	122	80-120	Chlorobenzene Toluene	1	J+
			Toluene-d8 (7/22/24 13:12 analysis)	3105	80-120	Toluene	1	J+
	PDI-03-SO-29.5-20240712	8260D	Toluene-d8 (7/25/24 7:01 analysis)	156	80-120	o-Xylene Tetrachloroethene	1	J+
	PDI-03-50-29.5-20240/12	8200D	1,2-Dichloroethane-d4 (7/25/24 12:47 analysis)	63	80-121	None for qualification, reported analytes not	1	
			Dibromofluoromethane (7/25/24 12:47 analysis)	60	80-120	associated with surrogates	1	
	PDI-03-SO-39.5-20240712		Toluene-d8 (7/22/24 13:33 analysis)	7268	80-120	Isopropylbenzene	1	J+
580-142079-1		8260D	Toluene-d8 (7/25/24 7:24 analysis)	162	80-120	None for qualification, reported analytes not associated with	1	
			1,2-Dichloroethane-d4 (7/25/24 13:08 analysis)	61	80-121	surrogate  None for qualification, reported analytes not	1	
			Dibromofluoromethane (7/25/24 13:08 analysis)	59	80-120	associated with surrogates	_	
	PDI-03-SO-42-20240712	8260D	1,2-Dichloroethane-d4 (7/25/24 12:27 analysis)	67	80-121	None for qualification, reported analytes not	1	
	FD1-03-30-42-20240/12	8200D	Dibromofluoromethane (7/25/24 12:27 analysis)	59	80-120	associated with surrogates	1	
580-142311-1	MB 580-466542/3-A	8260D	Dibromofluoromethane 1,2-Dichloroethane-d4	76 79	80-120 80-121	None for qualification, QC sample	NR	
	PDI-07-SO-36.5-20240723	8260D	Toluene-d8 (7/29/24 16:22 analysis)	127	80-120	Toluene	1	J+
580-142413-1	PDI-08-SO-35.8-20240724	8260D	1,2-Dichloroethane-d4 (8/1/24 22:19 analysis)	66	80-121	None for qualification, reported analytes not	1	
	FDI-00-30-33.0-20240/24	62000	Dibromofluoromethane (8/1/24 22:19 analysis)	64	80-120	associated with surrogates	1	

Table 8
Surrogate Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Surrogate	Recovery (%)	Limit (%)	Affected Analyte	Dilution Factor	ERM Qualifier
			Nitrobenzene-d5 (8/7/24 22:07 analysis)	0	63-120	None for qualification,	20	
			2,4,6-Tribromophenol (8/7/24 22:07 analysis)	214	62-122	dilution factor ≥ 10	20	
			2-Fluorophenol	0	58-120			
			Phenol-d5	0	59-120	None for qualification,		
			Nitrobenzene-d5	0	63-120	dilution factor ≥ 10	500	
			2,4,6-Tribromophenol	0	62-122			
			Terphenyl-d14	0	73-125			
			2-Fluorophenol	0	58-120			
580-142513-1	PDI-15-SO-38-20240725	8270E	Phenol-d5	0	59-120			
			Nitrobenzene-d5	0	63-120	None for qualification,	1000	
			2-Fluorobiphenyl	0	64-120	dilution factor ≥ 10		
			2,4,6-Tribromophenol	0	62-122			
			Terphenyl-d14	0	73-125			
			2-Fluorophenol (8/13/24 13:17 analysis)	57	58-120			
			Phenol-d5 (8/13/24 13:17 analysis)	29	59-120	None for qualification, dilution factor ≥ 10	20	
			Nitrobenzene-d5 (8/13/24 13:17 analysis)	0	63-120			
			Decachlorobiphenyl (8/21/24 14:35 analysis)	14357	53-123	None for qualification,	50	
			Tetrachloro-m-xylene (8/21/24 14:35 analysis)	2555	48-123	dilution factor ≥ 10	30	
580-142622-1		8081B	Decachlorobiphenyl (9/5/24 14:32 analysis)	506	53-123	None for qualification,	50	
Rev(1)	PDI-15-SO-38-20240725		Tetrachloro-m-xylene (9/5/24 14:32 analysis)	1602	48-123	dilution factor ≥ 10	30	
			Decachlorobiphenyl	32489	53-123	None for qualification,	500	
			Tetrachloro-m-xylene	0	48-123	dilution factor $\geq 10$	300	
	0.	8082A	Decachlorobiphenyl	0	44-135	None for qualification,	20	
		000ZA	Tetrachloro-m-xylene	1887	48-150	dilution factor $\geq 10$	20	

Table 8
Surrogate Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Surrogate	Recovery (%)	Limit (%)	Affected Analyte	Dilution Factor	ERM Qualifier
	PDI-15-SO-38-20240725	8082A	Decachlorobiphenyl	0	44-135	None for qualification,	NR	
580-142622-1	MS	0002A	Tetrachloro-m-xylene	953	48-150	QC sample	INK	
Rev(1)	PDI-15-SO-38-20240725	8082A	Decachlorobiphenyl	0	44-135	None for qualification,	NR	
	MSD	0002A	Tetrachloro-m-xylene	1237	48-150	QC sample	INIX	
580-142691-1	PDI-14-SO-38.6-20240802	8260D	Toluene-d8 (8/10/24 5:54 analysis)	190	80-120	Toluene	1	J+
		8260D	4-Bromofluorobenzene (8/12/24 14:51 analysis)	141	80-120	None for qualification, reported analytes not associated with surrogate	1	
			2-Fluorophenol	144	58-120			
			Phenol-d5	169	59-120			
	PDI-20-SO-9-20240807	92705	Nitrobenzene-d5	277	63-120	None for qualification,	100	
		8270E	2-Fluorobiphenyl	190	64-120	dilution factor $\geq 10$		
			2,4,6-Tribromophenol	0	62-122			
			Terphenyl-d14	316	73-125			
		8081B	Decachlorobiphenyl	0	53-123	All	2	UJ
F00 142012 1		NWTPH-Dx	o-Terphenyl	217	50-150 None for qualification factor ≥		20	
580-142813-1	PDI-21-SO-36.3-20240808	8081B	Tetrachloro-m-xylene (8/21/24 22:28 analysis)	39	48-123	All from 8/21/24 22:28 analysis	1	Detects J- Nondetects UJ
	FDI-21-30-30.3-20240808	80816	Tetrachloro-m-xylene (8/23/24 14:32 analysis)	286	48-123	2,4'-DDT	1	J+
			Decachlorobiphenyl (8/21/24 22:10 analysis)	1507	53-123	2,4'-DDD 4,4'-DDE	2	J+
	PD1-21-SO-20.2-20240808	8081B	Decachlorobiphenyl (8/26/24 13:10 analysis)	189	53-123	None for qualification, dilution factor $\geq 10$	10	
			Decachlorobiphenyl (8/23/24 14:14 analysis)	254	53-123	None for qualification, associated results ND	2	
	PDI-20-SO-9-20240807 MS	8081B	Decachlorohinhenyl	335	53-123	None for qualification,	NR	
	PDI-20-SO-9-20240807 MSD	00010	B Decachlorobiphenyl ——		33-123	QC sample	INIX	

Table 8
Surrogate Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Surrogate	Recovery (%)	Limit (%)	Affected Analyte	Dilution Factor	ERM Qualifier
		8270E	Terphenyl-d14	27	73-125	None for qualification, only one acid or base surrogate outside criteria	1	
			Decachlorobiphenyl	7530	53-123		50	
	PDI-24-SO-23.1-20240809		Decachlorobiphenyl	19952	53-123		1000	
		8081B	Decachlorobiphenyl	384428	53-123	None for qualification,	20000	
580-142896-1			Tetrachloro-m-xylene	279	48-123	dilution factor ≥ 10	50	
				Tetrachloro-m-xylene	0	48-123	anation factor = 10	1000
			Tetrachloro-m-xylene	0	48-123		20000	
		8082A	Decachlorobiphenyl	6657	44-135		50	
	PDI-24-SO-23.1-20240809 MS	8270E	Terphenyl-d14	32	73-123	None for qualification,	NR	
	PDI-24-SO-23.1-20240809 MSD	02/UL	reiphenyr-u14	32	75-125	QC sample	INK	_ <del>-</del>
580-143296-1	PDI-29-SO-39.5-20240822	8260D	Toluene-d8 (9/4/24 13:58 analysis)	147	80-120	Toluene	1	J+

