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Arkema Quarter 1, 2025, Groundwater Monitoring Report

Arkema Inc. Facility, Portland, Oregon

PREPARED FOR
Legacy Site Services LLC

DATE
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REFERENCE
0773823



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Arkema Inc. Facility, Portland, Oregon
0773823



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ACRONYMS AND ABBREVIATIONS

Acronyms	Description
µg/L	micrograms per liter
Arkema	Arkema Inc.
cis-1,2-DCE	cis-1,2-dichloroethene
COC	contaminant of concern
ERM	Environmental Resources Management, Inc.
GEE	Groundwater Extraction Enhancement
GMWP	Groundwater Monitoring Work Plan
GWBW	groundwater barrier wall
GWET	groundwater extraction and treatment
GW SCM	groundwater source control measures
LSS	Legacy Site Services, LLC
NTU	nephelometric turbidity unit
ODEQ	Oregon Department of Environmental Quality
PCE	tetrachloroethene
QA/QC	quality assurance / quality control
QAPP	Quality Assurance Project Plan
Report	Quarter 1, 2025, Groundwater Monitoring Report
SEE	System Effectiveness Evaluation
Site	Former Arkema Portland Plant at 6400 NW Front Avenue, Portland, Oregon



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1. INTRODUCTION

Environmental Resources Management, Inc. (ERM) has prepared this *Arkema Quarter 1, 2025, Groundwater Monitoring Report* (Report) for the Arkema Inc. Facility (the Site) on behalf of Legacy Site Services, LLC (LSS), agent for Arkema Inc. (Arkema). The Site is located at 6400 NW Front Avenue in the Northwest Industrial Area of Portland, Oregon, and is bounded by Front Avenue on the north and west, the Willamette River on the east, and an asphalt roofing manufacturer on the south. The Site lies on the southwest bank of the lower Willamette River between river mile 6.9 and river mile 7.6, immediately upstream of the Burlington Northern Santa Fe Railroad Bridge and is adjacent to the Portland Harbor Superfund site.

The Site's operational and remedial history was documented in the *Revised Upland Feasibility Study Work Plan* (ERM 2017). This Report provides the field procedures, groundwater level data, and analytical results for the Quarter 1, 2025, groundwater monitoring at the former Arkema Portland Plant at 6400 NW Front Avenue, Portland, Oregon.

The objective of this groundwater monitoring program is to evaluate the performance of the groundwater source control measure (GW SCM). The GW SCM consists of the groundwater barrier wall (GWBW) and the groundwater extraction and treatment system (GWET). The objective of the GW SCM is to achieve hydraulic containment of the alluvial sequence within the Target Capture Zone at the Site to prevent the flow of contaminants of concern (COCs) to the Willamette River. The GW SCM is described in further detail in the *Revised Final Performance Monitoring Plan—Groundwater Source Control Measure* (ERM 2015). In 2022, the GWET system was upgraded by installing 14 additional extraction wells referred to as the Groundwater Extraction Enhancement (GEE). The GEE is described in further detail in the Final Design Report (ERM 2022).

In their 31 May 2019 review of the *Draft GWET System Effectiveness Evaluation [SEE] Report* (ODEQ 2019), the Oregon Department of Environmental Quality (ODEQ) requested the development of an analytical monitoring program for groundwater COCs. Subsequent to that letter, LSS, ERM, and the ODEQ held a meeting on 2 July 2019, during which ERM and LSS agreed to commence groundwater monitoring. Starting in October 2019 through April 2021, groundwater monitoring was conducted in accordance with the ODEQ-approved *Arkema Quarterly Groundwater Monitoring Work Plan* (GMWP), dated October 2019 (ERM 2019). This groundwater monitoring scope consisted of a sitewide assessment of groundwater COCs.

Following the ODEQ review of the *2021 GWET SEE Report* (ODEQ 2021; ERM 2021), ERM, on behalf of LSS, requested a reduced monitoring scope in a memorandum dated 9 September 2021. The ODEQ approved the reduced monitoring scope on 14 September 2021. The objective of the reduced monitoring scope of work is to evaluate the potential for the following COCs to migrate around or below the GBW:

- Volatile organic compounds (VOCs)
- Perchlorate
- Chloride



The reduced monitoring scope includes 29 well locations in the Shallow, Intermediate, and Deep hydrogeological zones. On 24 February 2023, following implementation of the GEE, LSS, ERM, and ODEQ held a meeting during which the parties agreed to continue with the reduced monitoring program, and incorporate piezometer PA-18d into the program. Collectively, the GMWP as amended by the conversations with ODEQ discussed above is referred to as the Approved Groundwater Monitoring Program in this report. ERM conducts groundwater monitoring events on a quarterly basis and assesses historical and current groundwater analytical trends in the area of the GWBW on an annual basis. The annual assessment is included in the Annual SEE Report.



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2. FIELD PROCEDURES

ERM collected groundwater elevation data from 128 well locations on 17 February 2025 and groundwater samples from 30 well locations between 18 February and 21 February 2025. The locations of all monitoring wells and piezometers are presented on Figure 1. A summary of groundwater level and sampling locations and analyses are displayed in Table 1.

ERM performed field sampling in accordance with the procedures outlined in the GMWP and addenda, with exception of deviations further described in Section 2.5. These procedures cover well purging, field parameter collection, analytical requirements, and quality assurance / quality control (QA/QC) protocols.

Groundwater monitoring fieldwork included collecting groundwater level measurements, water quality parameters, and groundwater samples for laboratory analysis.

2.1 GROUNDWATER LEVEL MEASUREMENTS

As shown in Table 1, ERM collected groundwater elevation data on 17 February 2025 from 128 well locations using a combination of transducer and manual measurements. Manual measurements were measured to the nearest 0.01 foot using a water level indicator in accordance with the GMWP. For locations with functioning transducers, transducer data were used for reporting in lieu of collecting manual measurements. For locations with transducers where a manual measurement was collected, when drift was 0.1 foot or greater, the transducer was recalibrated.

2.2 GROUNDWATER SAMPLE COLLECTION PROCEDURES

ERM collected groundwater samples from 30 well locations in accordance with the Approved Groundwater Monitoring Program. The monitoring well network includes eight monitoring wells and 22 piezometers (Table 1). Sample collection procedures pertaining to the 30 well locations under ERM's monitoring program are included below.

All wells and piezometers were sampled with a bladder or peristaltic pump using low-flow techniques and sample collection procedures as described in the GMWP. Field water quality measurements (i.e., temperature, pH, specific conductivity, dissolved oxygen, oxygen-reduction potential, turbidity) were collected with calibrated field water quality meters. ERM recorded field notes taken during sampling in field logs; field forms are provided as Appendix A.

After well-purging criteria were satisfied, ERM disconnected the in-line flow cell and collected groundwater samples in the appropriate containers for the analyses as shown in Table 1. For VOCs, low level analyses were performed if historical results were non-detected by standard methods.

After sampling, ERM removed the pump and associated tubing from the well, discarded disposable tubing, and decontaminated reusable equipment as described in the GMWP.



2.3 SAMPLE SHIPPING AND INVESTIGATION-DERIVED WASTE

After sample collection, ERM labeled samples with the required data and entered the data into the chain-of-custody record to facilitate proper tracking and control. Samples were delivered under chain-of-custody to the Eurofins Beaverton Service Center and then shipped to their respective Eurofins laboratory in sealed containers, accompanied by the chain-of-custody record.

Investigation-derived waste generated during the groundwater monitoring included groundwater purged from monitoring wells, personal protective equipment, and disposable sampling equipment. Decontamination fluids and purge water were contained in 5-gallon buckets and then processed in the GWET system. Disposable sampling equipment and used personal protective equipment were disposed of as non-hazardous solid waste.

2.4 QUALITY ASSURANCE AND QUALITY CONTROL AND DATA VALIDATION

As described in the GMWP, the analyses were performed in accordance with the Quality Assurance Project Plan (QAPP) and the 2009 and 2011 QAPP addenda, as described in the GMWP.

ERM collected field QA/QC samples in accordance with the QAPP and associated addenda (listed below). QA/QC samples—including trip blanks, field duplicates, and rinsate samples—were collected, controlled, and shipped in the same manner as normal field samples.

- Trip blanks were included in each cooler that contained VOC samples.
- Field duplicate samples were collected for every 20 samples.
- Rinsate blank samples were collected for every 20 samples to verify efficacy of sampling equipment decontamination.

ERM completed data validation after receiving the laboratory analytical reports. Appendix B includes laboratory analytical reports and Appendix C includes data validation memos. 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 it was determined that the qualified data are acceptable for decision making and meet the overall objectives of the monitoring program.

2.5 DEVIATIONS FROM GROUNDWATER MONITORING WORK PLAN

Deviations outside of the Approved Groundwater Monitoring Program include the following:

- Select wells sampled during Quarter 1, 2025, had unstable field parameters and drawdown over 1 foot. Additional details are provided below in Section 3.2.1.
- One of the field duplicate samples, Dup-02-022125, collected at MWA-63, was only analyzed for VOCs and was not analyzed for perchlorate and chloride, due to a communication error with the lab.



2.6 MONITORING WELL REDEVELOPMENT

In March 2025, redevelopment was performed at five well locations (PA-19d, PA-20d, PA-21d, PA-23d, and PA-25d), which had consistent drawdown greater than 1 foot during groundwater monitoring in 2024. After sampling each well during Quarter 1, 2025, ERM staff measured total depths to inform planning for well redevelopment efforts. Redevelopment was performed at each location by using a surge block and pumping until turbidity was less than 50 nephelometric turbidity units (NTUs). Drawdown at each of these locations will be reviewed following the Quarter 2, 2025, groundwater monitoring event, and discussion on the efficacy of redevelopment at these locations will be discussed in the forthcoming Quarter 2, 2025, Groundwater Monitoring Report.



3. GROUNDWATER MONITORING RESULTS

3.1 GROUNDWATER ELEVATIONS

On 17 February 2025, ERM manually measured depth to groundwater to the nearest 0.01 foot in 56 wells at the Site using an electronic water level indicator. For the additional 72 wells with functioning transducers, ERM collected transducer groundwater elevation data on 17 February 2025. ERM averaged transducer data recorded in the respective Shallow Zone, Intermediate Zone, and Deep Zone aquifer wells during the time period that manual water level measurements were collected to estimate groundwater elevations. Table 2 presents groundwater elevation data for all 128 well locations, the time period used for averaging transducer groundwater elevation data, and transducers recalibrated based on this event. These data were used to develop potentiometric surface maps for the Shallow, Intermediate, and Deep hydrogeological zones. These maps are presented on Figures 2 through 4, respectively.

3.2 GROUNDWATER SAMPLING RESULTS

ERM personnel completed groundwater sampling between 18 and 21 February 2025 at 30 monitoring well and piezometer locations, in accordance with the Approved Groundwater Monitoring Program. Results from the groundwater sampling and analyses of the well locations included in ERM's monitoring program are presented in further detail below.

3.2.1 FIELD PARAMETER RESULTS

ERM measured and recorded field parameters during well purging. Table 3 presents the results of the field parameter measurements. The following well locations did not stabilize for select field parameters during the Quarter 1, 2025, groundwater monitoring event:

- Five monitoring locations (PA-04, PA-19d, PA-21d, PA-23d, PA-27d) did not stabilize for turbidity.
- Two monitoring locations (PA-21d, PA-25d) did not stabilize for dissolved oxygen.
- Two monitoring locations (PA-19d, PA-23d) did not stabilize for oxygen-reduction potential.
- Two monitoring locations (PA-19d, PA-23d) did not stabilize for temperature.
- Seven monitoring locations (PA-08, PA-19d, PA-20d, PA-21d, PA-23d, PA-25d, PA-27d) had drawdown greater than 1 foot.

At each of the well locations with non-stabilized field parameters listed above, three well volumes were purged prior to sampling except at locations PA-20d, PA-25d, and PA-27d. At the listed well locations where three well volumes were not collected, field parameters were close to stabilization and the quality of the data is not considered to be affected. Field staff will receive additional training regarding field parameter stabilization prior to the next groundwater monitoring event.



3.2.2 ANALYTICAL RESULTS

Tables 4 and 5 present the analytical results for VOCs, and perchlorate and chloride, respectively, from the Quarter 1, 2025, groundwater monitoring event. Appendix B presents laboratory analytical reports. Appendix D includes previous groundwater monitoring data, beginning in October 2019, from well locations associated with the Approved Groundwater Monitoring Program. Appendix E includes historical groundwater data associated with the Site prior to implementation of the groundwater monitoring program in October 2019.

3.2.2.1 VOCS

The results for chlorobenzene in the Shallow, Intermediate, and Deep Zones are presented on Figures 5 through 7, respectively. Chlorobenzene was detected in 6 out of 30 samples. The highest detected concentration of chlorobenzene was 43,000 micrograms per liter ($\mu\text{g/L}$) at Deep Zone piezometer PA-21d.

The results for 1,2-dichlorobenzene in the Shallow, Intermediate, and Deep Zones are presented on Figures 8 through 10, respectively. 1,2-Dichlorobenzene was detected in 4 out of 30 samples. The highest detected concentration of 1,2-dichlorobenzene was 0.26 $\mu\text{g/L}$ at Intermediate Zone piezometer PA-32i.

The results for tetrachloroethene (PCE), trichloroethene (TCE), and their de-chlorination daughter-products cis-1,2-dichloroethene (cis-1,2-DCE) and vinyl chloride, in the Shallow, Intermediate, and Deep Zones, are presented on Figures 11 through 13, respectively:

- PCE was detected in 7 out of 30 samples. The highest detected concentration of PCE was 9.2 $\mu\text{g/L}$ at Shallow Zone monitoring well MWA-63.
- TCE was detected in 5 out of 30 samples. The highest detected concentration of TCE was 1.5 $\mu\text{g/L}$ at Shallow Zone monitoring well MWA-63.
- cis-1,2-DCE was detected in 8 out of 30 samples. The highest detected concentration of cis-1,2-DCE was 0.94 $\mu\text{g/L}$ at Shallow Zone monitoring well MWA-63.
- Vinyl chloride was detected in 1 out of 30 samples. The highest detected concentration of vinyl chloride was 0.47 $\mu\text{g/L}$ at Intermediate Zone piezometer PA-10i.

3.2.2.2 PERCHLORATE

Perchlorate results for the Shallow, Intermediate, and Deep Zones are presented on Figures 14 through 16, respectively. Perchlorate was detected in 9 out of 30 samples. The highest detected concentration of perchlorate was 53,000 $\mu\text{g/L}$ at Deep Zone monitoring well MWA-58d.

3.2.2.3 CHLORIDE

Chloride results for the Shallow, Intermediate, and Deep Zones are presented on Figures 17 through 19, respectively. Chloride was detected in 29 out of 30 samples. The highest detected concentration of chloride was 33,000 milligrams per liter at Deep Zone piezometer PA-23d.



4. RECOMMENDATIONS

Following the Quarter 1, 2025, groundwater monitoring event, no changes are recommended to the GMWP at this time.

ERM will conduct the Quarter 2, 2025, groundwater monitoring event according to the following schedule:

- Water levels will be measured on 9 May 2025.
- Sampling will begin 12 May 2025 and is expected to be completed over a 1-week period.
- Receipt of analytical results is anticipated to be completed over a period of 5 weeks from the completion of the sampling event (June 2025).

The Quarter 2, 2025, Groundwater Monitoring Report will be submitted to the ODEQ within 60 days after data validation (August 2025).



5. REFERENCES

- ERM (ERM-West, Inc.). 2015. *Revised Final Performance Monitoring Plan—Groundwater Source Control Measure*. Arkema Inc. Facility, Portland, Oregon. July 2015.
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TABLES

Table 1
Groundwater Sampling Matrix
Arkema Quarter 1, 2025, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Analyte			Volatiles Organic Compounds	Volatiles Organic Compounds	Chloride	Perchlorate	Comments
Analytical Method			8260C	8260C_LL ^a	300	314	
Location ID	Aquifer Classification	Groundwater Level Measurement					
MWA-02	Shallow	X*	--	--	--	--	
MWA-15r	Shallow	X	--	--	--	--	
MWA-18	Shallow	X	--	--	--	--	
MWA-19	Shallow	X*	--	--	--	--	
MWA-20	Shallow	X	--	--	--	--	
MWA-22	Shallow	X	--	--	--	--	
MWA-24	Shallow	X	--	--	--	--	
MWA-29	Shallow	X	--	--	--	--	
MWA-33	Shallow	X	--	--	--	--	
MWA-40	Shallow	X	--	--	--	--	
MWA-41	Shallow	X	--	X	X	X	
MWA-42	Shallow	X	--	--	--	--	
MWA-43	Shallow	X	--	--	--	--	
MWA-46	Shallow	X	--	--	--	--	
MWA-47	Shallow	X*	--	--	--	--	
MWA-61	Shallow	X	--	--	--	--	
MWA-63	Shallow	X	X	--	X	X	
MWA-69	Shallow	X*	--	--	--	--	
MWA-71	Shallow	X	--	--	--	--	
MWA-72	Shallow	X	--	--	--	--	
MWA-73	Shallow	X	--	--	--	--	
MWA-82	Shallow	X	--	X	X	X	
PA-03	Shallow	X*	--	X	X	X	
PA-04	Shallow	X*	--	X	X	X	
PA-05	Shallow	X*	--	--	--	--	
PA-06	Shallow	X*	--	--	--	--	
PA-07	Shallow	X*	--	--	--	--	
PA-08	Shallow	X*	--	X	X	X	
PA-09	Shallow	X*	--	X	X	X	
PA-28	Shallow	X*	--	--	--	--	
PA-31	Shallow	X	--	X	X	X	
PA-33	Shallow	X	--	--	--	--	
PA-35	Shallow	X	--	--	--	--	
PA-36	Shallow	X	--	--	--	--	
PA-38	Shallow	X	--	--	--	--	
PA-41	Shallow	X	--	--	--	--	
PA-42	Shallow	X	--	--	--	--	
PA-43	Shallow	X	--	--	--	--	
RP-02-31	Shallow	X	--	--	--	--	
RP-10-30	Shallow	X	--	--	--	--	
RW-05	Shallow	X*	--	--	--	--	
RW-07	Shallow	X*	--	--	--	--	

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Analyte			Volatile Organic Compounds	Volatile Organic Compounds	Chloride	Perchlorate	Comments
Analytical Method			8260C	8260C_LL ^a	300	314	
Location ID	Aquifer Classification	Groundwater Level Measurement					
RW-08	Shallow	X*	--	--	--	--	
RW-10	Shallow	X*	--	--	--	--	
RW-12	Shallow	X*	--	--	--	--	
RW-14	Shallow	X*	--	--	--	--	
RW-15	Shallow	X*	--	--	--	--	
RW-17	Shallow	X*	--	--	--	--	
RW-18	Shallow	X*	--	--	--	--	
RW-20	Shallow	X*	--	--	--	--	
RW-22	Shallow	X*	--	--	--	--	
RW-23	Shallow	X*	--	--	--	--	
RW-25	Shallow	X*	--	--	--	--	
EW-1	Shallow/Intermediate	X*	--	--	--	--	
EW-2	Shallow/Intermediate	X*	--	--	--	--	
EW-3	Shallow/Intermediate	X*	--	--	--	--	
EW-4	Shallow/Intermediate	X*	--	--	--	--	
EW-5	Shallow/Intermediate	X*	--	--	--	--	
EW-6	Shallow/Intermediate	X*	--	--	--	--	
EW-7	Shallow/Intermediate	X*	--	--	--	--	
EW-8	Shallow/Intermediate	X*	--	--	--	--	
EW-9	Shallow/Intermediate	X*	--	--	--	--	
EW-10	Shallow/Intermediate	X*	--	--	--	--	
EW-11	Shallow/Intermediate	X*	--	--	--	--	
EW-12	Shallow/Intermediate	X*	--	--	--	--	
EW-13	Shallow/Intermediate	X*	--	--	--	--	
EW-14	Shallow/Intermediate	X*	--	--	--	--	
MWA-83	Shallow/Intermediate	X	--	--	--	--	
MWA-84	Shallow/Intermediate	X	--	--	--	--	
MWA-85	Shallow/Intermediate	X	--	--	--	--	
MWA-86	Shallow/Intermediate	X	--	--	--	--	
MWA-87	Shallow/Intermediate	X	--	--	--	--	
MWA-88	Shallow/Intermediate	X	--	--	--	--	
MWA-89	Shallow/Intermediate	X	--	--	--	--	
MWA-07(i)	Intermediate	X	--	--	--	--	
MWA-08i	Intermediate	X*	--	--	--	--	
MWA-16i	Intermediate	X	--	--	--	--	
MWA-34iR ^b	Intermediate	X*	--	--	--	--	
MWA-49i	Intermediate	X	--	--	--	--	
MWA-53i	Intermediate	X	--	--	--	--	
MWA-54i	Intermediate	X	--	--	--	--	
MWA-66i	Intermediate	X*	--	--	--	--	
MWA-70i	Intermediate	X	--	--	--	--	
MWA-74i	Intermediate	X	--	--	--	--	
MWA-75i	Intermediate	X	--	--	--	--	
MWA-81i	Intermediate	X	--	X	X	X	

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Analytical Method			8260C	8260C_LL ^a	300	314	
Location ID	Aquifer Classification	Groundwater Level Measurement					
PA-10i	Intermediate	X*	--	X	X	X	
PA-11i	Intermediate	X*	--	--	--	--	
PA-12i	Intermediate	X*	--	--	--	--	
PA-13i	Intermediate	X*	--	--	--	--	
PA-14i	Intermediate	X*	--	--	--	--	
PA-15i	Intermediate	X*	--	X	X	X	
PA-16i	Intermediate	X*	--	X	X	X	
PA-17iR	Intermediate	X*	--	X	X	X	
PA-29i	Intermediate	X*	--	--	--	--	
PA-32i	Intermediate	X	--	X	X	X	
PA-34i	Intermediate	X	--	--	--	--	
PA-37i	Intermediate	X	--	--	--	--	
PA-39i	Intermediate	X	--	--	--	--	
PA-40i	Intermediate	X	--	--	--	--	
PA-44i	Intermediate	X	--	X	X	X	
RW-06i	Intermediate	X*	--	--	--	--	
RW-09i	Intermediate	X*	--	--	--	--	
RW-11i	Intermediate	X*	--	--	--	--	
RW-13i	Intermediate	X*	--	--	--	--	
RW-16i	Intermediate	X*	--	--	--	--	
RW-19i	Intermediate	X*	--	--	--	--	
RW-21i	Intermediate	X*	--	--	--	--	
RW-24i	Intermediate	X*	--	--	--	--	
RW-26i	Intermediate	X*	--	--	--	--	
MWA-11i(d)	Deep	X	--	X	X	X	
MWA-12i(d)	Deep	X	--	--	--	--	
MWA-31i(d)	Deep	X	X	--	X	X	
MWA-56d	Deep	X	X	--	X	X	
MWA-58d	Deep	X*	X	--	X	X	
PA-18d	Deep	X*	X	--	X	X	
PA-19d	Deep	X*	X	--	X	X	
PA-20d	Deep	X*	X	--	X	X	
PA-21d	Deep	X*	X	--	X	X	
PA-22d	Deep	X*	X	--	X	X	
PA-23d	Deep	X*	X	--	X	X	
PA-24d	Deep	X*	X	--	X	X	
PA-25d	Deep	X*	--	X	X	X	
PA-26d	Deep	X*	--	X	X	X	
PA-27d	Deep	X*	X	--	X	X	
PA-30d	Deep	X*	X	--	X	X	
MWA-76g	Gravel	X	--	--	--	--	
MWA-77g	Gravel	X	--	--	--	--	

Notes:

^a low level test

^b MWA-34i was abandoned on 30 May 2024 and reinstalled as MWA-34iR on 29 May 2024.

* = indicates locations where groundwater level was measured with transducer.

Table 2
Groundwater Elevation Results
Arkema Quarter 1, 2025, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Well ID	Date	Time	Aquifer Unit	Top of Casing Elevation (ft NAVD88)	Depth to Water (ft)	Groundwater Elevation (ft NAVD88)	Transducer Recalibrated following Manual Measurement ^a
MWA-02*	2/17/2025	*	Shallow	36.20	--	9.2	
MWA-15r	2/17/2025	9:40:00 AM	Shallow	36.06	24.66	11.4	
MWA-18	2/17/2025	10:07:00 AM	Shallow	39.43	29.68	9.75	
MWA-19*	2/17/2025	*	Shallow	38.26	--	10.51	
MWA-20	2/17/2025	9:53:00 AM	Shallow	40.95	27	13.95	
MWA-22	2/17/2025	9:38:00 AM	Shallow	36.59	21.1	15.49	
MWA-24	2/17/2025	11:37:00 AM	Shallow	37.58	21.17	16.41	
MWA-29	2/17/2025	10:24:00 AM	Shallow	44.42	34.1	10.32	
MWA-33	2/17/2025	11:28:00 AM	Shallow	37.26	16.5	20.76	
MWA-40	2/17/2025	11:33:00 AM	Shallow	36.96	17.58	19.38	
MWA-41	2/17/2025	11:15:00 AM	Shallow	45.14	32.52	12.62	
MWA-42	2/17/2025	9:47:00 AM	Shallow	37.24	25.8	11.44	
MWA-43	2/17/2025	10:59:00 AM	Shallow	44.53	33.8	10.73	
MWA-46	2/17/2025	10:04:00 AM	Shallow	36.67	26.98	9.69	
MWA-47*	2/17/2025	*	Shallow	39.02	--	9.41	
MWA-61	2/17/2025	9:12:00 AM	Shallow	36.21	27	9.21	
MWA-63	2/17/2025	9:09:00 AM	Shallow	36.29	22.9	13.39	
MWA-69*	2/17/2025	*	Shallow	33.73	--	10.03	
MWA-71	2/17/2025	8:48:00 AM	Shallow	34.82	2.5	32.32	
MWA-72	2/17/2025	11:46:00 AM	Shallow	34.16	1.87	32.29	
MWA-73	2/17/2025	11:40:00 AM	Shallow	36.01	4.25	31.76	
MWA-82	2/17/2025	11:20:00 AM	Shallow	37.74	23.05	14.69	
PA-03*	2/17/2025	*	Shallow	37.10	--	27.3	
PA-04*	2/17/2025	*	Shallow	36.67	--	27.8	
PA-05*	2/17/2025	*	Shallow	37.22	--	7.77	
PA-06*	2/17/2025	*	Shallow	38.03	--	12.48	
PA-07*	2/17/2025	*	Shallow	39.30	--	14.48	
PA-08*	2/17/2025	*	Shallow	40.47	--	13.11	
PA-09*	2/17/2025	*	Shallow	40.24	--	11.92	
PA-28*	2/17/2025	*	Shallow	38.58	--	14.48	
PA-31	2/17/2025	8:52:00 AM	Shallow	36.25	8.27	27.98	
PA-33	2/17/2025	8:57:00 AM	Shallow	36.29	8.92	27.37	
PA-35	2/17/2025	9:02:00 AM	Shallow	35.91	27.19	8.72	
PA-36	2/17/2025	9:18:00 AM	Shallow	36.90	30.5	6.4	
PA-38	2/17/2025	10:56:00 AM	Shallow	42.93	28.52	14.41	
PA-41	2/17/2025	10:49:00 AM	Shallow	39.69	25.04	14.65	
PA-42	2/17/2025	10:58:00 AM	Shallow	40.60	27.45	13.15	
PA-43	2/17/2025	11:12:00 AM	Shallow	40.41	31.95	8.46	
RP-02-31	2/17/2025	8:33:00 AM	Shallow	42.49	30.85	11.64	
RP-10-30	2/17/2025	8:40:00 AM	Shallow	37.47	6.26	31.21	
RW-05*	2/17/2025	*	Shallow	34.80	--	24.71	
RW-07*	2/17/2025	*	Shallow	33.98	--	8.12	
RW-08*	2/17/2025	*	Shallow	34.21	--	9.1	
RW-10*	2/17/2025	*	Shallow	34.33	--	12.32	
RW-12*	2/17/2025	*	Shallow	35.58	--	13.2	
RW-14*	2/17/2025	*	Shallow	36.08	--	10.06	
RW-15*	2/17/2025	*	Shallow	35.81	--	14.08	
RW-17*	2/17/2025	*	Shallow	36.55	--	14.43	
RW-18*	2/17/2025	*	Shallow	36.51	--	14.2	
RW-20*	2/17/2025	*	Shallow	37.07	--	14.33	
RW-22*	2/17/2025	*	Shallow	38.02	--	13.72	
RW-23*	2/17/2025	*	Shallow	33.63	--	4.59	
RW-25*	2/17/2025	*	Shallow	38.06	--	8.1	
EW-1*	2/17/2025	*	Shallow/Intermediate	33.84	--	-0.04	
EW-2*	2/17/2025	*	Shallow/Intermediate	34.20	--	0.8	
EW-3*	2/17/2025	*	Shallow/Intermediate	34.43	--	0.15	
EW-4*	2/17/2025	*	Shallow/Intermediate	34.61	--	0.33	
EW-5*	2/17/2025	*	Shallow/Intermediate	35.03	--	-6	
EW-6*	2/17/2025	*	Shallow/Intermediate	35.43	--	-5.59	
EW-7*	2/17/2025	*	Shallow/Intermediate	35.24	--	6.15	

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Groundwater Elevation Results
Arkema Quarter 1, 2025, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Well ID	Date	Time	Aquifer Unit	Top of Casing Elevation (ft NAVD88)	Depth to Water (ft)	Groundwater Elevation (ft NAVD88)	Transducer Recalibrated following Manual Measurement ^a
EW-8*	2/17/2025	*	Shallow/Intermediate	35.07	--	5.24	
EW-9*	2/17/2025	*	Shallow/Intermediate	36.77	--	-0.44	
EW-10*	2/17/2025	*	Shallow/Intermediate	36.35	--	-17.81	
EW-11*	2/17/2025	*	Shallow/Intermediate	37.38	--	-5.56	
EW-12*	2/17/2025	*	Shallow/Intermediate	38.24	--	-5.46	
EW-13*	2/17/2025	*	Shallow/Intermediate	39.79	--	-2.04	
EW-14*	2/17/2025	*	Shallow/Intermediate	40.03	--	-1.44	
MWA-83	2/17/2025	9:05:00 AM	Shallow/Intermediate	35.82	26.19	9.63	
MWA-84	2/17/2025	9:21:00 AM	Shallow/Intermediate	36.31	31.92	4.39	
MWA-85	2/17/2025	9:32:00 AM	Shallow/Intermediate	36.86	36.4	0.46	
MWA-86	2/17/2025	9:49:00 AM	Shallow/Intermediate	37.15	24.29	12.86	
MWA-87	2/17/2025	9:57:00 AM	Shallow/Intermediate	37.68	33.93	3.75	
MWA-88	2/17/2025	10:15:00 AM	Shallow/Intermediate	39.36	39.39	-0.03	
MWA-89	2/17/2025	11:07:00 AM	Shallow/Intermediate	41.65	38.98	2.67	
MWA-07(i)	2/17/2025	11:41:00 AM	Intermediate	36.24	5.16	31.08	
MWA-08i*	2/17/2025	*	Intermediate	36.25	--	9.5	
MWA-16i	2/17/2025	9:27:00 AM	Intermediate	36.58	26.5	10.08	
MWA-34iR*	2/17/2025	*	Intermediate	37.36	--	9.36	
MWA-49i	2/17/2025	10:05:00 AM	Intermediate	36.68	26.62	10.06	
MWA-53i	2/17/2025	10:23:00 AM	Intermediate	44.63	34.35	10.28	
MWA-54i	2/17/2025	9:45:00 AM	Intermediate	37.35	24.1	13.25	
MWA-66i*	2/17/2025	*	Intermediate	33.35	--	9.33	
MWA-70i	2/17/2025	11:25:00 AM	Intermediate	37.62	20.78	16.84	
MWA-74i	2/17/2025	8:47:00 AM	Intermediate	34.72	9.4	25.32	
MWA-75i	2/17/2025	11:47:00 AM	Intermediate	34.09	2	32.09	
MWA-81i	2/17/2025	11:14:00 AM	Intermediate	44.62	33.43	11.19	
PA-10i*	2/17/2025	*	Intermediate	36.67	--	13.2	
PA-11i*	2/17/2025	*	Intermediate	37.63	--	10.09	
PA-12i*	2/17/2025	*	Intermediate	38.03	--	12.3	
PA-13i*	2/17/2025	*	Intermediate	38.48	--	11.37	
PA-14i*	2/17/2025	*	Intermediate	39.30	--	11.02	
PA-15i*	2/17/2025	*	Intermediate	40.62	--	11.27	
PA-16i*	2/17/2025	*	Intermediate	40.30	--	10.78	
PA-17iR*	2/17/2025	*	Intermediate	37.59	--	12	
PA-29i*	2/17/2025	*	Intermediate	39.18	--	9.58	
PA-32i	2/17/2025	8:54:00 AM	Intermediate	36.28	23.38	12.9	
PA-34i	2/17/2025	9:00:00 AM	Intermediate	36.02	23.25	12.77	
PA-37i	2/17/2025	9:15:00 AM	Intermediate	36.54	25.3	11.24	
PA-39i	2/17/2025	10:52:00 AM	Intermediate	40.11	28.9	11.21	
PA-40i	2/17/2025	10:54:00 AM	Intermediate	41.47	30.22	11.25	
PA-44i	2/17/2025	11:10:00 AM	Intermediate	40.36	29.13	11.23	
RW-06i*	2/17/2025	*	Intermediate	35.59	--	12.52	
RW-09i*	2/17/2025	*	Intermediate	33.73	--	10.21	
RW-11i*	2/17/2025	*	Intermediate	34.77	--	10.12	
RW-13i*	2/17/2025	*	Intermediate	36.09	--	13.18	
RW-16i*	2/17/2025	*	Intermediate	35.77	--	13.27	
RW-19i*	2/17/2025	*	Intermediate	36.56	--	11.21	
RW-21i*	2/17/2025	*	Intermediate	37.38	--	11.27	
RW-24i*	2/17/2025	*	Intermediate	34.03	--	8.74	
RW-26i*	2/17/2025	*	Intermediate	38.10	--	11.25	
MWA-11i(d)	2/17/2025	9:42:00 AM	Deep	36.49	25.76	10.73	
MWA-12i(d)	2/17/2025	11:44:00 AM	Deep	35.86	9.9	25.96	
MWA-31i(d)	2/17/2025	10:20:00 AM	Deep	38.36	28.82	9.54	
MWA-56d	2/17/2025	10:03:00 AM	Deep	36.68	26.75	9.93	
MWA-58d*	2/17/2025	*	Deep	37.97	--	8.85	
PA-18d*	2/17/2025	*	Deep	36.55	--	9.12	
PA-19d*	2/17/2025	*	Deep	36.65	--	8.52	
PA-20d*	2/17/2025	*	Deep	37.91	--	10.36	
PA-21d*	2/17/2025	*	Deep	34.36	--	8.44	
PA-22d*	2/17/2025	*	Deep	38.75	--	9.03	

Table 2
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Arkema Inc. Facility
Portland, Oregon

Well ID	Date	Time	Aquifer Unit	Top of Casing Elevation (ft NAVD88)	Depth to Water (ft)	Groundwater Elevation (ft NAVD88)	Transducer Recalibrated following Manual Measurement ^a
PA-23d*	2/17/2025	*	Deep	39.31	--	8.81	
PA-24d*	2/17/2025	*	Deep	39.06	--	9.1	
PA-25d*	2/17/2025	*	Deep	40.44	--	11.76	
PA-26d*	2/17/2025	*	Deep	40.33	--	11.24	
PA-27d*	2/17/2025	*	Deep	37.10	--	11.45	
PA-30d*	2/17/2025	*	Deep	37.34	--	9.56	
MWA-76g	2/17/2025	11:48:00 AM	Gravel	34.96	9.5	25.46	
MWA-77g	2/17/2025	8:45:00 AM	Gravel	34.03	19.31	14.72	

Notes:

^a For monitoring wells with transducers where manual measurements were collected, if drift was 0.1 foot or greater, the transducer was recalibrated.

* = wells with transducers; transducer data were used to obtain groundwater elevation

** = wells with malfunctioning or down transducers, water levels collected manually

ft = feet

NAVD 88 = North American Vertical Datum 1988

Manual measurement data collected in field with tablet.

Transducer data was averaged between 7:16 AM and 9:56 PM for the groundwater elevation value.

Table 3
Field Parameters Measured in Groundwater
Arkema Quarter 1, 2025, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

				Analyte Method Unit	pH Field Measure SU	Temperature Field Measure deg C	Specific Conductivity Field Measure uS/cm	Oxidation- Reduction Potential Field Measure mV	Dissolved Oxygen Field Measure mg/L	Turbidity Field Measure NTU
Location ID	Sample Date	Aquifer Classification	Sample ID							
MWA-41	18-Feb-25	Shallow	MWA-41-021825		6.82	15.5	323	44.2	0.93	20
MWA-63	21-Feb-25	Shallow	MWA-63-022125		6.98	14.4	725	49	6.57	27.5
MWA-82	18-Feb-25	Shallow	MWA-82-021825		9.72	15.1	578	-13.6	0.85	50.6
PA-03	20-Feb-25	Shallow	PA-03-022025		10.57	15.4	950	241	0.17	183
PA-04	21-Feb-25	Shallow	PA-04-022125		10.25	14.8	808	-108.7	0.49	77.5
PA-08	20-Feb-25	Shallow	PA-08-022025		7.4	11.4	2211	-35.8	0.81	19.4
PA-09	20-Feb-25	Shallow	PA-09-022025		6.88	12.7	1415	80.3	0.69	117
PA-31	19-Feb-25	Shallow	PA-31-021925		9.92	15.2	919	-13.8	0.62	501
MWA-81i	18-Feb-25	Intermediate	MWA-81i-180225		6.92	14.79	460	-38.8	0.75	2.22
PA-10i	21-Feb-25	Intermediate	PA-10i-022125		7.83	14.5	980	-185.2	0.32	5.57
PA-15i	18-Feb-25	Intermediate	PA-15i-021825		7.37	14.2	841	-84.2	0.18	88
PA-16i	21-Feb-25	Intermediate	PA-16i-022125		7.05	13.7	752	-48.5	8.34	118
PA-17iR	21-Feb-25	Intermediate	PA-17iR-022125		9.41	12.4	1444	-249.4	0.16	5.78
PA-32i	20-Feb-25	Intermediate	PA-32i-022025		6.06	14.98	1110	-12.9	0.24	14
PA-44i	18-Feb-25	Intermediate	PA-44i-021825		8.97	14.5	148	59.8	9.4	14
MWA-11i(d)	21-Feb-25	Deep	MWA-11i(d)-022125		6.96	14.3	2657	-97.6	9.68	24.5
MWA-31i(d)	19-Feb-25	Deep	MWA-31i(d)-021925		6.33	14	16480	82.2	0.57	17.7
MWA-56d	19-Feb-25	Deep	MWA-56d-021925		6.71	15.3	39750	140	0.56	17.8
MWA-58d	19-Feb-25	Deep	MWA-58d-021925		6.77	14.5	51180	77.7	0.6	8.99
PA-18d	21-Feb-25	Deep	PA-18d-022125		8.85	15	1484	-197.7	0.32	NM
PA-19d ^a	20-Feb-25	Deep	PA-19d-022025		7.13	12.6	3203	-139.8	2.85	22.9
PA-20d	20-Feb-25	Deep	PA-20d-022025		6.61	13.13	2417	-189.3	0.45	2.43
PA-21d	20-Feb-25	Deep	PA-21d-022025		6.06	12.9	4030	-128.6	0.45	4.83
PA-22d	20-Feb-25	Deep	PA-22d-022025		7.13	11.8	16.5	40.2	0.79	91.9
PA-23d	19-Feb-25	Deep	PA-23d-021925		6.9	13.2	66.18	-76.8	9.59	18.7
PA-24d	19-Feb-25	Deep	PA-24d-021925		6.73	12.4	69.42	-87.8	1.4	57.7
PA-25d	18-Feb-25	Deep	PA-25d-021825		6.99	13.3	683	-101.6	4.7	3
PA-26d	21-Feb-25	Deep	PA-26d-022125		6.87	12.8	736	-126	0.92	53.3
PA-27d	21-Feb-25	Deep	PA-27d-022125		7.34	13.7	3281	-121.9	0.44	35.7
PA-30d	20-Feb-25	Deep	PA-30d-022025		8.26	14.3	2942	-145.2	0.48	43.5

Notes:

^a Well went dry during purging, well sampled within 24 hours of going dry.

uS/cm = microSiemens per centimeter

deg C = degrees Celsius

mg/L = milligrams per liter

mV = millivolts

NTU = nephelometric turbidity units

SU = standard units

Table 4
Volatile Organic Compounds Results
Arkema Quarter 1, 2025, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Analyte Unit					1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene
FSWP SHSC (shaded values indicate results above the value shown)					NE	11	0.4	1.6	47	710	NE	NE	NE	0.076	NE
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID											
MWA-41	2-18-2025	N	Shallow	MWA-41-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.084	< 0.47	< 0.050	< 0.36	< 0.55 U
MWA-63	2-21-2025	N	Shallow	MWA-63-022125	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 2.9	< 4.3	< 4.1	< 3.3	< 6.1
MWA-63	2-21-2025	FD	Shallow	DUP-02-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.29	< 0.43	< 0.41	< 0.33	< 0.61
MWA-82	2-18-2025	N	Shallow	MWA-82-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.084	< 0.47	< 0.050	< 0.36	< 0.55 U
PA-03	2-20-2025	N	Shallow	PA-03-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.16 J+	< 0.035	< 0.084	< 0.47	< 0.050	< 0.36	< 0.23
PA-04	2-21-2025	N	Shallow	PA-04-022125	< 0.11	< 0.025	< 0.056	0.074	0.24	0.23 J+	< 0.084	< 0.47	< 0.050	< 0.36	< 0.23
PA-08	2-20-2025	N	Shallow	PA-08-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19	< 0.035	< 0.084	< 0.47	< 0.050	< 0.36	< 0.55 U
PA-09	2-20-2025	N	Shallow	PA-09-022025	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.084	< 0.47	< 0.050	< 0.36	< 0.55 U
PA-31	2-19-2025	N	Shallow	PA-31-021925	< 0.11	0.22	< 0.056	< 0.070	0.19	0.71	< 0.084	< 0.47	< 0.050	< 0.36	< 0.55 U
MWA-81i	2-18-2025	N	Intermediate	MWA-81i-021825	< 0.11	< 0.025	< 0.056	< 0.070	0.069	< 0.035	< 0.084	< 0.47	< 0.050	< 0.36	< 0.55 U
PA-10i	2-21-2025	N	Intermediate	PA-10i-022125	< 0.11	< 0.20 U	< 0.056	0.075	< 0.064	< 0.20 U	< 0.084	< 0.47	0.061	< 0.36	< 0.23
PA-15i	2-18-2025	N	Intermediate	PA-15i-021825	< 0.11	< 0.025	< 0.056	< 0.070	0.21	< 0.035	< 0.084	< 0.47	< 0.050	< 0.36	< 0.55 U
PA-16i	2-21-2025	N	Intermediate	PA-16i-022125	< 0.11	< 0.025	< 0.056	< 0.070	0.10 J+	< 0.035	< 0.084	< 0.47	< 0.050	< 0.36	< 0.55 U
PA-17iR	2-21-2025	N	Intermediate	PA-17iR-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.29	< 0.43	< 0.41	< 0.33	< 0.61
PA-32i	2-20-2025	N	Intermediate	PA-32i-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19	0.059 J+	< 0.084	< 0.47	< 0.050	< 0.36	< 0.55 U
PA-32i	2-20-2025	FD	Intermediate	DUP-01-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19 J+	0.12 J+	< 0.084	< 0.47	< 0.050	< 0.36	< 0.55 U
PA-44i	2-18-2025	N	Intermediate	PA-44i-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.084	< 0.47	< 0.050	< 0.36	< 0.55 U
MWA-11i(d)	2-21-2025	N	Deep	MWA-11i(d)-022125	< 0.11	< 0.025	< 0.056	0.073	0.079	< 0.20 U	0.090	< 0.47	< 0.050	< 0.36	< 0.23
MWA-31i(d)	2-19-2025	N	Deep	MWA-31i(d)-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.29	< 0.43	< 0.41	< 0.33	< 0.61
MWA-56d	2-19-2025	N	Deep	MWA-56d-021925	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 2.9	< 4.3	< 4.1	< 3.3	< 6.1
MWA-58d	2-19-2025	N	Deep	MWA-58d-021925	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 2.9	< 4.3	< 4.1	< 3.3	< 6.1
PA-18d	2-21-2025	N	Deep	PA-18d-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.29	< 0.43	< 0.41	< 0.33	< 0.61
PA-19d	2-20-2025	N	Deep	PA-19d-022025	< 18	< 39	< 52	< 24	< 22	< 28	< 29	< 43	< 41	< 33	< 61
PA-20d	2-20-2025	N	Deep	PA-20d-022025	< 0.18	< 0.39	< 0.52	< 0.24	0.25	< 0.28	< 0.29	< 0.43	< 0.41	< 0.33	< 0.61
PA-21d	2-20-2025	N	Deep	PA-21d-022025	< 180	< 390	< 520	< 240	< 220	< 280	< 290	< 430	< 410	< 330	< 610
PA-22d	2-20-2025	N	Deep	PA-22d-022025	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.29	< 0.43	< 0.41	< 0.33	< 0.61
PA-23d	2-19-2025	N	Deep	PA-23d-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.29	< 0.43	< 0.41	< 0.33	< 0.61
PA-24d	2-19-2025	N	Deep	PA-24d-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.29	< 0.43	< 0.41	< 0.33	< 0.61
PA-25d	2-18-2025	N	Deep	PA-25d-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.084	< 0.47	< 0.050	< 0.36	< 0.55 U
PA-26d	2-21-2025	N	Deep	PA-26d-022125	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.084	< 0.47	< 0.050	< 0.36	< 0.23
PA-27d	2-21-2025	N	Deep	PA-27d-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.29	< 0.43	< 0.41	< 0.33	< 0.61
PA-30d	2-20-2025	N	Deep	PA-30d-022025	< 90	< 200	< 260	< 120	< 110	< 140	< 150	< 220	< 210	< 170	< 310

Notes:
Bolded values indicate concentrations above the Method Detection Limit.
Shaded values indicate concentrations above the FSWP SHSC.
< = Compound not detected. Method Detection Limit shown.
µg/L = micrograms per liter
FD = Field Duplicate Sample
FSWP SHSC = Feasibility Study Work Plan Indirect Exposure Pathway Selected Hot Spot Criteria
N = Normal Environmental Sample
NE = Not Established
SW8260C analyses performed by TestAmerica - Seattle, WA of Seattle.

Qualifiers - Organic:
j = The analyte was positively identified below the RDL; associated numerical value is the approximate concentration of the analyte in the sample.
J- = The concentration of the sample is considered to be biased low, as the associated QC results are outside the lower control limits.
J+ = The concentration of the sample is considered to be biased high, as the associated QC results exceed the upper control limits.
U = Analyte was analyzed for, but not detected above, the limit displayed.
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Table 4
Volatile Organic Compounds Results
Arkema Quarter 1, 2025, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Analyte Unit					1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dibromo-3-chloropropane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene
FSWP SHSC (shaded values indicate results above the value shown)					NE	11	0.4	1.6	47	710	NE	14	3.7	1.5	NE
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID											
MWA-41	2-18-2025	N	Shallow	MWA-41-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.48	< 0.038	< 0.12	< 0.060	< 0.19
MWA-63	2-21-2025	N	Shallow	MWA-63-022125	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 5.7	< 4.6	< 4.2	< 1.8	< 5.5
MWA-63	2-21-2025	FD	Shallow	DUP-02-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.57	< 0.46	< 0.42	< 0.18	< 0.55
MWA-82	2-18-2025	N	Shallow	MWA-82-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.48	0.077	< 0.12	< 0.060	< 0.19
PA-03	2-20-2025	N	Shallow	PA-03-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.16 J+	< 0.035	< 0.48	< 0.038	< 0.12	< 0.060	< 0.19
PA-04	2-21-2025	N	Shallow	PA-04-022125	< 0.11	< 0.025	< 0.056	0.074	0.24	0.23 J+	< 0.48	< 0.30 U	< 0.12	< 0.060	< 0.19
PA-08	2-20-2025	N	Shallow	PA-08-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19	< 0.035	< 0.48	0.066	< 0.12	< 0.060	< 0.19
PA-09	2-20-2025	N	Shallow	PA-09-022025	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.48	< 0.038	< 0.12	< 0.060	< 0.19
PA-31	2-19-2025	N	Shallow	PA-31-021925	< 0.11	0.22	< 0.056	< 0.070	0.19	0.71	< 0.48	< 0.038	< 0.12	< 0.060	< 0.19
MWA-81i	2-18-2025	N	Intermediate	MWA-81i-021825	< 0.11	< 0.025	< 0.056	< 0.070	0.069	< 0.035	< 0.48	0.046	< 0.12	< 0.060	< 0.19
PA-10i	2-21-2025	N	Intermediate	PA-10i-022125	< 0.11	< 0.20 U	< 0.056	0.075	< 0.064	< 0.20 U	< 0.48	< 0.30 U	< 0.12	< 0.060	< 0.19
PA-15i	2-18-2025	N	Intermediate	PA-15i-021825	< 0.11	< 0.025	< 0.056	< 0.070	0.21	< 0.035	< 0.48	< 0.038	< 0.12	< 0.060	< 0.19
PA-16i	2-21-2025	N	Intermediate	PA-16i-022125	< 0.11	< 0.025	< 0.056	< 0.070	0.10 J+	< 0.035	< 0.48	< 0.038	< 0.12	< 0.060	< 0.19
PA-17iR	2-21-2025	N	Intermediate	PA-17iR-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.57	< 0.46	< 0.42	< 0.18	< 0.55
PA-32i	2-20-2025	N	Intermediate	PA-32i-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19	0.059 J+	< 0.48	0.25	< 0.12	< 0.060	< 0.19
PA-32i	2-20-2025	FD	Intermediate	DUP-01-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19 J+	0.12 J+	< 0.48	0.26	< 0.12	< 0.060	< 0.19
PA-44i	2-18-2025	N	Intermediate	PA-44i-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.48	< 0.038	< 0.12	< 0.060	< 0.19
MWA-11i(d)	2-21-2025	N	Deep	MWA-11i(d)-022125	< 0.11	< 0.025	< 0.056	0.073	0.079	< 0.20 U	< 0.48	< 0.30 U	< 0.12	< 0.20 U	< 0.19
MWA-31i(d)	2-19-2025	N	Deep	MWA-31i(d)-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.57	< 0.46	< 0.42	< 0.18	< 0.55
MWA-56d	2-19-2025	N	Deep	MWA-56d-021925	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 5.7	< 4.6	< 4.2	< 1.8	< 5.5
MWA-58d	2-19-2025	N	Deep	MWA-58d-021925	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 5.7	< 4.6	< 4.2	< 1.8	< 5.5
PA-18d	2-21-2025	N	Deep	PA-18d-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.57	< 0.46	< 0.42	< 0.18	< 0.55
PA-19d	2-20-2025	N	Deep	PA-19d-022025	< 18	< 39	< 52	< 24	< 22	< 28	< 57	< 46	< 42	< 18	< 55
PA-20d	2-20-2025	N	Deep	PA-20d-022025	< 0.18	< 0.39	< 0.52	< 0.24	0.25	< 0.28	< 0.57	< 0.46	< 0.42	< 0.18	< 0.55
PA-21d	2-20-2025	N	Deep	PA-21d-022025	< 180	< 390	< 520	< 240	< 220	< 280	< 570	< 460	< 420	< 180	< 550
PA-22d	2-20-2025	N	Deep	PA-22d-022025	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.57	< 0.46	< 0.42	< 0.18	< 0.55
PA-23d	2-19-2025	N	Deep	PA-23d-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.57	< 0.46	< 0.42	< 0.18	< 0.55
PA-24d	2-19-2025	N	Deep	PA-24d-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.57	< 0.46	0.50	< 0.18	< 0.55
PA-25d	2-18-2025	N	Deep	PA-25d-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.48	< 0.038	< 0.12	< 0.060	< 0.19
PA-26d	2-21-2025	N	Deep	PA-26d-022125	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.48	< 0.038	0.48	< 0.060	< 0.19
PA-27d	2-21-2025	N	Deep	PA-27d-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.57	< 0.46	< 0.42	< 0.18	< 0.55
PA-30d	2-20-2025	N	Deep	PA-30d-022025	< 90	< 200	< 260	< 120	< 110	< 140	< 290	< 230	< 210	< 90	< 280

Notes:
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SW8260C analyses performed by TestAmerica - Seattle, WA of Seattle.

Qualifiers - Organic:
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Table 4
Volatile Organic Compounds Results
Arkema Quarter 1, 2025, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Analyte Unit					1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone (Methyl ethyl ketone)
FSWP SHSC (shaded values indicate results above the value shown)					NE	11	0.4	1.6	47	710	10	NE	15	NE	14000
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID											
MWA-41	2-18-2025	N	Shallow	MWA-41-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.050	< 0.056	< 0.050	< 0.060	< 2.5
MWA-63	2-21-2025	N	Shallow	MWA-63-022125	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 4.8	< 3.5	< 4.6	< 3.2	< 47
MWA-63	2-21-2025	FD	Shallow	DUP-02-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.48	< 0.35	< 0.46	< 0.32	< 4.7
MWA-82	2-18-2025	N	Shallow	MWA-82-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.050	< 0.056	< 0.050	< 0.060	< 2.5
PA-03	2-20-2025	N	Shallow	PA-03-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.16 J+	< 0.035	< 0.050	< 0.056	< 0.050	< 0.060	< 2.5
PA-04	2-21-2025	N	Shallow	PA-04-022125	< 0.11	< 0.025	< 0.056	0.074	0.24	0.23 J+	< 0.050	< 0.20 U	< 0.050	< 0.060	< 2.5
PA-08	2-20-2025	N	Shallow	PA-08-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19	< 0.035	< 0.050	< 0.056	< 0.050	< 0.060	< 2.5
PA-09	2-20-2025	N	Shallow	PA-09-022025	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.050	< 0.056	< 0.050	< 0.060	< 2.5
PA-31	2-19-2025	N	Shallow	PA-31-021925	< 0.11	0.22	< 0.056	< 0.070	0.19	0.71	< 0.050	< 0.056	< 0.050	< 0.060	< 2.5
MWA-81i	2-18-2025	N	Intermediate	MWA-81i-021825	< 0.11	< 0.025	< 0.056	< 0.070	0.069	< 0.035	0.051	< 0.056	0.067	< 0.060	< 2.5
PA-10i	2-21-2025	N	Intermediate	PA-10i-022125	< 0.11	< 0.20 U	< 0.056	0.075	< 0.064	< 0.20 U	< 0.050	< 0.20 U	< 0.050	< 0.060	< 2.5
PA-15i	2-18-2025	N	Intermediate	PA-15i-021825	< 0.11	< 0.025	< 0.056	< 0.070	0.21	< 0.035	< 0.050	< 0.056	< 0.050	< 0.060	< 2.5
PA-16i	2-21-2025	N	Intermediate	PA-16i-022125	< 0.11	< 0.025	< 0.056	< 0.070	0.10 J+	< 0.035	< 0.050	< 0.056	< 0.050	< 0.060	< 2.5
PA-17iR	2-21-2025	N	Intermediate	PA-17iR-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.48	< 0.35	< 0.46	< 0.32	< 4.7
PA-32i	2-20-2025	N	Intermediate	PA-32i-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19	0.059 J+	< 0.050	< 0.056	< 0.050	< 0.060	< 2.5
PA-32i	2-20-2025	FD	Intermediate	DUP-01-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19 J+	0.12 J+	< 0.050	< 0.056	< 0.050	< 0.060	< 2.5
PA-44i	2-18-2025	N	Intermediate	PA-44i-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.050	< 0.056	< 0.050	< 0.060	< 2.5
MWA-11i(d)	2-21-2025	N	Deep	MWA-11i(d)-022125	< 0.11	< 0.025	< 0.056	0.073	0.079	< 0.20 U	< 0.050	< 0.20 U	< 0.050	< 0.060	< 2.5
MWA-31i(d)	2-19-2025	N	Deep	MWA-31i(d)-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.48	< 0.35	< 0.46	< 0.32	< 4.7
MWA-56d	2-19-2025	N	Deep	MWA-56d-021925	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 4.8	< 3.5	< 4.6	< 3.2	< 47
MWA-58d	2-19-2025	N	Deep	MWA-58d-021925	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 4.8	< 3.5	< 4.6	< 3.2	< 47
PA-18d	2-21-2025	N	Deep	PA-18d-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.48	< 0.35	< 0.46	< 0.32	< 4.7
PA-19d	2-20-2025	N	Deep	PA-19d-022025	< 18	< 39	< 52	< 24	< 22	< 28	< 48	< 35	< 46	< 32	< 470
PA-20d	2-20-2025	N	Deep	PA-20d-022025	< 0.18	< 0.39	< 0.52	< 0.24	0.25	< 0.28	< 0.48	< 0.35	< 0.46	< 0.32	< 4.7
PA-21d	2-20-2025	N	Deep	PA-21d-022025	< 180	< 390	< 520	< 240	< 220	< 280	< 480	< 350	< 460	< 320	< 4,700
PA-22d	2-20-2025	N	Deep	PA-22d-022025	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.48	< 0.35	< 0.46	< 0.32	< 4.7
PA-23d	2-19-2025	N	Deep	PA-23d-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.48	< 0.35	< 0.46	< 0.32	< 4.7
PA-24d	2-19-2025	N	Deep	PA-24d-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.48	< 0.35	< 0.46	< 0.32	< 4.7
PA-25d	2-18-2025	N	Deep	PA-25d-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.050	< 0.056	< 0.050	< 0.060	< 2.5
PA-26d	2-21-2025	N	Deep	PA-26d-022125	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.050	< 0.056	< 0.050	< 0.060	< 2.5
PA-27d	2-21-2025	N	Deep	PA-27d-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.48	< 0.35	< 0.46	< 0.32	< 4.7
PA-30d	2-20-2025	N	Deep	PA-30d-022025	< 90	< 200	< 260	< 120	< 110	< 140	< 240	< 180	< 230	< 160	< 2,400

Notes:
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Analyte Unit					1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	4-Chlorotoluene	4-Isopropyltoluene	4-Methyl-2-pentanone	Acetone	Benzene
FSWP SHSC (shaded values indicate results above the value shown)					NE	11	0.4	1.6	47	710	NE	NE	NE	1500	1.4
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID											
MWA-41	2-18-2025	N	Shallow	MWA-41-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.12	< 0.25	< 2.7	< 3.1	< 0.030
MWA-63	2-21-2025	N	Shallow	MWA-63-022125	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 3.8	< 2.8	< 25	< 32	< 2.4
MWA-63	2-21-2025	FD	Shallow	DUP-02-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.38	< 0.28	< 2.5	< 3.2	< 0.24
MWA-82	2-18-2025	N	Shallow	MWA-82-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.12	< 0.25	< 2.7	< 3.1	< 0.030
PA-03	2-20-2025	N	Shallow	PA-03-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.16 J+	< 0.035	< 0.12	< 0.25	< 2.7	< 3.1	0.076
PA-04	2-21-2025	N	Shallow	PA-04-022125	< 0.11	< 0.025	< 0.056	0.074	0.24	0.23 J+	< 0.12	< 0.25	< 2.7	< 3.1	< 0.030
PA-08	2-20-2025	N	Shallow	PA-08-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19	< 0.035	< 0.12	< 0.25	< 2.7	< 3.1	< 0.030
PA-09	2-20-2025	N	Shallow	PA-09-022025	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.12	< 0.25	< 2.7	< 3.1	< 0.030
PA-31	2-19-2025	N	Shallow	PA-31-021925	< 0.11	0.22	< 0.056	< 0.070	0.19	0.71	< 0.12	< 0.25	< 2.7	< 3.1	< 0.030
MWA-81i	2-18-2025	N	Intermediate	MWA-81i-021825	< 0.11	< 0.025	< 0.056	< 0.070	0.069	< 0.035	< 0.12	< 0.25	< 2.7	< 3.1	< 0.030
PA-10i	2-21-2025	N	Intermediate	PA-10i-022125	< 0.11	< 0.20 U	< 0.056	0.075	< 0.064	< 0.20 U	< 0.12	< 0.25	< 2.7	< 3.1	0.038
PA-15i	2-18-2025	N	Intermediate	PA-15i-021825	< 0.11	< 0.025	< 0.056	< 0.070	0.21	< 0.035	< 0.12	< 0.25	< 2.7	< 3.1	< 0.030
PA-16i	2-21-2025	N	Intermediate	PA-16i-022125	< 0.11	< 0.025	< 0.056	< 0.070	0.10 J+	< 0.035	< 0.12	< 0.25	< 2.7	< 3.1	< 0.030
PA-17iR	2-21-2025	N	Intermediate	PA-17iR-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.38	< 0.28	< 2.5	< 3.2	< 0.24
PA-32i	2-20-2025	N	Intermediate	PA-32i-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19	0.059 J+	< 0.12	< 0.25	< 2.7	< 3.1	0.11
PA-32i	2-20-2025	FD	Intermediate	DUP-01-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19 J+	0.12 J+	< 0.12	< 0.25	< 2.7	< 3.1	0.10
PA-44i	2-18-2025	N	Intermediate	PA-44i-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.12	< 0.25	< 2.7	< 3.1	< 0.030
MWA-11i(d)	2-21-2025	N	Deep	MWA-11i(d)-022125	< 0.11	< 0.025	< 0.056	0.073	0.079	< 0.20 U	< 0.12	< 0.25	< 2.7	< 3.1	< 0.030
MWA-31i(d)	2-19-2025	N	Deep	MWA-31i(d)-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.38	< 0.28	< 2.5	< 3.2	< 0.24
MWA-56d	2-19-2025	N	Deep	MWA-56d-021925	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 3.8	< 2.8	< 25	< 32	< 2.4
MWA-58d	2-19-2025	N	Deep	MWA-58d-021925	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 3.8	< 2.8	< 25	< 32	< 2.4
PA-18d	2-21-2025	N	Deep	PA-18d-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.38	< 0.28	< 2.5	< 3.2	< 0.24
PA-19d	2-20-2025	N	Deep	PA-19d-022025	< 18	< 39	< 52	< 24	< 22	< 28	< 38	< 28	< 250	< 320	46
PA-20d	2-20-2025	N	Deep	PA-20d-022025	< 0.18	< 0.39	< 0.52	< 0.24	0.25	< 0.28	< 0.38	< 0.28	< 2.5	< 3.2	< 0.24
PA-21d	2-20-2025	N	Deep	PA-21d-022025	< 180	< 390	< 520	< 240	< 220	< 280	< 380	< 280	< 2,500	< 3,200	< 240
PA-22d	2-20-2025	N	Deep	PA-22d-022025	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.38	< 0.28	< 2.5	< 3.2	< 0.24
PA-23d	2-19-2025	N	Deep	PA-23d-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.38	< 0.28	< 2.5	< 3.2	< 0.24
PA-24d	2-19-2025	N	Deep	PA-24d-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.38	< 0.28	< 2.5	< 3.2	< 0.24
PA-25d	2-18-2025	N	Deep	PA-25d-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.12	< 0.25	< 2.7	< 3.1	< 0.030
PA-26d	2-21-2025	N	Deep	PA-26d-022125	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.12	< 0.25	< 2.7	< 3.1	< 0.030
PA-27d	2-21-2025	N	Deep	PA-27d-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.38	< 0.28	< 2.5	< 3.2	< 0.24
PA-30d	2-20-2025	N	Deep	PA-30d-022025	< 90	< 200	< 260	< 120	< 110	< 140	< 190	< 140	< 1,300	< 1,600	< 120

Notes:
Bolded values indicate concentrations above the Method Detection Limit.
Shaded values indicate concentrations above the FSWP SHSC.
< = Compound not detected. Method Detection Limit shown.
µg/L = micrograms per liter
FD = Field Duplicate Sample
FSWP SHSC = Feasibility Study Work Plan Indirect Exposure Pathway Selected Hot Spot Criteria
N = Normal Environmental Sample
NE = Not Established
SW8260C analyses performed by TestAmerica - Seattle, WA of Seattle.

Qualifiers - Organic:
j = The analyte was positively identified below the RDL; associated numerical value is the approximate concentration of the analyte in the sample.
J- = The concentration of the sample is considered to be biased low, as the associated QC results are outside the lower control limits.
J+ = The concentration of the sample is considered to be biased high, as the associated QC results exceed the upper control limits.
U = Analyte was analyzed for, but not detected above, the limit displayed.
UJ = Analyte was analyzed for, but not detected. The detection limit is a quantitative estimate.

Table 4
Volatile Organic Compounds Results
Arkema Quarter 1, 2025, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Analyte Unit					1,1,1,2-Tetrachloroethane	1,1,1,1-Trichloroethane	1,1,1,2-Tetrachloroethane	1,1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	Bromobenzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide
FSWP SHSC (shaded values indicate results above the value shown)					NE	11	0.4	1.6	47	710	NE	1.7	14	150	0.92
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID											
MWA-41	2-18-2025	N	Shallow	MWA-41-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.038	< 0.060	< 0.16	< 0.13	< 0.20
MWA-63	2-21-2025	N	Shallow	MWA-63-022125	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 4.3	< 2.9	< 5.1	< 2.1	< 5.3
MWA-63	2-21-2025	FD	Shallow	DUP-02-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.43	< 0.29	< 0.51	< 0.21	< 0.53
MWA-82	2-18-2025	N	Shallow	MWA-82-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.038	< 0.060	< 0.16	< 0.13	< 0.20
PA-03	2-20-2025	N	Shallow	PA-03-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.16 J+	< 0.035	< 0.038	< 0.060	< 0.16	< 0.13	< 0.20
PA-04	2-21-2025	N	Shallow	PA-04-022125	< 0.11	< 0.025	< 0.056	0.074	0.24	0.23 J+	< 0.038	< 0.20 U	< 0.16	< 0.13 UJ	< 0.20
PA-08	2-20-2025	N	Shallow	PA-08-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19	< 0.035	< 0.038	< 0.060	< 0.16	< 0.13	< 0.20
PA-09	2-20-2025	N	Shallow	PA-09-022025	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.038	< 0.060	< 0.16	< 0.13	< 0.20
PA-31	2-19-2025	N	Shallow	PA-31-021925	< 0.11	0.22	< 0.056	< 0.070	0.19	0.71	< 0.038	< 0.060	< 0.16	< 0.13	< 0.20
MWA-81i	2-18-2025	N	Intermediate	MWA-81i-021825	< 0.11	< 0.025	< 0.056	< 0.070	0.069	< 0.035	< 0.038	< 0.060	< 0.16	< 0.13	< 0.20
PA-10i	2-21-2025	N	Intermediate	PA-10i-022125	< 0.11	< 0.20 U	< 0.056	0.075	< 0.064	< 0.20 U	< 0.038	< 0.060	< 0.16	< 0.13 UJ	< 0.20
PA-15i	2-18-2025	N	Intermediate	PA-15i-021825	< 0.11	< 0.025	< 0.056	< 0.070	0.21	< 0.035	< 0.038	< 0.060	< 0.16	< 0.13	< 0.20
PA-16i	2-21-2025	N	Intermediate	PA-16i-022125	< 0.11	< 0.025	< 0.056	< 0.070	0.10 J+	< 0.035	< 0.038	< 0.060	< 0.16	< 0.13	< 0.20
PA-17iR	2-21-2025	N	Intermediate	PA-17iR-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.43	< 0.29	< 0.51	< 0.21	< 0.53
PA-32i	2-20-2025	N	Intermediate	PA-32i-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19	0.059 J+	< 0.038	< 0.060	< 0.16	< 0.13	< 0.20
PA-32i	2-20-2025	FD	Intermediate	DUP-01-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19 J+	0.12 J+	< 0.038	< 0.060	< 0.16	< 0.13	< 0.20
PA-44i	2-18-2025	N	Intermediate	PA-44i-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.038	< 0.060	< 0.16	< 0.13	< 0.20
MWA-11i(d)	2-21-2025	N	Deep	MWA-11i(d)-022125	< 0.11	< 0.025	< 0.056	0.073	0.079	< 0.20 U	< 0.038	< 0.20 U	< 0.16	< 0.13 UJ	< 0.20
MWA-31i(d)	2-19-2025	N	Deep	MWA-31i(d)-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.43	< 0.29	< 0.51	< 0.21	< 0.53
MWA-56d	2-19-2025	N	Deep	MWA-56d-021925	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 4.3	< 2.9	< 5.1	< 2.1	< 5.3
MWA-58d	2-19-2025	N	Deep	MWA-58d-021925	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 4.3	< 2.9	< 5.1	< 2.1	< 5.3
PA-18d	2-21-2025	N	Deep	PA-18d-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.43	< 0.29	< 0.51	< 0.21	< 0.53
PA-19d	2-20-2025	N	Deep	PA-19d-022025	< 18	< 39	< 52	< 24	< 22	< 28	< 43	< 29	< 51	< 21	< 53
PA-20d	2-20-2025	N	Deep	PA-20d-022025	< 0.18	< 0.39	< 0.52	< 0.24	0.25	< 0.28	< 0.43	< 0.29	< 0.51	< 0.21	< 0.53
PA-21d	2-20-2025	N	Deep	PA-21d-022025	< 180	< 390	< 520	< 240	< 220	< 280	< 430	< 290	< 510	< 210	< 530
PA-22d	2-20-2025	N	Deep	PA-22d-022025	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.43	< 0.29	< 0.51	< 0.21	< 0.53
PA-23d	2-19-2025	N	Deep	PA-23d-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.43	< 0.29	< 0.51	< 0.21	< 0.53
PA-24d	2-19-2025	N	Deep	PA-24d-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.43	< 0.29	< 0.51	< 0.21	< 0.53
PA-25d	2-18-2025	N	Deep	PA-25d-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.038	< 0.060	< 0.16	< 0.13	< 0.20
PA-26d	2-21-2025	N	Deep	PA-26d-022125	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.038	< 0.060	< 0.16	< 0.13	< 0.20
PA-27d	2-21-2025	N	Deep	PA-27d-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.43	< 0.29	< 0.51	< 0.21	< 0.53
PA-30d	2-20-2025	N	Deep	PA-30d-022025	< 90	< 200	< 260	< 120	< 110	< 140	< 220	< 150	< 260	< 110	< 270

Notes:
Bolded values indicate concentrations above the Method Detection Limit.
Shaded values indicate concentrations above the FSWP SHSC.
< = Compound not detected. Method Detection Limit shown.
µg/L = micrograms per liter
FD = Field Duplicate Sample
FSWP SHSC = Feasibility Study Work Plan Indirect Exposure Pathway Selected Hot Spot Criteria
N = Normal Environmental Sample
NE = Not Established
SW8260C analyses performed by TestAmerica - Seattle, WA of Seattle.

Qualifiers - Organic:
j = The analyte was positively identified below the RDL; associated numerical value is the approximate concentration of the analyte in the sample.
J- = The concentration of the sample is considered to be biased low, as the associated QC results are outside the lower control limits.
J+ = The concentration of the sample is considered to be biased high, as the associated QC results exceed the upper control limits.
U = Analyte was analyzed for, but not detected above, the limit displayed.
UJ = Analyte was analyzed for, but not detected. The detection limit is a quantitative estimate.

Table 4
Volatile Organic Compounds Results
Arkema Quarter 1, 2025, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Analyte Unit					1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	Carbon tetrachloride	Chlorobenzene	Chlorobromomethane	Chloroethane	Chloroform
FSWP SHSC (shaded values indicate results above the value shown)					NE	11	0.4	1.6	47	710	0.16	64	NE	NE	28
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID											
MWA-41	2-18-2025	N	Shallow	MWA-41-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.025	< 0.060	< 0.050	< 0.24	< 0.030
MWA-63	2-21-2025	N	Shallow	MWA-63-022125	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 3.0	< 4.4	< 2.9	< 3.5	120
MWA-63	2-21-2025	FD	Shallow	DUP-02-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.30	0.65	< 0.29	< 0.35	93
MWA-82	2-18-2025	N	Shallow	MWA-82-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.025	< 0.060	< 0.050	< 0.24	3.2
PA-03	2-20-2025	N	Shallow	PA-03-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.16 J+	< 0.035	< 0.025	< 0.060	< 0.050	< 0.24	0.035
PA-04	2-21-2025	N	Shallow	PA-04-022125	< 0.11	< 0.025	< 0.056	0.074	0.24	0.23 J+	< 0.20 U	< 0.060	< 0.050	< 0.24	< 0.20 U
PA-08	2-20-2025	N	Shallow	PA-08-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19	< 0.035	< 0.025	< 0.060	< 0.050	< 0.24	0.14
PA-09	2-20-2025	N	Shallow	PA-09-022025	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.025	< 0.060	< 0.050	< 0.24	0.60
PA-31	2-19-2025	N	Shallow	PA-31-021925	< 0.11	0.22	< 0.056	< 0.070	0.19	0.71	< 0.025	< 0.060	< 0.050	< 0.24	0.16
MWA-81i	2-18-2025	N	Intermediate	MWA-81i-021825	< 0.11	< 0.025	< 0.056	< 0.070	0.069	< 0.035	< 0.025	< 0.060	< 0.050	< 0.24	< 0.030
PA-10i	2-21-2025	N	Intermediate	PA-10i-022125	< 0.11	< 0.20 U	< 0.056	0.075	< 0.064	< 0.20 U	< 0.20 U	1.0	< 0.050	< 0.24	< 0.20 U
PA-15i	2-18-2025	N	Intermediate	PA-15i-021825	< 0.11	< 0.025	< 0.056	< 0.070	0.21	< 0.035	< 0.025	< 0.060	< 0.050	< 0.24	< 0.030
PA-16i	2-21-2025	N	Intermediate	PA-16i-022125	< 0.11	< 0.025	< 0.056	< 0.070	0.10 J+	< 0.035	< 0.025	< 0.060	< 0.050	< 0.24	< 0.030
PA-17iR	2-21-2025	N	Intermediate	PA-17iR-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.30	< 0.44	< 0.29	< 0.35	< 0.26
PA-32i	2-20-2025	N	Intermediate	PA-32i-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19	0.059 J+	< 0.025	< 0.060	< 0.050	< 0.24	< 0.030
PA-32i	2-20-2025	FD	Intermediate	DUP-01-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19 J+	0.12 J+	< 0.025	< 0.060	< 0.050	< 0.24	< 0.030
PA-44i	2-18-2025	N	Intermediate	PA-44i-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.025	< 0.060	< 0.050	< 0.24	< 0.030
MWA-11i(d)	2-21-2025	N	Deep	MWA-11i(d)-022125	< 0.11	< 0.025	< 0.056	0.073	0.079	< 0.20 U	< 0.025	< 0.060	< 0.050	< 0.24	< 0.20 U
MWA-31i(d)	2-19-2025	N	Deep	MWA-31i(d)-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.30	< 0.44	< 0.29	< 0.35	6.3
MWA-56d	2-19-2025	N	Deep	MWA-56d-021925	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 3.0	< 4.4	< 2.9	< 3.5	160
MWA-58d	2-19-2025	N	Deep	MWA-58d-021925	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 3.0	< 4.4	< 2.9	< 3.5	230
PA-18d	2-21-2025	N	Deep	PA-18d-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.30	< 0.44	< 0.29	< 0.35	< 0.26
PA-19d	2-20-2025	N	Deep	PA-19d-022025	< 18	< 39	< 52	< 24	< 22	< 28	< 30	11,000	< 29	< 35	< 26
PA-20d	2-20-2025	N	Deep	PA-20d-022025	< 0.18	< 0.39	< 0.52	< 0.24	0.25	< 0.28	< 0.30	1.7	< 0.29	< 0.35	< 0.26
PA-21d	2-20-2025	N	Deep	PA-21d-022025	< 180	< 390	< 520	< 240	< 220	< 280	< 300	43,000	< 290	< 350	< 260
PA-22d	2-20-2025	N	Deep	PA-22d-022025	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.30	< 0.44	< 0.29	< 0.35	22
PA-23d	2-19-2025	N	Deep	PA-23d-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.30	< 0.44	< 0.29	< 0.35	< 0.26
PA-24d	2-19-2025	N	Deep	PA-24d-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.30	< 0.44	< 0.29	< 0.35	< 0.26
PA-25d	2-18-2025	N	Deep	PA-25d-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.025	< 0.060	< 0.050	< 0.24	< 0.030
PA-26d	2-21-2025	N	Deep	PA-26d-022125	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.025	< 0.060	< 0.050	< 0.24	< 0.030
PA-27d	2-21-2025	N	Deep	PA-27d-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.30	< 0.44	< 0.29	< 0.35	< 0.26
PA-30d	2-20-2025	N	Deep	PA-30d-022025	< 90	< 200	< 260	< 120	< 110	< 140	< 150	6,700	< 150	< 180	< 130

Notes:
Bolded values indicate concentrations above the Method Detection Limit.
Shaded values indicate concentrations above the FSWP SHSC.
< = Compound not detected. Method Detection Limit shown.
µg/L = micrograms per liter
FD = Field Duplicate Sample
FSWP SHSC = Feasibility Study Work Plan Indirect Exposure Pathway Selected Hot Spot Criteria
N = Normal Environmental Sample
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SW8260C analyses performed by TestAmerica - Seattle, WA of Seattle.

Qualifiers - Organic:
j = The analyte was positively identified below the RDL; associated numerical value is the approximate concentration of the analyte in the sample.
J- = The concentration of the sample is considered to be biased low, as the associated QC results are outside the lower control limits.
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U = Analyte was analyzed for, but not detected above, the limit displayed.
UJ = Analyte was analyzed for, but not detected. The detection limit is a quantitative estimate.