-- = not applicable; associated data not affected

J- = detected results are estimated with a low bias

J+ = detected results are estimated with a high bias

ND = not detected

NR = not reported

Table 9
Isotope Dilution Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Isotope	Recovery (%)	Limit (%)	Affected Analyte	Dilution Factor	ERM Qualifier
	PDI-20-SO-9-20240807	1613B	13C-OCDF	16	17-157	OCDF	5	J
			13C7 PFUnA	19.6	20-150	PFUnA	1	UJ
	PDI-15-SO-38-20240725	1633	13C2 PFDoA	18.7	20-150	PFDoA	1	UJ
	PDI-15-5U-38-20240/25	1033	d5-NEtPFOSA	18.4	20-150	NEtPFOSA	1	UJ
580-142813-1			d3-NMePFOSA	17.5	20-150	NMePFOSA	1	UJ
360-142613-1	PDI-21-SO-20.2-20240808	1613B	13C-1,2,3,4,7,8,9-HpCDF	20	26-138	1,2,3,4,7,8,9-HpCDF	20	UJ
	PDI-21-SO-20.2-20240808	1633	d5-NEtFOSAA	178	20-150	None for qualification,	1	
		1033	13C2 8:2 FTS	158	20-150	associated analytes ND	1	
	PDI-15-SO-38-20240725 MS	1633	Modelina	Low	Low 20-150	None for qualification,	NR	
	PDI-15-SO-38-20240725 MSD	1033	Multiple	Low	20-150	QC sample	INK	
			13C2 PFDoA	223	20-150		1	
			13C2 PFTeDA	263	20-150	Nama fan avalifiaatian	1	
580-142896-1	PDI-24-SO-23.1-20240809	1633	13C3 PFBS	174	20-150	None for qualification, associated analytes ND	1	
			13C8 PFOS	156	20-150	associated alialytes ND	1	
			13C8 PFOSA	165	20-150		1	

-- = not applicable; associated data not affected

J = estimated detected result

Low = recovery below minimum acceptable limit

ND = not detected

NR = not reported

Table 10 Laboratory Duplicate Evaluation 2024 Pre-Design Investigation Samples Arkema Portland, Oregon

			Conce	Concentration		rt Limit					
Lab Package	Primary/Duplicate Sample ID	Analyte	Sample	Duplicate	Sample	Duplicate	Units	AbD	RPD	Limit	ERM Qualifier
580-142190-1		Percent Moisture	17.9	13.2	0.1	0.1	%		30	20	J
Rev(1) PDI-06-SO-38.7-20240718	VOCs									Detects J Nondetects UJ	
	PDI-16-SO-52.5-20240726	Percent Moisture	7.4	9.4	0.1	0.1	%		24	20	J
580-142513-1		VOCs									Detects J Nondetects UJ
		Percent Moisture	31.5	19.0	0.1	0.1	%		50	20	J
580-142813-1	PDI-12-SO-47.8-20240806	VOCs									Detects J Nondetects UJ
		Percent Moisture	25.3	18.2	0.1	0.1	%		33	20	J
580-142896-1	PDI-24-SO-35.5-20240809	VOCs									Detects J Nondetects UJ

-- = not applicable; associated data not affected

% = percent

AbD = absolute Difference

J = estimated detected result

RPD = relative percent difference

Table 11
Field Duplicate Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

			Conce	ntration	Repo	rt Limit					
Lab Package	Package Primary/Duplicate Sample ID Analyte		Sample	Duplicate	Sample	Duplicate	Units	AbD	RPD	Limit	ERM Qualifier
		1,4-Dichlorobenzene	ND	0.21	0.12	0.85	mg/kg			NA	
580-142190-1	PDI-05-SO-40.5-20240717/	Chlorobenzene	26	18	0.46	0.56	mg/kg		36	50	
Rev(1)	Dup-01-SQ-20240717	Methylene Chloride	2.7	3.0	2.9	3.5	mg/kg			NA	
		m-Xylene & p-Xylene	0.16	0.20	0.46	0.56	mg/kg			NA	
		1,2-Dichlorobenzene	ND	0.0097	0.039	0.043	mg/kg			NA	
E00 143E13 1	PDI-16-SO-44.6-20240726/	1,4-Dichlorobenzene	0.027	0.028	0.059	0.064	mg/kg			NA	
580-142513-1	DUP-02-SO-20240726	Benzene	0.0058	ND	0.020	0.021	mg/kg			NA	
		Chlorobenzene	40	40	0.42	0.055	mg/kg		0	50	
		Hexachlorobutadiene	0.070	ND	0.11	0.098	mg/kg			NA	
F00 142C01 1	PDI-11-SO-39.5-20240805/	Methylene Chloride	0.16	0.14	0.28	0.24	mg/kg			NA	
580-142691-1	DUP-03-SQ-20240805	Tetrachloroethene	0.0062	ND	0.045	0.039	mg/kg			NA	
		Chlorobenzene	0.67	0.51	0.045	0.039	mg/kg		27	50	
		1,2,3-Trichlorobenzene	0.14	$ND^1$	0.094	0.076	mg/kg	0.064		0.304	
580-142896-1	PDI-21-SO-55.6-20240809/	Hexachlorobutadiene	0.030	ND	0.12	0.096	mg/kg			NA	
360-142696-1	DUP-04-SQ-20240809	Naphthalene	0.060	ND	0.18	0.14	mg/kg			NA	
		Chlorobenzene	17	14	0.50	0.41	mg/kg		19	50	
580-143177-1	PDI-31-35.2-SO-20240820/ DUP-05-SQ-20240820	i (nioronenzene		0.61	0.042	0.040	mg/kg		30	50	
	DDI 22 CO 27 2 20240020/	1,4-Dichlorobenzene	0.030	0.05	0.061	0.055	mg/kg			NA	
580-143405-1	PDI-33-SO-37.2-20240828/ DUP-06-SQ-20240829	Chlorobenzene	4.9	9.3	0.041	0.036	mg/kg		62	50	J
	DUF-00-3Q-20240829	Tetrachloroethene	0.020	0.042	0.041	0.036	mg/kg	0.022		0.144	

-- = not applicable; associated data not affected

AbD = absolute Difference

J = estimated detected result

mg/kg = milligrams per kilogram

NA = not applicable

ND = not detected

ND<sup>1</sup> = the report limit was used for comparison purposes

RPD = relative percent difference

Table 12
Calibration Range Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Sample ID	Analyte	Reported Concentration	Units	ERM Qualifier
580-142079-1	PDI-03-SO-29.5-20240712	Chlorobenzene	16000	mg/kg	J
580-142079-1	PDI-03-SO-39.5-20240712	Chlorobenzene	15000	mg/kg	J
580-142413-1	PDI-15-SO-38-20240725	Carbon tetrachloride	13000	mg/kg	J
580-142622-1 Rev(1)	PDI-19-SO-39-20240801	Chlorobenzene	41000	mg/kg	J
580-142622-2	PDI-15-SO-38-20240725	2,3,7,8-TCDF	23000	pg/g	J
580-142896-1	PDI-24-SO-23.1-20240809	4,4'-DDT	19000	mg/kg	J

J = estimated detected result mg/kg = milligrams per kilogram pg/g = picograms per gram

Table 13
Professional Judgement Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Analyte	Reason	ERM Qualifier	
			2,4-D			
			2,4-DB		None for qualification, exceedance limited to	
	LCS 570-468000/2-A	8151A	Dalapon	Column RPD exceeded 40%,		
	LCS 370 400000/2 A	01317	MCPP	lower value reported	QC sample	
			2,4-Dichlorophenylacetic acid		QC 5ampic	
580-142622-1			(surrogate)			
Rev(1)			2,4-D	_		
(1)			2,4-DB	_		
			Dalapon	Column RPD exceeded 40%,	None for qualification,	
	LCSD 570-468000/3-A	8151A	Dichlorprop	lower value reported	exceedance limited to QC sample	
			МСРР	lower value reported		
			2,4-Dichlorophenylacetic acid (surrogate)			
	PDI-15-SO-38-20240725	1613B	1,2,3,7,8,9-HxCDD	Estimated maximum possible concentration	43 U	
	MB 320-792800/1-A		2,3,7,8-TCDD	Concentration	1.0 U	
580-142622-2			1,2,3,6,7,8-HxCDD	-	5.0 U	
300-142022-2		1613B	1,2,3,7,8,9-HxCDD	Estimated maximum possible	5.0 U	
	115 320 7 32000,1 7		1,2,3,6,7,8-HxCDF	concentration	5.0 U	
			1,2,3,7,8,9-HxCDF	-	5.0 U	
	DDI 20 CO 0 20240007	8082A	Decachlorobiphenyl (surrogate)	Column RPD exceeded 40%,	None for qualification,	
	PDI-20-SO-9-20240807	8151A	2,4-Dichlorophenylacetic acid (surrogate)	lower value reported	exceedance limited to surrogate	
			2,4'-DDD	Column DDD averaged 400/	J	
580-142813-1			4,4'-DDD	Column RPD exceeded 40%, higher value reported	J	
			4,4'-DDT	migher value reported	J	
	PDI-21-SO-36.3-20240808	8081B	2,4'-DDT		J	
			Decachlorobiphenyl (surrogate)	Column RPD exceeded 40%, lower value reported	None for qualification, exceedance limited to surrogate	

Table 13
Professional Judgement Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Analyte	Reason	ERM Qualifier	
			2,4'-DDD	Column RPD exceeded 40%,	J	
		8081B	4,4'-DDE	higher value reported	J	
		OGGID	4,4'-DDT	Column RPD exceeded 40%, lower value reported	J	
	PD1-21-SO-20.2-20240808	8082A	Decachlorobiphenyl (surrogate)	Column RPD exceeded 40%,	None for qualification, exceedance limited to surrogate	
		8151A	2,4-Dichlorophenylacetic acid (surrogate)	lower value reported		
580-142813-1	PDI-20-SO-9-20240807 MSD	8082A	Decachlorobiphenyl (surrogate)	Column RPD exceeded 40%, lower value reported	None for qualification, exceedance limited to surrogate	
	PDI-20-SO-9-20240807	1613B	13C-1,2,3,6,7,8-HxCDD (IDA)	Estimated maximum possible concentration	None for qualification, exceedance limited to IDA	
			OCDF		59 U	
			1,2,3,4,7,8-HxCDF		120 U	
	PD1-21-SO-20.2-20240808	1613B	1,2,3,6,7,8-HxCDF	Estimated maximum possible	120 U	
	151 21 30 20.2 202 10000	10135	13C-OCDF (IDA)	concentration	None for qualification, exceedance limited to	
			13C-1,2,3,7,8-PeCDD (IDA)		IDA	
			2,4-D		None for qualification, exceedance limited to	
580-142813-1	LCS 570-471244/2-A LCSD 570-471244/3-A	8151A	MCPP	Column RPD exceeded 40%,	QC sample	
580-142896-1		JIJIA	2,4-Dichlorophenylacetic acid (surrogate)	lower value reported	None for qualification, exceedance limited to surrogate	

Table 13
Professional Judgement Evaluation
2024 Pre-Design Investigation Samples
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Analyte	Reason	ERM Qualifier		
			2,4'-DDE		J		
			alpha-BHC		J		
		8081B	Endrin		J		
		00015	Heptachlor epoxide		J		
	PDI-24-SO-23.1-20240809		Tetrachloro-m-xylene	Column RPD exceeded 40%,			
			(surrogate)	lower value reported	None for qualification,		
580-142896-1		8082A	Tetrachloro-m-xylene		exceedance limited to surrogate		
		000ZA	(surrogate)				
		8151A	2,4-Dichlorophenylacetic acid		surrogate		
		6131A	(surrogate)				
	PDI-24-SO-23.1-20240809		2,3,4,7,8-PeCDF	Estimated maximum possible	470 U		
	MB 320-793238/1-A	1613B	1,2,3,4,7,8-HxCDD	Estimated maximum possible concentration	5.0 U		
	11D 320-7 93230/ 1-A		OCDF	concent ation	10 U		

IDA = isotope dilution analyte

J = estimated detected result

LCS = laboratory control sample

LCSD = laboratory control sample duplicate

MB = method blank

QC = quality control

RPD = relative percent difference

U = non-detected



### APPENDIX D GEOTECHNICAL LABORATORY REPORT



#### TECHNICAL REPORT

Report To: Josh Hancock Date: 10/17/2024

Environmental Resources Management, Inc.

1201 3<sup>rd</sup> Avenue, Floor 22 **Lab No.**: 24-606

Seattle, Washington 97101

Project: Arkema PDI Project No.: 00-232350-0

Report of: Unconfined Compression of Cohesive Soil, Unconsolidated-Undrained Triaxial, and

Flexible Wall Permeability testing.

#### Sample Identification

As requested, NTI provided testing of tube samples obtained by a NTI representative on September 5, 2024. Testing was performed in general accordance with the standards indicated. Our laboratory test results are summarized on the following tables and pages.

#### **Laboratory Testing**

Compressive Strength of Cohesive Soil Specimens (ASTM D2166)						
Sample ID  Diameter (inches)  Height (bs/s)  Rate of Loading (lbs/s)  Compressive (inches)						
PDI-23-3 @ 31.0 – 34.0 Ft.	2.74	6.01	N/A	>1 psi		
PDI-23-4 @ 47.0 – 50.0 Ft.	2.78	5.94	N/A	>1 psi		
PDI-31-5 @ 32.0 – 35.0 Ft.	2.73	5.91	N/A	>1 psi		
PDI-31-6 @ 42.0 – 45.0 Ft.	2.74	6.12	N/A	>1 psi		

<sup>\*</sup>Specimens deformed under top plate, unconfined compressive strength less than 1 psi.

Attachments: Laboratory Test Results

Copies: (1) Addressee

(1) Avery Soplata, Environmental Resources Management, Inc.(1) David Stone, Environmental Resources Management, Inc.

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SHEET 1 of 13

REVIEWED BY: Mitchell Guha



#### TECHNICAL REPORT

Report To: Josh Hancock Date: 10/17/2024

Environmental Resources Management, Inc.

1201 3<sup>rd</sup> Avenue, Floor 22 **Lab No.**: 24-606

Seattle, Washington 97101

Project: Arkema PDI Project No.: 00-232350-0

#### Sample ID: PDI-23-3 @ 31.0 - 34.0 Ft.

Unconsolidate	Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils – Sample Data (ASTM D2850)							
Mass (grams)	,							
1087.9	6.10	2.84	24.5	86.2				



### **TECHNICAL REPORT**

Report To: Josh Hancock Date: 10/17/2024

Environmental Resources Management, Inc.

1201 3<sup>rd</sup> Avenue, Floor 22 **Lab No.:** 24-606

Seattle, Washington 97101

Project: Arkema PDI Project No.: 00-232350-0

#### Sample ID: PDI-23-3 @ 31.0 - 34.0 Ft.

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils – Test Data (ASTM D2850)								
Strain Rate Peak Strength (%/min) (psi)								
			Specimen too fragile, unable to complete test due to inability to get specimen into membrane/apparatus.					



### **TECHNICAL REPORT**

Report To: Josh Hancock Date: 10/17/2024

Environmental Resources Management, Inc.

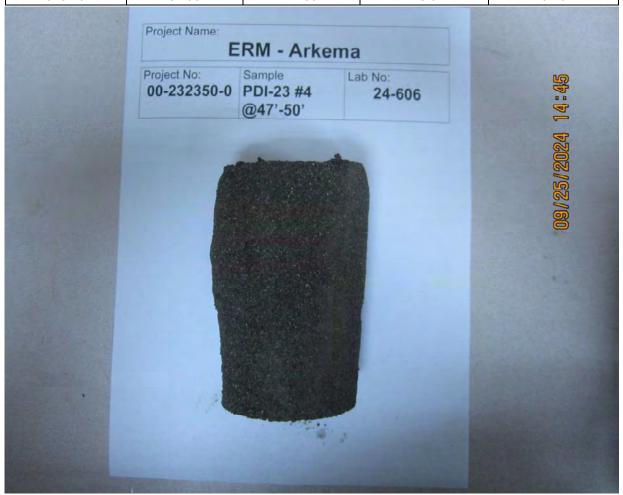
1201 3<sup>rd</sup> Avenue, Floor 22 **Lab No.**: 24-606

Seattle, Washington 97101

Project: Arkema PDI Project No.: 00-232350-0

#### Sample ID: PDI-23-4 @ 47.0 - 50.0 Ft.

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils – Sample Data (ASTM D2850)							
Mass Length Diameter Moisture Content Dry Density (grams) (inches) (inches) (percent) (pcf)							
979.29	5.493	2.733	25.0	92.6			



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### **TECHNICAL REPORT**

Report To: Josh Hancock Date: 10/17/2024

Environmental Resources Management, Inc.

1201 3<sup>rd</sup> Avenue, Floor 22 Lab No.: 24-606

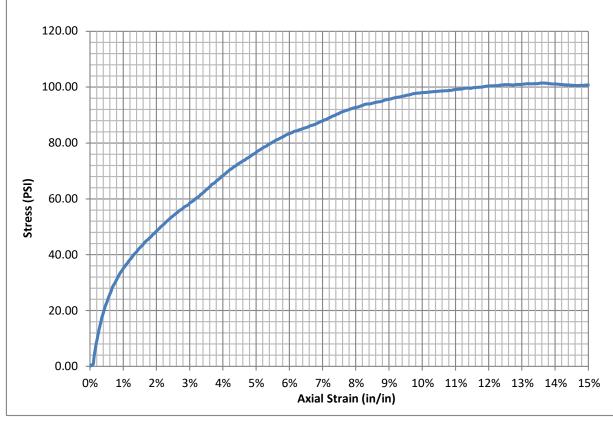
Seattle, Washington 97101

Project: Arkema PDI Project No.: 00-232350-0

#### Sample ID: PDI-23-4 @ 47.0 - 50.0 Ft.

Unconsolid	Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils – Test Data (ASTM D2850)							
Strain Rate (%/min)	Notes							
0.5	101.5	01.5 4,600 Barrel failure.						

#### **Stress Strain Figure**



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### **TECHNICAL REPORT**

Report To: Josh Hancock Date: 10/17/2024

Environmental Resources Management, Inc.

1201 3<sup>rd</sup> Avenue, Floor 22 **Lab No.:** 24-606

Seattle, Washington 97101

Project: Arkema PDI Project No.: 00-232350-0

#### Sample ID: PDI-31-5 @ 32.0 - 35.0 Ft.

Unconsolidate	Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils – Sample Data (ASTM D2850)								
Mass (grams)	Length (inches)	Moisture Content (percent)	Dry Density (pcf)						
1092.3									



#### TECHNICAL REPORT

Report To: Josh Hancock Date: 10/17/2024

Environmental Resources Management, Inc.

1201 3<sup>rd</sup> Avenue, Floor 22 **Lab No.:** 24-606

Seattle, Washington 97101

Project: Arkema PDI Project No.: 00-232350-0

#### Sample ID: PDI-31-5 @ 32.0 - 35.0 Ft.

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils – Test Data (ASTM D2850)									
Strain Rate (%/min)	Peak Strength (psi)	Confining Pressure (psf)	Notes						
			Specimen too fragile, unable to complete test due to inability to get specimen into membrane/apparatus.						