Table 4
Volatile Organic Compounds Results
Arkema Quarter 1, 2025, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Analyte Unit					1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethane	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochloro methane	Dibromomethane
FSWP SHSC (shaded values indicate results above the value shown)					NE	11	0.4	1.6	47	710	NE	590	NE	1.3	NE
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID											
MWA-41	2-18-2025	N	Shallow	MWA-41-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.14	< 0.055	< 0.090	< 0.055	< 0.062
MWA-63	2-21-2025	N	Shallow	MWA-63-022125	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 2.8	< 3.5	< 4.2	< 4.3	< 3.4
MWA-63	2-21-2025	FD	Shallow	DUP-02-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.28	0.94	< 0.42	< 0.43	< 0.34
MWA-82	2-18-2025	N	Shallow	MWA-82-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.14	< 0.055	< 0.090	< 0.055	< 0.062
PA-03	2-20-2025	N	Shallow	PA-03-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.16 J+	< 0.035	< 0.14	< 0.055	< 0.090	< 0.055	< 0.062
PA-04	2-21-2025	N	Shallow	PA-04-022125	< 0.11	< 0.025	< 0.056	0.074	0.24	0.23 J+	< 0.14	< 0.20 U	< 0.090	< 0.055	< 0.062
PA-08	2-20-2025	N	Shallow	PA-08-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19	< 0.035	< 0.14	0.090	< 0.090	< 0.055	< 0.062
PA-09	2-20-2025	N	Shallow	PA-09-022025	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.14	< 0.055	< 0.090	< 0.055	< 0.062
PA-31	2-19-2025	N	Shallow	PA-31-021925	< 0.11	0.22	< 0.056	< 0.070	0.19	0.71	< 0.14	< 0.055	< 0.090	< 0.055	< 0.062
MWA-81i	2-18-2025	N	Intermediate	MWA-81i-021825	< 0.11	< 0.025	< 0.056	< 0.070	0.069	< 0.035	< 0.14	< 0.055	< 0.090	< 0.055	< 0.062
PA-10i	2-21-2025	N	Intermediate	PA-10i-022125	< 0.11	< 0.20 U	< 0.056	0.075	< 0.064	< 0.20 U	< 0.14	0.41 J+	< 0.090	< 0.055	< 0.062
PA-15i	2-18-2025	N	Intermediate	PA-15i-021825	< 0.11	< 0.025	< 0.056	< 0.070	0.21	< 0.035	< 0.14	0.10	< 0.090	< 0.055	< 0.062
PA-16i	2-21-2025	N	Intermediate	PA-16i-022125	< 0.11	< 0.025	< 0.056	< 0.070	0.10 J+	< 0.035	< 0.14	0.16	< 0.090	< 0.055	< 0.062
PA-17iR	2-21-2025	N	Intermediate	PA-17iR-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.28	< 0.35	< 0.42	< 0.43	< 0.34
PA-32i	2-20-2025	N	Intermediate	PA-32i-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19	0.059 J+	< 0.14	0.12	< 0.090	< 0.055	< 0.062
PA-32i	2-20-2025	FD	Intermediate	DUP-01-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19 J+	0.12 J+	< 0.14	0.12	< 0.090	< 0.055	< 0.062
PA-44i	2-18-2025	N	Intermediate	PA-44i-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.14	< 0.055	< 0.090	< 0.055	< 0.062
MWA-11i(d)	2-21-2025	N	Deep	MWA-11i(d)-022125	< 0.11	< 0.025	< 0.056	0.073	0.079	< 0.20 U	< 0.14	0.22 J+	< 0.090	< 0.055	< 0.062
MWA-31i(d)	2-19-2025	N	Deep	MWA-31i(d)-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.28	< 0.35	< 0.42	< 0.43	< 0.34
MWA-56d	2-19-2025	N	Deep	MWA-56d-021925	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 2.8	< 3.5	< 4.2	< 4.3	< 3.4
MWA-58d	2-19-2025	N	Deep	MWA-58d-021925	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 2.8	< 3.5	< 4.2	< 4.3	< 3.4
PA-18d	2-21-2025	N	Deep	PA-18d-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.28	< 0.35	< 0.42	< 0.43	< 0.34
PA-19d	2-20-2025	N	Deep	PA-19d-022025	< 18	< 39	< 52	< 24	< 22	< 28	< 28	< 35	< 42	< 43	< 34
PA-20d	2-20-2025	N	Deep	PA-20d-022025	< 0.18	< 0.39	< 0.52	< 0.24	0.25	< 0.28	< 0.28	< 0.35	< 0.42	< 0.43	< 0.34
PA-21d	2-20-2025	N	Deep	PA-21d-022025	< 180	< 390	< 520	< 240	< 220	< 280	< 280	< 350	< 420	< 430	< 340
PA-22d	2-20-2025	N	Deep	PA-22d-022025	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.28	< 0.35	< 0.42	< 0.43	< 0.34
PA-23d	2-19-2025	N	Deep	PA-23d-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.28	< 0.35	< 0.42	< 0.43	< 0.34
PA-24d	2-19-2025	N	Deep	PA-24d-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.28	< 0.35	< 0.42	< 0.43	< 0.34
PA-25d	2-18-2025	N	Deep	PA-25d-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.14	< 0.055	< 0.090	< 0.055	< 0.062
PA-26d	2-21-2025	N	Deep	PA-26d-022125	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.14	< 0.055	< 0.090	< 0.055	< 0.062
PA-27d	2-21-2025	N	Deep	PA-27d-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.28	0.55	< 0.42	< 0.43	< 0.34
PA-30d	2-20-2025	N	Deep	PA-30d-022025	< 90	< 200	< 260	< 120	< 110	< 140	< 140	< 180	< 210	< 220	< 170

Notes:
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Table 4
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Arkema Quarter 1, 2025, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Analyte Unit					1,1,1,2-Tetrachloroethane	1,1,1,1-Trichloroethane	1,1,1,2,2-Tetrachloroethane	1,1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	Dichlorodifluoromethane (Freon 12)	Ethylbenzene	Ethylene dibromide	Hexachlorobutadiene	Isopropylbenzene (Cumene)
FSWP SHSC (shaded values indicate results above the value shown)					NE	11	0.4	1.6	47	710	NE	7.3	NE	0.01	NE
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID											
MWA-41	2-18-2025	N	Shallow	MWA-41-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.13	< 0.082	< 0.067	< 0.16	< 1.0 U
MWA-63	2-21-2025	N	Shallow	MWA-63-022125	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 5.3	< 5.0	< 4.0	< 7.9	< 4.4
MWA-63	2-21-2025	FD	Shallow	DUP-02-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.53	< 0.50	< 0.40	< 0.79	< 0.44
MWA-82	2-18-2025	N	Shallow	MWA-82-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.13	< 0.082	< 0.067	< 0.16	< 0.27
PA-03	2-20-2025	N	Shallow	PA-03-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.16 J+	< 0.035	< 0.13	< 0.082	< 0.067	< 0.16	< 0.27
PA-04	2-21-2025	N	Shallow	PA-04-022125	< 0.11	< 0.025	< 0.056	0.074	0.24	0.23 J+	< 0.13	< 0.082	< 0.067	< 0.16	< 0.27
PA-08	2-20-2025	N	Shallow	PA-08-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19	< 0.035	< 0.13	< 0.082	< 0.067	< 0.16	< 0.27
PA-09	2-20-2025	N	Shallow	PA-09-022025	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.13	< 0.082	< 0.067	< 0.16	< 0.27
PA-31	2-19-2025	N	Shallow	PA-31-021925	< 0.11	0.22	< 0.056	< 0.070	0.19	0.71	< 0.13	< 0.082	< 0.067	< 0.16	< 0.27
MWA-81i	2-18-2025	N	Intermediate	MWA-81i-021825	< 0.11	< 0.025	< 0.056	< 0.070	0.069	< 0.035	< 0.13	< 0.082	< 0.067	0.16	< 1.0 U
PA-10i	2-21-2025	N	Intermediate	PA-10i-022125	< 0.11	< 0.20 U	< 0.056	0.075	< 0.064	< 0.20 U	< 0.13	< 0.082	< 0.067	< 0.16	< 0.27
PA-15i	2-18-2025	N	Intermediate	PA-15i-021825	< 0.11	< 0.025	< 0.056	< 0.070	0.21	< 0.035	< 0.13	< 0.082	< 0.067	< 0.16	< 1.0 U
PA-16i	2-21-2025	N	Intermediate	PA-16i-022125	< 0.11	< 0.025	< 0.056	< 0.070	0.10 J+	< 0.035	< 0.13	< 0.082	< 0.067	< 0.16	< 0.27
PA-17iR	2-21-2025	N	Intermediate	PA-17iR-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.53	< 0.50	< 0.40	< 0.79	< 0.44
PA-32i	2-20-2025	N	Intermediate	PA-32i-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19	0.059 J+	< 0.13	< 0.082	< 0.067	< 0.16	< 1.0 U
PA-32i	2-20-2025	FD	Intermediate	DUP-01-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19 J+	0.12 J+	< 0.13	< 0.082	< 0.067	< 0.16	< 0.27
PA-44i	2-18-2025	N	Intermediate	PA-44i-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.13	< 0.082	< 0.067	< 0.16	< 1.0 U
MWA-11i(d)	2-21-2025	N	Deep	MWA-11i(d)-022125	< 0.11	< 0.025	< 0.056	0.073	0.079	< 0.20 U	< 0.13	< 0.082	< 0.067	< 0.16	< 0.27
MWA-31i(d)	2-19-2025	N	Deep	MWA-31i(d)-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.53	< 0.50	< 0.40	< 0.79	< 1.0 U
MWA-56d	2-19-2025	N	Deep	MWA-56d-021925	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 5.3	< 5.0	< 4.0	< 7.9	< 4.4
MWA-58d	2-19-2025	N	Deep	MWA-58d-021925	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 5.3	< 5.0	< 4.0	< 7.9	< 4.4
PA-18d	2-21-2025	N	Deep	PA-18d-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.53	< 0.50	< 0.40	< 0.79	< 0.44
PA-19d	2-20-2025	N	Deep	PA-19d-022025	< 18	< 39	< 52	< 24	< 22	< 28	< 53	< 50	< 40	< 79	< 44
PA-20d	2-20-2025	N	Deep	PA-20d-022025	< 0.18	< 0.39	< 0.52	< 0.24	0.25	< 0.28	< 0.53	< 0.50	< 0.40	< 0.79	< 1.0 U
PA-21d	2-20-2025	N	Deep	PA-21d-022025	< 180	< 390	< 520	< 240	< 220	< 280	< 530	< 500	< 400	< 790	< 1,000 U
PA-22d	2-20-2025	N	Deep	PA-22d-022025	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.53	< 0.50	< 0.40	< 0.79	< 0.44
PA-23d	2-19-2025	N	Deep	PA-23d-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.53	< 0.50	< 0.40	< 0.79	< 0.44
PA-24d	2-19-2025	N	Deep	PA-24d-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.53	< 0.50	< 0.40	< 0.79	< 1.0 U
PA-25d	2-18-2025	N	Deep	PA-25d-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.13	< 0.082	< 0.067	< 0.16	< 1.0 U
PA-26d	2-21-2025	N	Deep	PA-26d-022125	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.13	< 0.082	< 0.067	< 0.16	< 0.27
PA-27d	2-21-2025	N	Deep	PA-27d-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.53	< 0.50	< 0.40	< 0.79	< 0.44
PA-30d	2-20-2025	N	Deep	PA-30d-022025	< 90	< 200	< 260	< 120	< 110	< 140	< 270	< 250	< 200	< 400	< 220

Notes:
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Analyte Unit					1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	m,p-Xylenes	Methyl tert-butyl ether	Methylene chloride	Naphthalene	n-Butylbenzene
FSWP SHSC (shaded values indicate results above the value shown)					NE	11	0.4	1.6	47	710	1.8	NE	59	12	NE
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID											
MWA-41	2-18-2025	N	Shallow	MWA-41-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.12	< 0.070	< 1.2	< 0.52	< 1.0 U
MWA-63	2-21-2025	N	Shallow	MWA-63-022125	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 5.3	< 4.4	19 J	< 9.3	< 4.4
MWA-63	2-21-2025	FD	Shallow	DUP-02-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.53	< 0.44	< 1.4 UJ	< 0.93	< 0.44
MWA-82	2-18-2025	N	Shallow	MWA-82-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.12	< 0.070	< 1.2	< 0.52	< 0.35
PA-03	2-20-2025	N	Shallow	PA-03-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.16 J+	< 0.035	< 0.12	< 0.070	< 1.2	< 0.52	< 0.35
PA-04	2-21-2025	N	Shallow	PA-04-022125	< 0.11	< 0.025	< 0.056	0.074	0.24	0.23 J+	< 0.50 U	< 0.070	< 1.2	< 0.52	< 0.35
PA-08	2-20-2025	N	Shallow	PA-08-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19	< 0.035	< 0.12	< 0.070	< 1.2	< 0.52	< 0.35
PA-09	2-20-2025	N	Shallow	PA-09-022025	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.12	< 0.070	< 1.2	< 0.52	< 1.0 U
PA-31	2-19-2025	N	Shallow	PA-31-021925	< 0.11	0.22	< 0.056	< 0.070	0.19	0.71	< 0.12	< 0.070	< 1.2	< 0.52	< 1.0 U
MWA-81i	2-18-2025	N	Intermediate	MWA-81i-021825	< 0.11	< 0.025	< 0.056	< 0.070	0.069	< 0.035	< 0.12	< 0.070	< 1.2	< 0.52	< 1.0 U
PA-10i	2-21-2025	N	Intermediate	PA-10i-022125	< 0.11	< 0.20 U	< 0.056	0.075	< 0.064	< 0.20 U	< 0.50 U	< 0.070	< 1.2	< 0.52	< 0.35
PA-15i	2-18-2025	N	Intermediate	PA-15i-021825	< 0.11	< 0.025	< 0.056	< 0.070	0.21	< 0.035	< 0.12	< 0.070	< 1.2	< 0.52	< 1.0 U
PA-16i	2-21-2025	N	Intermediate	PA-16i-022125	< 0.11	< 0.025	< 0.056	< 0.070	0.10 J+	< 0.035	< 0.12	< 0.070	< 1.2	< 0.52	< 0.35
PA-17iR	2-21-2025	N	Intermediate	PA-17iR-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.53	< 0.44	< 1.4	< 0.93	< 1.0 U
PA-32i	2-20-2025	N	Intermediate	PA-32i-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19	0.059 J+	< 0.12	< 0.070	< 1.2	< 0.52	< 0.35
PA-32i	2-20-2025	FD	Intermediate	DUP-01-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19 J+	0.12 J+	< 0.12	< 0.070	< 1.2	< 0.52	< 0.35
PA-44i	2-18-2025	N	Intermediate	PA-44i-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.12	< 0.070	< 1.2	< 0.52	< 1.0 U
MWA-11i(d)	2-21-2025	N	Deep	MWA-11i(d)-022125	< 0.11	< 0.025	< 0.056	0.073	0.079	< 0.20 U	< 0.50 U	< 0.070	< 1.2	< 0.52	< 0.35
MWA-31i(d)	2-19-2025	N	Deep	MWA-31i(d)-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.53	< 0.44	< 1.4	< 0.93	< 1.0 U
MWA-56d	2-19-2025	N	Deep	MWA-56d-021925	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 5.3	< 4.4	< 14	< 9.3	< 10 U
MWA-58d	2-19-2025	N	Deep	MWA-58d-021925	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 5.3	< 4.4	< 14	< 9.3	< 10 U
PA-18d	2-21-2025	N	Deep	PA-18d-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.53	< 0.44	< 1.4	< 0.93	< 0.44
PA-19d	2-20-2025	N	Deep	PA-19d-022025	< 18	< 39	< 52	< 24	< 22	< 28	< 53	< 44	< 140	< 93	< 100 U
PA-20d	2-20-2025	N	Deep	PA-20d-022025	< 0.18	< 0.39	< 0.52	< 0.24	0.25	< 0.28	< 0.53	< 0.44	< 1.4	< 0.93	< 1.0 U
PA-21d	2-20-2025	N	Deep	PA-21d-022025	< 180	< 390	< 520	< 240	< 220	< 280	< 530	< 440	< 1,400	< 930	< 440
PA-22d	2-20-2025	N	Deep	PA-22d-022025	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.53	< 0.44	< 1.4	< 0.93	< 1.0 U
PA-23d	2-19-2025	N	Deep	PA-23d-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.53	< 0.44	< 1.4	< 0.93	< 0.44
PA-24d	2-19-2025	N	Deep	PA-24d-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.53	< 0.44	< 1.4	< 0.93	< 0.44
PA-25d	2-18-2025	N	Deep	PA-25d-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.12	< 0.070	< 1.2	< 0.52	< 1.0 U
PA-26d	2-21-2025	N	Deep	PA-26d-022125	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.12	0.13 J+	< 1.2	< 0.52	< 0.35
PA-27d	2-21-2025	N	Deep	PA-27d-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.53	< 0.44	< 1.4	< 0.93	< 0.44
PA-30d	2-20-2025	N	Deep	PA-30d-022025	< 90	< 200	< 260	< 120	< 110	< 140	< 270	< 220	< 720	< 470	< 500 U

Notes:
Bolded values indicate concentrations above the Method Detection Limit.
Shaded values indicate concentrations above the FSWP SHSC.
< = Compound not detected. Method Detection Limit shown.
µg/L = micrograms per liter
FD = Field Duplicate Sample
FSWP SHSC = Feasibility Study Work Plan Indirect Exposure Pathway Selected Hot Spot Criteria
N = Normal Environmental Sample
NE = Not Established
SW8260C analyses performed by TestAmerica - Seattle, WA of Seattle.

Qualifiers - Organic:
j = The analyte was positively identified below the RDL; associated numerical value is the approximate concentration of the analyte in the sample.
J- = The concentration of the sample is considered to be biased low, as the associated QC results are outside the lower control limits.
J+ = The concentration of the sample is considered to be biased high, as the associated QC results exceed the upper control limits.
U = Analyte was analyzed for, but not detected above, the limit displayed.
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Table 4
Volatile Organic Compounds Results
Arkema Quarter 1, 2025, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Analyte Unit					1,1,1,2-Tetrachloroethane	1,1,1,1-Trichloroethane	1,1,1,2,2-Tetrachloroethane	1,1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	n-Propylbenzene	o-Chlorotoluene (2-chlorotoluene)	o-Xylene	sec-Butylbenzene	Styrene
FSWP SHSC (shaded values indicate results above the value shown)					NE	11	0.4	1.6	47	710	NE	NE	13	NE	NE
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID											
MWA-41	2-18-2025	N	Shallow	MWA-41-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.091	< 0.12	< 0.23	< 0.17	< 0.33
MWA-63	2-21-2025	N	Shallow	MWA-63-022125	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 5.0	< 5.1	< 3.9	< 4.9	< 5.3
MWA-63	2-21-2025	FD	Shallow	DUP-02-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.50	< 0.51	< 0.39	< 0.49	< 0.53
MWA-82	2-18-2025	N	Shallow	MWA-82-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.091	< 0.12	< 0.23	< 0.17	< 0.33
PA-03	2-20-2025	N	Shallow	PA-03-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.16 J+	< 0.035	< 0.091	< 0.12	< 0.23	< 0.17	< 0.33
PA-04	2-21-2025	N	Shallow	PA-04-022125	< 0.11	< 0.025	< 0.056	0.074	0.24	0.23 J+	< 0.30 U	< 0.12	< 0.23	< 0.17	< 0.33
PA-08	2-20-2025	N	Shallow	PA-08-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19	< 0.035	< 0.091	< 0.12	< 0.23	< 0.17	< 0.33
PA-09	2-20-2025	N	Shallow	PA-09-022025	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.091	< 0.12	< 0.23	< 0.17	< 0.33
PA-31	2-19-2025	N	Shallow	PA-31-021925	< 0.11	0.22	< 0.056	< 0.070	0.19	0.71	< 0.091	< 0.12	< 0.23	< 0.17	< 0.33
MWA-81i	2-18-2025	N	Intermediate	MWA-81i-021825	< 0.11	< 0.025	< 0.056	< 0.070	0.069	< 0.035	< 0.091	< 0.12	< 0.23	< 0.17	< 0.33
PA-10i	2-21-2025	N	Intermediate	PA-10i-022125	< 0.11	< 0.20 U	< 0.056	0.075	< 0.064	< 0.20 U	< 0.091	< 0.12	< 0.23	< 0.17	< 0.33
PA-15i	2-18-2025	N	Intermediate	PA-15i-021825	< 0.11	< 0.025	< 0.056	< 0.070	0.21	< 0.035	< 0.091	< 0.12	< 0.23	< 0.17	< 0.33
PA-16i	2-21-2025	N	Intermediate	PA-16i-022125	< 0.11	< 0.025	< 0.056	< 0.070	0.10 J+	< 0.035	< 0.091	< 0.12	< 0.23	< 0.17	< 0.33
PA-17iR	2-21-2025	N	Intermediate	PA-17iR-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.50	< 0.51	< 0.39	< 0.49	< 0.53
PA-32i	2-20-2025	N	Intermediate	PA-32i-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19	0.059 J+	< 0.091	< 0.12	< 0.23	< 0.17	< 0.33
PA-32i	2-20-2025	FD	Intermediate	DUP-01-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19 J+	0.12 J+	< 0.091	< 0.12	< 0.23	< 0.17	< 0.33
PA-44i	2-18-2025	N	Intermediate	PA-44i-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.091	< 0.12	< 0.23	< 0.17	< 0.33
MWA-11i(d)	2-21-2025	N	Deep	MWA-11i(d)-022125	< 0.11	< 0.025	< 0.056	0.073	0.079	< 0.20 U	< 0.30 U	< 0.12	< 0.23	< 0.17	< 0.33
MWA-31i(d)	2-19-2025	N	Deep	MWA-31i(d)-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.50	< 0.51	< 0.39	< 0.49	< 0.53
MWA-56d	2-19-2025	N	Deep	MWA-56d-021925	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 5.0	< 5.1	< 3.9	< 4.9	< 5.3
MWA-58d	2-19-2025	N	Deep	MWA-58d-021925	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 5.0	< 5.1	< 3.9	< 4.9	< 5.3
PA-18d	2-21-2025	N	Deep	PA-18d-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.50	< 0.51	< 0.39	< 0.49	< 0.53
PA-19d	2-20-2025	N	Deep	PA-19d-022025	< 18	< 39	< 52	< 24	< 22	< 28	< 50	< 51	< 39	< 49	< 53
PA-20d	2-20-2025	N	Deep	PA-20d-022025	< 0.18	< 0.39	< 0.52	< 0.24	0.25	< 0.28	< 0.50	< 0.51	< 0.39	< 0.49	< 0.53
PA-21d	2-20-2025	N	Deep	PA-21d-022025	< 180	< 390	< 520	< 240	< 220	< 280	< 500	< 510	< 390	< 490	< 530
PA-22d	2-20-2025	N	Deep	PA-22d-022025	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.50	< 0.51	< 0.39	< 0.49	< 0.53 UJ
PA-23d	2-19-2025	N	Deep	PA-23d-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.50	< 0.51	< 0.39	< 0.49	< 0.53
PA-24d	2-19-2025	N	Deep	PA-24d-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.50	< 0.51	< 0.39	< 0.49	< 0.53
PA-25d	2-18-2025	N	Deep	PA-25d-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.091	< 0.12	< 0.23	< 0.17	< 0.33
PA-26d	2-21-2025	N	Deep	PA-26d-022125	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.091	< 0.12	< 0.23	< 0.17	< 0.33
PA-27d	2-21-2025	N	Deep	PA-27d-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.50	< 0.51	< 0.39	< 0.49	< 0.53
PA-30d	2-20-2025	N	Deep	PA-30d-022025	< 90	< 200	< 260	< 120	< 110	< 140	< 250	< 260	< 200	< 250	< 270

Notes:
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Shaded values indicate concentrations above the FSWP SHSC.
< = Compound not detected. Method Detection Limit shown.
µg/L = micrograms per liter
FD = Field Duplicate Sample
FSWP SHSC = Feasibility Study Work Plan Indirect Exposure Pathway Selected Hot Spot Criteria
N = Normal Environmental Sample
NE = Not Established
SW8260C analyses performed by TestAmerica - Seattle, WA of Seattle.

Qualifiers - Organic:
j = The analyte was positively identified below the RDL; associated numerical value is the approximate concentration of the analyte in the sample.
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J+ = The concentration of the sample is considered to be biased high, as the associated QC results exceed the upper control limits.
U = Analyte was analyzed for, but not detected above, the limit displayed.
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Table 4
Volatile Organic Compounds Results
Arkema Quarter 1, 2025, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Analyte Unit					1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethane	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene
FSWP SHSC (shaded values indicate results above the value shown)					NE	11	0.4	1.6	47	710	NE	0.33	9.8	1000	NE
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID											
MWA-41	2-18-2025	N	Shallow	MWA-41-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.26	< 0.084	< 0.050	< 0.033	< 0.092
MWA-63	2-21-2025	N	Shallow	MWA-63-022125	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 5.8	8.8	< 3.9	< 3.9	< 4.1
MWA-63	2-21-2025	FD	Shallow	DUP-02-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.58	9.2	< 0.39	< 0.39	< 0.41
MWA-82	2-18-2025	N	Shallow	MWA-82-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.26	0.50	< 0.050	< 0.033	< 0.092
PA-03	2-20-2025	N	Shallow	PA-03-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.16 J+	< 0.035	< 0.26	0.086	0.16	< 0.033	< 0.092
PA-04	2-21-2025	N	Shallow	PA-04-022125	< 0.11	< 0.025	< 0.056	0.074	0.24	0.23 J+	< 0.26	< 0.50 U	< 0.050	< 0.20 U	< 0.092
PA-08	2-20-2025	N	Shallow	PA-08-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19	< 0.035	< 0.26	0.20	0.051	< 0.033	< 0.092
PA-09	2-20-2025	N	Shallow	PA-09-022025	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.26	0.30	< 0.050	< 0.033	< 0.092
PA-31	2-19-2025	N	Shallow	PA-31-021925	< 0.11	0.22	< 0.056	< 0.070	0.19	0.71	< 0.26	0.20	< 0.050	< 0.033	< 0.092
MWA-81i	2-18-2025	N	Intermediate	MWA-81i-021825	< 0.11	< 0.025	< 0.056	< 0.070	0.069	< 0.035	< 0.26	< 0.084	< 0.050	< 0.033	< 0.092
PA-10i	2-21-2025	N	Intermediate	PA-10i-022125	< 0.11	< 0.20 U	< 0.056	0.075	< 0.064	< 0.20 U	< 0.26	< 0.50 U	< 0.050	< 0.20 U	< 0.092
PA-15i	2-18-2025	N	Intermediate	PA-15i-021825	< 0.11	< 0.025	< 0.056	< 0.070	0.21	< 0.035	< 0.26	< 0.084	< 0.050	< 0.033	< 0.092
PA-16i	2-21-2025	N	Intermediate	PA-16i-022125	< 0.11	< 0.025	< 0.056	< 0.070	0.10 J+	< 0.035	< 0.26	< 0.084	0.087	< 0.033	< 0.092
PA-17iR	2-21-2025	N	Intermediate	PA-17iR-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.58	< 0.41	< 0.39	< 0.39	< 0.41
PA-32i	2-20-2025	N	Intermediate	PA-32i-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19	0.059 J+	< 0.26	< 0.084	0.052	< 0.033	< 0.092
PA-32i	2-20-2025	FD	Intermediate	DUP-01-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19 J+	0.12 J+	< 0.26	< 0.084	< 0.050	< 0.033	< 0.092
PA-44i	2-18-2025	N	Intermediate	PA-44i-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.26	< 0.084	< 0.050	< 0.033	< 0.092
MWA-11i(d)	2-21-2025	N	Deep	MWA-11i(d)-022125	< 0.11	< 0.025	< 0.056	0.073	0.079	< 0.20 U	< 0.26	< 0.50 U	0.11	< 0.20 U	< 0.092
MWA-31i(d)	2-19-2025	N	Deep	MWA-31i(d)-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.58	< 0.41	< 0.39	< 0.39	< 0.41
MWA-56d	2-19-2025	N	Deep	MWA-56d-021925	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 5.8	< 4.1	< 3.9	< 3.9	< 4.1
MWA-58d	2-19-2025	N	Deep	MWA-58d-021925	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 5.8	< 4.1	< 3.9	< 3.9	< 4.1
PA-18d	2-21-2025	N	Deep	PA-18d-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.58	< 0.41	< 0.39	< 0.39	< 0.41
PA-19d	2-20-2025	N	Deep	PA-19d-022025	< 18	< 39	< 52	< 24	< 22	< 28	< 58	< 41	< 39	< 39	< 41
PA-20d	2-20-2025	N	Deep	PA-20d-022025	< 0.18	< 0.39	< 0.52	< 0.24	0.25	< 0.28	< 0.58	< 0.41	< 0.39	< 0.39	< 0.41
PA-21d	2-20-2025	N	Deep	PA-21d-022025	< 180	< 390	< 520	< 240	< 220	< 280	< 580	< 410	< 390	< 390	< 410
PA-22d	2-20-2025	N	Deep	PA-22d-022025	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.58	< 0.41	< 0.39	< 0.39	< 0.41
PA-23d	2-19-2025	N	Deep	PA-23d-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.58	< 0.41	< 0.39	< 0.39	< 0.41
PA-24d	2-19-2025	N	Deep	PA-24d-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.58	< 0.41	< 0.39	< 0.39	< 0.41
PA-25d	2-18-2025	N	Deep	PA-25d-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.26	< 0.084	< 0.050	< 0.033	< 0.092
PA-26d	2-21-2025	N	Deep	PA-26d-022125	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.26	0.11	0.16	< 0.033	< 0.092
PA-27d	2-21-2025	N	Deep	PA-27d-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.58	< 0.41	< 0.39	< 0.39	< 0.41
PA-30d	2-20-2025	N	Deep	PA-30d-022025	< 90	< 200	< 260	< 120	< 110	< 140	< 290	< 210	< 200	< 200	< 210

Notes:
Bolded values indicate concentrations above the Method Detection Limit.
Shaded values indicate concentrations above the FSWP SHSC.
< = Compound not detected. Method Detection Limit shown.
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Portland, Oregon

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FSWP SHSC (shaded values indicate results above the value shown)					NE	11	0.4	1.6	47	710	3	NE	0.24
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID									
MWA-41	2-18-2025	N	Shallow	MWA-41-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.066	< 0.12	< 0.040
MWA-63	2-21-2025	N	Shallow	MWA-63-022125	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 2.6	< 3.6	< 2.2
MWA-63	2-21-2025	FD	Shallow	DUP-02-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	1.5	< 0.36	< 0.22
MWA-82	2-18-2025	N	Shallow	MWA-82-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	0.18	< 0.12	< 0.040
PA-03	2-20-2025	N	Shallow	PA-03-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.16 J+	< 0.035	< 0.066	< 0.12	< 0.040
PA-04	2-21-2025	N	Shallow	PA-04-022125	< 0.11	< 0.025	< 0.056	0.074	0.24	0.23 J+	< 0.066	< 0.12	< 0.040
PA-08	2-20-2025	N	Shallow	PA-08-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19	< 0.035	0.12	< 0.12	< 0.040
PA-09	2-20-2025	N	Shallow	PA-09-022025	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.066	< 0.12	< 0.040
PA-31	2-19-2025	N	Shallow	PA-31-021925	< 0.11	0.22	< 0.056	< 0.070	0.19	0.71	0.081	< 0.12	< 0.040
MWA-81i	2-18-2025	N	Intermediate	MWA-81i-021825	< 0.11	< 0.025	< 0.056	< 0.070	0.069	< 0.035	< 0.066	< 0.12	< 0.040
PA-10i	2-21-2025	N	Intermediate	PA-10i-022125	< 0.11	< 0.20 U	< 0.056	0.075	< 0.064	< 0.20 U	< 0.066	< 0.12	0.47 J
PA-15i	2-18-2025	N	Intermediate	PA-15i-021825	< 0.11	< 0.025	< 0.056	< 0.070	0.21	< 0.035	< 0.066	< 0.12	< 0.040
PA-16i	2-21-2025	N	Intermediate	PA-16i-022125	< 0.11	< 0.025	< 0.056	< 0.070	0.10 J+	< 0.035	0.081	< 0.12	< 0.040
PA-17iR	2-21-2025	N	Intermediate	PA-17iR-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.26	< 0.36	< 0.22
PA-32i	2-20-2025	N	Intermediate	PA-32i-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19	0.059 J+	< 0.066	< 0.12	< 0.040
PA-32i	2-20-2025	FD	Intermediate	DUP-01-022025	< 0.11	< 0.025	< 0.056	< 0.070	0.19 J+	0.12 J+	< 0.066	< 0.12	< 0.040
PA-44i	2-18-2025	N	Intermediate	PA-44i-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.066	< 0.12	< 0.040
MWA-11i(d)	2-21-2025	N	Deep	MWA-11i(d)-022125	< 0.11	< 0.025	< 0.056	0.073	0.079	< 0.20 U	< 0.066	< 0.12	< 0.040
MWA-31i(d)	2-19-2025	N	Deep	MWA-31i(d)-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.26	< 0.36	< 0.22
MWA-56d	2-19-2025	N	Deep	MWA-56d-021925	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 2.6	< 3.6	< 2.2
MWA-58d	2-19-2025	N	Deep	MWA-58d-021925	< 1.8	< 3.9	< 5.2	< 2.4	< 2.2	< 2.8	< 2.6	< 3.6	< 2.2
PA-18d	2-21-2025	N	Deep	PA-18d-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.26	< 0.36	< 0.22
PA-19d	2-20-2025	N	Deep	PA-19d-022025	< 18	< 39	< 52	< 24	< 22	< 28	< 26	< 36	< 22
PA-20d	2-20-2025	N	Deep	PA-20d-022025	< 0.18	< 0.39	< 0.52	< 0.24	0.25	< 0.28	< 0.26	< 0.36	< 0.22
PA-21d	2-20-2025	N	Deep	PA-21d-022025	< 180	< 390	< 520	< 240	< 220	< 280	< 260	< 360	< 220
PA-22d	2-20-2025	N	Deep	PA-22d-022025	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.26	< 0.36	< 0.22
PA-23d	2-19-2025	N	Deep	PA-23d-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.26	< 0.36	< 0.22
PA-24d	2-19-2025	N	Deep	PA-24d-021925	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.26	< 0.36	< 0.22
PA-25d	2-18-2025	N	Deep	PA-25d-021825	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.066	< 0.12	< 0.040
PA-26d	2-21-2025	N	Deep	PA-26d-022125	< 0.11	< 0.025	< 0.056	< 0.070	< 0.064	< 0.035	< 0.066	< 0.12	< 0.040
PA-27d	2-21-2025	N	Deep	PA-27d-022125	< 0.18	< 0.39	< 0.52	< 0.24	< 0.22	< 0.28	< 0.26	< 0.36	< 0.22
PA-30d	2-20-2025	N	Deep	PA-30d-022025	< 90	< 200	< 260	< 120	< 110	< 140	< 130	< 180	< 110

Notes:
Bolded values indicate concentrations above the Method Detection Limit.
Shaded values indicate concentrations above the FSWP SHSC.
< = Compound not detected. Method Detection Limit shown.
µg/L = micrograms per liter
FD = Field Duplicate Sample
FSWP SHSC = Feasibility Study Work Plan Indirect Exposure Pathway Selected Hot Spot Criteria
N = Normal Environmental Sample
NE = Not Established
SW8260C analyses performed by TestAmerica - Seattle, WA of Seattle.

Qualifiers - Organic:
j = The analyte was positively identified below the RDL; associated numerical value is the approximate concentration of the analyte in the sample.
J- = The concentration of the sample is considered to be biased low, as the associated QC results are outside the lower control limits.
J+ = The concentration of the sample is considered to be biased high, as the associated QC results exceed the upper control limits.
U = Analyte was analyzed for, but not detected above, the limit displayed.
UJ = Analyte was analyzed for, but not detected. The detection limit is a quantitative estimate.

Table 5
Additional Compounds Results
Arkema Quarter 1, 2025, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Analyte					Chloride	Perchlorate
Unit					mg / L	µg / L
FSWP SHSC (shaded values indicate results above the value shown)					230	1800
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID		
MWA-41	2-18-2025	N	Shallow	MWA-41-021825	5.4	< 0.91
MWA-63	2-21-2025	N	Shallow	MWA-63-022125	5.8	< 1.8
MWA-63	2-21-2025	FD	Shallow	DUP-02-022125	-	-
MWA-82	2-18-2025	N	Shallow	MWA-82-021825	9.1	420
PA-03	2-20-2025	N	Shallow	PA-03-022025	3.9	< 18
PA-04	2-21-2025	N	Shallow	PA-04-022125	4.0	< 9.1
PA-08	2-20-2025	N	Shallow	PA-08-022025	460	28
PA-09	2-20-2025	N	Shallow	PA-09-022025	180	< 9.1
PA-31	2-19-2025	N	Shallow	PA-31-021925	3.4 J+	< 9.1
MWA-81i	2-18-2025	N	Intermediate	MWA-81i-021825	12	< 0.91
PA-10i	2-21-2025	N	Intermediate	PA-10i-022125	27	< 36
PA-15i	2-18-2025	N	Intermediate	PA-15i-021825	44	< 18
PA-16i	2-21-2025	N	Intermediate	PA-16i-022125	32	< 36
PA-17iR	2-21-2025	N	Intermediate	PA-17iR-022125	58	< 91
PA-32i	2-20-2025	N	Intermediate	PA-32i-022025	44	< 91
PA-32i	2-20-2025	FD	Intermediate	DUP-01-022025	47	< 91
PA-44i	2-18-2025	N	Intermediate	PA-44i-021825	< 1.5 U	< 0.91
MWA-11i(d)	2-21-2025	N	Deep	MWA-11i(d)-022125	730	< 0.91
MWA-31i(d)	2-19-2025	N	Deep	MWA-31i(d)-021925	6,000	3,700
MWA-56d	2-19-2025	N	Deep	MWA-56d-021925	13,000	13,000
MWA-58d	2-19-2025	N	Deep	MWA-58d-021925	18,000	53,000
PA-18d	2-21-2025	N	Deep	PA-18d-022125	75	< 36
PA-19d	2-20-2025	N	Deep	PA-19d-022025	280	89
PA-20d	2-20-2025	N	Deep	PA-20d-022025	580	28
PA-21d	2-20-2025	N	Deep	PA-21d-022025	350	1,100
PA-22d	2-20-2025	N	Deep	PA-22d-022025	5,200	13,000
PA-23d	2-19-2025	N	Deep	PA-23d-021925	33,000	< 91
PA-24d	2-19-2025	N	Deep	PA-24d-021925	29,000	< 91
PA-25d	2-18-2025	N	Deep	PA-25d-021825	32	< 0.91
PA-26d	2-21-2025	N	Deep	PA-26d-022125	84	< 0.91
PA-27d	2-21-2025	N	Deep	PA-27d-022125	600	< 36
PA-30d	2-20-2025	N	Deep	PA-30d-022025	280	< 91

Notes:

Bolded values indicate concentrations above the Method Detection Limit.

Shaded values indicate concentrations above the FSWP SHSC.

< = Compound not detected. Method Detection Limit shown.

µg/L = micrograms per liter

mg/L = milligrams per liter

FD = Field Duplicate Sample

FSWP SHSC = Feasibility Study Work Plan Indirect Exposure Pathway Selected Hot Spot Criteria

N = Normal Environmental Sample

E300 analyses performed by TestAmerica - Seattle, WA of Seattle.

E314.0 analyses performed by TestAmerica - Sacramento, CA of West Sacramento.

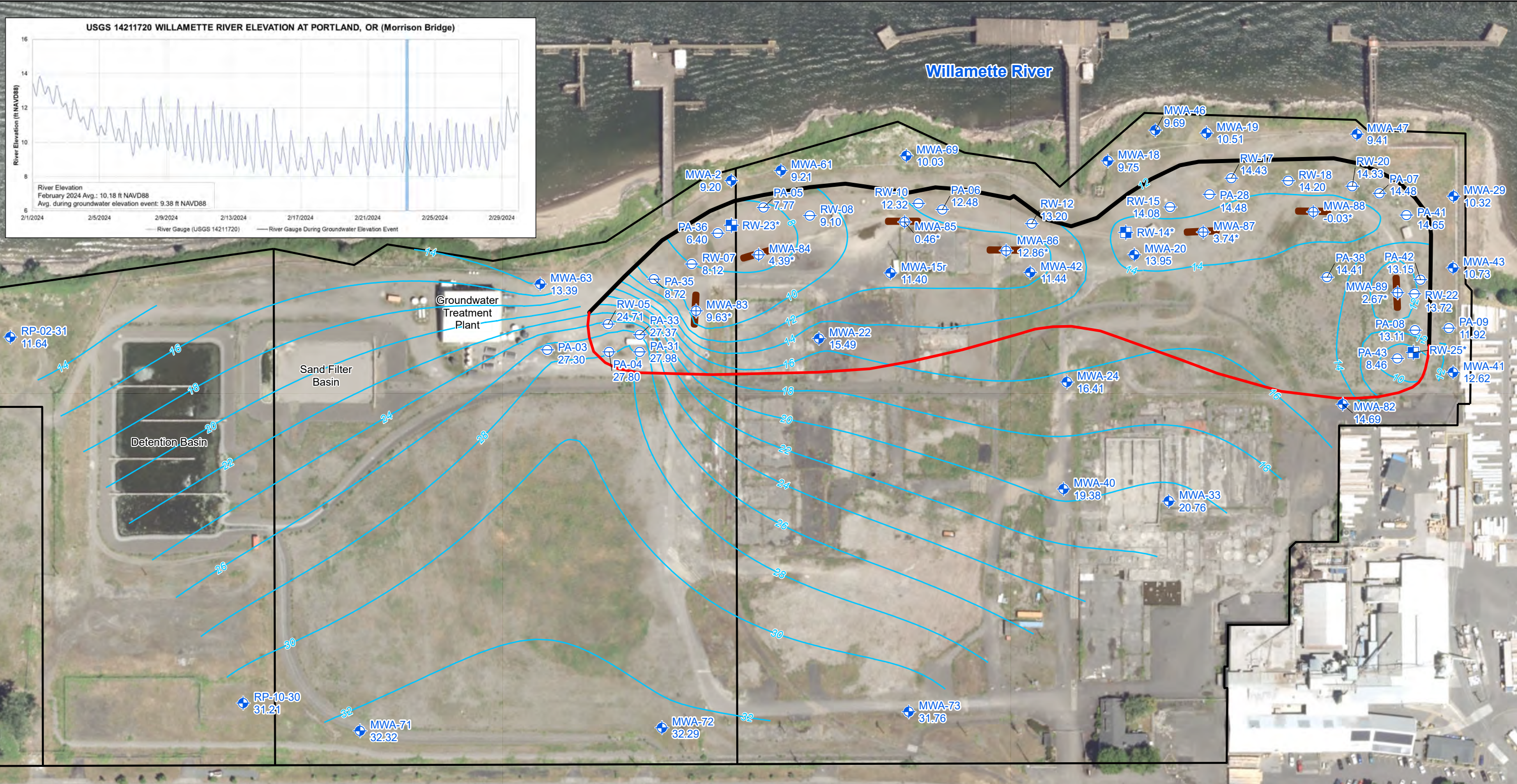
J+ = The concentration of the sample is considered to be biased high, as the associated QC results exceed the upper control limits.

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

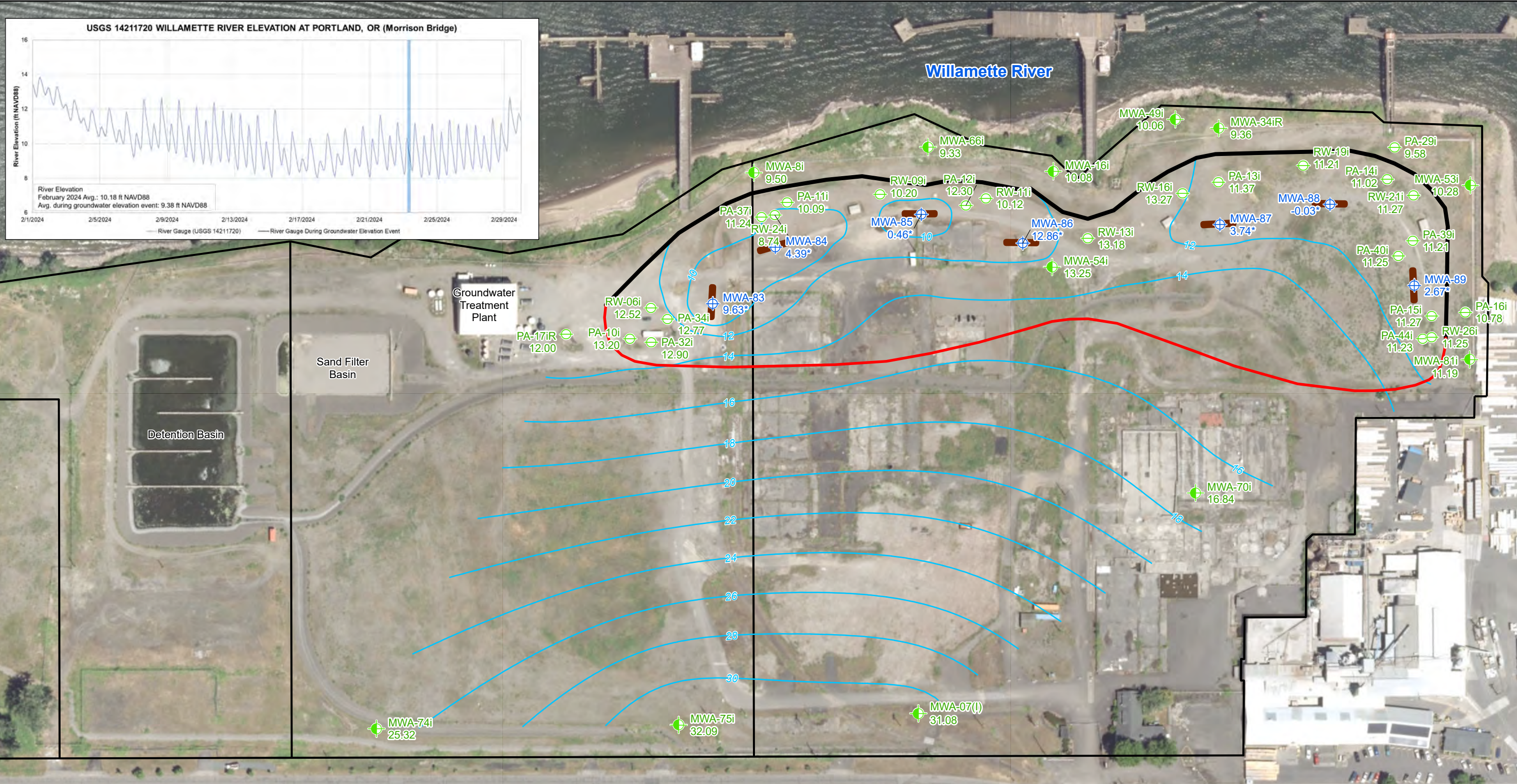


FIGURES

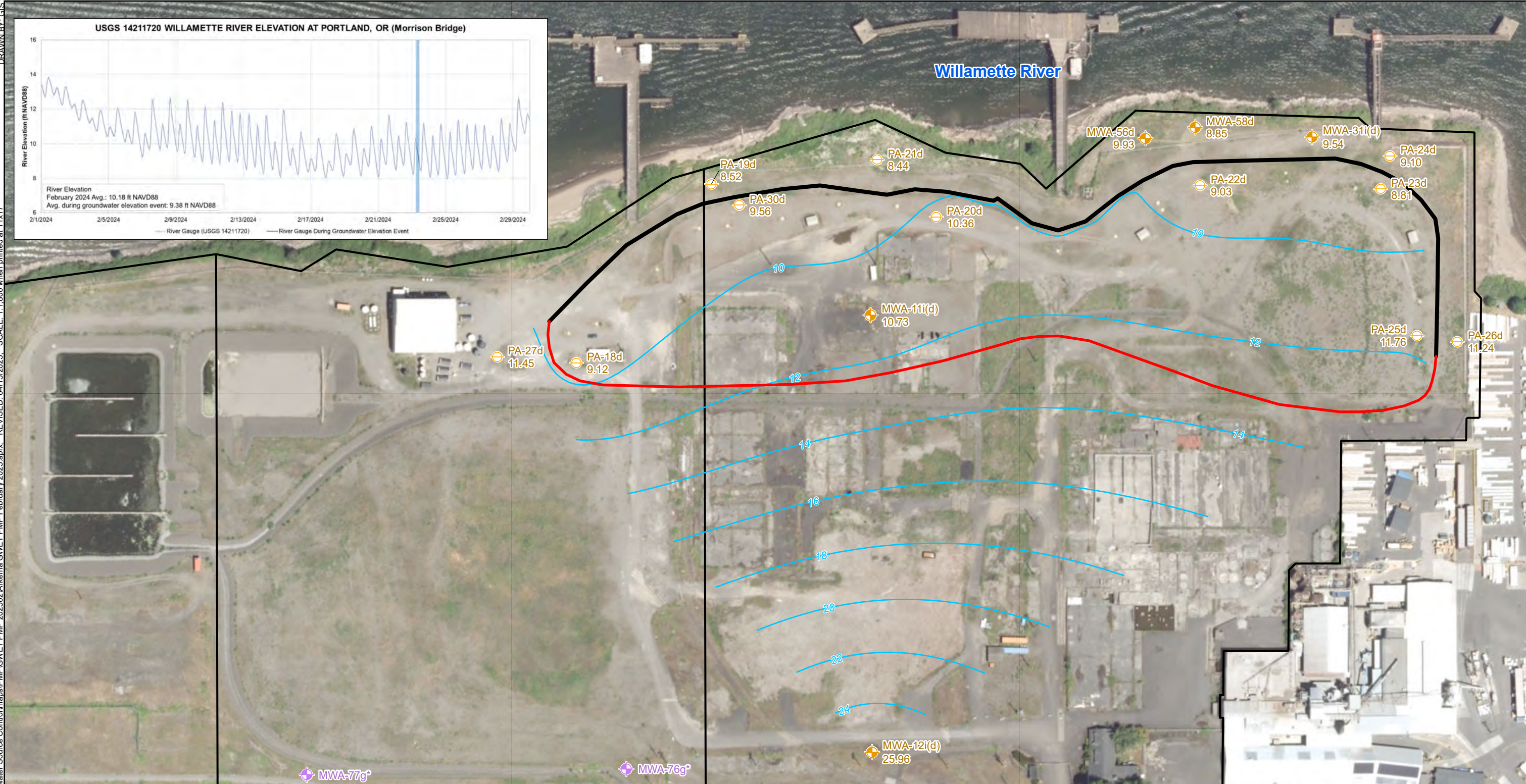
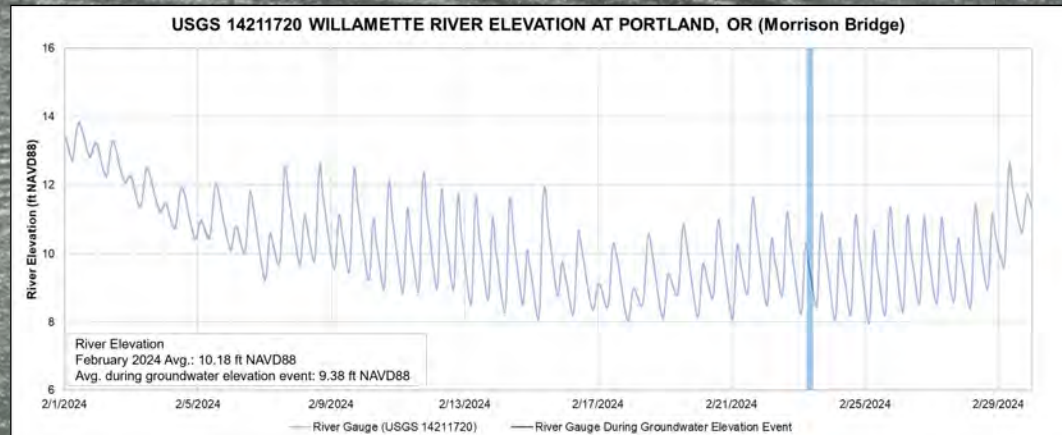
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DRAWN BY: GIS
NAD 1983 StatePlane Oregon North FIPS 3601 Feet Intl



M:\US\Projects\S-U\Total\Arkema Portland\Groundwater Source Control\maps\PMP\GWET PMP 202502\Arkema GWET PMP February 2025.aprx. SCALE: 1:1,900 when printed at 11x17
DRAWN BY: GIS
REVISED: 04/15/2025



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DRAWN BY: GIS



Legend

- Deep Zone Piezometer
- Deep Zone Monitoring Well
- Gravel Zone Monitoring Well
- 27.70 Groundwater Elevation (ft NAVD88)
- Deep Zone Groundwater Contours (ft NAVD88)
Dashed where Inferred
- Target Capture Zone
- Barrier Wall Alignment

Notes:
* Value not used for contouring.
Gravel zone wells not used in contouring. Water levels collected February, 17, 2025.
ft NAVD88: feet North American Vertical Datum of 1988.
Aerial Photo: City of Portland, Summer 2017.

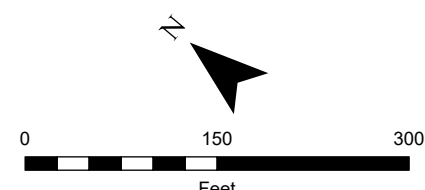


Figure 4
February 2025 Deep Zone Groundwater Contours
Quarter 1, 2025
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon

M:\US\Projects\S-U\Total\Arkema Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working Maps\2025 Q1\Figure 5 Chlorobenzene Shallow.mxd, REVISED: 04/14/2025, SCALE: 1:1,440 when printed at 11x DRAWN BY: Jake Sullivan DATE: 4/14/2025



Legend

- | | |
|-----------------------|---|
| ● > 6,400 µg/L | — Target Capture Zone |
| ● >= 640 - 6,400 µg/L | — Barrier Wall Alignment |
| ● >= 64 - < 640 µg/L | — Parcel and Property Boundaries |
| ● < 64 µg/L | — Shallow Zone Groundwater Contours (ft NAVD88) February 2025 |
| ○ Not Detected | |
| ⊗ Not Sampled | |

Notes:
Samples collected February 18–21, 2025.
All results in micrograms per liter (µg/L).
Results in **red** exceed screening criteria.
Screening criteria for Chlorobenzene = 64 µg/L.
See Table 4 for definition of qualifiers.
ND: Non-Detect
NS: Not Sampled

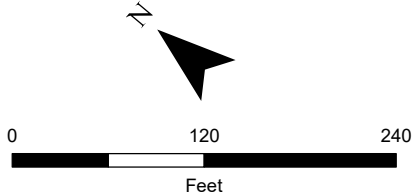


Figure 5
Chlorobenzene Groundwater Concentrations
Shallow Zone
Quarter 1, 2025
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon



M:\US\Projects\S-U\Total\Arkema Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working Maps\2025 Q1\Figure 6 Chlorobenzene Intermediate.mxd, REVISED: 04/14/2025, SCALE: 1:1,440 when printed at 11" x 17", DATE: 4/14/2025



Legend

- > 6,400 µg/L
- >= 640 - 6,400 µg/L
- >= 64 - < 640 µg/L
- < 64 µg/L
- Not Detected
- ⊙ Not Sampled
- Target Capture Zone
- Barrier Wall Alignment
- Parcel and Property Boundaries
- Intermediate Zone Groundwater Contours (ft NAVD88) February 2025

Notes:
Samples collected February 18–21, 2025.
All results in micrograms per liter (µg/L).
Results in **red** exceed screening criteria.
Screening criteria for Chlorobenzene = 64 µg/L.
See Table 4 for definition of qualifiers.
ND: Non-Detect
NS: Not Sampled

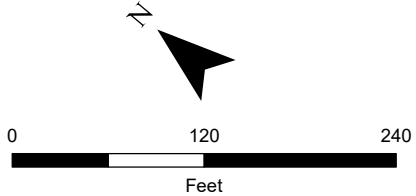
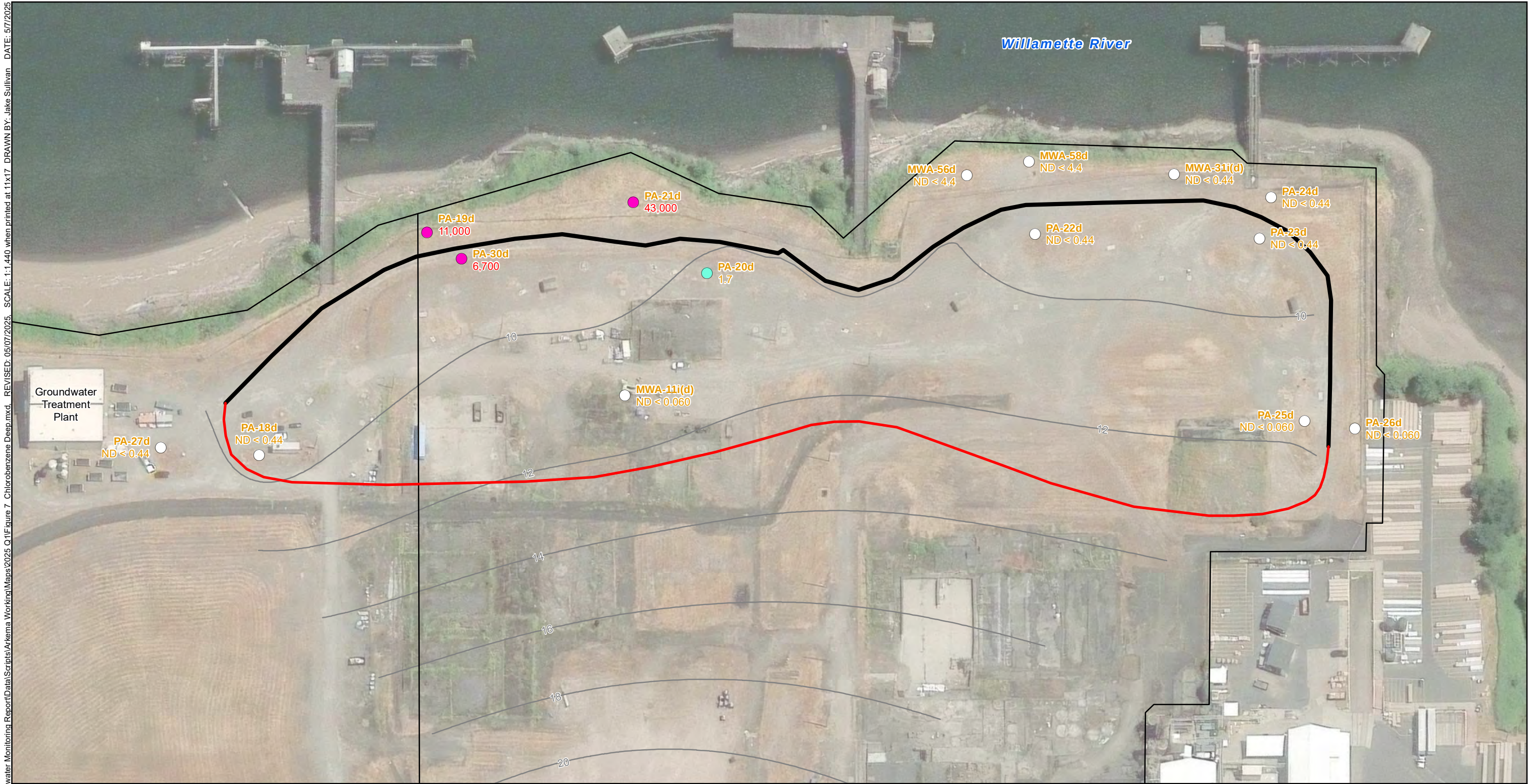


Figure 6
Chlorobenzene Groundwater Concentrations
Intermediate Zone
Quarter 1, 2025
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon



M:\US\Projects\S-U\Total\Arkema Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working Maps\2025 Q1\Figure 7 Chlorobenzene Deep.mxd, REVISED: 05/07/2025, SCALE: 1:1,440 when printed at 11x17 DRAWN BY: Jake Sullivan DATE: 5/7/2025



Legend

- > 6,400 µg/L
- >= 640 - 6,400 µg/L
- >= 64 - < 640 µg/L
- < 64 µg/L
- Not Detected
- Barrier Wall Alignment
- Parcel and Property Boundaries
- Deep Zone Groundwater Contours (ft NAVD88) February 2025
- Target Capture Zone

Notes:
Samples collected February 18–21, 2025.
All results in micrograms per liter (µg/L).
Results in **red** exceed screening criteria.
Screening criteria for Chlorobenzene = 64 µg/L.
See Table 4 for definition of qualifiers.
ND: Non-Detect

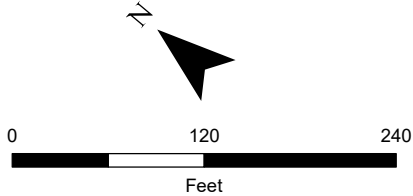


Figure 7
Chlorobenzene Groundwater Concentrations
Deep Zone
Quarter 1, 2025
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon



M:\US\Projects\S-U\Total\Arkema Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working Maps\2025 Q1\Figure 8 1,2-Dichlorobenzene Shallow.mxd, REVISED: 04/14/2025, SCALE: 1:1,440 when printed at DRAWN BY: Jake Sullivan DATE: 4/14/2025



Legend

- | | |
|-----------------------|---|
| ● > 1,400 µg/L | — Target Capture Zone |
| ● >= 140 - 1,400 µg/L | — Barrier Wall Alignment |
| ● >= 14 - < 140 µg/L | — Parcel and Property Boundaries |
| ● < 14 µg/L | — Shallow Zone Groundwater Contours (ft NAVD88) February 2025 |
| ○ Not Detected | |
| ⊗ Not Sampled | |

Notes:
Samples collected February 18–21, 2025.
All results in micrograms per liter (µg/L).
Results in **red** exceed screening criteria.
Screening criteria for 1,2-Dichlorobenzene = 14 µg/L.
See Table 4 for definition of qualifiers.
ND: Non-Detect
NS: Not Sampled

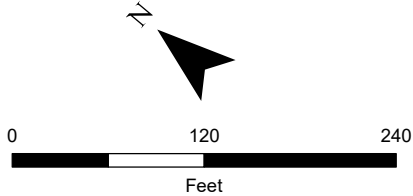


Figure 8
1,2-Dichlorobenzene Groundwater Concentrations
Shallow Zone
Quarter 1, 2025
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon



M:\US\Projects\S-U\Total\Arkema Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working Maps\2025 Q1\Figure 9 1,2-Dichlorobenzene Intermediate.mxd, REVISED: 04/14/2025, SCALE: 1:1,440 when printed, BY: Jake Sullivan, DATE: 4/14/2025



Legend

- | | |
|----------------------|--|
| ● > 1,400 µg/L | — Target Capture Zone |
| ● ≥ 140 - 1,400 µg/L | — Barrier Wall Alignment |
| ● ≥ 14 - < 140 µg/L | — Parcel and Property Boundaries |
| ● < 14 µg/L | — Intermediate Zone Groundwater Contours (ft NAVD88) February 2025 |
| ○ Not Detected | |
| ● Not Sampled | |

Notes:
Samples collected February 18–21, 2025.
All results in micrograms per liter (µg/L).
Results in **red** exceed screening criteria.
Screening criteria for 1,2-Dichlorobenzene = 14 µg/L.
See Table 4 for definition of qualifiers.
ND: Non-Detect
NS: Not Sampled

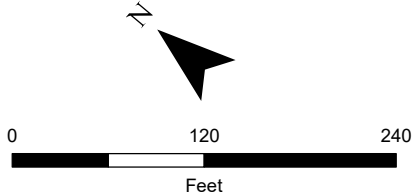


Figure 9
1,2-Dichlorobenzene Groundwater Concentrations
Intermediate Zone
Quarter 1, 2025
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon



M:\US\Projects\S-U\Total\Arkema Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working Maps\2025 Q1\Figure 10 12-Dichlorobenzene Deep.mxd, REVISED: 04/14/2025, SCALE: 1:1,440 when printed at DRAWN BY: Jake Sullivan DATE: 4/14/2025



Legend

- > 1,400 µg/L
- ≥ 140 - 1,400 µg/L
- ≥ 14 - < 140 µg/L
- < 14 µg/L
- Not Detected
- Barrier Wall Alignment
- Parcel and Property Boundaries
- Deep Zone Groundwater Contours (ft NAVD88) February 2025
- Target Capture Zone

Notes:
Samples collected February 18–21, 2025.
All results in micrograms per liter (µg/L).
Results in **red** exceed screening criteria.
Screening criteria for 1,2-Dichlorobenzene = 14 µg/L.
See Table 4 for definition of qualifiers.
ND: Non-Detect

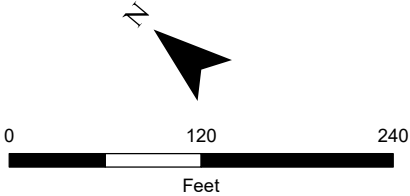


Figure 10
1,2-Dichlorobenzene Groundwater Concentrations
Deep Zone
Quarter 1, 2025
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon



M:\US\Projects\S-U\Total\Arkema Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working Maps\2025 Q1\Figure 11 VOCs PieChart Shallow.mxd, REVISED: 04/14/2025, SCALE: 1:1,440 when printed at 11x17, DRAWN BY: Tyler Harris, DATE: 4/14/2025



Legend

Molar Ratio

- Tetrachloroethene
- Trichloroethene
- cis-1,2-Dichloroethene
- Vinyl chloride

○ Not Detected

— Target Capture Zone

— Barrier Wall Alignment

— Parcel and Property Boundaries

— Shallow Zone Groundwater Contours (ft NAVD88) February 2025

Notes:
Samples collected February 18–21, 2025.
All results in micrograms per liter (µg/L).
Results in **red** exceed screening criteria.
Screening criteria for tetrachloroethene (PCE) = 0.33 µg/L.
Screening criteria for trichloroethene (TCE) = 3 µg/L.
Screening criteria for cis-1,2-dichloroethene (Cis-1,2) = 590 µg/L.
Screening criteria for vinyl chloride (VC) = 0.24 µg/L.
ND: Non-Detect

0 120 240
Feet

Figure 11
PCE, TCE, cis-1,2-DCE and
Vinyl Chloride Groundwater Concentrations
Shallow Zone
Quarter 1, 2025
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon

M:\US\Projects\US-U\Total\Arkema Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working Maps\2025 Q1\Figure 12 VOCs PieChart Intermediate.mxd, REVISED: 04/14/2025, SCALE: 1:1,440 when printed aDRAWN BY: Tyler Harris DATE: 4/14/2025



Legend

Molar Ratio

- Tetrachloroethene
- Trichloroethene
- cis-1,2-Dichloroethene
- Vinyl chloride

- Not Detected
- Target Capture Zone
- Barrier Wall Alignment
- Parcel and Property Boundaries
- Intermediate Zone Groundwater Contours (ft NAVD88) February 2025

Notes:
Samples collected February 18–21, 2025.
All results in micrograms per liter (µg/L).
Results in **red** exceed screening criteria.
Screening criteria for tetrachloroethene (PCE) = 0.33 µg/L .
Screening criteria for trichloroethene (TCE) = 3 µg/L.
Screening criteria for cis-1,2-dichloroethene (Cis-1,2) = 590 µg/L.
Screening criteria for vinyl chloride (VC) = 0.24 µg/L.
ND: Non-Detect

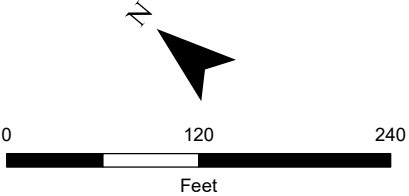
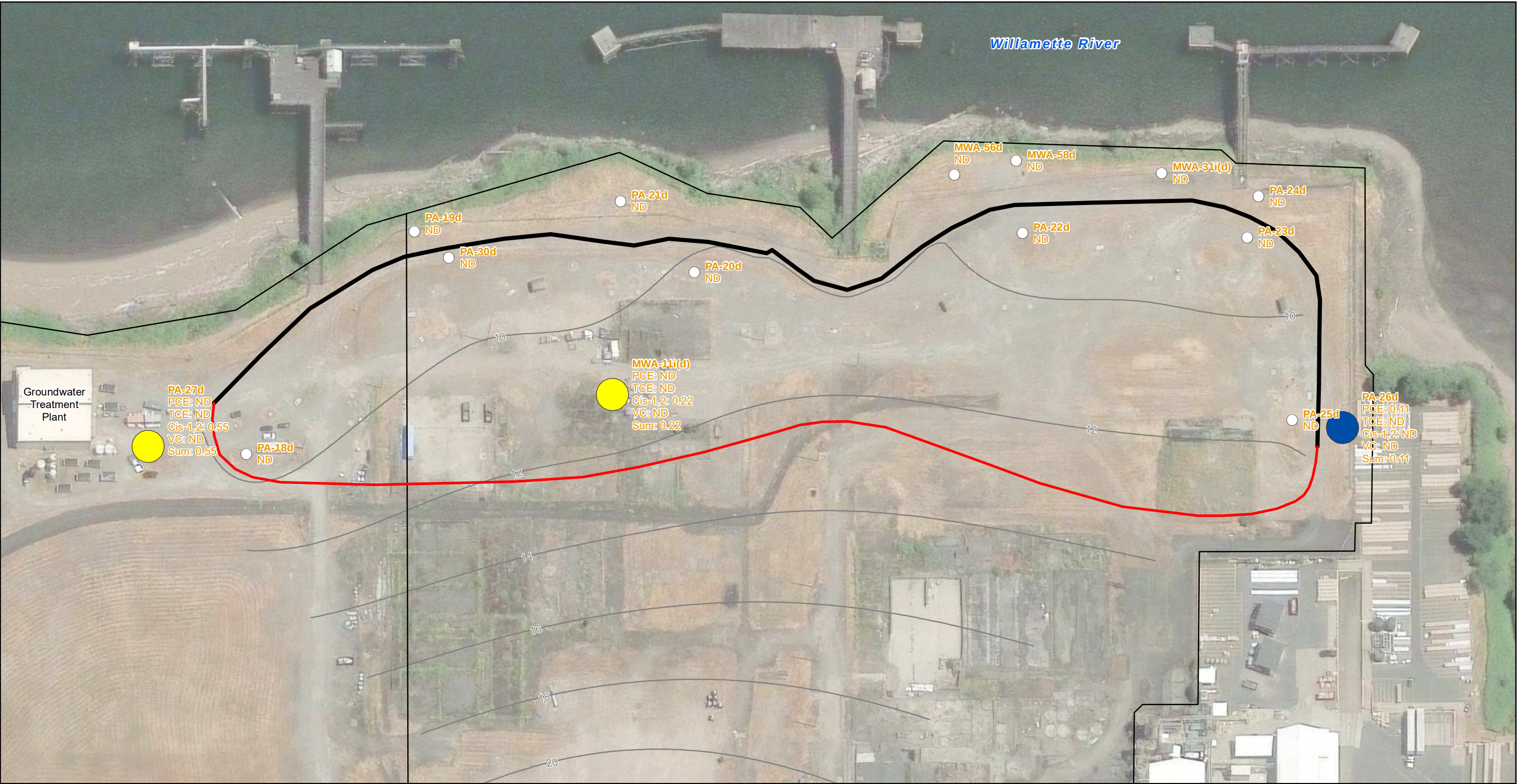


Figure 12
PCE, TCE, cis-1,2-DCE and
Vinyl Chloride Groundwater Concentrations
Intermediate Zone
Quarter 1, 2025
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon



M:\US\Projects\US-U\Total\Arkema Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working Maps\2025 Q1\Figure 13 VOCs PieChart Deep.mxd, REVISED: 04/14/2025, SCALE: 1:1,440 when printed at 11x17 DRAWN BY: Tyler Harris DATE: 4/14/2025



Legend

Molar Ratio

Tetrachloroethene

Trichloroethene

cis-1,2-Dichloroethene

Vinyl chloride

○ Not Detected

— Target Capture Zone

— Barrier Wall Alignment

— Parcel and Property Boundaries

— Deep Zone Groundwater Contours (ft NAVD88) February 2025

Notes:
Samples collected February 18–21, 2025.
All results in micrograms per liter (µg/L).
Results in **red** exceed screening criteria.
Screening criteria for tetrachloroethene (PCE) = 0.33 µg/L .
Screening criteria for trichloroethene (TCE) = 3 µg/L.
Screening criteria for cis-1,2-dichloroethene (Cis-1,2) = 590 µg/L.
Screening criteria for vinyl chloride (VC) = 0.24 µg/L.
ND: Non-Detect

0 120 240

Feet

N

Figure 13
PCE, TCE, cis-1,2-DCE and Vinyl Chloride Groundwater Concentrations Deep Zone
Quarter 1, 2025
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon

Source: City of Portland Aerial Imagery, flown Summer 2017; NAD 1983 HARN StatePlane Oregon North FIPS 3601 Feet Intl

M:\US\Projects\S-U\Total\Arkema Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working Maps\2025 Q1\Figure 14 Perchlorate Shallow.mxd, REVISED: 04/14/2025, SCALE: 1:1,440 when printed at 11x17 DRAWN BY: Jake Sullivan DATE: 4/14/2025



Legend

- | | |
|----------------------------|---|
| ● > 180,000 µg/L | — Target Capture Zone |
| ● >= 18,000 - 180,000 µg/L | — Barrier Wall Alignment |
| ● >= 1,800 - < 18,000 µg/L | — Parcel and Property Boundaries |
| ● < 1,800 µg/L | — Shallow Zone Groundwater Contours (ft NAVD88) February 2025 |
| ○ Not Detected | |
| ⊗ Not Sampled | |

Notes:
Samples collected February 18–21, 2025.
All results in micrograms per liter (µg/L).
Results in **red** exceed screening criteria.
Screening criteria for Perchlorate = 1,800 µg/L.
See Table 5 for definition of qualifiers.
ND: Non-Detect
NS: Not Sampled

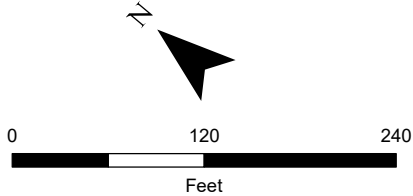


Figure 14
Perchlorate Groundwater Concentrations
Shallow Zone
Quarter 1, 2025
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon



M:\US\Projects\S-U\Total\Arkema Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working Maps\2025 Q1\Figure 15 Perchlorate Intermediate.mxd, REVISED: 04/14/2025, SCALE: 1:1,440 when printed at 11x17 IN BY: Jake Sullivan DATE: 4/14/2025



Legend

- | | |
|----------------------------|--|
| ● > 180,000 µg/L | — Target Capture Zone |
| ● >= 18,000 - 180,000 µg/L | — Barrier Wall Alignment |
| ● >= 1,800 - < 18,000 µg/L | — Parcel and Property Boundaries |
| ● < 1,800 µg/L | — Intermediate Zone Groundwater Contours (ft NAVD88) February 2025 |
| ○ Not Detected | |
| ⊕ Not Sampled | |

Notes:
Samples collected February 18–21, 2025.
All results in micrograms per liter (µg/L).
Results in **red** exceed screening criteria.
Screening criteria for Perchlorate = 1,800 µg/L.
See Table 5 for definition of qualifiers.
ND: Non-Detect
NS: Not Sampled

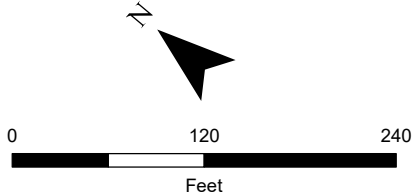
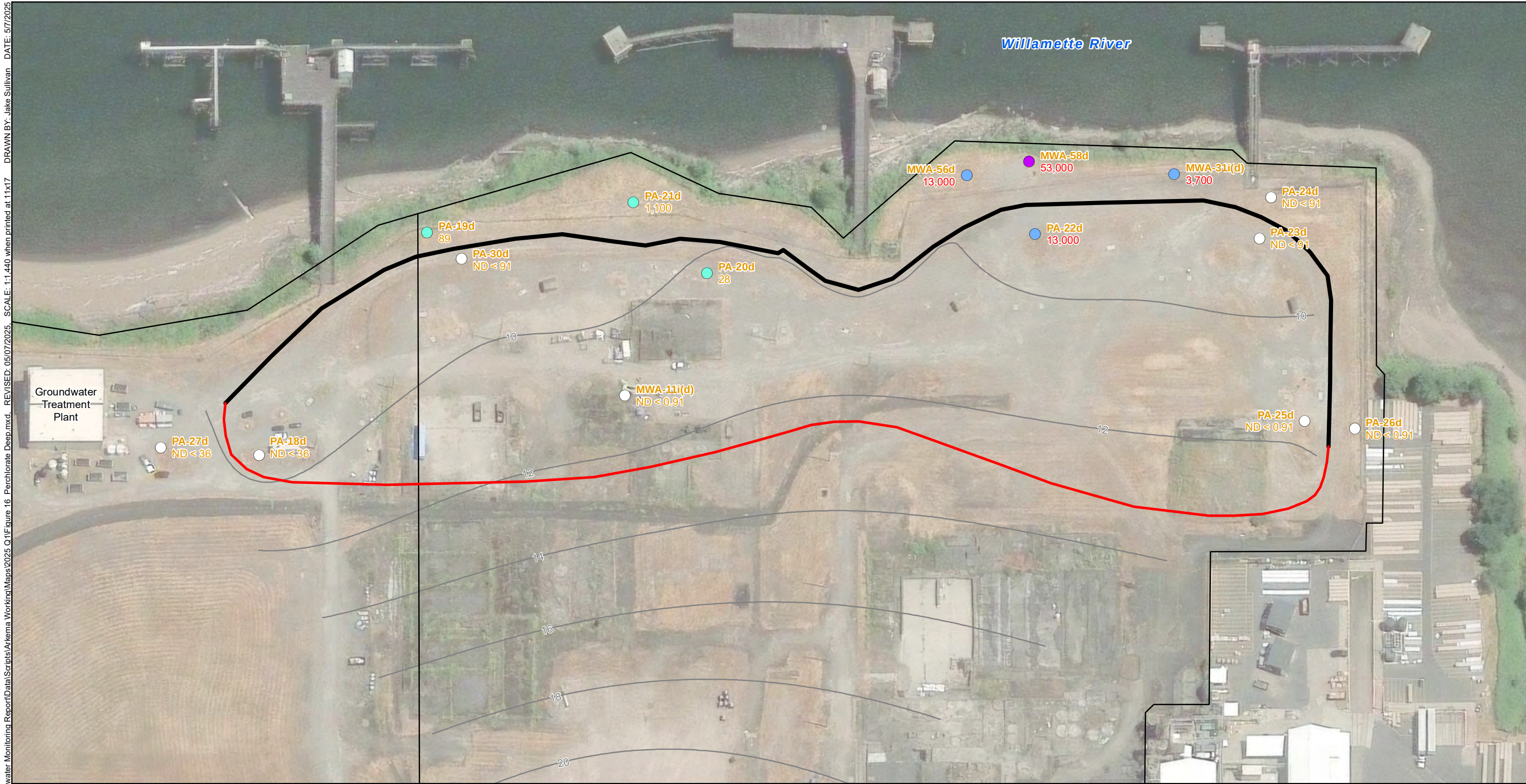


Figure 15
Perchlorate Groundwater Concentrations
Intermediate Zone
Quarter 1, 2025
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon



M:\US\Projects\S-U\Total\Arkema Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working Maps\2025 Q1\Figure 16 Perchlorate Deep.mxd, REVISED: 05/07/2025, SCALE: 1:1,440 when printed at 11x17 DRAWN BY: Jake Sullivan DATE: 5/7/2025



Legend

- > 180,000 µg/L
- ≥ 18,000 - 180,000 µg/L
- ≥ 1,800 - < 18,000 µg/L
- < 1,800 µg/L
- Not Detected
- Barrier Wall Alignment
- Parcel and Property Boundaries
- Deep Zone Groundwater Contours (ft NAVD88) February 2025
- Target Capture Zone

Notes:
Samples collected February 18–21, 2025.
All results in micrograms per liter (µg/L).
Results in **red** exceed screening criteria.
Screening criteria for Perchlorate = 1,800 µg/L.
See Table 5 for definition of qualifiers.
ND: Non-Detect

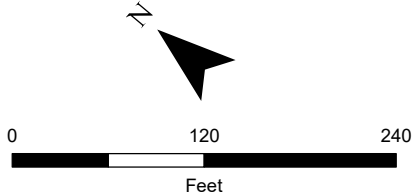


Figure 16
Perchlorate Groundwater Concentrations
Deep Zone
Quarter 1, 2025
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon



M:\US\Projects\S-U\Total\Arkema Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working Maps\2025 Q1\Figure 17 Chloride Shallow.mxd. REVISED: 04/14/2025. SCALE: 1:1,440 when printed at 11x17 DRAWN BY: Jake Sullivan DATE: 4/14/2025



Legend

- > 23,000 mg/L
- >= 2,300 - 23,000 mg/L
- >= 230 - < 2,300 mg/L
- < 230 mg/L
- Not Detected
- ⊕ Not Sampled
- Target Capture Zone
- Barrier Wall Alignment
- Parcel and Property Boundaries
- Shallow Zone Groundwater Contours (ft NAVD88) February 2025

Notes:
Samples collected February 18–21, 2025.
All results in milligrams per liter (mg/L).
Results in **red** exceed screening criteria.
Screening criteria for Chloride = 230 mg/L.
See Table 5 for definition of qualifiers.
NS: Not Sampled

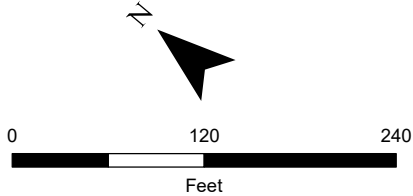


Figure 17
Chloride Groundwater Concentrations
Shallow Zone
Quarter 1, 2025
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon



M:\US\Projects\S-U\Total\Arkema Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working Maps\2025 Q1\Figure 18 Chloride Intermediate.mxd, REVISED: 04/14/2025, SCALE: 1:1,440 when printed at 11x17 DRAWN BY: Jake Sullivan DATE: 4/14/2025



Legend

- > 23,000 mg/L
- >= 2,300 - 23,000 mg/L
- >= 230 - < 2,300 mg/L
- < 230 mg/L
- Not Detected
- ⊙ Not Sampled
- Target Capture Zone
- Barrier Wall Alignment
- Parcel and Property Boundaries
- Intermediate Zone Groundwater Contours (ft NAVD88) February 2025

Notes:
Samples collected February 18–21, 2025.
All results in milligrams per liter (mg/L).
Results in **red** exceed screening criteria.
Screening criteria for Chloride = 230 mg/L.
See Table 5 for definition of qualifiers.
ND: Non-Detect
NS: Not Sampled

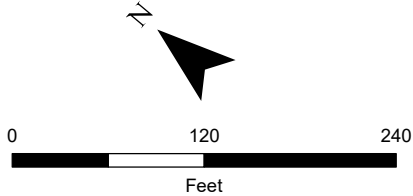
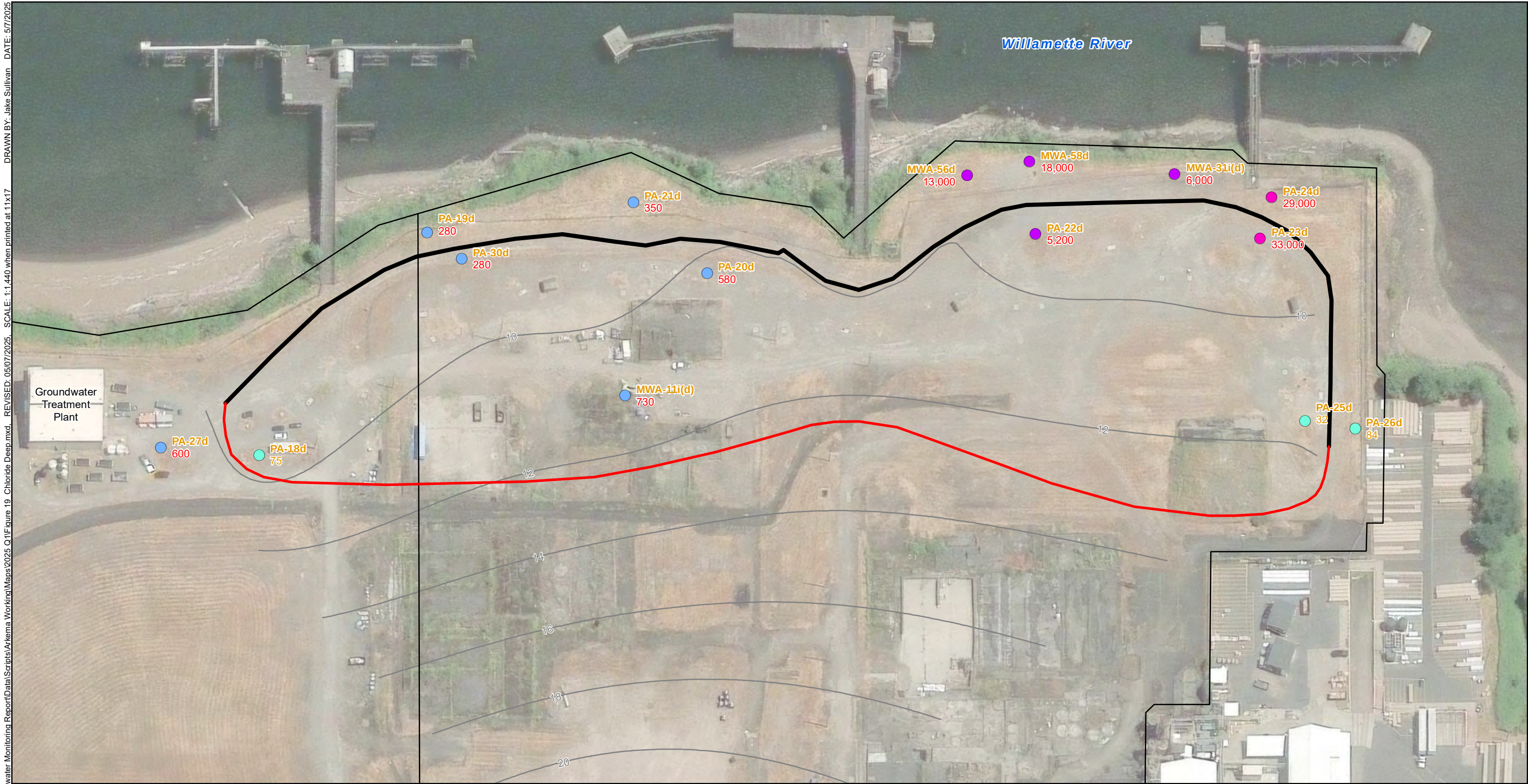


Figure 18
Chloride Groundwater Concentrations
Intermediate Zone
Quarter 1, 2025
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon



M:\US\Projects\S-U\Total\Arkema Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working Maps\2025 Q1\Figure 19 Chloride Deep.mxd, REVISED: 05/07/2025, SCALE: 1:1,440 when printed at 11x17, DRAWN BY: Jake Sullivan, DATE: 5/7/2025



Legend

- > 23,000 mg/L
- >= 2,300 - < 23,000 mg/L
- < 230 mg/L
- Not Detected
- Target Capture Zone
- Barrier Wall Alignment
- Parcel and Property Boundaries
- Deep Zone Groundwater Contours (ft NAVD88) February 2025

Notes:
Samples collected February 18–21, 2025.
All results in milligrams per liter (mg/L).
Results in red exceed screening criteria.
Screening criteria for Chloride = 230 mg/L.
See Table 5 for definition of qualifiers.

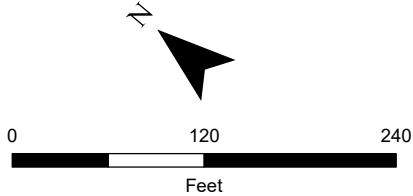


Figure 19
Chloride Groundwater Concentrations
Deep Zone
Quarter 1, 2025
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon





APPENDIX A FIELD FORMS



Low Flow Groundwater Sampling Field Data Form

Well ID: MWA-31I(D)
Well Permit No:

Date: 2025/02/19
Rainy

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 56 (ft)	Reference Elevation 38.36 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 29.18 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 59.98 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 300 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - (in)
Sampler faye parish	Volume of Water in Well / Total Volume Purged 19.03 (l) / 4.19 (l)	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
08:40	29.07	300	1.49	14.2	6.32	14570	NM	0.71	82.5	21.9	NM	Specific conductivity reading in mS/cm on aquaread. Converted on the form
08:44	29.02	300	2.39	14.3	6.32	15560	NM	0.57	81.7	20.2	NM	
08:47	29.02	300	3.29	14.1	6.32	16100	NM	0.58	81.8	18.6	NM	
08:50	29.01	300	4.19	14	6.33	16480	NM	0.57	82.2	17.7	NM	

Sample ID(s): MWA-31id-021925	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		FP 	02/19/2025 17:05



Low Flow Groundwater Sampling Field Data Form

Well ID: MWA-58D
Well Permit No:

Date: 2025/02/19
Overcast

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 57 (ft)	Reference Elevation 37.97 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 28.19 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 60.62 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 200 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - (in)
Sampler faye parish	Volume of Water in Well / Total Volume Purged 20.03 (l) / 7.2 (l)	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
10:28	28.33	200	0.8	14.3	6.86	50800	NM	0.9	85	8.6	NM	Specific conductivity reading in mS/cm on aquaread. Converted to uS/cm in form
10:31	28.27	200	1.8	14.3	6.81	50910	NM	0.81	83.2	7.01	NM	
10:35	28.29	200	2.4	14.3	6.79	51070	NM	0.69	79.9	8.95	NM	
10:38	28.28	200	3.3	14.4	6.78	51220	NM	0.67	78.8	9.1	NM	
10:41	28.2	200	4.2	14.3	6.78	51030	NM	0.66	78.2	7.69	NM	
10:44	28.3	318.2	5.1	14.4	6.77	51130	NM	0.63	77.5	8.2	NM	
10:47	28.29	212.1	6	14.5	6.77	51180	NM	0.6	77.7	8.99	NM	

Sample ID(s): MWA-58d-021925	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
	Added additional 1.2 L that was purged while getting re	FP 	02/19/2025 19:07
Analysis:			



Low Flow Groundwater Sampling Field Data Form

Well ID: MWA-81I
Well Permit No:

Date: 2025/02/18

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 48 (ft)	Reference Elevation 44.62 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 33.32 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 52.33 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 300 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - ()
Sampler faye parish	Volume of Water in Well / Total Volume Purged 3.1 (gal) / 4.12 (l)	Well Construction

Well Head Vapor Measurements

PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
10:10	33.35	300	2.02	14.7	7.59	473	NM	1.03	19.2	0	NM	Initial purge vol to get correct flow rate
10:13	33.56	300	2.92	15	7.17	477	NM	1.05	7.1	1.03	NM	Aquaread turbidity meter not working, switched to hach meter
10:17	33.38	300	3.82	14.9	6.99	474	NM	0.86	-0.4	1.35	NM	
10:20	33.38	300	4.72	14.9	6.99	468	NM	0.81	-5.1	0.73	NM	
10:23	33.38	300	5.62	14.9	6.96	474	NM	0.73	-9.8	1.06	NM	
10:26	33.38	300	6.52	15	6.93	479	NM	0.72	-16.4	0.72	NM	
10:29	33.38	300	7.42	14.93	6.94	478	NM	0.8	-22.6	3.37	NM	
10:32	3.37	300	8.32	15	6.94	474	NM	0.64	-32.4	2.06	NM	
10:35	33.37	300	9.22	15	6.91	475	NM	0.62	-37.9	2.45	NM	
10:38	33.39	300	10.12	14.79	6.92	460	NM	0.75	-38.8	2.22	NM	Stabilized

Sample ID(s): MWA-81i-180225	Additional Comments	SAMPLER NAME AND SIGNATURE		Date Time
Analysis:		FP		



Low Flow Groundwater Sampling Field Data Form

Well ID: MWA-82
Well Permit No:

Date: 2025/02/18
Overcast

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 28 (ft)	Reference Elevation 37.74 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 23.05 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 31.79 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 240 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - ()
Sampler faye parish	Volume of Water in Well / Total Volume Purged 5.4 (l) / 9.92 (gal)	Well Construction

Well Head Vapor Measurements
PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
12:24	23.02	240	1.28	15	9.14	552	NM	1.05	8	206	NM	
12:27	23.02	240	2	15	9.52	556	NM	1.06	0.4	182	NM	
12:30	23.01	240	2.72	15.2	9.58	563	NM	1.02	-0.9	141	NM	
12:33	23.02	240	3.44	15.1	9.62	561	NM	1.08	-4.2	129	NM	
12:36	23.03	240	4.16	15.1	9.65	563	NM	1.09	-4.9	113	NM	
12:39	23.02	240	4.88	15.2	9.68	557	NM	0.95	-7.2	102	NM	
12:42	23.01	240	5.6	15.2	9.71	567	NM	1.01	-10	87.4	NM	
12:45	23.01	240	7.02	15.2	9.71	578	NM	0.82	-10.2	85	NM	
12:48	23.02	240	7.76	15.2	9.71	573	NM	0.86	-11.1	73.6	NM	
12:51	23.02	240	8.48	15.1	9.72	582	NM	0.95	-12	60.7	NM	
12:54	23.02	240	9.2	15.1	9.71	578	NM	0.91	-13.2	55	NM	
12:56	23.01	240	9.92	15.1	9.72	578	NM	0.85	-13.6	50.6	NM	

Sample ID(s): MWA-82-021825	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		FP 	02/19/2025 00:22



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-03
Well Permit No:

Date: 2025/02/20
Overcasting

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 23 (ft)	Reference Elevation 37.1 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 8.52 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 26.22 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 200 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler faye parish	Volume of Water in Well / Total Volume Purged 2.73 (l) / 2.4 (l)	Well Construction

Well Head Vapor Measurements
PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
15:34	11.21	200	0.6	14.8	10.18	962	NM	0.55	-172.6	192	NM	
15:37	11.32	200	1.2	15.2	10.47	973	NM	0.34	-214.1	183	NM	
15:40	11.41	200	1.8	15.3	10.52	977	NM	0.22	-231.2	176	NM	
15:44	11.42	200	2.4	15.4	10.54	974	NM	0.19	-240	192	NM	
15:48	11.56	200	3	15.4	10.57	950	NM	0.17	241	183	NM	ORP stable +/- 10 mV (last 3 readings); DO stable +/- 0.2 mg/L (last 3 readings).