#### TECHNICAL REPORT

Report To: Josh Hancock Date: 10/17/2024

Environmental Resources Management, Inc.

1201 3<sup>rd</sup> Avenue, Floor 22 **Lab No.**: 24-606

Seattle, Washington 97101

Project: Arkema PDI Project No.: 00-232350-0

#### Sample ID: PDI-31-6 @ 42.0 - 45.0 Ft.

Unconsolidate	Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils – Sample Data (ASTM D2850)								
Mass (grams)	Length (inches)	Moisture Content (percent) Dry Density (pcf)							
1059.0	5.96	2.75	29.4	91.9					



### **TECHNICAL REPORT**

Report To: Josh Hancock Date: 10/17/2024

Environmental Resources Management, Inc.

1201 3<sup>rd</sup> Avenue, Floor 22 **Lab No.:** 24-606

Seattle, Washington 97101

Project: Arkema PDI Project No.: 00-232350-0

#### Sample ID: PDI-31-6 @ 42.0 - 45.0 Ft.

Unconsolidated-Undrained Triaxial Compression Test on Cohesive Soils – Test Data (ASTM D2850)									
Strain Rate (%/min)	Peak Strength (psi)	Confining Pressure (psf)	Notes						
			Specimen too fragile, unable to complete test due to inability to get specimen into membrane/apparatus.						



### **TECHNICAL REPORT**

Report To: Josh Hancock Date: 10/17/2024

Environmental Resources Management, Inc.

1201 3<sup>rd</sup> Avenue, Floor 22 Seattle, Washington 97101

**Lab No.:** 24-606

Project: Arkema PDI Project No.: 00-232350-0

#### Sample ID: PDI-23-3 @ 31.0 - 34.0 Ft.

	Flexible Wall Permeability – Sample Data (ASTM D5084 – Method C)											
Initial Mas (grams)	s In	itial L (incl	ength	Dia	nitial ameter nches)	Initial A (sq. incl		Initial Moistur Content (percent)		ıre	Initial Dry Density (pcf)	
335.3		1.8	73	2	2.845	6.35	7	2	4.5		86.2	
Final Mas (grams)	s F	inal L (incl	ength		Diameter nches)	Final A (sq. incl		Final Moistu Content (percent)		ire	Final Dry Density (pcf)	
334.8		1.8	40	2	2.847	6.36	4	3	3.4		81.6	
Sample Condition		Saturation at Time of Testing (percent)			ting	Head (psi)						
U	ndisturk	oed		96					0.1			
Tes	st 1			Test	Test 2 Test		Γest 3	3			Test 4	
Initial Hydraulic Gradient	Fina Hydra Gradi	ulic	Initia Hydrau Gradie	ılic   H	Final Hydraulic Gradient	Initial Hydraulid Gradient	с Ну	Final draulic radient	Hyd	itial raulic dient	Final Hydraulic Gradient	
2.01	1.0	1	2.01		1.01	2.01		1.01	2	.01	1.01	
		Test 2 l (cm/sec				Test 4 k cm/sec)			rerage k em/sec)			
1.87x10	)-4		1.88x10	-4	1.80	x10 <sup>-4</sup>	1	.82x10 <sup>-4</sup>		1.84x10 <sup>-4</sup>		



### **TECHNICAL REPORT**

Report To: Josh Hancock Date: 10/17/2024

Environmental Resources Management, Inc.

1201 3<sup>rd</sup> Avenue, Floor 22 Seattle, Washington 97101

**Lab No.:** 24-606

Project: Arkema PDI Project No.: 00-232350-0

#### Sample ID: PDI-23-4 @ 47.0 - 50.0 Ft.

	Flexible Wall Permeability – Sample Data (ASTM D5084 – Method C)											
Initial Mas (grams)	Initial Mass (grams) (inches)		_	Diamotor   """		Initial A	• •		Moist ntent cent)		Initial Dry Density (pcf)	
226.7		1.2	47	2	2.750	5.94	0	2	9.9		89.8	
Final Mas (grams)	s F	inal L (incl	ength		Diameter nches)	Final A (sq. inc		Final Moiste Content (percent)			Final Dry Density (pcf)	
221.9		1.3	37	2	2.783	6.08	4	3	0.5		79.6	
Sample Condition			Saturation at Time of Testing (percent)					Head (psi)				
U	ndisturk	oed		96			0.1					
Tes	st 1			Test	Test 2 Test		Test 3	3			Test 4	
Initial Hydraulic Gradient	Fina Hydra Gradi	ulic	Initia Hydrau Gradie	ulic H	Final Hydraulic Gradient	Initial Hydrauli Gradien	с Ну	Final draulic radient	Hyc	nitial Iraulic adient	Final Hydraulic Gradient	
2.76	1.3	8	2.76	;	1.38	2.76		1.38	2	2.76	1.38	
		Test 2 l (cm/sec				Test 4 k cm/sec)			rerage k em/sec)			
2.05x10	)-4		2.06x10	-4	2.13	x10 <sup>-4</sup>		2.10x <sup>-4</sup>		2.	2.08x10 <sup>-4</sup>	



### **TECHNICAL REPORT**

Report To: Josh Hancock Date: 10/17/2024

Environmental Resources Management, Inc.

1201 3<sup>rd</sup> Avenue, Floor 22 Seattle, Washington 97101

**Lab No.:** 24-606

Project:Arkema PDIProject No.:00-232350-0

#### Sample ID: PDI-31-5 @ 32.0 - 35.0 Ft.

	Flexible Wall Permeability – Sample Data (ASTM D5084 – Method C)											
Initial Mas (grams)	s In	itial L (incl	_ength hes)	Dia	nitial ameter nches)	Initial A (sq. inc	• •		Moistontent cent)		Initial Dry Density (pcf)	
344.1		1.8	53	2	2.745	5.91	8	2	4.9		95.7	
Final Mas (grams)	s F	inal L (incl	ength		Diameter nches)	Final A (sq. inc	• •	Final Moistu Content (percent)			Final Dry Density (pcf)	
337.9		1.7	50	2	2.750	5.94	0	2	7.1		97.4	
Sample Condition			Saturation at Time of Testing (percent)					Head (psi)				
U	ndisturk	oed		100			0.2					
Tes	st 1			Test	Test 2 Test 3		Test 3			Tes	Test 4	
Initial Hydraulic Gradient	Fina Hydra Gradi	ulic	Initia Hydrau Gradie	ılic l	Final Hydraulic Gradient	Initial Hydrauli Gradien	с Ну	Final draulic radient	Hyd	itial Iraulic Idient	Final Hydraulic Gradient	
3.69	2.6	4	3.69	)	2.64	3.69		2.64		3.69	2.64	
		Test 2 l (cm/sec			l	Test 4 k cm/sec)			rerage k em/sec)			
1.18x10	)-4		1.10x10	-4	1.16	x10 <sup>-4</sup>	,	I.14x10 <sup>-4</sup>		1.14x10 <sup>-4</sup>		



### **TECHNICAL REPORT**

Report To: Josh Hancock Date: 10/17/2024

Environmental Resources Management, Inc.

1201 3<sup>rd</sup> Avenue, Floor 22 Seattle, Washington 97101

**Lab No.:** 24-606

Project: Arkema PDI Project No.: 00-232350-0

#### Sample ID: PDI-31-6 @ 42.0 - 45.0 Ft.

	Flexible Wall Permeability – Sample Data (ASTM D5084 – Method C)											
Initial Mas (grams)	s In	itial L (incl	ength	Dia	nitial ameter nches)	Initial A	• •	Co	Initial Moistu Content (percent)		Initial Dry Density (pcf)	
342.7		1.7	67	2	2.810	6.20	2	2	9.4		92.1	
Final Mas (grams)	s F	inal L (incl	ength nes)	l	Diameter nches)	Final A (sq. inc		Final Moistur Content (percent)			Final Dry Density (pcf)	
335.3		1.7	55	2	2.830	6.29	0	2	29.9		89.1	
Sam	Sample Condition			Saturation at Time of Testing (percent)					Head (psi)			
U	ndisturk	oed		100			0.4					
Tes	st 1			Test	2	-	Test 3	Te			st 4	
Initial Hydraulic Gradient	Fin Hydra Gradi	ulic	Initia Hydrau Gradie	ulic l	Final Hydraulic Gradient	Initial Hydrauli Gradien	с Ну	Final draulic radient	Hyc	nitial Iraulic adient	Final Hydraulic Gradient	
6.84	6.0	5	6.84		6.05	6.84		6.05	6	6.84	6.05	
		Test 2 l (cm/sec				Test 4 k cm/sec)			rerage k em/sec)			
6.31x10	)-6		6.76x10	-6	6.55	x10 <sup>-6</sup>	5	5.60x10 <sup>-6</sup>		6.	6.31x10 <sup>-6</sup>	



#### DRAFT TECHNICAL REPORT

Report To: Josh Hancock Date: 11/20/2024

Environmental Resources Management, Inc. 1201 3<sup>rd</sup> Avenue, Floor 22

**Lab No.**: 24-606B

Seattle, Washington 97101

Project: Arkema PDI Project No.: 00-232350-0

**Report of:** Direct shear testing.

#### **Sample Identification**

As requested, NTI provided testing of tube samples obtained by a NTI representative on September 5, 2024. Testing was performed in general accordance with the standards indicated. Our laboratory test results are summarized on the following tables and pages.

#### **Laboratory Testing**

#### Sample ID: PDI-23 #3

Direct Shear Test of Soils Under Consolidated Drained Conditions – Sample Data (ASTM D3080)								
Test 500psf Normal Load Initial Conditions Initial Conditions 2500psf Normal Load Initial Conditions								
Moisture Content, (%)	24.7	24.7	24.7					
Dry Unit Weight, (pcf)	88.4	79.6	75.7					
Peak Shear Strength, (psf)	516	1437	2033					

Note: Displacement rate used during testing, 0.00417 inches/minute

Attachments: Laboratory Test Results

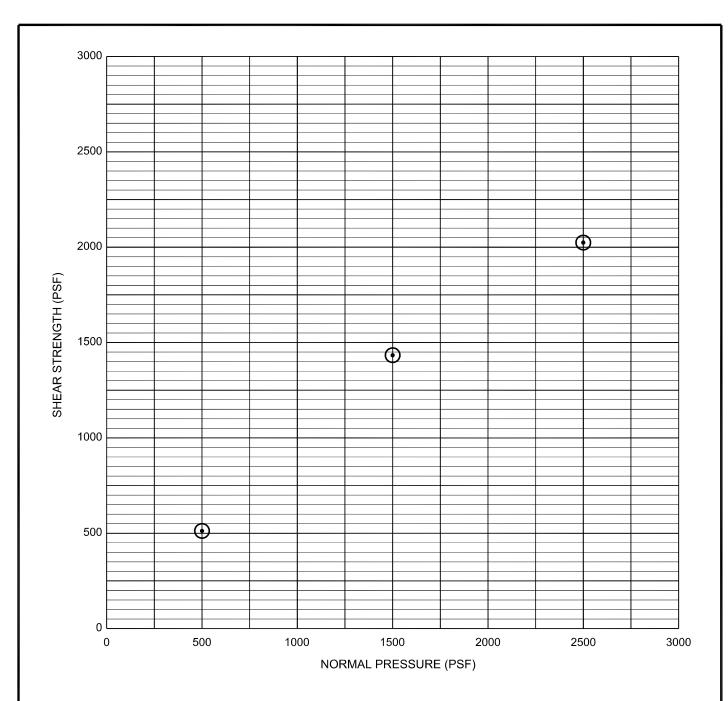
Copies: (1) Addressee

(1) Avery Soplata, Environmental Resources Management, Inc.(1) David Stone, Environmental Resources Management, Inc.

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SHEET 1 of 4

REVIEWED BY: Mitchell Guha



SYMBOL	SAMPLE LOCATION	COHESION (psf)	FRICTION ANGLE	REMARKS
	PDI-23 #3		37.2	SATURATED

## DIRECT SHEAR TEST RESULTS - ASTM D3080

PROJECT NO. 00-232350-0 ERM ARKEMA LAB NO. 24-606B





#### DRAFT TECHNICAL REPORT

Report To: Josh Hancock Date: 11/20/2024

Environmental Resources Management, Inc.

1201 3<sup>rd</sup> Avenue, Floor 22 **Lab No.:** 24-606B

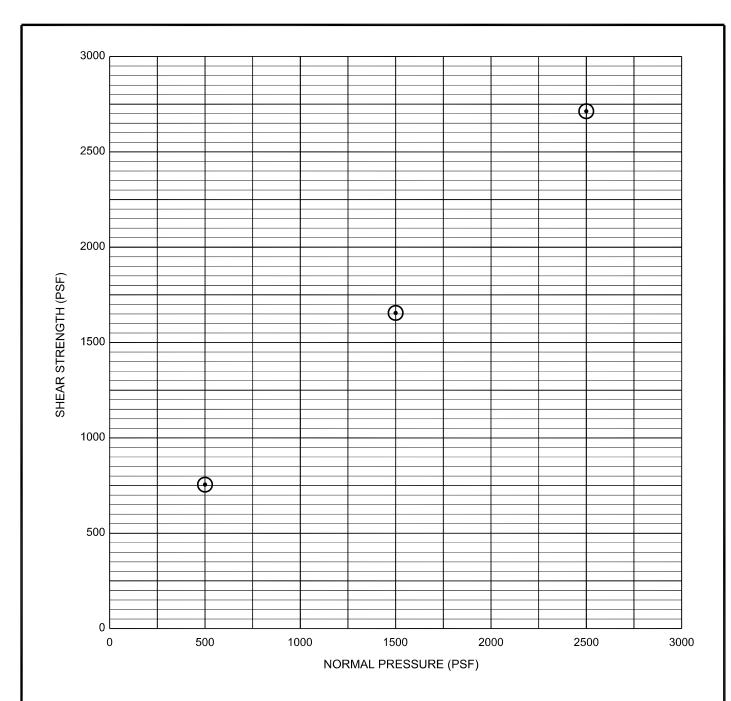
Seattle, Washington 97101

Project: Arkema PDI Project No.: 00-232350-0

#### Sample ID: PDI-23 #4

Direct Shear Test of Soils Under Consolidated Drained Conditions – Sample Data (ASTM D3080)								
Test 500psf Normal Load Initial Conditions 1500psf Normal Load Initial Conditions 2500psf Normal Load Initial Conditions								
Moisture Content, (%)	29.9	29.9	29.9					
Dry Unit Weight, (pcf)	88.0	89.9	90.0					
Peak Shear Strength, (psf)	753	1653	2715					