Sample ID(s): PA-03-022025	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		FP 	02/21/2025 15:15



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-04
Well Permit No:

Date: 2025/02/21
Cloudy

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 25 (ft)	Reference Elevation 36.67 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 22.8 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 27.21 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 200 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - (in)
Sampler faye parish	Volume of Water in Well / Total Volume Purged 0.68 (l) / 2.4 (l)	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
11:20	22.79	200	0.6	14.7	10.25	837	NM	1.21	-92.6	245	NM	
11:23	22.81	200	1.2	15	10.26	802	NM	0.6	-101.5	125	NM	
11:26	22.82	200	1.8	14.9	10.26	781	NM	0.51	-104.8	94.7	NM	
11:29	22.39	200	2.4	14.8	10.25	808	NM	0.49	-108.7	77.5	NM	

Sample ID(s): PA-04-022125	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
	Sample time 1134	FP 	02/21/2025 20:01
Analysis:			



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-08
Well Permit No:

Date: 2025/02/20
Overcast

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 28.5 (ft)	Reference Elevation 40.47 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 27.38 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 34.05 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 200 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - (in)
Sampler faye parish	Volume of Water in Well / Total Volume Purged 1.03 (l) / 4.8 (l)	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
10:05	27.41	200	1.2	13.2	7.49	2360	NM	1.99	-51.3	20.8	NM	
10:08	27.41	200	1.8	12.88	7.42	2344	NM	1.63	-44.2	21.9	NM	
10:11	27.39	200	2.4	12.4	7.39	2320	NM	1.73	-40	21.8	NM	
10:14	27.39	200	3	12.03	7.39	2278	NM	0.93	-38.2	20	NM	
10:17	27.4	200	3.6	11.83	7.39	2313	NM	0.96	-36.7	20.3	NM	
10:20	26.39	200	4.2	11.5	7.39	2225	NM	0.86	-36	21.1	NM	
10:22	26.39	200	4.8	11.4	7.4	2211	NM	0.81	-35.8	19.4	NM	DO Stable within 0.2

Sample ID(s): PA-08-022025	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		FP 	02/20/2025 19:29



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-09
Well Permit No:

Date: 2025/02/20
Rainy

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 29 (ft)	Reference Elevation 40.24 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 28.29 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 32.6 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 240 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler faye parish	Volume of Water in Well / Total Volume Purged 0.67 (l) / 2.88 (l)	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
11:46	28.34	240	0.72	15.3	7.22	1432	NM	0.42	76.6	174	NM	
11:49	28.29	240	1.44	14.88	7	1420	NM	0.67	74	151	NM	
11:51	28.29	240	2.16	14.6	6.95	1416	NM	1.05	75.9	135	NM	
11:54	28.28	240	2.88	14.23	6.88	1408	NM	0.92	76.9	125	NM	
11:57	28.28	227.7	3.6	13.7	6.91	1416	NM	0.96	78.6	120	NM	
12:00	28.29	240	4.32	13.2	6.89	1413	NM	0.74	79.3	122	NM	
12:03	28.3	240	5.04	13.03	6.85	1412	NM	0.72	79.9	114	NM	
12:06	28.28	240	5.76	12.7	6.88	1415	NM	0.69	80.3	117	NM	

Sample ID(s): PA-09-022025	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		FP 	02/20/2025 21:05



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-18D
Well Permit No:

Date: 2025/02/21
Overcast

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / (ft)	Reference Elevation 36.55 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 23.25 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 43.02 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 211.1 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler faye parish	Volume of Water in Well / Total Volume Purged 3.05 (l) / 6.6 (l)	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
13:32	28.76	200	1.2	15.6	8.68	1421	NM	0.78	-71.4	80.5	NM	0.6 purged initially when setting rate
13:35	28.78	300	1.8	15.5	8.74	1430	NM	0.62	-110.9	171	NM	
13:38	28.71	200	2.4	15.3	8.76	1479	NM	0.53	-144.6	524	NM	
13:41	28.71	200	3	15.2	8.79	1513	NM	0.41	-166.6	994	NM	
13:44	28.69	200	3.6	15.2	8.81	969	NM	0.27	-186.5	NM	NM	Turbidity over range
13:48	27.49	200	4.8	15.1	8.8	1473	NM	0.35	-283.3	749	NM	
13:51	27.1	200	5.4	15.1	8.8	1462	NM	0.38	-184.8	NM	NM	Overrange
13:54	26.89	200	6	14.9	8.84	1473	NM	0.32	-194.8	NM	NM	
14:03	26.71	200	6.6	14.9	8.84	1481	NM	0.34	-196.4	NM	NM	
14:06	26.58	200	7.2	15	8.85	1484	NM	0.32	-197.7	NM	NM	

Sample ID(s):	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-27D
Well Permit No:

Date: 2025/02/21
Cloudy

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 46 (ft)	Reference Elevation 37.1 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 25.98 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 47 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 300 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler faye parish	Volume of Water in Well / Total Volume Purged 3.25 (l) / 8.1 (l)	Well Construction

Well Head Vapor Measurements

PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
09:56	30.02	300	0.9	14.3	7.63	3443	NM	0.58	-147	NM	NM	
09:59	29.98	300	1.8	14	7.39	3396	NM	0.45	-137.1	92.3	NM	
10:02	29.83	300	2.7	14	7.36	3325	NM	0.44	-131.4	86.2	NM	
10:05	29.62	300	3.6	14	7.33	3314	NM	0.46	-125.7	77.4	NM	
10:08	29.46	300	4.5	14	7.32	3310	NM	0.47	-124.7	65.5	NM	
10:11	29.33	300	5.4	13.8	7.32	3285	NM	0.48	-123.9	61.2	NM	
10:14	29.12	300	6.3	13.7	7.33	3283	NM	0.47	-122.9	48.4	NM	
10:17	29.05	300	7.2	13.6	7.33	3284	NM	0.45	-122.8	46.2	NM	
10:20	28.97	300	8.1	13.7	7.34	3281	NM	0.44	-121.9	35.7	NM	Purged 3 well volumes

Sample ID(s): PA-27d-022125	Additional Comments	SAMPLER NAME AND SIGNATURE		Date Time
Analysis:		FP		02/21/2025 18:48



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-44I
Well Permit No:

Date: 2025/02/18
Overcast

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 42 (ft)	Reference Elevation 40.36 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 29.21 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 47.71 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 220 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - ()
Sampler faye parish	Volume of Water in Well / Total Volume Purged 11.43 (l) / 3.9 (l)	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
15:45	29.28	220	1.32	14.3	8.37	145	NM	10.59	51.7	15.6	NM	
15:48	29.23	220	1.98	14.5	8.73	142	NM	10.52	53.1	13.8	NM	
15:51	29.25	220	2.64	14.6	8.84	146	NM	10.27	56	13.9	NM	
15:54	29.25	220	3.3	14.6	8.97	147	NM	9.65	58.7	12.8	NM	
15:57	29.25	220	3.9	14.5	8.97	148	NM	9.4	59.8	14	NM	

Sample ID(s): PA-44i-021825	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		FP 	02/19/2025 00:20



Low Flow Groundwater Sampling Field Data Form

Well ID: MWA-41
Well Permit No:

Date: 2025/02/18
Overcast

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 36 (ft)	Reference Elevation 45.14 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 32.46 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 42.31 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 240 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - ()
Sampler faye parish	Volume of Water in Well / Total Volume Purged 6.09 (l) / 5.76 (l)	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
14:12	32.49	240	0.72	14.78	7.43	350	NM	0.92	53.5	57	NM	
14:15	32.59	240	1.44	15.3	7.24	334	NM	1.02	53.2	44.2	NM	
14:18	32.49	240	2.16	15.6	7.04	332	NM	0.94	49.3	30.6	NM	
14:21	32.49	240	2.88	15.4	7	330	NM	1.02	48.1	29.8	NM	
14:24	32.47	240	4.32	15.7	6.89	330	NM	0.78	44.2	23.2	NM	
14:27	32.47	240	5.04	15.7	6.91	340	NM	0.85	43.7	22.1	NM	
14:30	32.48	240	5.76	15.5	6.82	323	NM	0.93	44.2	20	NM	

Sample ID(s): MWA-41-021825	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		FP 	02/18/2025 23:43



Low Flow Groundwater Sampling Field Data Form

Well ID: MWA-56D
Well Permit No:

Date: 2025/02/19
Overcast

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 57 (ft)	Reference Elevation 36.68 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 26.64 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 60.02 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 200 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - ()
Sampler faye parish	Volume of Water in Well / Total Volume Purged 20.62 (l) / 6.6 (l)	Well Construction

Well Head Vapor Measurements

PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
12:15	26.84	200	1.2	14.7	6.93	28010	NM	1.03	133.3	9.62	NM	Specific conductivity on aquaread in mS/cm. Converted to uS/cm in form
12:18	26.81	200	1.8	14.7	6.83	30990	NM	0.9	135.9	8.28	NM	
12:21	26.87	200	2.4	14.5	6.76	37550	NM	0.82	137.9	8.41	NM	
12:24	26.87	200	3	14.9	6.75	38910	NM	0.69	138.7	9.9	NM	
12:27	26.89	200	3.6	15.18	6.74	39260	NM	0.61	139.6	9.7	NM	
12:30	26.92	200	4.2	15.3	6.74	39620	NM	0.64	139.6	11.4	NM	
12:33	26.87	200	4.8	15.3	6.73	39570	NM	0.6	139	15.5	NM	
12:36	26.87	200	5.4	15.3	6.72	39670	NM	0.61	139.2	18.2	NM	
12:39	26.87	200	6	15.3	6.72	39850	NM	0.59	139.6	17.1	NM	
12:42	26.91	200	6.6	15.3	6.71	39750	NM	0.56	140	17.8	NM	

Sample ID(s): MWA-56d-021925	Additional Comments	SAMPLER NAME AND SIGNATURE		Date Time
Analysis:		FP		02/19/2025 21:06



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-32I
Well Permit No:

Date: 2025/02/20
Overcast

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 37 (ft)	Reference Elevation 36.28 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 23.44 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 40.51 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 300 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - ()
Sampler faye parish	Volume of Water in Well / Total Volume Purged 10.55 (l) / 10.8 (l)	Well Construction

Well Head Vapor Measurements

PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
08:11	23.18	300	1.8	14.23	5.37	221	NM	4.08	214.4	25.7	NM	
08:14	23.12	300	2.7	14.33	5.64	588	NM	1.63	126.4	18.9	NM	
08:17	23.18	300	3.6	14.7	5.8	775	NM	0.86	73.9	16.7	NM	
08:20	23.18	300	4.5	14.8	5.95	1009	NM	0.58	30.9	15.5	NM	
08:23	23.15	300	5.4	14.8	5.99	1035	NM	0.39	15.7	17	NM	
08:26	23.14	300	6.3	14.9	6.01	1054	NM	0.36	12.8	14.1	NM	
08:29	23.14	300	7.2	14.85	6.06	1089	NM	0.33	7.5	13.5	NM	
08:32	23.19	300	8.1	14.98	6.07	1087	NM	0.28	0.1	13.4	NM	
08:35	23.15	300	9	14.98	6.02	1094	NM	0.24	-1.1	13.9	NM	
08:38	23.14	300	9.9	14.95	6.06	1143	NM	0.24	-9	13.1	NM	
08:41	23.16	300	10.8	14.98	6.06	1110	NM	0.24	-12.9	14	NM	ORP stable +/- 10 mV

Sample ID(s): DUP-01-022025,PA-32i-022025	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		FP 	02/24/2025 20:34



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-31
Well Permit No:

Date: 2025/02/19
Overcast

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 21 (ft)	Reference Elevation 36.25 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 17.98 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 24.75 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 300 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - ()
Sampler faye parish	Volume of Water in Well / Total Volume Purged 4.18 (l) / 9.7 (l)	Well Construction

Well Head Vapor Measurements

PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
13:57	17.83	300	1.5	14.5	9.94	988	NM	1.5	9.7	476	NM	
14:01	18.03	300	2.4	14.8	9.89	965	NM	1.05	6.6	637	NM	
14:04	18.02	300	3.3	15	9.91	954	NM	0.85	3.8	625	NM	
14:08	17.69	300	4.2	15	9.93	946	NM	0.69	-2.7	696	NM	
14:11	18.03	300	5.2	15	9.89	866	NM	1.15	-1	514	NM	
14:14	18.05	300	6.1	15.2	9.91	907	NM	0.97	-4.5	558	NM	
14:17	18.02	300	7	15.2	9.91	919	NM	0.83	-6.9	514	NM	
14:20	18.08	300	7.9	15.1	9.91	921	NM	0.72	-9.3	508	NM	
14:23	18.09	300	8.8	15.3	9.9	924	NM	0.66	-11.1	513	NM	
14:26	18.08	300	9.7	15.2	9.92	919	NM	0.62	-13.8	501	NM	

Sample ID(s): PA-31-021925	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		FP 	02/19/2025 22:40



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-17IR
Well Permit No:

Date: 2025/02/21
Cloudy

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 38 (ft)	Reference Elevation 37.59 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 26.39 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 42.07 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 175 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - (ft)
Sampler faye parish	Volume of Water in Well / Total Volume Purged 9.69 (l) / 8.925 (l)	Well Construction

Well Head Vapor Measurements

PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
08:08	27.77	175	0.525	13.9	7.5	63	NM	0.62	-33	10.2	NM	
08:11	27.84	175	1.05	13.8	7.05	69	NM	0.58	-31.6	8.74	NM	
08:14	27.86	175	1.575	13.4	6.73	68	NM	0.55	-33	6.71	NM	
08:17	27.91	175	2.1	13.2	6.64	71	NM	0.55	-36.9	7.96	NM	
08:20	28.83	175	2.625	13.2	6.58	92	NM	0.56	-47.9	6.64	NM	
08:23	28.81	175	3.15	13	6.63	141	NM	0.57	-66.1	8.57	NM	
08:26	28.75	175	3.675	12.83	6.76	178	NM	0.58	-86.9	5.42	NM	
08:29	28.76	175	4.2	12.7	7.07	348	NM	0.52	-138.9	6.36	NM	
08:32	28.74	175	4.725	12.58	7.24	292	NM	0.47	-163.9	5.5	NM	
08:35	27.74	175	5.25	12.4	8.51	583	NM	0.29	-224.5	6.95	NM	
08:38	27.79	175	5.775	12.4	8.61	1089	NM	0.17	-250.6	6.47	NM	
08:41	27.68	175	6.3	12.3	9.08	1178	NM	0.12	-254.5	5.37	NM	
08:45	27.74	175	6.825	12.3	9.22	1244	NM	0.11	-255.1	5.86	NM	
08:48	27.81	175	7.35	12.3	9.31	1325	NM	0.12	-255.5	4.92	NM	
08:51	27.71	175	7.875	12.3	9.34	1410	NM	0.14	-255.4	5.65	NM	
08:54	27.65	175	8.4	12.3	9.39	1417	NM	0.17	-252.3	5.6	NM	
08:57	27.7	175	8.925	12.4	9.41	1444	NM	0.16	-249.4	5.78	NM	DO stable +/- 0.2 mg/L

Sample ID(s): PA-17IR-022125	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		FP 	02/21/2025 17:30



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-10I
Well Permit No:

Date: 2025/02/21

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / (ft)	Reference Elevation 36.67 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 23.51 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 36.26 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 200 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler faye parish	Volume of Water in Well / Total Volume Purged 1.97 (l) / 1.2 (l)	Well Construction

Well Head Vapor Measurements												
PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
12:26	23.69	200	0.6	15.2	8.25	1018	NM	0.62	-174.7	44.6	NM	
12:29	23.79	200	1.2	15.2	8.07	1018	NM	0.42	-179.5	26.1	NM	
12:32	23.62	200	1.8	15.1	7.97	1013	NM	0.31	-182.4	21.7	NM	
12:35	23.58	200	2.4	15	7.91	988	NM	0.33	-183.1	14.4	NM	
12:38	23.58	200	3	14.9	7.88	985	NM	0.35	-187.9	12.1	NM	
12:41	23.56	200	3.6	14.7	7.86	989	NM	0.36	-183.8	9.23	NM	
12:44	23.57	200	4.2	14.6	7.84	983	NM	0.37	-184.5	7.95	NM	
12:47	23.56	200	4.8	14.5	7.84	986	NM	0.39	-184.7	7.69	NM	
12:50	23.56	200	5.4	14.5	7.83	986	NM	0.38	-184.6	6.26	NM	
12:53	23.55	200	6	14.5	7.83	980	NM	0.32	-185.2	5.57	NM	

Sample ID(s):	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
	Analysis:		



Low Flow Groundwater Sampling Field Data Form

Well ID: MWA-11I(D)
Well Permit No:

Date: 2025/02/21
Cloudy 50 degrees

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 48 (ft)	Reference Elevation 36.49 (ft)
Site Address Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 25.95 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 50.97 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 110 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - (in)
Sampler paul vannevel	Volume of Water in Well / Total Volume Purged 1.02 (l) / 2.2 (l)	Well Construction

Well Head Vapor Measurements

PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
12:30	26.1	100	0	14.4	9.59	410	NM	1.72	-97.1	19.7	NM	
12:33	26.1	150	0.3	14	9.85	405	NM	1.63	-107.2	19.1	NM	
12:36	26.1	106.1	0.6	13.8	9.87	489	NM	1.26	-107.6	17.4	NM	
12:39	26.1	86.6	0.9	13.7	8.13	2406	NM	0.6	-149.1	11.7	NM	
12:42	26.1	86.6	1.2	13.8	7.42	2750	NM	7.55	-114.3	11	NM	Checking on changes- verified water level
12:49	26.1	118.2	1.9	13.93	7.06	2899	NM	9.51	-104.9	23.6	NM	Noticed change in amount of water pumping out and more air in the hose. Adjusted pump intake depth and confirmed water level
12:52	26.1	122.5	2.2	13.9	7.04	2946	NM	9.34	-104.5	130	NM	
12:55	26.1	86.6	2.5	14	7.01	2947	NM	9.48	-105.1	90.6	NM	
12:58	26.1	122.5	2.8	14.1	7	2907	NM	9.48	-104.1	76.1	NM	
13:01	26.1	106.1	3.1	14.2	6.98	2963	NM	9.58	-103.6	55	NM	
13:04	26.1	106.1	3.4	14.1	6.97	2897	NM	9.64	-102.7	44.5	NM	
13:07	26.1	106.1	3.7	14.1	6.96	2744	NM	9.64	-102	35.9	NM	
13:10	26.1	106.1	4	14.1	6.96	2523	NM	9.61	-100.9	35.4	NM	
13:13	26.1	94.9	4.3	14.13	6.96	3260	NM	9.61	-100.3	31.4	NM	
13:16	26.1	94.9	4.6	14.2	6.96	2604	NM	9.62	-98.9	28.9	NM	
13:19	26.1	94.9	4.9	14.2	6.95	2631	NM	9.63	-98.2	26.5	NM	
13:22	26.1	106.1	5.2	14.3	6.96	2657	NM	9.68	-97.6	24.5	NM	

Sample ID(s): MWA-11i(d)-022125	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		PV 	02/21/2025 21:48



Low Flow Groundwater Sampling Field Data Form

Well ID: MWA-63
Well Permit No:

Date: 2025/02/21
Cloudy 50 degrees

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 26.5 (ft)	Reference Elevation 36.29 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 22.78 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 29.72 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 133.7 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler paul vannevel	Volume of Water in Well / Total Volume Purged 0.28 (l) / 2 (l)	Well Construction

Well Head Vapor Measurements												
PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
11:24	23.62	125	0	13.35	7.71	725	NM	6.61	-5	36.2	NM	
11:27	23.8	163.3	0.4	14.6	7.3	720	NM	6.39	19.2	27	NM	
11:30	23.89	115.5	0.8	14.4	7.1	719	NM	6.52	32.4	28.9	NM	
11:33	23.96	115.5	1.2	14.5	7.01	717	NM	6.55	39.7	30.8	NM	
11:36	24	141.4	1.6	14.5	6.99	724	NM	6.49	44.9	30.3	NM	
11:39	24.05	141.4	2	14.4	6.98	725	NM	6.57	49	27.5	NM	

Sample ID(s): Dup-01-022125,MWA-63-022125	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		PV 	02/21/2025 20:04



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-19D
Well Permit No:

Date: 2025/02/20
45 degrees rainy

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 47 (ft)	Reference Elevation 36.65 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 27.91 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 49.3 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 154.6 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler paul vannevel	Volume of Water in Well / Total Volume Purged 0.87 (l) / 5 (l)	Well Construction

Well Head Vapor Measurements
PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
12:22	30.45	150	0	11.5	7.16	3194	NM	1.38	-67.5	35.1	NM	
12:25	32.75	159.1	0.45	12.6	7.12	3136	NM	0.9	-69	29.7	NM	
12:55	44.5	150.2	4.95	12.6	7.13	3203	NM	2.85	-139.8	22.9	NM	
12:59				NM	NM	NM	NM	NM	NM	NM	NM	Well went dry

Sample ID(s): PA-19d-022025	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		PV 	02/20/2025 21:25



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-20D
Well Permit No:

Date: 2025/02/20
50 degrees partly cloudy

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 60 (ft)	Reference Elevation 37.91 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 28.35 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 63.85 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 91.4 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - (in)
Sampler paul vannevel	Volume of Water in Well / Total Volume Purged 1.45 (l) / 0.48 (l)	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
16:04	29.6	85	0	12.7	7.37	2560	NM	2.8	-184	11.8	NM	
16:07	30.5	120	0.3	12.7	6.96	2534	NM	1.39	-188.2	7.46	NM	
16:10	31.4	69.3	0.6	12.6	6.79	2528	NM	0.9	-193.8	4.74	NM	
16:40	36.5	100.8	3.6	12.5	6.51	2627	NM	0.54	-192.7	3.84	NM	
17:10	38.4	99.6	6.6	12.5	6.41	2610	NM	0.68	-177	4.07	NM	
17:40	42.45	98.3	9.6	13.1	6.48	2519	NM	0.64	-191.3	4.86	NM	
18:10	44.15		12.6	13.1	6.57	2454	NM	0.47	-190.4	3.98	NM	
18:41	45.01	150	15.7	13.13	6.61	2417	NM	0.45	-189.3	2.43	NM	

Sample ID(s): PA-20d-022025	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		PV 	02/21/2025 02:55



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-21D
Well Permit No:

Date: 2025/02/20
45 degrees partly cloudy

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 53.5 (ft)	Reference Elevation 34.36 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 25.83 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 56.09 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 86.2 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler paul vannevel	Volume of Water in Well / Total Volume Purged 1.23 (l) / 0.45 (l)	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
08:38	27.01	75	0	9.5	6.94	4503	NM	3.4	-76.7	46.6	NM	
08:41	28.2	112.5	0.225	10	6.4	4294	NM	2.01	-81.2	25.4	NM	
08:44	29.47	71.2	0.45	10.5	6.28	4129	NM	1.62	-90.6	22.8	NM	
09:14	42.2	101.1	3.45	12.9	6.11	4031	NM	1.1	-154.4	35.6	NM	
09:44	49.05	100	6.45	13.6	6.03	4111	NM	0.74	-150.5	16.2	NM	
10:14	50.8	100.1	9.45	13.1	6.04	4099	NM	0.7	-138.4	6.93	NM	
10:44	51.5	98.6	12.45	13.5	5.95	4058	NM	0.39	-127.7	3.2	NM	
11:01	50.5	102.3	14.15	12.9	6.06	4030	NM	0.45	-128.6	4.83	NM	

Sample ID(s): PA-21d-022025	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		PV 	02/20/2025 19:28



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-22D
Well Permit No:

Date: 2025/02/20
40 degrees partly cloudy

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 60 (ft)	Reference Elevation 38.75 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 28.27 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 63.58 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 98.3 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler paul vannevel	Volume of Water in Well / Total Volume Purged 1.44 (l) / 2.7 (l)	Well Construction

Well Head Vapor Measurements
PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
06:29	28.65	100	0	11	7.56	16.14	NM	4.47	17.1	139	NM	
06:32	28.6	100	0.3	11.1	7.4	15.07	NM	2.07	18.5	33	NM	
06:35	28.6	94.9	0.6	11.23	7.29	14.69	NM	1.21	21.9	11.6	NM	
06:38	28.55	122.5	0.9	11.38	7.23	14.9	NM	0.95	25.4	8.06	NM	
06:41	28.7	80.2	1.2	12.2	7.17	15.7	NM	0.62	28.4	32.9	NM	
06:44	28.55	122.5	1.5	12.4	7.16	15.74	NM	0.6	29	57.5	NM	
06:47	28.55	94.9	1.8	12.1	7.14	16.08	NM	0.71	31	76.4	NM	
06:50	28.5	94.9	2.1	12.1	7.14	16.34	NM	0.8	34.5	90.8	NM	
06:53	28.53	86.6	2.4	11.9	7.13	16.39	NM	0.77	37.9	92.7	NM	
06:56	28.53	86.6	2.7	11.8	7.13	16.5	NM	0.79	40.2	91.9	NM	

Sample ID(s): PA-22d-022025	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		PV 	02/20/2025 15:35



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-23D
Well Permit No:

Date: 2025/02/19
40 degrees raining

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 80.5 (ft)	Reference Elevation 39.31 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 30.85 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 82.9 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 81.7 (mL/min)	Well Diameter / Well Screen Interval (in) / - ()
Sampler paul vannevel	Volume of Water in Well / Total Volume Purged (l) / 24.24 (l)	Well Construction

Well Head Vapor Measurements

PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
08:35	31.8	75	0	9.5	6.97	67.86	NM	3.91	-85.4	11.9	NM	
08:38	33.07	80	0.24	9.8	6.98	68.96	NM	2.19	-91.4	11.5	NM	
09:08	43.52	100.9	3.24	12.2	7	69.09	NM	8.21	-89.5	24.5	NM	
09:38	47.95	99.9	6.24	12.88	6.92	68.67	NM	8.88	-84.4	40.7	NM	
10:08	49.37	100	9.24	12.5	6.97	69.51	NM	9.3	-83.2	32.6	NM	
10:38	49.95	99.9	12.24	11.7	6.99	71.39	NM	10.15	83.1	17.6	NM	
11:08	50.3	99.3	15.24	12.7	6.9	61.25	NM	10.32	-81.4	18.9	NM	
11:38	50.55	100.6	18.24	11.8	6.93	71.46	NM	10.13	-84.4	12.9	NM	
12:08	50.5	98.2	21.24	12.6	7	71.88	NM	10.04	-88.3	17.1	NM	
12:38	50.4	102.3	24.24	13.2	6.9	66.18	NM	9.59	-76.8	18.7	NM	

Sample ID(s): PA-23d-021925	Additional Comments	SAMPLER NAME AND SIGNATURE		Date Time
Analysis:		PV		02/19/2025 20:51



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-24D
Well Permit No:

Date: 2025/02/19
45 degrees and raining

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 80.5 (ft)	Reference Elevation 39.06 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 30.05 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 84.75 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 69.6 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - (in)
Sampler paul vannevel	Volume of Water in Well / Total Volume Purged 2.23 (l) / 1 (l)	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
14:05	30.96	75	0	10.8	7.02	26.61	NM	6.53	-76.9	86.7	NM	
14:08	31.1	75	0.225	12.1	6.88	68.88	NM	1.69	-90.5	69.2	NM	
14:11	30.45	50.5	0.4	12.1	6.79	69.32	NM	1.28	-88.2	64.6	NM	
14:14	30.47	100	0.6	12.1	6.75	69.54	NM	1.31	-87.8	63.5	NM	
14:17	30.55	47.4	0.75	12.4	6.73	69.42	NM	1.4	-87.8	57.7	NM	

Sample ID(s): PA-24d-021925	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		PV 	02/19/2025 22:44



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-25D
Well Permit No:

Date: 2025/02/18
Cloudy 55 degrees

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 80 (ft)	Reference Elevation 40.44 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 29.05 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 84.92 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 107.4 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler paul vannevel	Volume of Water in Well / Total Volume Purged 2.28 (l) / 25 (l)	Well Construction

Well Head Vapor Measurements

PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
14:28	29.01		0	13.05	7.65	102	NM	7.55	89.5	28.3	NM	
14:31	29.67	100	0.3	13.1	7.27	106	NM	6.42	97.7	25.8	NM	
14:34	30.45	70.7	0.6	13.1	7.06	97	NM	4.96	104.1	NM	NM	
14:37	31.2	63.2	0.9	13.15	6.91	94	NM	4.62	108.2	22.2	NM	
15:07	39.21	103.3	4	13.8	6.88	475	NM	4.77	-37.4	21.7	NM	
15:37	43.3	124.9	7.75	13.8	6.95	634	NM	4.23	-52.1	21.7	NM	
16:07	44.3	124.7	11.5	13.7	6.98	668	NM	3.19	-73.6	4.34	NM	
16:37	44.55	124.9	15.25	13.6	6.99	678	NM	4.07	-77.4	3.32	NM	
17:07	44.65	125.6	19	13.6	6.98	686	NM	3.65	-95.2	2.52	NM	
17:37	44.6	124.7	22.75	13.5	6.98	688	NM	4.22	-102.8	2.57	NM	
17:57	44.6	111.9	25	13.3	6.99	683	NM	4.7	-101.6	3	NM	

Sample ID(s): PA-25d-021825	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		PV 	02/19/2025 15:53



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-26D
Well Permit No:

Date: 2025/02/21
Sunny 45 degrees

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 80 (ft)	Reference Elevation 40.33 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 29.35 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 84.35 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 80.2 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler paul vannevel	Volume of Water in Well / Total Volume Purged 2.24 (l) / 1.5 (l)	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
09:59	30.18	75	0	13.2	7.17	610	NM	0.97	-125.4	85.7	NM	
10:02	30.15	88.4	0.25	13.6	6.98	635	NM	1.74	-126.2	82.5	NM	
10:05	30.19	79.1	0.5	12.9	6.91	674	NM	1.76	-126.1	73.7	NM	
10:08	30.2	72.2	0.75	12.8	6.89	699	NM	1.27	-127.7	67.9	NM	
10:11	30.2	79.1	1	12.9	6.88	717	NM	1.09	-127.2	59.2	NM	
10:14	30.2	79.1	1.25	12.8	6.88	726	NM	0.98	-127.4	57.2	NM	
10:17	30.2	88.4	1.5	12.8	6.87	736	NM	0.92	-126	53.3	NM	

Sample ID(s): PA-26d-022125	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		PV 	02/21/2025 18:37



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-30D
Well Permit No:

Date: 2025/02/20
50 degrees cloudy

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 50 (ft)	Reference Elevation 37.34 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 27.29 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 53.1 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 122.2 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler paul vannevel	Volume of Water in Well / Total Volume Purged 1.05 (l) / 4.25 (l)	Well Construction

Well Head Vapor Measurements

PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
14:16	27.55	125	0	13.4	7.99	2402	NM	0.08	-172.9	47.8	NM	
14:19	27.45	132.6	0.375	13.7	7.95	2503	NM	0.08	-184	153	NM	
14:22	27.5	118.6	0.75	13.8	8.07	2702	NM	0.03	-181.1	284	NM	
14:25	27.5	126.5	1.15	13.9	8.15	2821	NM	0.11	-174.2	174	NM	
14:28	27.5	106.1	1.45	14	8.18	2854	NM	0.54	-169.2	110	NM	
14:31	27.5	110.7	1.8	14.1	8.2	2871	NM	0.52	-164.6	97.3	NM	
14:34	27.52	101	2.15	14.1	8.22	2888	NM	0.43	-161.3	88.9	NM	
14:37	27.5	123.7	2.5	14.1	8.23	2906	NM	0.29	-159.9	78.5	NM	
14:40	27.5	142.9	2.85	14.1	8.23	2917	NM	0.29	-156.3	72.6	NM	
14:43	27.5	123.7	3.2	14.2	8.24	2911	NM	0.28	-152.3	59.7	NM	
14:46	27.5	123.7	3.55	14.2	8.24	2935	NM	0.28	-149.7	52.3	NM	
14:49	27.5	110.7	3.9	14.2	8.24	2925	NM	0.38	-146.6	47.6	NM	
14:52	27.5	142.9	4.25	14.3	8.26	2942	NM	0.48	-145.2	43.5	NM	

Sample ID(s): PA-30d-022025	Additional Comments	SAMPLER NAME AND SIGNATURE		Date Time
Analysis:		PV		02/20/2025 23:22



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-15I
Well Permit No:

Date: 2025/02/18
Cloudy 55 degrees

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 42.5 (ft)	Reference Elevation 40.62 (ft)
Site Address , Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 29.38 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 47.43 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 99.1 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler paul vannevel	Volume of Water in Well / Total Volume Purged 0.74 (l) / 3 (l)	Well Construction

Well Head Vapor Measurements

PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
12:42	29.6	90		14.93	8.15	763	NM	3.03	35.3	54.4	NM	
12:45	29.65	100	0.3	14.7	7.71	847	NM	1.27	-0.5	54.4	NM	
12:48	29.65	100	0.6	14.5	7.52	869	NM	0.7	23.4	53.1	NM	
12:51	29.65		0.9	14.4	7.45	882	NM	0.7	-35.7	84.7	NM	
12:54	29.65	94.9	1.2	14.4	7.4	865	NM	0.63	-46	92.6	NM	
12:57	29.65	106.1	1.5	14.3	7.39	862	NM	0.48	-53.5	94.7	NM	
13:00	29.65	106.1	1.8	14.2	7.38	855	NM	0.38	-61.4	94.9	NM	
13:03	29.65	94.9	2.1	14.2	7.37	852	NM	0.32	-68.1	94.2	NM	
13:06	29.65	106.1	2.4	14.2	7.38	839	NM	0.28	-74.3	92.9	NM	
13:09	29.65	106.1	2.7	14.2	7.37	842	NM	0.22	-79.7	90.1	NM	
13:12	29.65	86.6	3	14.2	7.37	841	NM	0.18	-84.2	88	NM	

Sample ID(s): PA-15i-021825	Additional Comments	SAMPLER NAME AND SIGNATURE		Date Time
Analysis:		PV		02/18/2025 21:47



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-16I
Well Permit No:

Date: 2025/02/21
40 degrees clear

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 43 (ft)	Reference Elevation 40.3 (ft)
Site Address Portland, US-OR	Purge Equipment NA	Depth to Water / Free Product 29.8 (ft) / None
Project Number 0726697	Sample Equipment NA	Total Well Depth 45.55 (ft)
Project Name rev20250217-GWMonitor	Average Purge Rate 152 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler paul vannevel	Volume of Water in Well / Total Volume Purged 0.64 (l) / 6.8 (l)	Well Construction

Well Head Vapor Measurements

PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±3%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
08:13	30	150	3	12.3	7.63	721	NM	9.72	-81.4	469	NM	Had to trouble shoot some issues with the pump/set up. The pump was running while doing so and purged 3 liters based on flow and estimated time of troubleshooting
08:16	30.1	142.3	3.45	12.7	7.49	722	NM	9.64	-70.5	373	NM	
08:19	30.02	159.1	3.9	13	7.36	726	NM	9.4	-61.2	315	NM	
08:22	30.05	129.9	4.35	13.3	7.25	730	NM	9.01	-55.4	271	NM	
08:25	30	129.9	4.8	13.5	7.17	735	NM	8.53	-52.2	242	NM	
08:28	30.05	142.3	5.25	13.6	7.13	740	NM	8.57	-51.4	227	NM	
08:31	30.05	142.3	5.7	13.6	7.13	742	NM	8.58	-51.5	197	NM	
08:34	30.05	142.3	6.15	13.6	7.12	750	NM	8.37	-51.6	215	NM	
08:37	30.05	229.8	6.6	13.6	7.06	756	NM	8.25	-51.5	161	NM	
08:40	30	183.7	7.05	13.6	7.05	747	NM	8.37	-49.5	135	NM	
08:43	30	106.1	7.5	13.6	7.06	759	NM	8.38	-48.4	127	NM	
08:46	3.05	183.7	7.95	13.7	7.05	752	NM	8.34	-48.5	118	NM	

Sample ID(s): PA-16i-022125	Additional Comments	SAMPLER NAME AND SIGNATURE		Date Time
Analysis:		PV		02/21/2025 17:02



APPENDIX B LABORATORY ANALYTICAL REPORTS

ANALYTICAL REPORT

PREPARED FOR

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

Generated 3/7/2025 4:30:45 PM

JOB DESCRIPTION

Arkema - Q1 2025 Groundwater Event

JOB NUMBER

580-148198-1

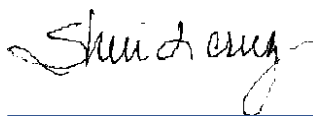
Eurofins Seattle

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
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Case Narrative

Client: ERM-West
Project: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Job ID: 580-148198-1

Eurofins Seattle

Job Narrative 580-148198-1

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 2/20/2025 4:58 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 2.6°C.

Receipt Exceptions

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): PA-24d-021925 (580-148198-14). We received a sample not on the COC. Please confirm analyses.

GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-485845 recovered above the upper control limit for 1,1-Dichloroethene and 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: TB-01-021925 (580-148198-1), PA-23d-021925 (580-148198-8), MWA-31i(d)-021925 (580-148198-9), MWA-58d-021925 (580-148198-10), MWA-56d-021925 (580-148198-11), PA-31-021925 (580-148198-12), PA-24d-021925 (580-148198-14) and (CCVIS 580-485845/3).

Method 8260D: The method blank for analytical batch 580-485845 contained Isopropylbenzene, Bromobenzene, 1,2,4-Trimethylbenzene 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 method blank for preparation batch analytical batch 580-485845 contained Methylene Chloride 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 8260D: The following samples were diluted to bring the concentration of target analytes within the calibration range: MWA-58d-021925 (580-148198-10) and MWA-56d-021925 (580-148198-11). Elevated reporting limits (RLs) are provided.

Method 8260D_LL: The continuing calibration verification (CCV) associated with batch 580-485769 recovered above the upper control limit for Methylene Chloride 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: PA-44i-021825 (580-148198-2), PA-25d-021825 (580-148198-3), PA-15i-021825 (580-148198-4), MWA-82-021825 (580-148198-5), MWA-81i-021825 (580-148198-6), MWA-41-021825 (580-148198-7) and (CCVIS 580-485769/3).

Method 8260D_LL: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 580-485769 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.

Method 8260D_LL: The method blank for analytical batch 580-485769 contained Acetone, Methylene Chloride, Isopropylbenzene, 1,2,4-Trimethylbenzene 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_LL: The continuing calibration verification (CCV) associated with batch 580-485845 recovered above the upper control limit for 1,1-Dichloroethene and 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: TB-01-021925 (580-148198-1), PA-23d-021925 (580-148198-8), MWA-31i(d)-021925 (580-148198-9), MWA-58d-021925 (580-148198-10), MWA-56d-021925 (580-148198-11), PA-31-021925 (580-148198-12), PA-24d-021925 (580-148198-14) and (CCVIS 580-485845/3).

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Case Narrative

Client: ERM-West
Project: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Job ID: 580-148198-1 (Continued)

Eurofins Seattle

Method 8260D_LL: The method blank for analytical batch 580-485845 contained Isopropylbenzene, Bromobenzene, 1,2,4-Trimethylbenzene 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_LL: The method blank for preparation batch analytical batch 580-485845 contained Methylene Chloride 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 8260D_LL: The continuing calibration verification (CCV) associated with batch 580-485909 recovered above the upper control limit for Dichlorodifluoromethane, Carbon disulfide, 1,1-Dichloroethene, Methylene Chloride 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-01-022025 (580-148198-13) and (CCVIS 580-485909/3).

Method 8260D_LL: The method blank for analytical batch 580-485909 contained Methylene Chloride, Isopropylbenzene, 1,2,4-Trimethylbenzene 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_LL: The method blank for analytical batch 580-486202 contained 1,1-Dichloroethene, cis-1,2-Dichloroethene, Chloroform, Carbon tetrachloride, 1,3-Dichloropropane, Chlorodibromomethane, m-Xylene & p-Xylene, N-Propylbenzene and 1,2-Dichlorobenzene 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.

HPLC/IC

Method 314.0: The following samples were diluted due to the nature of the sample matrix: PA-15i-021825 (580-148198-4) and PA-23d-021925 (580-148198-8). Elevated reporting limits (RLs) are provided.

Method 314.0: The following sample was diluted due to the nature of the sample matrix: PA-31-021925 (580-148198-12). Elevated reporting limits (RLs) are provided.

Method 314.0: The following sample was diluted due to the nature of the sample matrix: PA-24d-021925 (580-148198-14). 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.

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Definitions/Glossary

Client: ERM-West

Job ID: 580-148198-1

Project/Site: Arkema - Q1 2025 Groundwater Event

Qualifiers

GC/MS VOA

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

General Chemistry

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
SQL	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

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: TB-01-021925

Lab Sample ID: 580-148198-1

Date Collected: 02/19/25 06:00

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			02/26/25 02:34	1
Chloromethane	ND		0.50	0.14	ug/L			02/26/25 02:34	1
Vinyl chloride	ND		0.10	0.040	ug/L			02/26/25 02:34	1
Bromomethane	ND		0.50	0.13	ug/L			02/26/25 02:34	1
Chloroethane	ND		0.50	0.24	ug/L			02/26/25 02:34	1
Carbon disulfide	ND		0.40	0.20	ug/L			02/26/25 02:34	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			02/26/25 02:34	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			02/26/25 02:34	1
Acetone	ND		10	3.1	ug/L			02/26/25 02:34	1
Methylene Chloride	ND		5.0	1.2	ug/L			02/26/25 02:34	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			02/26/25 02:34	1
2-Butanone (MEK)	ND		10	2.5	ug/L			02/26/25 02:34	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			02/26/25 02:34	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			02/26/25 02:34	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			02/26/25 02:34	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			02/26/25 02:34	1
Chlorobromomethane	ND		0.20	0.050	ug/L			02/26/25 02:34	1
Chloroform	ND		0.20	0.030	ug/L			02/26/25 02:34	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			02/26/25 02:34	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			02/26/25 02:34	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			02/26/25 02:34	1
Benzene	ND		0.20	0.030	ug/L			02/26/25 02:34	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			02/26/25 02:34	1
Trichloroethene	ND		0.20	0.066	ug/L			02/26/25 02:34	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			02/26/25 02:34	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			02/26/25 02:34	1
Dibromomethane	ND		0.20	0.062	ug/L			02/26/25 02:34	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			02/26/25 02:34	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			02/26/25 02:34	1
Toluene	ND		0.20	0.050	ug/L			02/26/25 02:34	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			02/26/25 02:34	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			02/26/25 02:34	1
Tetrachloroethene	ND		0.24	0.084	ug/L			02/26/25 02:34	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			02/26/25 02:34	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			02/26/25 02:34	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			02/26/25 02:34	1
Chlorobenzene	ND		0.20	0.060	ug/L			02/26/25 02:34	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			02/26/25 02:34	1
Ethylbenzene	ND		0.20	0.082	ug/L			02/26/25 02:34	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			02/26/25 02:34	1
o-Xylene	ND		0.50	0.23	ug/L			02/26/25 02:34	1
Styrene	ND		1.0	0.33	ug/L			02/26/25 02:34	1
Bromoform	ND		0.50	0.16	ug/L			02/26/25 02:34	1
Isopropylbenzene	0.45	J B	1.0	0.27	ug/L			02/26/25 02:34	1
Bromobenzene	ND		0.20	0.038	ug/L			02/26/25 02:34	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			02/26/25 02:34	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			02/26/25 02:34	1
N-Propylbenzene	ND		0.30	0.091	ug/L			02/26/25 02:34	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			02/26/25 02:34	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: TB-01-021925

Lab Sample ID: 580-148198-1

Date Collected: 02/19/25 06:00

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		0.30	0.12	ug/L			02/26/25 02:34	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			02/26/25 02:34	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			02/26/25 02:34	1
1,2,4-Trimethylbenzene	0.26	J B	0.55	0.23	ug/L			02/26/25 02:34	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			02/26/25 02:34	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			02/26/25 02:34	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			02/26/25 02:34	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			02/26/25 02:34	1
n-Butylbenzene	0.58	J B	1.0	0.35	ug/L			02/26/25 02:34	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			02/26/25 02:34	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			02/26/25 02:34	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			02/26/25 02:34	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			02/26/25 02:34	1
Naphthalene	ND		1.5	0.52	ug/L			02/26/25 02:34	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			02/26/25 02:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	93		80 - 120		02/26/25 02:34	1
Dibromofluoromethane (Surr)	103		80 - 120		02/26/25 02:34	1
4-Bromofluorobenzene (Surr)	96		80 - 120		02/26/25 02:34	1
1,2-Dichloroethane-d4 (Surr)	97		80 - 120		02/26/25 02:34	1

Client Sample Results

Client: ERM-West

Job ID: 580-148198-1

Project/Site: Arkema - Q1 2025 Groundwater Event

Client Sample ID: PA-44i-021825

Lab Sample ID: 580-148198-2

Date Collected: 02/18/25 16:00

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			02/25/25 17:39	1
Chloromethane	ND		0.50	0.14	ug/L			02/25/25 17:39	1
Vinyl chloride	ND		0.10	0.040	ug/L			02/25/25 17:39	1
Bromomethane	ND		0.50	0.13	ug/L			02/25/25 17:39	1
Chloroethane	ND		0.50	0.24	ug/L			02/25/25 17:39	1
Carbon disulfide	ND		0.40	0.20	ug/L			02/25/25 17:39	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			02/25/25 17:39	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			02/25/25 17:39	1
Acetone	ND		10	3.1	ug/L			02/25/25 17:39	1
Methylene Chloride	ND	+	5.0	1.2	ug/L			02/25/25 17:39	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			02/25/25 17:39	1
2-Butanone (MEK)	ND		10	2.5	ug/L			02/25/25 17:39	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			02/25/25 17:39	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			02/25/25 17:39	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			02/25/25 17:39	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			02/25/25 17:39	1
Chlorobromomethane	ND		0.20	0.050	ug/L			02/25/25 17:39	1
Chloroform	ND		0.20	0.030	ug/L			02/25/25 17:39	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			02/25/25 17:39	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			02/25/25 17:39	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			02/25/25 17:39	1
Benzene	ND		0.20	0.030	ug/L			02/25/25 17:39	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			02/25/25 17:39	1
Trichloroethene	ND		0.20	0.066	ug/L			02/25/25 17:39	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			02/25/25 17:39	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			02/25/25 17:39	1
Dibromomethane	ND		0.20	0.062	ug/L			02/25/25 17:39	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			02/25/25 17:39	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			02/25/25 17:39	1
Toluene	ND		0.20	0.050	ug/L			02/25/25 17:39	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			02/25/25 17:39	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			02/25/25 17:39	1
Tetrachloroethene	ND		0.24	0.084	ug/L			02/25/25 17:39	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			02/25/25 17:39	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			02/25/25 17:39	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			02/25/25 17:39	1
Chlorobenzene	ND		0.20	0.060	ug/L			02/25/25 17:39	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			02/25/25 17:39	1
Ethylbenzene	ND		0.20	0.082	ug/L			02/25/25 17:39	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			02/25/25 17:39	1
o-Xylene	ND		0.50	0.23	ug/L			02/25/25 17:39	1
Styrene	ND		1.0	0.33	ug/L			02/25/25 17:39	1
Bromoform	ND		0.50	0.16	ug/L			02/25/25 17:39	1
Isopropylbenzene	0.45	J B	1.0	0.27	ug/L			02/25/25 17:39	1
Bromobenzene	ND		0.20	0.038	ug/L			02/25/25 17:39	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			02/25/25 17:39	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			02/25/25 17:39	1
N-Propylbenzene	ND		0.30	0.091	ug/L			02/25/25 17:39	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			02/25/25 17:39	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: PA-44i-021825

Lab Sample ID: 580-148198-2

Date Collected: 02/18/25 16:00

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		0.30	0.12	ug/L			02/25/25 17:39	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			02/25/25 17:39	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			02/25/25 17:39	1
1,2,4-Trimethylbenzene	0.26	J B	0.55	0.23	ug/L			02/25/25 17:39	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			02/25/25 17:39	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			02/25/25 17:39	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			02/25/25 17:39	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			02/25/25 17:39	1
n-Butylbenzene	0.57	J B	1.0	0.35	ug/L			02/25/25 17:39	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			02/25/25 17:39	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			02/25/25 17:39	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			02/25/25 17:39	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			02/25/25 17:39	1
Naphthalene	ND		1.5	0.52	ug/L			02/25/25 17:39	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			02/25/25 17:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		80 - 120		02/25/25 17:39	1
Dibromofluoromethane (Surr)	101		80 - 120		02/25/25 17:39	1
4-Bromofluorobenzene (Surr)	98		80 - 120		02/25/25 17:39	1
1,2-Dichloroethane-d4 (Surr)	95		80 - 120		02/25/25 17:39	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		2.0	0.91	ug/L			02/26/25 19:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	0.80	J	1.5	0.43	mg/L			03/05/25 12:23	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: PA-25d-021825

Lab Sample ID: 580-148198-3

Date Collected: 02/18/25 17:58

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			02/25/25 18:02	1
Chloromethane	ND		0.50	0.14	ug/L			02/25/25 18:02	1
Vinyl chloride	ND		0.10	0.040	ug/L			02/25/25 18:02	1
Bromomethane	ND		0.50	0.13	ug/L			02/25/25 18:02	1
Chloroethane	ND		0.50	0.24	ug/L			02/25/25 18:02	1
Carbon disulfide	ND		0.40	0.20	ug/L			02/25/25 18:02	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			02/25/25 18:02	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			02/25/25 18:02	1
Acetone	ND		10	3.1	ug/L			02/25/25 18:02	1
Methylene Chloride	ND	+	5.0	1.2	ug/L			02/25/25 18:02	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			02/25/25 18:02	1
2-Butanone (MEK)	ND		10	2.5	ug/L			02/25/25 18:02	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			02/25/25 18:02	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			02/25/25 18:02	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			02/25/25 18:02	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			02/25/25 18:02	1
Chlorobromomethane	ND		0.20	0.050	ug/L			02/25/25 18:02	1
Chloroform	ND		0.20	0.030	ug/L			02/25/25 18:02	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			02/25/25 18:02	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			02/25/25 18:02	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			02/25/25 18:02	1
Benzene	ND		0.20	0.030	ug/L			02/25/25 18:02	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			02/25/25 18:02	1
Trichloroethene	ND		0.20	0.066	ug/L			02/25/25 18:02	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			02/25/25 18:02	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			02/25/25 18:02	1
Dibromomethane	ND		0.20	0.062	ug/L			02/25/25 18:02	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			02/25/25 18:02	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			02/25/25 18:02	1
Toluene	ND		0.20	0.050	ug/L			02/25/25 18:02	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			02/25/25 18:02	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			02/25/25 18:02	1
Tetrachloroethene	ND		0.24	0.084	ug/L			02/25/25 18:02	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			02/25/25 18:02	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			02/25/25 18:02	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			02/25/25 18:02	1
Chlorobenzene	ND		0.20	0.060	ug/L			02/25/25 18:02	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			02/25/25 18:02	1
Ethylbenzene	ND		0.20	0.082	ug/L			02/25/25 18:02	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			02/25/25 18:02	1
o-Xylene	ND		0.50	0.23	ug/L			02/25/25 18:02	1
Styrene	ND		1.0	0.33	ug/L			02/25/25 18:02	1
Bromoform	ND		0.50	0.16	ug/L			02/25/25 18:02	1
Isopropylbenzene	0.45	J B	1.0	0.27	ug/L			02/25/25 18:02	1
Bromobenzene	ND		0.20	0.038	ug/L			02/25/25 18:02	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			02/25/25 18:02	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			02/25/25 18:02	1
N-Propylbenzene	ND		0.30	0.091	ug/L			02/25/25 18:02	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			02/25/25 18:02	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: PA-25d-021825

Lab Sample ID: 580-148198-3

Date Collected: 02/18/25 17:58

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		0.30	0.12	ug/L			02/25/25 18:02	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			02/25/25 18:02	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			02/25/25 18:02	1
1,2,4-Trimethylbenzene	0.26	J B	0.55	0.23	ug/L			02/25/25 18:02	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			02/25/25 18:02	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			02/25/25 18:02	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			02/25/25 18:02	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			02/25/25 18:02	1
n-Butylbenzene	0.58	J B	1.0	0.35	ug/L			02/25/25 18:02	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			02/25/25 18:02	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			02/25/25 18:02	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			02/25/25 18:02	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			02/25/25 18:02	1
Naphthalene	ND		1.5	0.52	ug/L			02/25/25 18:02	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			02/25/25 18:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		80 - 120		02/25/25 18:02	1
Dibromofluoromethane (Surr)	103		80 - 120		02/25/25 18:02	1
4-Bromofluorobenzene (Surr)	96		80 - 120		02/25/25 18:02	1
1,2-Dichloroethane-d4 (Surr)	95		80 - 120		02/25/25 18:02	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		2.0	0.91	ug/L			02/26/25 20:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	32		1.5	0.43	mg/L			03/05/25 12:47	1

Client Sample Results

Client: ERM-West

Job ID: 580-148198-1

Project/Site: Arkema - Q1 2025 Groundwater Event

Client Sample ID: PA-15i-021825

Lab Sample ID: 580-148198-4

Date Collected: 02/18/25 13:13

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			02/25/25 18:26	1
Chloromethane	ND		0.50	0.14	ug/L			02/25/25 18:26	1
Vinyl chloride	ND		0.10	0.040	ug/L			02/25/25 18:26	1
Bromomethane	ND		0.50	0.13	ug/L			02/25/25 18:26	1
Chloroethane	ND		0.50	0.24	ug/L			02/25/25 18:26	1
Carbon disulfide	ND		0.40	0.20	ug/L			02/25/25 18:26	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			02/25/25 18:26	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			02/25/25 18:26	1
Acetone	ND		10	3.1	ug/L			02/25/25 18:26	1
Methylene Chloride	ND	+	5.0	1.2	ug/L			02/25/25 18:26	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			02/25/25 18:26	1
2-Butanone (MEK)	ND		10	2.5	ug/L			02/25/25 18:26	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			02/25/25 18:26	1
1,1-Dichloroethane	0.21		0.20	0.064	ug/L			02/25/25 18:26	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			02/25/25 18:26	1
cis-1,2-Dichloroethene	0.10	J	0.20	0.055	ug/L			02/25/25 18:26	1
Chlorobromomethane	ND		0.20	0.050	ug/L			02/25/25 18:26	1
Chloroform	ND		0.20	0.030	ug/L			02/25/25 18:26	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			02/25/25 18:26	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			02/25/25 18:26	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			02/25/25 18:26	1
Benzene	ND		0.20	0.030	ug/L			02/25/25 18:26	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			02/25/25 18:26	1
Trichloroethene	ND		0.20	0.066	ug/L			02/25/25 18:26	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			02/25/25 18:26	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			02/25/25 18:26	1
Dibromomethane	ND		0.20	0.062	ug/L			02/25/25 18:26	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			02/25/25 18:26	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			02/25/25 18:26	1
Toluene	ND		0.20	0.050	ug/L			02/25/25 18:26	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			02/25/25 18:26	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			02/25/25 18:26	1
Tetrachloroethene	ND		0.24	0.084	ug/L			02/25/25 18:26	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			02/25/25 18:26	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			02/25/25 18:26	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			02/25/25 18:26	1
Chlorobenzene	ND		0.20	0.060	ug/L			02/25/25 18:26	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			02/25/25 18:26	1
Ethylbenzene	ND		0.20	0.082	ug/L			02/25/25 18:26	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			02/25/25 18:26	1
o-Xylene	ND		0.50	0.23	ug/L			02/25/25 18:26	1
Styrene	ND		1.0	0.33	ug/L			02/25/25 18:26	1
Bromoform	ND		0.50	0.16	ug/L			02/25/25 18:26	1
Isopropylbenzene	0.45	J B	1.0	0.27	ug/L			02/25/25 18:26	1
Bromobenzene	ND		0.20	0.038	ug/L			02/25/25 18:26	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			02/25/25 18:26	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			02/25/25 18:26	1
N-Propylbenzene	ND		0.30	0.091	ug/L			02/25/25 18:26	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			02/25/25 18:26	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: PA-15i-021825

Lab Sample ID: 580-148198-4

Date Collected: 02/18/25 13:13

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		0.30	0.12	ug/L			02/25/25 18:26	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			02/25/25 18:26	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			02/25/25 18:26	1
1,2,4-Trimethylbenzene	0.26	J B	0.55	0.23	ug/L			02/25/25 18:26	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			02/25/25 18:26	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			02/25/25 18:26	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			02/25/25 18:26	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			02/25/25 18:26	1
n-Butylbenzene	0.59	J B	1.0	0.35	ug/L			02/25/25 18:26	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			02/25/25 18:26	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			02/25/25 18:26	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			02/25/25 18:26	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			02/25/25 18:26	1
Naphthalene	ND		1.5	0.52	ug/L			02/25/25 18:26	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			02/25/25 18:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	92		80 - 120		02/25/25 18:26	1
Dibromofluoromethane (Surr)	103		80 - 120		02/25/25 18:26	1
4-Bromofluorobenzene (Surr)	96		80 - 120		02/25/25 18:26	1
1,2-Dichloroethane-d4 (Surr)	95		80 - 120		02/25/25 18:26	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		40	18	ug/L			02/26/25 20:32	20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	44		1.5	0.43	mg/L			03/05/25 13:11	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: MWA-82-021825

Lab Sample ID: 580-148198-5

Date Collected: 02/18/25 13:00

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			02/25/25 18:49	1
Chloromethane	ND		0.50	0.14	ug/L			02/25/25 18:49	1
Vinyl chloride	ND		0.10	0.040	ug/L			02/25/25 18:49	1
Bromomethane	ND		0.50	0.13	ug/L			02/25/25 18:49	1
Chloroethane	ND		0.50	0.24	ug/L			02/25/25 18:49	1
Carbon disulfide	ND		0.40	0.20	ug/L			02/25/25 18:49	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			02/25/25 18:49	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			02/25/25 18:49	1
Acetone	ND		10	3.1	ug/L			02/25/25 18:49	1
Methylene Chloride	ND	+	5.0	1.2	ug/L			02/25/25 18:49	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			02/25/25 18:49	1
2-Butanone (MEK)	ND		10	2.5	ug/L			02/25/25 18:49	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			02/25/25 18:49	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			02/25/25 18:49	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			02/25/25 18:49	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			02/25/25 18:49	1
Chlorobromomethane	ND		0.20	0.050	ug/L			02/25/25 18:49	1
Chloroform	3.2		0.20	0.030	ug/L			02/25/25 18:49	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			02/25/25 18:49	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			02/25/25 18:49	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			02/25/25 18:49	1
Benzene	ND		0.20	0.030	ug/L			02/25/25 18:49	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			02/25/25 18:49	1
Trichloroethene	0.18	J	0.20	0.066	ug/L			02/25/25 18:49	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			02/25/25 18:49	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			02/25/25 18:49	1
Dibromomethane	ND		0.20	0.062	ug/L			02/25/25 18:49	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			02/25/25 18:49	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			02/25/25 18:49	1
Toluene	ND		0.20	0.050	ug/L			02/25/25 18:49	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			02/25/25 18:49	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			02/25/25 18:49	1
Tetrachloroethene	0.50		0.24	0.084	ug/L			02/25/25 18:49	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			02/25/25 18:49	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			02/25/25 18:49	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			02/25/25 18:49	1
Chlorobenzene	ND		0.20	0.060	ug/L			02/25/25 18:49	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			02/25/25 18:49	1
Ethylbenzene	ND		0.20	0.082	ug/L			02/25/25 18:49	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			02/25/25 18:49	1
o-Xylene	ND		0.50	0.23	ug/L			02/25/25 18:49	1
Styrene	ND		1.0	0.33	ug/L			02/25/25 18:49	1
Bromoform	ND		0.50	0.16	ug/L			02/25/25 18:49	1
Isopropylbenzene	ND		1.0	0.27	ug/L			02/25/25 18:49	1
Bromobenzene	ND		0.20	0.038	ug/L			02/25/25 18:49	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			02/25/25 18:49	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			02/25/25 18:49	1
N-Propylbenzene	ND		0.30	0.091	ug/L			02/25/25 18:49	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			02/25/25 18:49	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: MWA-82-021825

Lab Sample ID: 580-148198-5

Date Collected: 02/18/25 13:00

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		0.30	0.12	ug/L			02/25/25 18:49	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			02/25/25 18:49	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			02/25/25 18:49	1
1,2,4-Trimethylbenzene	0.26	J B	0.55	0.23	ug/L			02/25/25 18:49	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			02/25/25 18:49	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			02/25/25 18:49	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			02/25/25 18:49	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			02/25/25 18:49	1
n-Butylbenzene	ND		1.0	0.35	ug/L			02/25/25 18:49	1
1,2-Dichlorobenzene	0.077	J	0.30	0.038	ug/L			02/25/25 18:49	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			02/25/25 18:49	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			02/25/25 18:49	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			02/25/25 18:49	1
Naphthalene	ND		1.5	0.52	ug/L			02/25/25 18:49	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			02/25/25 18:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	93		80 - 120		02/25/25 18:49	1
Dibromofluoromethane (Surr)	104		80 - 120		02/25/25 18:49	1
4-Bromofluorobenzene (Surr)	97		80 - 120		02/25/25 18:49	1
1,2-Dichloroethane-d4 (Surr)	97		80 - 120		02/25/25 18:49	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	420		20	9.1	ug/L			02/26/25 20:53	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	9.1		1.5	0.43	mg/L			03/05/25 13:59	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: MWA-81i-021825

Lab Sample ID: 580-148198-6

Date Collected: 02/18/25 10:46

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			02/25/25 19:59	1
Chloromethane	ND		0.50	0.14	ug/L			02/25/25 19:59	1
Vinyl chloride	ND		0.10	0.040	ug/L			02/25/25 19:59	1
Bromomethane	ND		0.50	0.13	ug/L			02/25/25 19:59	1
Chloroethane	ND		0.50	0.24	ug/L			02/25/25 19:59	1
Carbon disulfide	ND		0.40	0.20	ug/L			02/25/25 19:59	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			02/25/25 19:59	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			02/25/25 19:59	1
Acetone	ND		10	3.1	ug/L			02/25/25 19:59	1
Methylene Chloride	ND	+	5.0	1.2	ug/L			02/25/25 19:59	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			02/25/25 19:59	1
2-Butanone (MEK)	ND		10	2.5	ug/L			02/25/25 19:59	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			02/25/25 19:59	1
1,1-Dichloroethane	0.069	J	0.20	0.064	ug/L			02/25/25 19:59	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			02/25/25 19:59	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			02/25/25 19:59	1
Chlorobromomethane	ND		0.20	0.050	ug/L			02/25/25 19:59	1
Chloroform	ND		0.20	0.030	ug/L			02/25/25 19:59	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			02/25/25 19:59	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			02/25/25 19:59	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			02/25/25 19:59	1
Benzene	ND		0.20	0.030	ug/L			02/25/25 19:59	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			02/25/25 19:59	1
Trichloroethene	ND		0.20	0.066	ug/L			02/25/25 19:59	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			02/25/25 19:59	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			02/25/25 19:59	1
Dibromomethane	ND		0.20	0.062	ug/L			02/25/25 19:59	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			02/25/25 19:59	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			02/25/25 19:59	1
Toluene	ND		0.20	0.050	ug/L			02/25/25 19:59	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			02/25/25 19:59	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			02/25/25 19:59	1
Tetrachloroethene	ND		0.24	0.084	ug/L			02/25/25 19:59	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			02/25/25 19:59	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			02/25/25 19:59	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			02/25/25 19:59	1
Chlorobenzene	ND		0.20	0.060	ug/L			02/25/25 19:59	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			02/25/25 19:59	1
Ethylbenzene	ND		0.20	0.082	ug/L			02/25/25 19:59	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			02/25/25 19:59	1
o-Xylene	ND		0.50	0.23	ug/L			02/25/25 19:59	1
Styrene	ND		1.0	0.33	ug/L			02/25/25 19:59	1
Bromoform	ND		0.50	0.16	ug/L			02/25/25 19:59	1
Isopropylbenzene	0.46	J B	1.0	0.27	ug/L			02/25/25 19:59	1
Bromobenzene	ND		0.20	0.038	ug/L			02/25/25 19:59	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			02/25/25 19:59	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			02/25/25 19:59	1
N-Propylbenzene	ND		0.30	0.091	ug/L			02/25/25 19:59	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			02/25/25 19:59	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: MWA-81i-021825

Lab Sample ID: 580-148198-6

Date Collected: 02/18/25 10:46

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		0.30	0.12	ug/L			02/25/25 19:59	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			02/25/25 19:59	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			02/25/25 19:59	1
1,2,4-Trimethylbenzene	0.27	J B	0.55	0.23	ug/L			02/25/25 19:59	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			02/25/25 19:59	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			02/25/25 19:59	1
1,3-Dichlorobenzene	0.051	J	0.30	0.050	ug/L			02/25/25 19:59	1
1,4-Dichlorobenzene	0.067	J	0.30	0.050	ug/L			02/25/25 19:59	1
n-Butylbenzene	0.63	J B	1.0	0.35	ug/L			02/25/25 19:59	1
1,2-Dichlorobenzene	0.046	J	0.30	0.038	ug/L			02/25/25 19:59	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			02/25/25 19:59	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			02/25/25 19:59	1
Hexachlorobutadiene	0.16	J	0.50	0.16	ug/L			02/25/25 19:59	1
Naphthalene	ND		1.5	0.52	ug/L			02/25/25 19:59	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			02/25/25 19:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	93		80 - 120		02/25/25 19:59	1
Dibromofluoromethane (Surr)	102		80 - 120		02/25/25 19:59	1
4-Bromofluorobenzene (Surr)	95		80 - 120		02/25/25 19:59	1
1,2-Dichloroethane-d4 (Surr)	94		80 - 120		02/25/25 19:59	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		2.0	0.91	ug/L			02/26/25 21:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	12		1.5	0.43	mg/L			03/05/25 14:22	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: MWA-41-021825

Lab Sample ID: 580-148198-7

Date Collected: 02/18/25 14:40

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			02/25/25 20:22	1
Chloromethane	ND		0.50	0.14	ug/L			02/25/25 20:22	1
Vinyl chloride	ND		0.10	0.040	ug/L			02/25/25 20:22	1
Bromomethane	ND		0.50	0.13	ug/L			02/25/25 20:22	1
Chloroethane	ND		0.50	0.24	ug/L			02/25/25 20:22	1
Carbon disulfide	ND		0.40	0.20	ug/L			02/25/25 20:22	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			02/25/25 20:22	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			02/25/25 20:22	1
Acetone	ND		10	3.1	ug/L			02/25/25 20:22	1
Methylene Chloride	ND	+	5.0	1.2	ug/L			02/25/25 20:22	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			02/25/25 20:22	1
2-Butanone (MEK)	ND		10	2.5	ug/L			02/25/25 20:22	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			02/25/25 20:22	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			02/25/25 20:22	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			02/25/25 20:22	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			02/25/25 20:22	1
Chlorobromomethane	ND		0.20	0.050	ug/L			02/25/25 20:22	1
Chloroform	ND		0.20	0.030	ug/L			02/25/25 20:22	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			02/25/25 20:22	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			02/25/25 20:22	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			02/25/25 20:22	1
Benzene	ND		0.20	0.030	ug/L			02/25/25 20:22	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			02/25/25 20:22	1
Trichloroethene	ND		0.20	0.066	ug/L			02/25/25 20:22	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			02/25/25 20:22	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			02/25/25 20:22	1
Dibromomethane	ND		0.20	0.062	ug/L			02/25/25 20:22	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			02/25/25 20:22	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			02/25/25 20:22	1
Toluene	ND		0.20	0.050	ug/L			02/25/25 20:22	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			02/25/25 20:22	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			02/25/25 20:22	1
Tetrachloroethene	ND		0.24	0.084	ug/L			02/25/25 20:22	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			02/25/25 20:22	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			02/25/25 20:22	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			02/25/25 20:22	1
Chlorobenzene	ND		0.20	0.060	ug/L			02/25/25 20:22	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			02/25/25 20:22	1
Ethylbenzene	ND		0.20	0.082	ug/L			02/25/25 20:22	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			02/25/25 20:22	1
o-Xylene	ND		0.50	0.23	ug/L			02/25/25 20:22	1
Styrene	ND		1.0	0.33	ug/L			02/25/25 20:22	1
Bromoform	ND		0.50	0.16	ug/L			02/25/25 20:22	1
Isopropylbenzene	0.45	J B	1.0	0.27	ug/L			02/25/25 20:22	1
Bromobenzene	ND		0.20	0.038	ug/L			02/25/25 20:22	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			02/25/25 20:22	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			02/25/25 20:22	1
N-Propylbenzene	ND		0.30	0.091	ug/L			02/25/25 20:22	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			02/25/25 20:22	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: MWA-41-021825

Lab Sample ID: 580-148198-7

Date Collected: 02/18/25 14:40

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		0.30	0.12	ug/L			02/25/25 20:22	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			02/25/25 20:22	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			02/25/25 20:22	1
1,2,4-Trimethylbenzene	0.26	J B	0.55	0.23	ug/L			02/25/25 20:22	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			02/25/25 20:22	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			02/25/25 20:22	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			02/25/25 20:22	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			02/25/25 20:22	1
n-Butylbenzene	0.58	J B	1.0	0.35	ug/L			02/25/25 20:22	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			02/25/25 20:22	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			02/25/25 20:22	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			02/25/25 20:22	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			02/25/25 20:22	1
Naphthalene	ND		1.5	0.52	ug/L			02/25/25 20:22	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			02/25/25 20:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	93		80 - 120		02/25/25 20:22	1
Dibromofluoromethane (Surr)	103		80 - 120		02/25/25 20:22	1
4-Bromofluorobenzene (Surr)	95		80 - 120		02/25/25 20:22	1
1,2-Dichloroethane-d4 (Surr)	95		80 - 120		02/25/25 20:22	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		2.0	0.91	ug/L			02/26/25 21:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	5.4		1.5	0.43	mg/L			03/05/25 14:46	1

Client Sample Results

Client: ERM-West

Job ID: 580-148198-1

Project/Site: Arkema - Q1 2025 Groundwater Event

Client Sample ID: PA-23d-021925

Lab Sample ID: 580-148198-8

Date Collected: 02/19/25 12:39

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0	0.53	ug/L			02/26/25 03:44	1
Chloromethane	ND		1.0	0.28	ug/L			02/26/25 03:44	1
Vinyl chloride	ND		1.0	0.22	ug/L			02/26/25 03:44	1
Bromomethane	ND		1.0	0.21	ug/L			02/26/25 03:44	1
Chloroethane	ND		1.0	0.35	ug/L			02/26/25 03:44	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			02/26/25 03:44	1
Carbon disulfide	ND		1.0	0.53	ug/L			02/26/25 03:44	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			02/26/25 03:44	1
Acetone	ND		15	3.2	ug/L			02/26/25 03:44	1
Methylene Chloride	ND		5.0	1.4	ug/L			02/26/25 03:44	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			02/26/25 03:44	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			02/26/25 03:44	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			02/26/25 03:44	1
2-Butanone (MEK)	ND		15	4.7	ug/L			02/26/25 03:44	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			02/26/25 03:44	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			02/26/25 03:44	1
Chlorobromomethane	ND		1.0	0.29	ug/L			02/26/25 03:44	1
Chloroform	ND		1.0	0.26	ug/L			02/26/25 03:44	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			02/26/25 03:44	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			02/26/25 03:44	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			02/26/25 03:44	1
Benzene	ND		1.0	0.24	ug/L			02/26/25 03:44	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			02/26/25 03:44	1
Trichloroethene	ND		1.0	0.26	ug/L			02/26/25 03:44	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			02/26/25 03:44	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			02/26/25 03:44	1
Dibromomethane	ND		1.0	0.34	ug/L			02/26/25 03:44	1
Dichlorobromomethane	ND		1.0	0.29	ug/L			02/26/25 03:44	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			02/26/25 03:44	1
Toluene	ND		1.0	0.39	ug/L			02/26/25 03:44	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			02/26/25 03:44	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			02/26/25 03:44	1
Tetrachloroethene	ND		1.0	0.41	ug/L			02/26/25 03:44	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			02/26/25 03:44	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			02/26/25 03:44	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			02/26/25 03:44	1
Chlorobenzene	ND		1.0	0.44	ug/L			02/26/25 03:44	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			02/26/25 03:44	1
Ethylbenzene	ND		1.0	0.50	ug/L			02/26/25 03:44	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			02/26/25 03:44	1
o-Xylene	ND		1.0	0.39	ug/L			02/26/25 03:44	1
Styrene	ND		1.0	0.53	ug/L			02/26/25 03:44	1
Bromoform	ND		1.0	0.51	ug/L			02/26/25 03:44	1
Isopropylbenzene	ND		1.0	0.44	ug/L			02/26/25 03:44	1
Bromobenzene	ND		1.0	0.43	ug/L			02/26/25 03:44	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			02/26/25 03:44	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			02/26/25 03:44	1
N-Propylbenzene	ND		1.0	0.50	ug/L			02/26/25 03:44	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			02/26/25 03:44	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: PA-23d-021925

Lab Sample ID: 580-148198-8

Date Collected: 02/19/25 12:39

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		1.0	0.38	ug/L			02/26/25 03:44	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			02/26/25 03:44	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			02/26/25 03:44	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			02/26/25 03:44	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			02/26/25 03:44	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			02/26/25 03:44	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			02/26/25 03:44	1
n-Butylbenzene	ND		1.0	0.44	ug/L			02/26/25 03:44	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			02/26/25 03:44	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			02/26/25 03:44	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			02/26/25 03:44	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			02/26/25 03:44	1
Naphthalene	ND		3.0	0.93	ug/L			02/26/25 03:44	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			02/26/25 03:44	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			02/26/25 03:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	92		80 - 120		02/26/25 03:44	1
1,2-Dichloroethane-d4 (Surr)	109		80 - 120		02/26/25 03:44	1
4-Bromofluorobenzene (Surr)	99		80 - 120		02/26/25 03:44	1
Dibromofluoromethane (Surr)	109		80 - 120		02/26/25 03:44	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		200	91	ug/L			02/26/25 21:55	100

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	33000		1500	430	mg/L			03/05/25 15:22	1000

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: MWA-31i(d)-021925

Lab Sample ID: 580-148198-9

Date Collected: 02/19/25 09:01

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0	0.53	ug/L			02/26/25 04:07	1
Chloromethane	ND		1.0	0.28	ug/L			02/26/25 04:07	1
Vinyl chloride	ND		1.0	0.22	ug/L			02/26/25 04:07	1
Bromomethane	ND		1.0	0.21	ug/L			02/26/25 04:07	1
Chloroethane	ND		1.0	0.35	ug/L			02/26/25 04:07	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			02/26/25 04:07	1
Carbon disulfide	ND		1.0	0.53	ug/L			02/26/25 04:07	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			02/26/25 04:07	1
Acetone	ND		15	3.2	ug/L			02/26/25 04:07	1
Methylene Chloride	ND		5.0	1.4	ug/L			02/26/25 04:07	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			02/26/25 04:07	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			02/26/25 04:07	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			02/26/25 04:07	1
2-Butanone (MEK)	ND		15	4.7	ug/L			02/26/25 04:07	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			02/26/25 04:07	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			02/26/25 04:07	1
Chlorobromomethane	ND		1.0	0.29	ug/L			02/26/25 04:07	1
Chloroform	6.3		1.0	0.26	ug/L			02/26/25 04:07	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			02/26/25 04:07	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			02/26/25 04:07	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			02/26/25 04:07	1
Benzene	ND		1.0	0.24	ug/L			02/26/25 04:07	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			02/26/25 04:07	1
Trichloroethene	ND		1.0	0.26	ug/L			02/26/25 04:07	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			02/26/25 04:07	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			02/26/25 04:07	1
Dibromomethane	ND		1.0	0.34	ug/L			02/26/25 04:07	1
Dichlorobromomethane	ND		1.0	0.29	ug/L			02/26/25 04:07	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			02/26/25 04:07	1
Toluene	ND		1.0	0.39	ug/L			02/26/25 04:07	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			02/26/25 04:07	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			02/26/25 04:07	1
Tetrachloroethene	ND		1.0	0.41	ug/L			02/26/25 04:07	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			02/26/25 04:07	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			02/26/25 04:07	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			02/26/25 04:07	1
Chlorobenzene	ND		1.0	0.44	ug/L			02/26/25 04:07	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			02/26/25 04:07	1
Ethylbenzene	ND		1.0	0.50	ug/L			02/26/25 04:07	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			02/26/25 04:07	1
o-Xylene	ND		1.0	0.39	ug/L			02/26/25 04:07	1
Styrene	ND		1.0	0.53	ug/L			02/26/25 04:07	1
Bromoform	ND		1.0	0.51	ug/L			02/26/25 04:07	1
Isopropylbenzene	0.45	J B	1.0	0.44	ug/L			02/26/25 04:07	1
Bromobenzene	ND		1.0	0.43	ug/L			02/26/25 04:07	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			02/26/25 04:07	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			02/26/25 04:07	1
N-Propylbenzene	ND		1.0	0.50	ug/L			02/26/25 04:07	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			02/26/25 04:07	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: MWA-31i(d)-021925

Lab Sample ID: 580-148198-9

Date Collected: 02/19/25 09:01

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		1.0	0.38	ug/L			02/26/25 04:07	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			02/26/25 04:07	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			02/26/25 04:07	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			02/26/25 04:07	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			02/26/25 04:07	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			02/26/25 04:07	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			02/26/25 04:07	1
n-Butylbenzene	0.57	J B	1.0	0.44	ug/L			02/26/25 04:07	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			02/26/25 04:07	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			02/26/25 04:07	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			02/26/25 04:07	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			02/26/25 04:07	1
Naphthalene	ND		3.0	0.93	ug/L			02/26/25 04:07	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			02/26/25 04:07	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			02/26/25 04:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	92		80 - 120		02/26/25 04:07	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 120		02/26/25 04:07	1
4-Bromofluorobenzene (Surr)	99		80 - 120		02/26/25 04:07	1
Dibromofluoromethane (Surr)	108		80 - 120		02/26/25 04:07	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	3700		80	36	ug/L			02/26/25 22:16	40

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	6000		150	43	mg/L			03/05/25 15:34	100

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: MWA-58d-021925

Lab Sample ID: 580-148198-10

Date Collected: 02/19/25 10:53

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		10	5.3	ug/L			02/26/25 09:09	10
Chloromethane	ND		10	2.8	ug/L			02/26/25 09:09	10
Vinyl chloride	ND		10	2.2	ug/L			02/26/25 09:09	10
Bromomethane	ND		10	2.1	ug/L			02/26/25 09:09	10
Chloroethane	ND		10	3.5	ug/L			02/26/25 09:09	10
Trichlorofluoromethane	ND		10	3.6	ug/L			02/26/25 09:09	10
Carbon disulfide	ND		10	5.3	ug/L			02/26/25 09:09	10
1,1-Dichloroethene	ND		10	2.8	ug/L			02/26/25 09:09	10
Acetone	ND		150	32	ug/L			02/26/25 09:09	10
Methylene Chloride	ND		50	14	ug/L			02/26/25 09:09	10
Methyl tert-butyl ether	ND		10	4.4	ug/L			02/26/25 09:09	10
trans-1,2-Dichloroethene	ND		10	3.9	ug/L			02/26/25 09:09	10
1,1-Dichloroethane	ND		10	2.2	ug/L			02/26/25 09:09	10
2-Butanone (MEK)	ND		150	47	ug/L			02/26/25 09:09	10
2,2-Dichloropropane	ND		10	3.2	ug/L			02/26/25 09:09	10
cis-1,2-Dichloroethene	ND		10	3.5	ug/L			02/26/25 09:09	10
Chlorobromomethane	ND		10	2.9	ug/L			02/26/25 09:09	10
Chloroform	230		10	2.6	ug/L			02/26/25 09:09	10
1,1,1-Trichloroethane	ND		10	3.9	ug/L			02/26/25 09:09	10
Carbon tetrachloride	ND		10	3.0	ug/L			02/26/25 09:09	10
1,1-Dichloropropene	ND		10	2.9	ug/L			02/26/25 09:09	10
Benzene	ND		10	2.4	ug/L			02/26/25 09:09	10
1,2-Dichloroethane	ND		10	4.2	ug/L			02/26/25 09:09	10
Trichloroethene	ND		10	2.6	ug/L			02/26/25 09:09	10
1,2-Dichloropropane	ND		10	1.8	ug/L			02/26/25 09:09	10
4-Methyl-2-pentanone (MIBK)	ND		50	25	ug/L			02/26/25 09:09	10
Dibromomethane	ND		10	3.4	ug/L			02/26/25 09:09	10
Dichlorobromomethane	ND		10	2.9	ug/L			02/26/25 09:09	10
cis-1,3-Dichloropropene	ND		10	4.2	ug/L			02/26/25 09:09	10
Toluene	ND		10	3.9	ug/L			02/26/25 09:09	10
trans-1,3-Dichloropropene	ND		10	4.1	ug/L			02/26/25 09:09	10
1,1,2-Trichloroethane	ND		10	2.4	ug/L			02/26/25 09:09	10
Tetrachloroethene	ND		10	4.1	ug/L			02/26/25 09:09	10
1,3-Dichloropropane	ND		10	3.5	ug/L			02/26/25 09:09	10
Chlorodibromomethane	ND		10	4.3	ug/L			02/26/25 09:09	10
Ethylene Dibromide	ND		10	4.0	ug/L			02/26/25 09:09	10
Chlorobenzene	ND		10	4.4	ug/L			02/26/25 09:09	10
1,1,1,2-Tetrachloroethane	ND		10	1.8	ug/L			02/26/25 09:09	10
Ethylbenzene	ND		10	5.0	ug/L			02/26/25 09:09	10
m-Xylene & p-Xylene	ND		20	5.3	ug/L			02/26/25 09:09	10
o-Xylene	ND		10	3.9	ug/L			02/26/25 09:09	10
Styrene	ND		10	5.3	ug/L			02/26/25 09:09	10
Bromoform	ND		10	5.1	ug/L			02/26/25 09:09	10
Isopropylbenzene	ND		10	4.4	ug/L			02/26/25 09:09	10
Bromobenzene	ND		10	4.3	ug/L			02/26/25 09:09	10
1,1,2,2-Tetrachloroethane	ND		10	5.2	ug/L			02/26/25 09:09	10
1,2,3-Trichloropropane	ND		10	4.1	ug/L			02/26/25 09:09	10
N-Propylbenzene	ND		10	5.0	ug/L			02/26/25 09:09	10
2-Chlorotoluene	ND		10	5.1	ug/L			02/26/25 09:09	10

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: MWA-58d-021925

Lab Sample ID: 580-148198-10

Date Collected: 02/19/25 10:53

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		10	3.8	ug/L			02/26/25 09:09	10
tert-Butylbenzene	ND		20	5.8	ug/L			02/26/25 09:09	10
1,2,4-Trimethylbenzene	ND		30	6.1	ug/L			02/26/25 09:09	10
sec-Butylbenzene	ND		10	4.9	ug/L			02/26/25 09:09	10
4-Isopropyltoluene	ND		10	2.8	ug/L			02/26/25 09:09	10
1,3-Dichlorobenzene	ND		10	4.8	ug/L			02/26/25 09:09	10
1,4-Dichlorobenzene	ND		10	4.6	ug/L			02/26/25 09:09	10
n-Butylbenzene	5.7	J B	10	4.4	ug/L			02/26/25 09:09	10
1,2-Dichlorobenzene	ND		10	4.6	ug/L			02/26/25 09:09	10
1,2-Dibromo-3-Chloropropane	ND		30	5.7	ug/L			02/26/25 09:09	10
1,2,4-Trichlorobenzene	ND		10	3.3	ug/L			02/26/25 09:09	10
Hexachlorobutadiene	ND		30	7.9	ug/L			02/26/25 09:09	10
Naphthalene	ND		30	9.3	ug/L			02/26/25 09:09	10
1,2,3-Trichlorobenzene	ND		20	4.3	ug/L			02/26/25 09:09	10
1,3,5-Trimethylbenzene	ND		10	5.5	ug/L			02/26/25 09:09	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	91		80 - 120		02/26/25 09:09	10
1,2-Dichloroethane-d4 (Surr)	108		80 - 120		02/26/25 09:09	10
4-Bromofluorobenzene (Surr)	96		80 - 120		02/26/25 09:09	10
Dibromofluoromethane (Surr)	111		80 - 120		02/26/25 09:09	10

Method: EPA 314.0 - Perchlorate (IC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	53000		2000	910	ug/L			02/27/25 17:31	1000

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	18000		1500	430	mg/L			03/05/25 16:33	1000