Note: Displacement rate used during testing, 0.00417 inches/minute



SYMBOL	SAMPLE LOCATION	COHESION (psf)	FRICTION ANGLE	REMARKS
	PDI-23 #4		44.4	SATURATED

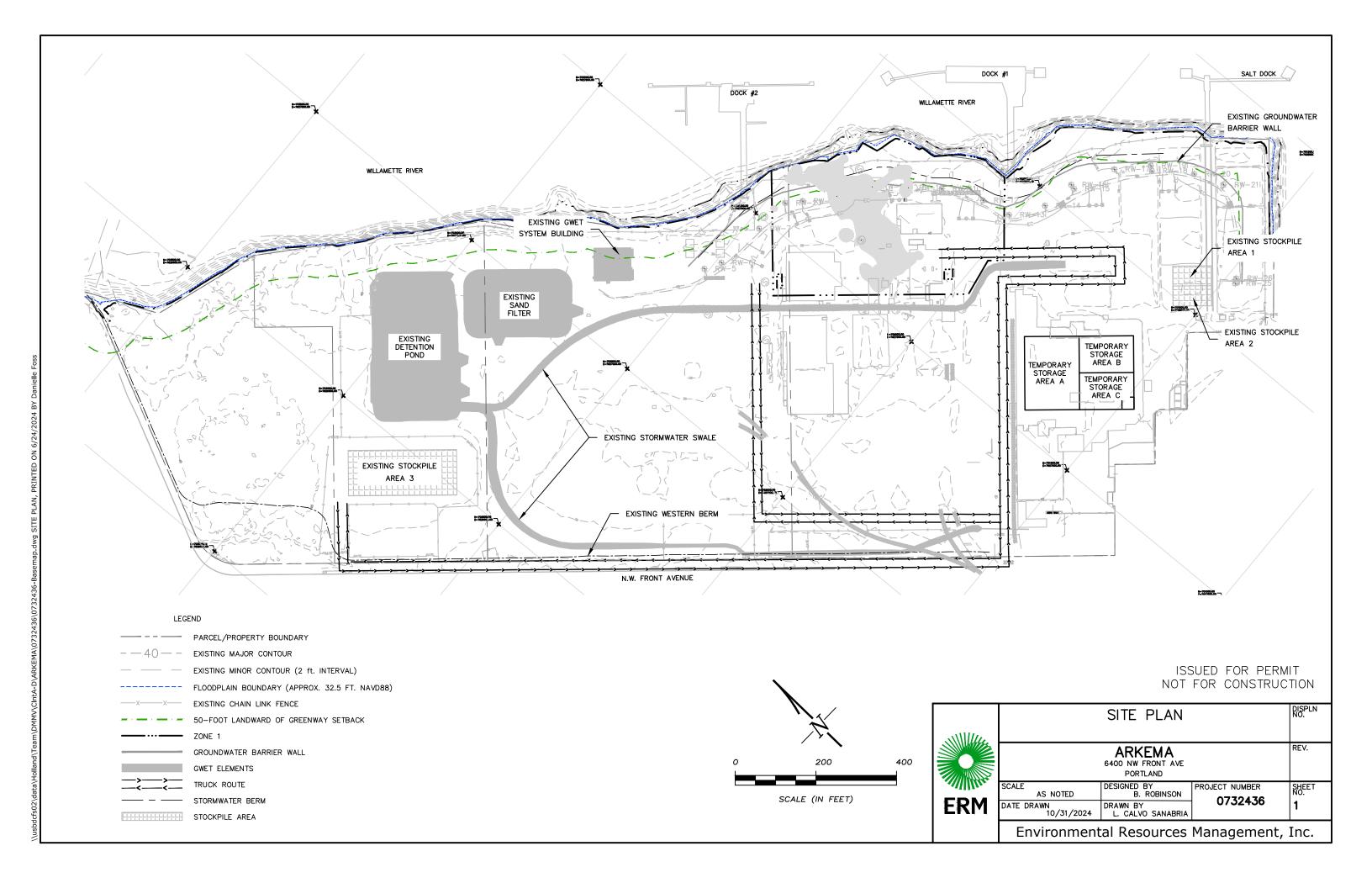
## DIRECT SHEAR TEST RESULTS - ASTM D3080

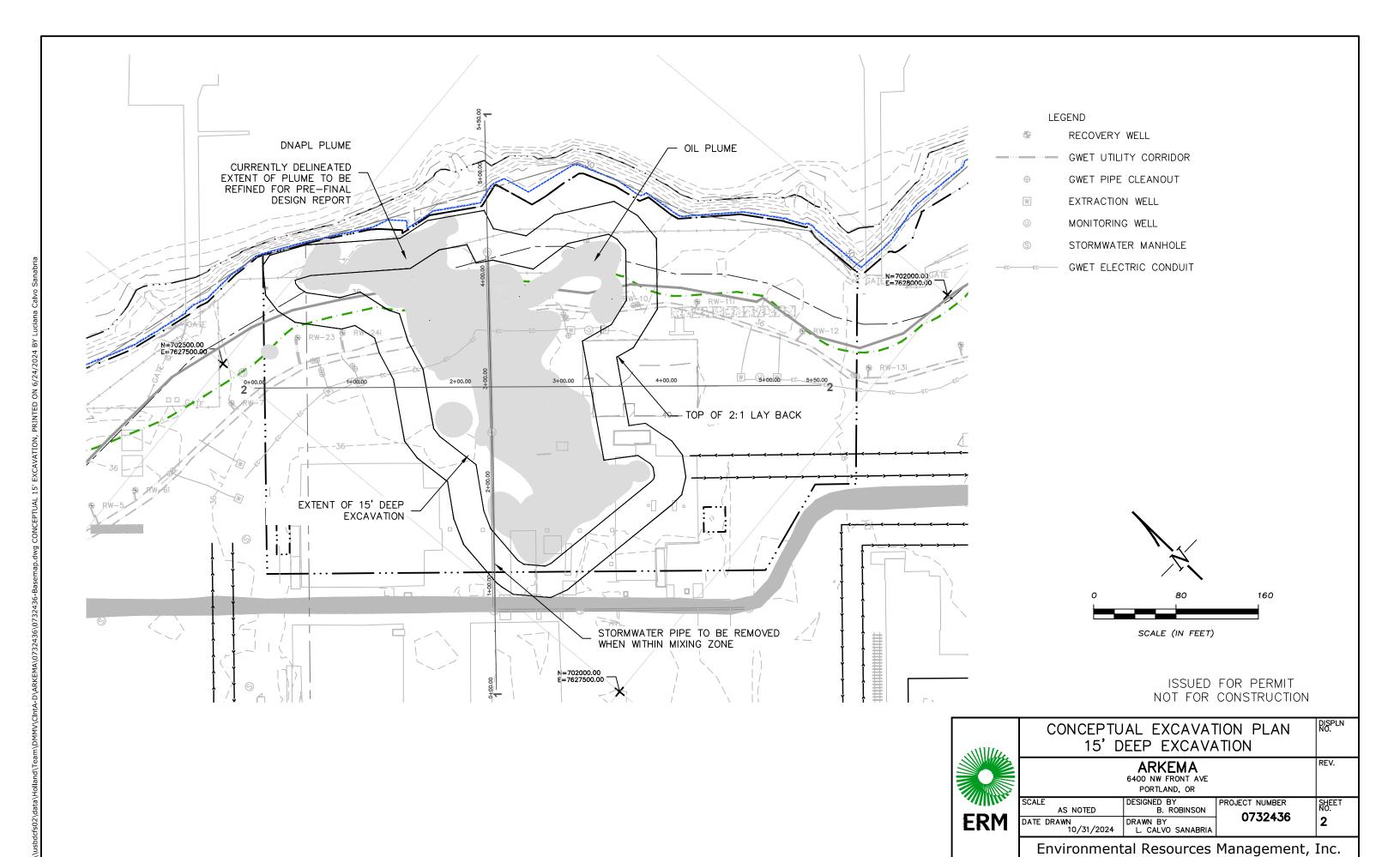
PROJECT NO. 00-232350-0 ERM ARKEMA LAB NO. 24-606B

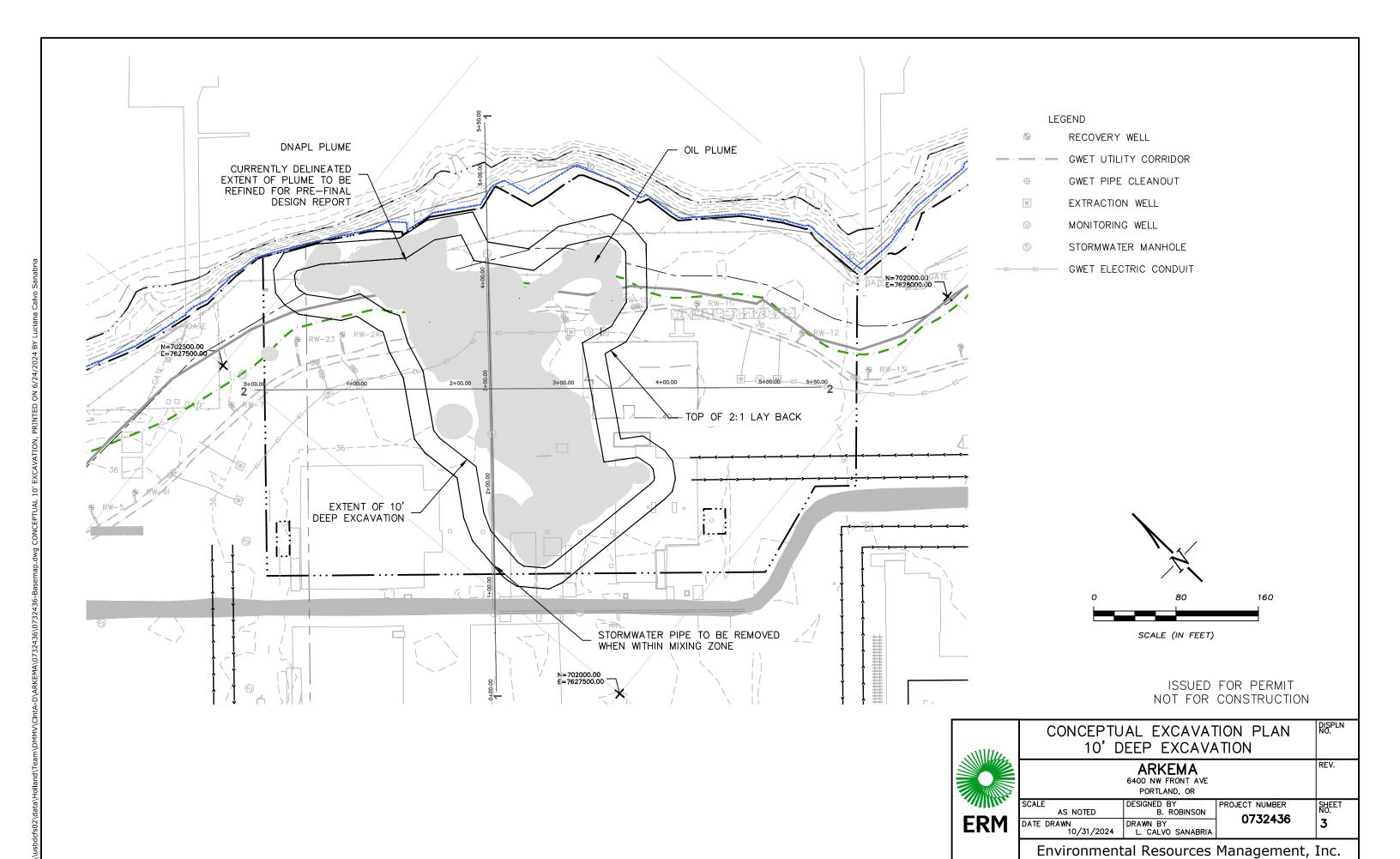


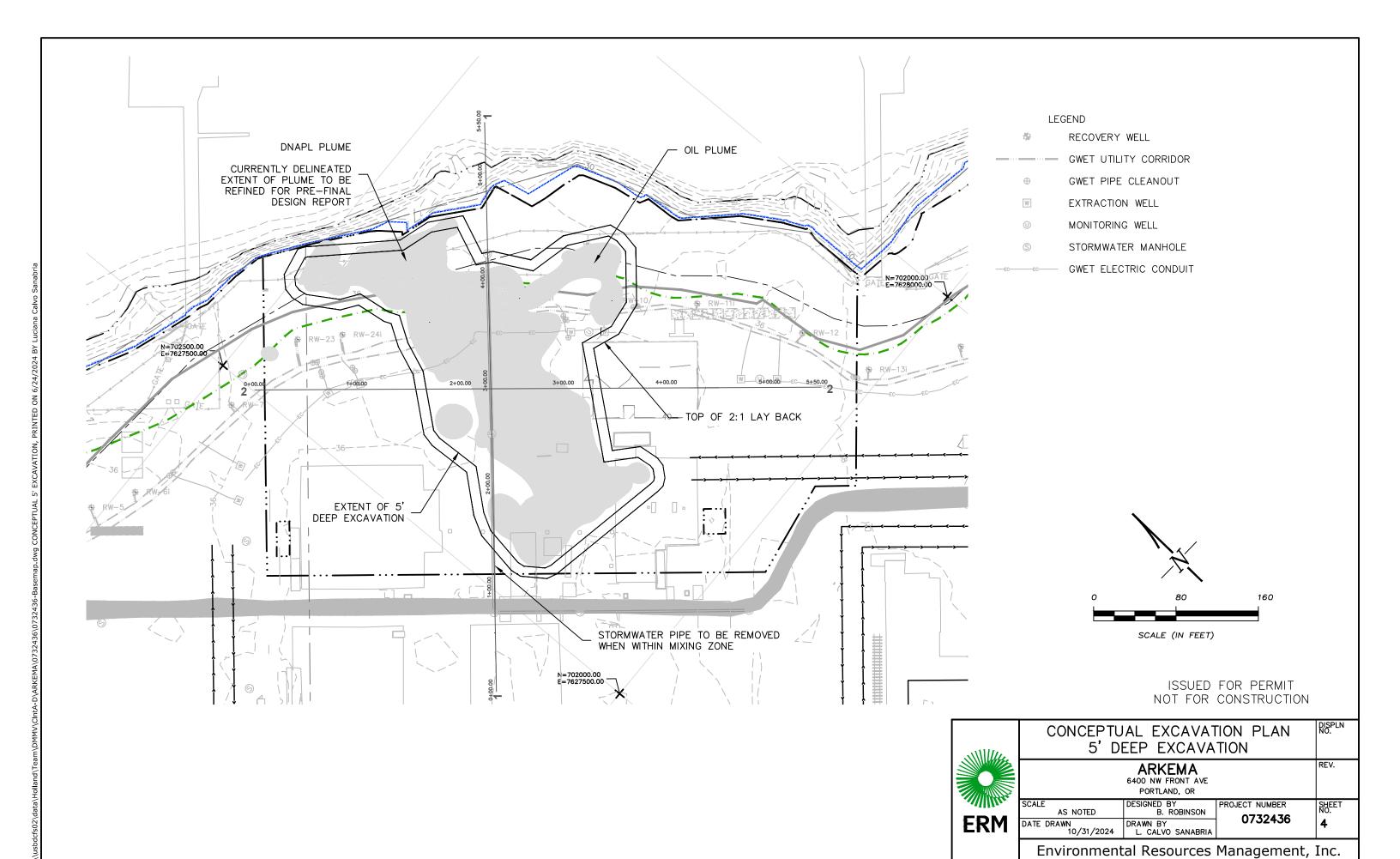


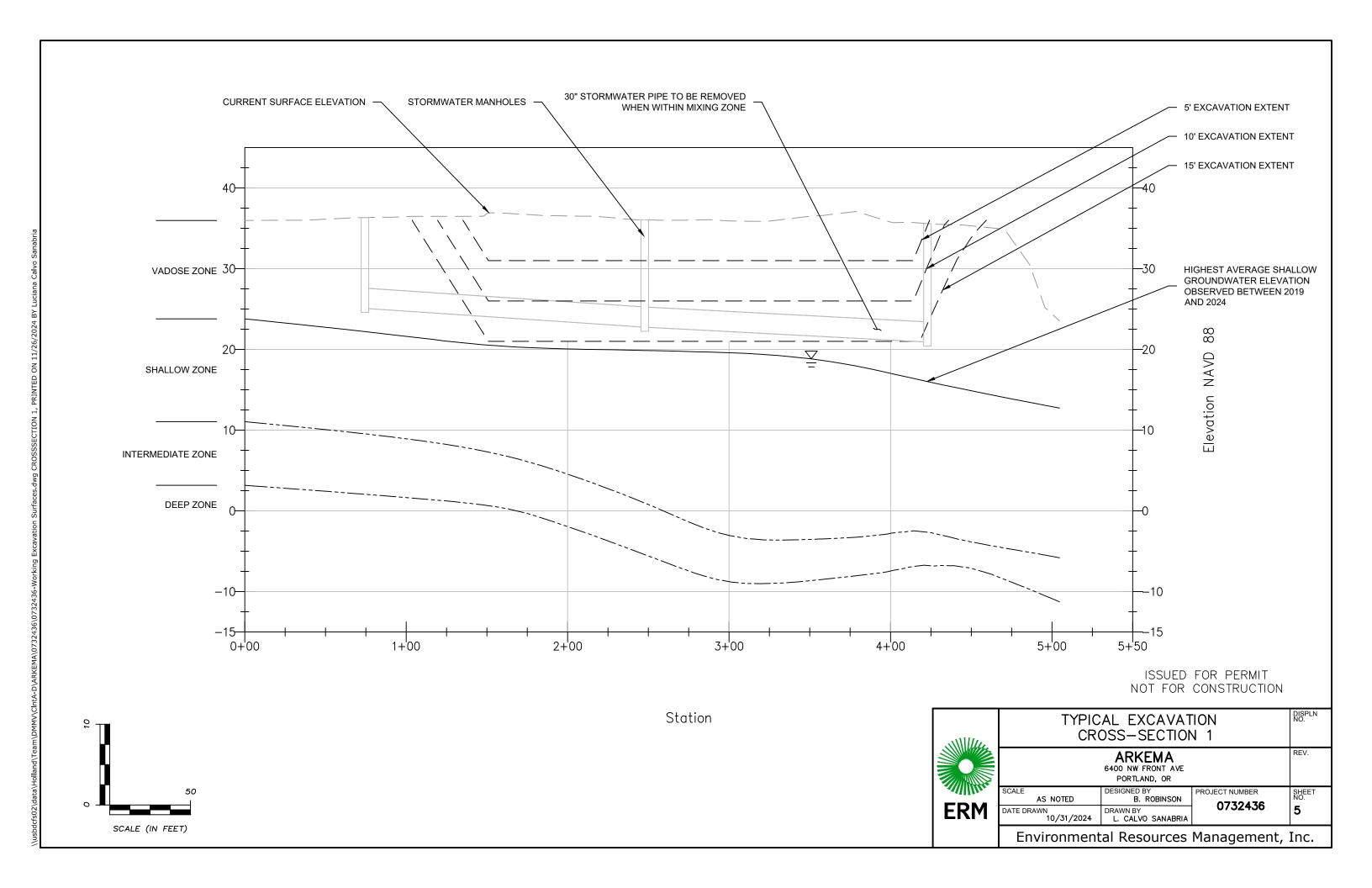
## APPENDIX E CONCEPTUAL DESIGN DRAWINGS

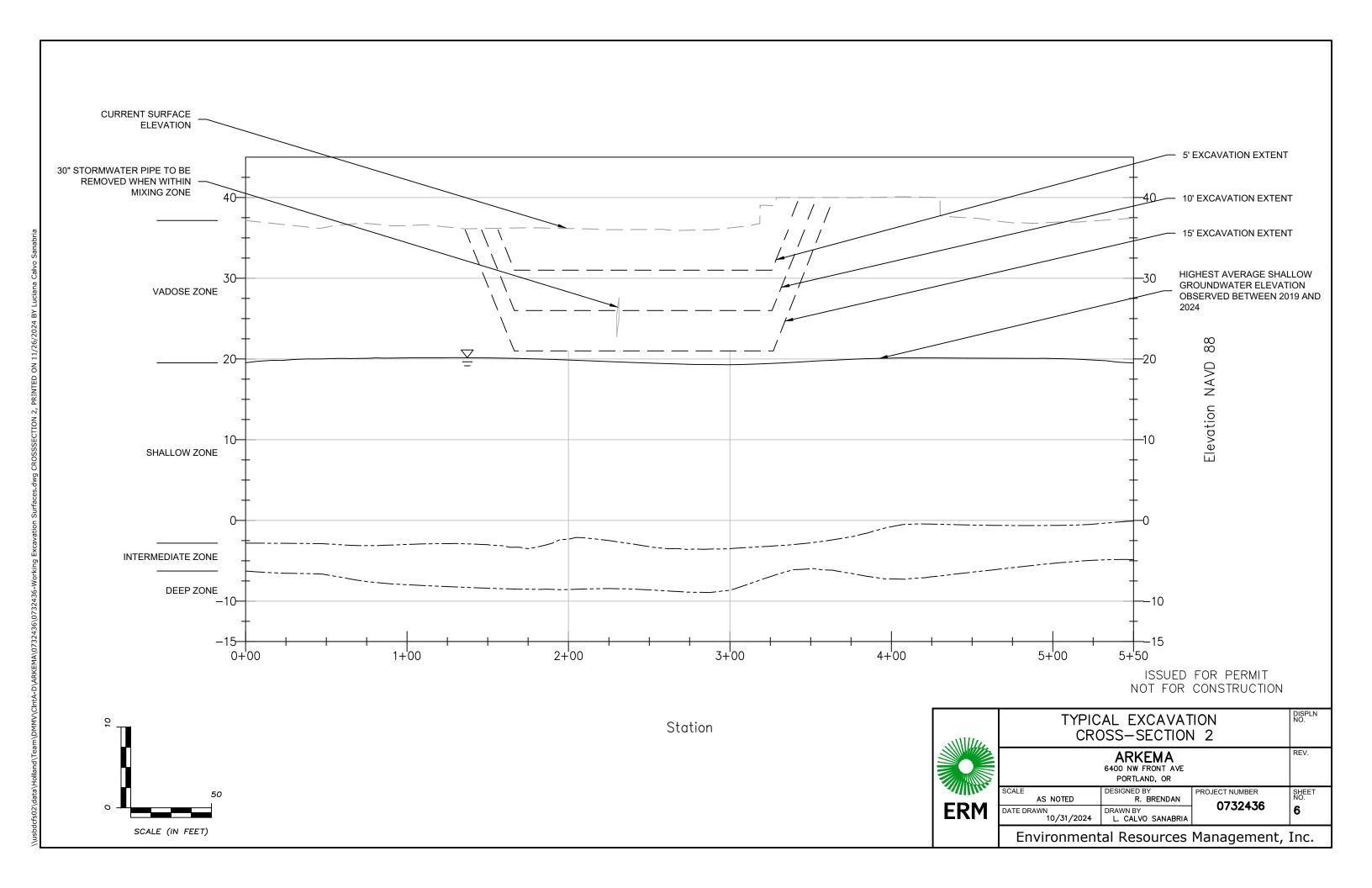


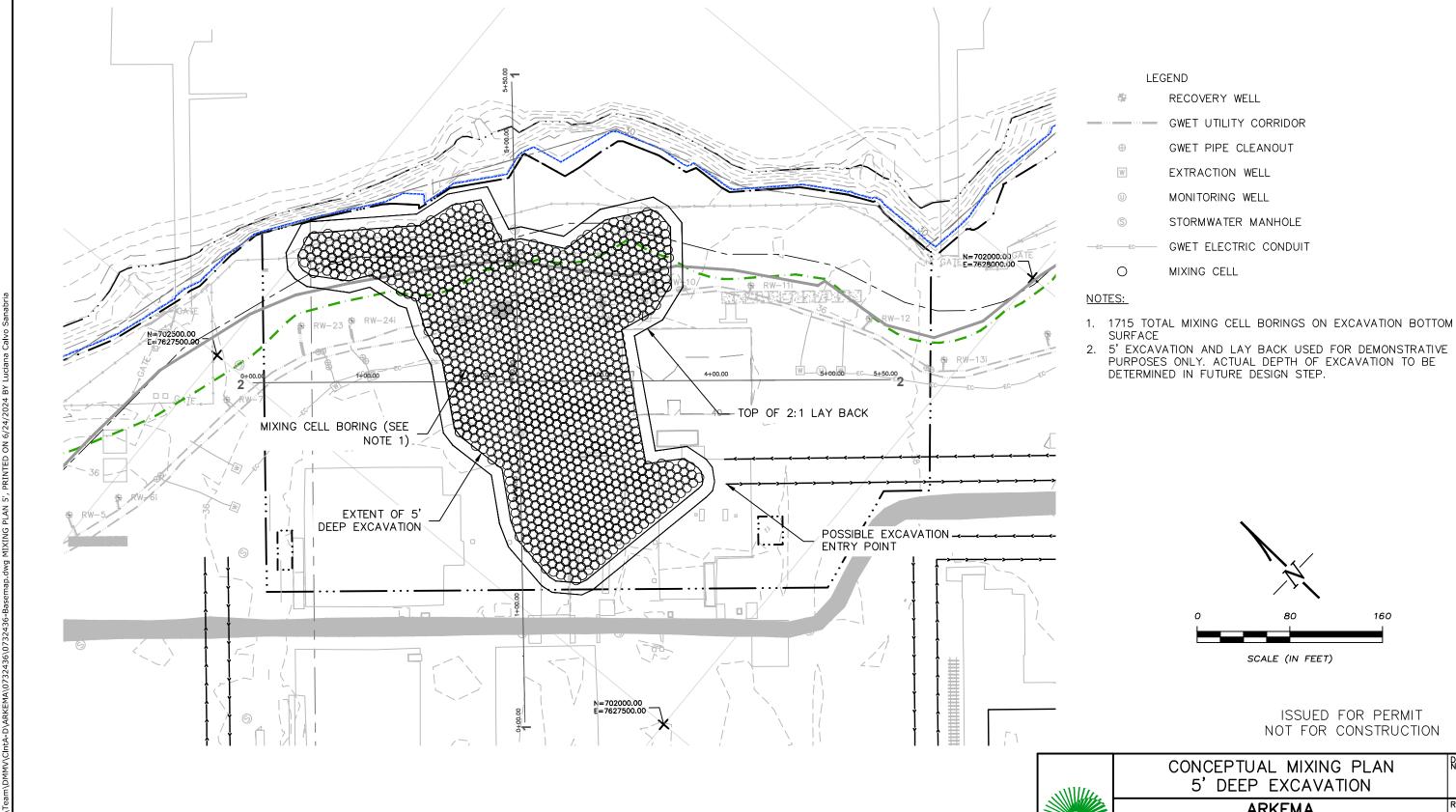