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: MWA-56d-021925

Lab Sample ID: 580-148198-11

Date Collected: 02/19/25 12:45

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		10	5.3	ug/L			02/26/25 09:32	10
Chloromethane	ND		10	2.8	ug/L			02/26/25 09:32	10
Vinyl chloride	ND		10	2.2	ug/L			02/26/25 09:32	10
Bromomethane	ND		10	2.1	ug/L			02/26/25 09:32	10
Chloroethane	ND		10	3.5	ug/L			02/26/25 09:32	10
Trichlorofluoromethane	ND		10	3.6	ug/L			02/26/25 09:32	10
Carbon disulfide	ND		10	5.3	ug/L			02/26/25 09:32	10
1,1-Dichloroethene	ND		10	2.8	ug/L			02/26/25 09:32	10
Acetone	ND		150	32	ug/L			02/26/25 09:32	10
Methylene Chloride	ND		50	14	ug/L			02/26/25 09:32	10
Methyl tert-butyl ether	ND		10	4.4	ug/L			02/26/25 09:32	10
trans-1,2-Dichloroethene	ND		10	3.9	ug/L			02/26/25 09:32	10
1,1-Dichloroethane	ND		10	2.2	ug/L			02/26/25 09:32	10
2-Butanone (MEK)	ND		150	47	ug/L			02/26/25 09:32	10
2,2-Dichloropropane	ND		10	3.2	ug/L			02/26/25 09:32	10
cis-1,2-Dichloroethene	ND		10	3.5	ug/L			02/26/25 09:32	10
Chlorobromomethane	ND		10	2.9	ug/L			02/26/25 09:32	10
Chloroform	160		10	2.6	ug/L			02/26/25 09:32	10
1,1,1-Trichloroethane	ND		10	3.9	ug/L			02/26/25 09:32	10
Carbon tetrachloride	ND		10	3.0	ug/L			02/26/25 09:32	10
1,1-Dichloropropene	ND		10	2.9	ug/L			02/26/25 09:32	10
Benzene	ND		10	2.4	ug/L			02/26/25 09:32	10
1,2-Dichloroethane	ND		10	4.2	ug/L			02/26/25 09:32	10
Trichloroethene	ND		10	2.6	ug/L			02/26/25 09:32	10
1,2-Dichloropropane	ND		10	1.8	ug/L			02/26/25 09:32	10
4-Methyl-2-pentanone (MIBK)	ND		50	25	ug/L			02/26/25 09:32	10
Dibromomethane	ND		10	3.4	ug/L			02/26/25 09:32	10
Dichlorobromomethane	ND		10	2.9	ug/L			02/26/25 09:32	10
cis-1,3-Dichloropropene	ND		10	4.2	ug/L			02/26/25 09:32	10
Toluene	ND		10	3.9	ug/L			02/26/25 09:32	10
trans-1,3-Dichloropropene	ND		10	4.1	ug/L			02/26/25 09:32	10
1,1,2-Trichloroethane	ND		10	2.4	ug/L			02/26/25 09:32	10
Tetrachloroethene	ND		10	4.1	ug/L			02/26/25 09:32	10
1,3-Dichloropropane	ND		10	3.5	ug/L			02/26/25 09:32	10
Chlorodibromomethane	ND		10	4.3	ug/L			02/26/25 09:32	10
Ethylene Dibromide	ND		10	4.0	ug/L			02/26/25 09:32	10
Chlorobenzene	ND		10	4.4	ug/L			02/26/25 09:32	10
1,1,1,2-Tetrachloroethane	ND		10	1.8	ug/L			02/26/25 09:32	10
Ethylbenzene	ND		10	5.0	ug/L			02/26/25 09:32	10
m-Xylene & p-Xylene	ND		20	5.3	ug/L			02/26/25 09:32	10
o-Xylene	ND		10	3.9	ug/L			02/26/25 09:32	10
Styrene	ND		10	5.3	ug/L			02/26/25 09:32	10
Bromoform	ND		10	5.1	ug/L			02/26/25 09:32	10
Isopropylbenzene	ND		10	4.4	ug/L			02/26/25 09:32	10
Bromobenzene	ND		10	4.3	ug/L			02/26/25 09:32	10
1,1,2,2-Tetrachloroethane	ND		10	5.2	ug/L			02/26/25 09:32	10
1,2,3-Trichloropropane	ND		10	4.1	ug/L			02/26/25 09:32	10
N-Propylbenzene	ND		10	5.0	ug/L			02/26/25 09:32	10
2-Chlorotoluene	ND		10	5.1	ug/L			02/26/25 09:32	10

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: MWA-56d-021925

Lab Sample ID: 580-148198-11

Date Collected: 02/19/25 12:45

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		10	3.8	ug/L			02/26/25 09:32	10
tert-Butylbenzene	ND		20	5.8	ug/L			02/26/25 09:32	10
1,2,4-Trimethylbenzene	ND		30	6.1	ug/L			02/26/25 09:32	10
sec-Butylbenzene	ND		10	4.9	ug/L			02/26/25 09:32	10
4-Isopropyltoluene	ND		10	2.8	ug/L			02/26/25 09:32	10
1,3-Dichlorobenzene	ND		10	4.8	ug/L			02/26/25 09:32	10
1,4-Dichlorobenzene	ND		10	4.6	ug/L			02/26/25 09:32	10
n-Butylbenzene	5.7	J B	10	4.4	ug/L			02/26/25 09:32	10
1,2-Dichlorobenzene	ND		10	4.6	ug/L			02/26/25 09:32	10
1,2-Dibromo-3-Chloropropane	ND		30	5.7	ug/L			02/26/25 09:32	10
1,2,4-Trichlorobenzene	ND		10	3.3	ug/L			02/26/25 09:32	10
Hexachlorobutadiene	ND		30	7.9	ug/L			02/26/25 09:32	10
Naphthalene	ND		30	9.3	ug/L			02/26/25 09:32	10
1,2,3-Trichlorobenzene	ND		20	4.3	ug/L			02/26/25 09:32	10
1,3,5-Trimethylbenzene	ND		10	5.5	ug/L			02/26/25 09:32	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	91		80 - 120		02/26/25 09:32	10
1,2-Dichloroethane-d4 (Surr)	108		80 - 120		02/26/25 09:32	10
4-Bromofluorobenzene (Surr)	93		80 - 120		02/26/25 09:32	10
Dibromofluoromethane (Surr)	112		80 - 120		02/26/25 09:32	10

Method: EPA 314.0 - Perchlorate (IC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	13000		800	360	ug/L			02/27/25 17:52	400

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	13000		1500	430	mg/L			03/05/25 16:57	1000

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: PA-31-021925

Lab Sample ID: 580-148198-12

Date Collected: 02/19/25 14:29

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			02/26/25 04:30	1
Chloromethane	ND		0.50	0.14	ug/L			02/26/25 04:30	1
Vinyl chloride	ND		0.10	0.040	ug/L			02/26/25 04:30	1
Bromomethane	ND		0.50	0.13	ug/L			02/26/25 04:30	1
Chloroethane	ND		0.50	0.24	ug/L			02/26/25 04:30	1
Carbon disulfide	ND		0.40	0.20	ug/L			02/26/25 04:30	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			02/26/25 04:30	1
Acetone	ND		10	3.1	ug/L			02/26/25 04:30	1
Methylene Chloride	ND		5.0	1.2	ug/L			02/26/25 04:30	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			02/26/25 04:30	1
2-Butanone (MEK)	ND		10	2.5	ug/L			02/26/25 04:30	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			02/26/25 04:30	1
1,1-Dichloroethane	0.19	J	0.20	0.064	ug/L			02/26/25 04:30	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			02/26/25 04:30	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			02/26/25 04:30	1
Chlorobromomethane	ND		0.20	0.050	ug/L			02/26/25 04:30	1
Chloroform	0.16	J	0.20	0.030	ug/L			02/26/25 04:30	1
1,1,1-Trichloroethane	0.22		0.20	0.025	ug/L			02/26/25 04:30	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			02/26/25 04:30	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			02/26/25 04:30	1
Benzene	ND		0.20	0.030	ug/L			02/26/25 04:30	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			02/26/25 04:30	1
Trichloroethene	0.081	J	0.20	0.066	ug/L			02/26/25 04:30	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			02/26/25 04:30	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			02/26/25 04:30	1
Dibromomethane	ND		0.20	0.062	ug/L			02/26/25 04:30	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			02/26/25 04:30	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			02/26/25 04:30	1
Toluene	ND		0.20	0.050	ug/L			02/26/25 04:30	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			02/26/25 04:30	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			02/26/25 04:30	1
Tetrachloroethene	0.20	J	0.24	0.084	ug/L			02/26/25 04:30	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			02/26/25 04:30	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			02/26/25 04:30	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			02/26/25 04:30	1
Chlorobenzene	ND		0.20	0.060	ug/L			02/26/25 04:30	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			02/26/25 04:30	1
Ethylbenzene	ND		0.20	0.082	ug/L			02/26/25 04:30	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			02/26/25 04:30	1
o-Xylene	ND		0.50	0.23	ug/L			02/26/25 04:30	1
Styrene	ND		1.0	0.33	ug/L			02/26/25 04:30	1
Bromoform	ND		0.50	0.16	ug/L			02/26/25 04:30	1
Isopropylbenzene	ND		1.0	0.27	ug/L			02/26/25 04:30	1
Bromobenzene	ND		0.20	0.038	ug/L			02/26/25 04:30	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			02/26/25 04:30	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			02/26/25 04:30	1
N-Propylbenzene	ND		0.30	0.091	ug/L			02/26/25 04:30	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			02/26/25 04:30	1
4-Chlorotoluene	ND		0.30	0.12	ug/L			02/26/25 04:30	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: PA-31-021925

Lab Sample ID: 580-148198-12

Date Collected: 02/19/25 14:29

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			02/26/25 04:30	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			02/26/25 04:30	1
1,2,4-Trimethylbenzene	0.26	J B	0.55	0.23	ug/L			02/26/25 04:30	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			02/26/25 04:30	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			02/26/25 04:30	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			02/26/25 04:30	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			02/26/25 04:30	1
n-Butylbenzene	0.58	J B	1.0	0.35	ug/L			02/26/25 04:30	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			02/26/25 04:30	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			02/26/25 04:30	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			02/26/25 04:30	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			02/26/25 04:30	1
Naphthalene	ND		1.5	0.52	ug/L			02/26/25 04:30	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			02/26/25 04:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	92		80 - 120		02/26/25 04:30	1
Dibromofluoromethane (Surr)	108		80 - 120		02/26/25 04:30	1
4-Bromofluorobenzene (Surr)	98		80 - 120		02/26/25 04:30	1
1,2-Dichloroethane-d4 (Surr)	104		80 - 120		02/26/25 04:30	1

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.71	B	0.20	0.035	ug/L			03/01/25 05:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		03/01/25 05:36	1
Dibromofluoromethane (Surr)	118		80 - 120		03/01/25 05:36	1
4-Bromofluorobenzene (Surr)	101		80 - 120		03/01/25 05:36	1
1,2-Dichloroethane-d4 (Surr)	112		80 - 120		03/01/25 05:36	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		20	9.1	ug/L			02/26/25 20:42	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	3.4		1.5	0.43	mg/L			03/05/25 17:09	1

Client Sample Results

Client: ERM-West

Job ID: 580-148198-1

Project/Site: Arkema - Q1 2025 Groundwater Event

Client Sample ID: RB-01-022025

Lab Sample ID: 580-148198-13

Date Collected: 02/20/25 06:01

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			02/26/25 15:34	1
Chloromethane	ND		0.50	0.14	ug/L			02/26/25 15:34	1
Vinyl chloride	ND		0.10	0.040	ug/L			02/26/25 15:34	1
Bromomethane	ND		0.50	0.13	ug/L			02/26/25 15:34	1
Chloroethane	ND		0.50	0.24	ug/L			02/26/25 15:34	1
Carbon disulfide	ND		0.40	0.20	ug/L			02/26/25 15:34	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			02/26/25 15:34	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			02/26/25 15:34	1
Acetone	3.3	J	10	3.1	ug/L			02/26/25 15:34	1
Methylene Chloride	ND		5.0	1.2	ug/L			02/26/25 15:34	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			02/26/25 15:34	1
2-Butanone (MEK)	ND		10	2.5	ug/L			02/26/25 15:34	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			02/26/25 15:34	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			02/26/25 15:34	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			02/26/25 15:34	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			02/26/25 15:34	1
Chlorobromomethane	ND		0.20	0.050	ug/L			02/26/25 15:34	1
Chloroform	ND		0.20	0.030	ug/L			02/26/25 15:34	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			02/26/25 15:34	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			02/26/25 15:34	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			02/26/25 15:34	1
Benzene	ND		0.20	0.030	ug/L			02/26/25 15:34	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			02/26/25 15:34	1
Trichloroethene	ND		0.20	0.066	ug/L			02/26/25 15:34	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			02/26/25 15:34	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			02/26/25 15:34	1
Dibromomethane	ND		0.20	0.062	ug/L			02/26/25 15:34	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			02/26/25 15:34	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			02/26/25 15:34	1
Toluene	0.061	J	0.20	0.050	ug/L			02/26/25 15:34	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			02/26/25 15:34	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			02/26/25 15:34	1
Tetrachloroethene	ND		0.24	0.084	ug/L			02/26/25 15:34	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			02/26/25 15:34	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			02/26/25 15:34	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			02/26/25 15:34	1
Chlorobenzene	ND		0.20	0.060	ug/L			02/26/25 15:34	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			02/26/25 15:34	1
Ethylbenzene	ND		0.20	0.082	ug/L			02/26/25 15:34	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			02/26/25 15:34	1
o-Xylene	ND		0.50	0.23	ug/L			02/26/25 15:34	1
Styrene	ND		1.0	0.33	ug/L			02/26/25 15:34	1
Bromoform	ND		0.50	0.16	ug/L			02/26/25 15:34	1
Isopropylbenzene	0.45	J B	1.0	0.27	ug/L			02/26/25 15:34	1
Bromobenzene	ND		0.20	0.038	ug/L			02/26/25 15:34	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			02/26/25 15:34	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			02/26/25 15:34	1
N-Propylbenzene	ND		0.30	0.091	ug/L			02/26/25 15:34	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			02/26/25 15:34	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: RB-01-022025

Lab Sample ID: 580-148198-13

Date Collected: 02/20/25 06:01

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		0.30	0.12	ug/L			02/26/25 15:34	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			02/26/25 15:34	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			02/26/25 15:34	1
1,2,4-Trimethylbenzene	0.26	J B	0.55	0.23	ug/L			02/26/25 15:34	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			02/26/25 15:34	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			02/26/25 15:34	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			02/26/25 15:34	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			02/26/25 15:34	1
n-Butylbenzene	0.57	J B	1.0	0.35	ug/L			02/26/25 15:34	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			02/26/25 15:34	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			02/26/25 15:34	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			02/26/25 15:34	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			02/26/25 15:34	1
Naphthalene	ND		1.5	0.52	ug/L			02/26/25 15:34	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			02/26/25 15:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	91		80 - 120		02/26/25 15:34	1
Dibromofluoromethane (Surr)	110		80 - 120		02/26/25 15:34	1
4-Bromofluorobenzene (Surr)	98		80 - 120		02/26/25 15:34	1
1,2-Dichloroethane-d4 (Surr)	108		80 - 120		02/26/25 15:34	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		2.0	0.91	ug/L			02/26/25 21:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	0.47	J	1.5	0.43	mg/L			03/05/25 17:33	1

Client Sample Results

Client: ERM-West

Job ID: 580-148198-1

Project/Site: Arkema - Q1 2025 Groundwater Event

Client Sample ID: PA-24d-021925

Lab Sample ID: 580-148198-14

Date Collected: 02/19/25 14:18

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0	0.53	ug/L			02/26/25 04:53	1
Chloromethane	ND		1.0	0.28	ug/L			02/26/25 04:53	1
Vinyl chloride	ND		1.0	0.22	ug/L			02/26/25 04:53	1
Bromomethane	ND		1.0	0.21	ug/L			02/26/25 04:53	1
Chloroethane	ND		1.0	0.35	ug/L			02/26/25 04:53	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			02/26/25 04:53	1
Carbon disulfide	ND		1.0	0.53	ug/L			02/26/25 04:53	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			02/26/25 04:53	1
Acetone	ND		15	3.2	ug/L			02/26/25 04:53	1
Methylene Chloride	ND		5.0	1.4	ug/L			02/26/25 04:53	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			02/26/25 04:53	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			02/26/25 04:53	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			02/26/25 04:53	1
2-Butanone (MEK)	ND		15	4.7	ug/L			02/26/25 04:53	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			02/26/25 04:53	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			02/26/25 04:53	1
Chlorobromomethane	ND		1.0	0.29	ug/L			02/26/25 04:53	1
Chloroform	ND		1.0	0.26	ug/L			02/26/25 04:53	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			02/26/25 04:53	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			02/26/25 04:53	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			02/26/25 04:53	1
Benzene	ND		1.0	0.24	ug/L			02/26/25 04:53	1
1,2-Dichloroethane	0.50	J	1.0	0.42	ug/L			02/26/25 04:53	1
Trichloroethene	ND		1.0	0.26	ug/L			02/26/25 04:53	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			02/26/25 04:53	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			02/26/25 04:53	1
Dibromomethane	ND		1.0	0.34	ug/L			02/26/25 04:53	1
Dichlorobromomethane	ND		1.0	0.29	ug/L			02/26/25 04:53	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			02/26/25 04:53	1
Toluene	ND		1.0	0.39	ug/L			02/26/25 04:53	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			02/26/25 04:53	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			02/26/25 04:53	1
Tetrachloroethene	ND		1.0	0.41	ug/L			02/26/25 04:53	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			02/26/25 04:53	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			02/26/25 04:53	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			02/26/25 04:53	1
Chlorobenzene	ND		1.0	0.44	ug/L			02/26/25 04:53	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			02/26/25 04:53	1
Ethylbenzene	ND		1.0	0.50	ug/L			02/26/25 04:53	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			02/26/25 04:53	1
o-Xylene	ND		1.0	0.39	ug/L			02/26/25 04:53	1
Styrene	ND		1.0	0.53	ug/L			02/26/25 04:53	1
Bromoform	ND		1.0	0.51	ug/L			02/26/25 04:53	1
Isopropylbenzene	0.45	J B	1.0	0.44	ug/L			02/26/25 04:53	1
Bromobenzene	ND		1.0	0.43	ug/L			02/26/25 04:53	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			02/26/25 04:53	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			02/26/25 04:53	1
N-Propylbenzene	ND		1.0	0.50	ug/L			02/26/25 04:53	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			02/26/25 04:53	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: PA-24d-021925

Lab Sample ID: 580-148198-14

Date Collected: 02/19/25 14:18

Matrix: Water

Date Received: 02/20/25 16:58

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		1.0	0.38	ug/L			02/26/25 04:53	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			02/26/25 04:53	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			02/26/25 04:53	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			02/26/25 04:53	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			02/26/25 04:53	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			02/26/25 04:53	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			02/26/25 04:53	1
n-Butylbenzene	ND		1.0	0.44	ug/L			02/26/25 04:53	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			02/26/25 04:53	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			02/26/25 04:53	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			02/26/25 04:53	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			02/26/25 04:53	1
Naphthalene	ND		3.0	0.93	ug/L			02/26/25 04:53	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			02/26/25 04:53	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			02/26/25 04:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	91		80 - 120		02/26/25 04:53	1
1,2-Dichloroethane-d4 (Surr)	112		80 - 120		02/26/25 04:53	1
4-Bromofluorobenzene (Surr)	96		80 - 120		02/26/25 04:53	1
Dibromofluoromethane (Surr)	110		80 - 120		02/26/25 04:53	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		200	91	ug/L			02/26/25 21:23	100

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	29000		1500	430	mg/L			03/05/25 18:09	1000

QC Sample Results

Client: ERM-West

Job ID: 580-148198-1

Project/Site: Arkema - Q1 2025 Groundwater Event

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

Lab Sample ID: MB 580-485769/10

Matrix: Water

Analysis Batch: 485769

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			02/25/25 14:57	1
Chloromethane	ND		0.50	0.14	ug/L			02/25/25 14:57	1
Vinyl chloride	ND		0.10	0.040	ug/L			02/25/25 14:57	1
Bromomethane	ND		0.50	0.13	ug/L			02/25/25 14:57	1
Chloroethane	ND		0.50	0.24	ug/L			02/25/25 14:57	1
Carbon disulfide	ND		0.40	0.20	ug/L			02/25/25 14:57	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			02/25/25 14:57	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			02/25/25 14:57	1
Acetone	9.15	J	10	3.1	ug/L			02/25/25 14:57	1
Methylene Chloride	3.40	J	5.0	1.2	ug/L			02/25/25 14:57	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			02/25/25 14:57	1
2-Butanone (MEK)	ND		10	2.5	ug/L			02/25/25 14:57	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			02/25/25 14:57	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			02/25/25 14:57	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			02/25/25 14:57	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			02/25/25 14:57	1
Chlorobromomethane	ND		0.20	0.050	ug/L			02/25/25 14:57	1
Chloroform	ND		0.20	0.030	ug/L			02/25/25 14:57	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			02/25/25 14:57	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			02/25/25 14:57	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			02/25/25 14:57	1
Benzene	ND		0.20	0.030	ug/L			02/25/25 14:57	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			02/25/25 14:57	1
Trichloroethene	ND		0.20	0.066	ug/L			02/25/25 14:57	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			02/25/25 14:57	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			02/25/25 14:57	1
Dibromomethane	ND		0.20	0.062	ug/L			02/25/25 14:57	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			02/25/25 14:57	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			02/25/25 14:57	1
Toluene	ND		0.20	0.050	ug/L			02/25/25 14:57	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			02/25/25 14:57	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			02/25/25 14:57	1
Tetrachloroethene	ND		0.24	0.084	ug/L			02/25/25 14:57	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			02/25/25 14:57	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			02/25/25 14:57	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			02/25/25 14:57	1
Chlorobenzene	ND		0.20	0.060	ug/L			02/25/25 14:57	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			02/25/25 14:57	1
Ethylbenzene	ND		0.20	0.082	ug/L			02/25/25 14:57	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			02/25/25 14:57	1
o-Xylene	ND		0.50	0.23	ug/L			02/25/25 14:57	1
Styrene	ND		1.0	0.33	ug/L			02/25/25 14:57	1
Bromoform	ND		0.50	0.16	ug/L			02/25/25 14:57	1
Isopropylbenzene	0.452	J	1.0	0.27	ug/L			02/25/25 14:57	1
Bromobenzene	ND		0.20	0.038	ug/L			02/25/25 14:57	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			02/25/25 14:57	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			02/25/25 14:57	1
N-Propylbenzene	ND		0.30	0.091	ug/L			02/25/25 14:57	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

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

Lab Sample ID: MB 580-485769/10

Matrix: Water

Analysis Batch: 485769

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorotoluene	ND		0.50	0.12	ug/L			02/25/25 14:57	1
4-Chlorotoluene	ND		0.30	0.12	ug/L			02/25/25 14:57	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			02/25/25 14:57	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			02/25/25 14:57	1
1,2,4-Trimethylbenzene	0.265	J	0.55	0.23	ug/L			02/25/25 14:57	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			02/25/25 14:57	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			02/25/25 14:57	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			02/25/25 14:57	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			02/25/25 14:57	1
n-Butylbenzene	0.578	J	1.0	0.35	ug/L			02/25/25 14:57	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			02/25/25 14:57	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			02/25/25 14:57	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			02/25/25 14:57	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			02/25/25 14:57	1
Naphthalene	ND		1.5	0.52	ug/L			02/25/25 14:57	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			02/25/25 14:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		80 - 120		02/25/25 14:57	1
Dibromofluoromethane (Surr)	100		80 - 120		02/25/25 14:57	1
4-Bromofluorobenzene (Surr)	98		80 - 120		02/25/25 14:57	1
1,2-Dichloroethane-d4 (Surr)	91		80 - 120		02/25/25 14:57	1

Lab Sample ID: LCS 580-485769/5

Matrix: Water

Analysis Batch: 485769

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dichlorodifluoromethane	5.00	3.87		ug/L		77	20 - 150
Chloromethane	5.00	4.22		ug/L		84	32 - 150
Vinyl chloride	5.00	4.38		ug/L		88	41 - 150
Bromomethane	5.00	4.45		ug/L		89	51 - 148
Chloroethane	5.00	4.28		ug/L		86	54 - 140
Carbon disulfide	5.00	4.75		ug/L		95	54 - 142
Trichlorofluoromethane	5.00	4.20		ug/L		84	60 - 132
1,1-Dichloroethene	5.00	5.20		ug/L		104	60 - 129
Acetone	25.0	28.6		ug/L		114	49 - 150
Methylene Chloride	5.00	13.4	*+	ug/L		269	40 - 142
Methyl tert-butyl ether	5.00	5.34		ug/L		107	61 - 131
2-Butanone (MEK)	25.0	27.5		ug/L		110	37 - 150
trans-1,2-Dichloroethene	5.00	5.32		ug/L		106	69 - 121
1,1-Dichloroethane	5.00	5.33		ug/L		107	74 - 120
2,2-Dichloropropane	5.00	6.04		ug/L		121	55 - 140
cis-1,2-Dichloroethene	5.00	5.28		ug/L		106	72 - 120
Chlorobromomethane	5.00	5.27		ug/L		105	79 - 121
Chloroform	5.00	4.78		ug/L		96	75 - 120
1,1,1-Trichloroethane	5.00	4.39		ug/L		88	70 - 121
Carbon tetrachloride	5.00	4.30		ug/L		86	66 - 130

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

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

Lab Sample ID: LCS 580-485769/5

Matrix: Water

Analysis Batch: 485769

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloropropene	5.00	4.85		ug/L		97	72 - 125
Benzene	5.00	5.34		ug/L		107	80 - 120
1,2-Dichloroethane	5.00	4.35		ug/L		87	74 - 127
Trichloroethene	5.00	5.11		ug/L		102	72 - 120
1,2-Dichloropropane	5.00	5.45		ug/L		109	69 - 130
4-Methyl-2-pentanone (MIBK)	25.0	25.9		ug/L		104	63 - 137
Dibromomethane	5.00	5.39		ug/L		108	65 - 141
Dichlorobromomethane	5.00	4.81		ug/L		96	74 - 131
cis-1,3-Dichloropropene	5.00	4.66		ug/L		93	77 - 131
Toluene	5.00	4.82		ug/L		96	80 - 126
trans-1,3-Dichloropropene	5.00	4.98		ug/L		100	71 - 138
1,1,2-Trichloroethane	5.00	4.89		ug/L		98	73 - 127
Tetrachloroethene	5.00	4.54		ug/L		91	75 - 124
1,3-Dichloropropane	5.00	4.82		ug/L		96	69 - 138
Chlorodibromomethane	5.00	4.41		ug/L		88	62 - 141
Ethylene Dibromide	5.00	4.94		ug/L		99	61 - 143
Chlorobenzene	5.00	4.78		ug/L		96	74 - 123
1,1,1,2-Tetrachloroethane	5.00	4.69		ug/L		94	69 - 127
Ethylbenzene	5.00	4.86		ug/L		97	80 - 124
m-Xylene & p-Xylene	5.00	4.82		ug/L		96	75 - 124
o-Xylene	5.00	4.83		ug/L		97	71 - 124
Styrene	5.00	4.86		ug/L		97	74 - 127
Bromoform	5.00	4.44		ug/L		89	48 - 127
Isopropylbenzene	5.00	5.05		ug/L		101	71 - 123
Bromobenzene	5.00	4.63		ug/L		93	74 - 130
1,1,2,2-Tetrachloroethane	5.00	4.89		ug/L		98	67 - 136
1,2,3-Trichloropropane	5.00	4.62		ug/L		92	67 - 135
N-Propylbenzene	5.00	4.70		ug/L		94	72 - 126
2-Chlorotoluene	5.00	5.06		ug/L		101	73 - 120
4-Chlorotoluene	5.00	5.12		ug/L		102	75 - 124
1,3,5-Trimethylbenzene	5.00	4.90		ug/L		98	75 - 123
tert-Butylbenzene	5.00	5.06		ug/L		101	70 - 129
1,2,4-Trimethylbenzene	5.00	4.57		ug/L		91	71 - 127
sec-Butylbenzene	5.00	4.78		ug/L		96	75 - 126
4-Isopropyltoluene	5.00	4.52		ug/L		90	78 - 125
1,3-Dichlorobenzene	5.00	4.85		ug/L		97	72 - 125
1,4-Dichlorobenzene	5.00	4.73		ug/L		95	71 - 129
n-Butylbenzene	5.00	4.65		ug/L		93	69 - 127
1,2-Dichlorobenzene	5.00	4.80		ug/L		96	72 - 129
1,2-Dibromo-3-Chloropropane	5.00	4.49		ug/L		90	55 - 135
1,2,4-Trichlorobenzene	5.00	4.88		ug/L		98	60 - 130
Hexachlorobutadiene	5.00	4.89		ug/L		98	63 - 130
Naphthalene	5.00	5.58		ug/L		112	54 - 137
1,2,3-Trichlorobenzene	5.00	4.77		ug/L		95	60 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	96		80 - 120

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

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

Lab Sample ID: LCS 580-485769/5

Matrix: Water

Analysis Batch: 485769

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		80 - 120
1,2-Dichloroethane-d4 (Surr)	87		80 - 120

Lab Sample ID: LCSD 580-485769/6

Matrix: Water

Analysis Batch: 485769

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dichlorodifluoromethane	5.00	4.09		ug/L		82	20 - 150	5	30
Chloromethane	5.00	4.45		ug/L		89	32 - 150	5	33
Vinyl chloride	5.00	4.81		ug/L		96	41 - 150	9	32
Bromomethane	5.00	4.63		ug/L		93	51 - 148	4	35
Chloroethane	5.00	4.29		ug/L		86	54 - 140	0	33
Carbon disulfide	5.00	4.86		ug/L		97	54 - 142	2	34
Trichlorofluoromethane	5.00	4.36		ug/L		87	60 - 132	4	32
1,1-Dichloroethene	5.00	5.20		ug/L		104	60 - 129	0	29
Acetone	25.0	29.6		ug/L		118	49 - 150	3	24
Methylene Chloride	5.00	14.3	*+	ug/L		286	40 - 142	6	25
Methyl tert-butyl ether	5.00	5.34		ug/L		107	61 - 131	0	27
2-Butanone (MEK)	25.0	28.3		ug/L		113	37 - 150	3	35
trans-1,2-Dichloroethene	5.00	5.42		ug/L		108	69 - 121	2	27
1,1-Dichloroethane	5.00	5.50		ug/L		110	74 - 120	3	26
2,2-Dichloropropane	5.00	6.04		ug/L		121	55 - 140	0	31
cis-1,2-Dichloroethene	5.00	5.40		ug/L		108	72 - 120	2	22
Chlorobromomethane	5.00	5.58		ug/L		112	79 - 121	6	20
Chloroform	5.00	4.84		ug/L		97	75 - 120	1	21
1,1,1-Trichloroethane	5.00	4.41		ug/L		88	70 - 121	0	24
Carbon tetrachloride	5.00	4.34		ug/L		87	66 - 130	1	24
1,1-Dichloropropene	5.00	4.86		ug/L		97	72 - 125	0	23
Benzene	5.00	5.42		ug/L		108	80 - 120	1	22
1,2-Dichloroethane	5.00	4.44		ug/L		89	74 - 127	2	21
Trichloroethene	5.00	5.21		ug/L		104	72 - 120	2	22
1,2-Dichloropropane	5.00	5.60		ug/L		112	69 - 130	3	22
4-Methyl-2-pentanone (MIBK)	25.0	24.9		ug/L		100	63 - 137	4	26
Dibromomethane	5.00	5.40		ug/L		108	65 - 141	0	22
Dichlorobromomethane	5.00	4.69		ug/L		94	74 - 131	3	21
cis-1,3-Dichloropropene	5.00	4.67		ug/L		93	77 - 131	0	24
Toluene	5.00	4.83		ug/L		97	80 - 126	0	20
trans-1,3-Dichloropropene	5.00	5.01		ug/L		100	71 - 138	1	26
1,1,2-Trichloroethane	5.00	4.90		ug/L		98	73 - 127	0	22
Tetrachloroethene	5.00	4.43		ug/L		89	75 - 124	2	20
1,3-Dichloropropane	5.00	4.92		ug/L		98	69 - 138	2	19
Chlorodibromomethane	5.00	4.49		ug/L		90	62 - 141	2	22
Ethylene Dibromide	5.00	4.92		ug/L		98	61 - 143	0	22
Chlorobenzene	5.00	4.85		ug/L		97	74 - 123	1	21
1,1,1,2-Tetrachloroethane	5.00	4.78		ug/L		96	69 - 127	2	22
Ethylbenzene	5.00	4.83		ug/L		97	80 - 124	1	22
m-Xylene & p-Xylene	5.00	4.73		ug/L		95	75 - 124	2	22

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QC Sample Results

Client: ERM-West

Job ID: 580-148198-1

Project/Site: Arkema - Q1 2025 Groundwater Event

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

Lab Sample ID: LCSD 580-485769/6

Matrix: Water

Analysis Batch: 485769

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
o-Xylene	5.00	4.85		ug/L		97	71 - 124	1	23
Styrene	5.00	4.72		ug/L		94	74 - 127	3	22
Bromoform	5.00	4.47		ug/L		89	48 - 127	1	23
Isopropylbenzene	5.00	5.08		ug/L		102	71 - 123	1	23
Bromobenzene	5.00	4.59		ug/L		92	74 - 130	1	23
1,1,2,2-Tetrachloroethane	5.00	4.71		ug/L		94	67 - 136	4	24
1,2,3-Trichloropropane	5.00	4.40		ug/L		88	67 - 135	5	25
N-Propylbenzene	5.00	4.61		ug/L		92	72 - 126	2	20
2-Chlorotoluene	5.00	5.01		ug/L		100	73 - 120	1	22
4-Chlorotoluene	5.00	5.15		ug/L		103	75 - 124	1	23
1,3,5-Trimethylbenzene	5.00	4.82		ug/L		96	75 - 123	2	23
tert-Butylbenzene	5.00	4.82		ug/L		96	70 - 129	5	24
1,2,4-Trimethylbenzene	5.00	4.51		ug/L		90	71 - 127	1	23
sec-Butylbenzene	5.00	4.65		ug/L		93	75 - 126	3	23
4-Isopropyltoluene	5.00	4.49		ug/L		90	78 - 125	1	24
1,3-Dichlorobenzene	5.00	4.82		ug/L		96	72 - 125	1	22
1,4-Dichlorobenzene	5.00	4.69		ug/L		94	71 - 129	1	22
n-Butylbenzene	5.00	4.57		ug/L		91	69 - 127	2	24
1,2-Dichlorobenzene	5.00	4.88		ug/L		98	72 - 129	2	22
1,2-Dibromo-3-Chloropropane	5.00	4.46		ug/L		89	55 - 135	1	29
1,2,4-Trichlorobenzene	5.00	4.75		ug/L		95	60 - 130	3	26
Hexachlorobutadiene	5.00	4.66		ug/L		93	63 - 130	5	26
Naphthalene	5.00	5.26		ug/L		105	54 - 137	6	28
1,2,3-Trichlorobenzene	5.00	4.42		ug/L		88	60 - 136	8	28

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	97		80 - 120
4-Bromofluorobenzene (Surr)	104		80 - 120
1,2-Dichloroethane-d4 (Surr)	88		80 - 120

Lab Sample ID: MB 580-485845/7

Matrix: Water

Analysis Batch: 485845

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			02/26/25 02:11	1
Chloromethane	ND		0.50	0.14	ug/L			02/26/25 02:11	1
Vinyl chloride	ND		0.10	0.040	ug/L			02/26/25 02:11	1
Bromomethane	ND		0.50	0.13	ug/L			02/26/25 02:11	1
Chloroethane	ND		0.50	0.24	ug/L			02/26/25 02:11	1
Carbon disulfide	ND		0.40	0.20	ug/L			02/26/25 02:11	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			02/26/25 02:11	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			02/26/25 02:11	1
Acetone	ND		10	3.1	ug/L			02/26/25 02:11	1
Methylene Chloride	7.39		5.0	1.2	ug/L			02/26/25 02:11	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			02/26/25 02:11	1
2-Butanone (MEK)	ND		10	2.5	ug/L			02/26/25 02:11	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

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

Lab Sample ID: MB 580-485845/7

Matrix: Water

Analysis Batch: 485845

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			02/26/25 02:11	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			02/26/25 02:11	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			02/26/25 02:11	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			02/26/25 02:11	1
Chlorobromomethane	ND		0.20	0.050	ug/L			02/26/25 02:11	1
Chloroform	ND		0.20	0.030	ug/L			02/26/25 02:11	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			02/26/25 02:11	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			02/26/25 02:11	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			02/26/25 02:11	1
Benzene	ND		0.20	0.030	ug/L			02/26/25 02:11	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			02/26/25 02:11	1
Trichloroethene	ND		0.20	0.066	ug/L			02/26/25 02:11	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			02/26/25 02:11	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			02/26/25 02:11	1
Dibromomethane	ND		0.20	0.062	ug/L			02/26/25 02:11	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			02/26/25 02:11	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			02/26/25 02:11	1
Toluene	ND		0.20	0.050	ug/L			02/26/25 02:11	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			02/26/25 02:11	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			02/26/25 02:11	1
Tetrachloroethene	ND		0.24	0.084	ug/L			02/26/25 02:11	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			02/26/25 02:11	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			02/26/25 02:11	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			02/26/25 02:11	1
Chlorobenzene	ND		0.20	0.060	ug/L			02/26/25 02:11	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			02/26/25 02:11	1
Ethylbenzene	ND		0.20	0.082	ug/L			02/26/25 02:11	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			02/26/25 02:11	1
o-Xylene	ND		0.50	0.23	ug/L			02/26/25 02:11	1
Styrene	ND		1.0	0.33	ug/L			02/26/25 02:11	1
Bromoform	ND		0.50	0.16	ug/L			02/26/25 02:11	1
Isopropylbenzene	0.455	J	1.0	0.27	ug/L			02/26/25 02:11	1
Bromobenzene	0.0386	J	0.20	0.038	ug/L			02/26/25 02:11	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			02/26/25 02:11	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			02/26/25 02:11	1
N-Propylbenzene	ND		0.30	0.091	ug/L			02/26/25 02:11	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			02/26/25 02:11	1
4-Chlorotoluene	ND		0.30	0.12	ug/L			02/26/25 02:11	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			02/26/25 02:11	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			02/26/25 02:11	1
1,2,4-Trimethylbenzene	0.254	J	0.55	0.23	ug/L			02/26/25 02:11	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			02/26/25 02:11	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			02/26/25 02:11	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			02/26/25 02:11	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			02/26/25 02:11	1
n-Butylbenzene	0.580	J	1.0	0.35	ug/L			02/26/25 02:11	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			02/26/25 02:11	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			02/26/25 02:11	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			02/26/25 02:11	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

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

Lab Sample ID: MB 580-485845/7

Matrix: Water

Analysis Batch: 485845

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	ND		0.50	0.16	ug/L			02/26/25 02:11	1
Naphthalene	ND		1.5	0.52	ug/L			02/26/25 02:11	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			02/26/25 02:11	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	93		80 - 120					02/26/25 02:11	1
Dibromofluoromethane (Surr)	103		80 - 120					02/26/25 02:11	1
4-Bromofluorobenzene (Surr)	96		80 - 120					02/26/25 02:11	1
1,2-Dichloroethane-d4 (Surr)	95		80 - 120					02/26/25 02:11	1

Lab Sample ID: LCS 580-485845/4

Matrix: Water

Analysis Batch: 485845

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dichlorodifluoromethane	5.00	3.30		ug/L		66	20 - 150
Chloromethane	5.00	4.28		ug/L		86	32 - 150
Vinyl chloride	5.00	4.26		ug/L		85	41 - 150
Bromomethane	5.00	4.30		ug/L		86	51 - 148
Chloroethane	5.00	4.07		ug/L		81	54 - 140
Carbon disulfide	5.00	4.41		ug/L		88	54 - 142
Trichlorofluoromethane	5.00	3.61		ug/L		72	60 - 132
1,1-Dichloroethene	5.00	4.57		ug/L		91	60 - 129
Acetone	25.0	23.2		ug/L		93	49 - 150
Methylene Chloride	5.00	6.57		ug/L		131	40 - 142
Methyl tert-butyl ether	5.00	4.86		ug/L		97	61 - 131
2-Butanone (MEK)	25.0	24.8		ug/L		99	37 - 150
trans-1,2-Dichloroethene	5.00	4.90		ug/L		98	69 - 121
1,1-Dichloroethane	5.00	5.18		ug/L		104	74 - 120
2,2-Dichloropropane	5.00	4.65		ug/L		93	55 - 140
cis-1,2-Dichloroethene	5.00	5.06		ug/L		101	72 - 120
Chlorobromomethane	5.00	5.12		ug/L		102	79 - 121
Chloroform	5.00	4.73		ug/L		95	75 - 120
1,1,1-Trichloroethane	5.00	4.20		ug/L		84	70 - 121
Carbon tetrachloride	5.00	3.92		ug/L		78	66 - 130
1,1-Dichloropropene	5.00	4.46		ug/L		89	72 - 125
Benzene	5.00	5.11		ug/L		102	80 - 120
1,2-Dichloroethane	5.00	4.33		ug/L		87	74 - 127
Trichloroethene	5.00	4.98		ug/L		100	72 - 120
1,2-Dichloropropane	5.00	5.24		ug/L		105	69 - 130
4-Methyl-2-pentanone (MIBK)	25.0	21.7		ug/L		87	63 - 137
Dibromomethane	5.00	4.94		ug/L		99	65 - 141
Dichlorobromomethane	5.00	4.83		ug/L		97	74 - 131
cis-1,3-Dichloropropene	5.00	4.26		ug/L		85	77 - 131
Toluene	5.00	4.51		ug/L		90	80 - 126
trans-1,3-Dichloropropene	5.00	4.50		ug/L		90	71 - 138
1,1,2-Trichloroethane	5.00	4.64		ug/L		93	73 - 127
Tetrachloroethene	5.00	4.04		ug/L		81	75 - 124

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

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

Lab Sample ID: LCS 580-485845/4

Matrix: Water

Analysis Batch: 485845

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,3-Dichloropropane	5.00	4.62		ug/L		92	69 - 138
Chlorodibromomethane	5.00	4.28		ug/L		86	62 - 141
Ethylene Dibromide	5.00	4.52		ug/L		90	61 - 143
Chlorobenzene	5.00	4.60		ug/L		92	74 - 123
1,1,1,2-Tetrachloroethane	5.00	4.59		ug/L		92	69 - 127
Ethylbenzene	5.00	4.56		ug/L		91	80 - 124
m-Xylene & p-Xylene	5.00	4.38		ug/L		88	75 - 124
o-Xylene	5.00	4.46		ug/L		89	71 - 124
Styrene	5.00	4.50		ug/L		90	74 - 127
Bromoform	5.00	4.25		ug/L		85	48 - 127
Isopropylbenzene	5.00	4.69		ug/L		94	71 - 123
Bromobenzene	5.00	4.31		ug/L		86	74 - 130
1,1,2,2-Tetrachloroethane	5.00	4.43		ug/L		89	67 - 136
1,2,3-Trichloropropane	5.00	4.29		ug/L		86	67 - 135
N-Propylbenzene	5.00	4.32		ug/L		86	72 - 126
2-Chlorotoluene	5.00	4.64		ug/L		93	73 - 120
4-Chlorotoluene	5.00	4.72		ug/L		94	75 - 124
1,3,5-Trimethylbenzene	5.00	4.51		ug/L		90	75 - 123
tert-Butylbenzene	5.00	4.48		ug/L		90	70 - 129
1,2,4-Trimethylbenzene	5.00	4.19		ug/L		84	71 - 127
sec-Butylbenzene	5.00	4.26		ug/L		85	75 - 126
4-Isopropyltoluene	5.00	4.08		ug/L		82	78 - 125
1,3-Dichlorobenzene	5.00	4.54		ug/L		91	72 - 125
1,4-Dichlorobenzene	5.00	4.41		ug/L		88	71 - 129
n-Butylbenzene	5.00	4.02		ug/L		80	69 - 127
1,2-Dichlorobenzene	5.00	4.56		ug/L		91	72 - 129
1,2-Dibromo-3-Chloropropane	5.00	3.84		ug/L		77	55 - 135
1,2,4-Trichlorobenzene	5.00	4.22		ug/L		84	60 - 130
Hexachlorobutadiene	5.00	4.24		ug/L		85	63 - 130
Naphthalene	5.00	4.59		ug/L		92	54 - 137
1,2,3-Trichlorobenzene	5.00	4.21		ug/L		84	60 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	97		80 - 120
4-Bromofluorobenzene (Surr)	102		80 - 120
1,2-Dichloroethane-d4 (Surr)	89		80 - 120

Lab Sample ID: LCSD 580-485845/5

Matrix: Water

Analysis Batch: 485845

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dichlorodifluoromethane	5.00	3.34		ug/L		67	20 - 150	1	30
Chloromethane	5.00	4.49		ug/L		90	32 - 150	5	33
Vinyl chloride	5.00	4.27		ug/L		85	41 - 150	0	32
Bromomethane	5.00	4.35		ug/L		87	51 - 148	1	35
Chloroethane	5.00	4.20		ug/L		84	54 - 140	3	33

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QC Sample Results

Client: ERM-West

Job ID: 580-148198-1

Project/Site: Arkema - Q1 2025 Groundwater Event

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

Lab Sample ID: LCSD 580-485845/5

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 485845

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Carbon disulfide	5.00	4.54		ug/L		91	54 - 142	3	34
Trichlorofluoromethane	5.00	3.73		ug/L		75	60 - 132	3	32
1,1-Dichloroethene	5.00	4.55		ug/L		91	60 - 129	0	29
Acetone	25.0	22.8		ug/L		91	49 - 150	2	24
Methylene Chloride	5.00	6.32		ug/L		126	40 - 142	4	25
Methyl tert-butyl ether	5.00	5.05		ug/L		101	61 - 131	4	27
2-Butanone (MEK)	25.0	24.6		ug/L		99	37 - 150	0	35
trans-1,2-Dichloroethene	5.00	4.85		ug/L		97	69 - 121	1	27
1,1-Dichloroethane	5.00	5.19		ug/L		104	74 - 120	0	26
2,2-Dichloropropane	5.00	4.88		ug/L		98	55 - 140	5	31
cis-1,2-Dichloroethene	5.00	5.30		ug/L		106	72 - 120	5	22
Chlorobromomethane	5.00	5.10		ug/L		102	79 - 121	0	20
Chloroform	5.00	4.83		ug/L		97	75 - 120	2	21
1,1,1-Trichloroethane	5.00	4.30		ug/L		86	70 - 121	2	24
Carbon tetrachloride	5.00	4.11		ug/L		82	66 - 130	5	24
1,1-Dichloropropene	5.00	4.58		ug/L		92	72 - 125	3	23
Benzene	5.00	5.18		ug/L		104	80 - 120	2	22
1,2-Dichloroethane	5.00	4.45		ug/L		89	74 - 127	3	21
Trichloroethene	5.00	4.92		ug/L		98	72 - 120	1	22
1,2-Dichloropropane	5.00	5.34		ug/L		107	69 - 130	2	22
4-Methyl-2-pentanone (MIBK)	25.0	22.1		ug/L		88	63 - 137	2	26
Dibromomethane	5.00	4.99		ug/L		100	65 - 141	1	22
Dichlorobromomethane	5.00	4.88		ug/L		98	74 - 131	1	21
cis-1,3-Dichloropropene	5.00	4.26		ug/L		85	77 - 131	0	24
Toluene	5.00	4.68		ug/L		94	80 - 126	4	20
trans-1,3-Dichloropropene	5.00	4.58		ug/L		92	71 - 138	2	26
1,1,2-Trichloroethane	5.00	4.64		ug/L		93	73 - 127	0	22
Tetrachloroethene	5.00	4.04		ug/L		81	75 - 124	0	20
1,3-Dichloropropane	5.00	4.59		ug/L		92	69 - 138	1	19
Chlorodibromomethane	5.00	4.28		ug/L		86	62 - 141	0	22
Ethylene Dibromide	5.00	4.49		ug/L		90	61 - 143	1	22
Chlorobenzene	5.00	4.64		ug/L		93	74 - 123	1	21
1,1,1,2-Tetrachloroethane	5.00	4.42		ug/L		88	69 - 127	4	22
Ethylbenzene	5.00	4.72		ug/L		94	80 - 124	3	22
m-Xylene & p-Xylene	5.00	4.57		ug/L		91	75 - 124	4	22
o-Xylene	5.00	4.59		ug/L		92	71 - 124	3	23
Styrene	5.00	4.51		ug/L		90	74 - 127	0	22
Bromoform	5.00	4.17		ug/L		83	48 - 127	2	23
Isopropylbenzene	5.00	4.84		ug/L		97	71 - 123	3	23
Bromobenzene	5.00	4.41		ug/L		88	74 - 130	2	23
1,1,2,2-Tetrachloroethane	5.00	4.44		ug/L		89	67 - 136	0	24
1,2,3-Trichloropropane	5.00	4.41		ug/L		88	67 - 135	3	25
N-Propylbenzene	5.00	4.41		ug/L		88	72 - 126	2	20
2-Chlorotoluene	5.00	4.80		ug/L		96	73 - 120	3	22
4-Chlorotoluene	5.00	4.85		ug/L		97	75 - 124	3	23
1,3,5-Trimethylbenzene	5.00	4.62		ug/L		92	75 - 123	2	23
tert-Butylbenzene	5.00	4.48		ug/L		90	70 - 129	0	24
1,2,4-Trimethylbenzene	5.00	4.39		ug/L		88	71 - 127	5	23
sec-Butylbenzene	5.00	4.31		ug/L		86	75 - 126	1	23

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

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

Lab Sample ID: LCSD 580-485845/5

Matrix: Water

Analysis Batch: 485845

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4-Isopropyltoluene	5.00	4.20		ug/L		84	78 - 125	3	24
1,3-Dichlorobenzene	5.00	4.65		ug/L		93	72 - 125	3	22
1,4-Dichlorobenzene	5.00	4.48		ug/L		90	71 - 129	2	22
n-Butylbenzene	5.00	4.11		ug/L		82	69 - 127	2	24
1,2-Dichlorobenzene	5.00	4.58		ug/L		92	72 - 129	0	22
1,2-Dibromo-3-Chloropropane	5.00	4.06		ug/L		81	55 - 135	5	29
1,2,4-Trichlorobenzene	5.00	4.26		ug/L		85	60 - 130	1	26
Hexachlorobutadiene	5.00	4.23		ug/L		85	63 - 130	0	26
Naphthalene	5.00	4.49		ug/L		90	54 - 137	2	28
1,2,3-Trichlorobenzene	5.00	4.07		ug/L		81	60 - 136	3	28

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	98		80 - 120
4-Bromofluorobenzene (Surr)	103		80 - 120
1,2-Dichloroethane-d4 (Surr)	89		80 - 120

Lab Sample ID: MB 580-485909/11

Matrix: Water

Analysis Batch: 485909

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			02/26/25 14:48	1
Chloromethane	ND		0.50	0.14	ug/L			02/26/25 14:48	1
Vinyl chloride	ND		0.10	0.040	ug/L			02/26/25 14:48	1
Bromomethane	ND		0.50	0.13	ug/L			02/26/25 14:48	1
Chloroethane	ND		0.50	0.24	ug/L			02/26/25 14:48	1
Carbon disulfide	ND		0.40	0.20	ug/L			02/26/25 14:48	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			02/26/25 14:48	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			02/26/25 14:48	1
Acetone	ND		10	3.1	ug/L			02/26/25 14:48	1
Methylene Chloride	2.21	J	5.0	1.2	ug/L			02/26/25 14:48	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			02/26/25 14:48	1
2-Butanone (MEK)	ND		10	2.5	ug/L			02/26/25 14:48	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			02/26/25 14:48	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			02/26/25 14:48	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			02/26/25 14:48	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			02/26/25 14:48	1
Chlorobromomethane	ND		0.20	0.050	ug/L			02/26/25 14:48	1
Chloroform	ND		0.20	0.030	ug/L			02/26/25 14:48	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			02/26/25 14:48	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			02/26/25 14:48	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			02/26/25 14:48	1
Benzene	ND		0.20	0.030	ug/L			02/26/25 14:48	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			02/26/25 14:48	1
Trichloroethene	ND		0.20	0.066	ug/L			02/26/25 14:48	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			02/26/25 14:48	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			02/26/25 14:48	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

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

Lab Sample ID: MB 580-485909/11

Matrix: Water

Analysis Batch: 485909

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	ND		0.20	0.062	ug/L			02/26/25 14:48	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			02/26/25 14:48	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			02/26/25 14:48	1
Toluene	ND		0.20	0.050	ug/L			02/26/25 14:48	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			02/26/25 14:48	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			02/26/25 14:48	1
Tetrachloroethene	ND		0.24	0.084	ug/L			02/26/25 14:48	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			02/26/25 14:48	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			02/26/25 14:48	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			02/26/25 14:48	1
Chlorobenzene	ND		0.20	0.060	ug/L			02/26/25 14:48	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			02/26/25 14:48	1
Ethylbenzene	ND		0.20	0.082	ug/L			02/26/25 14:48	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			02/26/25 14:48	1
o-Xylene	ND		0.50	0.23	ug/L			02/26/25 14:48	1
Styrene	ND		1.0	0.33	ug/L			02/26/25 14:48	1
Bromoform	ND		0.50	0.16	ug/L			02/26/25 14:48	1
Isopropylbenzene	0.457	J	1.0	0.27	ug/L			02/26/25 14:48	1
Bromobenzene	ND		0.20	0.038	ug/L			02/26/25 14:48	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			02/26/25 14:48	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			02/26/25 14:48	1
N-Propylbenzene	ND		0.30	0.091	ug/L			02/26/25 14:48	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			02/26/25 14:48	1
4-Chlorotoluene	ND		0.30	0.12	ug/L			02/26/25 14:48	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			02/26/25 14:48	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			02/26/25 14:48	1
1,2,4-Trimethylbenzene	0.269	J	0.55	0.23	ug/L			02/26/25 14:48	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			02/26/25 14:48	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			02/26/25 14:48	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			02/26/25 14:48	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			02/26/25 14:48	1
n-Butylbenzene	0.582	J	1.0	0.35	ug/L			02/26/25 14:48	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			02/26/25 14:48	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			02/26/25 14:48	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			02/26/25 14:48	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			02/26/25 14:48	1
Naphthalene	ND		1.5	0.52	ug/L			02/26/25 14:48	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			02/26/25 14:48	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	89		80 - 120					02/26/25 14:48	1
Dibromofluoromethane (Surr)	107		80 - 120					02/26/25 14:48	1
4-Bromofluorobenzene (Surr)	98		80 - 120					02/26/25 14:48	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 120					02/26/25 14:48	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

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

Lab Sample ID: LCS 580-485909/5

Matrix: Water

Analysis Batch: 485909

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dichlorodifluoromethane	5.00	3.65		ug/L		73	20 - 150
Chloromethane	5.00	4.52		ug/L		90	32 - 150
Vinyl chloride	5.00	4.64		ug/L		93	41 - 150
Bromomethane	5.00	4.93		ug/L		99	51 - 148
Chloroethane	5.00	4.49		ug/L		90	54 - 140
Carbon disulfide	5.00	4.56		ug/L		91	54 - 142
Trichlorofluoromethane	5.00	4.06		ug/L		81	60 - 132
1,1-Dichloroethene	5.00	4.67		ug/L		93	60 - 129
Acetone	25.0	27.1		ug/L		109	49 - 150
Methylene Chloride	5.00	6.43		ug/L		129	40 - 142
Methyl tert-butyl ether	5.00	4.92		ug/L		98	61 - 131
2-Butanone (MEK)	25.0	25.4		ug/L		101	37 - 150
trans-1,2-Dichloroethene	5.00	5.17		ug/L		103	69 - 121
1,1-Dichloroethane	5.00	5.27		ug/L		105	74 - 120
2,2-Dichloropropane	5.00	6.26		ug/L		125	55 - 140
cis-1,2-Dichloroethene	5.00	5.28		ug/L		106	72 - 120
Chlorobromomethane	5.00	5.31		ug/L		106	79 - 121
Chloroform	5.00	5.23		ug/L		105	75 - 120
1,1,1-Trichloroethane	5.00	4.67		ug/L		93	70 - 121
Carbon tetrachloride	5.00	4.48		ug/L		90	66 - 130
1,1-Dichloropropene	5.00	4.72		ug/L		94	72 - 125
Benzene	5.00	5.27		ug/L		105	80 - 120
1,2-Dichloroethane	5.00	5.02		ug/L		100	74 - 127
Trichloroethene	5.00	5.13		ug/L		103	72 - 120
1,2-Dichloropropane	5.00	5.56		ug/L		111	69 - 130
4-Methyl-2-pentanone (MIBK)	25.0	20.1		ug/L		81	63 - 137
Dibromomethane	5.00	5.12		ug/L		102	65 - 141
Dichlorobromomethane	5.00	5.06		ug/L		101	74 - 131
cis-1,3-Dichloropropene	5.00	4.26		ug/L		85	77 - 131
Toluene	5.00	4.65		ug/L		93	80 - 126
trans-1,3-Dichloropropene	5.00	4.70		ug/L		94	71 - 138
1,1,2-Trichloroethane	5.00	4.47		ug/L		89	73 - 127
Tetrachloroethene	5.00	4.08		ug/L		82	75 - 124
1,3-Dichloropropane	5.00	4.52		ug/L		90	69 - 138
Chlorodibromomethane	5.00	4.38		ug/L		88	62 - 141
Ethylene Dibromide	5.00	4.46		ug/L		89	61 - 143
Chlorobenzene	5.00	4.56		ug/L		91	74 - 123
1,1,1,2-Tetrachloroethane	5.00	4.65		ug/L		93	69 - 127
Ethylbenzene	5.00	4.62		ug/L		92	80 - 124
m-Xylene & p-Xylene	5.00	4.57		ug/L		91	75 - 124
o-Xylene	5.00	4.60		ug/L		92	71 - 124
Styrene	5.00	4.47		ug/L		89	74 - 127
Bromoform	5.00	4.18		ug/L		84	48 - 127
Isopropylbenzene	5.00	4.72		ug/L		94	71 - 123
Bromobenzene	5.00	4.50		ug/L		90	74 - 130
1,1,2,2-Tetrachloroethane	5.00	4.25		ug/L		85	67 - 136
1,2,3-Trichloropropane	5.00	4.20		ug/L		84	67 - 135
N-Propylbenzene	5.00	4.37		ug/L		87	72 - 126

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

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

Lab Sample ID: LCS 580-485909/5

Matrix: Water

Analysis Batch: 485909

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Chlorotoluene	5.00	4.70		ug/L		94	73 - 120
4-Chlorotoluene	5.00	4.77		ug/L		95	75 - 124
1,3,5-Trimethylbenzene	5.00	4.62		ug/L		92	75 - 123
tert-Butylbenzene	5.00	4.60		ug/L		92	70 - 129
1,2,4-Trimethylbenzene	5.00	4.32		ug/L		86	71 - 127
sec-Butylbenzene	5.00	4.29		ug/L		86	75 - 126
4-Isopropyltoluene	5.00	4.16		ug/L		83	78 - 125
1,3-Dichlorobenzene	5.00	4.57		ug/L		91	72 - 125
1,4-Dichlorobenzene	5.00	4.51		ug/L		90	71 - 129
n-Butylbenzene	5.00	4.28		ug/L		86	69 - 127
1,2-Dichlorobenzene	5.00	4.63		ug/L		93	72 - 129
1,2-Dibromo-3-Chloropropane	5.00	3.55		ug/L		71	55 - 135
1,2,4-Trichlorobenzene	5.00	4.21		ug/L		84	60 - 130
Hexachlorobutadiene	5.00	4.36		ug/L		87	63 - 130
Naphthalene	5.00	4.41		ug/L		88	54 - 137
1,2,3-Trichlorobenzene	5.00	4.00		ug/L		80	60 - 136

LCS LCS			
Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	104		80 - 120
1,2-Dichloroethane-d4 (Surr)	98		80 - 120

Lab Sample ID: LCSD 580-485909/6

Matrix: Water

Analysis Batch: 485909

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dichlorodifluoromethane	5.00	3.48		ug/L		70	20 - 150	5	30
Chloromethane	5.00	4.33		ug/L		87	32 - 150	4	33
Vinyl chloride	5.00	4.43		ug/L		89	41 - 150	5	32
Bromomethane	5.00	4.47		ug/L		89	51 - 148	10	35
Chloroethane	5.00	4.35		ug/L		87	54 - 140	3	33
Carbon disulfide	5.00	4.28		ug/L		86	54 - 142	6	34
Trichlorofluoromethane	5.00	3.87		ug/L		77	60 - 132	5	32
1,1-Dichloroethene	5.00	4.54		ug/L		91	60 - 129	3	29
Acetone	25.0	23.3		ug/L		93	49 - 150	15	24
Methylene Chloride	5.00	6.17		ug/L		123	40 - 142	4	25
Methyl tert-butyl ether	5.00	4.96		ug/L		99	61 - 131	1	27
2-Butanone (MEK)	25.0	25.2		ug/L		101	37 - 150	1	35
trans-1,2-Dichloroethene	5.00	4.77		ug/L		95	69 - 121	8	27
1,1-Dichloroethane	5.00	5.24		ug/L		105	74 - 120	1	26
2,2-Dichloropropane	5.00	5.77		ug/L		115	55 - 140	8	31
cis-1,2-Dichloroethene	5.00	5.21		ug/L		104	72 - 120	1	22
Chlorobromomethane	5.00	5.18		ug/L		104	79 - 121	2	20
Chloroform	5.00	4.93		ug/L		99	75 - 120	6	21
1,1,1-Trichloroethane	5.00	4.50		ug/L		90	70 - 121	4	24
Carbon tetrachloride	5.00	4.21		ug/L		84	66 - 130	6	24

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

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

Lab Sample ID: LCSD 580-485909/6

Matrix: Water

Analysis Batch: 485909

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1-Dichloropropene	5.00	4.47		ug/L		89	72 - 125	6	23
Benzene	5.00	5.03		ug/L		101	80 - 120	4	22
1,2-Dichloroethane	5.00	4.81		ug/L		96	74 - 127	4	21
Trichloroethene	5.00	4.87		ug/L		97	72 - 120	5	22
1,2-Dichloropropane	5.00	5.07		ug/L		101	69 - 130	9	22
4-Methyl-2-pentanone (MIBK)	25.0	20.9		ug/L		84	63 - 137	4	26
Dibromomethane	5.00	5.09		ug/L		102	65 - 141	1	22
Dichlorobromomethane	5.00	4.90		ug/L		98	74 - 131	3	21
cis-1,3-Dichloropropene	5.00	4.16		ug/L		83	77 - 131	2	24
Toluene	5.00	4.33		ug/L		87	80 - 126	7	20
trans-1,3-Dichloropropene	5.00	4.55		ug/L		91	71 - 138	3	26
1,1,2-Trichloroethane	5.00	4.40		ug/L		88	73 - 127	2	22
Tetrachloroethene	5.00	3.94		ug/L		79	75 - 124	4	20
1,3-Dichloropropane	5.00	4.49		ug/L		90	69 - 138	1	19
Chlorodibromomethane	5.00	4.27		ug/L		85	62 - 141	2	22
Ethylene Dibromide	5.00	4.32		ug/L		86	61 - 143	3	22
Chlorobenzene	5.00	4.37		ug/L		87	74 - 123	4	21
1,1,1,2-Tetrachloroethane	5.00	4.55		ug/L		91	69 - 127	2	22
Ethylbenzene	5.00	4.37		ug/L		87	80 - 124	6	22
m-Xylene & p-Xylene	5.00	4.32		ug/L		86	75 - 124	6	22
o-Xylene	5.00	4.28		ug/L		86	71 - 124	7	23
Styrene	5.00	4.14		ug/L		83	74 - 127	8	22
Bromoform	5.00	4.09		ug/L		82	48 - 127	2	23
Isopropylbenzene	5.00	4.58		ug/L		92	71 - 123	3	23
Bromobenzene	5.00	4.13		ug/L		83	74 - 130	9	23
1,1,2,2-Tetrachloroethane	5.00	4.26		ug/L		85	67 - 136	0	24
1,2,3-Trichloropropane	5.00	4.28		ug/L		86	67 - 135	2	25
N-Propylbenzene	5.00	4.09		ug/L		82	72 - 126	6	20
2-Chlorotoluene	5.00	4.47		ug/L		89	73 - 120	5	22
4-Chlorotoluene	5.00	4.60		ug/L		92	75 - 124	4	23
1,3,5-Trimethylbenzene	5.00	4.39		ug/L		88	75 - 123	5	23
tert-Butylbenzene	5.00	4.30		ug/L		86	70 - 129	7	24
1,2,4-Trimethylbenzene	5.00	4.11		ug/L		82	71 - 127	5	23
sec-Butylbenzene	5.00	4.07		ug/L		81	75 - 126	5	23
4-Isopropyltoluene	5.00	3.95		ug/L		79	78 - 125	5	24
1,3-Dichlorobenzene	5.00	4.29		ug/L		86	72 - 125	6	22
1,4-Dichlorobenzene	5.00	4.31		ug/L		86	71 - 129	5	22
n-Butylbenzene	5.00	3.95		ug/L		79	69 - 127	8	24
1,2-Dichlorobenzene	5.00	4.33		ug/L		87	72 - 129	7	22
1,2-Dibromo-3-Chloropropane	5.00	3.92		ug/L		78	55 - 135	10	29
1,2,4-Trichlorobenzene	5.00	4.11		ug/L		82	60 - 130	2	26
Hexachlorobutadiene	5.00	4.19		ug/L		84	63 - 130	4	26
Naphthalene	5.00	4.43		ug/L		89	54 - 137	1	28
1,2,3-Trichlorobenzene	5.00	3.91		ug/L		78	60 - 136	2	28

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

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

Lab Sample ID: LCSD 580-485909/6

Matrix: Water

Analysis Batch: 485909

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		80 - 120
1,2-Dichloroethane-d4 (Surr)	98		80 - 120

Lab Sample ID: MB 580-486202/10

Matrix: Water

Analysis Batch: 486202

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.0522	J	0.20	0.035	ug/L			03/01/25 03:17	1
Surrogate	MB	MB	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120					03/01/25 03:17	1
Dibromofluoromethane (Surr)	119		80 - 120					03/01/25 03:17	1
4-Bromofluorobenzene (Surr)	99		80 - 120					03/01/25 03:17	1
1,2-Dichloroethane-d4 (Surr)	111		80 - 120					03/01/25 03:17	1

Lab Sample ID: LCS 580-486202/5

Matrix: Water

Analysis Batch: 486202

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
1,1-Dichloroethene	Added	Result	Qualifier	ug/L		87	Limits
	5.00	4.37					60 - 129
Surrogate	LCS	LCS	Limits				
Toluene-d8 (Surr)	98		80 - 120				
Dibromofluoromethane (Surr)	106		80 - 120				
4-Bromofluorobenzene (Surr)	102		80 - 120				
1,2-Dichloroethane-d4 (Surr)	104		80 - 120				

Lab Sample ID: LCSD 580-486202/6

Matrix: Water

Analysis Batch: 486202

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec	RPD	RPD
1,1-Dichloroethene	Added	Result	Qualifier	ug/L		95	Limits	RPD	Limit
	5.00	4.75					60 - 129	8	29
Surrogate	LCSD	LCSD	Limits						
Toluene-d8 (Surr)	99		80 - 120						
Dibromofluoromethane (Surr)	107		80 - 120						
4-Bromofluorobenzene (Surr)	103		80 - 120						
1,2-Dichloroethane-d4 (Surr)	107		80 - 120						

QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Method: 314.0 - Perchlorate (IC)

Lab Sample ID: MB 570-538471/8

Matrix: Water

Analysis Batch: 538471

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		2.0	0.91	ug/L			02/26/25 13:14	1

Lab Sample ID: LCS 570-538471/9

Matrix: Water

Analysis Batch: 538471

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	25.0	23.5		ug/L		94	85 - 115

Lab Sample ID: LCSD 570-538471/10

Matrix: Water

Analysis Batch: 538471

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perchlorate	25.0	23.3		ug/L		93	85 - 115	1	15

Lab Sample ID: MB 570-538472/8

Matrix: Water

Analysis Batch: 538472

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		2.0	0.91	ug/L			02/26/25 13:07	1

Lab Sample ID: LCS 570-538472/9

Matrix: Water

Analysis Batch: 538472

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	25.0	24.4		ug/L		98	85 - 115

Lab Sample ID: LCSD 570-538472/10

Matrix: Water

Analysis Batch: 538472

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perchlorate	25.0	24.5		ug/L		98	85 - 115	0	15

Lab Sample ID: MB 570-539019/8

Matrix: Water

Analysis Batch: 539019

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		2.0	0.91	ug/L			02/27/25 13:21	1

Lab Sample ID: LCS 570-539019/9

Matrix: Water

Analysis Batch: 539019

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	25.0	23.8		ug/L		95	85 - 115

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Method: 314.0 - Perchlorate (IC)

Lab Sample ID: LCSD 570-539019/10
Matrix: Water
Analysis Batch: 539019

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perchlorate	25.0	23.7		ug/L		95	85 - 115	0	15

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-486680/106
Matrix: Water
Analysis Batch: 486680

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5	0.43	mg/L			03/05/25 09:01	1

Lab Sample ID: MB 580-486680/22
Matrix: Water
Analysis Batch: 486680

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5	0.43	mg/L			03/05/25 18:45	1

Lab Sample ID: LCS 580-486680/107
Matrix: Water
Analysis Batch: 486680

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	52.5		mg/L		105	90 - 110

Lab Sample ID: LCS 580-486680/23
Matrix: Water
Analysis Batch: 486680

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	52.7		mg/L		105	90 - 110

Lab Sample ID: LCSD 580-486680/108
Matrix: Water
Analysis Batch: 486680

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	50.0	52.5		mg/L		105	90 - 110	0	15

Lab Sample ID: LCSD 580-486680/24
Matrix: Water
Analysis Batch: 486680

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	50.0	52.7		mg/L		105	90 - 110	0	15

Lab Chronicle

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: TB-01-021925

Lab Sample ID: 580-148198-1

Date Collected: 02/19/25 06:00

Matrix: Water

Date Received: 02/20/25 16:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	485845	JBT	EET SEA	02/26/25 02:34

Client Sample ID: PA-44i-021825

Lab Sample ID: 580-148198-2

Date Collected: 02/18/25 16:00

Matrix: Water

Date Received: 02/20/25 16:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	485769	K1K	EET SEA	02/25/25 17:39
Total/NA	Analysis	314.0		1	538471	UIP1	EET CAL 4	02/26/25 19:50
Total/NA	Analysis	300.0		1	486680	FCG	EET SEA	03/05/25 12:23

Client Sample ID: PA-25d-021825

Lab Sample ID: 580-148198-3

Date Collected: 02/18/25 17:58

Matrix: Water

Date Received: 02/20/25 16:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	485769	K1K	EET SEA	02/25/25 18:02
Total/NA	Analysis	314.0		1	538471	UIP1	EET CAL 4	02/26/25 20:11
Total/NA	Analysis	300.0		1	486680	FCG	EET SEA	03/05/25 12:47

Client Sample ID: PA-15i-021825

Lab Sample ID: 580-148198-4

Date Collected: 02/18/25 13:13

Matrix: Water

Date Received: 02/20/25 16:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	485769	K1K	EET SEA	02/25/25 18:26
Total/NA	Analysis	314.0		20	538471	UIP1	EET CAL 4	02/26/25 20:32
Total/NA	Analysis	300.0		1	486680	FCG	EET SEA	03/05/25 13:11

Client Sample ID: MWA-82-021825

Lab Sample ID: 580-148198-5

Date Collected: 02/18/25 13:00

Matrix: Water

Date Received: 02/20/25 16:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	485769	K1K	EET SEA	02/25/25 18:49
Total/NA	Analysis	314.0		10	538471	UIP1	EET CAL 4	02/26/25 20:53
Total/NA	Analysis	300.0		1	486680	FCG	EET SEA	03/05/25 13:59

Client Sample ID: MWA-81i-021825

Lab Sample ID: 580-148198-6

Date Collected: 02/18/25 10:46

Matrix: Water

Date Received: 02/20/25 16:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	485769	K1K	EET SEA	02/25/25 19:59
Total/NA	Analysis	314.0		1	538471	UIP1	EET CAL 4	02/26/25 21:14

Eurofins Seattle

Lab Chronicle

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: MWA-81i-021825

Lab Sample ID: 580-148198-6

Date Collected: 02/18/25 10:46

Matrix: Water

Date Received: 02/20/25 16:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	486680	FCG	EET SEA	03/05/25 14:22

Client Sample ID: MWA-41-021825

Lab Sample ID: 580-148198-7

Date Collected: 02/18/25 14:40

Matrix: Water

Date Received: 02/20/25 16:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	485769	K1K	EET SEA	02/25/25 20:22
Total/NA	Analysis	314.0		1	538471	UIP1	EET CAL 4	02/26/25 21:35
Total/NA	Analysis	300.0		1	486680	FCG	EET SEA	03/05/25 14:46

Client Sample ID: PA-23d-021925

Lab Sample ID: 580-148198-8

Date Collected: 02/19/25 12:39

Matrix: Water

Date Received: 02/20/25 16:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	485845	JBT	EET SEA	02/26/25 03:44
Total/NA	Analysis	314.0		100	538471	UIP1	EET CAL 4	02/26/25 21:55
Total/NA	Analysis	300.0		1000	486680	FCG	EET SEA	03/05/25 15:22

Client Sample ID: MWA-31i(d)-021925

Lab Sample ID: 580-148198-9

Date Collected: 02/19/25 09:01

Matrix: Water

Date Received: 02/20/25 16:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	485845	JBT	EET SEA	02/26/25 04:07
Total/NA	Analysis	314.0		40	538471	UIP1	EET CAL 4	02/26/25 22:16
Total/NA	Analysis	300.0		100	486680	FCG	EET SEA	03/05/25 15:34

Client Sample ID: MWA-58d-021925

Lab Sample ID: 580-148198-10

Date Collected: 02/19/25 10:53

Matrix: Water

Date Received: 02/20/25 16:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		10	485845	JBT	EET SEA	02/26/25 09:09
Total/NA	Analysis	314.0	DL	1000	539019	M5Z3	EET CAL 4	02/27/25 17:31
Total/NA	Analysis	300.0		1000	486680	FCG	EET SEA	03/05/25 16:33

Client Sample ID: MWA-56d-021925

Lab Sample ID: 580-148198-11

Date Collected: 02/19/25 12:45

Matrix: Water

Date Received: 02/20/25 16:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		10	485845	JBT	EET SEA	02/26/25 09:32
Total/NA	Analysis	314.0	DL	400	539019	M5Z3	EET CAL 4	02/27/25 17:52

Eurofins Seattle

Lab Chronicle

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148198-1

Client Sample ID: MWA-56d-021925

Lab Sample ID: 580-148198-11

Date Collected: 02/19/25 12:45

Matrix: Water

Date Received: 02/20/25 16:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1000	486680	FCG	EET SEA	03/05/25 16:57

Client Sample ID: PA-31-021925

Lab Sample ID: 580-148198-12

Date Collected: 02/19/25 14:29

Matrix: Water

Date Received: 02/20/25 16:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D	RA	1	486202	AA	EET SEA	03/01/25 05:36
Total/NA	Analysis	8260D		1	485845	JBT	EET SEA	02/26/25 04:30
Total/NA	Analysis	314.0		10	538472	M5Z3	EET CAL 4	02/26/25 20:42
Total/NA	Analysis	300.0		1	486680	FCG	EET SEA	03/05/25 17:09

Client Sample ID: RB-01-022025

Lab Sample ID: 580-148198-13

Date Collected: 02/20/25 06:01

Matrix: Water

Date Received: 02/20/25 16:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	485909	K1K	EET SEA	02/26/25 15:34
Total/NA	Analysis	314.0		1	538472	M5Z3	EET CAL 4	02/26/25 21:03
Total/NA	Analysis	300.0		1	486680	FCG	EET SEA	03/05/25 17:33

Client Sample ID: PA-24d-021925

Lab Sample ID: 580-148198-14

Date Collected: 02/19/25 14:18

Matrix: Water

Date Received: 02/20/25 16:58

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	485845	JBT	EET SEA	02/26/25 04:53
Total/NA	Analysis	314.0		100	538472	M5Z3	EET CAL 4	02/26/25 21:23
Total/NA	Analysis	300.0		1000	486680	FCG	EET SEA	03/05/25 18:09

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: 580-148198-1

Project/Site: Arkema - Q1 2025 Groundwater Event

Laboratory: Eurofins Seattle

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

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4167	07-07-25

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	Expiration Date
A2LA	Dept. of Defense ELAP	7296.01	11-30-26
Arizona	State	AZ0830	11-16-25
Arkansas DEQ	State	88-01672	07-02-25
California	Los Angeles County Sanitation Districts	9257304	07-31-26
California	SCAQMD LAP	17LA0919	11-30-25
California	State	3082	07-31-25
Kansas	NELAP	E-10420	07-31-25
Nevada	State	CA00111	07-31-25
Oregon	NELAP	4175	02-02-26
USDA	US Federal Programs	525-23-159-97150	06-08-26
Utah	NELAP	CA001112025-8	02-28-26
Washington	State	C916	10-11-25

Sample Summary

Client: ERM-West

Job ID: 580-148198-1

Project/Site: Arkema - Q1 2025 Groundwater Event

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-148198-1	TB-01-021925	Water	02/19/25 06:00	02/20/25 16:58
580-148198-2	PA-44i-021825	Water	02/18/25 16:00	02/20/25 16:58
580-148198-3	PA-25d-021825	Water	02/18/25 17:58	02/20/25 16:58
580-148198-4	PA-15i-021825	Water	02/18/25 13:13	02/20/25 16:58
580-148198-5	MWA-82-021825	Water	02/18/25 13:00	02/20/25 16:58
580-148198-6	MWA-81i-021825	Water	02/18/25 10:46	02/20/25 16:58
580-148198-7	MWA-41-021825	Water	02/18/25 14:40	02/20/25 16:58
580-148198-8	PA-23d-021925	Water	02/19/25 12:39	02/20/25 16:58
580-148198-9	MWA-31i(d)-021925	Water	02/19/25 09:01	02/20/25 16:58
580-148198-10	MWA-58d-021925	Water	02/19/25 10:53	02/20/25 16:58
580-148198-11	MWA-56d-021925	Water	02/19/25 12:45	02/20/25 16:58
580-148198-12	PA-31-021925	Water	02/19/25 14:29	02/20/25 16:58
580-148198-13	RB-01-022025	Water	02/20/25 06:01	02/20/25 16:58
580-148198-14	PA-24d-021925	Water	02/19/25 14:18	02/20/25 16:58

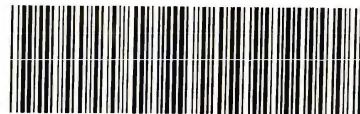
Eurofins TestAmerica, Seattle

5755 8th Street East

Tacoma, WA 98424

Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

Environment Testing
TestAmerica

580-148198 Chain of Custody

Client Information		Sampler: <u>Paul Van Newel</u>		Lab PM: <u>Cruz, Sheri L</u>	
Client Contact: <u>Avery Soplat and Andrew Gardner</u>		Phone: <u>240-755-1398</u>		E-Mail: <u>sheri.cruz@testamericainc.com</u>	
Company: <u>ERM-West</u>				COC No: <u>1 of 2</u>	
Address: <u>1050 SW 6th Avenue Suite 1650</u>		Due Date Requested:		Analysis Requested	
City: <u>Portland</u>		TAT Requested (days): <u>15BD</u>			
State, Zip: <u>OR, 97204</u>		PO #: <u>PN 0732445.207</u>			
Phone:		WO #:			
Email: <u>avery.soplat@erm.com andrew.gardner@erm.com</u>		Project #: <u>0732445</u>			
Project Name: <u>Arkema - Q1 2025 Groundwater event</u>		SSOW#:			
Site:					
Sample Identification		Sample Date		Sample Time	
		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	
				Field Filtered Sample (Yes or No)	
				8260C regular level standard VOA list-Seattle	
				8260C_LL - Standard VOA list-Seattle	
				300.0_28D-Chloride-Seattle	
				314 Perchlorate	
				Total Number of containers	
				Preservation Codes:	
				A - HCL M - Hexane	
				B - NaOH N - None	
				C - Zn Acetate O - AsNaO2	
				D - Nitric Acid P - Na2O4S	
				E - NaHSO4 Q - Na2SO3	
				F - MeOH R - Na2S2O3	
				G - Amchlor S - H2SO4	
				H - Ascorbic Acid T - TSP Dodecahydrate	
				I - Ice U - Acetone	
				J - DI Water V - MCAA	
				K - EDTA W - pH 4-5	
				L - EDA Z - other (specify)	
				Other:	
				Special Instructions/Note:	
TB-01-021925		02/19/25 0600		G Water	
PA-44-021825		02/18/25 1600		G Water	
PA-25d-021825		02/18/25 1758		G Water	
PA-15i-021825		02/18/25 1313		G Water	
MWA-82-021825		02/18/25 1300		G Water	
MWA-81i-021825		02/18/25 1046		G Water	
MWA-41-021825		02/18/25 1440		G Water	
PA-23d-021925		02/19/25 1239		G Water	
MWA-31(d)-021925		02/19/25 0901		G Water	
MWA-58d-021925		02/19/25 1053		G water	
MWA-56d-021925		02/19/25 1245		G water	
Possible Hazard Identification		☐ Non-Hazard ☐ Ammable ☐ Solvent ☐ Poison B ☐ Brown ☐ Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Deliverable Requested: I, II, III, IV, Other (specify)				☐ Return To Client ☐ Disposal By Lab ☐ Months	
Empty Kit Relinquished by:		Date: <u>50 2/20/25</u>		Time: <u>1658</u>	
Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/20/25 1658</u>		Company: <u>ERM</u>	
Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/20/25 1658</u>		Company: <u>ERM</u>	
Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/20/25 1658</u>		Company: <u>ERM</u>	
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <u>31/26</u>	

eurofins | **Environment Testing**
TestAmerica

3/7/2025

eurolins
Environment Testing
TestAmerica

Chain of Custody Record

Page 60 of 65 3/

ORIGIN ID: BNOA (503) 906-9200
SAMPLE RECEIVING
EUROFINS PORTLAND
7959 SW CIRrus DR
BUILDING 22
BEAVERTON, OR 970087145
UNITED STATES US

SHIP DATE: 21FEB25
ACTWGT: 41.20 LB MAN
CAD: 0893932/CAFE3855

BILL THIRD-PARTY

TO **SHIPPING/RECEIVING**
EUROFINS ENVIRONMENT TESTING SOUTHW
2841 DOW AVENUE, SUITE 100

TUSTIN CA 92780

(714) 886-5494

REF: S580 - 66530



FedEx
Express



TRK# 4254 2767 2604
0201

SATURDAY 12:00P
PRIORITY OVERNIGHT

WO DTHA

92780
CA-US SNA



580-148198 Waybill

Eurofins Seattle

5755 8th Street East

Tacoma, WA 98424

Phone: 253-922-2310

Chain of Custody Record

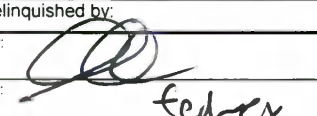
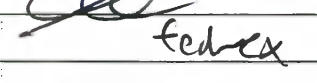


eurofins

En

Loc: 580

148198

Client Information (Sub Contract Lab)		Sampler: N/A		Lab PM: Cruz, Sheri L		Carrier Tracking No(s): N/A		COC No: 580-141792.1									
Client Contact: Shipping/Receiving		Phone: N/A		E-Mail: Sheri.Cruz@et.eurofinsus.com		State of Origin: Oregon		Page: Page 1 of 2									
Company: Eurofins Environment Testing Southwest				Accreditations Required (See note): NELAP - Oregon				Job #: 580-148198-1									
Address: 2841 Dow Avenue, Suite 100, Tustin, CA, 92780		Due Date Requested: 3/6/2025		Analysis Requested						Preservation Codes:							
City: Tustin		TAT Requested (days): N/A															
State, Zip: CA, 92780		PO #: N/A		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		314.0/ Perchlorate		Total Number of containers		Other: N/A					
Phone: 714-895-5494(Tel)		WO #: N/A															
Email: N/A		Project #: 58016290		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		314.0/ Perchlorate		Total Number of containers		Other: N/A					
Project Name: Arkema - Q1 2025 Groundwater Event		SSOW#: N/A															
Site: N/A		SSOW#: N/A		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		314.0/ Perchlorate		Total Number of containers		Other: N/A					
Sample Identification - Client ID (Lab ID)		Sample Date															
Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		314.0/ Perchlorate		Total Number of containers		Special Inst	
PA-44i-021825 (580-148198-2)		2/18/25		16:00 Pacific		G		Water		X				1			
PA-25d-021825 (580-148198-3)		2/18/25		17:58 Pacific		G		Water		X				1			
PA-15i-021825 (580-148198-4)		2/18/25		13:13 Pacific		G		Water		X				1			
MWA-82-021825 (580-148198-5)		2/18/25		13:00 Pacific		G		Water		X				1			
MWA-81i-021825 (580-148198-6)		2/18/25		10:46 Pacific		G		Water		X				1			
MWA-41-021825 (580-148198-7)		2/18/25		14:40 Pacific		G		Water		X				1			
PA-23d-021925 (580-148198-8)		2/19/25		12:39 Pacific		G		Water		X				1			
MWA-31i(d)-021925 (580-148198-9)		2/19/25		09:01 Pacific		G		Water		X				1			
MWA-58d-021925 (580-148198-10)		2/19/25		10:53 Pacific		G		Water		X				1			
Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northwest, LLC places the ownership of method, analyte & accreditation compliance 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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northwest, LLC laboratory or other instructions will be provided. 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 compliance to Eurofins Environment Testing Northwest, LLC.																	
Possible Hazard Identification										Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)							
Unconfirmed										☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months							
Deliverable Requested: I, II, III, IV, Other (specify)										Special Instructions/QC Requirements:							
Empty Kit Relinquished by:										Date: _____ Time: _____ Method of Shipment: _____							
Relinquished by: 										Date/Time: 2/22/25 1715 Company: EET							
Relinquished by: 										Date/Time: 2/22/25 1010 Company: Ec							
Relinquished by:										Date/Time: _____ Company: _____							
Custody Seals Intact: ☐ Yes ☐ No										Custody Seal No.: _____ Cooler Temperature(s) °C and Other Remarks: 3.5 / 3.7 5014							

 eurofins | Environment Testing

Ver: 10/10/2024 3/7/2025

Login Sample Receipt Checklist

Client: ERM-West

Job Number: 580-148198-1

Login Number: 148198

List Source: Eurofins Seattle

List Number: 1

Creator: O'Connell, Jason I

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	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.	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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: ERM-West

Job Number: 580-148198-1

Login Number: 148198

List Number: 2

Creator: Khana, Piyush

List Source: Eurofins Calscience

List Creation: 02/24/25 02:53 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	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	3.7
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.	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 $<6\text{mm}$ (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 3/7/2025 4:33:10 PM

JOB DESCRIPTION

Arkema - Q1 2025 Groundwater Event

JOB NUMBER

580-148207-1

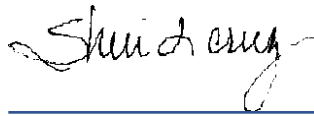
Eurofins Seattle

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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3/7/2025 4:33:10 PM

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

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Case Narrative

Client: ERM-West
Project: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Job ID: 580-148207-1

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Job Narrative 580-148207-1

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 2/21/2025 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 0.3°C.

GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-485845 recovered above the upper control limit for 1,1-Dichloroethene and 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: PA-20d-022025 (580-148207-6), RB-02-022125 (580-148207-12) and (CCVIS 580-485845/3).

Method 8260D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 580-485845 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.

Method 8260D: The method blank for analytical batch 580-485845 contained Isopropylbenzene 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 method blank for preparation batch analytical batch 580-485845 contained Methylene Chloride 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 8260D: The continuing calibration verification (CCV) associated with batch 580-485909 recovered above the upper control limit for Dichlorodifluoromethane, Carbon disulfide, 1,1-Dichloroethene, Methylene Chloride 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: TB-01-022025 (580-148207-1), PA-21d-022025 (580-148207-3), PA-19d-022025 (580-148207-4), PA-30d-022025 (580-148207-5), PA-32i-022025 (580-148207-7), PA-08-022025 (580-148207-8) and (CCVIS 580-485909/3).

Method 8260D: The method blank for analytical batch 580-485909 contained Methylene Chloride, Isopropylbenzene, 1,2,4-Trimethylbenzene 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 following samples were diluted to bring the concentration of target analytes within the calibration range: PA-21d-022025 (580-148207-3), PA-19d-022025 (580-148207-4) and PA-30d-022025 (580-148207-5). Elevated reporting limits (RLs) are provided.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-485951 recovered above the upper control limit for Dichlorodifluoromethane, Chloromethane, Vinyl chloride, Carbon disulfide, 1,1-Dichloroethene, Methylene Chloride, Methyl tert-butyl ether, trans-1,2-Dichloroethene, 1,1-Dichloroethane, 2,2-Dichloropropane and 1,1-Dichloropropene. The samples associated with this CCV were non-detects below the RL for the affected analytes; therefore, the data have been reported. The associated samples are impacted: PA-22d-022025 (580-148207-2), Dup-01-022025 (580-148207-9), PA-09-022025 (580-148207-10), PA-03-022025 (580-148207-11), PA-17iR-022125 (580-148207-13) and (CCVIS 580-485951/3).

Method 8260D: The method blank for analytical batch 580-485951 contained 1,2,4-Trimethylbenzene and n-Butylbenzene above

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Case Narrative

Client: ERM-West
Project: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Job ID: 580-148207-1 (Continued)

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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 analytical batch 580-485951 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 / sample duplicate (MS/MSD/DUP) precision for analytical batch 580-485951 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: The following sample was diluted to bring the concentration of target analytes within the calibration range: PA-19d-022025 (580-148207-4). Elevated reporting limits (RLs) are provided.

Method 8260D_LL: The continuing calibration verification (CCV) associated with batch 580-485909 recovered above the upper control limit for Dichlorodifluoromethane, Carbon disulfide, 1,1-Dichloroethene, Methylene Chloride 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: TB-01-022025 (580-148207-1), PA-21d-022025 (580-148207-3), PA-19d-022025 (580-148207-4), PA-30d-022025 (580-148207-5), PA-32i-022025 (580-148207-7), PA-08-022025 (580-148207-8) and (CCVIS 580-485909/3).

Method 8260D_LL: The method blank for analytical batch 580-485909 contained Methylene Chloride, Isopropylbenzene, 1,2,4-Trimethylbenzene 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_LL: The continuing calibration verification (CCV) associated with batch 580-485951 recovered above the upper control limit for Dichlorodifluoromethane, Chloromethane, Vinyl chloride, Carbon disulfide, 1,1-Dichloroethene, Methylene Chloride, Methyl tert-butyl ether, trans-1,2-Dichloroethene, 1,1-Dichloroethane, 2,2-Dichloropropane and 1,1-Dichloropropene. The samples associated with this CCV were non-detects below the RL for the affected analytes; therefore, the data have been reported. The associated samples are impacted: PA-22d-022025 (580-148207-2), Dup-01-022025 (580-148207-9), PA-09-022025 (580-148207-10), PA-03-022025 (580-148207-11), PA-17iR-022125 (580-148207-13) and (CCVIS 580-485951/3).

Method 8260D_LL: The method blank for analytical batch 580-485951 contained 1,2,4-Trimethylbenzene 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_LL: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 580-485951 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.

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

HPLC/IC

Method 314.0: The following samples were diluted due to the nature of the sample matrix: PA-30d-022025 (580-148207-5), PA-32i-022025 (580-148207-7), Dup-01-022025 (580-148207-9), PA-09-022025 (580-148207-10), PA-03-022025 (580-148207-11) and PA-17iR-022125 (580-148207-13). 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.

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: 580-148207-1

Project/Site: Arkema - Q1 2025 Groundwater Event

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD 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.
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
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

HPLC/IC

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.

General Chemistry

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

Client Sample Results

Client: ERM-West

Job ID: 580-148207-1

Project/Site: Arkema - Q1 2025 Groundwater Event

Client Sample ID: TB-01-022025

Lab Sample ID: 580-148207-1

Date Collected: 02/20/25 06:00

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			02/26/25 15:57	1
Chloromethane	ND		0.50	0.14	ug/L			02/26/25 15:57	1
Vinyl chloride	ND		0.10	0.040	ug/L			02/26/25 15:57	1
Bromomethane	ND		0.50	0.13	ug/L			02/26/25 15:57	1
Chloroethane	ND		0.50	0.24	ug/L			02/26/25 15:57	1
Carbon disulfide	ND		0.40	0.20	ug/L			02/26/25 15:57	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			02/26/25 15:57	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			02/26/25 15:57	1
Acetone	ND		10	3.1	ug/L			02/26/25 15:57	1
Methylene Chloride	ND		5.0	1.2	ug/L			02/26/25 15:57	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			02/26/25 15:57	1
2-Butanone (MEK)	ND		10	2.5	ug/L			02/26/25 15:57	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			02/26/25 15:57	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			02/26/25 15:57	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			02/26/25 15:57	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			02/26/25 15:57	1
Chlorobromomethane	ND		0.20	0.050	ug/L			02/26/25 15:57	1
Chloroform	ND		0.20	0.030	ug/L			02/26/25 15:57	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			02/26/25 15:57	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			02/26/25 15:57	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			02/26/25 15:57	1
Benzene	ND		0.20	0.030	ug/L			02/26/25 15:57	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			02/26/25 15:57	1
Trichloroethene	ND		0.20	0.066	ug/L			02/26/25 15:57	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			02/26/25 15:57	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			02/26/25 15:57	1
Dibromomethane	ND		0.20	0.062	ug/L			02/26/25 15:57	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			02/26/25 15:57	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			02/26/25 15:57	1
Toluene	ND		0.20	0.050	ug/L			02/26/25 15:57	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			02/26/25 15:57	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			02/26/25 15:57	1
Tetrachloroethene	ND		0.24	0.084	ug/L			02/26/25 15:57	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			02/26/25 15:57	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			02/26/25 15:57	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			02/26/25 15:57	1
Chlorobenzene	ND		0.20	0.060	ug/L			02/26/25 15:57	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			02/26/25 15:57	1
Ethylbenzene	ND		0.20	0.082	ug/L			02/26/25 15:57	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			02/26/25 15:57	1
o-Xylene	ND		0.50	0.23	ug/L			02/26/25 15:57	1
Styrene	ND		1.0	0.33	ug/L			02/26/25 15:57	1
Bromoform	ND		0.50	0.16	ug/L			02/26/25 15:57	1
Isopropylbenzene	ND		1.0	0.27	ug/L			02/26/25 15:57	1
Bromobenzene	ND		0.20	0.038	ug/L			02/26/25 15:57	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			02/26/25 15:57	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			02/26/25 15:57	1
N-Propylbenzene	ND		0.30	0.091	ug/L			02/26/25 15:57	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			02/26/25 15:57	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: TB-01-022025

Lab Sample ID: 580-148207-1

Date Collected: 02/20/25 06:00

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		0.30	0.12	ug/L			02/26/25 15:57	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			02/26/25 15:57	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			02/26/25 15:57	1
1,2,4-Trimethylbenzene	0.26	J B	0.55	0.23	ug/L			02/26/25 15:57	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			02/26/25 15:57	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			02/26/25 15:57	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			02/26/25 15:57	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			02/26/25 15:57	1
n-Butylbenzene	0.57	J B	1.0	0.35	ug/L			02/26/25 15:57	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			02/26/25 15:57	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			02/26/25 15:57	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			02/26/25 15:57	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			02/26/25 15:57	1
Naphthalene	ND		1.5	0.52	ug/L			02/26/25 15:57	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			02/26/25 15:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	90		80 - 120		02/26/25 15:57	1
Dibromofluoromethane (Surr)	112		80 - 120		02/26/25 15:57	1
4-Bromofluorobenzene (Surr)	97		80 - 120		02/26/25 15:57	1
1,2-Dichloroethane-d4 (Surr)	109		80 - 120		02/26/25 15:57	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: PA-22d-022025

Lab Sample ID: 580-148207-2

Date Collected: 02/20/25 06:57

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0	0.53	ug/L			02/27/25 07:50	1
Chloromethane	ND		1.0	0.28	ug/L			02/27/25 07:50	1
Vinyl chloride	ND		1.0	0.22	ug/L			02/27/25 07:50	1
Bromomethane	ND		1.0	0.21	ug/L			02/27/25 07:50	1
Chloroethane	ND	F1	1.0	0.35	ug/L			02/27/25 07:50	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			02/27/25 07:50	1
Carbon disulfide	ND		1.0	0.53	ug/L			02/27/25 07:50	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			02/27/25 07:50	1
Acetone	ND		15	3.2	ug/L			02/27/25 07:50	1
Methylene Chloride	ND		5.0	1.4	ug/L			02/27/25 07:50	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			02/27/25 07:50	1
trans-1,2-Dichloroethene	ND	F1	1.0	0.39	ug/L			02/27/25 07:50	1
1,1-Dichloroethane	ND	F1	1.0	0.22	ug/L			02/27/25 07:50	1
2-Butanone (MEK)	ND		15	4.7	ug/L			02/27/25 07:50	1
2,2-Dichloropropane	ND	F2 F1	1.0	0.32	ug/L			02/27/25 07:50	1
cis-1,2-Dichloroethene	ND	F1	1.0	0.35	ug/L			02/27/25 07:50	1
Chlorobromomethane	ND	F1	1.0	0.29	ug/L			02/27/25 07:50	1
Chloroform	22		1.0	0.26	ug/L			02/27/25 07:50	1
1,1,1-Trichloroethane	ND	F1	1.0	0.39	ug/L			02/27/25 07:50	1
Carbon tetrachloride	ND	F1	1.0	0.30	ug/L			02/27/25 07:50	1
1,1-Dichloropropene	ND	F1	1.0	0.29	ug/L			02/27/25 07:50	1
Benzene	ND	F1	1.0	0.24	ug/L			02/27/25 07:50	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			02/27/25 07:50	1
Trichloroethene	ND	F1	1.0	0.26	ug/L			02/27/25 07:50	1
1,2-Dichloropropane	ND	F1	1.0	0.18	ug/L			02/27/25 07:50	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			02/27/25 07:50	1
Dibromomethane	ND	F1	1.0	0.34	ug/L			02/27/25 07:50	1
Dichlorobromomethane	ND	F1	1.0	0.29	ug/L			02/27/25 07:50	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			02/27/25 07:50	1
Toluene	ND		1.0	0.39	ug/L			02/27/25 07:50	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			02/27/25 07:50	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			02/27/25 07:50	1
Tetrachloroethene	ND		1.0	0.41	ug/L			02/27/25 07:50	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			02/27/25 07:50	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			02/27/25 07:50	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			02/27/25 07:50	1
Chlorobenzene	ND		1.0	0.44	ug/L			02/27/25 07:50	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			02/27/25 07:50	1
Ethylbenzene	ND		1.0	0.50	ug/L			02/27/25 07:50	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			02/27/25 07:50	1
o-Xylene	ND		1.0	0.39	ug/L			02/27/25 07:50	1
Styrene	ND	F1	1.0	0.53	ug/L			02/27/25 07:50	1
Bromoform	ND		1.0	0.51	ug/L			02/27/25 07:50	1
Isopropylbenzene	ND		1.0	0.44	ug/L			02/27/25 07:50	1
Bromobenzene	ND		1.0	0.43	ug/L			02/27/25 07:50	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			02/27/25 07:50	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			02/27/25 07:50	1
N-Propylbenzene	ND		1.0	0.50	ug/L			02/27/25 07:50	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			02/27/25 07:50	1

Eurofins Seattle

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: PA-22d-022025

Lab Sample ID: 580-148207-2

Date Collected: 02/20/25 06:57

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		1.0	0.38	ug/L			02/27/25 07:50	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			02/27/25 07:50	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			02/27/25 07:50	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			02/27/25 07:50	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			02/27/25 07:50	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			02/27/25 07:50	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			02/27/25 07:50	1
n-Butylbenzene	0.57	J	1.0	0.44	ug/L			02/27/25 07:50	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			02/27/25 07:50	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			02/27/25 07:50	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			02/27/25 07:50	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			02/27/25 07:50	1
Naphthalene	ND		3.0	0.93	ug/L			02/27/25 07:50	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			02/27/25 07:50	1
1,3,5-Trimethylbenzene	ND	F1 F2	1.0	0.55	ug/L			02/27/25 07:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	88		80 - 120		02/27/25 07:50	1
1,2-Dichloroethane-d4 (Surr)	115		80 - 120		02/27/25 07:50	1
4-Bromofluorobenzene (Surr)	98		80 - 120		02/27/25 07:50	1
Dibromofluoromethane (Surr)	116		80 - 120		02/27/25 07:50	1

Method: EPA 314.0 - Perchlorate (IC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	13000		800	360	ug/L			02/26/25 23:19	400

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	5200		150	43	mg/L			03/05/25 19:20	100

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: PA-21d-022025

Lab Sample ID: 580-148207-3

Date Collected: 02/20/25 11:02

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1000	530	ug/L			02/26/25 22:32	1000
Chloromethane	ND		1000	280	ug/L			02/26/25 22:32	1000
Vinyl chloride	ND		1000	220	ug/L			02/26/25 22:32	1000
Bromomethane	ND		1000	210	ug/L			02/26/25 22:32	1000
Chloroethane	ND		1000	350	ug/L			02/26/25 22:32	1000
Trichlorofluoromethane	ND		1000	360	ug/L			02/26/25 22:32	1000
Carbon disulfide	ND		1000	530	ug/L			02/26/25 22:32	1000
1,1-Dichloroethene	ND		1000	280	ug/L			02/26/25 22:32	1000
Acetone	ND		15000	3200	ug/L			02/26/25 22:32	1000
Methylene Chloride	ND		5000	1400	ug/L			02/26/25 22:32	1000
Methyl tert-butyl ether	ND		1000	440	ug/L			02/26/25 22:32	1000
trans-1,2-Dichloroethene	ND		1000	390	ug/L			02/26/25 22:32	1000
1,1-Dichloroethane	ND		1000	220	ug/L			02/26/25 22:32	1000
2-Butanone (MEK)	ND		15000	4700	ug/L			02/26/25 22:32	1000
2,2-Dichloropropane	ND		1000	320	ug/L			02/26/25 22:32	1000
cis-1,2-Dichloroethene	ND		1000	350	ug/L			02/26/25 22:32	1000
Chlorobromomethane	ND		1000	290	ug/L			02/26/25 22:32	1000
Chloroform	ND		1000	260	ug/L			02/26/25 22:32	1000
1,1,1-Trichloroethane	ND		1000	390	ug/L			02/26/25 22:32	1000
Carbon tetrachloride	ND		1000	300	ug/L			02/26/25 22:32	1000
1,1-Dichloropropene	ND		1000	290	ug/L			02/26/25 22:32	1000
Benzene	ND		1000	240	ug/L			02/26/25 22:32	1000
1,2-Dichloroethane	ND		1000	420	ug/L			02/26/25 22:32	1000
Trichloroethene	ND		1000	260	ug/L			02/26/25 22:32	1000
1,2-Dichloropropane	ND		1000	180	ug/L			02/26/25 22:32	1000
4-Methyl-2-pentanone (MIBK)	ND		5000	2500	ug/L			02/26/25 22:32	1000
Dibromomethane	ND		1000	340	ug/L			02/26/25 22:32	1000
Dichlorobromomethane	ND		1000	290	ug/L			02/26/25 22:32	1000
cis-1,3-Dichloropropene	ND		1000	420	ug/L			02/26/25 22:32	1000
Toluene	ND		1000	390	ug/L			02/26/25 22:32	1000
trans-1,3-Dichloropropene	ND		1000	410	ug/L			02/26/25 22:32	1000
1,1,2-Trichloroethane	ND		1000	240	ug/L			02/26/25 22:32	1000
Tetrachloroethene	ND		1000	410	ug/L			02/26/25 22:32	1000
1,3-Dichloropropane	ND		1000	350	ug/L			02/26/25 22:32	1000
Chlorodibromomethane	ND		1000	430	ug/L			02/26/25 22:32	1000
Ethylene Dibromide	ND		1000	400	ug/L			02/26/25 22:32	1000
Chlorobenzene	43000		1000	440	ug/L			02/26/25 22:32	1000
1,1,1,2-Tetrachloroethane	ND		1000	180	ug/L			02/26/25 22:32	1000
Ethylbenzene	ND		1000	500	ug/L			02/26/25 22:32	1000
m-Xylene & p-Xylene	ND		2000	530	ug/L			02/26/25 22:32	1000
o-Xylene	ND		1000	390	ug/L			02/26/25 22:32	1000
Styrene	ND		1000	530	ug/L			02/26/25 22:32	1000
Bromoform	ND		1000	510	ug/L			02/26/25 22:32	1000
Isopropylbenzene	450	J B	1000	440	ug/L			02/26/25 22:32	1000
Bromobenzene	ND		1000	430	ug/L			02/26/25 22:32	1000
1,1,2,2-Tetrachloroethane	ND		1000	520	ug/L			02/26/25 22:32	1000
1,2,3-Trichloropropane	ND		1000	410	ug/L			02/26/25 22:32	1000
N-Propylbenzene	ND		1000	500	ug/L			02/26/25 22:32	1000
2-Chlorotoluene	ND		1000	510	ug/L			02/26/25 22:32	1000

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: PA-21d-022025

Lab Sample ID: 580-148207-3

Date Collected: 02/20/25 11:02

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		1000	380	ug/L			02/26/25 22:32	1000
tert-Butylbenzene	ND		2000	580	ug/L			02/26/25 22:32	1000
1,2,4-Trimethylbenzene	ND		3000	610	ug/L			02/26/25 22:32	1000
sec-Butylbenzene	ND		1000	490	ug/L			02/26/25 22:32	1000
4-Isopropyltoluene	ND		1000	280	ug/L			02/26/25 22:32	1000
1,3-Dichlorobenzene	ND		1000	480	ug/L			02/26/25 22:32	1000
1,4-Dichlorobenzene	ND		1000	460	ug/L			02/26/25 22:32	1000
n-Butylbenzene	ND		1000	440	ug/L			02/26/25 22:32	1000
1,2-Dichlorobenzene	ND		1000	460	ug/L			02/26/25 22:32	1000
1,2-Dibromo-3-Chloropropane	ND		3000	570	ug/L			02/26/25 22:32	1000
1,2,4-Trichlorobenzene	ND		1000	330	ug/L			02/26/25 22:32	1000
Hexachlorobutadiene	ND		3000	790	ug/L			02/26/25 22:32	1000
Naphthalene	ND		3000	930	ug/L			02/26/25 22:32	1000
1,2,3-Trichlorobenzene	ND		2000	430	ug/L			02/26/25 22:32	1000
1,3,5-Trimethylbenzene	ND		1000	550	ug/L			02/26/25 22:32	1000

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	90		80 - 120		02/26/25 22:32	1000
1,2-Dichloroethane-d4 (Surr)	109		80 - 120		02/26/25 22:32	1000
4-Bromofluorobenzene (Surr)	96		80 - 120		02/26/25 22:32	1000
Dibromofluoromethane (Surr)	113		80 - 120		02/26/25 22:32	1000

Method: EPA 314.0 - Perchlorate (IC) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	1100		80	36	ug/L			02/27/25 00:22	40

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	350		15	4.3	mg/L			03/05/25 21:08	10

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: PA-19d-022025

Lab Sample ID: 580-148207-4

Date Collected: 02/20/25 13:10

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		100	53	ug/L			02/26/25 21:46	100
Chloromethane	ND		100	28	ug/L			02/26/25 21:46	100
Vinyl chloride	ND		100	22	ug/L			02/26/25 21:46	100
Bromomethane	ND		100	21	ug/L			02/26/25 21:46	100
Chloroethane	ND		100	35	ug/L			02/26/25 21:46	100
Trichlorofluoromethane	ND		100	36	ug/L			02/26/25 21:46	100
Carbon disulfide	ND		100	53	ug/L			02/26/25 21:46	100
1,1-Dichloroethene	ND		100	28	ug/L			02/26/25 21:46	100
Acetone	ND		1500	320	ug/L			02/26/25 21:46	100
Methylene Chloride	ND		500	140	ug/L			02/26/25 21:46	100
Methyl tert-butyl ether	ND		100	44	ug/L			02/26/25 21:46	100
trans-1,2-Dichloroethene	ND		100	39	ug/L			02/26/25 21:46	100
1,1-Dichloroethane	ND		100	22	ug/L			02/26/25 21:46	100
2-Butanone (MEK)	ND		1500	470	ug/L			02/26/25 21:46	100
2,2-Dichloropropane	ND		100	32	ug/L			02/26/25 21:46	100
cis-1,2-Dichloroethene	ND		100	35	ug/L			02/26/25 21:46	100
Chlorobromomethane	ND		100	29	ug/L			02/26/25 21:46	100
Chloroform	ND		100	26	ug/L			02/26/25 21:46	100
1,1,1-Trichloroethane	ND		100	39	ug/L			02/26/25 21:46	100
Carbon tetrachloride	ND		100	30	ug/L			02/26/25 21:46	100
1,1-Dichloropropene	ND		100	29	ug/L			02/26/25 21:46	100
Benzene	46 J		100	24	ug/L			02/26/25 21:46	100
1,2-Dichloroethane	ND		100	42	ug/L			02/26/25 21:46	100
Trichloroethene	ND		100	26	ug/L			02/26/25 21:46	100
1,2-Dichloropropane	ND		100	18	ug/L			02/26/25 21:46	100
4-Methyl-2-pentanone (MIBK)	ND		500	250	ug/L			02/26/25 21:46	100
Dibromomethane	ND		100	34	ug/L			02/26/25 21:46	100
Dichlorobromomethane	ND		100	29	ug/L			02/26/25 21:46	100
cis-1,3-Dichloropropene	ND		100	42	ug/L			02/26/25 21:46	100
Toluene	ND		100	39	ug/L			02/26/25 21:46	100
trans-1,3-Dichloropropene	ND		100	41	ug/L			02/26/25 21:46	100
1,1,2-Trichloroethane	ND		100	24	ug/L			02/26/25 21:46	100
Tetrachloroethene	ND		100	41	ug/L			02/26/25 21:46	100
1,3-Dichloropropane	ND		100	35	ug/L			02/26/25 21:46	100
Chlorodibromomethane	ND		100	43	ug/L			02/26/25 21:46	100
Ethylene Dibromide	ND		100	40	ug/L			02/26/25 21:46	100
1,1,1,2-Tetrachloroethane	ND		100	18	ug/L			02/26/25 21:46	100
Ethylbenzene	ND		100	50	ug/L			02/26/25 21:46	100
m-Xylene & p-Xylene	ND		200	53	ug/L			02/26/25 21:46	100
o-Xylene	ND		100	39	ug/L			02/26/25 21:46	100
Styrene	ND		100	53	ug/L			02/26/25 21:46	100
Bromoform	ND		100	51	ug/L			02/26/25 21:46	100
Isopropylbenzene	ND		100	44	ug/L			02/26/25 21:46	100
Bromobenzene	ND		100	43	ug/L			02/26/25 21:46	100
1,1,2,2-Tetrachloroethane	ND		100	52	ug/L			02/26/25 21:46	100
1,2,3-Trichloropropane	ND		100	41	ug/L			02/26/25 21:46	100
N-Propylbenzene	ND		100	50	ug/L			02/26/25 21:46	100
2-Chlorotoluene	ND		100	51	ug/L			02/26/25 21:46	100
4-Chlorotoluene	ND		100	38	ug/L			02/26/25 21:46	100

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: PA-19d-022025

Lab Sample ID: 580-148207-4

Date Collected: 02/20/25 13:10

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
tert-Butylbenzene	ND		200	58	ug/L			02/26/25 21:46	100
1,2,4-Trimethylbenzene	ND		300	61	ug/L			02/26/25 21:46	100
sec-Butylbenzene	ND		100	49	ug/L			02/26/25 21:46	100
4-Isopropyltoluene	ND		100	28	ug/L			02/26/25 21:46	100
1,3-Dichlorobenzene	ND		100	48	ug/L			02/26/25 21:46	100
1,4-Dichlorobenzene	ND		100	46	ug/L			02/26/25 21:46	100
n-Butylbenzene	57	J B	100	44	ug/L			02/26/25 21:46	100
1,2-Dichlorobenzene	ND		100	46	ug/L			02/26/25 21:46	100
1,2-Dibromo-3-Chloropropane	ND		300	57	ug/L			02/26/25 21:46	100
1,2,4-Trichlorobenzene	ND		100	33	ug/L			02/26/25 21:46	100
Hexachlorobutadiene	ND		300	79	ug/L			02/26/25 21:46	100
Naphthalene	ND		300	93	ug/L			02/26/25 21:46	100
1,2,3-Trichlorobenzene	ND		200	43	ug/L			02/26/25 21:46	100
1,3,5-Trimethylbenzene	ND		100	55	ug/L			02/26/25 21:46	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	90		80 - 120		02/26/25 21:46	100
1,2-Dichloroethane-d4 (Surr)	110		80 - 120		02/26/25 21:46	100
4-Bromofluorobenzene (Surr)	95		80 - 120		02/26/25 21:46	100
Dibromofluoromethane (Surr)	112		80 - 120		02/26/25 21:46	100

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	11000		1000	440	ug/L			03/02/25 11:53	1000

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		03/02/25 11:53	1000
1,2-Dichloroethane-d4 (Surr)	106		80 - 120		03/02/25 11:53	1000
4-Bromofluorobenzene (Surr)	102		80 - 120		03/02/25 11:53	1000
Dibromofluoromethane (Surr)	108		80 - 120		03/02/25 11:53	1000

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	89		80	36	ug/L			02/26/25 15:40	40

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	280		15	4.3	mg/L			03/05/25 21:32	10

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: PA-30d-022025

Lab Sample ID: 580-148207-5

Date Collected: 02/20/25 14:53

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		500	270	ug/L			02/26/25 22:09	500
Chloromethane	ND		500	140	ug/L			02/26/25 22:09	500
Vinyl chloride	ND		500	110	ug/L			02/26/25 22:09	500
Bromomethane	ND		500	110	ug/L			02/26/25 22:09	500
Chloroethane	ND		500	180	ug/L			02/26/25 22:09	500
Trichlorofluoromethane	ND		500	180	ug/L			02/26/25 22:09	500
Carbon disulfide	ND		500	270	ug/L			02/26/25 22:09	500
1,1-Dichloroethene	ND		500	140	ug/L			02/26/25 22:09	500
Acetone	ND		7500	1600	ug/L			02/26/25 22:09	500
Methylene Chloride	ND		2500	720	ug/L			02/26/25 22:09	500
Methyl tert-butyl ether	ND		500	220	ug/L			02/26/25 22:09	500
trans-1,2-Dichloroethene	ND		500	200	ug/L			02/26/25 22:09	500
1,1-Dichloroethane	ND		500	110	ug/L			02/26/25 22:09	500
2-Butanone (MEK)	ND		7500	2400	ug/L			02/26/25 22:09	500
2,2-Dichloropropane	ND		500	160	ug/L			02/26/25 22:09	500
cis-1,2-Dichloroethene	ND		500	180	ug/L			02/26/25 22:09	500
Chlorobromomethane	ND		500	150	ug/L			02/26/25 22:09	500
Chloroform	ND		500	130	ug/L			02/26/25 22:09	500
1,1,1-Trichloroethane	ND		500	200	ug/L			02/26/25 22:09	500
Carbon tetrachloride	ND		500	150	ug/L			02/26/25 22:09	500
1,1-Dichloropropene	ND		500	150	ug/L			02/26/25 22:09	500
Benzene	ND		500	120	ug/L			02/26/25 22:09	500
1,2-Dichloroethane	ND		500	210	ug/L			02/26/25 22:09	500
Trichloroethene	ND		500	130	ug/L			02/26/25 22:09	500
1,2-Dichloropropane	ND		500	90	ug/L			02/26/25 22:09	500
4-Methyl-2-pentanone (MIBK)	ND		2500	1300	ug/L			02/26/25 22:09	500
Dibromomethane	ND		500	170	ug/L			02/26/25 22:09	500
Dichlorobromomethane	ND		500	150	ug/L			02/26/25 22:09	500
cis-1,3-Dichloropropene	ND		500	210	ug/L			02/26/25 22:09	500
Toluene	ND		500	200	ug/L			02/26/25 22:09	500
trans-1,3-Dichloropropene	ND		500	210	ug/L			02/26/25 22:09	500
1,1,2-Trichloroethane	ND		500	120	ug/L			02/26/25 22:09	500
Tetrachloroethene	ND		500	210	ug/L			02/26/25 22:09	500
1,3-Dichloropropane	ND		500	180	ug/L			02/26/25 22:09	500
Chlorodibromomethane	ND		500	220	ug/L			02/26/25 22:09	500
Ethylene Dibromide	ND		500	200	ug/L			02/26/25 22:09	500
Chlorobenzene	6700		500	220	ug/L			02/26/25 22:09	500
1,1,1,2-Tetrachloroethane	ND		500	90	ug/L			02/26/25 22:09	500
Ethylbenzene	ND		500	250	ug/L			02/26/25 22:09	500
m-Xylene & p-Xylene	ND		1000	270	ug/L			02/26/25 22:09	500
o-Xylene	ND		500	200	ug/L			02/26/25 22:09	500
Styrene	ND		500	270	ug/L			02/26/25 22:09	500
Bromoform	ND		500	260	ug/L			02/26/25 22:09	500
Isopropylbenzene	ND		500	220	ug/L			02/26/25 22:09	500
Bromobenzene	ND		500	220	ug/L			02/26/25 22:09	500
1,1,2,2-Tetrachloroethane	ND		500	260	ug/L			02/26/25 22:09	500
1,2,3-Trichloropropane	ND		500	210	ug/L			02/26/25 22:09	500
N-Propylbenzene	ND		500	250	ug/L			02/26/25 22:09	500
2-Chlorotoluene	ND		500	260	ug/L			02/26/25 22:09	500

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: PA-30d-022025

Lab Sample ID: 580-148207-5

Date Collected: 02/20/25 14:53

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		500	190	ug/L			02/26/25 22:09	500
tert-Butylbenzene	ND		1000	290	ug/L			02/26/25 22:09	500
1,2,4-Trimethylbenzene	ND		1500	310	ug/L			02/26/25 22:09	500
sec-Butylbenzene	ND		500	250	ug/L			02/26/25 22:09	500
4-Isopropyltoluene	ND		500	140	ug/L			02/26/25 22:09	500
1,3-Dichlorobenzene	ND		500	240	ug/L			02/26/25 22:09	500
1,4-Dichlorobenzene	ND		500	230	ug/L			02/26/25 22:09	500
n-Butylbenzene	290	J B	500	220	ug/L			02/26/25 22:09	500
1,2-Dichlorobenzene	ND		500	230	ug/L			02/26/25 22:09	500
1,2-Dibromo-3-Chloropropane	ND		1500	290	ug/L			02/26/25 22:09	500
1,2,4-Trichlorobenzene	ND		500	170	ug/L			02/26/25 22:09	500
Hexachlorobutadiene	ND		1500	400	ug/L			02/26/25 22:09	500
Naphthalene	ND		1500	470	ug/L			02/26/25 22:09	500
1,2,3-Trichlorobenzene	ND		1000	220	ug/L			02/26/25 22:09	500
1,3,5-Trimethylbenzene	ND		500	280	ug/L			02/26/25 22:09	500

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	91		80 - 120		02/26/25 22:09	500
1,2-Dichloroethane-d4 (Surr)	112		80 - 120		02/26/25 22:09	500
4-Bromofluorobenzene (Surr)	99		80 - 120		02/26/25 22:09	500
Dibromofluoromethane (Surr)	114		80 - 120		02/26/25 22:09	500

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		200	91	ug/L			02/26/25 16:01	100

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	280		15	4.3	mg/L			03/05/25 21:55	10

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: PA-20d-022025

Lab Sample ID: 580-148207-6

Date Collected: 02/20/25 18:42

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0	0.53	ug/L			02/26/25 05:17	1
Chloromethane	ND		1.0	0.28	ug/L			02/26/25 05:17	1
Vinyl chloride	ND		1.0	0.22	ug/L			02/26/25 05:17	1
Bromomethane	ND		1.0	0.21	ug/L			02/26/25 05:17	1
Chloroethane	ND		1.0	0.35	ug/L			02/26/25 05:17	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			02/26/25 05:17	1
Carbon disulfide	ND		1.0	0.53	ug/L			02/26/25 05:17	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			02/26/25 05:17	1
Acetone	ND		15	3.2	ug/L			02/26/25 05:17	1
Methylene Chloride	ND	+	5.0	1.4	ug/L			02/26/25 05:17	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			02/26/25 05:17	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			02/26/25 05:17	1
1,1-Dichloroethane	0.25	J	1.0	0.22	ug/L			02/26/25 05:17	1
2-Butanone (MEK)	ND		15	4.7	ug/L			02/26/25 05:17	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			02/26/25 05:17	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			02/26/25 05:17	1
Chlorobromomethane	ND		1.0	0.29	ug/L			02/26/25 05:17	1
Chloroform	ND		1.0	0.26	ug/L			02/26/25 05:17	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			02/26/25 05:17	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			02/26/25 05:17	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			02/26/25 05:17	1
Benzene	ND		1.0	0.24	ug/L			02/26/25 05:17	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			02/26/25 05:17	1
Trichloroethene	ND		1.0	0.26	ug/L			02/26/25 05:17	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			02/26/25 05:17	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			02/26/25 05:17	1
Dibromomethane	ND		1.0	0.34	ug/L			02/26/25 05:17	1
Dichlorobromomethane	ND		1.0	0.29	ug/L			02/26/25 05:17	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			02/26/25 05:17	1
Toluene	ND		1.0	0.39	ug/L			02/26/25 05:17	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			02/26/25 05:17	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			02/26/25 05:17	1
Tetrachloroethene	ND		1.0	0.41	ug/L			02/26/25 05:17	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			02/26/25 05:17	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			02/26/25 05:17	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			02/26/25 05:17	1
Chlorobenzene	1.7		1.0	0.44	ug/L			02/26/25 05:17	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			02/26/25 05:17	1
Ethylbenzene	ND		1.0	0.50	ug/L			02/26/25 05:17	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			02/26/25 05:17	1
o-Xylene	ND		1.0	0.39	ug/L			02/26/25 05:17	1
Styrene	ND		1.0	0.53	ug/L			02/26/25 05:17	1
Bromoform	ND		1.0	0.51	ug/L			02/26/25 05:17	1
Isopropylbenzene	0.45	J B	1.0	0.44	ug/L			02/26/25 05:17	1
Bromobenzene	ND		1.0	0.43	ug/L			02/26/25 05:17	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			02/26/25 05:17	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			02/26/25 05:17	1
N-Propylbenzene	ND		1.0	0.50	ug/L			02/26/25 05:17	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			02/26/25 05:17	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: PA-20d-022025

Lab Sample ID: 580-148207-6

Date Collected: 02/20/25 18:42

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		1.0	0.38	ug/L			02/26/25 05:17	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			02/26/25 05:17	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			02/26/25 05:17	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			02/26/25 05:17	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			02/26/25 05:17	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			02/26/25 05:17	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			02/26/25 05:17	1
n-Butylbenzene	0.58	J B	1.0	0.44	ug/L			02/26/25 05:17	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			02/26/25 05:17	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			02/26/25 05:17	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			02/26/25 05:17	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			02/26/25 05:17	1
Naphthalene	ND		3.0	0.93	ug/L			02/26/25 05:17	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			02/26/25 05:17	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			02/26/25 05:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	91		80 - 120		02/26/25 05:17	1
1,2-Dichloroethane-d4 (Surr)	107		80 - 120		02/26/25 05:17	1
4-Bromofluorobenzene (Surr)	96		80 - 120		02/26/25 05:17	1
Dibromofluoromethane (Surr)	109		80 - 120		02/26/25 05:17	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	28		4.0	1.8	ug/L			02/26/25 16:22	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	580		30	8.6	mg/L			03/05/25 22:19	20

Client Sample Results

Client: ERM-West

Job ID: 580-148207-1

Project/Site: Arkema - Q1 2025 Groundwater Event

Client Sample ID: PA-32i-022025

Lab Sample ID: 580-148207-7

Date Collected: 02/20/25 08:49

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			02/26/25 20:13	1
Chloromethane	ND		0.50	0.14	ug/L			02/26/25 20:13	1
Vinyl chloride	ND		0.10	0.040	ug/L			02/26/25 20:13	1
Bromomethane	ND		0.50	0.13	ug/L			02/26/25 20:13	1
Chloroethane	ND		0.50	0.24	ug/L			02/26/25 20:13	1
Carbon disulfide	ND		0.40	0.20	ug/L			02/26/25 20:13	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			02/26/25 20:13	1
1,1-Dichloroethene	0.059	J	0.20	0.035	ug/L			02/26/25 20:13	1
Acetone	ND		10	3.1	ug/L			02/26/25 20:13	1
Methylene Chloride	ND		5.0	1.2	ug/L			02/26/25 20:13	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			02/26/25 20:13	1
2-Butanone (MEK)	ND		10	2.5	ug/L			02/26/25 20:13	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			02/26/25 20:13	1
1,1-Dichloroethane	0.19	J	0.20	0.064	ug/L			02/26/25 20:13	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			02/26/25 20:13	1
cis-1,2-Dichloroethene	0.12	J	0.20	0.055	ug/L			02/26/25 20:13	1
Chlorobromomethane	ND		0.20	0.050	ug/L			02/26/25 20:13	1
Chloroform	ND		0.20	0.030	ug/L			02/26/25 20:13	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			02/26/25 20:13	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			02/26/25 20:13	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			02/26/25 20:13	1
Benzene	0.11	J	0.20	0.030	ug/L			02/26/25 20:13	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			02/26/25 20:13	1
Trichloroethene	ND		0.20	0.066	ug/L			02/26/25 20:13	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			02/26/25 20:13	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			02/26/25 20:13	1
Dibromomethane	ND		0.20	0.062	ug/L			02/26/25 20:13	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			02/26/25 20:13	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			02/26/25 20:13	1
Toluene	0.052	J	0.20	0.050	ug/L			02/26/25 20:13	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			02/26/25 20:13	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			02/26/25 20:13	1
Tetrachloroethene	ND		0.24	0.084	ug/L			02/26/25 20:13	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			02/26/25 20:13	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			02/26/25 20:13	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			02/26/25 20:13	1
Chlorobenzene	ND		0.20	0.060	ug/L			02/26/25 20:13	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			02/26/25 20:13	1
Ethylbenzene	ND		0.20	0.082	ug/L			02/26/25 20:13	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			02/26/25 20:13	1
o-Xylene	ND		0.50	0.23	ug/L			02/26/25 20:13	1
Styrene	ND		1.0	0.33	ug/L			02/26/25 20:13	1
Bromoform	ND		0.50	0.16	ug/L			02/26/25 20:13	1
Isopropylbenzene	0.46	J B	1.0	0.27	ug/L			02/26/25 20:13	1
Bromobenzene	ND		0.20	0.038	ug/L			02/26/25 20:13	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			02/26/25 20:13	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			02/26/25 20:13	1
N-Propylbenzene	ND		0.30	0.091	ug/L			02/26/25 20:13	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			02/26/25 20:13	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: PA-32i-022025

Lab Sample ID: 580-148207-7

Date Collected: 02/20/25 08:49

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		0.30	0.12	ug/L			02/26/25 20:13	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			02/26/25 20:13	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			02/26/25 20:13	1
1,2,4-Trimethylbenzene	0.27	J B	0.55	0.23	ug/L			02/26/25 20:13	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			02/26/25 20:13	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			02/26/25 20:13	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			02/26/25 20:13	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			02/26/25 20:13	1
n-Butylbenzene	ND		1.0	0.35	ug/L			02/26/25 20:13	1
1,2-Dichlorobenzene	0.25	J	0.30	0.038	ug/L			02/26/25 20:13	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			02/26/25 20:13	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			02/26/25 20:13	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			02/26/25 20:13	1
Naphthalene	ND		1.5	0.52	ug/L			02/26/25 20:13	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			02/26/25 20:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	90		80 - 120		02/26/25 20:13	1
Dibromofluoromethane (Surr)	113		80 - 120		02/26/25 20:13	1
4-Bromofluorobenzene (Surr)	98		80 - 120		02/26/25 20:13	1
1,2-Dichloroethane-d4 (Surr)	109		80 - 120		02/26/25 20:13	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		200	91	ug/L			02/26/25 16:43	100

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	44		1.5	0.43	mg/L			03/05/25 22:31	1

Client Sample Results

Client: ERM-West

Job ID: 580-148207-1

Project/Site: Arkema - Q1 2025 Groundwater Event

Client Sample ID: PA-08-022025

Lab Sample ID: 580-148207-8

Date Collected: 02/20/25 10:38

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			02/26/25 20:36	1
Chloromethane	ND		0.50	0.14	ug/L			02/26/25 20:36	1
Vinyl chloride	ND		0.10	0.040	ug/L			02/26/25 20:36	1
Bromomethane	ND		0.50	0.13	ug/L			02/26/25 20:36	1
Chloroethane	ND		0.50	0.24	ug/L			02/26/25 20:36	1
Carbon disulfide	ND		0.40	0.20	ug/L			02/26/25 20:36	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			02/26/25 20:36	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			02/26/25 20:36	1
Acetone	ND		10	3.1	ug/L			02/26/25 20:36	1
Methylene Chloride	ND		5.0	1.2	ug/L			02/26/25 20:36	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			02/26/25 20:36	1
2-Butanone (MEK)	ND		10	2.5	ug/L			02/26/25 20:36	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			02/26/25 20:36	1
1,1-Dichloroethane	0.19	J	0.20	0.064	ug/L			02/26/25 20:36	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			02/26/25 20:36	1
cis-1,2-Dichloroethene	0.090	J	0.20	0.055	ug/L			02/26/25 20:36	1
Chlorobromomethane	ND		0.20	0.050	ug/L			02/26/25 20:36	1
Chloroform	0.14	J	0.20	0.030	ug/L			02/26/25 20:36	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			02/26/25 20:36	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			02/26/25 20:36	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			02/26/25 20:36	1
Benzene	ND		0.20	0.030	ug/L			02/26/25 20:36	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			02/26/25 20:36	1
Trichloroethene	0.12	J	0.20	0.066	ug/L			02/26/25 20:36	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			02/26/25 20:36	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			02/26/25 20:36	1
Dibromomethane	ND		0.20	0.062	ug/L			02/26/25 20:36	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			02/26/25 20:36	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			02/26/25 20:36	1
Toluene	0.051	J	0.20	0.050	ug/L			02/26/25 20:36	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			02/26/25 20:36	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			02/26/25 20:36	1
Tetrachloroethene	0.20	J	0.24	0.084	ug/L			02/26/25 20:36	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			02/26/25 20:36	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			02/26/25 20:36	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			02/26/25 20:36	1
Chlorobenzene	ND		0.20	0.060	ug/L			02/26/25 20:36	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			02/26/25 20:36	1
Ethylbenzene	ND		0.20	0.082	ug/L			02/26/25 20:36	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			02/26/25 20:36	1
o-Xylene	ND		0.50	0.23	ug/L			02/26/25 20:36	1
Styrene	ND		1.0	0.33	ug/L			02/26/25 20:36	1
Bromoform	ND		0.50	0.16	ug/L			02/26/25 20:36	1
Isopropylbenzene	ND		1.0	0.27	ug/L			02/26/25 20:36	1
Bromobenzene	ND		0.20	0.038	ug/L			02/26/25 20:36	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			02/26/25 20:36	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			02/26/25 20:36	1
N-Propylbenzene	ND		0.30	0.091	ug/L			02/26/25 20:36	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			02/26/25 20:36	1

Eurofins Seattle

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: PA-08-022025

Lab Sample ID: 580-148207-8

Date Collected: 02/20/25 10:38

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		0.30	0.12	ug/L			02/26/25 20:36	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			02/26/25 20:36	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			02/26/25 20:36	1
1,2,4-Trimethylbenzene	0.26	J B	0.55	0.23	ug/L			02/26/25 20:36	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			02/26/25 20:36	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			02/26/25 20:36	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			02/26/25 20:36	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			02/26/25 20:36	1
n-Butylbenzene	ND		1.0	0.35	ug/L			02/26/25 20:36	1
1,2-Dichlorobenzene	0.066	J	0.30	0.038	ug/L			02/26/25 20:36	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			02/26/25 20:36	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			02/26/25 20:36	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			02/26/25 20:36	1
Naphthalene	ND		1.5	0.52	ug/L			02/26/25 20:36	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			02/26/25 20:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	89		80 - 120		02/26/25 20:36	1
Dibromofluoromethane (Surr)	114		80 - 120		02/26/25 20:36	1
4-Bromofluorobenzene (Surr)	96		80 - 120		02/26/25 20:36	1
1,2-Dichloroethane-d4 (Surr)	112		80 - 120		02/26/25 20:36	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	28	J	40	18	ug/L			02/26/25 17:03	20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	460		30	8.6	mg/L			03/05/25 23:31	20

Client Sample Results

Client: ERM-West

Job ID: 580-148207-1

Project/Site: Arkema - Q1 2025 Groundwater Event

Client Sample ID: Dup-01-022025

Lab Sample ID: 580-148207-9

Date Collected: 02/20/25 12:00

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			02/27/25 08:13	1
Chloromethane	ND		0.50	0.14	ug/L			02/27/25 08:13	1
Vinyl chloride	ND		0.10	0.040	ug/L			02/27/25 08:13	1
Bromomethane	ND		0.50	0.13	ug/L			02/27/25 08:13	1
Chloroethane	ND		0.50	0.24	ug/L			02/27/25 08:13	1
Carbon disulfide	ND		0.40	0.20	ug/L			02/27/25 08:13	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			02/27/25 08:13	1
1,1-Dichloroethene	0.12	J	0.20	0.035	ug/L			02/27/25 08:13	1
Acetone	ND		10	3.1	ug/L			02/27/25 08:13	1
Methylene Chloride	ND		5.0	1.2	ug/L			02/27/25 08:13	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			02/27/25 08:13	1
2-Butanone (MEK)	ND		10	2.5	ug/L			02/27/25 08:13	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			02/27/25 08:13	1
1,1-Dichloroethane	0.19	J	0.20	0.064	ug/L			02/27/25 08:13	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			02/27/25 08:13	1
cis-1,2-Dichloroethene	0.12	J	0.20	0.055	ug/L			02/27/25 08:13	1
Chlorobromomethane	ND		0.20	0.050	ug/L			02/27/25 08:13	1
Chloroform	ND		0.20	0.030	ug/L			02/27/25 08:13	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			02/27/25 08:13	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			02/27/25 08:13	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			02/27/25 08:13	1
Benzene	0.10	J	0.20	0.030	ug/L			02/27/25 08:13	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			02/27/25 08:13	1
Trichloroethene	ND		0.20	0.066	ug/L			02/27/25 08:13	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			02/27/25 08:13	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			02/27/25 08:13	1
Dibromomethane	ND		0.20	0.062	ug/L			02/27/25 08:13	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			02/27/25 08:13	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			02/27/25 08:13	1
Toluene	ND		0.20	0.050	ug/L			02/27/25 08:13	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			02/27/25 08:13	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			02/27/25 08:13	1
Tetrachloroethene	ND		0.24	0.084	ug/L			02/27/25 08:13	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			02/27/25 08:13	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			02/27/25 08:13	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			02/27/25 08:13	1
Chlorobenzene	ND		0.20	0.060	ug/L			02/27/25 08:13	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			02/27/25 08:13	1
Ethylbenzene	ND		0.20	0.082	ug/L			02/27/25 08:13	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			02/27/25 08:13	1
o-Xylene	ND		0.50	0.23	ug/L			02/27/25 08:13	1
Styrene	ND		1.0	0.33	ug/L			02/27/25 08:13	1
Bromoform	ND		0.50	0.16	ug/L			02/27/25 08:13	1
Isopropylbenzene	ND		1.0	0.27	ug/L			02/27/25 08:13	1
Bromobenzene	ND		0.20	0.038	ug/L			02/27/25 08:13	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			02/27/25 08:13	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			02/27/25 08:13	1
N-Propylbenzene	ND		0.30	0.091	ug/L			02/27/25 08:13	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			02/27/25 08:13	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: Dup-01-022025

Lab Sample ID: 580-148207-9

Date Collected: 02/20/25 12:00

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		0.30	0.12	ug/L			02/27/25 08:13	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			02/27/25 08:13	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			02/27/25 08:13	1
1,2,4-Trimethylbenzene	0.26	J B	0.55	0.23	ug/L			02/27/25 08:13	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			02/27/25 08:13	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			02/27/25 08:13	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			02/27/25 08:13	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			02/27/25 08:13	1
n-Butylbenzene	ND		1.0	0.35	ug/L			02/27/25 08:13	1
1,2-Dichlorobenzene	0.26	J	0.30	0.038	ug/L			02/27/25 08:13	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			02/27/25 08:13	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			02/27/25 08:13	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			02/27/25 08:13	1
Naphthalene	ND		1.5	0.52	ug/L			02/27/25 08:13	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			02/27/25 08:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	89		80 - 120		02/27/25 08:13	1
Dibromofluoromethane (Surr)	113		80 - 120		02/27/25 08:13	1
4-Bromofluorobenzene (Surr)	100		80 - 120		02/27/25 08:13	1
1,2-Dichloroethane-d4 (Surr)	112		80 - 120		02/27/25 08:13	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		200	91	ug/L			02/26/25 17:24	100

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	47		1.5	0.43	mg/L			03/05/25 23:43	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: PA-09-022025

Lab Sample ID: 580-148207-10

Date Collected: 02/20/25 12:12

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			02/27/25 05:54	1
Chloromethane	ND		0.50	0.14	ug/L			02/27/25 05:54	1
Vinyl chloride	ND		0.10	0.040	ug/L			02/27/25 05:54	1
Bromomethane	ND		0.50	0.13	ug/L			02/27/25 05:54	1
Chloroethane	ND		0.50	0.24	ug/L			02/27/25 05:54	1
Carbon disulfide	ND		0.40	0.20	ug/L			02/27/25 05:54	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			02/27/25 05:54	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			02/27/25 05:54	1
Acetone	ND		10	3.1	ug/L			02/27/25 05:54	1
Methylene Chloride	ND		5.0	1.2	ug/L			02/27/25 05:54	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			02/27/25 05:54	1
2-Butanone (MEK)	ND		10	2.5	ug/L			02/27/25 05:54	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			02/27/25 05:54	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			02/27/25 05:54	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			02/27/25 05:54	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			02/27/25 05:54	1
Chlorobromomethane	ND		0.20	0.050	ug/L			02/27/25 05:54	1
Chloroform	0.60		0.20	0.030	ug/L			02/27/25 05:54	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			02/27/25 05:54	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			02/27/25 05:54	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			02/27/25 05:54	1
Benzene	ND		0.20	0.030	ug/L			02/27/25 05:54	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			02/27/25 05:54	1
Trichloroethene	ND		0.20	0.066	ug/L			02/27/25 05:54	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			02/27/25 05:54	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			02/27/25 05:54	1
Dibromomethane	ND		0.20	0.062	ug/L			02/27/25 05:54	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			02/27/25 05:54	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			02/27/25 05:54	1
Toluene	ND		0.20	0.050	ug/L			02/27/25 05:54	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			02/27/25 05:54	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			02/27/25 05:54	1
Tetrachloroethene	0.30		0.24	0.084	ug/L			02/27/25 05:54	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			02/27/25 05:54	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			02/27/25 05:54	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			02/27/25 05:54	1
Chlorobenzene	ND		0.20	0.060	ug/L			02/27/25 05:54	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			02/27/25 05:54	1
Ethylbenzene	ND		0.20	0.082	ug/L			02/27/25 05:54	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			02/27/25 05:54	1
o-Xylene	ND		0.50	0.23	ug/L			02/27/25 05:54	1
Styrene	ND		1.0	0.33	ug/L			02/27/25 05:54	1
Bromoform	ND		0.50	0.16	ug/L			02/27/25 05:54	1
Isopropylbenzene	ND		1.0	0.27	ug/L			02/27/25 05:54	1
Bromobenzene	ND		0.20	0.038	ug/L			02/27/25 05:54	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			02/27/25 05:54	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			02/27/25 05:54	1
N-Propylbenzene	ND		0.30	0.091	ug/L			02/27/25 05:54	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			02/27/25 05:54	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: PA-09-022025

Lab Sample ID: 580-148207-10

Date Collected: 02/20/25 12:12

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		0.30	0.12	ug/L			02/27/25 05:54	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			02/27/25 05:54	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			02/27/25 05:54	1
1,2,4-Trimethylbenzene	0.25	J B	0.55	0.23	ug/L			02/27/25 05:54	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			02/27/25 05:54	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			02/27/25 05:54	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			02/27/25 05:54	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			02/27/25 05:54	1
n-Butylbenzene	0.57	J B	1.0	0.35	ug/L			02/27/25 05:54	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			02/27/25 05:54	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			02/27/25 05:54	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			02/27/25 05:54	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			02/27/25 05:54	1
Naphthalene	ND		1.5	0.52	ug/L			02/27/25 05:54	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			02/27/25 05:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	88		80 - 120		02/27/25 05:54	1
Dibromofluoromethane (Surr)	114		80 - 120		02/27/25 05:54	1
4-Bromofluorobenzene (Surr)	96		80 - 120		02/27/25 05:54	1
1,2-Dichloroethane-d4 (Surr)	112		80 - 120		02/27/25 05:54	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		20	9.1	ug/L			02/26/25 17:45	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	180		15	4.3	mg/L			03/06/25 00:19	10

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: PA-03-022025

Lab Sample ID: 580-148207-11

Date Collected: 02/20/25 13:50

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			02/27/25 06:17	1
Chloromethane	ND		0.50	0.14	ug/L			02/27/25 06:17	1
Vinyl chloride	ND		0.10	0.040	ug/L			02/27/25 06:17	1
Bromomethane	ND		0.50	0.13	ug/L			02/27/25 06:17	1
Chloroethane	ND		0.50	0.24	ug/L			02/27/25 06:17	1
Carbon disulfide	ND		0.40	0.20	ug/L			02/27/25 06:17	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			02/27/25 06:17	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			02/27/25 06:17	1
Acetone	ND		10	3.1	ug/L			02/27/25 06:17	1
Methylene Chloride	ND		5.0	1.2	ug/L			02/27/25 06:17	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			02/27/25 06:17	1
2-Butanone (MEK)	ND		10	2.5	ug/L			02/27/25 06:17	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			02/27/25 06:17	1
1,1-Dichloroethane	0.16	J	0.20	0.064	ug/L			02/27/25 06:17	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			02/27/25 06:17	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			02/27/25 06:17	1
Chlorobromomethane	ND		0.20	0.050	ug/L			02/27/25 06:17	1
Chloroform	0.035	J	0.20	0.030	ug/L			02/27/25 06:17	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			02/27/25 06:17	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			02/27/25 06:17	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			02/27/25 06:17	1
Benzene	0.076	J	0.20	0.030	ug/L			02/27/25 06:17	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			02/27/25 06:17	1
Trichloroethene	ND		0.20	0.066	ug/L			02/27/25 06:17	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			02/27/25 06:17	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			02/27/25 06:17	1
Dibromomethane	ND		0.20	0.062	ug/L			02/27/25 06:17	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			02/27/25 06:17	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			02/27/25 06:17	1
Toluene	0.16	J	0.20	0.050	ug/L			02/27/25 06:17	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			02/27/25 06:17	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			02/27/25 06:17	1
Tetrachloroethene	0.086	J	0.24	0.084	ug/L			02/27/25 06:17	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			02/27/25 06:17	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			02/27/25 06:17	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			02/27/25 06:17	1
Chlorobenzene	ND		0.20	0.060	ug/L			02/27/25 06:17	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			02/27/25 06:17	1
Ethylbenzene	ND		0.20	0.082	ug/L			02/27/25 06:17	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			02/27/25 06:17	1
o-Xylene	ND		0.50	0.23	ug/L			02/27/25 06:17	1
Styrene	ND		1.0	0.33	ug/L			02/27/25 06:17	1
Bromoform	ND		0.50	0.16	ug/L			02/27/25 06:17	1
Isopropylbenzene	ND		1.0	0.27	ug/L			02/27/25 06:17	1
Bromobenzene	ND		0.20	0.038	ug/L			02/27/25 06:17	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			02/27/25 06:17	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			02/27/25 06:17	1
N-Propylbenzene	ND		0.30	0.091	ug/L			02/27/25 06:17	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			02/27/25 06:17	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: PA-03-022025

Lab Sample ID: 580-148207-11

Date Collected: 02/20/25 13:50

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		0.30	0.12	ug/L			02/27/25 06:17	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			02/27/25 06:17	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			02/27/25 06:17	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			02/27/25 06:17	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			02/27/25 06:17	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			02/27/25 06:17	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			02/27/25 06:17	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			02/27/25 06:17	1
n-Butylbenzene	ND		1.0	0.35	ug/L			02/27/25 06:17	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			02/27/25 06:17	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			02/27/25 06:17	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			02/27/25 06:17	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			02/27/25 06:17	1
Naphthalene	ND		1.5	0.52	ug/L			02/27/25 06:17	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			02/27/25 06:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	89		80 - 120		02/27/25 06:17	1
Dibromofluoromethane (Surr)	115		80 - 120		02/27/25 06:17	1
4-Bromofluorobenzene (Surr)	97		80 - 120		02/27/25 06:17	1
1,2-Dichloroethane-d4 (Surr)	112		80 - 120		02/27/25 06:17	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		40	18	ug/L			02/26/25 18:06	20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	3.9		1.5	0.43	mg/L			03/06/25 00:30	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: RB-02-022125

Lab Sample ID: 580-148207-12

Date Collected: 02/21/25 06:00

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0	0.53	ug/L			02/26/25 03:20	1
Chloromethane	ND		1.0	0.28	ug/L			02/26/25 03:20	1
Vinyl chloride	ND		1.0	0.22	ug/L			02/26/25 03:20	1
Bromomethane	ND		1.0	0.21	ug/L			02/26/25 03:20	1
Chloroethane	ND		1.0	0.35	ug/L			02/26/25 03:20	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			02/26/25 03:20	1
Carbon disulfide	ND		1.0	0.53	ug/L			02/26/25 03:20	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			02/26/25 03:20	1
Acetone	4.1	J	15	3.2	ug/L			02/26/25 03:20	1
Methylene Chloride	ND	*+	5.0	1.4	ug/L			02/26/25 03:20	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			02/26/25 03:20	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			02/26/25 03:20	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			02/26/25 03:20	1
2-Butanone (MEK)	ND		15	4.7	ug/L			02/26/25 03:20	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			02/26/25 03:20	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			02/26/25 03:20	1
Chlorobromomethane	ND		1.0	0.29	ug/L			02/26/25 03:20	1
Chloroform	ND		1.0	0.26	ug/L			02/26/25 03:20	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			02/26/25 03:20	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			02/26/25 03:20	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			02/26/25 03:20	1
Benzene	ND		1.0	0.24	ug/L			02/26/25 03:20	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			02/26/25 03:20	1
Trichloroethene	ND		1.0	0.26	ug/L			02/26/25 03:20	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			02/26/25 03:20	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			02/26/25 03:20	1
Dibromomethane	ND		1.0	0.34	ug/L			02/26/25 03:20	1
Dichlorobromomethane	ND		1.0	0.29	ug/L			02/26/25 03:20	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			02/26/25 03:20	1
Toluene	ND		1.0	0.39	ug/L			02/26/25 03:20	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			02/26/25 03:20	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			02/26/25 03:20	1
Tetrachloroethene	ND		1.0	0.41	ug/L			02/26/25 03:20	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			02/26/25 03:20	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			02/26/25 03:20	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			02/26/25 03:20	1
Chlorobenzene	ND		1.0	0.44	ug/L			02/26/25 03:20	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			02/26/25 03:20	1
Ethylbenzene	ND		1.0	0.50	ug/L			02/26/25 03:20	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			02/26/25 03:20	1
o-Xylene	ND		1.0	0.39	ug/L			02/26/25 03:20	1
Styrene	ND		1.0	0.53	ug/L			02/26/25 03:20	1
Bromoform	ND		1.0	0.51	ug/L			02/26/25 03:20	1
Isopropylbenzene	0.45	J B	1.0	0.44	ug/L			02/26/25 03:20	1
Bromobenzene	ND		1.0	0.43	ug/L			02/26/25 03:20	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			02/26/25 03:20	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			02/26/25 03:20	1
N-Propylbenzene	ND		1.0	0.50	ug/L			02/26/25 03:20	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			02/26/25 03:20	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: RB-02-022125

Lab Sample ID: 580-148207-12

Date Collected: 02/21/25 06:00

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		1.0	0.38	ug/L			02/26/25 03:20	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			02/26/25 03:20	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			02/26/25 03:20	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			02/26/25 03:20	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			02/26/25 03:20	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			02/26/25 03:20	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			02/26/25 03:20	1
n-Butylbenzene	0.57	J B	1.0	0.44	ug/L			02/26/25 03:20	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			02/26/25 03:20	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			02/26/25 03:20	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			02/26/25 03:20	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			02/26/25 03:20	1
Naphthalene	ND		3.0	0.93	ug/L			02/26/25 03:20	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			02/26/25 03:20	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			02/26/25 03:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	92		80 - 120		02/26/25 03:20	1
1,2-Dichloroethane-d4 (Surr)	99		80 - 120		02/26/25 03:20	1
4-Bromofluorobenzene (Surr)	95		80 - 120		02/26/25 03:20	1
Dibromofluoromethane (Surr)	106		80 - 120		02/26/25 03:20	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		2.0	0.91	ug/L			02/26/25 19:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	0.49	J	1.5	0.43	mg/L			03/06/25 00:54	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: PA-17iR-022125

Lab Sample ID: 580-148207-13

Date Collected: 02/21/25 09:01

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0	0.53	ug/L			02/27/25 06:40	1
Chloromethane	ND		1.0	0.28	ug/L			02/27/25 06:40	1
Vinyl chloride	ND		1.0	0.22	ug/L			02/27/25 06:40	1
Bromomethane	ND		1.0	0.21	ug/L			02/27/25 06:40	1
Chloroethane	ND		1.0	0.35	ug/L			02/27/25 06:40	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			02/27/25 06:40	1
Carbon disulfide	ND		1.0	0.53	ug/L			02/27/25 06:40	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			02/27/25 06:40	1
Acetone	ND		15	3.2	ug/L			02/27/25 06:40	1
Methylene Chloride	ND		5.0	1.4	ug/L			02/27/25 06:40	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			02/27/25 06:40	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			02/27/25 06:40	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			02/27/25 06:40	1
2-Butanone (MEK)	ND		15	4.7	ug/L			02/27/25 06:40	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			02/27/25 06:40	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			02/27/25 06:40	1
Chlorobromomethane	ND		1.0	0.29	ug/L			02/27/25 06:40	1
Chloroform	ND		1.0	0.26	ug/L			02/27/25 06:40	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			02/27/25 06:40	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			02/27/25 06:40	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			02/27/25 06:40	1
Benzene	ND		1.0	0.24	ug/L			02/27/25 06:40	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			02/27/25 06:40	1
Trichloroethene	ND		1.0	0.26	ug/L			02/27/25 06:40	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			02/27/25 06:40	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			02/27/25 06:40	1
Dibromomethane	ND		1.0	0.34	ug/L			02/27/25 06:40	1
Dichlorobromomethane	ND		1.0	0.29	ug/L			02/27/25 06:40	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			02/27/25 06:40	1
Toluene	ND		1.0	0.39	ug/L			02/27/25 06:40	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			02/27/25 06:40	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			02/27/25 06:40	1
Tetrachloroethene	ND		1.0	0.41	ug/L			02/27/25 06:40	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			02/27/25 06:40	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			02/27/25 06:40	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			02/27/25 06:40	1
Chlorobenzene	ND		1.0	0.44	ug/L			02/27/25 06:40	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			02/27/25 06:40	1
Ethylbenzene	ND		1.0	0.50	ug/L			02/27/25 06:40	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			02/27/25 06:40	1
o-Xylene	ND		1.0	0.39	ug/L			02/27/25 06:40	1
Styrene	ND		1.0	0.53	ug/L			02/27/25 06:40	1
Bromoform	ND		1.0	0.51	ug/L			02/27/25 06:40	1
Isopropylbenzene	ND		1.0	0.44	ug/L			02/27/25 06:40	1
Bromobenzene	ND		1.0	0.43	ug/L			02/27/25 06:40	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			02/27/25 06:40	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			02/27/25 06:40	1
N-Propylbenzene	ND		1.0	0.50	ug/L			02/27/25 06:40	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			02/27/25 06:40	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: PA-17iR-022125

Lab Sample ID: 580-148207-13

Date Collected: 02/21/25 09:01

Matrix: Water

Date Received: 02/21/25 13:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		1.0	0.38	ug/L			02/27/25 06:40	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			02/27/25 06:40	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			02/27/25 06:40	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			02/27/25 06:40	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			02/27/25 06:40	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			02/27/25 06:40	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			02/27/25 06:40	1
n-Butylbenzene	0.57	J B	1.0	0.44	ug/L			02/27/25 06:40	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			02/27/25 06:40	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			02/27/25 06:40	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			02/27/25 06:40	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			02/27/25 06:40	1
Naphthalene	ND		3.0	0.93	ug/L			02/27/25 06:40	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			02/27/25 06:40	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			02/27/25 06:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	89		80 - 120		02/27/25 06:40	1
1,2-Dichloroethane-d4 (Surr)	111		80 - 120		02/27/25 06:40	1
4-Bromofluorobenzene (Surr)	97		80 - 120		02/27/25 06:40	1
Dibromofluoromethane (Surr)	113		80 - 120		02/27/25 06:40	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		200	91	ug/L			02/26/25 19:29	100

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	58		1.5	0.43	mg/L			03/06/25 01:18	1

QC Sample Results

Client: ERM-West

Job ID: 580-148207-1

Project/Site: Arkema - Q1 2025 Groundwater Event

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

Lab Sample ID: MB 580-485845/7

Matrix: Water

Analysis Batch: 485845

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0	0.53	ug/L			02/26/25 02:11	1
Chloromethane	ND		1.0	0.28	ug/L			02/26/25 02:11	1
Vinyl chloride	ND		1.0	0.22	ug/L			02/26/25 02:11	1
Bromomethane	ND		1.0	0.21	ug/L			02/26/25 02:11	1
Chloroethane	ND		1.0	0.35	ug/L			02/26/25 02:11	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			02/26/25 02:11	1
Carbon disulfide	ND		1.0	0.53	ug/L			02/26/25 02:11	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			02/26/25 02:11	1
Acetone	ND		15	3.2	ug/L			02/26/25 02:11	1
Methylene Chloride	7.39		5.0	1.4	ug/L			02/26/25 02:11	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			02/26/25 02:11	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			02/26/25 02:11	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			02/26/25 02:11	1
2-Butanone (MEK)	ND		15	4.7	ug/L			02/26/25 02:11	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			02/26/25 02:11	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			02/26/25 02:11	1
Chlorobromomethane	ND		1.0	0.29	ug/L			02/26/25 02:11	1
Chloroform	ND		1.0	0.26	ug/L			02/26/25 02:11	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			02/26/25 02:11	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			02/26/25 02:11	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			02/26/25 02:11	1
Benzene	ND		1.0	0.24	ug/L			02/26/25 02:11	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			02/26/25 02:11	1
Trichloroethene	ND		1.0	0.26	ug/L			02/26/25 02:11	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			02/26/25 02:11	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			02/26/25 02:11	1
Dibromomethane	ND		1.0	0.34	ug/L			02/26/25 02:11	1
Dichlorobromomethane	ND		1.0	0.29	ug/L			02/26/25 02:11	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			02/26/25 02:11	1
Toluene	ND		1.0	0.39	ug/L			02/26/25 02:11	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			02/26/25 02:11	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			02/26/25 02:11	1
Tetrachloroethene	ND		1.0	0.41	ug/L			02/26/25 02:11	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			02/26/25 02:11	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			02/26/25 02:11	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			02/26/25 02:11	1
Chlorobenzene	ND		1.0	0.44	ug/L			02/26/25 02:11	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			02/26/25 02:11	1
Ethylbenzene	ND		1.0	0.50	ug/L			02/26/25 02:11	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			02/26/25 02:11	1
o-Xylene	ND		1.0	0.39	ug/L			02/26/25 02:11	1
Styrene	ND		1.0	0.53	ug/L			02/26/25 02:11	1
Bromoform	ND		1.0	0.51	ug/L			02/26/25 02:11	1
Isopropylbenzene	0.455	J	1.0	0.44	ug/L			02/26/25 02:11	1
Bromobenzene	ND		1.0	0.43	ug/L			02/26/25 02:11	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			02/26/25 02:11	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			02/26/25 02:11	1
N-Propylbenzene	ND		1.0	0.50	ug/L			02/26/25 02:11	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

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

Lab Sample ID: MB 580-485845/7

Matrix: Water

Analysis Batch: 485845

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorotoluene	ND		1.0	0.51	ug/L			02/26/25 02:11	1
4-Chlorotoluene	ND		1.0	0.38	ug/L			02/26/25 02:11	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			02/26/25 02:11	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			02/26/25 02:11	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			02/26/25 02:11	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			02/26/25 02:11	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			02/26/25 02:11	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			02/26/25 02:11	1
n-Butylbenzene	0.580	J	1.0	0.44	ug/L			02/26/25 02:11	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			02/26/25 02:11	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			02/26/25 02:11	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			02/26/25 02:11	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			02/26/25 02:11	1
Naphthalene	ND		3.0	0.93	ug/L			02/26/25 02:11	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			02/26/25 02:11	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			02/26/25 02:11	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	93		80 - 120		02/26/25 02:11	1
1,2-Dichloroethane-d4 (Surr)	95		80 - 120		02/26/25 02:11	1
4-Bromofluorobenzene (Surr)	96		80 - 120		02/26/25 02:11	1
Dibromofluoromethane (Surr)	103		80 - 120		02/26/25 02:11	1

Lab Sample ID: LCS 580-485845/4

Matrix: Water

Analysis Batch: 485845

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dichlorodifluoromethane	5.00	3.30		ug/L		66	20 - 150
Chloromethane	5.00	4.28		ug/L		86	25 - 150
Vinyl chloride	5.00	4.26		ug/L		85	31 - 150
Bromomethane	5.00	4.30		ug/L		86	36 - 150
Chloroethane	5.00	4.07		ug/L		81	38 - 150
Trichlorofluoromethane	5.00	3.61		ug/L		72	45 - 148
Carbon disulfide	5.00	4.41		ug/L		88	63 - 134
1,1-Dichloroethene	5.00	4.57		ug/L		91	70 - 129
Acetone	25.0	23.2		ug/L		93	44 - 150
Methylene Chloride	5.00	6.57	*+	ug/L		131	77 - 125
Methyl tert-butyl ether	5.00	4.86		ug/L		97	72 - 120
trans-1,2-Dichloroethene	5.00	4.90		ug/L		98	75 - 120
1,1-Dichloroethane	5.00	5.18		ug/L		104	80 - 120
2-Butanone (MEK)	25.0	24.8		ug/L		99	65 - 137
2,2-Dichloropropane	5.00	4.65		ug/L		93	66 - 126
cis-1,2-Dichloroethene	5.00	5.06		ug/L		101	76 - 120
Chlorobromomethane	5.00	5.12		ug/L		102	78 - 120
Chloroform	5.00	4.73		ug/L		95	78 - 127
1,1,1-Trichloroethane	5.00	4.20		ug/L		84	74 - 130
Carbon tetrachloride	5.00	3.92		ug/L		78	72 - 129

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

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

Lab Sample ID: LCS 580-485845/4

Matrix: Water

Analysis Batch: 485845

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloropropene	5.00	4.46		ug/L		89	74 - 120
Benzene	5.00	5.11		ug/L		102	80 - 122
1,2-Dichloroethane	5.00	4.33		ug/L		87	69 - 126
Trichloroethene	5.00	4.98		ug/L		100	80 - 125
1,2-Dichloropropane	5.00	5.24		ug/L		105	80 - 120
4-Methyl-2-pentanone (MIBK)	25.0	21.7		ug/L		87	59 - 141
Dibromomethane	5.00	4.94		ug/L		99	80 - 120
Dichlorobromomethane	5.00	4.83		ug/L		97	75 - 124
cis-1,3-Dichloropropene	5.00	4.26		ug/L		85	77 - 120
Toluene	5.00	4.51		ug/L		90	80 - 120
trans-1,3-Dichloropropene	5.00	4.50		ug/L		90	76 - 122
1,1,2-Trichloroethane	5.00	4.64		ug/L		93	80 - 121
Tetrachloroethene	5.00	4.04		ug/L		81	76 - 125
1,3-Dichloropropane	5.00	4.62		ug/L		92	79 - 120
Chlorodibromomethane	5.00	4.28		ug/L		86	73 - 125
Ethylene Dibromide	5.00	4.52		ug/L		90	79 - 126
Chlorobenzene	5.00	4.60		ug/L		92	80 - 120
1,1,1,2-Tetrachloroethane	5.00	4.59		ug/L		92	79 - 120
Ethylbenzene	5.00	4.56		ug/L		91	80 - 120
m-Xylene & p-Xylene	5.00	4.38		ug/L		88	80 - 120
o-Xylene	5.00	4.46		ug/L		89	80 - 120
Styrene	5.00	4.50		ug/L		90	76 - 122
Bromoform	5.00	4.25		ug/L		85	56 - 139
Isopropylbenzene	5.00	4.69		ug/L		94	80 - 123
Bromobenzene	5.00	4.31		ug/L		86	80 - 120
1,1,2,2-Tetrachloroethane	5.00	4.43		ug/L		89	74 - 124
1,2,3-Trichloropropane	5.00	4.29		ug/L		86	76 - 124
N-Propylbenzene	5.00	4.32		ug/L		86	80 - 122
2-Chlorotoluene	5.00	4.64		ug/L		93	80 - 120
4-Chlorotoluene	5.00	4.72		ug/L		94	73 - 129
tert-Butylbenzene	5.00	4.48		ug/L		90	75 - 123
1,2,4-Trimethylbenzene	5.00	4.19		ug/L		84	80 - 120
sec-Butylbenzene	5.00	4.26		ug/L		85	78 - 122
4-Isopropyltoluene	5.00	4.08		ug/L		82	77 - 126
1,3-Dichlorobenzene	5.00	4.54		ug/L		91	77 - 127
1,4-Dichlorobenzene	5.00	4.41		ug/L		88	80 - 120
n-Butylbenzene	5.00	4.02		ug/L		80	57 - 133
1,2-Dichlorobenzene	5.00	4.56		ug/L		91	80 - 120
1,2-Dibromo-3-Chloropropane	5.00	3.84		ug/L		77	65 - 133
1,2,4-Trichlorobenzene	5.00	4.22		ug/L		84	61 - 148
Hexachlorobutadiene	5.00	4.24		ug/L		85	74 - 131
Naphthalene	5.00	4.59		ug/L		92	63 - 150
1,2,3-Trichlorobenzene	5.00	4.21		ug/L		84	65 - 150
1,3,5-Trimethylbenzene	5.00	4.51		ug/L		90	80 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	98		80 - 120
1,2-Dichloroethane-d4 (Surr)	89		80 - 120

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

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

Lab Sample ID: LCS 580-485845/4

Matrix: Water

Analysis Batch: 485845

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	97		80 - 120

Lab Sample ID: LCSD 580-485845/5

Matrix: Water

Analysis Batch: 485845

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dichlorodifluoromethane	5.00	3.34		ug/L		67	20 - 150	1	33
Chloromethane	5.00	4.49		ug/L		90	25 - 150	5	26
Vinyl chloride	5.00	4.27		ug/L		85	31 - 150	0	26
Bromomethane	5.00	4.35		ug/L		87	36 - 150	1	33
Chloroethane	5.00	4.20		ug/L		84	38 - 150	3	28
Trichlorofluoromethane	5.00	3.73		ug/L		75	45 - 148	3	35
Carbon disulfide	5.00	4.54		ug/L		91	63 - 134	3	24
1,1-Dichloroethene	5.00	4.55		ug/L		91	70 - 129	0	23
Acetone	25.0	22.8		ug/L		91	44 - 150	2	33
Methylene Chloride	5.00	6.32	+	ug/L		126	77 - 125	4	18
Methyl tert-butyl ether	5.00	5.05		ug/L		101	72 - 120	4	18
trans-1,2-Dichloroethene	5.00	4.85		ug/L		97	75 - 120	1	21
1,1-Dichloroethane	5.00	5.19		ug/L		104	80 - 120	0	15
2-Butanone (MEK)	25.0	24.6		ug/L		99	65 - 137	0	34
2,2-Dichloropropane	5.00	4.88		ug/L		98	66 - 126	5	22
cis-1,2-Dichloroethene	5.00	5.30		ug/L		106	76 - 120	5	20
Chlorobromomethane	5.00	5.10		ug/L		102	78 - 120	0	13
Chloroform	5.00	4.83		ug/L		97	78 - 127	2	14
1,1,1-Trichloroethane	5.00	4.30		ug/L		86	74 - 130	2	19
Carbon tetrachloride	5.00	4.11		ug/L		82	72 - 129	5	19
1,1-Dichloropropene	5.00	4.58		ug/L		92	74 - 120	3	14
Benzene	5.00	5.18		ug/L		104	80 - 122	2	14
1,2-Dichloroethane	5.00	4.45		ug/L		89	69 - 126	3	11
Trichloroethene	5.00	4.92		ug/L		98	80 - 125	1	13
1,2-Dichloropropane	5.00	5.34		ug/L		107	80 - 120	2	14
4-Methyl-2-pentanone (MIBK)	25.0	22.1		ug/L		88	59 - 141	2	22
Dibromomethane	5.00	4.99		ug/L		100	80 - 120	1	11
Dichlorobromomethane	5.00	4.88		ug/L		98	75 - 124	1	13
cis-1,3-Dichloropropene	5.00	4.26		ug/L		85	77 - 120	0	35
Toluene	5.00	4.68		ug/L		94	80 - 120	4	13
trans-1,3-Dichloropropene	5.00	4.58		ug/L		92	76 - 122	2	20
1,1,2-Trichloroethane	5.00	4.64		ug/L		93	80 - 121	0	14
Tetrachloroethene	5.00	4.04		ug/L		81	76 - 125	0	13
1,3-Dichloropropane	5.00	4.59		ug/L		92	79 - 120	1	19
Chlorodibromomethane	5.00	4.28		ug/L		86	73 - 125	0	13
Ethylene Dibromide	5.00	4.49		ug/L		90	79 - 126	1	12
Chlorobenzene	5.00	4.64		ug/L		93	80 - 120	1	10
1,1,1,2-Tetrachloroethane	5.00	4.42		ug/L		88	79 - 120	4	16
Ethylbenzene	5.00	4.72		ug/L		94	80 - 120	3	14
m-Xylene & p-Xylene	5.00	4.57		ug/L		91	80 - 120	4	14

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QC Sample Results

Client: ERM-West

Job ID: 580-148207-1

Project/Site: Arkema - Q1 2025 Groundwater Event

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

Lab Sample ID: LCSD 580-485845/5

Matrix: Water

Analysis Batch: 485845

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
o-Xylene	5.00	4.59		ug/L		92	80 - 120	3	16
Styrene	5.00	4.51		ug/L		90	76 - 122	0	16
Bromoform	5.00	4.17		ug/L		83	56 - 139	2	21
Isopropylbenzene	5.00	4.84		ug/L		97	80 - 123	3	19
Bromobenzene	5.00	4.41		ug/L		88	80 - 120	2	24
1,1,2,2-Tetrachloroethane	5.00	4.44		ug/L		89	74 - 124	0	25
1,2,3-Trichloropropane	5.00	4.41		ug/L		88	76 - 124	3	26
N-Propylbenzene	5.00	4.41		ug/L		88	80 - 122	2	22
2-Chlorotoluene	5.00	4.80		ug/L		96	80 - 120	3	20
4-Chlorotoluene	5.00	4.85		ug/L		97	73 - 129	3	29
tert-Butylbenzene	5.00	4.48		ug/L		90	75 - 123	0	21
1,2,4-Trimethylbenzene	5.00	4.39		ug/L		88	80 - 120	5	16
sec-Butylbenzene	5.00	4.31		ug/L		86	78 - 122	1	15
4-Isopropyltoluene	5.00	4.20		ug/L		84	77 - 126	3	20
1,3-Dichlorobenzene	5.00	4.65		ug/L		93	77 - 127	3	35
1,4-Dichlorobenzene	5.00	4.48		ug/L		90	80 - 120	2	17
n-Butylbenzene	5.00	4.11		ug/L		82	57 - 133	2	14
1,2-Dichlorobenzene	5.00	4.58		ug/L		92	80 - 120	0	15
1,2-Dibromo-3-Chloropropane	5.00	4.06		ug/L		81	65 - 133	5	25
1,2,4-Trichlorobenzene	5.00	4.26		ug/L		85	61 - 148	1	27
Hexachlorobutadiene	5.00	4.23		ug/L		85	74 - 131	0	22
Naphthalene	5.00	4.49		ug/L		90	63 - 150	2	33
1,2,3-Trichlorobenzene	5.00	4.07		ug/L		81	65 - 150	3	33
1,3,5-Trimethylbenzene	5.00	4.62		ug/L		92	80 - 122	2	21

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	98		80 - 120
1,2-Dichloroethane-d4 (Surr)	89		80 - 120
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	98		80 - 120

Lab Sample ID: MB 580-485909/11

Matrix: Water

Analysis Batch: 485909

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			02/26/25 14:48	1
Chloromethane	ND		0.50	0.14	ug/L			02/26/25 14:48	1
Vinyl chloride	ND		0.10	0.040	ug/L			02/26/25 14:48	1
Bromomethane	ND		0.50	0.13	ug/L			02/26/25 14:48	1
Chloroethane	ND		0.50	0.24	ug/L			02/26/25 14:48	1
Carbon disulfide	ND		0.40	0.20	ug/L			02/26/25 14:48	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			02/26/25 14:48	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			02/26/25 14:48	1
Acetone	ND		10	3.1	ug/L			02/26/25 14:48	1
Methylene Chloride	2.21	J	5.0	1.2	ug/L			02/26/25 14:48	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			02/26/25 14:48	1
2-Butanone (MEK)	ND		10	2.5	ug/L			02/26/25 14:48	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

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

Lab Sample ID: MB 580-485909/11

Matrix: Water

Analysis Batch: 485909

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			02/26/25 14:48	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			02/26/25 14:48	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			02/26/25 14:48	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			02/26/25 14:48	1
Chlorobromomethane	ND		0.20	0.050	ug/L			02/26/25 14:48	1
Chloroform	ND		0.20	0.030	ug/L			02/26/25 14:48	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			02/26/25 14:48	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			02/26/25 14:48	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			02/26/25 14:48	1
Benzene	ND		0.20	0.030	ug/L			02/26/25 14:48	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			02/26/25 14:48	1
Trichloroethene	ND		0.20	0.066	ug/L			02/26/25 14:48	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			02/26/25 14:48	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			02/26/25 14:48	1
Dibromomethane	ND		0.20	0.062	ug/L			02/26/25 14:48	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			02/26/25 14:48	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			02/26/25 14:48	1
Toluene	ND		0.20	0.050	ug/L			02/26/25 14:48	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			02/26/25 14:48	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			02/26/25 14:48	1
Tetrachloroethene	ND		0.24	0.084	ug/L			02/26/25 14:48	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			02/26/25 14:48	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			02/26/25 14:48	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			02/26/25 14:48	1
Chlorobenzene	ND		0.20	0.060	ug/L			02/26/25 14:48	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			02/26/25 14:48	1
Ethylbenzene	ND		0.20	0.082	ug/L			02/26/25 14:48	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			02/26/25 14:48	1
o-Xylene	ND		0.50	0.23	ug/L			02/26/25 14:48	1
Styrene	ND		1.0	0.33	ug/L			02/26/25 14:48	1
Bromoform	ND		0.50	0.16	ug/L			02/26/25 14:48	1
Isopropylbenzene	0.457	J	1.0	0.27	ug/L			02/26/25 14:48	1
Bromobenzene	ND		0.20	0.038	ug/L			02/26/25 14:48	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			02/26/25 14:48	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			02/26/25 14:48	1
N-Propylbenzene	ND		0.30	0.091	ug/L			02/26/25 14:48	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			02/26/25 14:48	1
4-Chlorotoluene	ND		0.30	0.12	ug/L			02/26/25 14:48	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			02/26/25 14:48	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			02/26/25 14:48	1
1,2,4-Trimethylbenzene	0.269	J	0.55	0.23	ug/L			02/26/25 14:48	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			02/26/25 14:48	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			02/26/25 14:48	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			02/26/25 14:48	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			02/26/25 14:48	1
n-Butylbenzene	0.582	J	1.0	0.35	ug/L			02/26/25 14:48	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			02/26/25 14:48	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			02/26/25 14:48	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			02/26/25 14:48	1

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QC Sample Results

Client: ERM-West

Job ID: 580-148207-1

Project/Site: Arkema - Q1 2025 Groundwater Event

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

Lab Sample ID: MB 580-485909/11

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 485909

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Hexachlorobutadiene	ND		0.50	0.16	ug/L			02/26/25 14:48	1
Naphthalene	ND		1.5	0.52	ug/L			02/26/25 14:48	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			02/26/25 14:48	1
Surrogate	MB	MB	Limits				Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier							
Toluene-d8 (Surr)	89		80 - 120					02/26/25 14:48	1
Dibromofluoromethane (Surr)	107		80 - 120					02/26/25 14:48	1
4-Bromofluorobenzene (Surr)	98		80 - 120					02/26/25 14:48	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 120					02/26/25 14:48	1

Lab Sample ID: LCS 580-485909/5

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 485909

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec
	Added	Result	Qualifier				Limits
Dichlorodifluoromethane	5.00	3.65		ug/L		73	20 - 150
Chloromethane	5.00	4.52		ug/L		90	32 - 150
Vinyl chloride	5.00	4.64		ug/L		93	41 - 150
Bromomethane	5.00	4.93		ug/L		99	51 - 148
Chloroethane	5.00	4.49		ug/L		90	54 - 140
Carbon disulfide	5.00	4.56		ug/L		91	54 - 142
Trichlorofluoromethane	5.00	4.06		ug/L		81	60 - 132
1,1-Dichloroethene	5.00	4.67		ug/L		93	60 - 129
Acetone	25.0	27.1		ug/L		109	49 - 150
Methylene Chloride	5.00	6.43		ug/L		129	40 - 142
Methyl tert-butyl ether	5.00	4.92		ug/L		98	61 - 131
2-Butanone (MEK)	25.0	25.4		ug/L		101	37 - 150
trans-1,2-Dichloroethene	5.00	5.17		ug/L		103	69 - 121
1,1-Dichloroethane	5.00	5.27		ug/L		105	74 - 120
2,2-Dichloropropane	5.00	6.26		ug/L		125	55 - 140
cis-1,2-Dichloroethene	5.00	5.28		ug/L		106	72 - 120
Chlorobromomethane	5.00	5.31		ug/L		106	79 - 121
Chloroform	5.00	5.23		ug/L		105	75 - 120
1,1,1-Trichloroethane	5.00	4.67		ug/L		93	70 - 121
Carbon tetrachloride	5.00	4.48		ug/L		90	66 - 130
1,1-Dichloropropene	5.00	4.72		ug/L		94	72 - 125
Benzene	5.00	5.27		ug/L		105	80 - 120
1,2-Dichloroethane	5.00	5.02		ug/L		100	74 - 127
Trichloroethene	5.00	5.13		ug/L		103	72 - 120
1,2-Dichloropropane	5.00	5.56		ug/L		111	69 - 130
4-Methyl-2-pentanone (MIBK)	25.0	20.1		ug/L		81	63 - 137
Dibromomethane	5.00	5.12		ug/L		102	65 - 141
Dichlorobromomethane	5.00	5.06		ug/L		101	74 - 131
cis-1,3-Dichloropropene	5.00	4.26		ug/L		85	77 - 131
Toluene	5.00	4.65		ug/L		93	80 - 126
trans-1,3-Dichloropropene	5.00	4.70		ug/L		94	71 - 138
1,1,2-Trichloroethane	5.00	4.47		ug/L		89	73 - 127
Tetrachloroethene	5.00	4.08		ug/L		82	75 - 124

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

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

Lab Sample ID: LCS 580-485909/5

Matrix: Water

Analysis Batch: 485909

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,3-Dichloropropane	5.00	4.52		ug/L		90	69 - 138
Chlorodibromomethane	5.00	4.38		ug/L		88	62 - 141
Ethylene Dibromide	5.00	4.46		ug/L		89	61 - 143
Chlorobenzene	5.00	4.56		ug/L		91	74 - 123
1,1,1,2-Tetrachloroethane	5.00	4.65		ug/L		93	69 - 127
Ethylbenzene	5.00	4.62		ug/L		92	80 - 124
m-Xylene & p-Xylene	5.00	4.57		ug/L		91	75 - 124
o-Xylene	5.00	4.60		ug/L		92	71 - 124
Styrene	5.00	4.47		ug/L		89	74 - 127
Bromoform	5.00	4.18		ug/L		84	48 - 127
Isopropylbenzene	5.00	4.72		ug/L		94	71 - 123
Bromobenzene	5.00	4.50		ug/L		90	74 - 130
1,1,2,2-Tetrachloroethane	5.00	4.25		ug/L		85	67 - 136
1,2,3-Trichloropropane	5.00	4.20		ug/L		84	67 - 135
N-Propylbenzene	5.00	4.37		ug/L		87	72 - 126
2-Chlorotoluene	5.00	4.70		ug/L		94	73 - 120
4-Chlorotoluene	5.00	4.77		ug/L		95	75 - 124
1,3,5-Trimethylbenzene	5.00	4.62		ug/L		92	75 - 123
tert-Butylbenzene	5.00	4.60		ug/L		92	70 - 129
1,2,4-Trimethylbenzene	5.00	4.32		ug/L		86	71 - 127
sec-Butylbenzene	5.00	4.29		ug/L		86	75 - 126
4-Isopropyltoluene	5.00	4.16		ug/L		83	78 - 125
1,3-Dichlorobenzene	5.00	4.57		ug/L		91	72 - 125
1,4-Dichlorobenzene	5.00	4.51		ug/L		90	71 - 129
n-Butylbenzene	5.00	4.28		ug/L		86	69 - 127
1,2-Dichlorobenzene	5.00	4.63		ug/L		93	72 - 129
1,2-Dibromo-3-Chloropropane	5.00	3.55		ug/L		71	55 - 135
1,2,4-Trichlorobenzene	5.00	4.21		ug/L		84	60 - 130
Hexachlorobutadiene	5.00	4.36		ug/L		87	63 - 130
Naphthalene	5.00	4.41		ug/L		88	54 - 137
1,2,3-Trichlorobenzene	5.00	4.00		ug/L		80	60 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	104		80 - 120
1,2-Dichloroethane-d4 (Surr)	98		80 - 120

Lab Sample ID: LCSD 580-485909/6

Matrix: Water

Analysis Batch: 485909

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dichlorodifluoromethane	5.00	3.48		ug/L		70	20 - 150	5	30
Chloromethane	5.00	4.33		ug/L		87	32 - 150	4	33
Vinyl chloride	5.00	4.43		ug/L		89	41 - 150	5	32
Bromomethane	5.00	4.47		ug/L		89	51 - 148	10	35
Chloroethane	5.00	4.35		ug/L		87	54 - 140	3	33

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

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

Lab Sample ID: LCSD 580-485909/6

Matrix: Water

Analysis Batch: 485909

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Carbon disulfide	5.00	4.28		ug/L		86	54 - 142	6	34
Trichlorofluoromethane	5.00	3.87		ug/L		77	60 - 132	5	32
1,1-Dichloroethene	5.00	4.54		ug/L		91	60 - 129	3	29
Acetone	25.0	23.3		ug/L		93	49 - 150	15	24
Methylene Chloride	5.00	6.17		ug/L		123	40 - 142	4	25
Methyl tert-butyl ether	5.00	4.96		ug/L		99	61 - 131	1	27
2-Butanone (MEK)	25.0	25.2		ug/L		101	37 - 150	1	35
trans-1,2-Dichloroethene	5.00	4.77		ug/L		95	69 - 121	8	27
1,1-Dichloroethane	5.00	5.24		ug/L		105	74 - 120	1	26
2,2-Dichloropropane	5.00	5.77		ug/L		115	55 - 140	8	31
cis-1,2-Dichloroethene	5.00	5.21		ug/L		104	72 - 120	1	22
Chlorobromomethane	5.00	5.18		ug/L		104	79 - 121	2	20
Chloroform	5.00	4.93		ug/L		99	75 - 120	6	21
1,1,1-Trichloroethane	5.00	4.50		ug/L		90	70 - 121	4	24
Carbon tetrachloride	5.00	4.21		ug/L		84	66 - 130	6	24
1,1-Dichloropropene	5.00	4.47		ug/L		89	72 - 125	6	23
Benzene	5.00	5.03		ug/L		101	80 - 120	4	22
1,2-Dichloroethane	5.00	4.81		ug/L		96	74 - 127	4	21
Trichloroethene	5.00	4.87		ug/L		97	72 - 120	5	22
1,2-Dichloropropane	5.00	5.07		ug/L		101	69 - 130	9	22
4-Methyl-2-pentanone (MIBK)	25.0	20.9		ug/L		84	63 - 137	4	26
Dibromomethane	5.00	5.09		ug/L		102	65 - 141	1	22
Dichlorobromomethane	5.00	4.90		ug/L		98	74 - 131	3	21
cis-1,3-Dichloropropene	5.00	4.16		ug/L		83	77 - 131	2	24
Toluene	5.00	4.33		ug/L		87	80 - 126	7	20
trans-1,3-Dichloropropene	5.00	4.55		ug/L		91	71 - 138	3	26
1,1,2-Trichloroethane	5.00	4.40		ug/L		88	73 - 127	2	22
Tetrachloroethene	5.00	3.94		ug/L		79	75 - 124	4	20
1,3-Dichloropropane	5.00	4.49		ug/L		90	69 - 138	1	19
Chlorodibromomethane	5.00	4.27		ug/L		85	62 - 141	2	22
Ethylene Dibromide	5.00	4.32		ug/L		86	61 - 143	3	22
Chlorobenzene	5.00	4.37		ug/L		87	74 - 123	4	21
1,1,1,2-Tetrachloroethane	5.00	4.55		ug/L		91	69 - 127	2	22
Ethylbenzene	5.00	4.37		ug/L		87	80 - 124	6	22
m-Xylene & p-Xylene	5.00	4.32		ug/L		86	75 - 124	6	22
o-Xylene	5.00	4.28		ug/L		86	71 - 124	7	23
Styrene	5.00	4.14		ug/L		83	74 - 127	8	22
Bromoform	5.00	4.09		ug/L		82	48 - 127	2	23
Isopropylbenzene	5.00	4.58		ug/L		92	71 - 123	3	23
Bromobenzene	5.00	4.13		ug/L		83	74 - 130	9	23
1,1,2,2-Tetrachloroethane	5.00	4.26		ug/L		85	67 - 136	0	24
1,2,3-Trichloropropane	5.00	4.28		ug/L		86	67 - 135	2	25
N-Propylbenzene	5.00	4.09		ug/L		82	72 - 126	6	20
2-Chlorotoluene	5.00	4.47		ug/L		89	73 - 120	5	22
4-Chlorotoluene	5.00	4.60		ug/L		92	75 - 124	4	23
1,3,5-Trimethylbenzene	5.00	4.39		ug/L		88	75 - 123	5	23
tert-Butylbenzene	5.00	4.30		ug/L		86	70 - 129	7	24
1,2,4-Trimethylbenzene	5.00	4.11		ug/L		82	71 - 127	5	23
sec-Butylbenzene	5.00	4.07		ug/L		81	75 - 126	5	23

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

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

Lab Sample ID: LCSD 580-485909/6

Matrix: Water

Analysis Batch: 485909

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4-Isopropyltoluene	5.00	3.95		ug/L		79	78 - 125	5	24
1,3-Dichlorobenzene	5.00	4.29		ug/L		86	72 - 125	6	22
1,4-Dichlorobenzene	5.00	4.31		ug/L		86	71 - 129	5	22
n-Butylbenzene	5.00	3.95		ug/L		79	69 - 127	8	24
1,2-Dichlorobenzene	5.00	4.33		ug/L		87	72 - 129	7	22
1,2-Dibromo-3-Chloropropane	5.00	3.92		ug/L		78	55 - 135	10	29
1,2,4-Trichlorobenzene	5.00	4.11		ug/L		82	60 - 130	2	26
Hexachlorobutadiene	5.00	4.19		ug/L		84	63 - 130	4	26
Naphthalene	5.00	4.43		ug/L		89	54 - 137	1	28
1,2,3-Trichlorobenzene	5.00	3.91		ug/L		78	60 - 136	2	28

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120
4-Bromofluorobenzene (Surr)	103		80 - 120
1,2-Dichloroethane-d4 (Surr)	98		80 - 120

Lab Sample ID: MB 580-485951/7

Matrix: Water

Analysis Batch: 485951

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			02/27/25 01:38	1
Chloromethane	ND		0.50	0.14	ug/L			02/27/25 01:38	1
Vinyl chloride	ND		0.10	0.040	ug/L			02/27/25 01:38	1
Bromomethane	ND		0.50	0.13	ug/L			02/27/25 01:38	1
Chloroethane	ND		0.50	0.24	ug/L			02/27/25 01:38	1
Carbon disulfide	ND		0.40	0.20	ug/L			02/27/25 01:38	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			02/27/25 01:38	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			02/27/25 01:38	1
Acetone	ND		10	3.1	ug/L			02/27/25 01:38	1
Methylene Chloride	ND		5.0	1.2	ug/L			02/27/25 01:38	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			02/27/25 01:38	1
2-Butanone (MEK)	ND		10	2.5	ug/L			02/27/25 01:38	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			02/27/25 01:38	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			02/27/25 01:38	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			02/27/25 01:38	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			02/27/25 01:38	1
Chlorobromomethane	ND		0.20	0.050	ug/L			02/27/25 01:38	1
Chloroform	ND		0.20	0.030	ug/L			02/27/25 01:38	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			02/27/25 01:38	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			02/27/25 01:38	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			02/27/25 01:38	1
Benzene	ND		0.20	0.030	ug/L			02/27/25 01:38	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			02/27/25 01:38	1
Trichloroethene	ND		0.20	0.066	ug/L			02/27/25 01:38	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			02/27/25 01:38	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			02/27/25 01:38	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

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

Lab Sample ID: MB 580-485951/7

Matrix: Water

Analysis Batch: 485951

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	ND		0.20	0.062	ug/L			02/27/25 01:38	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			02/27/25 01:38	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			02/27/25 01:38	1
Toluene	ND		0.20	0.050	ug/L			02/27/25 01:38	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			02/27/25 01:38	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			02/27/25 01:38	1
Tetrachloroethene	ND		0.24	0.084	ug/L			02/27/25 01:38	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			02/27/25 01:38	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			02/27/25 01:38	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			02/27/25 01:38	1
Chlorobenzene	ND		0.20	0.060	ug/L			02/27/25 01:38	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			02/27/25 01:38	1
Ethylbenzene	ND		0.20	0.082	ug/L			02/27/25 01:38	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			02/27/25 01:38	1
o-Xylene	ND		0.50	0.23	ug/L			02/27/25 01:38	1
Styrene	ND		1.0	0.33	ug/L			02/27/25 01:38	1
Bromoform	ND		0.50	0.16	ug/L			02/27/25 01:38	1
Isopropylbenzene	ND		1.0	0.27	ug/L			02/27/25 01:38	1
Bromobenzene	ND		0.20	0.038	ug/L			02/27/25 01:38	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			02/27/25 01:38	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			02/27/25 01:38	1
N-Propylbenzene	ND		0.30	0.091	ug/L			02/27/25 01:38	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			02/27/25 01:38	1
4-Chlorotoluene	ND		0.30	0.12	ug/L			02/27/25 01:38	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			02/27/25 01:38	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			02/27/25 01:38	1
1,2,4-Trimethylbenzene	0.260	J	0.55	0.23	ug/L			02/27/25 01:38	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			02/27/25 01:38	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			02/27/25 01:38	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			02/27/25 01:38	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			02/27/25 01:38	1
n-Butylbenzene	0.581	J	1.0	0.35	ug/L			02/27/25 01:38	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			02/27/25 01:38	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			02/27/25 01:38	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			02/27/25 01:38	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			02/27/25 01:38	1
Naphthalene	ND		1.5	0.52	ug/L			02/27/25 01:38	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			02/27/25 01:38	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	89		80 - 120					02/27/25 01:38	1
Dibromofluoromethane (Surr)	112		80 - 120					02/27/25 01:38	1
4-Bromofluorobenzene (Surr)	97		80 - 120					02/27/25 01:38	1
1,2-Dichloroethane-d4 (Surr)	110		80 - 120					02/27/25 01:38	1

QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

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

Lab Sample ID: LCS 580-485951/4

Matrix: Water

Analysis Batch: 485951

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dichlorodifluoromethane	5.00	4.67		ug/L		93	20 - 150
Chloromethane	5.00	5.13		ug/L		103	32 - 150
Vinyl chloride	5.00	5.30		ug/L		106	41 - 150
Bromomethane	5.00	4.87		ug/L		97	51 - 148
Chloroethane	5.00	4.82		ug/L		96	54 - 140
Carbon disulfide	5.00	4.71		ug/L		94	54 - 142
Trichlorofluoromethane	5.00	4.80		ug/L		96	60 - 132
1,1-Dichloroethene	5.00	4.77		ug/L		95	60 - 129
Acetone	25.0	24.8		ug/L		99	49 - 150
Methylene Chloride	5.00	6.31		ug/L		126	40 - 142
Methyl tert-butyl ether	5.00	5.14		ug/L		103	61 - 131
2-Butanone (MEK)	25.0	25.6		ug/L		102	37 - 150
trans-1,2-Dichloroethene	5.00	5.31		ug/L		106	69 - 121
1,1-Dichloroethane	5.00	5.65		ug/L		113	74 - 120
2,2-Dichloropropane	5.00	5.59		ug/L		112	55 - 140
cis-1,2-Dichloroethene	5.00	5.46		ug/L		109	72 - 120
Chlorobromomethane	5.00	5.61		ug/L		112	79 - 121
Chloroform	5.00	5.44		ug/L		109	75 - 120
1,1,1-Trichloroethane	5.00	4.94		ug/L		99	70 - 121
Carbon tetrachloride	5.00	4.71		ug/L		94	66 - 130
1,1-Dichloropropene	5.00	5.01		ug/L		100	72 - 125
Benzene	5.00	5.59		ug/L		112	80 - 120
1,2-Dichloroethane	5.00	5.19		ug/L		104	74 - 127
Trichloroethene	5.00	5.40		ug/L		108	72 - 120
1,2-Dichloropropane	5.00	5.60		ug/L		112	69 - 130
4-Methyl-2-pentanone (MIBK)	25.0	20.9		ug/L		83	63 - 137
Dibromomethane	5.00	5.53		ug/L		111	65 - 141
Dichlorobromomethane	5.00	5.57		ug/L		111	74 - 131
cis-1,3-Dichloropropene	5.00	4.27		ug/L		85	77 - 131
Toluene	5.00	4.79		ug/L		96	80 - 126
trans-1,3-Dichloropropene	5.00	4.71		ug/L		94	71 - 138
1,1,2-Trichloroethane	5.00	4.59		ug/L		92	73 - 127
Tetrachloroethene	5.00	4.24		ug/L		85	75 - 124
1,3-Dichloropropane	5.00	4.68		ug/L		94	69 - 138
Chlorodibromomethane	5.00	4.71		ug/L		94	62 - 141
Ethylene Dibromide	5.00	4.62		ug/L		92	61 - 143
Chlorobenzene	5.00	4.72		ug/L		94	74 - 123
1,1,1,2-Tetrachloroethane	5.00	4.86		ug/L		97	69 - 127
Ethylbenzene	5.00	4.81		ug/L		96	80 - 124
m-Xylene & p-Xylene	5.00	4.66		ug/L		93	75 - 124
o-Xylene	5.00	4.66		ug/L		93	71 - 124
Styrene	5.00	4.52		ug/L		90	74 - 127
Bromoform	5.00	4.51		ug/L		90	48 - 127
Isopropylbenzene	5.00	4.85		ug/L		97	71 - 123
Bromobenzene	5.00	4.54		ug/L		91	74 - 130
1,1,2,2-Tetrachloroethane	5.00	4.50		ug/L		90	67 - 136
1,2,3-Trichloropropane	5.00	4.24		ug/L		85	67 - 135
N-Propylbenzene	5.00	4.61		ug/L		92	72 - 126

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

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

Lab Sample ID: LCS 580-485951/4

Matrix: Water

Analysis Batch: 485951

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Chlorotoluene	5.00	4.86		ug/L		97	73 - 120
4-Chlorotoluene	5.00	5.16		ug/L		103	75 - 124
1,3,5-Trimethylbenzene	5.00	4.82		ug/L		96	75 - 123
tert-Butylbenzene	5.00	4.53		ug/L		91	70 - 129
1,2,4-Trimethylbenzene	5.00	4.49		ug/L		90	71 - 127
sec-Butylbenzene	5.00	4.42		ug/L		88	75 - 126
4-Isopropyltoluene	5.00	4.30		ug/L		86	78 - 125
1,3-Dichlorobenzene	5.00	4.72		ug/L		94	72 - 125
1,4-Dichlorobenzene	5.00	4.68		ug/L		94	71 - 129
n-Butylbenzene	5.00	4.22		ug/L		84	69 - 127
1,2-Dichlorobenzene	5.00	4.78		ug/L		96	72 - 129
1,2-Dibromo-3-Chloropropane	5.00	3.99		ug/L		80	55 - 135
1,2,4-Trichlorobenzene	5.00	4.47		ug/L		89	60 - 130
Hexachlorobutadiene	5.00	4.44		ug/L		89	63 - 130
Naphthalene	5.00	4.56		ug/L		91	54 - 137
1,2,3-Trichlorobenzene	5.00	4.28		ug/L		86	60 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	103		80 - 120
4-Bromofluorobenzene (Surr)	104		80 - 120
1,2-Dichloroethane-d4 (Surr)	99		80 - 120

Lab Sample ID: LCSD 580-485951/5

Matrix: Water

Analysis Batch: 485951

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dichlorodifluoromethane	5.00	4.94		ug/L		99	20 - 150	6	30
Chloromethane	5.00	5.22		ug/L		104	32 - 150	2	33
Vinyl chloride	5.00	5.55		ug/L		111	41 - 150	5	32
Bromomethane	5.00	5.15		ug/L		103	51 - 148	6	35
Chloroethane	5.00	5.08		ug/L		102	54 - 140	5	33
Carbon disulfide	5.00	4.86		ug/L		97	54 - 142	3	34
Trichlorofluoromethane	5.00	4.85		ug/L		97	60 - 132	1	32
1,1-Dichloroethene	5.00	4.99		ug/L		100	60 - 129	4	29
Acetone	25.0	25.9		ug/L		103	49 - 150	4	24
Methylene Chloride	5.00	6.45		ug/L		129	40 - 142	2	25
Methyl tert-butyl ether	5.00	5.36		ug/L		107	61 - 131	4	27
2-Butanone (MEK)	25.0	25.6		ug/L		102	37 - 150	0	35
trans-1,2-Dichloroethene	5.00	5.37		ug/L		107	69 - 121	1	27
1,1-Dichloroethane	5.00	5.82		ug/L		116	74 - 120	3	26
2,2-Dichloropropane	5.00	5.73		ug/L		115	55 - 140	2	31
cis-1,2-Dichloroethene	5.00	5.65		ug/L		113	72 - 120	4	22
Chlorobromomethane	5.00	5.77		ug/L		115	79 - 121	3	20
Chloroform	5.00	5.53		ug/L		111	75 - 120	2	21
1,1,1-Trichloroethane	5.00	4.90		ug/L		98	70 - 121	1	24
Carbon tetrachloride	5.00	4.82		ug/L		96	66 - 130	2	24

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

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

Lab Sample ID: LCSD 580-485951/5

Matrix: Water

Analysis Batch: 485951

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1-Dichloropropene	5.00	4.89		ug/L		98	72 - 125	2	23
Benzene	5.00	5.65		ug/L		113	80 - 120	1	22
1,2-Dichloroethane	5.00	5.35		ug/L		107	74 - 127	3	21
Trichloroethene	5.00	5.48		ug/L		110	72 - 120	1	22
1,2-Dichloropropane	5.00	5.75		ug/L		115	69 - 130	3	22
4-Methyl-2-pentanone (MIBK)	25.0	20.8		ug/L		83	63 - 137	0	26
Dibromomethane	5.00	5.42		ug/L		108	65 - 141	2	22
Dichlorobromomethane	5.00	5.55		ug/L		111	74 - 131	0	21
cis-1,3-Dichloropropene	5.00	4.60		ug/L		92	77 - 131	7	24
Toluene	5.00	4.80		ug/L		96	80 - 126	0	20
trans-1,3-Dichloropropene	5.00	4.91		ug/L		98	71 - 138	4	26
1,1,2-Trichloroethane	5.00	4.81		ug/L		96	73 - 127	5	22
Tetrachloroethene	5.00	4.33		ug/L		87	75 - 124	2	20
1,3-Dichloropropane	5.00	4.99		ug/L		100	69 - 138	7	19
Chlorodibromomethane	5.00	4.88		ug/L		98	62 - 141	3	22
Ethylene Dibromide	5.00	4.68		ug/L		94	61 - 143	1	22
Chlorobenzene	5.00	4.89		ug/L		98	74 - 123	3	21
1,1,1,2-Tetrachloroethane	5.00	5.09		ug/L		102	69 - 127	5	22
Ethylbenzene	5.00	4.83		ug/L		97	80 - 124	0	22
m-Xylene & p-Xylene	5.00	4.78		ug/L		96	75 - 124	2	22
o-Xylene	5.00	4.80		ug/L		96	71 - 124	3	23
Styrene	5.00	4.61		ug/L		92	74 - 127	2	22
Bromoform	5.00	4.59		ug/L		92	48 - 127	2	23
Isopropylbenzene	5.00	4.90		ug/L		98	71 - 123	1	23
Bromobenzene	5.00	4.60		ug/L		92	74 - 130	1	23
1,1,2,2-Tetrachloroethane	5.00	4.62		ug/L		92	67 - 136	3	24
1,2,3-Trichloropropane	5.00	4.43		ug/L		89	67 - 135	4	25
N-Propylbenzene	5.00	4.70		ug/L		94	72 - 126	2	20
2-Chlorotoluene	5.00	4.98		ug/L		100	73 - 120	2	22
4-Chlorotoluene	5.00	5.10		ug/L		102	75 - 124	1	23
1,3,5-Trimethylbenzene	5.00	4.87		ug/L		97	75 - 123	1	23
tert-Butylbenzene	5.00	4.65		ug/L		93	70 - 129	3	24
1,2,4-Trimethylbenzene	5.00	4.48		ug/L		90	71 - 127	0	23
sec-Butylbenzene	5.00	4.47		ug/L		89	75 - 126	1	23
4-Isopropyltoluene	5.00	4.22		ug/L		84	78 - 125	2	24
1,3-Dichlorobenzene	5.00	4.73		ug/L		95	72 - 125	0	22
1,4-Dichlorobenzene	5.00	4.80		ug/L		96	71 - 129	2	22
n-Butylbenzene	5.00	4.27		ug/L		85	69 - 127	1	24
1,2-Dichlorobenzene	5.00	4.96		ug/L		99	72 - 129	4	22
1,2-Dibromo-3-Chloropropane	5.00	4.36		ug/L		87	55 - 135	9	29
1,2,4-Trichlorobenzene	5.00	4.30		ug/L		86	60 - 130	4	26
Hexachlorobutadiene	5.00	4.40		ug/L		88	63 - 130	1	26
Naphthalene	5.00	4.47		ug/L		89	54 - 137	2	28
1,2,3-Trichlorobenzene	5.00	4.17		ug/L		83	60 - 136	3	28

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	105		80 - 120

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QC Sample Results

Client: ERM-West

Job ID: 580-148207-1

Project/Site: Arkema - Q1 2025 Groundwater Event

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

Lab Sample ID: LCSD 580-485951/5

Matrix: Water

Analysis Batch: 485951

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		80 - 120
1,2-Dichloroethane-d4 (Surr)	99		80 - 120

Lab Sample ID: 580-148207-2 MS

Matrix: Water

Analysis Batch: 485951

Client Sample ID: PA-22d-022025

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Dichlorodifluoromethane	ND		5.00	7.50		ug/L		150	20 - 150
Chloromethane	ND		5.00	6.01		ug/L		120	25 - 150
Vinyl chloride	ND		5.00	7.10		ug/L		142	31 - 150
Bromomethane	ND		5.00	5.78		ug/L		116	36 - 150
Chloroethane	ND	F1	5.00	7.11		ug/L		142	38 - 150
Trichlorofluoromethane	ND		5.00	7.17		ug/L		143	45 - 148
Carbon disulfide	ND		5.00	6.44		ug/L		129	63 - 134
1,1-Dichloroethene	ND		5.00	6.41		ug/L		128	70 - 129
Acetone	ND		25.0	23.3		ug/L		93	44 - 150
Methylene Chloride	ND		5.00	5.99		ug/L		120	77 - 125
Methyl tert-butyl ether	ND		5.00	5.56		ug/L		111	72 - 120
trans-1,2-Dichloroethene	ND	F1	5.00	6.36	F1	ug/L		127	75 - 120
1,1-Dichloroethane	ND	F1	5.00	6.91	F1	ug/L		138	80 - 120
2-Butanone (MEK)	ND		25.0	25.2		ug/L		101	65 - 137
2,2-Dichloropropane	ND	F2 F1	5.00	8.84	F1	ug/L		177	66 - 126
cis-1,2-Dichloroethene	ND	F1	5.00	6.33	F1	ug/L		127	76 - 120
Chlorobromomethane	ND	F1	5.00	6.46	F1	ug/L		129	78 - 120
Chloroform	22		5.00	27.4	4	ug/L		101	78 - 127
1,1,1-Trichloroethane	ND	F1	5.00	6.77	F1	ug/L		135	74 - 130
Carbon tetrachloride	ND	F1	5.00	7.17	F1	ug/L		143	72 - 129
1,1-Dichloropropene	ND	F1	5.00	6.99	F1	ug/L		140	74 - 120
Benzene	ND	F1	5.00	6.77	F1	ug/L		135	80 - 122
1,2-Dichloroethane	ND		5.00	6.13		ug/L		123	69 - 126
Trichloroethene	ND	F1	5.00	6.89	F1	ug/L		138	80 - 125
1,2-Dichloropropane	ND	F1	5.00	6.69	F1	ug/L		134	80 - 120
4-Methyl-2-pentanone (MIBK)	ND		25.0	20.2		ug/L		81	59 - 141
Dibromomethane	ND	F1	5.00	6.03	F1	ug/L		121	80 - 120
Dichlorobromomethane	ND	F1	5.00	6.64	F1	ug/L		133	75 - 124
cis-1,3-Dichloropropene	ND		5.00	4.91		ug/L		98	77 - 120
Toluene	ND		5.00	5.54		ug/L		111	80 - 120
trans-1,3-Dichloropropene	ND		5.00	5.43		ug/L		109	76 - 122
1,1,2-Trichloroethane	ND		5.00	5.07		ug/L		101	80 - 121
Tetrachloroethene	ND		5.00	5.46		ug/L		109	76 - 125
1,3-Dichloropropane	ND		5.00	5.00		ug/L		100	79 - 120
Chlorodibromomethane	ND		5.00	5.27		ug/L		105	73 - 125
Ethylene Dibromide	ND		5.00	4.88		ug/L		98	79 - 126
Chlorobenzene	ND		5.00	5.50		ug/L		110	80 - 120
1,1,1,2-Tetrachloroethane	ND		5.00	5.76		ug/L		115	79 - 120
Ethylbenzene	ND		5.00	5.83		ug/L		117	80 - 120
m-Xylene & p-Xylene	ND		5.00	5.63		ug/L		113	80 - 120

Eurofins Seattle

QC Sample Results

Client: ERM-West

Job ID: 580-148207-1

Project/Site: Arkema - Q1 2025 Groundwater Event

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

Lab Sample ID: 580-148207-2 MS

Client Sample ID: PA-22d-022025

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 485951

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
o-Xylene	ND		5.00	5.52		ug/L		110	80 - 120
Styrene	ND	F1	5.00	3.48	F1	ug/L		70	76 - 122
Bromoform	ND		5.00	4.85		ug/L		97	56 - 139
Isopropylbenzene	ND		5.00	5.75		ug/L		115	80 - 123
Bromobenzene	ND		5.00	5.14		ug/L		103	80 - 120
1,1,2,2-Tetrachloroethane	ND		5.00	4.75		ug/L		95	74 - 124
1,2,3-Trichloropropane	ND		5.00	4.30		ug/L		86	76 - 124
N-Propylbenzene	ND		5.00	5.53		ug/L		111	80 - 122
2-Chlorotoluene	ND		5.00	5.53		ug/L		111	80 - 120
4-Chlorotoluene	ND		5.00	5.73		ug/L		115	73 - 129
tert-Butylbenzene	ND		5.00	5.47		ug/L		109	75 - 123
1,2,4-Trimethylbenzene	ND		5.00	5.05		ug/L		101	80 - 120
sec-Butylbenzene	ND		5.00	5.48		ug/L		110	78 - 122
4-Isopropyltoluene	ND		5.00	5.11		ug/L		102	77 - 126
1,3-Dichlorobenzene	ND		5.00	5.22		ug/L		104	77 - 127
1,4-Dichlorobenzene	ND		5.00	5.33		ug/L		107	80 - 120
n-Butylbenzene	0.57	J	5.00	5.25		ug/L		94	57 - 133
1,2-Dichlorobenzene	ND		5.00	5.09		ug/L		102	80 - 120
1,2-Dibromo-3-Chloropropane	ND		5.00	3.66		ug/L		73	65 - 133
1,2,4-Trichlorobenzene	ND		5.00	4.43		ug/L		89	61 - 148
Hexachlorobutadiene	ND		5.00	5.64		ug/L		113	74 - 131
Naphthalene	ND		5.00	4.42		ug/L		88	63 - 150
1,2,3-Trichlorobenzene	ND		5.00	4.32		ug/L		86	65 - 150
1,3,5-Trimethylbenzene	ND	F1 F2	5.00	5.41		ug/L		108	80 - 122

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	93		80 - 120
1,2-Dichloroethane-d4 (Surr)	102		80 - 120
4-Bromofluorobenzene (Surr)	105		80 - 120
Dibromofluoromethane (Surr)	105		80 - 120

Lab Sample ID: 580-148207-2 MSD

Client Sample ID: PA-22d-022025

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 485951

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dichlorodifluoromethane	ND		5.00	7.22		ug/L		144	20 - 150	4	33
Chloromethane	ND		5.00	6.47		ug/L		129	25 - 150	7	26
Vinyl chloride	ND		5.00	6.98		ug/L		140	31 - 150	2	26
Bromomethane	ND		5.00	5.14		ug/L		103	36 - 150	12	33
Chloroethane	ND	F1	5.00	7.65	F1	ug/L		153	38 - 150	7	28
Trichlorofluoromethane	ND		5.00	7.11		ug/L		142	45 - 148	1	35
Carbon disulfide	ND		5.00	5.76		ug/L		115	63 - 134	11	24
1,1-Dichloroethene	ND		5.00	5.90		ug/L		118	70 - 129	8	23
Acetone	ND		25.0	28.1		ug/L		112	44 - 150	19	33
Methylene Chloride	ND		5.00	5.58		ug/L		112	77 - 125	7	18
Methyl tert-butyl ether	ND		5.00	5.55		ug/L		111	72 - 120	0	18
trans-1,2-Dichloroethene	ND	F1	5.00	5.82		ug/L		116	75 - 120	9	21

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QC Sample Results

Client: ERM-West

Job ID: 580-148207-1

Project/Site: Arkema - Q1 2025 Groundwater Event

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

Lab Sample ID: 580-148207-2 MSD

Client Sample ID: PA-22d-022025

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 485951

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1-Dichloroethane	ND	F1	5.00	6.56	F1	ug/L		131	80 - 120	5	15
2-Butanone (MEK)	ND		25.0	28.5		ug/L		114	65 - 137	12	34
2,2-Dichloropropane	ND	F2 F1	5.00	5.56	F2	ug/L		111	66 - 126	46	22
cis-1,2-Dichloroethene	ND	F1	5.00	5.77		ug/L		115	76 - 120	9	20
Chlorobromomethane	ND	F1	5.00	6.05	F1	ug/L		121	78 - 120	7	13
Chloroform	22		5.00	26.6	4	ug/L		85	78 - 127	3	14
1,1,1-Trichloroethane	ND	F1	5.00	6.35		ug/L		127	74 - 130	6	19
Carbon tetrachloride	ND	F1	5.00	6.70	F1	ug/L		134	72 - 129	7	19
1,1-Dichloropropene	ND	F1	5.00	6.23	F1	ug/L		125	74 - 120	12	14
Benzene	ND	F1	5.00	6.24	F1	ug/L		125	80 - 122	8	14
1,2-Dichloroethane	ND		5.00	5.86		ug/L		117	69 - 126	4	11
Trichloroethene	ND	F1	5.00	6.13		ug/L		123	80 - 125	12	13
1,2-Dichloropropane	ND	F1	5.00	6.21	F1	ug/L		124	80 - 120	7	14
4-Methyl-2-pentanone (MIBK)	ND		25.0	21.8		ug/L		87	59 - 141	8	22
Dibromomethane	ND	F1	5.00	5.92		ug/L		118	80 - 120	2	11
Dichlorobromomethane	ND	F1	5.00	6.39	F1	ug/L		128	75 - 124	4	13
cis-1,3-Dichloropropene	ND		5.00	4.30		ug/L		86	77 - 120	13	35
Toluene	ND		5.00	5.07		ug/L		101	80 - 120	9	13
trans-1,3-Dichloropropene	ND		5.00	4.75		ug/L		95	76 - 122	13	20
1,1,2-Trichloroethane	ND		5.00	4.80		ug/L		96	80 - 121	6	14
Tetrachloroethene	ND		5.00	4.89		ug/L		98	76 - 125	11	13
1,3-Dichloropropane	ND		5.00	4.98		ug/L		100	79 - 120	0	19
Chlorodibromomethane	ND		5.00	5.12		ug/L		102	73 - 125	3	13
Ethylene Dibromide	ND		5.00	4.96		ug/L		99	79 - 126	1	12
Chlorobenzene	ND		5.00	5.12		ug/L		102	80 - 120	7	10
1,1,1,2-Tetrachloroethane	ND		5.00	5.35		ug/L		107	79 - 120	7	16
Ethylbenzene	ND		5.00	5.23		ug/L		105	80 - 120	11	14
m-Xylene & p-Xylene	ND		5.00	5.08		ug/L		102	80 - 120	10	14
o-Xylene	ND		5.00	4.94		ug/L		99	80 - 120	11	16
Styrene	ND	F1	5.00	ND	F1	ug/L		0	76 - 122	NC	16
Bromoform	ND		5.00	5.17		ug/L		103	56 - 139	6	21
Isopropylbenzene	ND		5.00	5.27		ug/L		105	80 - 123	9	19
Bromobenzene	ND		5.00	4.49		ug/L		90	80 - 120	13	24
1,1,2,2-Tetrachloroethane	ND		5.00	4.58		ug/L		92	74 - 124	4	25
1,2,3-Trichloropropane	ND		5.00	4.63		ug/L		93	76 - 124	7	26
N-Propylbenzene	ND		5.00	4.94		ug/L		99	80 - 122	11	22
2-Chlorotoluene	ND		5.00	5.01		ug/L		100	80 - 120	10	20
4-Chlorotoluene	ND		5.00	5.09		ug/L		102	73 - 129	12	29
tert-Butylbenzene	ND		5.00	5.02		ug/L		100	75 - 123	9	21
1,2,4-Trimethylbenzene	ND		5.00	4.38		ug/L		88	80 - 120	14	16
sec-Butylbenzene	ND		5.00	5.03		ug/L		101	78 - 122	9	15
4-Isopropyltoluene	ND		5.00	4.62		ug/L		92	77 - 126	10	20
1,3-Dichlorobenzene	ND		5.00	4.86		ug/L		97	77 - 127	7	35
1,4-Dichlorobenzene	ND		5.00	4.86		ug/L		97	80 - 120	9	17
n-Butylbenzene	0.57	J	5.00	4.55		ug/L		80	57 - 133	14	14
1,2-Dichlorobenzene	ND		5.00	4.94		ug/L		99	80 - 120	3	15
1,2-Dibromo-3-Chloropropane	ND		5.00	4.15		ug/L		83	65 - 133	13	25
1,2,4-Trichlorobenzene	ND		5.00	4.34		ug/L		87	61 - 148	2	27
Hexachlorobutadiene	ND		5.00	4.87		ug/L		97	74 - 131	15	22

Eurofins Seattle

QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

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

Lab Sample ID: 580-148207-2 MSD

Client Sample ID: PA-22d-022025

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 485951

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Naphthalene	ND		5.00	4.60		ug/L		92	63 - 150	4	33
1,2,3-Trichlorobenzene	ND		5.00	4.24		ug/L		85	65 - 150	2	33
1,3,5-Trimethylbenzene	ND	F1 F2	5.00	2.45	F1 F2	ug/L		49	80 - 122	76	21
Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits								
Toluene-d8 (Surr)	92		80 - 120								
1,2-Dichloroethane-d4 (Surr)	108		80 - 120								
4-Bromofluorobenzene (Surr)	106		80 - 120								
Dibromofluoromethane (Surr)	109		80 - 120								

Lab Sample ID: MB 580-486238/10

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 486238

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		1.0	0.44	ug/L			03/02/25 04:57	1
Surrogate	MB %Recovery	MB Qualifier	MB Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120					03/02/25 04:57	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 120					03/02/25 04:57	1
4-Bromofluorobenzene (Surr)	105		80 - 120					03/02/25 04:57	1
Dibromofluoromethane (Surr)	109		80 - 120					03/02/25 04:57	1

Lab Sample ID: LCS 580-486238/5

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 486238

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chlorobenzene	5.00	5.16		ug/L		103	80 - 120		
Surrogate	LCS %Recovery	LCS Qualifier	LCS Limits						
Toluene-d8 (Surr)	98		80 - 120						
1,2-Dichloroethane-d4 (Surr)	100		80 - 120						
4-Bromofluorobenzene (Surr)	103		80 - 120						
Dibromofluoromethane (Surr)	105		80 - 120						

Lab Sample ID: LCSD 580-486238/6

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 486238

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chlorobenzene	5.00	5.11		ug/L		102	80 - 120	1	10
Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits						
Toluene-d8 (Surr)	98		80 - 120						
1,2-Dichloroethane-d4 (Surr)	101		80 - 120						
4-Bromofluorobenzene (Surr)	103		80 - 120						

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

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

Lab Sample ID: LCSD 580-486238/6

Matrix: Water

Analysis Batch: 486238

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
Dibromofluoromethane (Surr)	102		80 - 120

Method: 314.0 - Perchlorate (IC)

Lab Sample ID: MB 570-538471/8

Matrix: Water

Analysis Batch: 538471

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		2.0	0.91	ug/L			02/26/25 13:14	1

Lab Sample ID: LCS 570-538471/9

Matrix: Water

Analysis Batch: 538471

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	25.0	23.5		ug/L		94	85 - 115

Lab Sample ID: LCSD 570-538471/10

Matrix: Water

Analysis Batch: 538471

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perchlorate	25.0	23.3		ug/L		93	85 - 115	1	15

Method: 314.0 - Perchlorate (IC) - DL

Lab Sample ID: 580-148207-2 MS

Matrix: Water

Analysis Batch: 538471

Client Sample ID: PA-22d-022025

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate - DL	13000		10000	23600		ug/L		106	80 - 120

Lab Sample ID: 580-148207-2 MSD

Matrix: Water

Analysis Batch: 538471

Client Sample ID: PA-22d-022025

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perchlorate - DL	13000		10000	23100		ug/L		100	80 - 120	2	15

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-486680/22

Matrix: Water

Analysis Batch: 486680

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5	0.43	mg/L			03/05/25 18:45	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 580-486680/23

Matrix: Water

Analysis Batch: 486680

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	52.7		mg/L		105	90 - 110

Lab Sample ID: LCSD 580-486680/24

Matrix: Water

Analysis Batch: 486680

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	50.0	52.7		mg/L		105	90 - 110	0	15

Lab Sample ID: 580-148207-2 MS

Matrix: Water

Analysis Batch: 486680

Client Sample ID: PA-22d-022025

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	5200		5000	9700		mg/L		90	90 - 110

Lab Sample ID: 580-148207-2 MSD

Matrix: Water

Analysis Batch: 486680

Client Sample ID: PA-22d-022025

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	5200		5000	9700		mg/L		90	90 - 110	0	15

Lab Chronicle

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: TB-01-022025

Lab Sample ID: 580-148207-1

Date Collected: 02/20/25 06:00

Matrix: Water

Date Received: 02/21/25 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	485909	K1K	EET SEA	02/26/25 15:57

Client Sample ID: PA-22d-022025

Lab Sample ID: 580-148207-2

Date Collected: 02/20/25 06:57

Matrix: Water

Date Received: 02/21/25 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	485951	AA	EET SEA	02/27/25 07:50
Total/NA	Analysis	314.0	DL	400	538471	UIP1	EET CAL 4	02/26/25 23:19
Total/NA	Analysis	300.0		100	486680	FCG	EET SEA	03/05/25 19:20

Client Sample ID: PA-21d-022025

Lab Sample ID: 580-148207-3

Date Collected: 02/20/25 11:02

Matrix: Water

Date Received: 02/21/25 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1000	485909	K1K	EET SEA	02/26/25 22:32
Total/NA	Analysis	314.0	DL	40	538471	UIP1	EET CAL 4	02/27/25 00:22
Total/NA	Analysis	300.0		10	486680	FCG	EET SEA	03/05/25 21:08

Client Sample ID: PA-19d-022025

Lab Sample ID: 580-148207-4

Date Collected: 02/20/25 13:10

Matrix: Water

Date Received: 02/21/25 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D	DL	1000	486238	JBT	EET SEA	03/02/25 11:53
Total/NA	Analysis	8260D		100	485909	K1K	EET SEA	02/26/25 21:46
Total/NA	Analysis	314.0		40	538471	UIP1	EET CAL 4	02/26/25 15:40
Total/NA	Analysis	300.0		10	486680	FCG	EET SEA	03/05/25 21:32

Client Sample ID: PA-30d-022025

Lab Sample ID: 580-148207-5

Date Collected: 02/20/25 14:53

Matrix: Water

Date Received: 02/21/25 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		500	485909	K1K	EET SEA	02/26/25 22:09
Total/NA	Analysis	314.0		100	538471	UIP1	EET CAL 4	02/26/25 16:01
Total/NA	Analysis	300.0		10	486680	FCG	EET SEA	03/05/25 21:55

Client Sample ID: PA-20d-022025

Lab Sample ID: 580-148207-6

Date Collected: 02/20/25 18:42

Matrix: Water

Date Received: 02/21/25 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	485845	JBT	EET SEA	02/26/25 05:17

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Lab Chronicle

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: PA-20d-022025

Lab Sample ID: 580-148207-6

Date Collected: 02/20/25 18:42

Matrix: Water

Date Received: 02/21/25 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	314.0		2	538471	UIP1	EET CAL 4	02/26/25 16:22
Total/NA	Analysis	300.0		20	486680	FCG	EET SEA	03/05/25 22:19

Client Sample ID: PA-32i-022025

Lab Sample ID: 580-148207-7

Date Collected: 02/20/25 08:49

Matrix: Water

Date Received: 02/21/25 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	485909	K1K	EET SEA	02/26/25 20:13
Total/NA	Analysis	314.0		100	538471	UIP1	EET CAL 4	02/26/25 16:43
Total/NA	Analysis	300.0		1	486680	FCG	EET SEA	03/05/25 22:31

Client Sample ID: PA-08-022025

Lab Sample ID: 580-148207-8

Date Collected: 02/20/25 10:38

Matrix: Water

Date Received: 02/21/25 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	485909	K1K	EET SEA	02/26/25 20:36
Total/NA	Analysis	314.0		20	538471	UIP1	EET CAL 4	02/26/25 17:03
Total/NA	Analysis	300.0		20	486680	FCG	EET SEA	03/05/25 23:31

Client Sample ID: Dup-01-022025

Lab Sample ID: 580-148207-9

Date Collected: 02/20/25 12:00

Matrix: Water

Date Received: 02/21/25 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	485951	AA	EET SEA	02/27/25 08:13
Total/NA	Analysis	314.0		100	538471	UIP1	EET CAL 4	02/26/25 17:24
Total/NA	Analysis	300.0		1	486680	FCG	EET SEA	03/05/25 23:43

Client Sample ID: PA-09-022025

Lab Sample ID: 580-148207-10

Date Collected: 02/20/25 12:12

Matrix: Water

Date Received: 02/21/25 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	485951	AA	EET SEA	02/27/25 05:54
Total/NA	Analysis	314.0		10	538471	UIP1	EET CAL 4	02/26/25 17:45
Total/NA	Analysis	300.0		10	486680	FCG	EET SEA	03/06/25 00:19

Client Sample ID: PA-03-022025

Lab Sample ID: 580-148207-11

Date Collected: 02/20/25 13:50

Matrix: Water

Date Received: 02/21/25 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	485951	AA	EET SEA	02/27/25 06:17

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Lab Chronicle

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148207-1

Client Sample ID: PA-03-022025

Lab Sample ID: 580-148207-11

Date Collected: 02/20/25 13:50

Matrix: Water

Date Received: 02/21/25 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	314.0		20	538471	UIP1	EET CAL 4	02/26/25 18:06
Total/NA	Analysis	300.0		1	486680	FCG	EET SEA	03/06/25 00:30

Client Sample ID: RB-02-022125

Lab Sample ID: 580-148207-12

Date Collected: 02/21/25 06:00

Matrix: Water

Date Received: 02/21/25 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	485845	JBT	EET SEA	02/26/25 03:20
Total/NA	Analysis	314.0		1	538471	UIP1	EET CAL 4	02/26/25 19:09
Total/NA	Analysis	300.0		1	486680	FCG	EET SEA	03/06/25 00:54

Client Sample ID: PA-17iR-022125

Lab Sample ID: 580-148207-13

Date Collected: 02/21/25 09:01

Matrix: Water

Date Received: 02/21/25 13:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	485951	AA	EET SEA	02/27/25 06:40
Total/NA	Analysis	314.0		100	538471	UIP1	EET CAL 4	02/26/25 19:29
Total/NA	Analysis	300.0		1	486680	FCG	EET SEA	03/06/25 01:18

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: 580-148207-1

Project/Site: Arkema - Q1 2025 Groundwater Event

Laboratory: Eurofins Seattle

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

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4167	07-07-25

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	Expiration Date
A2LA	Dept. of Defense ELAP	7296.01	11-30-26
Arizona	State	AZ0830	11-16-25
Arkansas DEQ	State	88-01672	07-02-25
California	Los Angeles County Sanitation Districts	9257304	07-31-26
California	SCAQMD LAP	17LA0919	11-30-25
California	State	3082	07-31-25
Kansas	NELAP	E-10420	07-31-25
Nevada	State	CA00111	07-31-25
Oregon	NELAP	4175	02-02-26
USDA	US Federal Programs	525-23-159-97150	06-08-26
Utah	NELAP	CA001112025-8	02-28-26
Washington	State	C916	10-11-25

Sample Summary

Client: ERM-West

Job ID: 580-148207-1

Project/Site: Arkema - Q1 2025 Groundwater Event

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-148207-1	TB-01-022025	Water	02/20/25 06:00	02/21/25 13:00
580-148207-2	PA-22d-022025	Water	02/20/25 06:57	02/21/25 13:00
580-148207-3	PA-21d-022025	Water	02/20/25 11:02	02/21/25 13:00
580-148207-4	PA-19d-022025	Water	02/20/25 13:10	02/21/25 13:00
580-148207-5	PA-30d-022025	Water	02/20/25 14:53	02/21/25 13:00
580-148207-6	PA-20d-022025	Water	02/20/25 18:42	02/21/25 13:00
580-148207-7	PA-32i-022025	Water	02/20/25 08:49	02/21/25 13:00
580-148207-8	PA-08-022025	Water	02/20/25 10:38	02/21/25 13:00
580-148207-9	Dup-01-022025	Water	02/20/25 12:00	02/21/25 13:00
580-148207-10	PA-09-022025	Water	02/20/25 12:12	02/21/25 13:00
580-148207-11	PA-03-022025	Water	02/20/25 13:50	02/21/25 13:00
580-148207-12	RB-02-022125	Water	02/21/25 06:00	02/21/25 13:00
580-148207-13	PA-17iR-022125	Water	02/21/25 09:01	02/21/25 13:00

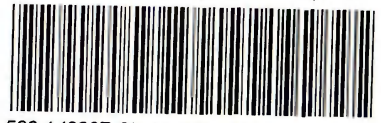
Eurofins Seattle

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

Chain of Custody Record



Environment Testing

Client Information		Sampler: <u>Paul Van Nevel</u>	Lab PM: <u>Cruz, Sheri L</u>	Carrier Tracking No(s)	COC No: <u>580-66274-19602.5</u>									
Client Contact: <u>Paul Van Nevel</u>		Phone: <u>240-755-1398</u>	E-Mail: <u>Sheri.Cruz@et.eurofinsus.com</u>	State of Origin:	Page: <u>1 of 2</u>									
Company: <u>ERM-West</u>		PWSID:	Analysis Requested											
Address: <u>1050 SW 6th Avenue Suite 1650</u>		Due Date Requested:	 580-148207 Chain of Custody											
City: <u>Portland</u>		TAT Requested (days):												
State, Zip: <u>OR, 97204</u>		Compliance Project: ☐ Yes ☐ No												
Phone:		PO #: <u>0732445.207</u>												
Email: <u>paul.vannevel@erm.com</u>		WO #:												
Project Name: <u>Arkema - 02-2025 Groundwater Event</u>		Project #: <u>58016290</u>	Preservation Codes: A - HCL N - None											
Site:		SSOW#:												
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260D - (MOD) Volatiles, standard list	8260D_LL - (MOD) Volatiles, standard list, low level	314.0 - Perchlorate	300.0_28D - (MOD) Local Method	Total Number of	Special Instructions/Note:	
TB-01-022025		02/20/25	0600	G	Water				X				1	
PA-22d-022025			0657	G	Water		XX		X	X			15	
PA-21d-022025			1102	G	Water			X	X	X			8	D. lute
PA-19d-022025			1310	G	Water			X	X	X			8	D. lute
PA-30d-022025			1453	G	Water			X	X	X			8	Dilute
PA-20d-022025			1842	G	Water			X	X	X			5	
PA-32i-022025			0849	G	Water				X	X	X		5	
PA-08-022025			1038	G	Water				X	X	X		5	
Dup-01-022025			1200	G	Water				X	X	X		5	
PA-09-022025			1212	G	Water				X	X	X		5	
PA-03-022025		✓	1350	G	Water				X	X	X		5	
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months								
Deliverable Requested: I, II, III, IV, Other (specify)						Special Instructions/QC Requirements:								
Empty Kit Relinquished by:						Date:								
Relinquished by: <u>[Signature]</u>		Date/Time: <u>02/21/25 10:45</u>		Company: <u>M.E.</u>		Received by: <u>[Signature]</u>		Date/Time: <u>2/21/25 1113</u>		Company: <u>M.E.</u>				
Relinquished by: <u>[Signature]</u>		Date/Time: <u>2/21/25 1300</u>		Company: <u>M.E.</u>		Received by: <u>[Signature]</u>		Date/Time: <u>2/21/25 1300</u>		Company: <u>CE</u>				
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:				
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <u>0.8/0.3 Ppx 30 Jk</u>										

 eurofins Environment Testing

[illegible]

Term ID: 11 Cor: 1.3 Line: 2.1

Tooler Desc: LTB

Tracking: BUS

Just Seal: Yes X No

Hum Ice, Wet, Dry, None

Other: _____

Lab Count: _____

UPS: _____

State or Origin: _____

Job #:

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Environment Testing

therm ID: 11 Cor: 1.3 Line: 2.1

Tooler Desc: LTB

Tracking: BUS

Just Seal: Yes X No

Hum Ice, Wet, Dry, None

Other: _____

Lab Count: _____

UPS: _____

State or Origin: _____

Job #:

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Chain of Custody Record

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

Client Information

Client Contact:
Paul Van Nevel

Company:
ERM-West

Address:
1050 SW 6th Avenue Suite 1650

City:
Portland

State, Zip:
OR, 97204

Phone:
0732445.207

Email:
paul.vannevel@erm.com

Project Name:
Arkema - Groundwater Event

Site:
SSOW#:

Sampler:
Paul Van Nevel

Phone:
240-755-1398

Due Date Requested:

TAT Requested (days):

Compliance Project: ☐ Yes ☐ No

PO #:
0732445.207

WO #:

Project #:
58016290

SSOW#:

Lab PM:
Cruz, Sheri L

E-Mail:
Sheri.Cruz@eurofins.com

State or Origin:

Job #:

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COC No:
580-66274-19602.5

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580-148207 Chain of Custody

Special Instructions/Note:

Sample Identification

Sample Date

Sample Time

Sample Type

Sample Matrix

Sample Preservation Code

Field Filtered Sample (Yes or No)

Perform MS/MSD (Yes or No)

8260D - (MOD) Volatiles, standard list

8260D_LL - (MOD) Volatiles, standard list, low level

314.0 - Perchlorate

300.0_28D - (MOD) Local Method

Total Number of

Special Instructions/Note:

Sample Identification

Sample Date

Sample Time

Sample Type

Sample Matrix

Sample Preservation Code

Field Filtered Sample (Yes or No)

Perform MS/MSD (Yes or No)

8260D - (MOD) Volatiles, standard list

8260D_LL - (MOD) Volatiles, standard list, low level

314.0 - Perchlorate

300.0_28D - (MOD) Local Method

Total Number of

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____

Relinquished by: _____ Date/Time: 02/21/25 10:45 Company: M.E.

Relinquished by: _____ Date/Time: 2/21/25 1300 Company: M.E.

Relinquished by: _____ Date/Time: 2/21/25 1700 Company: M.E.

Custody Seals Intact: ☐ Yes ☐ No Custody Seal No.: _____ Cooler Temperature(s) °C and Other Remarks: _____

Received by: _____ Date/Time: 2/21/25 1113 Company: M.E.

Received by: _____ Date/Time: 2/21/25 1300 Company: M.E.

Received by: _____ Date/Time: 2/22/25 945 Company: M.E.

ORIGIN ID:BN0A (503) 906-9200
SAMPLE RECEIVING
EUROFINS PORTLAND
7959 SW CIRROS DR
BUILDING 22
BEAVERTON, OR 970087145
UNITED STATES US

SHIP DATE: 21FEB25
ACTWGT: 41.20 LB MAN
CAD: 0893932/CAFE3855

BILL THIRD PARTY



580-148207 Waybill

TO **SHIPPING/RECEIVING**
EUROFINS ENVIRONMENT TESTING SOUTHW
2841 DOW AVENUE, SUITE 100

TUSTIN CA 92780

(714) 896-5494

REF: S580 - 66530



FedEx
Express



TRK#
0201 4254 2767 2604

SATURDAY 12:00P
PRIORITY OVERNIGHT

WO DTHA

92780
CA-US SNA



Chain of Custody Record



Environment Testing

Loc: 580

148207

Client Information (Sub Contract Lab)						Lab PM:								Carrier Tracking No(s):							COC No:						
Client Contact: Shipping/Receiving						Phone:								E-Mail:							Page:						
						N/A								Sheri.Cruz@et.eurofinsus.com							Page 1 of 2						
Company: Eurofins Environment Testing Southwest,						Accreditations Required (See note): NELAP - Oregon								Job #: 580-148207-1													
Address: 2841 Dow Avenue, Suite 100,						Due Date Requested: 3/13/2025								Analysis Requested							Preservation Codes:						
City: Tustin						TAT Requested (days): N/A																					
State, Zip: CA, 92780																											
Phone: 714-895-5494(Tel)						PO #: N/A																					
Email: N/A						WO #: N/A																					
Project Name: Arkema - Q1 2025 Groundwater Event						Project #: 58016290																					
Site: N/A						SSOW#: N/A															Other: N/A						
Sample Identification - Client ID (Lab ID)						Sample Date		Sample Time		Sample Type (C=Comp, G=grab) BT=Tissue, A=Air		Matrix (W=Water, S=solid, O=waste/oil, BT=Tissue, A=Air)		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		314.0/l Perchlorate		Total Number of containers		Special Instr.					
PA-22d-022025 (580-148207-2)						2/20/25		06:57 Pacific		G		Water				X				1							
PA-22d-022025 (580-148207-2MS)						2/20/25		06:57 Pacific		G		Water				X				1							
PA-22d-022025 (580-148207-2MSD)						2/20/25		06:57 Pacific		G		Water				X				1							
PA-21d-022025 (580-148207-3)						2/20/25		11:02 Pacific		G		Water				X				1							
PA-19d-022025 (580-148207-4)						2/20/25		13:10 Pacific		G		Water				X				1							
PA-30d-022025 (580-148207-5)						2/20/25		14:53 Pacific		G		Water				X				1							
PA-20d-022025 (580-148207-6)						2/20/25		18:42 Pacific		G		Water				X				1							
PA-32i-022025 (580-148207-7)						2/20/25		08:49 Pacific		G		Water				X				1							
PA-08-022025 (580-148207-8)						2/20/25		10:38 Pacific		G		Water				X				1							
Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northwest, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-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 laboratory or other instructions will be provided. If requested 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 compliance to Eurofins Environment Testing Northwest, LLC.																											
Possible Hazard Identification												Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)															
Unconfirmed												☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____															
Deliverable Requested: I, II, III, IV, Other (specify) _____												Primary Deliverable Rank: 2 Special Instructions/QC Requirements: _____															
Empty Kit Relinquished by:								Date:				Time:				Method of Shipment:											
Relinquished by: [Signature]								Date/Time: 2/21/25 17H				Company: ECR				Received by: Edex				Date/Time:				Co			
Relinquished by: [Signature]								Date/Time:				Company:				Received by: [Signature]				Date/Time: 2/22/25 1010				Co			
Relinquished by:								Date/Time:				Company:				Received by:				Date/Time:				Co			
Custody Seals Intact:								Custody Seal No.: _____				Cooler Temperature(s) °C and Other Remarks: 3-5°C at 5/14															
Δ Yes Δ No																											

580-148207 Chain of Custody

Login Sample Receipt Checklist

Client: ERM-West

Job Number: 580-148207-1

Login Number: 148207

List Source: Eurofins Seattle

List Number: 1

Creator: O'Connell, Jason I

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: ERM-West

Job Number: 580-148207-1

Login Number: 148207

List Number: 2

Creator: Khana, Piyush

List Source: Eurofins Calscience

List Creation: 02/24/25 02:52 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	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	3.7
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.	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 $<6\text{mm}$ (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 3/11/2025 2:30:27 PM

JOB DESCRIPTION

Arkema - Q1 2025 Groundwater Event

JOB NUMBER

580-148262-1

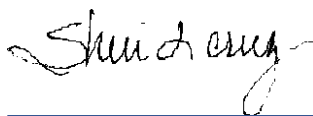
Eurofins Seattle

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
3/11/2025 2:30:27 PM

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

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Client Sample Results	7
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Case Narrative

Client: ERM-West
Project: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

Job ID: 580-148262-1

Eurofins Seattle

Job Narrative 580-148262-1

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 2/24/2025 12:05 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 2.8°C.

GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-485951 recovered above the upper control limit for Dichlorodifluoromethane, Chloromethane, Vinyl chloride, Carbon disulfide, 1,1-Dichloroethene, Methylene Chloride, Methyl tert-butyl ether, trans-1,2-Dichloroethene, 1,1-Dichloroethane, 2,2-Dichloropropane and 1,1-Dichloropropene. The samples associated with this CCV were non-detects below the RL for the affected analytes; therefore, the data have been reported. The associated samples are impacted: PA-16i-022125 (580-148262-2), PA-26d-022125 (580-148262-3), MWA-63-022125 (580-148262-4) and (CCVIS 580-485951/3).

Method 8260D: The method blank for analytical batch 580-485951 contained 1,2,4-Trimethylbenzene 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_LL: The continuing calibration verification (CCV) associated with batch 580-485951 recovered above the upper control limit for Dichlorodifluoromethane, Chloromethane, Vinyl chloride, Carbon disulfide, 1,1-Dichloroethene, Methylene Chloride, Methyl tert-butyl ether, trans-1,2-Dichloroethene, 1,1-Dichloroethane, 2,2-Dichloropropane and 1,1-Dichloropropene. The samples associated with this CCV were non-detects below the RL for the affected analytes; therefore, the data have been reported. The associated samples are impacted: PA-16i-022125 (580-148262-2), PA-26d-022125 (580-148262-3), MWA-63-022125 (580-148262-4) and (CCVIS 580-485951/3).

Method 8260D_LL: The method blank for analytical batch 580-485951 contained 1,2,4-Trimethylbenzene 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 580-486244 recovered above the upper control limit for 2,2-Dichloropropane 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: Dup-02-022125 (580-148262-5), PA-27d-022125 (580-148262-7), PA-18d-022125 (580-148262-10) and (CCVIS 580-486244/3).

Method 8260D: The laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 580-486244 recovered outside control limits for the following analytes: 2,2-Dichloropropane. 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 sample was diluted to bring the concentration of target analytes within the calibration range: MWA-63-022125 (580-148262-4). Elevated reporting limits (RLs) are provided.

Method 8260D_LL: The method blank for analytical batch 580-486309 contained 1,1-Dichloroethene, trans-1,2-Dichloroethene, cis-1,2-Dichloroethene, Chloroform, 1,1,1-Trichloroethane, Carbon tetrachloride, 1,2-Dichloropropane, Dichlorobromomethane, Tetrachloroethene, 1,3-Dichloropropane, m-Xylene & p-Xylene, N-Propylbenzene and 1,2-Dichlorobenzene 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.

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Case Narrative

Client: ERM-West
Project: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

Job ID: 580-148262-1 (Continued)

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Method 8260D_LL: The continuing calibration verification (CCV) associated with batch 580-486309 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 analyte(s), the data are reported.

Method 8260D_LL: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 580-486309 recovered outside control limits for the following analytes: Vinyl chloride.

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

HPLC/IC

Method 314.0: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 570-540307 were outside control limits Perchlorate. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 314.0: The following samples were diluted due to the nature of the sample matrix: PA-16i-022125 (580-148262-2), MWA-63-022125 (580-148262-4), PA-27d-022125 (580-148262-7), PA-04-022125 (580-148262-8), PA-10i-022125 (580-148262-9) and PA-18d-022125 (580-148262-10). 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.

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Definitions/Glossary

Client: ERM-West

Job ID: 580-148262-1

Project/Site: Arkema - Q1 2025 Groundwater Event

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
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.

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.

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

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

Client Sample ID: TB-01-022125

Lab Sample ID: 580-148262-1

Date Collected: 02/21/25 06:00

Matrix: Water

Date Received: 02/24/25 12:05

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			02/27/25 02:01	1
Chloromethane	ND		0.50	0.14	ug/L			02/27/25 02:01	1
Vinyl chloride	ND		0.10	0.040	ug/L			02/27/25 02:01	1
Bromomethane	ND		0.50	0.13	ug/L			02/27/25 02:01	1
Chloroethane	ND		0.50	0.24	ug/L			02/27/25 02:01	1
Carbon disulfide	ND		0.40	0.20	ug/L			02/27/25 02:01	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			02/27/25 02:01	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			02/27/25 02:01	1
Acetone	ND		10	3.1	ug/L			02/27/25 02:01	1
Methylene Chloride	ND		5.0	1.2	ug/L			02/27/25 02:01	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			02/27/25 02:01	1
2-Butanone (MEK)	ND		10	2.5	ug/L			02/27/25 02:01	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			02/27/25 02:01	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			02/27/25 02:01	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			02/27/25 02:01	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			02/27/25 02:01	1
Chlorobromomethane	ND		0.20	0.050	ug/L			02/27/25 02:01	1
Chloroform	ND		0.20	0.030	ug/L			02/27/25 02:01	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			02/27/25 02:01	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			02/27/25 02:01	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			02/27/25 02:01	1
Benzene	ND		0.20	0.030	ug/L			02/27/25 02:01	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			02/27/25 02:01	1
Trichloroethene	ND		0.20	0.066	ug/L			02/27/25 02:01	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			02/27/25 02:01	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			02/27/25 02:01	1
Dibromomethane	ND		0.20	0.062	ug/L			02/27/25 02:01	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			02/27/25 02:01	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			02/27/25 02:01	1
Toluene	ND		0.20	0.050	ug/L			02/27/25 02:01	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			02/27/25 02:01	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			02/27/25 02:01	1
Tetrachloroethene	ND		0.24	0.084	ug/L			02/27/25 02:01	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			02/27/25 02:01	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			02/27/25 02:01	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			02/27/25 02:01	1
Chlorobenzene	ND		0.20	0.060	ug/L			02/27/25 02:01	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			02/27/25 02:01	1
Ethylbenzene	ND		0.20	0.082	ug/L			02/27/25 02:01	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			02/27/25 02:01	1
o-Xylene	ND		0.50	0.23	ug/L			02/27/25 02:01	1
Styrene	ND		1.0	0.33	ug/L			02/27/25 02:01	1
Bromoform	ND		0.50	0.16	ug/L			02/27/25 02:01	1
Isopropylbenzene	ND		1.0	0.27	ug/L			02/27/25 02:01	1
Bromobenzene	ND		0.20	0.038	ug/L			02/27/25 02:01	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			02/27/25 02:01	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			02/27/25 02:01	1
N-Propylbenzene	ND		0.30	0.091	ug/L			02/27/25 02:01	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			02/27/25 02:01	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

Client Sample ID: TB-01-022125

Lab Sample ID: 580-148262-1

Date Collected: 02/21/25 06:00

Matrix: Water

Date Received: 02/24/25 12:05

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		0.30	0.12	ug/L			02/27/25 02:01	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			02/27/25 02:01	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			02/27/25 02:01	1
1,2,4-Trimethylbenzene	0.26	J B	0.55	0.23	ug/L			02/27/25 02:01	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			02/27/25 02:01	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			02/27/25 02:01	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			02/27/25 02:01	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			02/27/25 02:01	1
n-Butylbenzene	0.57	J B	1.0	0.35	ug/L			02/27/25 02:01	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			02/27/25 02:01	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			02/27/25 02:01	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			02/27/25 02:01	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			02/27/25 02:01	1
Naphthalene	ND		1.5	0.52	ug/L			02/27/25 02:01	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			02/27/25 02:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	89		80 - 120		02/27/25 02:01	1
Dibromofluoromethane (Surr)	115		80 - 120		02/27/25 02:01	1
4-Bromofluorobenzene (Surr)	97		80 - 120		02/27/25 02:01	1
1,2-Dichloroethane-d4 (Surr)	109		80 - 120		02/27/25 02:01	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

Client Sample ID: PA-16i-022125

Lab Sample ID: 580-148262-2

Date Collected: 02/21/25 08:47

Matrix: Water

Date Received: 02/24/25 12:05

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			02/27/25 07:04	1
Chloromethane	ND		0.50	0.14	ug/L			02/27/25 07:04	1
Vinyl chloride	ND		0.10	0.040	ug/L			02/27/25 07:04	1
Bromomethane	ND		0.50	0.13	ug/L			02/27/25 07:04	1
Chloroethane	ND		0.50	0.24	ug/L			02/27/25 07:04	1
Carbon disulfide	ND		0.40	0.20	ug/L			02/27/25 07:04	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			02/27/25 07:04	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			02/27/25 07:04	1
Acetone	ND		10	3.1	ug/L			02/27/25 07:04	1
Methylene Chloride	ND		5.0	1.2	ug/L			02/27/25 07:04	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			02/27/25 07:04	1
2-Butanone (MEK)	ND		10	2.5	ug/L			02/27/25 07:04	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			02/27/25 07:04	1
1,1-Dichloroethane	0.10	J	0.20	0.064	ug/L			02/27/25 07:04	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			02/27/25 07:04	1
cis-1,2-Dichloroethene	0.16	J	0.20	0.055	ug/L			02/27/25 07:04	1
Chlorobromomethane	ND		0.20	0.050	ug/L			02/27/25 07:04	1
Chloroform	ND		0.20	0.030	ug/L			02/27/25 07:04	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			02/27/25 07:04	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			02/27/25 07:04	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			02/27/25 07:04	1
Benzene	ND		0.20	0.030	ug/L			02/27/25 07:04	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			02/27/25 07:04	1
Trichloroethene	0.081	J	0.20	0.066	ug/L			02/27/25 07:04	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			02/27/25 07:04	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			02/27/25 07:04	1
Dibromomethane	ND		0.20	0.062	ug/L			02/27/25 07:04	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			02/27/25 07:04	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			02/27/25 07:04	1
Toluene	0.087	J	0.20	0.050	ug/L			02/27/25 07:04	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			02/27/25 07:04	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			02/27/25 07:04	1
Tetrachloroethene	ND		0.24	0.084	ug/L			02/27/25 07:04	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			02/27/25 07:04	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			02/27/25 07:04	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			02/27/25 07:04	1
Chlorobenzene	ND		0.20	0.060	ug/L			02/27/25 07:04	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			02/27/25 07:04	1
Ethylbenzene	ND		0.20	0.082	ug/L			02/27/25 07:04	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			02/27/25 07:04	1
o-Xylene	ND		0.50	0.23	ug/L			02/27/25 07:04	1
Styrene	ND		1.0	0.33	ug/L			02/27/25 07:04	1
Bromoform	ND		0.50	0.16	ug/L			02/27/25 07:04	1
Isopropylbenzene	ND		1.0	0.27	ug/L			02/27/25 07:04	1
Bromobenzene	ND		0.20	0.038	ug/L			02/27/25 07:04	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			02/27/25 07:04	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			02/27/25 07:04	1
N-Propylbenzene	ND		0.30	0.091	ug/L			02/27/25 07:04	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			02/27/25 07:04	1

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Client Sample Results

Client: ERM-West

Job ID: 580-148262-1

Project/Site: Arkema - Q1 2025 Groundwater Event

Client Sample ID: PA-16i-022125

Lab Sample ID: 580-148262-2

Date Collected: 02/21/25 08:47

Matrix: Water

Date Received: 02/24/25 12:05

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		0.30	0.12	ug/L			02/27/25 07:04	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			02/27/25 07:04	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			02/27/25 07:04	1
1,2,4-Trimethylbenzene	0.25	J B	0.55	0.23	ug/L			02/27/25 07:04	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			02/27/25 07:04	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			02/27/25 07:04	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			02/27/25 07:04	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			02/27/25 07:04	1
n-Butylbenzene	ND		1.0	0.35	ug/L			02/27/25 07:04	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			02/27/25 07:04	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			02/27/25 07:04	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			02/27/25 07:04	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			02/27/25 07:04	1
Naphthalene	ND		1.5	0.52	ug/L			02/27/25 07:04	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			02/27/25 07:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	88		80 - 120		02/27/25 07:04	1
Dibromofluoromethane (Surr)	116		80 - 120		02/27/25 07:04	1
4-Bromofluorobenzene (Surr)	97		80 - 120		02/27/25 07:04	1
1,2-Dichloroethane-d4 (Surr)	111		80 - 120		02/27/25 07:04	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		80	36	ug/L			03/03/25 14:42	40

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	32		1.5	0.43	mg/L			03/08/25 03:54	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

Client Sample ID: PA-26d-022125

Lab Sample ID: 580-148262-3

Date Collected: 02/21/25 10:18

Matrix: Water

Date Received: 02/24/25 12:05

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			02/27/25 07:27	1
Chloromethane	ND		0.50	0.14	ug/L			02/27/25 07:27	1
Vinyl chloride	ND		0.10	0.040	ug/L			02/27/25 07:27	1
Bromomethane	ND		0.50	0.13	ug/L			02/27/25 07:27	1
Chloroethane	ND		0.50	0.24	ug/L			02/27/25 07:27	1
Carbon disulfide	ND		0.40	0.20	ug/L			02/27/25 07:27	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			02/27/25 07:27	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			02/27/25 07:27	1
Acetone	ND		10	3.1	ug/L			02/27/25 07:27	1
Methylene Chloride	ND		5.0	1.2	ug/L			02/27/25 07:27	1
Methyl tert-butyl ether	0.13	J	0.30	0.070	ug/L			02/27/25 07:27	1
2-Butanone (MEK)	ND		10	2.5	ug/L			02/27/25 07:27	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			02/27/25 07:27	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			02/27/25 07:27	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			02/27/25 07:27	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			02/27/25 07:27	1
Chlorobromomethane	ND		0.20	0.050	ug/L			02/27/25 07:27	1
Chloroform	ND		0.20	0.030	ug/L			02/27/25 07:27	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			02/27/25 07:27	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			02/27/25 07:27	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			02/27/25 07:27	1
Benzene	ND		0.20	0.030	ug/L			02/27/25 07:27	1
1,2-Dichloroethane	0.48		0.25	0.12	ug/L			02/27/25 07:27	1
Trichloroethene	ND		0.20	0.066	ug/L			02/27/25 07:27	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			02/27/25 07:27	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			02/27/25 07:27	1
Dibromomethane	ND		0.20	0.062	ug/L			02/27/25 07:27	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			02/27/25 07:27	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			02/27/25 07:27	1
Toluene	0.16	J	0.20	0.050	ug/L			02/27/25 07:27	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			02/27/25 07:27	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			02/27/25 07:27	1
Tetrachloroethene	0.11	J	0.24	0.084	ug/L			02/27/25 07:27	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			02/27/25 07:27	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			02/27/25 07:27	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			02/27/25 07:27	1
Chlorobenzene	ND		0.20	0.060	ug/L			02/27/25 07:27	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			02/27/25 07:27	1
Ethylbenzene	ND		0.20	0.082	ug/L			02/27/25 07:27	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			02/27/25 07:27	1
o-Xylene	ND		0.50	0.23	ug/L			02/27/25 07:27	1
Styrene	ND		1.0	0.33	ug/L			02/27/25 07:27	1
Bromoform	ND		0.50	0.16	ug/L			02/27/25 07:27	1
Isopropylbenzene	ND		1.0	0.27	ug/L			02/27/25 07:27	1
Bromobenzene	ND		0.20	0.038	ug/L			02/27/25 07:27	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			02/27/25 07:27	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			02/27/25 07:27	1
N-Propylbenzene	ND		0.30	0.091	ug/L			02/27/25 07:27	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			02/27/25 07:27	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

Client Sample ID: PA-26d-022125

Lab Sample ID: 580-148262-3

Date Collected: 02/21/25 10:18

Matrix: Water

Date Received: 02/24/25 12:05

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		0.30	0.12	ug/L			02/27/25 07:27	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			02/27/25 07:27	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			02/27/25 07:27	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			02/27/25 07:27	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			02/27/25 07:27	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			02/27/25 07:27	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			02/27/25 07:27	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			02/27/25 07:27	1
n-Butylbenzene	ND		1.0	0.35	ug/L			02/27/25 07:27	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			02/27/25 07:27	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			02/27/25 07:27	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			02/27/25 07:27	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			02/27/25 07:27	1
Naphthalene	ND		1.5	0.52	ug/L			02/27/25 07:27	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			02/27/25 07:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	88		80 - 120		02/27/25 07:27	1
Dibromofluoromethane (Surr)	116		80 - 120		02/27/25 07:27	1
4-Bromofluorobenzene (Surr)	98		80 - 120		02/27/25 07:27	1
1,2-Dichloroethane-d4 (Surr)	115		80 - 120		02/27/25 07:27	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		2.0	0.91	ug/L			03/03/25 15:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	84		1.5	0.43	mg/L			03/08/25 04:41	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

Client Sample ID: MWA-63-022125

Lab Sample ID: 580-148262-4

Date Collected: 02/21/25 11:40

Matrix: Water

Date Received: 02/24/25 12:05

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		10	5.3	ug/L			02/27/25 08:36	10
Chloromethane	ND		10	2.8	ug/L			02/27/25 08:36	10
Vinyl chloride	ND		10	2.2	ug/L			02/27/25 08:36	10
Bromomethane	ND		10	2.1	ug/L			02/27/25 08:36	10
Chloroethane	ND		10	3.5	ug/L			02/27/25 08:36	10
Trichlorofluoromethane	ND		10	3.6	ug/L			02/27/25 08:36	10
Carbon disulfide	ND		10	5.3	ug/L			02/27/25 08:36	10
1,1-Dichloroethene	ND		10	2.8	ug/L			02/27/25 08:36	10
Acetone	ND		150	32	ug/L			02/27/25 08:36	10
Methylene Chloride	19	J	50	14	ug/L			02/27/25 08:36	10
Methyl tert-butyl ether	ND		10	4.4	ug/L			02/27/25 08:36	10
trans-1,2-Dichloroethene	ND		10	3.9	ug/L			02/27/25 08:36	10
1,1-Dichloroethane	ND		10	2.2	ug/L			02/27/25 08:36	10
2-Butanone (MEK)	ND		150	47	ug/L			02/27/25 08:36	10
2,2-Dichloropropane	ND		10	3.2	ug/L			02/27/25 08:36	10
cis-1,2-Dichloroethene	ND		10	3.5	ug/L			02/27/25 08:36	10
Chlorobromomethane	ND		10	2.9	ug/L			02/27/25 08:36	10
Chloroform	120		10	2.6	ug/L			02/27/25 08:36	10
1,1,1-Trichloroethane	ND		10	3.9	ug/L			02/27/25 08:36	10
Carbon tetrachloride	ND		10	3.0	ug/L			02/27/25 08:36	10
1,1-Dichloropropene	ND		10	2.9	ug/L			02/27/25 08:36	10
Benzene	ND		10	2.4	ug/L			02/27/25 08:36	10
1,2-Dichloroethane	ND		10	4.2	ug/L			02/27/25 08:36	10
Trichloroethene	ND		10	2.6	ug/L			02/27/25 08:36	10
1,2-Dichloropropane	ND		10	1.8	ug/L			02/27/25 08:36	10
4-Methyl-2-pentanone (MIBK)	ND		50	25	ug/L			02/27/25 08:36	10
Dibromomethane	ND		10	3.4	ug/L			02/27/25 08:36	10
Dichlorobromomethane	ND		10	2.9	ug/L			02/27/25 08:36	10
cis-1,3-Dichloropropene	ND		10	4.2	ug/L			02/27/25 08:36	10
Toluene	ND		10	3.9	ug/L			02/27/25 08:36	10
trans-1,3-Dichloropropene	ND		10	4.1	ug/L			02/27/25 08:36	10
1,1,2-Trichloroethane	ND		10	2.4	ug/L			02/27/25 08:36	10
Tetrachloroethene	8.8	J	10	4.1	ug/L			02/27/25 08:36	10
1,3-Dichloropropane	ND		10	3.5	ug/L			02/27/25 08:36	10
Chlorodibromomethane	ND		10	4.3	ug/L			02/27/25 08:36	10
Ethylene Dibromide	ND		10	4.0	ug/L			02/27/25 08:36	10
Chlorobenzene	ND		10	4.4	ug/L			02/27/25 08:36	10
1,1,1,2-Tetrachloroethane	ND		10	1.8	ug/L			02/27/25 08:36	10
Ethylbenzene	ND		10	5.0	ug/L			02/27/25 08:36	10
m-Xylene & p-Xylene	ND		20	5.3	ug/L			02/27/25 08:36	10
o-Xylene	ND		10	3.9	ug/L			02/27/25 08:36	10
Styrene	ND		10	5.3	ug/L			02/27/25 08:36	10
Bromoform	ND		10	5.1	ug/L			02/27/25 08:36	10
Isopropylbenzene	ND		10	4.4	ug/L			02/27/25 08:36	10
Bromobenzene	ND		10	4.3	ug/L			02/27/25 08:36	10
1,1,2,2-Tetrachloroethane	ND		10	5.2	ug/L			02/27/25 08:36	10
1,2,3-Trichloropropane	ND		10	4.1	ug/L			02/27/25 08:36	10
N-Propylbenzene	ND		10	5.0	ug/L			02/27/25 08:36	10
2-Chlorotoluene	ND		10	5.1	ug/L			02/27/25 08:36	10