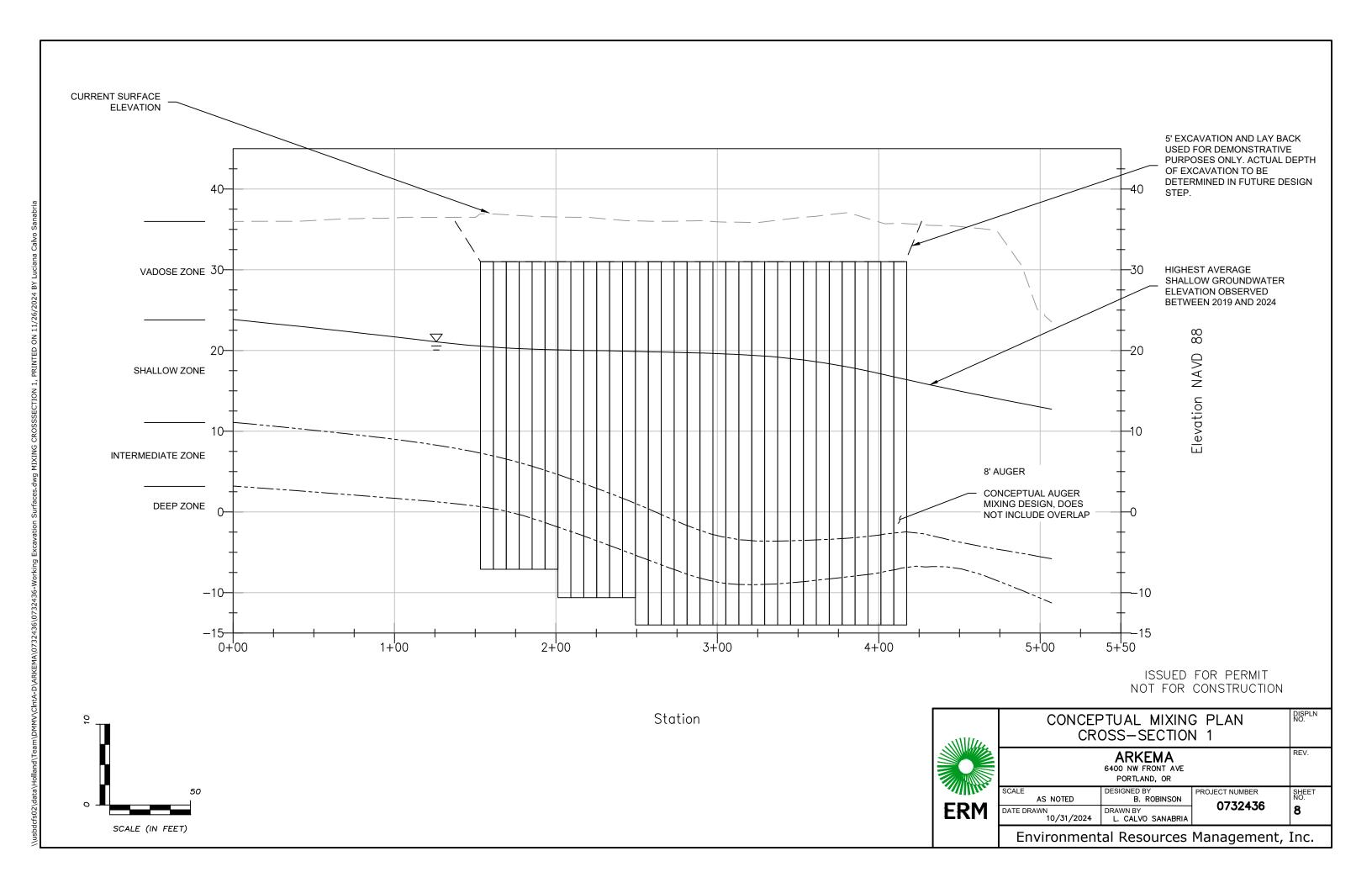






DISPLN NO. ARKEMA 6400 NW FRONT AVE PORTLAND, OR DESIGNED BY B. ROBINSON PROJECT NUMBER AS NOTED DATE DRAWN 10/31/2024 0732436 **ERM** DRAWN BY L. CALVO SANABRIA

Environmental Resources Management, Inc.





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