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

Client Sample ID: MWA-63-022125

Lab Sample ID: 580-148262-4

Date Collected: 02/21/25 11:40

Matrix: Water

Date Received: 02/24/25 12:05

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		10	3.8	ug/L			02/27/25 08:36	10
tert-Butylbenzene	ND		20	5.8	ug/L			02/27/25 08:36	10
1,2,4-Trimethylbenzene	ND		30	6.1	ug/L			02/27/25 08:36	10
sec-Butylbenzene	ND		10	4.9	ug/L			02/27/25 08:36	10
4-Isopropyltoluene	ND		10	2.8	ug/L			02/27/25 08:36	10
1,3-Dichlorobenzene	ND		10	4.8	ug/L			02/27/25 08:36	10
1,4-Dichlorobenzene	ND		10	4.6	ug/L			02/27/25 08:36	10
n-Butylbenzene	ND		10	4.4	ug/L			02/27/25 08:36	10
1,2-Dichlorobenzene	ND		10	4.6	ug/L			02/27/25 08:36	10
1,2-Dibromo-3-Chloropropane	ND		30	5.7	ug/L			02/27/25 08:36	10
1,2,4-Trichlorobenzene	ND		10	3.3	ug/L			02/27/25 08:36	10
Hexachlorobutadiene	ND		30	7.9	ug/L			02/27/25 08:36	10
Naphthalene	ND		30	9.3	ug/L			02/27/25 08:36	10
1,2,3-Trichlorobenzene	ND		20	4.3	ug/L			02/27/25 08:36	10
1,3,5-Trimethylbenzene	ND		10	5.5	ug/L			02/27/25 08:36	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	87		80 - 120		02/27/25 08:36	10
1,2-Dichloroethane-d4 (Surr)	112		80 - 120		02/27/25 08:36	10
4-Bromofluorobenzene (Surr)	98		80 - 120		02/27/25 08:36	10
Dibromofluoromethane (Surr)	115		80 - 120		02/27/25 08:36	10

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		4.0	1.8	ug/L			03/03/25 15:24	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	5.8		1.5	0.43	mg/L			03/08/25 05:05	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

Client Sample ID: Dup-02-022125

Lab Sample ID: 580-148262-5

Date Collected: 02/21/25 12:00

Matrix: Water

Date Received: 02/24/25 12:05

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0	0.53	ug/L			03/02/25 02:57	1
Chloromethane	ND		1.0	0.28	ug/L			03/02/25 02:57	1
Vinyl chloride	ND		1.0	0.22	ug/L			03/02/25 02:57	1
Bromomethane	ND		1.0	0.21	ug/L			03/02/25 02:57	1
Chloroethane	ND		1.0	0.35	ug/L			03/02/25 02:57	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			03/02/25 02:57	1
Carbon disulfide	ND		1.0	0.53	ug/L			03/02/25 02:57	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			03/02/25 02:57	1
Acetone	ND		15	3.2	ug/L			03/02/25 02:57	1
Methylene Chloride	ND		5.0	1.4	ug/L			03/02/25 02:57	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			03/02/25 02:57	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			03/02/25 02:57	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			03/02/25 02:57	1
2-Butanone (MEK)	ND		15	4.7	ug/L			03/02/25 02:57	1
2,2-Dichloropropane	ND	*+	1.0	0.32	ug/L			03/02/25 02:57	1
cis-1,2-Dichloroethene	0.94	J	1.0	0.35	ug/L			03/02/25 02:57	1
Chlorobromomethane	ND		1.0	0.29	ug/L			03/02/25 02:57	1
Chloroform	93		1.0	0.26	ug/L			03/02/25 02:57	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			03/02/25 02:57	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			03/02/25 02:57	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			03/02/25 02:57	1
Benzene	ND		1.0	0.24	ug/L			03/02/25 02:57	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			03/02/25 02:57	1
Trichloroethene	1.5		1.0	0.26	ug/L			03/02/25 02:57	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			03/02/25 02:57	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/02/25 02:57	1
Dibromomethane	ND		1.0	0.34	ug/L			03/02/25 02:57	1
Dichlorobromomethane	ND		1.0	0.29	ug/L			03/02/25 02:57	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			03/02/25 02:57	1
Toluene	ND		1.0	0.39	ug/L			03/02/25 02:57	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			03/02/25 02:57	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			03/02/25 02:57	1
Tetrachloroethene	9.2		1.0	0.41	ug/L			03/02/25 02:57	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			03/02/25 02:57	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			03/02/25 02:57	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			03/02/25 02:57	1
Chlorobenzene	0.65	J	1.0	0.44	ug/L			03/02/25 02:57	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			03/02/25 02:57	1
Ethylbenzene	ND		1.0	0.50	ug/L			03/02/25 02:57	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			03/02/25 02:57	1
o-Xylene	ND		1.0	0.39	ug/L			03/02/25 02:57	1
Styrene	ND		1.0	0.53	ug/L			03/02/25 02:57	1
Bromoform	ND		1.0	0.51	ug/L			03/02/25 02:57	1
Isopropylbenzene	ND		1.0	0.44	ug/L			03/02/25 02:57	1
Bromobenzene	ND		1.0	0.43	ug/L			03/02/25 02:57	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			03/02/25 02:57	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			03/02/25 02:57	1
N-Propylbenzene	ND		1.0	0.50	ug/L			03/02/25 02:57	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			03/02/25 02:57	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

Client Sample ID: Dup-02-022125

Lab Sample ID: 580-148262-5

Date Collected: 02/21/25 12:00

Matrix: Water

Date Received: 02/24/25 12:05

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		1.0	0.38	ug/L			03/02/25 02:57	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			03/02/25 02:57	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			03/02/25 02:57	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			03/02/25 02:57	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			03/02/25 02:57	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			03/02/25 02:57	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			03/02/25 02:57	1
n-Butylbenzene	ND		1.0	0.44	ug/L			03/02/25 02:57	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			03/02/25 02:57	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			03/02/25 02:57	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			03/02/25 02:57	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			03/02/25 02:57	1
Naphthalene	ND		3.0	0.93	ug/L			03/02/25 02:57	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			03/02/25 02:57	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			03/02/25 02:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 120		03/02/25 02:57	1
1,2-Dichloroethane-d4 (Surr)	103		80 - 120		03/02/25 02:57	1
4-Bromofluorobenzene (Surr)	103		80 - 120		03/02/25 02:57	1
Dibromofluoromethane (Surr)	104		80 - 120		03/02/25 02:57	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

Client Sample ID: MWA-11i(d)-022125

Lab Sample ID: 580-148262-6

Date Collected: 02/21/25 13:23

Matrix: Water

Date Received: 02/24/25 12:05

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			03/03/25 22:41	1
Chloromethane	ND		0.50	0.14	ug/L			03/03/25 22:41	1
Vinyl chloride	ND	*1	0.10	0.040	ug/L			03/03/25 22:41	1
Bromomethane	ND		0.50	0.13	ug/L			03/03/25 22:41	1
Chloroethane	ND		0.50	0.24	ug/L			03/03/25 22:41	1
Carbon disulfide	ND		0.40	0.20	ug/L			03/03/25 22:41	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			03/03/25 22:41	1
1,1-Dichloroethene	0.051	J B	0.20	0.035	ug/L			03/03/25 22:41	1
Acetone	ND		10	3.1	ug/L			03/03/25 22:41	1
Methylene Chloride	ND		5.0	1.2	ug/L			03/03/25 22:41	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			03/03/25 22:41	1
2-Butanone (MEK)	ND		10	2.5	ug/L			03/03/25 22:41	1
trans-1,2-Dichloroethene	0.077	J B	0.20	0.033	ug/L			03/03/25 22:41	1
1,1-Dichloroethane	0.079	J	0.20	0.064	ug/L			03/03/25 22:41	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			03/03/25 22:41	1
cis-1,2-Dichloroethene	0.22	B	0.20	0.055	ug/L			03/03/25 22:41	1
Chlorobromomethane	ND		0.20	0.050	ug/L			03/03/25 22:41	1
Chloroform	0.072	J B	0.20	0.030	ug/L			03/03/25 22:41	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			03/03/25 22:41	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			03/03/25 22:41	1
1,1-Dichloropropene	0.090	J	0.20	0.084	ug/L			03/03/25 22:41	1
Benzene	ND		0.20	0.030	ug/L			03/03/25 22:41	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			03/03/25 22:41	1
Trichloroethene	ND		0.20	0.066	ug/L			03/03/25 22:41	1
1,2-Dichloropropane	0.12	J B	0.20	0.060	ug/L			03/03/25 22:41	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			03/03/25 22:41	1
Dibromomethane	ND		0.20	0.062	ug/L			03/03/25 22:41	1
Dichlorobromomethane	0.082	J B	0.20	0.060	ug/L			03/03/25 22:41	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			03/03/25 22:41	1
Toluene	0.11	J	0.20	0.050	ug/L			03/03/25 22:41	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			03/03/25 22:41	1
1,1,2-Trichloroethane	0.073	J	0.20	0.070	ug/L			03/03/25 22:41	1
Tetrachloroethene	0.18	J B	0.50	0.084	ug/L			03/03/25 22:41	1
1,3-Dichloropropane	0.077	J B	0.20	0.056	ug/L			03/03/25 22:41	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			03/03/25 22:41	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			03/03/25 22:41	1
Chlorobenzene	ND		0.20	0.060	ug/L			03/03/25 22:41	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			03/03/25 22:41	1
Ethylbenzene	ND		0.20	0.082	ug/L			03/03/25 22:41	1
m-Xylene & p-Xylene	0.25	J B	0.50	0.12	ug/L			03/03/25 22:41	1
o-Xylene	ND		0.50	0.23	ug/L			03/03/25 22:41	1
Styrene	ND		1.0	0.33	ug/L			03/03/25 22:41	1
Bromoform	ND		0.50	0.16	ug/L			03/03/25 22:41	1
Isopropylbenzene	ND		1.0	0.27	ug/L			03/03/25 22:41	1
Bromobenzene	ND		0.20	0.038	ug/L			03/03/25 22:41	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			03/03/25 22:41	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			03/03/25 22:41	1
N-Propylbenzene	0.092	J B	0.30	0.091	ug/L			03/03/25 22:41	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			03/03/25 22:41	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

Client Sample ID: MWA-11i(d)-022125

Lab Sample ID: 580-148262-6

Date Collected: 02/21/25 13:23

Matrix: Water

Date Received: 02/24/25 12:05

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		0.30	0.12	ug/L			03/03/25 22:41	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			03/03/25 22:41	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			03/03/25 22:41	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			03/03/25 22:41	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			03/03/25 22:41	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			03/03/25 22:41	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			03/03/25 22:41	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			03/03/25 22:41	1
n-Butylbenzene	ND		1.0	0.35	ug/L			03/03/25 22:41	1
1,2-Dichlorobenzene	0.069	J B	0.30	0.038	ug/L			03/03/25 22:41	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			03/03/25 22:41	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			03/03/25 22:41	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			03/03/25 22:41	1
Naphthalene	ND		1.5	0.52	ug/L			03/03/25 22:41	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			03/03/25 22:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		03/03/25 22:41	1
Dibromofluoromethane (Surr)	111		80 - 120		03/03/25 22:41	1
4-Bromofluorobenzene (Surr)	104		80 - 120		03/03/25 22:41	1
1,2-Dichloroethane-d4 (Surr)	109		80 - 120		03/03/25 22:41	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		2.0	0.91	ug/L			03/03/25 15:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	730		150	43	mg/L			03/08/25 05:53	100

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

Client Sample ID: PA-27d-022125

Lab Sample ID: 580-148262-7

Date Collected: 02/21/25 10:23

Matrix: Water

Date Received: 02/24/25 12:05

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0	0.53	ug/L			03/02/25 03:21	1
Chloromethane	ND		1.0	0.28	ug/L			03/02/25 03:21	1
Vinyl chloride	ND		1.0	0.22	ug/L			03/02/25 03:21	1
Bromomethane	ND		1.0	0.21	ug/L			03/02/25 03:21	1
Chloroethane	ND		1.0	0.35	ug/L			03/02/25 03:21	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			03/02/25 03:21	1
Carbon disulfide	ND		1.0	0.53	ug/L			03/02/25 03:21	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			03/02/25 03:21	1
Acetone	ND		15	3.2	ug/L			03/02/25 03:21	1
Methylene Chloride	ND		5.0	1.4	ug/L			03/02/25 03:21	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			03/02/25 03:21	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			03/02/25 03:21	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			03/02/25 03:21	1
2-Butanone (MEK)	ND		15	4.7	ug/L			03/02/25 03:21	1
2,2-Dichloropropane	ND	*+	1.0	0.32	ug/L			03/02/25 03:21	1
cis-1,2-Dichloroethene	0.55	J	1.0	0.35	ug/L			03/02/25 03:21	1
Chlorobromomethane	ND		1.0	0.29	ug/L			03/02/25 03:21	1
Chloroform	ND		1.0	0.26	ug/L			03/02/25 03:21	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			03/02/25 03:21	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			03/02/25 03:21	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			03/02/25 03:21	1
Benzene	ND		1.0	0.24	ug/L			03/02/25 03:21	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			03/02/25 03:21	1
Trichloroethene	ND		1.0	0.26	ug/L			03/02/25 03:21	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			03/02/25 03:21	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/02/25 03:21	1
Dibromomethane	ND		1.0	0.34	ug/L			03/02/25 03:21	1
Dichlorobromomethane	ND		1.0	0.29	ug/L			03/02/25 03:21	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			03/02/25 03:21	1
Toluene	ND		1.0	0.39	ug/L			03/02/25 03:21	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			03/02/25 03:21	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			03/02/25 03:21	1
Tetrachloroethene	ND		1.0	0.41	ug/L			03/02/25 03:21	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			03/02/25 03:21	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			03/02/25 03:21	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			03/02/25 03:21	1
Chlorobenzene	ND		1.0	0.44	ug/L			03/02/25 03:21	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			03/02/25 03:21	1
Ethylbenzene	ND		1.0	0.50	ug/L			03/02/25 03:21	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			03/02/25 03:21	1
o-Xylene	ND		1.0	0.39	ug/L			03/02/25 03:21	1
Styrene	ND		1.0	0.53	ug/L			03/02/25 03:21	1
Bromoform	ND		1.0	0.51	ug/L			03/02/25 03:21	1
Isopropylbenzene	ND		1.0	0.44	ug/L			03/02/25 03:21	1
Bromobenzene	ND		1.0	0.43	ug/L			03/02/25 03:21	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			03/02/25 03:21	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			03/02/25 03:21	1
N-Propylbenzene	ND		1.0	0.50	ug/L			03/02/25 03:21	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			03/02/25 03:21	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

Client Sample ID: PA-27d-022125

Lab Sample ID: 580-148262-7

Date Collected: 02/21/25 10:23

Matrix: Water

Date Received: 02/24/25 12:05

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		1.0	0.38	ug/L			03/02/25 03:21	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			03/02/25 03:21	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			03/02/25 03:21	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			03/02/25 03:21	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			03/02/25 03:21	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			03/02/25 03:21	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			03/02/25 03:21	1
n-Butylbenzene	ND		1.0	0.44	ug/L			03/02/25 03:21	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			03/02/25 03:21	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			03/02/25 03:21	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			03/02/25 03:21	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			03/02/25 03:21	1
Naphthalene	ND		3.0	0.93	ug/L			03/02/25 03:21	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			03/02/25 03:21	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			03/02/25 03:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 120		03/02/25 03:21	1
1,2-Dichloroethane-d4 (Surr)	103		80 - 120		03/02/25 03:21	1
4-Bromofluorobenzene (Surr)	102		80 - 120		03/02/25 03:21	1
Dibromofluoromethane (Surr)	103		80 - 120		03/02/25 03:21	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		80	36	ug/L			03/03/25 16:05	40

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	600		30	8.6	mg/L			03/08/25 06:05	20

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

Client Sample ID: PA-04-022125

Lab Sample ID: 580-148262-8

Date Collected: 02/21/25 11:34

Matrix: Water

Date Received: 02/24/25 12:05

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			03/03/25 23:05	1
Chloromethane	ND		0.50	0.14	ug/L			03/03/25 23:05	1
Vinyl chloride	ND	*1	0.10	0.040	ug/L			03/03/25 23:05	1
Bromomethane	ND		0.50	0.13	ug/L			03/03/25 23:05	1
Chloroethane	ND		0.50	0.24	ug/L			03/03/25 23:05	1
Carbon disulfide	ND		0.40	0.20	ug/L			03/03/25 23:05	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			03/03/25 23:05	1
1,1-Dichloroethene	0.23	B	0.20	0.035	ug/L			03/03/25 23:05	1
Acetone	ND		10	3.1	ug/L			03/03/25 23:05	1
Methylene Chloride	ND		5.0	1.2	ug/L			03/03/25 23:05	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			03/03/25 23:05	1
2-Butanone (MEK)	ND		10	2.5	ug/L			03/03/25 23:05	1
trans-1,2-Dichloroethene	0.054	J B	0.20	0.033	ug/L			03/03/25 23:05	1
1,1-Dichloroethane	0.24		0.20	0.064	ug/L			03/03/25 23:05	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			03/03/25 23:05	1
cis-1,2-Dichloroethene	0.076	J B	0.20	0.055	ug/L			03/03/25 23:05	1
Chlorobromomethane	ND		0.20	0.050	ug/L			03/03/25 23:05	1
Chloroform	0.14	J B	0.20	0.030	ug/L			03/03/25 23:05	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			03/03/25 23:05	1
Carbon tetrachloride	0.031	J B	0.20	0.025	ug/L			03/03/25 23:05	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			03/03/25 23:05	1
Benzene	ND		0.20	0.030	ug/L			03/03/25 23:05	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			03/03/25 23:05	1
Trichloroethene	ND		0.20	0.066	ug/L			03/03/25 23:05	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			03/03/25 23:05	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			03/03/25 23:05	1
Dibromomethane	ND		0.20	0.062	ug/L			03/03/25 23:05	1
Dichlorobromomethane	0.071	J B	0.20	0.060	ug/L			03/03/25 23:05	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			03/03/25 23:05	1
Toluene	ND		0.20	0.050	ug/L			03/03/25 23:05	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			03/03/25 23:05	1
1,1,2-Trichloroethane	0.074	J	0.20	0.070	ug/L			03/03/25 23:05	1
Tetrachloroethene	0.26	J B	0.50	0.084	ug/L			03/03/25 23:05	1
1,3-Dichloropropane	0.072	J B	0.20	0.056	ug/L			03/03/25 23:05	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			03/03/25 23:05	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			03/03/25 23:05	1
Chlorobenzene	ND		0.20	0.060	ug/L			03/03/25 23:05	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			03/03/25 23:05	1
Ethylbenzene	ND		0.20	0.082	ug/L			03/03/25 23:05	1
m-Xylene & p-Xylene	0.15	J B	0.50	0.12	ug/L			03/03/25 23:05	1
o-Xylene	ND		0.50	0.23	ug/L			03/03/25 23:05	1
Styrene	ND		1.0	0.33	ug/L			03/03/25 23:05	1
Bromoform	ND		0.50	0.16	ug/L			03/03/25 23:05	1
Isopropylbenzene	ND		1.0	0.27	ug/L			03/03/25 23:05	1
Bromobenzene	ND		0.20	0.038	ug/L			03/03/25 23:05	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			03/03/25 23:05	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			03/03/25 23:05	1
N-Propylbenzene	0.094	J B	0.30	0.091	ug/L			03/03/25 23:05	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			03/03/25 23:05	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

Client Sample ID: PA-04-022125

Lab Sample ID: 580-148262-8

Date Collected: 02/21/25 11:34

Matrix: Water

Date Received: 02/24/25 12:05

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		0.30	0.12	ug/L			03/03/25 23:05	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			03/03/25 23:05	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			03/03/25 23:05	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			03/03/25 23:05	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			03/03/25 23:05	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			03/03/25 23:05	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			03/03/25 23:05	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			03/03/25 23:05	1
n-Butylbenzene	ND		1.0	0.35	ug/L			03/03/25 23:05	1
1,2-Dichlorobenzene	0.098	J B	0.30	0.038	ug/L			03/03/25 23:05	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			03/03/25 23:05	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			03/03/25 23:05	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			03/03/25 23:05	1
Naphthalene	ND		1.5	0.52	ug/L			03/03/25 23:05	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			03/03/25 23:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		80 - 120		03/03/25 23:05	1
Dibromofluoromethane (Surr)	108		80 - 120		03/03/25 23:05	1
4-Bromofluorobenzene (Surr)	103		80 - 120		03/03/25 23:05	1
1,2-Dichloroethane-d4 (Surr)	106		80 - 120		03/03/25 23:05	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND	F1	20	9.1	ug/L			03/03/25 16:26	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	4.0		1.5	0.43	mg/L			03/08/25 06:17	1

Client Sample Results

Client: ERM-West

Job ID: 580-148262-1

Project/Site: Arkema - Q1 2025 Groundwater Event

Client Sample ID: PA-10i-022125

Lab Sample ID: 580-148262-9

Date Collected: 02/21/25 12:56

Matrix: Water

Date Received: 02/24/25 12:05

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			03/03/25 23:28	1
Chloromethane	ND		0.50	0.14	ug/L			03/03/25 23:28	1
Vinyl chloride	0.47	*1	0.10	0.040	ug/L			03/03/25 23:28	1
Bromomethane	ND		0.50	0.13	ug/L			03/03/25 23:28	1
Chloroethane	ND		0.50	0.24	ug/L			03/03/25 23:28	1
Carbon disulfide	ND		0.40	0.20	ug/L			03/03/25 23:28	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			03/03/25 23:28	1
1,1-Dichloroethene	0.16	J B	0.20	0.035	ug/L			03/03/25 23:28	1
Acetone	ND		10	3.1	ug/L			03/03/25 23:28	1
Methylene Chloride	ND		5.0	1.2	ug/L			03/03/25 23:28	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			03/03/25 23:28	1
2-Butanone (MEK)	ND		10	2.5	ug/L			03/03/25 23:28	1
trans-1,2-Dichloroethene	0.091	J B	0.20	0.033	ug/L			03/03/25 23:28	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			03/03/25 23:28	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			03/03/25 23:28	1
cis-1,2-Dichloroethene	0.41	B	0.20	0.055	ug/L			03/03/25 23:28	1
Chlorobromomethane	ND		0.20	0.050	ug/L			03/03/25 23:28	1
Chloroform	0.059	J B	0.20	0.030	ug/L			03/03/25 23:28	1
1,1,1-Trichloroethane	0.043	J B	0.20	0.025	ug/L			03/03/25 23:28	1
Carbon tetrachloride	0.028	J B	0.20	0.025	ug/L			03/03/25 23:28	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			03/03/25 23:28	1
Benzene	0.038	J	0.20	0.030	ug/L			03/03/25 23:28	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			03/03/25 23:28	1
Trichloroethene	ND		0.20	0.066	ug/L			03/03/25 23:28	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			03/03/25 23:28	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			03/03/25 23:28	1
Dibromomethane	ND		0.20	0.062	ug/L			03/03/25 23:28	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			03/03/25 23:28	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			03/03/25 23:28	1
Toluene	ND		0.20	0.050	ug/L			03/03/25 23:28	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			03/03/25 23:28	1
1,1,2-Trichloroethane	0.075	J	0.20	0.070	ug/L			03/03/25 23:28	1
Tetrachloroethene	0.14	J B	0.50	0.084	ug/L			03/03/25 23:28	1
1,3-Dichloropropane	0.072	J B	0.20	0.056	ug/L			03/03/25 23:28	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			03/03/25 23:28	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			03/03/25 23:28	1
Chlorobenzene	1.0		0.20	0.060	ug/L			03/03/25 23:28	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			03/03/25 23:28	1
Ethylbenzene	ND		0.20	0.082	ug/L			03/03/25 23:28	1
m-Xylene & p-Xylene	0.14	J B	0.50	0.12	ug/L			03/03/25 23:28	1
o-Xylene	ND		0.50	0.23	ug/L			03/03/25 23:28	1
Styrene	ND		1.0	0.33	ug/L			03/03/25 23:28	1
Bromoform	ND		0.50	0.16	ug/L			03/03/25 23:28	1
Isopropylbenzene	ND		1.0	0.27	ug/L			03/03/25 23:28	1
Bromobenzene	ND		0.20	0.038	ug/L			03/03/25 23:28	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			03/03/25 23:28	1
1,2,3-Trichloropropane	0.061	J	0.20	0.050	ug/L			03/03/25 23:28	1
N-Propylbenzene	ND		0.30	0.091	ug/L			03/03/25 23:28	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			03/03/25 23:28	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

Client Sample ID: PA-10i-022125

Lab Sample ID: 580-148262-9

Date Collected: 02/21/25 12:56

Matrix: Water

Date Received: 02/24/25 12:05

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		0.30	0.12	ug/L			03/03/25 23:28	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			03/03/25 23:28	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			03/03/25 23:28	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			03/03/25 23:28	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			03/03/25 23:28	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			03/03/25 23:28	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			03/03/25 23:28	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			03/03/25 23:28	1
n-Butylbenzene	ND		1.0	0.35	ug/L			03/03/25 23:28	1
1,2-Dichlorobenzene	0.25	J B	0.30	0.038	ug/L			03/03/25 23:28	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			03/03/25 23:28	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			03/03/25 23:28	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			03/03/25 23:28	1
Naphthalene	ND		1.5	0.52	ug/L			03/03/25 23:28	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			03/03/25 23:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		80 - 120		03/03/25 23:28	1
Dibromofluoromethane (Surr)	109		80 - 120		03/03/25 23:28	1
4-Bromofluorobenzene (Surr)	104		80 - 120		03/03/25 23:28	1
1,2-Dichloroethane-d4 (Surr)	109		80 - 120		03/03/25 23:28	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		80	36	ug/L			03/03/25 18:30	40

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	27		1.5	0.43	mg/L			03/08/25 07:52	1

Client Sample Results

Client: ERM-West

Job ID: 580-148262-1

Project/Site: Arkema - Q1 2025 Groundwater Event

Client Sample ID: PA-18d-022125

Lab Sample ID: 580-148262-10

Date Collected: 02/21/25 14:11

Matrix: Water

Date Received: 02/24/25 12:05

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0	0.53	ug/L			03/02/25 02:33	1
Chloromethane	ND		1.0	0.28	ug/L			03/02/25 02:33	1
Vinyl chloride	ND		1.0	0.22	ug/L			03/02/25 02:33	1
Bromomethane	ND		1.0	0.21	ug/L			03/02/25 02:33	1
Chloroethane	ND		1.0	0.35	ug/L			03/02/25 02:33	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			03/02/25 02:33	1
Carbon disulfide	ND		1.0	0.53	ug/L			03/02/25 02:33	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			03/02/25 02:33	1
Acetone	ND		15	3.2	ug/L			03/02/25 02:33	1
Methylene Chloride	ND		5.0	1.4	ug/L			03/02/25 02:33	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			03/02/25 02:33	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			03/02/25 02:33	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			03/02/25 02:33	1
2-Butanone (MEK)	ND		15	4.7	ug/L			03/02/25 02:33	1
2,2-Dichloropropane	ND	*+	1.0	0.32	ug/L			03/02/25 02:33	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			03/02/25 02:33	1
Chlorobromomethane	ND		1.0	0.29	ug/L			03/02/25 02:33	1
Chloroform	ND		1.0	0.26	ug/L			03/02/25 02:33	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			03/02/25 02:33	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			03/02/25 02:33	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			03/02/25 02:33	1
Benzene	ND		1.0	0.24	ug/L			03/02/25 02:33	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			03/02/25 02:33	1
Trichloroethene	ND		1.0	0.26	ug/L			03/02/25 02:33	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			03/02/25 02:33	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/02/25 02:33	1
Dibromomethane	ND		1.0	0.34	ug/L			03/02/25 02:33	1
Dichlorobromomethane	ND		1.0	0.29	ug/L			03/02/25 02:33	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			03/02/25 02:33	1
Toluene	ND		1.0	0.39	ug/L			03/02/25 02:33	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			03/02/25 02:33	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			03/02/25 02:33	1
Tetrachloroethene	ND		1.0	0.41	ug/L			03/02/25 02:33	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			03/02/25 02:33	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			03/02/25 02:33	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			03/02/25 02:33	1
Chlorobenzene	ND		1.0	0.44	ug/L			03/02/25 02:33	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			03/02/25 02:33	1
Ethylbenzene	ND		1.0	0.50	ug/L			03/02/25 02:33	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			03/02/25 02:33	1
o-Xylene	ND		1.0	0.39	ug/L			03/02/25 02:33	1
Styrene	ND		1.0	0.53	ug/L			03/02/25 02:33	1
Bromoform	ND		1.0	0.51	ug/L			03/02/25 02:33	1
Isopropylbenzene	ND		1.0	0.44	ug/L			03/02/25 02:33	1
Bromobenzene	ND		1.0	0.43	ug/L			03/02/25 02:33	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			03/02/25 02:33	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			03/02/25 02:33	1
N-Propylbenzene	ND		1.0	0.50	ug/L			03/02/25 02:33	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			03/02/25 02:33	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

Client Sample ID: PA-18d-022125

Lab Sample ID: 580-148262-10

Date Collected: 02/21/25 14:11

Matrix: Water

Date Received: 02/24/25 12:05

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		1.0	0.38	ug/L			03/02/25 02:33	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			03/02/25 02:33	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			03/02/25 02:33	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			03/02/25 02:33	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			03/02/25 02:33	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			03/02/25 02:33	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			03/02/25 02:33	1
n-Butylbenzene	ND		1.0	0.44	ug/L			03/02/25 02:33	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			03/02/25 02:33	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			03/02/25 02:33	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			03/02/25 02:33	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			03/02/25 02:33	1
Naphthalene	ND		3.0	0.93	ug/L			03/02/25 02:33	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			03/02/25 02:33	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			03/02/25 02:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 120		03/02/25 02:33	1
1,2-Dichloroethane-d4 (Surr)	103		80 - 120		03/02/25 02:33	1
4-Bromofluorobenzene (Surr)	101		80 - 120		03/02/25 02:33	1
Dibromofluoromethane (Surr)	103		80 - 120		03/02/25 02:33	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		80	36	ug/L			03/03/25 18:50	40

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	75		1.5	0.43	mg/L			03/08/25 08:16	1

QC Sample Results

Client: ERM-West

Job ID: 580-148262-1

Project/Site: Arkema - Q1 2025 Groundwater Event

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

Lab Sample ID: MB 580-485951/7

Matrix: Water

Analysis Batch: 485951

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			02/27/25 01:38	1
Chloromethane	ND		0.50	0.14	ug/L			02/27/25 01:38	1
Vinyl chloride	ND		0.10	0.040	ug/L			02/27/25 01:38	1
Bromomethane	ND		0.50	0.13	ug/L			02/27/25 01:38	1
Chloroethane	ND		0.50	0.24	ug/L			02/27/25 01:38	1
Carbon disulfide	ND		0.40	0.20	ug/L			02/27/25 01:38	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			02/27/25 01:38	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			02/27/25 01:38	1
Acetone	ND		10	3.1	ug/L			02/27/25 01:38	1
Methylene Chloride	ND		5.0	1.2	ug/L			02/27/25 01:38	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			02/27/25 01:38	1
2-Butanone (MEK)	ND		10	2.5	ug/L			02/27/25 01:38	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			02/27/25 01:38	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			02/27/25 01:38	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			02/27/25 01:38	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			02/27/25 01:38	1
Chlorobromomethane	ND		0.20	0.050	ug/L			02/27/25 01:38	1
Chloroform	ND		0.20	0.030	ug/L			02/27/25 01:38	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			02/27/25 01:38	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			02/27/25 01:38	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			02/27/25 01:38	1
Benzene	ND		0.20	0.030	ug/L			02/27/25 01:38	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			02/27/25 01:38	1
Trichloroethene	ND		0.20	0.066	ug/L			02/27/25 01:38	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			02/27/25 01:38	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			02/27/25 01:38	1
Dibromomethane	ND		0.20	0.062	ug/L			02/27/25 01:38	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			02/27/25 01:38	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			02/27/25 01:38	1
Toluene	ND		0.20	0.050	ug/L			02/27/25 01:38	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			02/27/25 01:38	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			02/27/25 01:38	1
Tetrachloroethene	ND		0.24	0.084	ug/L			02/27/25 01:38	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			02/27/25 01:38	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			02/27/25 01:38	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			02/27/25 01:38	1
Chlorobenzene	ND		0.20	0.060	ug/L			02/27/25 01:38	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			02/27/25 01:38	1
Ethylbenzene	ND		0.20	0.082	ug/L			02/27/25 01:38	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			02/27/25 01:38	1
o-Xylene	ND		0.50	0.23	ug/L			02/27/25 01:38	1
Styrene	ND		1.0	0.33	ug/L			02/27/25 01:38	1
Bromoform	ND		0.50	0.16	ug/L			02/27/25 01:38	1
Isopropylbenzene	ND		1.0	0.27	ug/L			02/27/25 01:38	1
Bromobenzene	ND		0.20	0.038	ug/L			02/27/25 01:38	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			02/27/25 01:38	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			02/27/25 01:38	1
N-Propylbenzene	ND		0.30	0.091	ug/L			02/27/25 01:38	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

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

Lab Sample ID: MB 580-485951/7

Matrix: Water

Analysis Batch: 485951

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorotoluene	ND		0.50	0.12	ug/L			02/27/25 01:38	1
4-Chlorotoluene	ND		0.30	0.12	ug/L			02/27/25 01:38	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			02/27/25 01:38	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			02/27/25 01:38	1
1,2,4-Trimethylbenzene	0.260	J	0.55	0.23	ug/L			02/27/25 01:38	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			02/27/25 01:38	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			02/27/25 01:38	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			02/27/25 01:38	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			02/27/25 01:38	1
n-Butylbenzene	0.581	J	1.0	0.35	ug/L			02/27/25 01:38	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			02/27/25 01:38	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			02/27/25 01:38	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			02/27/25 01:38	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			02/27/25 01:38	1
Naphthalene	ND		1.5	0.52	ug/L			02/27/25 01:38	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			02/27/25 01:38	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	89		80 - 120		02/27/25 01:38	1
Dibromofluoromethane (Surr)	112		80 - 120		02/27/25 01:38	1
4-Bromofluorobenzene (Surr)	97		80 - 120		02/27/25 01:38	1
1,2-Dichloroethane-d4 (Surr)	110		80 - 120		02/27/25 01:38	1

Lab Sample ID: LCS 580-485951/4

Matrix: Water

Analysis Batch: 485951

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dichlorodifluoromethane	5.00	4.67		ug/L		93	20 - 150
Chloromethane	5.00	5.13		ug/L		103	32 - 150
Vinyl chloride	5.00	5.30		ug/L		106	41 - 150
Bromomethane	5.00	4.87		ug/L		97	51 - 148
Chloroethane	5.00	4.82		ug/L		96	54 - 140
Carbon disulfide	5.00	4.71		ug/L		94	54 - 142
Trichlorofluoromethane	5.00	4.80		ug/L		96	60 - 132
1,1-Dichloroethene	5.00	4.77		ug/L		95	60 - 129
Acetone	25.0	24.8		ug/L		99	49 - 150
Methylene Chloride	5.00	6.31		ug/L		126	40 - 142
Methyl tert-butyl ether	5.00	5.14		ug/L		103	61 - 131
2-Butanone (MEK)	25.0	25.6		ug/L		102	37 - 150
trans-1,2-Dichloroethene	5.00	5.31		ug/L		106	69 - 121
1,1-Dichloroethane	5.00	5.65		ug/L		113	74 - 120
2,2-Dichloropropane	5.00	5.59		ug/L		112	55 - 140
cis-1,2-Dichloroethene	5.00	5.46		ug/L		109	72 - 120
Chlorobromomethane	5.00	5.61		ug/L		112	79 - 121
Chloroform	5.00	5.44		ug/L		109	75 - 120
1,1,1-Trichloroethane	5.00	4.94		ug/L		99	70 - 121
Carbon tetrachloride	5.00	4.71		ug/L		94	66 - 130

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

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

Lab Sample ID: LCS 580-485951/4

Matrix: Water

Analysis Batch: 485951

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloropropene	5.00	5.01		ug/L		100	72 - 125
Benzene	5.00	5.59		ug/L		112	80 - 120
1,2-Dichloroethane	5.00	5.19		ug/L		104	74 - 127
Trichloroethene	5.00	5.40		ug/L		108	72 - 120
1,2-Dichloropropane	5.00	5.60		ug/L		112	69 - 130
4-Methyl-2-pentanone (MIBK)	25.0	20.9		ug/L		83	63 - 137
Dibromomethane	5.00	5.53		ug/L		111	65 - 141
Dichlorobromomethane	5.00	5.57		ug/L		111	74 - 131
cis-1,3-Dichloropropene	5.00	4.27		ug/L		85	77 - 131
Toluene	5.00	4.79		ug/L		96	80 - 126
trans-1,3-Dichloropropene	5.00	4.71		ug/L		94	71 - 138
1,1,2-Trichloroethane	5.00	4.59		ug/L		92	73 - 127
Tetrachloroethene	5.00	4.24		ug/L		85	75 - 124
1,3-Dichloropropane	5.00	4.68		ug/L		94	69 - 138
Chlorodibromomethane	5.00	4.71		ug/L		94	62 - 141
Ethylene Dibromide	5.00	4.62		ug/L		92	61 - 143
Chlorobenzene	5.00	4.72		ug/L		94	74 - 123
1,1,1,2-Tetrachloroethane	5.00	4.86		ug/L		97	69 - 127
Ethylbenzene	5.00	4.81		ug/L		96	80 - 124
m-Xylene & p-Xylene	5.00	4.66		ug/L		93	75 - 124
o-Xylene	5.00	4.66		ug/L		93	71 - 124
Styrene	5.00	4.52		ug/L		90	74 - 127
Bromoform	5.00	4.51		ug/L		90	48 - 127
Isopropylbenzene	5.00	4.85		ug/L		97	71 - 123
Bromobenzene	5.00	4.54		ug/L		91	74 - 130
1,1,2,2-Tetrachloroethane	5.00	4.50		ug/L		90	67 - 136
1,2,3-Trichloropropane	5.00	4.24		ug/L		85	67 - 135
N-Propylbenzene	5.00	4.61		ug/L		92	72 - 126
2-Chlorotoluene	5.00	4.86		ug/L		97	73 - 120
4-Chlorotoluene	5.00	5.16		ug/L		103	75 - 124
1,3,5-Trimethylbenzene	5.00	4.82		ug/L		96	75 - 123
tert-Butylbenzene	5.00	4.53		ug/L		91	70 - 129
1,2,4-Trimethylbenzene	5.00	4.49		ug/L		90	71 - 127
sec-Butylbenzene	5.00	4.42		ug/L		88	75 - 126
4-Isopropyltoluene	5.00	4.30		ug/L		86	78 - 125
1,3-Dichlorobenzene	5.00	4.72		ug/L		94	72 - 125
1,4-Dichlorobenzene	5.00	4.68		ug/L		94	71 - 129
n-Butylbenzene	5.00	4.22		ug/L		84	69 - 127
1,2-Dichlorobenzene	5.00	4.78		ug/L		96	72 - 129
1,2-Dibromo-3-Chloropropane	5.00	3.99		ug/L		80	55 - 135
1,2,4-Trichlorobenzene	5.00	4.47		ug/L		89	60 - 130
Hexachlorobutadiene	5.00	4.44		ug/L		89	63 - 130
Naphthalene	5.00	4.56		ug/L		91	54 - 137
1,2,3-Trichlorobenzene	5.00	4.28		ug/L		86	60 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	103		80 - 120

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

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

Lab Sample ID: LCS 580-485951/4

Matrix: Water

Analysis Batch: 485951

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		80 - 120
1,2-Dichloroethane-d4 (Surr)	99		80 - 120

Lab Sample ID: LCSD 580-485951/5

Matrix: Water

Analysis Batch: 485951

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dichlorodifluoromethane	5.00	4.94		ug/L		99	20 - 150	6	30
Chloromethane	5.00	5.22		ug/L		104	32 - 150	2	33
Vinyl chloride	5.00	5.55		ug/L		111	41 - 150	5	32
Bromomethane	5.00	5.15		ug/L		103	51 - 148	6	35
Chloroethane	5.00	5.08		ug/L		102	54 - 140	5	33
Carbon disulfide	5.00	4.86		ug/L		97	54 - 142	3	34
Trichlorofluoromethane	5.00	4.85		ug/L		97	60 - 132	1	32
1,1-Dichloroethene	5.00	4.99		ug/L		100	60 - 129	4	29
Acetone	25.0	25.9		ug/L		103	49 - 150	4	24
Methylene Chloride	5.00	6.45		ug/L		129	40 - 142	2	25
Methyl tert-butyl ether	5.00	5.36		ug/L		107	61 - 131	4	27
2-Butanone (MEK)	25.0	25.6		ug/L		102	37 - 150	0	35
trans-1,2-Dichloroethene	5.00	5.37		ug/L		107	69 - 121	1	27
1,1-Dichloroethane	5.00	5.82		ug/L		116	74 - 120	3	26
2,2-Dichloropropane	5.00	5.73		ug/L		115	55 - 140	2	31
cis-1,2-Dichloroethene	5.00	5.65		ug/L		113	72 - 120	4	22
Chlorobromomethane	5.00	5.77		ug/L		115	79 - 121	3	20
Chloroform	5.00	5.53		ug/L		111	75 - 120	2	21
1,1,1-Trichloroethane	5.00	4.90		ug/L		98	70 - 121	1	24
Carbon tetrachloride	5.00	4.82		ug/L		96	66 - 130	2	24
1,1-Dichloropropene	5.00	4.89		ug/L		98	72 - 125	2	23
Benzene	5.00	5.65		ug/L		113	80 - 120	1	22
1,2-Dichloroethane	5.00	5.35		ug/L		107	74 - 127	3	21
Trichloroethene	5.00	5.48		ug/L		110	72 - 120	1	22
1,2-Dichloropropane	5.00	5.75		ug/L		115	69 - 130	3	22
4-Methyl-2-pentanone (MIBK)	25.0	20.8		ug/L		83	63 - 137	0	26
Dibromomethane	5.00	5.42		ug/L		108	65 - 141	2	22
Dichlorobromomethane	5.00	5.55		ug/L		111	74 - 131	0	21
cis-1,3-Dichloropropene	5.00	4.60		ug/L		92	77 - 131	7	24
Toluene	5.00	4.80		ug/L		96	80 - 126	0	20
trans-1,3-Dichloropropene	5.00	4.91		ug/L		98	71 - 138	4	26
1,1,2-Trichloroethane	5.00	4.81		ug/L		96	73 - 127	5	22
Tetrachloroethene	5.00	4.33		ug/L		87	75 - 124	2	20
1,3-Dichloropropane	5.00	4.99		ug/L		100	69 - 138	7	19
Chlorodibromomethane	5.00	4.88		ug/L		98	62 - 141	3	22
Ethylene Dibromide	5.00	4.68		ug/L		94	61 - 143	1	22
Chlorobenzene	5.00	4.89		ug/L		98	74 - 123	3	21
1,1,1,2-Tetrachloroethane	5.00	5.09		ug/L		102	69 - 127	5	22
Ethylbenzene	5.00	4.83		ug/L		97	80 - 124	0	22
m-Xylene & p-Xylene	5.00	4.78		ug/L		96	75 - 124	2	22

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QC Sample Results

Client: ERM-West

Job ID: 580-148262-1

Project/Site: Arkema - Q1 2025 Groundwater Event

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

Lab Sample ID: LCSD 580-485951/5

Matrix: Water

Analysis Batch: 485951

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
o-Xylene	5.00	4.80		ug/L		96	71 - 124	3	23
Styrene	5.00	4.61		ug/L		92	74 - 127	2	22
Bromoform	5.00	4.59		ug/L		92	48 - 127	2	23
Isopropylbenzene	5.00	4.90		ug/L		98	71 - 123	1	23
Bromobenzene	5.00	4.60		ug/L		92	74 - 130	1	23
1,1,2,2-Tetrachloroethane	5.00	4.62		ug/L		92	67 - 136	3	24
1,2,3-Trichloropropane	5.00	4.43		ug/L		89	67 - 135	4	25
N-Propylbenzene	5.00	4.70		ug/L		94	72 - 126	2	20
2-Chlorotoluene	5.00	4.98		ug/L		100	73 - 120	2	22
4-Chlorotoluene	5.00	5.10		ug/L		102	75 - 124	1	23
1,3,5-Trimethylbenzene	5.00	4.87		ug/L		97	75 - 123	1	23
tert-Butylbenzene	5.00	4.65		ug/L		93	70 - 129	3	24
1,2,4-Trimethylbenzene	5.00	4.48		ug/L		90	71 - 127	0	23
sec-Butylbenzene	5.00	4.47		ug/L		89	75 - 126	1	23
4-Isopropyltoluene	5.00	4.22		ug/L		84	78 - 125	2	24
1,3-Dichlorobenzene	5.00	4.73		ug/L		95	72 - 125	0	22
1,4-Dichlorobenzene	5.00	4.80		ug/L		96	71 - 129	2	22
n-Butylbenzene	5.00	4.27		ug/L		85	69 - 127	1	24
1,2-Dichlorobenzene	5.00	4.96		ug/L		99	72 - 129	4	22
1,2-Dibromo-3-Chloropropane	5.00	4.36		ug/L		87	55 - 135	9	29
1,2,4-Trichlorobenzene	5.00	4.30		ug/L		86	60 - 130	4	26
Hexachlorobutadiene	5.00	4.40		ug/L		88	63 - 130	1	26
Naphthalene	5.00	4.47		ug/L		89	54 - 137	2	28
1,2,3-Trichlorobenzene	5.00	4.17		ug/L		83	60 - 136	3	28

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	105		80 - 120
4-Bromofluorobenzene (Surr)	103		80 - 120
1,2-Dichloroethane-d4 (Surr)	99		80 - 120

Lab Sample ID: MB 580-486244/7

Matrix: Water

Analysis Batch: 486244

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0	0.53	ug/L			03/01/25 20:53	1
Chloromethane	ND		1.0	0.28	ug/L			03/01/25 20:53	1
Vinyl chloride	ND		1.0	0.22	ug/L			03/01/25 20:53	1
Bromomethane	ND		1.0	0.21	ug/L			03/01/25 20:53	1
Chloroethane	ND		1.0	0.35	ug/L			03/01/25 20:53	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			03/01/25 20:53	1
Carbon disulfide	ND		1.0	0.53	ug/L			03/01/25 20:53	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			03/01/25 20:53	1
Acetone	ND		15	3.2	ug/L			03/01/25 20:53	1
Methylene Chloride	ND		5.0	1.4	ug/L			03/01/25 20:53	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			03/01/25 20:53	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			03/01/25 20:53	1

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QC Sample Results

Client: ERM-West

Job ID: 580-148262-1

Project/Site: Arkema - Q1 2025 Groundwater Event

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

Lab Sample ID: MB 580-486244/7

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 486244

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1-Dichloroethane	ND		1.0	0.22	ug/L			03/01/25 20:53	1
2-Butanone (MEK)	ND		15	4.7	ug/L			03/01/25 20:53	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			03/01/25 20:53	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			03/01/25 20:53	1
Chlorobromomethane	ND		1.0	0.29	ug/L			03/01/25 20:53	1
Chloroform	ND		1.0	0.26	ug/L			03/01/25 20:53	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			03/01/25 20:53	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			03/01/25 20:53	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			03/01/25 20:53	1
Benzene	ND		1.0	0.24	ug/L			03/01/25 20:53	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			03/01/25 20:53	1
Trichloroethene	ND		1.0	0.26	ug/L			03/01/25 20:53	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			03/01/25 20:53	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/01/25 20:53	1
Dibromomethane	ND		1.0	0.34	ug/L			03/01/25 20:53	1
Dichlorobromomethane	ND		1.0	0.29	ug/L			03/01/25 20:53	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			03/01/25 20:53	1
Toluene	ND		1.0	0.39	ug/L			03/01/25 20:53	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			03/01/25 20:53	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			03/01/25 20:53	1
Tetrachloroethene	ND		1.0	0.41	ug/L			03/01/25 20:53	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			03/01/25 20:53	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			03/01/25 20:53	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			03/01/25 20:53	1
Chlorobenzene	ND		1.0	0.44	ug/L			03/01/25 20:53	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			03/01/25 20:53	1
Ethylbenzene	ND		1.0	0.50	ug/L			03/01/25 20:53	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			03/01/25 20:53	1
o-Xylene	ND		1.0	0.39	ug/L			03/01/25 20:53	1
Styrene	ND		1.0	0.53	ug/L			03/01/25 20:53	1
Bromoform	ND		1.0	0.51	ug/L			03/01/25 20:53	1
Isopropylbenzene	ND		1.0	0.44	ug/L			03/01/25 20:53	1
Bromobenzene	ND		1.0	0.43	ug/L			03/01/25 20:53	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			03/01/25 20:53	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			03/01/25 20:53	1
N-Propylbenzene	ND		1.0	0.50	ug/L			03/01/25 20:53	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			03/01/25 20:53	1
4-Chlorotoluene	ND		1.0	0.38	ug/L			03/01/25 20:53	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			03/01/25 20:53	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			03/01/25 20:53	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			03/01/25 20:53	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			03/01/25 20:53	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			03/01/25 20:53	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			03/01/25 20:53	1
n-Butylbenzene	ND		1.0	0.44	ug/L			03/01/25 20:53	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			03/01/25 20:53	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			03/01/25 20:53	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			03/01/25 20:53	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			03/01/25 20:53	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

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

Lab Sample ID: MB 580-486244/7

Matrix: Water

Analysis Batch: 486244

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		3.0	0.93	ug/L			03/01/25 20:53	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			03/01/25 20:53	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			03/01/25 20:53	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 120					03/01/25 20:53	1
1,2-Dichloroethane-d4 (Surr)	104		80 - 120					03/01/25 20:53	1
4-Bromofluorobenzene (Surr)	101		80 - 120					03/01/25 20:53	1
Dibromofluoromethane (Surr)	101		80 - 120					03/01/25 20:53	1

Lab Sample ID: LCS 580-486244/4

Matrix: Water

Analysis Batch: 486244

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dichlorodifluoromethane	10.0	10.1		ug/L		101	20 - 150
Chloromethane	10.0	10.3		ug/L		103	25 - 150
Vinyl chloride	10.0	13.8		ug/L		138	31 - 150
Bromomethane	10.0	11.5		ug/L		115	36 - 150
Chloroethane	10.0	10.5		ug/L		105	38 - 150
Trichlorofluoromethane	10.0	10.8		ug/L		108	45 - 148
Carbon disulfide	10.0	10.9		ug/L		109	63 - 134
1,1-Dichloroethene	10.0	10.3		ug/L		103	70 - 129
Acetone	50.0	59.6		ug/L		119	44 - 150
Methylene Chloride	10.0	10.7		ug/L		107	77 - 125
Methyl tert-butyl ether	10.0	11.0		ug/L		110	72 - 120
trans-1,2-Dichloroethene	10.0	10.7		ug/L		107	75 - 120
1,1-Dichloroethane	10.0	10.9		ug/L		109	80 - 120
2-Butanone (MEK)	50.0	59.8		ug/L		120	65 - 137
2,2-Dichloropropane	10.0	16.3	*+	ug/L		163	66 - 126
cis-1,2-Dichloroethene	10.0	11.0		ug/L		110	76 - 120
Chlorobromomethane	10.0	10.5		ug/L		105	78 - 120
Chloroform	10.0	10.3		ug/L		103	78 - 127
1,1,1-Trichloroethane	10.0	10.4		ug/L		104	74 - 130
Carbon tetrachloride	10.0	10.5		ug/L		105	72 - 129
1,1-Dichloropropene	10.0	10.6		ug/L		106	74 - 120
Benzene	10.0	10.6		ug/L		106	80 - 122
1,2-Dichloroethane	10.0	11.0		ug/L		110	69 - 126
Trichloroethene	10.0	9.62		ug/L		96	80 - 125
1,2-Dichloropropane	10.0	11.1		ug/L		111	80 - 120
4-Methyl-2-pentanone (MIBK)	50.0	54.3		ug/L		109	59 - 141
Dibromomethane	10.0	10.4		ug/L		104	80 - 120
Dichlorobromomethane	10.0	10.5		ug/L		105	75 - 124
cis-1,3-Dichloropropene	10.0	11.0		ug/L		110	77 - 120
Toluene	10.0	10.3		ug/L		103	80 - 120
trans-1,3-Dichloropropene	10.0	12.2		ug/L		122	76 - 122
1,1,2-Trichloroethane	10.0	10.8		ug/L		108	80 - 121
Tetrachloroethene	10.0	9.91		ug/L		99	76 - 125

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

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

Lab Sample ID: LCS 580-486244/4

Matrix: Water

Analysis Batch: 486244

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,3-Dichloropropane	10.0	10.9		ug/L		109	79 - 120
Chlorodibromomethane	10.0	10.3		ug/L		103	73 - 125
Ethylene Dibromide	10.0	10.6		ug/L		106	79 - 126
Chlorobenzene	10.0	10.6		ug/L		106	80 - 120
1,1,1,2-Tetrachloroethane	10.0	10.6		ug/L		106	79 - 120
Ethylbenzene	10.0	10.6		ug/L		106	80 - 120
m-Xylene & p-Xylene	10.0	10.9		ug/L		109	80 - 120
o-Xylene	10.0	10.3		ug/L		103	80 - 120
Styrene	10.0	10.8		ug/L		108	76 - 122
Bromoform	10.0	10.8		ug/L		108	56 - 139
Isopropylbenzene	10.0	11.9		ug/L		119	80 - 123
Bromobenzene	10.0	10.3		ug/L		103	80 - 120
1,1,2,2-Tetrachloroethane	10.0	11.0		ug/L		110	74 - 124
1,2,3-Trichloropropane	10.0	10.4		ug/L		104	76 - 124
N-Propylbenzene	10.0	11.0		ug/L		110	80 - 122
2-Chlorotoluene	10.0	10.7		ug/L		107	80 - 120
4-Chlorotoluene	10.0	10.3		ug/L		103	73 - 129
tert-Butylbenzene	10.0	10.4		ug/L		104	75 - 123
1,2,4-Trimethylbenzene	10.0	10.5		ug/L		105	80 - 120
sec-Butylbenzene	10.0	10.3		ug/L		103	78 - 122
4-Isopropyltoluene	10.0	11.0		ug/L		110	77 - 126
1,3-Dichlorobenzene	10.0	11.0		ug/L		110	77 - 127
1,4-Dichlorobenzene	10.0	10.3		ug/L		103	80 - 120
n-Butylbenzene	10.0	11.1		ug/L		111	57 - 133
1,2-Dichlorobenzene	10.0	10.7		ug/L		107	80 - 120
1,2-Dibromo-3-Chloropropane	10.0	11.7		ug/L		117	65 - 133
1,2,4-Trichlorobenzene	10.0	12.5		ug/L		125	61 - 148
Hexachlorobutadiene	10.0	12.7		ug/L		127	74 - 131
Naphthalene	10.0	11.6		ug/L		116	63 - 150
1,2,3-Trichlorobenzene	10.0	13.3		ug/L		133	65 - 150
1,3,5-Trimethylbenzene	10.0	10.7		ug/L		107	80 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 120
1,2-Dichloroethane-d4 (Surr)	102		80 - 120
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120

Lab Sample ID: LCSD 580-486244/5

Matrix: Water

Analysis Batch: 486244

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dichlorodifluoromethane	10.0	9.49		ug/L		95	20 - 150	6	33
Chloromethane	10.0	8.45		ug/L		84	25 - 150	20	26
Vinyl chloride	10.0	11.3		ug/L		113	31 - 150	20	26
Bromomethane	10.0	10.8		ug/L		108	36 - 150	6	33
Chloroethane	10.0	10.5		ug/L		105	38 - 150	0	28

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

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

Lab Sample ID: LCSD 580-486244/5

Matrix: Water

Analysis Batch: 486244

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Trichlorofluoromethane	10.0	10.3		ug/L		103	45 - 148	4	35
Carbon disulfide	10.0	10.4		ug/L		104	63 - 134	5	24
1,1-Dichloroethene	10.0	9.73		ug/L		97	70 - 129	6	23
Acetone	50.0	65.4		ug/L		131	44 - 150	9	33
Methylene Chloride	10.0	10.3		ug/L		103	77 - 125	4	18
Methyl tert-butyl ether	10.0	10.7		ug/L		107	72 - 120	3	18
trans-1,2-Dichloroethene	10.0	10.1		ug/L		101	75 - 120	6	21
1,1-Dichloroethane	10.0	10.3		ug/L		103	80 - 120	6	15
2-Butanone (MEK)	50.0	59.1		ug/L		118	65 - 137	1	34
2,2-Dichloropropane	10.0	15.5	*+	ug/L		155	66 - 126	6	22
cis-1,2-Dichloroethene	10.0	10.3		ug/L		103	76 - 120	6	20
Chlorobromomethane	10.0	9.68		ug/L		97	78 - 120	8	13
Chloroform	10.0	9.96		ug/L		100	78 - 127	3	14
1,1,1-Trichloroethane	10.0	10.2		ug/L		102	74 - 130	3	19
Carbon tetrachloride	10.0	9.85		ug/L		98	72 - 129	6	19
1,1-Dichloropropene	10.0	9.99		ug/L		100	74 - 120	6	14
Benzene	10.0	10.2		ug/L		102	80 - 122	4	14
1,2-Dichloroethane	10.0	10.8		ug/L		108	69 - 126	3	11
Trichloroethene	10.0	9.17		ug/L		92	80 - 125	5	13
1,2-Dichloropropane	10.0	10.7		ug/L		107	80 - 120	4	14
4-Methyl-2-pentanone (MIBK)	50.0	51.6		ug/L		103	59 - 141	5	22
Dibromomethane	10.0	10.5		ug/L		105	80 - 120	1	11
Dichlorobromomethane	10.0	10.2		ug/L		102	75 - 124	3	13
cis-1,3-Dichloropropene	10.0	10.7		ug/L		107	77 - 120	3	35
Toluene	10.0	9.84		ug/L		98	80 - 120	5	13
trans-1,3-Dichloropropene	10.0	11.9		ug/L		119	76 - 122	3	20
1,1,2-Trichloroethane	10.0	10.2		ug/L		102	80 - 121	6	14
Tetrachloroethene	10.0	9.42		ug/L		94	76 - 125	5	13
1,3-Dichloropropane	10.0	10.4		ug/L		104	79 - 120	4	19
Chlorodibromomethane	10.0	9.92		ug/L		99	73 - 125	4	13
Ethylene Dibromide	10.0	10.3		ug/L		103	79 - 126	3	12
Chlorobenzene	10.0	9.96		ug/L		100	80 - 120	6	10
1,1,1,2-Tetrachloroethane	10.0	10.3		ug/L		103	79 - 120	3	16
Ethylbenzene	10.0	10.2		ug/L		102	80 - 120	4	14
m-Xylene & p-Xylene	10.0	10.6		ug/L		106	80 - 120	3	14
o-Xylene	10.0	9.81		ug/L		98	80 - 120	5	16
Styrene	10.0	10.4		ug/L		104	76 - 122	4	16
Bromoform	10.0	10.2		ug/L		102	56 - 139	5	21
Isopropylbenzene	10.0	11.5		ug/L		115	80 - 123	3	19
Bromobenzene	10.0	9.73		ug/L		97	80 - 120	5	24
1,1,2,2-Tetrachloroethane	10.0	11.0		ug/L		110	74 - 124	1	25
1,2,3-Trichloropropane	10.0	9.99		ug/L		100	76 - 124	4	26
N-Propylbenzene	10.0	10.4		ug/L		104	80 - 122	5	22
2-Chlorotoluene	10.0	10.6		ug/L		106	80 - 120	1	20
4-Chlorotoluene	10.0	10.0		ug/L		100	73 - 129	2	29
tert-Butylbenzene	10.0	9.92		ug/L		99	75 - 123	5	21
1,2,4-Trimethylbenzene	10.0	9.93		ug/L		99	80 - 120	6	16
sec-Butylbenzene	10.0	9.76		ug/L		98	78 - 122	6	15
4-Isopropyltoluene	10.0	10.4		ug/L		104	77 - 126	6	20

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

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

Lab Sample ID: LCSD 580-486244/5

Matrix: Water

Analysis Batch: 486244

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,3-Dichlorobenzene	10.0	10.3		ug/L		103	77 - 127	7	35
1,4-Dichlorobenzene	10.0	9.78		ug/L		98	80 - 120	5	17
n-Butylbenzene	10.0	10.4		ug/L		104	57 - 133	6	14
1,2-Dichlorobenzene	10.0	10.6		ug/L		106	80 - 120	2	15
1,2-Dibromo-3-Chloropropane	10.0	10.9		ug/L		109	65 - 133	7	25
1,2,4-Trichlorobenzene	10.0	11.9		ug/L		119	61 - 148	5	27
Hexachlorobutadiene	10.0	12.0		ug/L		120	74 - 131	6	22
Naphthalene	10.0	10.9		ug/L		109	63 - 150	7	33
1,2,3-Trichlorobenzene	10.0	12.6		ug/L		126	65 - 150	5	33
1,3,5-Trimethylbenzene	10.0	9.99		ug/L		100	80 - 122	7	21

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 120
1,2-Dichloroethane-d4 (Surr)	102		80 - 120
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	99		80 - 120

Lab Sample ID: MB 580-486309/11

Matrix: Water

Analysis Batch: 486309

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			03/03/25 18:04	1
Chloromethane	ND		0.50	0.14	ug/L			03/03/25 18:04	1
Vinyl chloride	ND		0.10	0.040	ug/L			03/03/25 18:04	1
Bromomethane	ND		0.50	0.13	ug/L			03/03/25 18:04	1
Chloroethane	ND		0.50	0.24	ug/L			03/03/25 18:04	1
Carbon disulfide	ND		0.40	0.20	ug/L			03/03/25 18:04	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			03/03/25 18:04	1
1,1-Dichloroethene	0.0387	J	0.20	0.035	ug/L			03/03/25 18:04	1
Acetone	ND		10	3.1	ug/L			03/03/25 18:04	1
Methylene Chloride	ND		5.0	1.2	ug/L			03/03/25 18:04	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			03/03/25 18:04	1
2-Butanone (MEK)	ND		10	2.5	ug/L			03/03/25 18:04	1
trans-1,2-Dichloroethene	0.0417	J	0.20	0.033	ug/L			03/03/25 18:04	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			03/03/25 18:04	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			03/03/25 18:04	1
cis-1,2-Dichloroethene	0.0609	J	0.20	0.055	ug/L			03/03/25 18:04	1
Chlorobromomethane	ND		0.20	0.050	ug/L			03/03/25 18:04	1
Chloroform	0.0596	J	0.20	0.030	ug/L			03/03/25 18:04	1
1,1,1-Trichloroethane	0.0423	J	0.20	0.025	ug/L			03/03/25 18:04	1
Carbon tetrachloride	0.0252	J	0.20	0.025	ug/L			03/03/25 18:04	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			03/03/25 18:04	1
Benzene	ND		0.20	0.030	ug/L			03/03/25 18:04	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			03/03/25 18:04	1
Trichloroethene	ND		0.20	0.066	ug/L			03/03/25 18:04	1
1,2-Dichloropropane	0.115	J	0.20	0.060	ug/L			03/03/25 18:04	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			03/03/25 18:04	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

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

Lab Sample ID: MB 580-486309/11

Matrix: Water

Analysis Batch: 486309

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	ND		0.20	0.062	ug/L			03/03/25 18:04	1
Dichlorobromomethane	0.0696	J	0.20	0.060	ug/L			03/03/25 18:04	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			03/03/25 18:04	1
Toluene	ND		0.20	0.050	ug/L			03/03/25 18:04	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			03/03/25 18:04	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			03/03/25 18:04	1
Tetrachloroethene	0.156	J	0.50	0.084	ug/L			03/03/25 18:04	1
1,3-Dichloropropane	0.0642	J	0.20	0.056	ug/L			03/03/25 18:04	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			03/03/25 18:04	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			03/03/25 18:04	1
Chlorobenzene	ND		0.20	0.060	ug/L			03/03/25 18:04	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			03/03/25 18:04	1
Ethylbenzene	ND		0.20	0.082	ug/L			03/03/25 18:04	1
m-Xylene & p-Xylene	0.164	J	0.50	0.12	ug/L			03/03/25 18:04	1
o-Xylene	ND		0.50	0.23	ug/L			03/03/25 18:04	1
Styrene	ND		1.0	0.33	ug/L			03/03/25 18:04	1
Bromoform	ND		0.50	0.16	ug/L			03/03/25 18:04	1
Isopropylbenzene	ND		1.0	0.27	ug/L			03/03/25 18:04	1
Bromobenzene	ND		0.20	0.038	ug/L			03/03/25 18:04	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			03/03/25 18:04	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			03/03/25 18:04	1
N-Propylbenzene	0.101	J	0.30	0.091	ug/L			03/03/25 18:04	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			03/03/25 18:04	1
4-Chlorotoluene	ND		0.30	0.12	ug/L			03/03/25 18:04	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			03/03/25 18:04	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			03/03/25 18:04	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			03/03/25 18:04	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			03/03/25 18:04	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			03/03/25 18:04	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			03/03/25 18:04	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			03/03/25 18:04	1
n-Butylbenzene	ND		1.0	0.35	ug/L			03/03/25 18:04	1
1,2-Dichlorobenzene	0.0821	J	0.30	0.038	ug/L			03/03/25 18:04	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			03/03/25 18:04	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			03/03/25 18:04	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			03/03/25 18:04	1
Naphthalene	ND		1.5	0.52	ug/L			03/03/25 18:04	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			03/03/25 18:04	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 120					03/03/25 18:04	1
Dibromofluoromethane (Surr)	106		80 - 120					03/03/25 18:04	1
4-Bromofluorobenzene (Surr)	106		80 - 120					03/03/25 18:04	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 120					03/03/25 18:04	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

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

Lab Sample ID: LCS 580-486309/6

Matrix: Water

Analysis Batch: 486309

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dichlorodifluoromethane	5.00	5.32		ug/L		106	20 - 150
Chloromethane	5.00	5.50		ug/L		110	32 - 150
Vinyl chloride	5.00	6.24		ug/L		125	41 - 150
Bromomethane	5.00	4.81		ug/L		96	51 - 148
Chloroethane	5.00	6.22		ug/L		124	54 - 140
Carbon disulfide	5.00	4.80		ug/L		96	54 - 142
Trichlorofluoromethane	5.00	6.17		ug/L		123	60 - 132
1,1-Dichloroethene	5.00	4.97		ug/L		99	60 - 129
Acetone	25.0	28.4		ug/L		113	49 - 150
Methylene Chloride	5.00	4.65	J	ug/L		93	40 - 142
Methyl tert-butyl ether	5.00	5.16		ug/L		103	61 - 131
2-Butanone (MEK)	25.0	27.0		ug/L		108	37 - 150
trans-1,2-Dichloroethene	5.00	5.14		ug/L		103	69 - 121
1,1-Dichloroethane	5.00	5.42		ug/L		108	74 - 120
2,2-Dichloropropane	5.00	5.15		ug/L		103	55 - 140
cis-1,2-Dichloroethene	5.00	5.35		ug/L		107	72 - 120
Chlorobromomethane	5.00	5.78		ug/L		116	79 - 121
Chloroform	5.00	5.40		ug/L		108	75 - 120
1,1,1-Trichloroethane	5.00	5.24		ug/L		105	70 - 121
Carbon tetrachloride	5.00	4.90		ug/L		98	66 - 130
1,1-Dichloropropene	5.00	4.67		ug/L		93	72 - 125
Benzene	5.00	5.11		ug/L		102	80 - 120
1,2-Dichloroethane	5.00	5.62		ug/L		112	74 - 127
Trichloroethene	5.00	4.90		ug/L		98	72 - 120
1,2-Dichloropropane	5.00	4.93		ug/L		99	69 - 130
4-Methyl-2-pentanone (MIBK)	25.0	26.0		ug/L		104	63 - 137
Dibromomethane	5.00	5.70		ug/L		114	65 - 141
Dichlorobromomethane	5.00	5.22		ug/L		104	74 - 131
cis-1,3-Dichloropropene	5.00	4.19		ug/L		84	77 - 131
Toluene	5.00	4.96		ug/L		99	80 - 126
trans-1,3-Dichloropropene	5.00	4.61		ug/L		92	71 - 138
1,1,2-Trichloroethane	5.00	4.83		ug/L		97	73 - 127
Tetrachloroethene	5.00	4.76		ug/L		95	75 - 124
1,3-Dichloropropane	5.00	4.68		ug/L		94	69 - 138
Chlorodibromomethane	5.00	4.65		ug/L		93	62 - 141
Ethylene Dibromide	5.00	5.49		ug/L		110	61 - 143
Chlorobenzene	5.00	5.19		ug/L		104	74 - 123
1,1,1,2-Tetrachloroethane	5.00	4.49		ug/L		90	69 - 127
Ethylbenzene	5.00	5.11		ug/L		102	80 - 124
m-Xylene & p-Xylene	5.00	4.99		ug/L		100	75 - 124
o-Xylene	5.00	5.24		ug/L		105	71 - 124
Styrene	5.00	5.25		ug/L		105	74 - 127
Bromoform	5.00	4.92		ug/L		98	48 - 127
Isopropylbenzene	5.00	5.52		ug/L		110	71 - 123
Bromobenzene	5.00	5.17		ug/L		103	74 - 130
1,1,2,2-Tetrachloroethane	5.00	5.45		ug/L		109	67 - 136
1,2,3-Trichloropropane	5.00	5.15		ug/L		103	67 - 135
N-Propylbenzene	5.00	5.04		ug/L		101	72 - 126

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

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

Lab Sample ID: LCS 580-486309/6

Matrix: Water

Analysis Batch: 486309

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Chlorotoluene	5.00	4.86		ug/L		97	73 - 120
4-Chlorotoluene	5.00	5.33		ug/L		107	75 - 124
1,3,5-Trimethylbenzene	5.00	4.50		ug/L		90	75 - 123
tert-Butylbenzene	5.00	5.16		ug/L		103	70 - 129
1,2,4-Trimethylbenzene	5.00	4.45		ug/L		89	71 - 127
sec-Butylbenzene	5.00	5.16		ug/L		103	75 - 126
4-Isopropyltoluene	5.00	4.77		ug/L		95	78 - 125
1,3-Dichlorobenzene	5.00	5.43		ug/L		109	72 - 125
1,4-Dichlorobenzene	5.00	5.47		ug/L		109	71 - 129
n-Butylbenzene	5.00	4.87		ug/L		97	69 - 127
1,2-Dichlorobenzene	5.00	5.35		ug/L		107	72 - 129
1,2-Dibromo-3-Chloropropane	5.00	5.52		ug/L		110	55 - 135
1,2,4-Trichlorobenzene	5.00	5.70		ug/L		114	60 - 130
Hexachlorobutadiene	5.00	5.44		ug/L		109	63 - 130
Naphthalene	5.00	6.13		ug/L		123	54 - 137
1,2,3-Trichlorobenzene	5.00	5.80		ug/L		116	60 - 136

LCS LCS			
Surrogate	%Recovery	Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	109		80 - 120
4-Bromofluorobenzene (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	107		80 - 120

Lab Sample ID: LCSD 580-486309/7

Matrix: Water

Analysis Batch: 486309

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dichlorodifluoromethane	5.00	4.63		ug/L		93	20 - 150	14	30
Chloromethane	5.00	3.94		ug/L		79	32 - 150	33	33
Vinyl chloride	5.00	4.29	*1	ug/L		86	41 - 150	37	32
Bromomethane	5.00	4.15		ug/L		83	51 - 148	15	35
Chloroethane	5.00	5.39		ug/L		108	54 - 140	14	33
Carbon disulfide	5.00	4.17		ug/L		83	54 - 142	14	34
Trichlorofluoromethane	5.00	5.26		ug/L		105	60 - 132	16	32
1,1-Dichloroethene	5.00	4.34		ug/L		87	60 - 129	14	29
Acetone	25.0	24.5		ug/L		98	49 - 150	15	24
Methylene Chloride	5.00	4.06	J	ug/L		81	40 - 142	14	25
Methyl tert-butyl ether	5.00	4.97		ug/L		99	61 - 131	4	27
2-Butanone (MEK)	25.0	26.4		ug/L		106	37 - 150	2	35
trans-1,2-Dichloroethene	5.00	4.62		ug/L		92	69 - 121	11	27
1,1-Dichloroethane	5.00	4.91		ug/L		98	74 - 120	10	26
2,2-Dichloropropane	5.00	4.76		ug/L		95	55 - 140	8	31
cis-1,2-Dichloroethene	5.00	5.14		ug/L		103	72 - 120	4	22
Chlorobromomethane	5.00	5.42		ug/L		108	79 - 121	6	20
Chloroform	5.00	5.05		ug/L		101	75 - 120	7	21
1,1,1-Trichloroethane	5.00	5.05		ug/L		101	70 - 121	4	24
Carbon tetrachloride	5.00	4.71		ug/L		94	66 - 130	4	24

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

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

Lab Sample ID: LCSD 580-486309/7

Matrix: Water

Analysis Batch: 486309

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1-Dichloropropene	5.00	4.70		ug/L		94	72 - 125	1	23
Benzene	5.00	5.11		ug/L		102	80 - 120	0	22
1,2-Dichloroethane	5.00	5.34		ug/L		107	74 - 127	5	21
Trichloroethene	5.00	5.04		ug/L		101	72 - 120	3	22
1,2-Dichloropropane	5.00	4.85		ug/L		97	69 - 130	2	22
4-Methyl-2-pentanone (MIBK)	25.0	26.2		ug/L		105	63 - 137	1	26
Dibromomethane	5.00	5.58		ug/L		112	65 - 141	2	22
Dichlorobromomethane	5.00	5.11		ug/L		102	74 - 131	2	21
cis-1,3-Dichloropropene	5.00	4.45		ug/L		89	77 - 131	6	24
Toluene	5.00	5.03		ug/L		101	80 - 126	1	20
trans-1,3-Dichloropropene	5.00	4.81		ug/L		96	71 - 138	4	26
1,1,2-Trichloroethane	5.00	5.24		ug/L		105	73 - 127	8	22
Tetrachloroethene	5.00	4.90		ug/L		98	75 - 124	3	20
1,3-Dichloropropane	5.00	5.05		ug/L		101	69 - 138	8	19
Chlorodibromomethane	5.00	4.98		ug/L		100	62 - 141	7	22
Ethylene Dibromide	5.00	5.59		ug/L		112	61 - 143	2	22
Chlorobenzene	5.00	5.21		ug/L		104	74 - 123	0	21
1,1,1,2-Tetrachloroethane	5.00	4.73		ug/L		95	69 - 127	5	22
Ethylbenzene	5.00	5.04		ug/L		101	80 - 124	1	22
m-Xylene & p-Xylene	5.00	4.98		ug/L		100	75 - 124	0	22
o-Xylene	5.00	5.13		ug/L		103	71 - 124	2	23
Styrene	5.00	5.05		ug/L		101	74 - 127	4	22
Bromoform	5.00	5.12		ug/L		102	48 - 127	4	23
Isopropylbenzene	5.00	5.49		ug/L		110	71 - 123	1	23
Bromobenzene	5.00	5.33		ug/L		107	74 - 130	3	23
1,1,2,2-Tetrachloroethane	5.00	5.54		ug/L		111	67 - 136	2	24
1,2,3-Trichloropropane	5.00	5.12		ug/L		102	67 - 135	1	25
N-Propylbenzene	5.00	4.91		ug/L		98	72 - 126	3	20
2-Chlorotoluene	5.00	4.81		ug/L		96	73 - 120	1	22
4-Chlorotoluene	5.00	5.30		ug/L		106	75 - 124	0	23
1,3,5-Trimethylbenzene	5.00	4.51		ug/L		90	75 - 123	0	23
tert-Butylbenzene	5.00	5.03		ug/L		101	70 - 129	3	24
1,2,4-Trimethylbenzene	5.00	4.64		ug/L		93	71 - 127	4	23
sec-Butylbenzene	5.00	5.12		ug/L		102	75 - 126	1	23
4-Isopropyltoluene	5.00	4.81		ug/L		96	78 - 125	1	24
1,3-Dichlorobenzene	5.00	5.48		ug/L		110	72 - 125	1	22
1,4-Dichlorobenzene	5.00	5.52		ug/L		110	71 - 129	1	22
n-Butylbenzene	5.00	5.05		ug/L		101	69 - 127	4	24
1,2-Dichlorobenzene	5.00	5.35		ug/L		107	72 - 129	0	22
1,2-Dibromo-3-Chloropropane	5.00	5.76		ug/L		115	55 - 135	4	29
1,2,4-Trichlorobenzene	5.00	5.56		ug/L		111	60 - 130	2	26
Hexachlorobutadiene	5.00	5.31		ug/L		106	63 - 130	2	26
Naphthalene	5.00	6.02		ug/L		120	54 - 137	2	28
1,2,3-Trichlorobenzene	5.00	5.70		ug/L		114	60 - 136	2	28

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	103		80 - 120

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

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

Lab Sample ID: LCSD 580-486309/7

Matrix: Water

Analysis Batch: 486309

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	100		80 - 120

Lab Sample ID: 580-148262-8 MS

Matrix: Water

Analysis Batch: 486309

Client Sample ID: PA-04-022125

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Dichlorodifluoromethane	ND		5.00	4.96		ug/L		99	20 - 150
Chloromethane	ND		5.00	3.63		ug/L		73	32 - 150
Vinyl chloride	ND	*1	5.00	4.11		ug/L		82	41 - 150
Bromomethane	ND		5.00	5.08		ug/L		102	51 - 148
Chloroethane	ND		5.00	5.26		ug/L		105	54 - 140
Carbon disulfide	ND		5.00	4.60		ug/L		92	54 - 142
Trichlorofluoromethane	ND		5.00	5.69		ug/L		114	60 - 132
1,1-Dichloroethene	0.23	B	5.00	4.77		ug/L		91	60 - 129
Acetone	ND		25.0	22.3		ug/L		89	49 - 150
Methylene Chloride	ND		5.00	3.86	J	ug/L		77	40 - 142
Methyl tert-butyl ether	ND		5.00	4.79		ug/L		96	61 - 131
2-Butanone (MEK)	ND		25.0	24.1		ug/L		96	37 - 150
trans-1,2-Dichloroethene	0.054	J B	5.00	4.92		ug/L		97	69 - 121
1,1-Dichloroethane	0.24		5.00	5.11		ug/L		97	74 - 120
2,2-Dichloropropane	ND		5.00	4.94		ug/L		99	55 - 140
cis-1,2-Dichloroethene	0.076	J B	5.00	5.27		ug/L		104	72 - 120
Chlorobromomethane	ND		5.00	5.61		ug/L		112	79 - 121
Chloroform	0.14	J B	5.00	5.38		ug/L		105	75 - 120
1,1,1-Trichloroethane	ND		5.00	5.65		ug/L		113	70 - 121
Carbon tetrachloride	0.031	J B	5.00	5.58		ug/L		111	66 - 130
1,1-Dichloropropene	ND		5.00	5.14		ug/L		103	72 - 125
Benzene	ND		5.00	5.51		ug/L		110	80 - 120
1,2-Dichloroethane	ND		5.00	5.45		ug/L		109	74 - 127
Trichloroethene	ND		5.00	5.45		ug/L		109	72 - 120
1,2-Dichloropropane	ND		5.00	5.17		ug/L		103	69 - 130
4-Methyl-2-pentanone (MIBK)	ND		25.0	23.8		ug/L		95	63 - 137
Dibromomethane	ND		5.00	5.47		ug/L		109	65 - 141
Dichlorobromomethane	0.071	J B	5.00	5.29		ug/L		104	74 - 131
cis-1,3-Dichloropropene	ND		5.00	4.57		ug/L		91	77 - 131
Toluene	ND		5.00	5.24		ug/L		105	80 - 126
trans-1,3-Dichloropropene	ND		5.00	4.88		ug/L		98	71 - 138
1,1,2-Trichloroethane	0.074	J	5.00	5.06		ug/L		100	73 - 127
Tetrachloroethene	0.26	J B	5.00	5.58		ug/L		106	75 - 124
1,3-Dichloropropane	0.072	J B	5.00	5.08		ug/L		100	69 - 138
Chlorodibromomethane	ND		5.00	4.81		ug/L		96	62 - 141
Ethylene Dibromide	ND		5.00	5.70		ug/L		114	61 - 143
Chlorobenzene	ND		5.00	5.25		ug/L		105	74 - 123
1,1,1,2-Tetrachloroethane	ND		5.00	4.80		ug/L		96	69 - 127
Ethylbenzene	ND		5.00	5.25		ug/L		105	80 - 124
m-Xylene & p-Xylene	0.15	J B	5.00	5.06		ug/L		98	75 - 124

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

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

Lab Sample ID: 580-148262-8 MS

Matrix: Water

Analysis Batch: 486309

Client Sample ID: PA-04-022125

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
o-Xylene	ND		5.00	5.16		ug/L		103	71 - 124
Styrene	ND		5.00	4.95		ug/L		99	74 - 127
Bromoform	ND		5.00	4.73		ug/L		95	48 - 127
Isopropylbenzene	ND		5.00	5.74		ug/L		115	71 - 123
Bromobenzene	ND		5.00	4.98		ug/L		100	74 - 130
1,1,2,2-Tetrachloroethane	ND		5.00	4.95		ug/L		99	67 - 136
1,2,3-Trichloropropane	ND		5.00	4.91		ug/L		98	67 - 135
N-Propylbenzene	0.094	J B	5.00	5.08		ug/L		100	72 - 126
2-Chlorotoluene	ND		5.00	4.89		ug/L		98	73 - 120
4-Chlorotoluene	ND		5.00	5.18		ug/L		104	75 - 124
1,3,5-Trimethylbenzene	ND		5.00	4.54		ug/L		91	75 - 123
tert-Butylbenzene	ND		5.00	5.27		ug/L		105	70 - 129
1,2,4-Trimethylbenzene	ND		5.00	4.62		ug/L		92	71 - 127
sec-Butylbenzene	ND		5.00	5.24		ug/L		105	75 - 126
4-Isopropyltoluene	ND		5.00	4.88		ug/L		98	78 - 125
1,3-Dichlorobenzene	ND		5.00	5.15		ug/L		103	72 - 125
1,4-Dichlorobenzene	ND		5.00	5.32		ug/L		106	71 - 129
n-Butylbenzene	ND		5.00	4.98		ug/L		100	69 - 127
1,2-Dichlorobenzene	0.098	J B	5.00	4.90		ug/L		96	72 - 129
1,2-Dibromo-3-Chloropropane	ND		5.00	4.68		ug/L		94	55 - 135
1,2,4-Trichlorobenzene	ND		5.00	4.94		ug/L		99	60 - 130
Hexachlorobutadiene	ND		5.00	4.72		ug/L		94	63 - 130
Naphthalene	ND		5.00	4.88		ug/L		98	54 - 137
1,2,3-Trichlorobenzene	ND		5.00	4.93		ug/L		99	60 - 136

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	104		80 - 120
4-Bromofluorobenzene (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	104		80 - 120

Lab Sample ID: 580-148262-8 MSD

Matrix: Water

Analysis Batch: 486309

Client Sample ID: PA-04-022125

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dichlorodifluoromethane	ND		5.00	4.60		ug/L		92	20 - 150	8	30
Chloromethane	ND		5.00	3.42		ug/L		68	32 - 150	6	33
Vinyl chloride	ND	*1	5.00	3.88		ug/L		78	41 - 150	6	32
Bromomethane	ND		5.00	4.74		ug/L		95	51 - 148	7	35
Chloroethane	ND		5.00	4.95		ug/L		99	54 - 140	6	33
Carbon disulfide	ND		5.00	4.72		ug/L		94	54 - 142	3	34
Trichlorofluoromethane	ND		5.00	5.59		ug/L		112	60 - 132	2	32
1,1-Dichloroethene	0.23	B	5.00	4.96		ug/L		94	60 - 129	4	29
Acetone	ND		25.0	25.2		ug/L		101	49 - 150	12	24
Methylene Chloride	ND		5.00	4.07	J	ug/L		81	40 - 142	5	25
Methyl tert-butyl ether	ND		5.00	5.13		ug/L		103	61 - 131	7	27
2-Butanone (MEK)	ND		25.0	24.6		ug/L		98	37 - 150	2	35

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QC Sample Results

Client: ERM-West

Job ID: 580-148262-1

Project/Site: Arkema - Q1 2025 Groundwater Event

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

Lab Sample ID: 580-148262-8 MSD

Client Sample ID: PA-04-022125

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 486309

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
trans-1,2-Dichloroethene	0.054	J B	5.00	5.08		ug/L		101	69 - 121	3	27
1,1-Dichloroethane	0.24		5.00	5.44		ug/L		104	74 - 120	6	26
2,2-Dichloropropane	ND		5.00	4.77		ug/L		95	55 - 140	4	31
cis-1,2-Dichloroethene	0.076	J B	5.00	5.27		ug/L		104	72 - 120	0	22
Chlorobromomethane	ND		5.00	5.48		ug/L		110	79 - 121	2	20
Chloroform	0.14	J B	5.00	5.34		ug/L		104	75 - 120	1	21
1,1,1-Trichloroethane	ND		5.00	5.62		ug/L		112	70 - 121	0	24
Carbon tetrachloride	0.031	J B	5.00	5.51		ug/L		110	66 - 130	1	24
1,1-Dichloropropene	ND		5.00	5.20		ug/L		104	72 - 125	1	23
Benzene	ND		5.00	5.45		ug/L		109	80 - 120	1	22
1,2-Dichloroethane	ND		5.00	5.38		ug/L		108	74 - 127	1	21
Trichloroethene	ND		5.00	5.28		ug/L		106	72 - 120	3	22
1,2-Dichloropropane	ND		5.00	4.98		ug/L		100	69 - 130	4	22
4-Methyl-2-pentanone (MIBK)	ND		25.0	23.8		ug/L		95	63 - 137	0	26
Dibromomethane	ND		5.00	5.59		ug/L		112	65 - 141	2	22
Dichlorobromomethane	0.071	J B	5.00	5.23		ug/L		103	74 - 131	1	21
cis-1,3-Dichloropropene	ND		5.00	4.55		ug/L		91	77 - 131	0	24
Toluene	ND		5.00	5.20		ug/L		104	80 - 126	1	20
trans-1,3-Dichloropropene	ND		5.00	4.87		ug/L		97	71 - 138	0	26
1,1,2-Trichloroethane	0.074	J	5.00	5.05		ug/L		100	73 - 127	0	22
Tetrachloroethene	0.26	J B	5.00	5.39		ug/L		103	75 - 124	3	20
1,3-Dichloropropane	0.072	J B	5.00	5.07		ug/L		100	69 - 138	0	19
Chlorodibromomethane	ND		5.00	4.90		ug/L		98	62 - 141	2	22
Ethylene Dibromide	ND		5.00	5.65		ug/L		113	61 - 143	1	22
Chlorobenzene	ND		5.00	5.20		ug/L		104	74 - 123	1	21
1,1,1,2-Tetrachloroethane	ND		5.00	4.68		ug/L		94	69 - 127	3	22
Ethylbenzene	ND		5.00	5.36		ug/L		107	80 - 124	2	22
m-Xylene & p-Xylene	0.15	J B	5.00	5.13		ug/L		100	75 - 124	1	22
o-Xylene	ND		5.00	5.32		ug/L		106	71 - 124	3	23
Styrene	ND		5.00	5.14		ug/L		103	74 - 127	4	22
Bromoform	ND		5.00	4.91		ug/L		98	48 - 127	4	23
Isopropylbenzene	ND		5.00	6.01		ug/L		120	71 - 123	5	23
Bromobenzene	ND		5.00	5.26		ug/L		105	74 - 130	5	23
1,1,2,2-Tetrachloroethane	ND		5.00	4.76		ug/L		95	67 - 136	4	24
1,2,3-Trichloropropane	ND		5.00	4.79		ug/L		96	67 - 135	2	25
N-Propylbenzene	0.094	J B	5.00	5.19		ug/L		102	72 - 126	2	20
2-Chlorotoluene	ND		5.00	4.90		ug/L		98	73 - 120	0	22
4-Chlorotoluene	ND		5.00	5.20		ug/L		104	75 - 124	0	23
1,3,5-Trimethylbenzene	ND		5.00	4.56		ug/L		91	75 - 123	0	23
tert-Butylbenzene	ND		5.00	5.30		ug/L		106	70 - 129	1	24
1,2,4-Trimethylbenzene	ND		5.00	4.56		ug/L		91	71 - 127	1	23
sec-Butylbenzene	ND		5.00	5.31		ug/L		106	75 - 126	1	23
4-Isopropyltoluene	ND		5.00	4.77		ug/L		95	78 - 125	2	24
1,3-Dichlorobenzene	ND		5.00	5.21		ug/L		104	72 - 125	1	22
1,4-Dichlorobenzene	ND		5.00	5.22		ug/L		104	71 - 129	2	22
n-Butylbenzene	ND		5.00	5.06		ug/L		101	69 - 127	2	24
1,2-Dichlorobenzene	0.098	J B	5.00	4.90		ug/L		96	72 - 129	0	22
1,2-Dibromo-3-Chloropropane	ND		5.00	4.50		ug/L		90	55 - 135	4	29
1,2,4-Trichlorobenzene	ND		5.00	5.11		ug/L		102	60 - 130	3	26

Eurofins Seattle

QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

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

Lab Sample ID: 580-148262-8 MSD

Matrix: Water

Analysis Batch: 486309

Client Sample ID: PA-04-022125

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexachlorobutadiene	ND		5.00	5.11		ug/L		102	63 - 130	8	26
Naphthalene	ND		5.00	5.00		ug/L		100	54 - 137	2	28
1,2,3-Trichlorobenzene	ND		5.00	5.15		ug/L		103	60 - 136	4	28
Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits								
Toluene-d8 (Surr)	99		80 - 120								
Dibromofluoromethane (Surr)	102		80 - 120								
4-Bromofluorobenzene (Surr)	104		80 - 120								
1,2-Dichloroethane-d4 (Surr)	102		80 - 120								

Method: 314.0 - Perchlorate (IC)

Lab Sample ID: MB 570-540307/8

Matrix: Water

Analysis Batch: 540307

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		2.0	0.91	ug/L			03/03/25 13:40	1

Lab Sample ID: LCS 570-540307/9

Matrix: Water

Analysis Batch: 540307

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	25.0	25.4		ug/L		101	85 - 115

Lab Sample ID: LCSD 570-540307/10

Matrix: Water

Analysis Batch: 540307

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perchlorate	25.0	25.4		ug/L		102	85 - 115	0	15

Lab Sample ID: 580-148262-8 MS

Matrix: Water

Analysis Batch: 540307

Client Sample ID: PA-04-022125

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	ND	F1	250	303	F1	ug/L		121	80 - 120

Lab Sample ID: 580-148262-8 MSD

Matrix: Water

Analysis Batch: 540307

Client Sample ID: PA-04-022125

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perchlorate	ND	F1	250	303	F1	ug/L		121	80 - 120	0	15

Eurofins Seattle

QC Sample Results

Client: ERM-West

Job ID: 580-148262-1

Project/Site: Arkema - Q1 2025 Groundwater Event

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-486914/21

Matrix: Water

Analysis Batch: 486914

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		1.5	0.43	mg/L			03/08/25 01:19	1

Lab Sample ID: LCS 580-486914/22

Matrix: Water

Analysis Batch: 486914

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	53.3		mg/L		107	90 - 110

Lab Sample ID: LCSD 580-486914/23

Matrix: Water

Analysis Batch: 486914

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	50.0	53.2		mg/L		106	90 - 110	0	15

Lab Sample ID: 580-148262-8 MS

Matrix: Water

Analysis Batch: 486914

Client Sample ID: PA-04-022125

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	4.0		50.0	57.9		mg/L		108	90 - 110

Lab Sample ID: 580-148262-8 MSD

Matrix: Water

Analysis Batch: 486914

Client Sample ID: PA-04-022125

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	4.0		50.0	56.1		mg/L		104	90 - 110	3	15

Lab Chronicle

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

Client Sample ID: TB-01-022125

Lab Sample ID: 580-148262-1

Date Collected: 02/21/25 06:00

Matrix: Water

Date Received: 02/24/25 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	485951	AA	EET SEA	02/27/25 02:01

Client Sample ID: PA-16i-022125

Lab Sample ID: 580-148262-2

Date Collected: 02/21/25 08:47

Matrix: Water

Date Received: 02/24/25 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	485951	AA	EET SEA	02/27/25 07:04
Total/NA	Analysis	314.0		40	540307	M5Z3	EET CAL 4	03/03/25 14:42
Total/NA	Analysis	300.0		1	486914	MLT	EET SEA	03/08/25 03:54

Client Sample ID: PA-26d-022125

Lab Sample ID: 580-148262-3

Date Collected: 02/21/25 10:18

Matrix: Water

Date Received: 02/24/25 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	485951	AA	EET SEA	02/27/25 07:27
Total/NA	Analysis	314.0		1	540307	M5Z3	EET CAL 4	03/03/25 15:03
Total/NA	Analysis	300.0		1	486914	MLT	EET SEA	03/08/25 04:41

Client Sample ID: MWA-63-022125

Lab Sample ID: 580-148262-4

Date Collected: 02/21/25 11:40

Matrix: Water

Date Received: 02/24/25 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		10	485951	AA	EET SEA	02/27/25 08:36
Total/NA	Analysis	314.0		2	540307	M5Z3	EET CAL 4	03/03/25 15:24
Total/NA	Analysis	300.0		1	486914	MLT	EET SEA	03/08/25 05:05

Client Sample ID: Dup-02-022125

Lab Sample ID: 580-148262-5

Date Collected: 02/21/25 12:00

Matrix: Water

Date Received: 02/24/25 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	486244	TL1	EET SEA	03/02/25 02:57

Client Sample ID: MWA-11i(d)-022125

Lab Sample ID: 580-148262-6

Date Collected: 02/21/25 13:23

Matrix: Water

Date Received: 02/24/25 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	486309	K1K	EET SEA	03/03/25 22:41
Total/NA	Analysis	314.0		1	540307	M5Z3	EET CAL 4	03/03/25 15:45
Total/NA	Analysis	300.0		100	486914	MLT	EET SEA	03/08/25 05:53

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Lab Chronicle

Client: ERM-West
Project/Site: Arkema - Q1 2025 Groundwater Event

Job ID: 580-148262-1

Client Sample ID: PA-27d-022125

Lab Sample ID: 580-148262-7

Date Collected: 02/21/25 10:23

Matrix: Water

Date Received: 02/24/25 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	486244	TL1	EET SEA	03/02/25 03:21
Total/NA	Analysis	314.0		40	540307	M5Z3	EET CAL 4	03/03/25 16:05
Total/NA	Analysis	300.0		20	486914	MLT	EET SEA	03/08/25 06:05

Client Sample ID: PA-04-022125

Lab Sample ID: 580-148262-8

Date Collected: 02/21/25 11:34

Matrix: Water

Date Received: 02/24/25 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	486309	K1K	EET SEA	03/03/25 23:05
Total/NA	Analysis	314.0		10	540307	M5Z3	EET CAL 4	03/03/25 16:26
Total/NA	Analysis	300.0		1	486914	MLT	EET SEA	03/08/25 06:17

Client Sample ID: PA-10i-022125

Lab Sample ID: 580-148262-9

Date Collected: 02/21/25 12:56

Matrix: Water

Date Received: 02/24/25 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	486309	K1K	EET SEA	03/03/25 23:28
Total/NA	Analysis	314.0		40	540307	M5Z3	EET CAL 4	03/03/25 18:30
Total/NA	Analysis	300.0		1	486914	MLT	EET SEA	03/08/25 07:52

Client Sample ID: PA-18d-022125

Lab Sample ID: 580-148262-10

Date Collected: 02/21/25 14:11

Matrix: Water

Date Received: 02/24/25 12:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	486244	TL1	EET SEA	03/02/25 02:33
Total/NA	Analysis	314.0		40	540307	M5Z3	EET CAL 4	03/03/25 18:50
Total/NA	Analysis	300.0		1	486914	MLT	EET SEA	03/08/25 08:16

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: 580-148262-1

Project/Site: Arkema - Q1 2025 Groundwater Event

Laboratory: Eurofins Seattle

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

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4167	07-07-25

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	Expiration Date
A2LA	Dept. of Defense ELAP	7296.01	11-30-26
Arizona	State	AZ0830	11-16-25
Arkansas DEQ	State	88-01672	07-02-25
California	Los Angeles County Sanitation Districts	9257304	07-31-26
California	SCAQMD LAP	17LA0919	11-30-25
California	State	3082	07-31-25
Kansas	NELAP	E-10420	07-31-25
Nevada	State	CA00111	07-31-25
Oregon	NELAP	4175	02-02-26
USDA	US Federal Programs	525-23-159-97150	06-08-26
Utah	NELAP	CA001112025-8	02-28-26
Washington	State	C916	10-11-25

Sample Summary

Client: ERM-West

Job ID: 580-148262-1

Project/Site: Arkema - Q1 2025 Groundwater Event

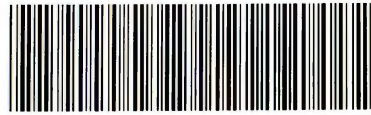
Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-148262-1	TB-01-022125	Water	02/21/25 06:00	02/24/25 12:05
580-148262-2	PA-16i-022125	Water	02/21/25 08:47	02/24/25 12:05
580-148262-3	PA-26d-022125	Water	02/21/25 10:18	02/24/25 12:05
580-148262-4	MWA-63-022125	Water	02/21/25 11:40	02/24/25 12:05
580-148262-5	Dup-02-022125	Water	02/21/25 12:00	02/24/25 12:05
580-148262-6	MWA-11i(d)-022125	Water	02/21/25 13:23	02/24/25 12:05
580-148262-7	PA-27d-022125	Water	02/21/25 10:23	02/24/25 12:05
580-148262-8	PA-04-022125	Water	02/21/25 11:34	02/24/25 12:05
580-148262-9	PA-10i-022125	Water	02/21/25 12:56	02/24/25 12:05
580-148262-10	PA-18d-022125	Water	02/21/25 14:11	02/24/25 12:05

Eurofins Seattle

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

Chain of Custody Record

eurofins
Environment Testing

Client Information		Sampler: <u>Paul Van Nevel</u>		Lab PM: <u>Cruz, Sheri L</u>		Carrier Tracking No(s):		COC No: <u>580-66274-19602.3</u>							
Client Contact: <u>Paul Van Nevel</u>		Phone: <u>240-755-1398</u>		E-Mail: <u>Sheri.Cruz@et.eurofinsus.com</u>		State of Origin:		Page: <u>2 of 10</u> <u>1 of 1</u>							
Company: <u>ERM-West</u>		PWSID:		Analysis Requested						Job #:					
Address: <u>1050 SW 6th Avenue Suite 1650</u>		Due Date Requested:		 580-148262 Chain of Custody						Preservation Codes: A - HCL N - None					
City: <u>Portland</u>		TAT Requested (days):													
State, Zip: <u>OR, 97204</u>		Compliance Project: ☐ Yes ☐ No													
Phone:		PO #: <u>0732445.207</u>													
Email: <u>paul.vannevel@erm.com</u>		WO #:													
Project Name: <u>Arkema - Q3 2024 Groundwater Event</u>		Project #: <u>58016290</u>		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 8260D - (MOD) Volatiles, standard list 8260D_LL - (MOD) Volatiles, standard list, low level 314.0 - Perchlorate 300.0_28D - (MOD) Local Method						Total Number					
Site:		SSOW#:													
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		Preservation Code:		Special Instructions/Note:			
<u>TB-01-022125</u>		<u>02/21/25</u>		<u>0600</u>		<u>G</u>		<u>Water</u>		<u>X</u>		<u>1</u>			
<u>PA-16i-022125</u>		<u>0847</u>		<u>G</u>		<u>Water</u>		<u>X</u>		<u>X</u>		<u>5</u>			
<u>PA-26d-022125</u>		<u>1018</u>		<u>G</u>		<u>Water</u>		<u>X</u>		<u>X</u>		<u>5</u>			
<u>MWA-63-022125</u>		<u>1140</u>		<u>G</u>		<u>Water</u>		<u>X</u>		<u>X</u>		<u>5</u>			
<u>Dug-02-022125</u>		<u>1200</u>		<u>G</u>		<u>Water</u>		<u>X</u>		<u>X</u>		<u>5</u>			
<u>MWA-11i(d)-022125</u>		<u>1323</u>		<u>G</u>		<u>Water</u>		<u>X</u>		<u>X</u>		<u>5</u>			
<u>PA-27d-022125</u>		<u>1023</u>		<u>G</u>		<u>Water</u>		<u>X</u>		<u>X</u>		<u>5</u>			
<u>PA-04-022125</u>		<u>1134</u>		<u>G</u>		<u>Water</u>		<u>X</u>		<u>X</u>		<u>5</u>			
<u>PA-10i-022125</u>		<u>1256</u>		<u>G</u>		<u>Water</u>		<u>X</u>		<u>X</u>		<u>5</u>			
<u>PA-18d-022125</u>		<u>1411</u>		<u>G</u>		<u>Water</u>		<u>X</u>		<u>X</u>		<u>5</u>			
<u>Water</u>															
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological										Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months					
Deliverable Requested: I, II, III, IV, Other (specify)										Special Instructions/QC Requirements:					
Empty Kit Relinquished by:				Date:		Time:		Method of Shipment:							
Relinquished by: <u>[Signature]</u>				Date/Time: <u>2/24/25 1130</u>		Company: <u>ERM</u>		Received by: <u>[Signature]</u>				Date/Time: <u>2/24/25 1130</u>		Company: <u>M.G.</u>	
Relinquished by: <u>[Signature]</u>				Date/Time: <u>2/24/25 1205</u>		Company: <u>M.E.</u>		Received by: <u>[Signature]</u>				Date/Time: <u>2/24/25 1205</u>		Company: <u>EET</u>	
Relinquished by:				Date/Time:		Company:		Received by:				Date/Time:		Company:	
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <u>3.3/2.8 PRT SC JZ</u>											

Eurofins Seattle

5755 8th Street East

Tacoma, WA 98424

Phone: 253-922-2310

Chain of Custody Record



Env

Loc: 580

148262

Client Information (Sub Contract Lab)		Sampler: N/A		Lab PM: Cruz, Sheri L		Carrier Tracking No(s): N/A		COC No: 580-141839.1			
Client Contact: Shipping/Receiving		Phone: N/A		E-Mail: Sheri.Cruz@et.eurofinsus.com		State of Origin: Oregon		Page: Page 1 of 2			
Company: Eurofins Environment Testing Southwest,				Accreditations Required (See note): NELAP - Oregon				Job #: 580-148262-1			
Address: 2841 Dow Avenue, Suite 100,		Due Date Requested: 3/10/2025		Analysis Requested						Preservation Codes:	
City: Tustin		TAT Requested (days): N/A									
State, Zip: CA, 92780											
Phone: 714-895-5494(Tel)		PO #: N/A									
Email: N/A		WO #: N/A									
Project Name: Arkema - Q1 2025 Groundwater Event		Project #: 58016290								Other: N/A	
Site: N/A		SSOW#: N/A									
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	314.0/ Perchlorate	Total Number of containers	Special Instr	
				Preservation Code:							
PA-16i-022125 (580-148262-2)		2/21/25	08:47 Pacific	G	Water		X			1	
PA-26d-022125 (580-148262-3)		2/21/25	10:18 Pacific	G	Water		X			1	
MWA-63-022125 (580-148262-4)		2/21/25	11:40 Pacific	G	Water		X			1	
MWA-11i(d)-022125 (580-148262-6)		2/21/25	13:23 Pacific	G	Water		X			1	
PA-27d-022125 (580-148262-7)		2/21/25	10:23 Pacific	G	Water		X			1	
PA-04-022125 (580-148262-8)		2/21/25	11:34 Pacific	G	Water		X			1	
PA-04-022125 (580-148262-8MS)		2/21/25	11:34 Pacific	G	Water		X			1	
PA-04-022125 (580-148262-8MSD)		2/21/25	11:34 Pacific	G	Water		X			1	
PA-10i-022125 (580-148262-9)		2/21/25	12:56 Pacific	G	Water		X			1	
Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northwest, LLC places the ownership of method, analyte & accreditation compliance 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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northwest, LLC laboratory or other instructions will be provided. 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 compliance to Eurofins Environment Testing Northwest, LLC.											
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Unconfirmed						☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months					
Deliverable Requested: I, II, III, IV, Other (specify)						Special Instructions/QC Requirements:					
Empty Kit Relinquished by:						Method of Shipment:					
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:	
Custody Seals Intact:		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:							
Δ Yes Δ No											

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Ver: 10/10/2024
3/11/2025

Login Sample Receipt Checklist

Client: ERM-West

Job Number: 580-148262-1

Login Number: 148262

List Source: Eurofins Seattle

List Number: 1

Creator: O'Connell, Jason I

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: ERM-West

Job Number: 580-148262-1

Login Number: 148262

List Number: 2

Creator: Khana, Piyush

List Source: Eurofins Calscience

List Creation: 02/26/25 12:22 PM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	2551836
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	1.9
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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



APPENDIX C DATA VALIDATION MEMOS



MEMO

TO	Sarah Seekins
FROM	Isaac Barraza
DATE	2025-03-24
REFERENCE	0732445
SUBJECT	Data Review of Arkema, First Quarter 2025 Groundwater. Samples Collected February 18, 19, 20, 21, 2025: Eurofins, Data Package(s) 580-148198-1, 580-148207-1 and 580-148262-1.

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.
- **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.
- **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: Case Narrative Evaluation

Table 2: Laboratory Blank Evaluation

Table 3: Field Blank Evaluation

Table 4: Laboratory Control Spike Evaluation

Table 5: Matrix Spike Evaluation

Table 6: Field Duplicate 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.

- **580-148198-1:** Sample PA-24d-021925 was included in the shipment; however, it was not listed on the COC. The laboratory logged the sample in and proceeded with the required analyses.

SAMPLES WITH NON-PREFERRED RESULTS

All samples had only one final result reported for each analyte and method combination. All results are considered preferred.

CASE NARRATIVE EVALUATION

The laboratory observed additional issues encountered during sample preparation or analysis as noted in Table 1.

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 appropriate considerations for sample preservation requirements.

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 2. 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 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, as adjusted for dilution, were qualified as estimates with a high bias (J+).

FIELD BLANK EVALUATION

The trip blank sample results were non-detected for each of the target analytes, with the exceptions and any necessary qualifications noted in Table 3. Any field blank detections associated with laboratory blank contamination and qualified as non-detected (U) are not included in Table 3. 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 4. 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 5. 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. The acceptable surrogate recoveries indicate minimal matrix interference in the samples.

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 6.

CALIBRATION RANGE EVALUATION

All results were reported within each instrument's calibration range.

PROFESSIONAL JUDGEMENT EVALUATION

Additional qualifiers using the validator's professional judgement were not necessary.

OVERALL ASSESSMENT

None of the data required rejection. All the data, including any qualified data, can be used for decision-making purposes; however, the limitations indicated by the applied qualifiers 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
Case Narrative Evaluation
First Quarter 2025 Groundwater
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Analyte	Reason	ERM Qualifier	
580-148198-1	None for qualification, associated samples ND	8260D 8260D_LL	1,1-Dichloroethene	Batch 580-485845	--	
			Methylene Chloride	CCV high bias		
		8260D_LL	Methylene Chloride	Batch 580-485769	--	
			2,2-Dichloropropane	CCV high bias		
		8260D_LL	Dichlorodifluoromethane	Batch 580-485909	--	
			Carbon disulfide			
			1,1-Dichloroethene			
			Methylene Chloride			
		2,2-Dichloropropane				
580-148207-1	None for qualification, associated samples ND	8260D	1,1-Dichloroethene	Batch 580-485845	--	
			Methylene Chloride	CCV high bias		
	PA-32i-022025	8260D 8260D_LL	Dichlorodifluoromethane	Batch 580-485909	--	
			Carbon disulfide		CCV high bias	J+
			1,1-Dichloroethene			--
			Methylene Chloride			
	None for qualification, associated samples ND	8260D 8260D_LL	2,2-Dichloropropane	Batch 580-485951	--	
			Dichlorodifluoromethane			
			Chloromethane			
			Vinyl chloride			
	DUP-01-022025	8260D 8260D_LL	Carbon disulfide	Batch 580-485951	J+	
			1,1-Dichloroethene		CCV high bias	--
	Methylene Chloride					
	Methyl tert-butyl ether					
	trans-1,2-Dichloroethene					
	DUP-01-022025	1,1-Dichloroethane	J+			
	PA-03-022025		J+			

Table 1
Case Narrative Evaluation
First Quarter 2025 Groundwater
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Analyte	Reason	ERM Qualifier
580-148207-1	None for qualification, associated samples ND	8260D 8260D_LL	2,2-Dichloropropane	Batch 580-485951 CCV high bias	--
			1,1-Dichloropropene		
580-148262-1	None for qualification, associated samples ND	8260D 8260D_LL	Dichlorodifluoromethane	Batch 580-485951 CCV high bias	--
			Chloromethane		
			Vinyl chloride		
			Carbon disulfide		
			1,1-Dichloroethene		
	MWA-63-022125		Methylene Chloride		J+
	PA-26d-022125		Methyl tert-butyl ether		J+
	None for qualification, associated samples ND		trans-1,2-Dichloroethene		--
			1,1-Dichloroethane		J+
			2,2-Dichloropropane		--
	None for qualification, associated samples ND		1,1-Dichloropropene		
	None for qualification, associated samples ND		8260D	2,2-Dichloropropane	Batch 580-486244 CCV high bias
		Hexachlorobutadiene			
	MWA-11i(d)-022125	8260D_LL	Bromomethane	Batch 580-486309 CCV low bias	UJ
	PA-04-022125				
	PA-10i-022125				

Notes:

-- = not applicable; associated data not affected

CCV = continuing calibration verification

ND = not detected

UJ = non-detected, estimated report limit

Table 2
Laboratory Blank Evaluation
First Quarter 2025 Groundwater
Arkema
Portland, Oregon

Lab Package	Blank ID	Analyte	Reported Blank Conc.	Blank RL	Associated Sample	Assoc. Sample Result	Assoc. Sample RL	Units	ERM Qualifier
580-148198-1	MB 580-485845/7	Isopropylbenzene	0.455	1.0	MWA-31i(d)-021925	0.45	1.0	µg/L	1.0 U
					PA-24d-021925	0.45	1.0	µg/L	1.0 U
					TB-01-021925	0.45	1.0	µg/L	1.0 U
		Bromobenzene	0.0386	0.20	None for qualification, samples ND	--	--	µg/L	--
		1,2,4-Trimethylbenzene	0.254	0.55	PA-31-021925	0.26	0.55	µg/L	0.55 U
					TB-01-021925	0.26	0.55	µg/L	0.55 U
		n-Butylbenzene	0.580	1.0	MWA-31i(d)-021925	0.57	1.0	µg/L	1.0 U
					MWA-58d-021925	5.7	10	µg/L	10 U
					MWA-56d-021925	5.7	10	µg/L	10 U
					PA-31-021925	0.58	1.0	µg/L	1.0 U
					TB-01-021925	0.58	1.0	µg/L	1.0 U
		Methylene Chloride	7.39	5.0	None for qualification, samples ND	--	--	µg/L	--
	MB 580-485769/10	Acetone	9.15	10	None for qualification, samples ND	--	--	µg/L	--
		Methylene Chloride	3.4	5.0					
		Isopropylbenzene	0.452	1.0	PA-44i-021825	0.45	1.0	µg/L	1.0 U
					PA-25d-021825	0.45	1.0	µg/L	1.0 U
					PA-15i-021825	0.45	1.0	µg/L	1.0 U
					MWA-81i-021825	0.46	1.0	µg/L	1.0 U
					MWA-41-021825	0.45	1.0	µg/L	1.0 U
		1,2,4-Trimethylbenzene	0.265	0.55	PA-44i-021825	0.26	0.55	µg/L	0.55 U
					PA-25d-021825	0.26	0.55	µg/L	0.55 U
					PA-15i-021825	0.26	0.55	µg/L	0.55 U
					MWA-82-021825	0.26	0.55	µg/L	0.55 U
					MWA-81i-021825	0.27	0.55	µg/L	0.55 U
					MWA-41-021825	0.26	0.55	µg/L	0.55 U
		n-Butylbenzene	0.578	1.0	PA-44i-021825	0.57	1.0	µg/L	1.0 U
					PA-25d-021825	0.58	1.0	µg/L	1.0 U
					PA-15i-021825	0.59	1.0	µg/L	1.0 U
					MWA-81i-021825	0.63	1.0	µg/L	1.0 U
					MWA-41-021825	0.58	1.0	µg/L	1.0 U

Table 2
Laboratory Blank Evaluation
First Quarter 2025 Groundwater
Arkema
Portland, Oregon

Lab Package	Blank ID	Analyte	Reported Blank Conc.	Blank RL	Associated Sample	Assoc. Sample Result	Assoc. Sample RL	Units	ERM Qualifier
580-148198-1	MB 580-485909/11	Methylene Chloride	2.21	5.0	None for qualification, samples ND	--	--	µg/L	--
		Isopropylbenzene	0.457	1.0	RB-01-022025	0.45	1.0	µg/L	1.0 U
		1,2,4-Trimethylbenzene	0.269	0.55	RB-01-022025	0.26	0.55	µg/L	0.55 U
		n-Butylbenzene	0.582	1.0	RB-01-022025	0.57	1.0	µg/L	1.0 U
	MB 580-486202/10	1,1-Dichloroethene	0.0522	0.20	None for qualification, samples > 5x blank	--	--	µg/L	--
580-148207-1	MB 580-485845/7	Methylene Chloride	7.39	5.0	None for qualification, samples ND	--	--	µg/L	--
		Isopropylbenzene	0.455	1.0	PA-20d-022025	0.45	1.0	µg/L	1.0 U
					RB-02-022125	0.45	1.0	µg/L	1.0 U
		n-Butylbenzene	0.580	1.0	PA-20d-022025	0.58	1.0	µg/L	1.0 U
					RB-02-022125	0.57	1.0	µg/L	1.0 U
	MB 580-485909/11	Methylene Chloride	2.21	5.0	None for qualification, samples ND	--	--	µg/L	--
		Isopropylbenzene	0.457	1.0	PA-21d-022025	450	1000	µg/L	1000 U
					PA-32i-022025	0.46	1.0	µg/L	1.0 U
		1,2,4-Trimethylbenzene	0.269	0.55	TB-01-022025	0.26	0.55	µg/L	0.55 U
					PA-32i-022025	0.27	0.55	µg/L	0.55 U
					PA-08-022025	0.26	0.55	µg/L	0.55 U
		n-Butylbenzene	0.582	1.0	TB-01-022025	0.57	1.0	µg/L	1.0 U
					PA-19d-022025	57	100	µg/L	100 U
					PA-30d-022025	290	500	µg/L	500 U
	MB 580-485951/7	1,2,4-Trimethylbenzene	0.260	0.55	Dup-01-022025	0.26	0.55	µg/L	0.55 U
					PA-09-022025	0.25	0.55	µg/L	0.55 U
		n-Butylbenzene	0.581	1.0	PA-22d-022025	0.57	1.0	µg/L	1.0 U
					PA-09-022025	0.57	1.0	µg/L	1.0 U
					PA-17iR-022125	0.57	1.0	µg/L	1.0 U
580-148262-1	MB 580-485951/7	1,2,4-Trimethylbenzene	0.260	0.55	TB-01-022125	0.26	0.55	µg/L	0.55 U
					PA-16i-022125	0.25	0.55	µg/L	0.55 U

Table 2
Laboratory Blank Evaluation
First Quarter 2025 Groundwater
Arkema
Portland, Oregon

Lab Package	Blank ID	Analyte	Reported Blank Conc.	Blank RL	Associated Sample	Assoc. Sample Result	Assoc. Sample RL	Units	ERM Qualifier
580-148262-1	MB 580-485951/7	n-Butylbenzene	0.581	1.0	TB-01-022125	0.57	1.0	µg/L	1.0 U
	MB 580-486309/11	1,1-Dichloroethene	0.0387	0.20	MWA-11i(d)-022125	0.051	0.20	µg/L	0.20 U
					PA-04-022125	0.23	0.20	µg/L	J+
					PA-10i-022125	0.16	0.20	µg/L	0.20 U
		trans-1,2-Dichloroethene	0.0417	0.20	MWA-11i(d)-022125	0.077	0.20	µg/L	0.20 U
					PA-04-022125	0.054	0.20	µg/L	0.20 U
					PA-10i-022125	0.091	0.20	µg/L	0.20 U
		cis-1,2-Dichloroethene	0.0609	0.20	MWA-11i(d)-022125	0.22	0.20	µg/L	J+
					PA-04-022125	0.076	0.20	µg/L	0.20 U
					PA-10i-022125	0.41	0.20	µg/L	J+
		Chloroform	0.0596	0.20	MWA-11i(d)-022125	0.072	0.20	µg/L	0.20 U
					PA-04-022125	0.14	0.20	µg/L	0.20 U
					PA-10i-022125	0.059	0.20	µg/L	0.20 U
		1,1,1-Trichloroethane	0.0423	0.20	PA-10i-022125	0.043	0.20	µg/L	0.20 U
		Carbon tetrachloride	0.0252	0.20	PA-04-022125	0.031	0.20	µg/L	0.20 U
					PA-10i-022125	0.028	0.20	µg/L	0.20 U
		1,2-Dichloropropane	0.115	0.20	MWA-11i(d)-022125	0.12	0.20	µg/L	0.20 U
		Dichlorobromomethane	0.0696	0.20	MWA-11i(d)-022125	0.082	0.20	µg/L	0.20 U
					PA-04-022125	0.071	0.20	µg/L	0.20 U
		Tetrachloroethene	0.156	0.50	MWA-11i(d)-022125	0.18	0.50	µg/L	0.50 U
					PA-04-022125	0.26	0.50	µg/L	0.50 U
					PA-10i-022125	0.14	0.50	µg/L	0.50 U
		1,3-Dichloropropane	0.0642	0.10	MWA-11i(d)-022125	0.077	0.20	µg/L	0.20 U
					PA-04-022125	0.072	0.20	µg/L	0.20 U
					PA-10i-022125	0.072	0.20	µg/L	0.20 U
		m-Xylene & p-Xylene	0.164	0.50	MWA-11i(d)-022125	0.25	0.50	µg/L	0.50 U
					PA-04-022125	0.15	0.50	µg/L	0.50 U
					PA-10i-022125	0.14	0.50	µg/L	0.50 U
		N-Propylbenzene	0.101	0.30	MWA-11i(d)-022125	0.092	0.30	µg/L	0.30 U

Table 2
Laboratory Blank Evaluation
First Quarter 2025 Groundwater
Arkema
Portland, Oregon

Lab Package	Blank ID	Analyte	Reported Blank Conc.	Blank RL	Associated Sample	Assoc. Sample Result	Assoc. Sample RL	Units	ERM Qualifier
580-148262-1	MB 580-486309/11	N-Propylbenzene	0.101	0.30	PA-04-022125	0.094	0.30	µg/L	0.30 U
		1,2-Dichlorobenzene	0.0821	0.30	MWA-11i(d)-022125	0.069	0.30	µg/L	0.30 U
					PA-04-022125	0.098	0.30	µg/L	0.30 U
					PA-10i-022125	0.25	0.30	µg/L	0.30 U

Notes:

-- = not applicable; associated data not affected

Conc. = concentration

J+ = detected results are estimated with a high bias

MB = method blank

µg/L = micrograms per liter

RL = reporting limit

U = non-detected

Table 3
Field Blank Evaluation
First Quarter 2025 Groundwater
Arkema
Portland, Oregon

Lab Package	Blank ID	Analyte	Reported Blank Conc.	Blank RL	Associated Sample	Assoc. Sample Result	Assoc. Sample RL	Units	ERM Qualifier
580-148198-1	RB-01-022025	Chloride	0.47	1.5	PA-31-021925	3.4	1.5	mg/L	J+
					PA-44i-021825	0.8	1.5	mg/L	1.5 U
		Toluene	0.061	0.20	None for qualification, samples ND	--	--	µg/L	--
		Acetone	3.3	10		--	--	µg/L	--
580-148207-1	RB-02-022125	Chloride	0.49	1.5	None for qualification, samples > 5x blank	--	--	µg/L	--
		Acetone	4.1	15	None for qualification, samples ND	--	--	µg/L	--

Notes:

-- = not applicable; associated data not affected

Conc. = concentration

J+ = detected results are estimated with a high bias

µg/L = micrograms per liter

mg/L = milligrams per liter

ND = non-detect

RB = rinse blank

RL = reporting limit

U = non-detected

Table 4
Laboratory Control Spike Evaluation
First Quarter 2025 Groundwater
Arkema
Portland, Oregon

Lab Package	Spike Sample ID	Associated Sample	Analyte	Recovery (%)	Limit (%)	RPD	RPD Limit	Result	Units	ERM Qualifier
580-148198-1	LCS 580-485769/5/ LCSD 580-485769/6	None for qualification, associated samples ND	Methylene Chloride	269/286	40-142	Pass	25	--	µg/L	--
580-148207-1	LCS 580-485845/4/ LCSD 580-485845/5	None for qualification, associated samples ND	Methylene Chloride	131/126	77-125	Pass	18	--	µg/L	--
580-148262-1	LCS 580-486244/4/ LCSD 580-486244/5	None for qualification, associated samples ND	2,2-Dichloropropane	163/155	66-126	Pass	22	--	µg/L	--
	LCS 580-486309/6/ LCSD 580-486309/7	PA-10i-022125	Vinyl chloride	Pass/Pass	41-150	37	32	0.47	µg/L	J

Notes:

-- = not applicable; associated data not affected

J = estimated detected result

LCS = laboratory control sample

LCSD = laboratory control sample duplicate

µg/L = micrograms per liter

ND = not detected

RPD = relative percent difference

Table 5
Matrix Spike Evaluation
First Quarter 2025 Groundwater
Arkema
Portland, Oregon

Lab Package	Spike Sample ID	Associated Sample	Analyte	Recovery (%)	Limit (%)	RPD	RPD Limit	Result	Units	ERM Qualifier
580-148207-1	PA-22d-022025 MS/MSD	PA-22d-022025	Styrene	70/0	76-122	NC	16	ND	µg/L	UJ
		None for qualification, one recovery passes	Chloroethane	Pass/153	38-150	Pass	28	--	µg/L	--
			trans-1,2-Dichloroethene	127/Pass	75-120	Pass	21	--	µg/L	--
			cis-1,2-Dichloroethene	127/Pass	76-120	Pass	20	--	µg/L	--
			1,1,1-Trichloroethane	135/Pass	74-130	Pass	19	--	µg/L	--
			Trichloroethene	138/Pass	80-125	Pass	13	--	µg/L	--
			Dibromomethane	121/Pass	80-120	Pass	11	--	µg/L	--
		None for qualification, parent sample ND	1,1-Dichloroethane	138/131	80-120	Pass	15	--	µg/L	--
			2,2-Dichloropropane	177/Pass	66-126	46	22			
			Chlorobromomethane	129/121	78-120	Pass	13			
			Carbon tetrachloride	143/134	72-129	Pass	19	--	µg/L	--
			1,1-Dichloropropene	140/125	74-120	Pass	14			
			Benzene	135/125	80-122	Pass	14			
			1,2-Dichloropropane	134/124	80-120	Pass	14	--	µg/L	--
			Dichlorobromomethane	133/128	75-124	Pass	13	--	µg/L	--
			1,3,5-Trimethylbenzene	Pass/49	80-122	76	21	--	µg/L	--
580-148262-1	PA-04-022125 MS/MSD	None for qualification, parent sample ND	Perchlorate	121/121	80-120	Pass	15	--	µg/L	--

Notes:

-- = not applicable; associated data not affected

MS = matrix spike

MSD = matrix spike duplicate

µg/L = micrograms per liter

NC = not calculated

ND = not detected

RPD = relative percent difference

UJ = non-detected, estimated report limit

Table 6
Field Duplicate Evaluation
First Quarter 2025 Groundwater
Arkema
Portland, Oregon

Lab Package	Primary / Duplicate Sample ID	Analyte	Concentration		Report Limit		Units	AbD	RPD	Limit	ERM Qualifier
			Sample	Duplicate	Sample	Duplicate					
580-148207-1	PA-32i-022025/ Dup-01-022025	1,1-Dichloroethene	0.059	0.12	0.20	0.20	µg/L	--	--	NA	--
		1,1-Dichloroethane	0.19	0.19	0.20	0.20	µg/L	--	--	NA	--
		cis-1,2-Dichloroethene	0.12	0.12	0.20	0.20	µg/L	--	--	NA	--
		Benzene	0.11	0.10	0.20	0.20	µg/L	--	--	NA	--
		Toluene	0.052	ND	0.20	0.20	µg/L	--	--	NA	--
		Isopropylbenzene	0.46	ND	1.0	1.0	µg/L	--	--	NA	--
		1,2,4-Trimethylbenzene	0.27	0.26	0.55	0.55	µg/L	--	--	NA	--
		1,2-Dichlorobenzene	0.25	0.26	0.30	0.30	µg/L	--	--	NA	--
580-148262-1	MWA-63-022125/ Dup-02-022125	Chloride	44	47	1.5	1.5	mg/L	--	6.6	30	--
		Methylene Chloride	19	ND ¹	50	5.0	µg/L	14	--	10	Detect J Non-detect UJ
		cis-1,2-Dichloroethene	ND	0.94	10	1.0	µg/L	--	--	NA	--
		Chloroform	120	93	10	1.0	µg/L	--	25	30	--
		Trichloroethene	ND	1.5	10	1.0	µg/L	--	--	NA	--
		Tetrachloroethene	8.8	9.2	10	1.0	µg/L	--	--	NA	--
		Chlorobenzene	ND	0.65	10	1.0	µg/L	--	--	NA	--

Notes:

-- = not applicable; associated data not affected

AbD = absolute Difference

J = estimated detected result

µg/L = micrograms per liter

mg/L = milligrams per liter

NA = not applicable

ND = not detected

ND¹ = the report limit was used for comparison purposes

RPD = relative percent difference

UJ = non-detected, estimated report limit



APPENDIX D PRIOR GROUNDWATER MONITORING PROGRAM DATA TABLES AND GRAPHS

Appendix D
Prior Groundwater Monitoring Plan Data Table
Arkema Quarter 1, 2025, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Aquifer	Well ID	Cluster	Sample ID	Date	Chloride	Chlorobenzene	Perchlorate
					ug / L	ug / L	ug / L
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-102319	10/23/2019	5,900	< 0.44 U	< 0.95 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-021220	02/12/2020	10,900	0.16 j	< 0.95 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-051820	05/18/2020	14,000	< 0.025 U	< 0.95 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-081820	08/18/2020	16,000	< 0.025 U	< 0.95 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-102720	10/27/2020	5,800	< 0.025 U	< 0.95 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-031821	03/18/2021	18,000	< 0.025 U	< 2.0 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-092221	09/22/2021	10,000	< 0.025 U	< 2.0 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-121421	12/14/2021	5,300	< 0.025	< 2.0
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-031422	03/14/2022	14,000 J-	< 0.060 U	< 2.0 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-060622	06/06/2022	9,600	< 0.060 U	< 2.0 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-110722	11/07/2022	21,000	< 0.060 U	< 2.0 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-030623	03/06/2023	7,800	< 0.060 U	< 2.0 UJ
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-061323	06/13/2023	7,500	< 0.060	< 2.0
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-082123	08/21/2023	7,100	< 0.060 U	< 2.0 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-121023	12/10/2023	5,600	< 0.20 U	< 2.0 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-022624	02/26/2024	8,000	< 0.060 U	< 2.0 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-061024	06/10/2024	7,600	0.060 j	2.6 j
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-091024	09/10/2024	18,000	< 0.060 U	< 0.91 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-121124	12/11/2024	4,900 J+	< 0.060 U	< 0.91 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-021825	02/18/2025	5,400	< 0.060	< 0.91
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-110619	11/06/2019	83,000	< 44 U	< 0.95 U
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-021720	02/17/2020	8,400	< 4.4 U	< 0.95 U
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-052620	05/26/2020	13,000	< 4.4 U	< 0.95 U
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-082420	08/24/2020	29,000	< 4.4 U	< 0.95 U
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-110320	11/03/2020	71,000	< 4.4 U	< 4.8 U
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-032921	03/29/2021	7,200 J	< 4.4 U	< 2.0 U
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-092321	09/23/2021	58,000 J	< 4.4 UJ	< 2.0 U
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-121521	12/15/2021	14,000	< 4.4	< 2.0
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-031522	03/15/2022	5,500 J-	< 4.4 UJ	< 2.0 U
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-060822	06/08/2022	4,900	< 0.30 U	13
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-110922	11/09/2022	33,000	< 4.4 U	< 2.0 U
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-030923	03/09/2023	5,500	5.6 j	< 10 UJ
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-061523	06/15/2023	5,700 j	< 4.4	< 2.0
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-082323	08/23/2023	17,000	< 4.4 U	< 2.0 U
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-121223	12/12/2023	15,000	< 4.4 U	< 2.0 U
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-022724	02/27/2024	4,500	< 4.4 U	< 2.0 U
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-061324	06/13/2024	6,600	< 4.4 U	< 2.0 U
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-091024	09/10/2024	23,000	< 4.4 U	< 0.91 U
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-121024	12/10/2024	15,000 J+	< 4.4 U	< 4.5 U
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-022125	02/21/2025	5,800	< 4.4	< 1.8
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-102319	10/23/2019	14,700	< 4.4 U	190
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-021120	02/11/2020	34,800	0.24	< 48 U
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-051920	05/19/2020	10,000	< 0.025 U	71 j
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-081820	08/18/2020	15,000	0.030 j	530
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-102720	10/27/2020	14,000	< 0.20 U	77
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-031821	03/18/2021	11,000 J	< 0.025 U	290
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-092121	09/21/2021	14,000	< 0.025 U	56
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-121421	12/14/2021	13,000	< 0.025	150
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-031422	03/14/2022	11,000 J-	< 0.060 U	52
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-060622	06/06/2022	11,000	< 0.060 U	340
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-110722	11/07/2022	9,000	< 0.060 U	120
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-030623	03/06/2023	11,000	< 0.060 U	210 J-
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-061323	06/13/2023	9,900	< 0.060	150
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-082123	08/21/2023	9,700	< 0.060 U	210
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-121023	12/10/2023	14,000	< 0.20 U	< 10 U
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-022524	02/25/2024	7,900	< 0.060 U	20
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-061024	06/10/2024	11,000	0.11 j	270
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-090924	09/09/2024	11,000	< 0.060 U	220
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-121124	12/11/2024	9,200 J+	< 0.060 U	56
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-021825	02/18/2025	9,100	< 0.060	420
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-102519	10/25/2019	9,700	< 4.4 U	< 4.8 U
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-021420	02/14/2020	9,700	0.29	< 48 U
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-052120	05/21/2020	8,300	< 0.025 U	< 48 U
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-081820	08/18/2020	10,000	< 0.025 U	< 95 U
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-102820	10/28/2020	< 9,000 U	< 0.025 U	< 19 U
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-032221	03/22/2021	9,600 J	< 0.025 U	< 20 U
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-092221	09/22/2021	7,800	< 0.025 U	< 20 U
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-121321	12/13/2021	7,300	< 0.025	< 20
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-031622	03/16/2022	7,300	< 0.060 U	< 20 U
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-060822	06/08/2022	5,500	< 0.070 U	< 4.0 U
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-110822	11/08/2022	6,200	< 0.060 U	< 4.0 U

Appendix D
Prior Groundwater Monitoring Plan Data Table
Arkema Quarter 1, 2025, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Aquifer	Well ID	Cluster	Sample ID	Date	Chloride	Chlorobenzene	Perchlorate
					ug / L	ug / L	ug / L
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-030723	03/07/2023	6,500	< 0.060 U	< 4.0 UJ
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-061423	06/14/2023	4,500	< 0.060	< 2.0
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-082223	08/22/2023	4,500	< 0.060 U	< 2.0 U
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-121123	12/11/2023	4,600	< 0.060 U	< 4.0 U
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-022624	02/26/2024	4,200	< 0.20 U	< 2.0 U
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-061224	06/12/2024	3,700	< 0.060 U	< 10 U
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-090924	09/09/2024	3,800	< 0.060 U	< 9.1 U
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-120924	12/09/2024	4,300 J+	< 0.060 U	< 9.1 U
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-022025	02/20/2025	3,900	< 0.060	< 18
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-102819	10/28/2019	14,300	< 2.0 U	< 4.8 U
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-021720	02/17/2020	13,700	0.14 j	< 48 U
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-052220	05/22/2020	12,000	< 0.025 U	< 4.8 U
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-081920	08/19/2020	14,000 J+	< 0.025 U	< 19 U
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-102920	10/29/2020	12,000	< 0.025 U	< 4.8 U
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-032421	03/24/2021	7,900 J	< 0.025 U	< 20 U
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-092221	09/22/2021	11,000	< 0.025 U	< 10 U
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-121321	12/13/2021	7,000	< 0.025	< 20
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-031722	03/17/2022	6,500	< 0.060 U	< 2.0 U
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-060822	06/08/2022	7,900	< 0.35 U	< 2.0 U
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-110922	11/09/2022	4,600	< 0.060 U	< 4.0 U
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-030823	03/08/2023	5,400	< 0.060 U	< 10 UJ
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-061523	06/15/2023	6,900 j	< 0.060	< 4.0
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-082223	08/22/2023	5,900	< 0.060 U	< 10 U
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-121223	12/12/2023	6,100	< 0.060 U	< 2.0 U
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-022724	02/27/2024	5,300	< 0.060 U	< 4.0 U
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-061224	06/12/2024	5,700	< 0.060 U	< 2.0 U
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-091024	09/10/2024	4,900	< 0.060 U	< 4.5 U
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-121024	12/10/2024	5,200 J+	< 0.060 U	< 9.1 U
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-022125	02/21/2025	4,000	< 0.060	< 9.1
Shallow	PA-08	GCC6 & Proximal Wells	PA-08-102219	10/22/2019	201,000	< 0.44 U	< 19 U
Shallow	PA-08	GCC6 & Proximal Wells	PA-08-021320	02/13/2020	197,000	0.53	< 48 U
Shallow	PA-08	GCC6 & Proximal Wells	PA-08-051920	05/19/2020	130,000	0.11 j	< 48 U
Shallow	PA-08	GCC6 & Proximal Wells	PA-08-081820	08/18/2020	100,000	< 0.025 U	< 48 U
Shallow	PA-08	GCC6 & Proximal Wells	PA-08-102720	10/27/2020	130,000	0.092 j	< 19 U
Shallow	PA-08	GCC6 & Proximal Wells	PA-08-031821	03/18/2021	110,000	< 0.025 U	< 20 U
Shallow	PA-08	GCC6 & Proximal Wells	PA-08-092121	09/21/2021	200,000	< 0.25 U	< 20 U
Shallow	PA-08	GCC6 & Proximal Wells	PA-08-121321	12/13/2021	130,000	0.084	< 20
Shallow	PA-08	GCC6 & Proximal Wells	PA-08-031422	03/14/2022	250,000 J-	< 0.060 U	< 20 U
Shallow	PA-08	GCC6 & Proximal Wells	PA-08-060622	06/06/2022	330,000	< 0.60 U	< 20 U
Shallow	PA-08	GCC6 & Proximal Wells	PA-08-110722	11/07/2022	770,000	< 0.060 U	< 10 U
Shallow	PA-08	GCC6 & Proximal Wells	PA-08-030723	03/07/2023	380,000	0.24	< 10 UJ
Shallow	PA-08	GCC6 & Proximal Wells	PA-08-061323	06/13/2023	110,000	< 0.060	11
Shallow	PA-08	GCC6 & Proximal Wells	PA-08-082123	08/21/2023	53,000	< 0.060 U	17
Shallow	PA-08	GCC6 & Proximal Wells	PA-08-121123	12/11/2023	29,000	< 0.060 U	< 4.0 U
Shallow	PA-08	GCC6 & Proximal Wells	PA-08-022624	02/26/2024	140,000	< 0.060 U	< 10 U
Shallow	PA-08	GCC6 & Proximal Wells	PA-08-061024	06/10/2024	190,000	0.10 j	19 j
Shallow	PA-08	GCC6 & Proximal Wells	PA-08-090924	09/09/2024	280,000	< 0.060 U	< 9.1 U
Shallow	PA-08	GCC6 & Proximal Wells	PA-08-120924	12/09/2024	230,000	< 0.060 U	33
Shallow	PA-08	GCC6 & Proximal Wells	PA-08-022025	02/20/2025	460,000	< 0.060	28
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-110119	11/01/2019	23,600	< 0.44 U	< 48 U
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-021220	02/12/2020	199,000	0.16 j	< 0.95 U
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-051820	05/18/2020	14,000	< 0.025 U	< 19 U
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-081820	08/18/2020	160,000 J+	< 0.025 U	< 19 U
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-102820	10/28/2020	14,000 J+	< 0.20 U	40
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-031621	03/16/2021	19,000	< 0.025 U	36
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-092121	09/21/2021	61,000	< 0.25 U	< 20 U
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-121321	12/13/2021	13,000	< 0.25	< 20
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-031522	03/15/2022	24,000 J-	< 0.060 U	20
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-060722	06/07/2022	19,000	< 0.060 U	120
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-110822	11/08/2022	68,000	< 0.060 U	< 10 U
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-030723	03/07/2023	120,000 j	0.39	< 4.0 UJ
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-061323	06/13/2023	110,000	< 0.060	6.2
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-082123	08/21/2023	5,700	< 0.060 U	< 2.0 U
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-121123	12/11/2023	5,600	< 0.060 U	< 2.0 U
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-022624	02/26/2024	160,000	< 0.060 U	< 20 U
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-061024	06/10/2024	130,000	< 0.060 U	11 j
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-090924	09/09/2024	15,000	< 0.060 U	84
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-121024	12/10/2024	6,600 J+	< 0.060 U	< 4.5 U
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-022025	02/20/2025	180,000	< 0.060	< 9.1
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-103019	10/30/2019	9,300	< 0.44 U	< 9.5 U
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-021820	02/18/2020	10,500	0.15 j	< 48 U

Appendix D
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Aquifer	Well ID	Cluster	Sample ID	Date	Chloride	Chlorobenzene	Perchlorate
					ug / L	ug / L	ug / L
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-052720	05/27/2020	9,500	< 0.025 U	< 9.5 U
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-082420	08/24/2020	8,800 J+	< 0.025 U	< 9.5 U
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-110220	11/02/2020	8,200 j	< 0.025 U	< 4.8 U
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-032921	03/29/2021	5,500 J	< 0.025 U	< 20 U
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-092321	09/23/2021	8,700	< 0.025 U	< 10 U
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-121521	12/15/2021	7,000	< 0.025	< 20
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-031522	03/15/2022	4,500 J-	< 0.060 U	< 10 U
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-060922	06/09/2022	4,300	< 0.070 U	< 100 U
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-110822	11/08/2022	5,900	< 0.060 U	< 4.0 U
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-030723	03/07/2023	5,800 J+	< 0.060 U	< 2.0 UJ
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-061623	06/16/2023	2,500	< 0.060	< 40
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-082423	08/24/2023	4,600	< 0.060 U	< 4.0 U
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-121223	12/12/2023	6,400	< 0.060 U	< 2.0 U
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-022724	02/27/2024	3,500	< 0.060 U	< 2.0 U
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-061324	06/13/2024	3,800	< 0.060 U	< 10 U
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-091124	09/11/2024	8,300	< 0.060 U	< 4.5 U
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-121024	12/10/2024	4,200 J+	< 0.060 U	< 4.5 U
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-021925	02/19/2025	3,400 J+	< 0.060	< 9.1
Intermediate	MWA-81i	GCC6 & Proximal Wells	MWA-81i-102319	10/23/2019	49,800	< 0.44 U	< 0.95 U
Intermediate	MWA-81i	GCC6 & Proximal Wells	MWA-81i-021220	02/12/2020	37,300	0.26	< 0.95 U
Intermediate	MWA-81i	GCC6 & Proximal Wells	MWA-81i-051820	05/18/2020	95,000	< 0.025 U	< 0.95 U
Intermediate	MWA-81i	GCC6 & Proximal Wells	MWA-81i-081820	08/18/2020	190,000	< 0.025 U	< 0.95 U
Intermediate	MWA-81i	GCC6 & Proximal Wells	MWA-81i-102720	10/27/2020	66,000	< 0.025 U	< 0.95 U
Intermediate	MWA-81i	GCC6 & Proximal Wells	MWA-81i-031821	03/18/2021	42,000	< 0.025 U	< 2.0 U
Intermediate	MWA-81i	GCC6 & Proximal Wells	MWA-81i-092221	09/22/2021	130,000	< 0.025 U	< 2.0 U
Intermediate	MWA-81i	GCC6 & Proximal Wells	MWA-81i-121421	12/14/2021	58,000	< 0.025	< 4.0
Intermediate	MWA-81i	GCC6 & Proximal Wells	MWA-81i-031422	03/14/2022	14,000 J-	< 0.060 U	< 2.0 U
Intermediate	MWA-81i	GCC6 & Proximal Wells	MWA-81i-060622	06/06/2022	34,000	< 0.060 U	< 2.0 U
Intermediate	MWA-81i	GCC6 & Proximal Wells	MWA-81i-110722	11/07/2022	610,000	< 0.060 U	< 10 U
Intermediate	MWA-81i	GCC6 & Proximal Wells	MWA-81i-030623	03/06/2023	95,000	< 0.060 U	< 2.0 UJ
Intermediate	MWA-81i	GCC6 & Proximal Wells	MWA-81i-061323	06/13/2023	27,000	< 0.060	< 2.0
Intermediate	MWA-81i	GCC6 & Proximal Wells	MWA-81i-082123	08/21/2023	19,000	< 0.060 U	< 2.0 U
Intermediate	MWA-81i	GCC6 & Proximal Wells	MWA-81i-121023	12/10/2023	39,000	< 0.20 U	< 2.0 U
Intermediate	MWA-81i	GCC6 & Proximal Wells	MWA-81i-022624	02/26/2024	23,000	< 0.060 U	< 2.0 U
Intermediate	MWA-81i	GCC6 & Proximal Wells	MWA-81i-061024	06/10/2024	26,000	0.085 j	< 2.0 U
Intermediate	MWA-81i	GCC6 & Proximal Wells	MWA-81i-091024	09/10/2024	8,400	< 0.060 U	< 0.91 U
Intermediate	MWA-81i	GCC6 & Proximal Wells	MWA-81i-121124	12/11/2024	33,000 J+	< 0.060 U	< 0.91 U
Intermediate	MWA-81i	GCC6 & Proximal Wells	MWA-81i-021825	02/18/2025	12,000	< 0.060	< 0.91
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-102519	10/25/2019	119,000	< 0.44 U	< 4.8 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-021720	02/17/2020	98,600	0.52	< 48 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-052620	05/26/2020	82,000	0.51	< 48 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-081920	08/19/2020	67,000	0.52	< 95 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-102920	10/29/2020	82,000	0.70	< 4.8 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-032421	03/24/2021	1,300,000	< 0.44 U	< 20 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-092221	09/22/2021	76,000	0.67	< 20 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-121321	12/13/2021	72,000	0.65	< 20
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-031722	03/17/2022	90,000	< 0.060 U	< 20 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-060822	06/08/2022	84,000	0.37 j	< 2.0 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-110922	11/09/2022	45,000	1.5	< 10 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-030823	03/08/2023	41,000	5.7	< 10 UJ
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-061623	06/16/2023	35,000	1.3 J+	< 20
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-082223	08/22/2023	53,000	0.67	< 4.0 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-121223	12/12/2023	58,000	0.90	< 4.0 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-022724	02/27/2024	55,000	0.53	< 10 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-061224	06/12/2024	44,000	0.71	< 10 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-091024	09/10/2024	30,000	< 0.060 U	< 9.1 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-121024	12/10/2024	25,000 J+	0.64	< 91 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-022125	02/21/2025	27,000	1.0	< 36
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-110519	11/05/2019	115,000	< 0.44 U	< 48 U
Intermediate	PA-15i	GCC6 & Proximal Wells	Pa-15i-021820	02/18/2020	249,000	< 0.025 U	< 48 U
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-051820	05/18/2020	270,000	< 0.025 U	< 48 U
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-081720	08/17/2020	250,000	< 0.025 U	< 48 U
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-102620	10/26/2020	230,000	< 2.5 U	< 4.8 U
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-031721	03/17/2021	260,000	< 0.025 U	< 20 U
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-092121	09/21/2021	360,000	< 0.25 U	< 20 U
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-121421	12/14/2021	340,000	< 0.025	< 20
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-031422	03/14/2022	250,000 J-	< 0.060 U	< 20 U
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-060622	06/06/2022	300,000	< 0.60 U	< 20 U
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-110722	11/07/2022	850,000	0.29	< 10 U
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-030823	03/08/2023	290,000	< 0.060 U	< 10 UJ
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-061323	06/13/2023	290,000	0.073 j	< 4.0

Appendix D
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Portland, Oregon

Aquifer	Well ID	Cluster	Sample ID	Date	Chloride	Chlorobenzene	Perchlorate
					ug / L	ug / L	ug / L
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-082123	08/21/2023	41,000	< 0.060 U	< 10 U
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-121123	12/11/2023	4,400	< 0.20 U	< 10 U
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-022624	02/26/2024	20,000	< 0.060 U	< 10 U
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-061224	06/12/2024	86,000 J-	< 0.060 U	< 10 U
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-090924	09/09/2024	59,000	< 0.060 U	< 9.1 U
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-121124	12/11/2024	64,000	< 0.060 U	< 9.1 U
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-021825	02/18/2025	44,000	< 0.060	< 18
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-110419	11/04/2019	319,000	< 0.44 U	< 48 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-021220	02/12/2020	186,000	0.22	< 48 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-051920	05/19/2020	150,000	0.073 j	< 48 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-081920	08/19/2020	95,000 J+	0.13 j	< 48 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-102720	10/27/2020	69,000	0.31	< 4.8 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-031721	03/17/2021	140,000	< 0.025 U	< 20 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-092121	09/21/2021	50,000	< 0.25 U	< 10 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-121421	12/14/2021	95,000	0.21	< 20
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-031522	03/15/2022	110,000 J-	< 0.060 U	< 10 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-060722	06/07/2022	110,000	< 0.30 U	< 20 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-110822	11/08/2022	270,000	< 0.060 U	< 4.0 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-030823	03/08/2023	530,000	< 0.060 U	< 20 UJ
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-061423	06/14/2023	120,000 J-	< 0.060	< 4.0
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-082223	08/22/2023	35,000	< 0.060 U	< 4.0 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-121123	12/11/2023	12,000	< 0.20 U	< 4.0 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-022724	02/27/2024	12,000	< 0.060 U	< 20 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-061024	06/10/2024	17,000	< 0.060 U	< 10 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-121024	12/10/2024	15,000 J+	0.15 j	< 9.1 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-022125	02/21/2025	32,000	< 0.060	< 36
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-102819	10/28/2019	73,600	0.57 j	< 48 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-021920	02/19/2020	65,400	24	< 190 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-052120	05/21/2020	60,000	0.16 j	< 48 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-082420	08/24/2020	62,000	< 0.025 U	< 95 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-102820	10/28/2020	50,000	< 0.20 U	< 4.8 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-032321	03/23/2021	43,000	0.15 J	< 20 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-092221	09/22/2021	35,000	< 0.025 U	< 20 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-121321	12/13/2021	30,000	< 0.025	< 20
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-031622	03/16/2022	23,000	0.072 j	< 20 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-060822	06/08/2022	26,000	< 0.70 U	< 10 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-110822	11/08/2022	13,000	< 0.60 U	< 10 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-030823	03/08/2023	25,000	< 0.060 U	< 10 UJ
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-061423	06/14/2023	15,000	0.073 j	< 4.0
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-082223	08/22/2023	8,800 J	< 0.060 U	< 2.0 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-121123	12/11/2023	20,000	< 0.20 U	< 4.0 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-022624	02/26/2024	32,000	< 0.060 U	< 2.0 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-061224	06/12/2024	35,000	0.16 j	< 10 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-090924	09/09/2024	43,000	< 0.060 U	< 9.1 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-120924	12/09/2024	49,000	0.12 j	< 91 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-022125	02/21/2025	58,000	< 0.44	< 91
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-103019	10/30/2019	161,000	< 0.44 U	< 48 U
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-021820	02/18/2020	170,000	0.50 J+	< 190 U
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-052220	05/22/2020	160,000	0.28	< 48 U
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-082120	08/21/2020	150,000 J+	0.30	< 95 U
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-110220	11/02/2020	170,000	< 0.025 U	< 48 U
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-040121	04/01/2021	130,000	0.43	< 20 U
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-092321	09/23/2021	100,000	< 0.025 U	< 20 U
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-121521	12/15/2021	93,000	0.29	< 20
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-031522	03/15/2022	89,000 J-	0.28 J+	< 20 U
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-060922	06/09/2022	87,000	< 0.70 U	< 20 U
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-110822	11/08/2022	75,000 J-	0.28	< 20 U
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-030723	03/07/2023	83,000 j	< 0.060 U	< 20 UJ
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-061623	06/16/2023	31,000	< 0.29 U	< 40
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-082423	08/24/2023	71,000	0.13 j	< 20 U
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-121323	12/13/2023	32,000	0.15 j	< 4.0 U
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-022824	02/28/2024	7,600,000	0.29	< 20 U
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-061324	06/13/2024	85,000	0.36	< 20 U
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-091124	09/11/2024	88,000	0.21	< 18 U
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-121024	12/10/2024	79,000	0.29	< 91 U
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-022025	02/20/2025	44,000	< 0.060	< 91
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-102919	10/29/2019	243,000	< 0.44 U	< 4.8 U
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-021220	02/12/2020	99,200	0.18 j	< 48 U
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-051920	05/19/2020	53,000	< 0.025 U	< 95 U
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-081820	08/18/2020	76,000	< 0.025 U	< 48 U
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-102720	10/27/2020	34,000	< 0.025 U	< 4.8 U

Appendix D
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Aquifer	Well ID	Cluster	Sample ID	Date	Chloride	Chlorobenzene	Perchlorate
					ug / L	ug / L	ug / L
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-031621	03/16/2021	60,000	< 0.025 U	7.1 J
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-092321	09/23/2021	39,000	< 0.025 U	390
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-121421	12/14/2021	51,000	< 0.025	130
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-031522	03/15/2022	23,000 J-	< 0.060 U	270
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-060622	06/06/2022	47,000	< 0.30 U	66
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-110722	11/07/2022	75,000	< 0.060 U	< 2.0 U
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-030623	03/06/2023	15,000	< 0.060 U	< 2.0 UJ
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-061323	06/13/2023	20,000	< 0.060	< 2.0
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-082223	08/22/2023	370,000	< 0.060 U	< 10 U
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-121023	12/10/2023	1,900	< 0.060 U	< 4.0 U
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-022524	02/25/2024	93,000	< 0.060 U	< 10 U
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-061124	06/11/2024	320,000	< 0.060 U	< 10 U
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-091024	09/10/2024	220,000	< 0.060 U	< 4.5 U
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-121124	12/11/2024	55,000	< 0.060 U	< 9.1 U
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-021825	02/18/2025	< 1,500 U	< 0.060	< 0.91
Deep	MWA-11i(d)	Well Distal from BW and GCCs	MWA-11i(D)-110519	11/05/2019	1,640,000	< 0.44 U	< 48 U
Deep	MWA-11i(d)	Well Distal from BW and GCCs	MWA-11i(d)-022620	02/26/2020	1,480,000	2.4	< 0.95 U
Deep	MWA-11i(d)	Well Distal from BW and GCCs	MWA-11i(d)-052920	05/29/2020	1,600,000	< 0.025 U	< 9.5 U
Deep	MWA-11i(d)	Well Distal from BW and GCCs	MWA-11i(d)-082720	08/27/2020	1,500,000	0.071 j	< 0.95 U
Deep	MWA-11i(d)	Well Distal from BW and GCCs	MWA-11i(d)-110420	11/04/2020	1,500,000	0.64 J	< 4.8 U
Deep	MWA-11i(d)	Well Distal from BW and GCCs	MWA-11i(D)-040221	04/02/2021	180,000	0.039 J	< 20 U
Deep	MWA-11i(d)	Well Distal from BW and GCCs	MWA-11i(D)-092421	09/24/2021	1,700,000	0.047 j	< 10 U
Deep	MWA-11i(d)	Well Distal from BW and GCCs	MWA-11i(D)-121621	12/16/2021	1,500,000	< 0.025	< 20
Deep	MWA-11i(d)	Well Distal from BW and GCCs	MWA-11i(D)-031722	03/17/2022	2,200,000	0.060 j	< 20 U
Deep	MWA-11i(d)	Well Distal from BW and GCCs	MWA-11i(D)-060922	06/09/2022	2,000,000	< 0.70 U	< 20 U
Deep	MWA-11i(d)	Well Distal from BW and GCCs	MWA-11i(D)-111022	11/10/2022	1,600,000	1.1	< 40 U
Deep	MWA-11i(d)	Well Distal from BW and GCCs	MWA-11i(D)-030923	03/09/2023	1,200,000	< 0.060 U	< 20 UJ
Deep	MWA-11i(d)	Well Distal from BW and GCCs	MWA-11i(D)-061623	06/16/2023	450,000	7.0	< 10
Deep	MWA-11i(d)	Well Distal from BW and GCCs	MWA-11i(D)-082323	08/23/2023	830,000	< 0.060 U	< 10 U
Deep	MWA-11i(d)	Well Distal from BW and GCCs	MWA-11i(D)-121323	12/13/2023	780,000	< 0.060 U	< 10 U
Deep	MWA-11i(d)	Well Distal from BW and GCCs	MWA-11i(D)-022824	02/28/2024	6,300,000	0.061 j	< 10 U
Deep	MWA-11i(d)	Well Distal from BW and GCCs	MWA-11i(D)-061324	06/13/2024	650,000	< 0.060 U	< 10 U
Deep	MWA-11i(d)	Well Distal from BW and GCCs	MWA-11i(D)-091124	09/11/2024	530,000	< 0.060 U	< 0.91 U
Deep	MWA-11i(d)	Well Distal from BW and GCCs	MWA-11i(D)-121224	12/12/2024	570,000	< 0.060 U	< 0.91 U
Deep	MWA-11i(d)	Well Distal from BW and GCCs	MWA-11i(D)-022125	02/21/2025	730,000	< 0.060	< 0.91
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(d)-102419	10/24/2019	25,900,000	0.57 j	100,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-021320	02/13/2020	27,700,000	0.58 j	91,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-052020	05/20/2020	27,000,000	< 0.44 U	100,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-081920	08/19/2020	23,000,000	0.52 j	89,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(d)-103020	10/30/2020	30,000,000	< 0.44 U	91,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-032421	03/24/2021	27,000,000	< 0.44 U	91,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-092321	09/23/2021	29,000,000	< 0.44 U	91,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-121521	12/15/2021	18,000,000	< 0.44	99,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-031622	03/16/2022	20,000,000	< 0.44 U	97,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-060722	06/07/2022	28,000,000	0.32 j	100,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-111022	11/10/2022	19,000,000	0.55 J	97,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-030923	03/09/2023	25,000,000	0.58 j	97,000 J-
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-061523	06/15/2023	16,000,000	< 1.0 U	86,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-082323	08/23/2023	27,000,000	< 0.44 U	98,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-121123	12/11/2023	14,000,000	< 0.44 U	28,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-022824	02/28/2024	26,000,000	< 0.44 U	100,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-061224	06/12/2024	21,000,000	< 4.4 U	100,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-091024	09/10/2024	16,000,000	< 0.44 U	87,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-121224	12/12/2024	13,000,000	< 0.44 U	74,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-021925	02/19/2025	6,000,000	< 0.44	3,700
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56D-102419	10/24/2019	20,100,000	< 0.44 U	3,300
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56D-021420	02/14/2020	22,300,000	< 2.0 U	3,500
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56D-052120	05/21/2020	21,000,000	< 0.44 U	5,700
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56D-082020	08/20/2020	24,000,000	< 0.44 U	6,400
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56d-102920	10/29/2020	22,000,000	< 0.44 U	7,100
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56D-032521	03/25/2021	26,000,000	< 4.4 U	6,500
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56D-092421	09/24/2021	21,000,000	< 0.44 U	8,100
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56D-121621	12/16/2021	18,000,000	< 0.44	8,400
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56D-031722	03/17/2022	19,000,000	< 0.44 U	9,200
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56D-060822	06/08/2022	18,000,000	< 0.30 U	11,000
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56D-110922	11/09/2022	15,000,000	< 0.44 U	12,000
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56D-030923	03/09/2023	16,000,000	< 0.44 U	15,000 J-
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56D-061523	06/15/2023	15,000,000	< 4.4	13,000
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56D-082323	08/23/2023	14,000,000	< 4.4 U	14,000
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56D-121223	12/12/2023	14,000,000	< 4.4 U	14,000
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56D-022824	02/28/2024	14,000,000	< 4.4 U	16,000

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Aquifer	Well ID	Cluster	Sample ID	Date	Chloride	Chlorobenzene	Perchlorate
					ug / L	ug / L	ug / L
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56D-061224	06/12/2024	13,000,000	< 4.4 U	15,000
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56D-091124	09/11/2024	10,000,000	< 4.4 U	14,000 J
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56D-121224	12/12/2024	12,000,000	< 4.4 U	13,000
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56D-021925	02/19/2025	13,000,000	< 4.4	13,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58d-102519	10/25/2019	18,900,000	< 0.44 U	61,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-021320	02/13/2020	21,100,000	< 0.44 U	49,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-052120	05/21/2020	19,000,000	< 0.44 U	46,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-082020	08/20/2020	20,000,000	< 0.44 U	45,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58d-102920	10/29/2020	20,000,000	< 0.44 U	44,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-032621	03/26/2021	29,000,000 J-	< 0.44 U	43,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-092421	09/24/2021	23,000,000	< 0.44 U	43,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-121621	12/16/2021	23,000,000	< 4.4	38,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-031722	03/17/2022	26,000,000	< 4.4 U	44,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-060822	06/08/2022	23,000,000	< 0.30 U	47,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-110922	11/09/2022	19,000,000	< 0.44 UJ	49,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-030923	03/09/2023	22,000,000	< 2.2 U	49,000 J-
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-061523	06/15/2023	19,000,000	< 2.2	50,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-082323	08/23/2023	20,000,000	< 2.2 U	50,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-121223	12/12/2023	19,000,000	< 2.2 U	50,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-022824	02/28/2024	19,000,000	< 4.4 U	50,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-061224	06/12/2024	19,000,000	< 4.4 U	47,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-091124	09/11/2024	17,000,000	< 4.4 U	54,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-121224	12/12/2024	17,000,000	< 4.4 U	51,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-021925	02/19/2025	18,000,000	< 4.4	53,000
Deep	PA-18d	GCC1 & Proximal Wells	PA-18D-032921	03/29/2021	110,000	81	< 20 U
Deep	PA-18d	GCC1 & Proximal Wells	PA-18D-030923	03/09/2023	50,000	< 0.44 U	< 20 UJ
Deep	PA-18d	GCC1 & Proximal Wells	PA-18D-061623	06/16/2023	27,000 J-	< 0.44	< 40
Deep	PA-18d	GCC1 & Proximal Wells	PA-18D-082123	08/21/2023	80,000	< 0.44 U	< 10 U
Deep	PA-18d	GCC1 & Proximal Wells	PA-18D-121223	12/12/2023	54,000	< 0.44 U	< 10 U
Deep	PA-18d	GCC1 & Proximal Wells	PA-18D-022724	02/27/2024	98,000	< 0.44 U	< 20 U
Deep	PA-18d	GCC1 & Proximal Wells	PA-18D-061224	06/12/2024	85,000	< 0.44 U	< 10 U
Deep	PA-18d	GCC1 & Proximal Wells	PA-18D-090924	09/09/2024	67,000	< 0.44 U	< 9.1 U
Deep	PA-18d	GCC1 & Proximal Wells	PA-18D-121024	12/10/2024	65,000	< 0.44 U	< 91 U
Deep	PA-18d	GCC1 & Proximal Wells	PA-18D-022125	02/21/2025	75,000	< 0.44	< 36
Deep	PA-19d	GCC2	Pa-19d-110619	11/06/2019	94,000	9,300 J-	< 48 U
Deep	PA-19d	GCC2	Pa-19d-022620	02/26/2020	111,000	8,300	< 48 U
Deep	PA-19d	GCC2	PA-19d-052920	05/29/2020	140,000	8,200	< 48 U
Deep	PA-19d	GCC2	PA-19D-082620	08/26/2020	160,000	5,200	< 95 U
Deep	PA-19d	GCC2	PA-19d-110520	11/05/2020	180,000	3,800	< 48 U
Deep	PA-19d	GCC2	PA-19D-040521	04/05/2021	340,000	7,100	< 20 U
Deep	PA-19d	GCC2	PA-19D-092321	09/23/2021	320,000 J	< 0.44 R	< 20 U
Deep	PA-19d	GCC2	PA-19D-121621	12/16/2021	330,000	2,700 J	< 200
Deep	PA-19d	GCC2	PA-19D-031722	03/17/2022	340,000	2,600	< 20 U
Deep	PA-19d	GCC2	PA-19D-060922	06/09/2022	360,000	3,200	< 20 U
Deep	PA-19d	GCC2	PA-19D-111022	11/10/2022	280,000	2,500	< 20 U
Deep	PA-19d	GCC2	PA-19D-030923	03/09/2023	350,000	12,000 J	< 10 UJ
Deep	PA-19d	GCC2	PA-19D-061623	06/16/2023	320,000	9,000	< 40
Deep	PA-19d	GCC2	PA-19D-082423	08/24/2023	320,000	6,600	< 20 U
Deep	PA-19d	GCC2	PA-19D-121323	12/13/2023	340,000	7,600	< 10 U
Deep	PA-19d	GCC2	PA-19D-022824	02/28/2024	330,000	5,700	< 10 U
Deep	PA-19d	GCC2	PA-19D-061324	06/13/2024	290,000	12,000	< 20 U
Deep	PA-19d	GCC2	PA-19D-091124	09/11/2024	270,000	6,300	< 4.5 U
Deep	PA-19d	GCC2	PA-19D-121224	12/12/2024	300,000	11,000	100
Deep	PA-19d	GCC2	PA-19D-022025	02/20/2025	280,000	11,000	89
Deep	PA-20d	GCC3	PA-20d-110719	11/07/2019	570,000	41	56 J+
Deep	PA-20d	GCC3	Pa-20d-022420	02/24/2020	789,000	39	58
Deep	PA-20d	GCC3	PA-20d-052120	05/21/2020	840,000	40	46
Deep	PA-20d	GCC3	PA-20D-082520	08/25/2020	800,000 J+	31	58
Deep	PA-20d	GCC3	PA-20d-110320	11/03/2020	840,000	37 J	61
Deep	PA-20d	GCC3	PA-20D-032521	03/25/2021	1,100,000	23	76
Deep	PA-20d	GCC3	PA-20D-092221	09/22/2021	1,100,000	24	99
Deep	PA-20d	GCC3	PA-20D-121521	12/15/2021	1,000,000	23	< 100
Deep	PA-20d	GCC3	PA-20D-031722	03/17/2022	1,200,000	12	140
Deep	PA-20d	GCC3	PA-20D-060922	06/09/2022	1,100,000	18	< 20 U
Deep	PA-20d	GCC3	PA-20D-111022	11/10/2022	1,000,000	9.3	< 20 U
Deep	PA-20d	GCC3	PA-20D-030923	03/09/2023	1,100,000	13	< 10 UJ
Deep	PA-20d	GCC3	PA-20D-061523	06/15/2023	880,000	14	< 20
Deep	PA-20d	GCC3	PA-20D-082323	08/23/2023	840,000	20	< 10 U
Deep	PA-20d	GCC3	PA-20D-121223	12/12/2023	810,000	18	< 10 U
Deep	PA-20d	GCC3	PA-20D-022824	02/28/2024	820,000	14	< 10 U
Deep	PA-20d	GCC3	PA-20D-061324	06/13/2024	680,000	4.5	< 10 U

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					ug / L	ug / L	ug / L
Deep	PA-20d	GCC3	PA-20D-091124	09/11/2024	620,000	2.7	74
Deep	PA-20d	GCC3	PA-20D-121224	12/12/2024	580,000	1.7	48
Deep	PA-20d	GCC3	PA-20D-022025	02/20/2025	580,000	1.7	28
Deep	PA-21d	GCC3	Pa-21d-110719	11/07/2019	347,000	27,000	2,400
Deep	PA-21d	GCC3	Pa-21d-022620	02/26/2020	463,000	38,000	1,300
Deep	PA-21d	GCC3	PA-21D-052120	05/21/2020	420,000	49,000 J	1,200
Deep	PA-21d	GCC3	PA-21D-082520	08/25/2020	360,000	36,000	1,300
Deep	PA-21d	GCC3	PA-21d-110420	11/04/2020	370,000	40,000 J+	1,300
Deep	PA-21d	GCC3	PA-21D-040121	04/01/2021	430,000	47,000	< 20 U
Deep	PA-21d	GCC3	PA-21D-092421	09/24/2021	350,000	39,000 J	1,800
Deep	PA-21d	GCC3	PA-21D-121521	12/15/2021	320,000	49,000 J	1,200
Deep	PA-21d	GCC3	PA-21D-031722	03/17/2022	360,000	16,000	1,100
Deep	PA-21d	GCC3	PA-21D-060922	06/09/2022	360,000	27,000	< 20 U
Deep	PA-21d	GCC3	PA-21D-111022	11/10/2022	290,000	15,000	< 100 U
Deep	PA-21d	GCC3	PA-21D-030923	03/09/2023	340,000	30,000 J	110 J-
Deep	PA-21d	GCC3	PA-21D-061623	06/16/2023	330,000	23,000	< 100
Deep	PA-21d	GCC3	PA-21D-082323	08/23/2023	330,000	26,000	< 100 U
Deep	PA-21d	GCC3	PA-21D-121223	12/12/2023	340,000	11,000	< 10 U
Deep	PA-21d	GCC3	PA-21D-022824	02/28/2024	300,000	27,000	< 10 U
Deep	PA-21d	GCC3	PA-21D-061324	06/13/2024	300,000	41,000	< 10 U
Deep	PA-21d	GCC3	PA-21D-022025	02/20/2025	350,000	43,000	1,100
Deep	PA-22d	GCC4 & Proximal Wells	PA-22d-102419	10/24/2019	10,200,000	< 0.44 U	54,000
Deep	PA-22d	GCC4 & Proximal Wells	Pa-22d-022120	02/21/2020	9,190,000	< 0.44 U	38,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22d-052020	05/20/2020	9,800,000	< 0.44 U	40,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-082120	08/21/2020	9,200,000 J+	< 0.44 U	38,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22d-110320	11/03/2020	9,100,000	< 0.44 U	37,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-032421	03/24/2021	8,200,000	< 0.44 U	33,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-092221	09/22/2021	7,400,000	< 0.44 U	26,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-121521	12/15/2021	7,100,000	< 0.44	24,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-031622	03/16/2022	8,000,000	< 0.44 U	23,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-060822	06/08/2022	7,300,000	< 0.30 U	22,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-110922	11/09/2022	6,000,000	< 0.44 U	17,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-030823	03/08/2023	6,000,000	< 0.44 U	17,000 J-
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-061523	06/15/2023	5,600,000	< 0.44	15,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-082323	08/23/2023	4,800,000	< 0.44 U	13,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-121223	12/12/2023	5,300,000	< 0.44 U	13,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-022724	02/27/2024	5,300,000	< 0.44 U	14,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-061224	06/12/2024	5,100,000	< 0.44 U	14,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-091124	09/11/2024	4,300,000	< 0.44 U	15,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-121224	12/12/2024	5,000,000	< 0.44 U	14,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-022025	02/20/2025	5,200,000	< 0.44	13,000
Deep	PA-23d	GCC5 & Proximal Wells	PA-23d-110519	11/05/2019	12,500	2.8	< 0.95 U
Deep	PA-23d	GCC5 & Proximal Wells	Pa-23d-021920	02/19/2020	5,690,000	< 0.44 U	< 0.95 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23d-052020	05/20/2020	12,000,000	1.3 j	< 4.8 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-082020	08/20/2020	22,000,000	< 0.44 U	< 4.8 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23d-102920	10/29/2020	27,000,000	< 0.44 U	< 0.95 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-032521	03/25/2021	16,000,000	< 0.44 U	< 1,000 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-092321	09/23/2021	17,000,000	< 0.44 U	< 100 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-121421	12/14/2021	5,700,000	< 0.44	< 50
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-031622	03/16/2022	89,000	< 0.44 U	< 2.0 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-060722	06/07/2022	9,700,000	< 0.30 U	< 100 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-111022	11/10/2022	6,900,000	< 0.44 U	< 200 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-030823	03/08/2023	17,000,000	< 0.44 U	< 200 UJ
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-061523	06/15/2023	25,000,000	< 0.44	< 400
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-082223	08/22/2023	29,000,000	< 0.44 U	< 400 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-121123	12/11/2023	30,000,000	< 0.44 U	< 300 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-022724	02/27/2024	9,700,000	< 0.44 U	< 100 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-061124	06/11/2024	31,000,000	< 0.44 U	< 400 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-091024	09/10/2024	33,000,000	< 0.44 U	< 18 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-121124	12/11/2024	31,000,000	< 0.44 U	< 0.91 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-021925	02/19/2025	33,000,000	< 0.44	< 91
Deep	PA-24d	GCC5 & Proximal Wells	PA-24d-110619	11/06/2019	42,300,000	< 0.44 U	< 48 U
Deep	PA-24d	GCC5 & Proximal Wells	Pa-24d-022020	02/20/2020	41,500,000	< 0.44 U	< 48 U
Deep	PA-24d	GCC5 & Proximal Wells	PA-24d-051920	05/19/2020	46,000,000	< 0.44 U	< 48 U
Deep	PA-24d	GCC5 & Proximal Wells	PA-24D-082020	08/20/2020	43,000,000	< 0.44 U	< 19 U
Deep	PA-24d	GCC5 & Proximal Wells	PA-24d-102920	10/29/2020	44,000,000	< 0.44 U	< 4.8 U
Deep	PA-24d	GCC5 & Proximal Wells	PA-24D-031821	03/18/2021	44,000,000	< 0.44 U	< 200 U
Deep	PA-24d	GCC5 & Proximal Wells	PA-24D-092221	09/22/2021	38,000,000	< 0.44 U	< 100 U
Deep	PA-24d	GCC5 & Proximal Wells	PA-24D-121521	12/15/2021	35,000,000	< 0.44	< 200
Deep	PA-24d	GCC5 & Proximal Wells	PA-24D-031622	03/16/2022	38,000,000	< 0.44 U	< 200 U
Deep	PA-24d	GCC5 & Proximal Wells	PA-24D-060722	06/07/2022	35,000,000	< 0.30 U	< 400 U

Appendix D
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Portland, Oregon

Aquifer	Well ID	Cluster	Sample ID	Date	Chloride	Chlorobenzene	Perchlorate
					ug / L	ug / L	ug / L
Deep	PA-24d	GCC5 & Proximal Wells	PA-24D-111022	11/10/2022	32,000,000	< 0.44 U	< 200 U
Deep	PA-24d	GCC5 & Proximal Wells	PA-24D-030823	03/08/2023	33,000,000	< 0.44 U	< 400 UJ
Deep	PA-24d	GCC5 & Proximal Wells	PA-24D-061523	06/15/2023	33,000,000	< 0.44	< 400
Deep	PA-24d	GCC5 & Proximal Wells	PA-24D-082223	08/22/2023	31,000,000	< 0.44 U	< 400 U
Deep	PA-24d	GCC5 & Proximal Wells	PA-24D-121123	12/11/2023	31,000,000	< 0.44 U	< 200 U
Deep	PA-24d	GCC5 & Proximal Wells	PA-24D-022724	02/27/2024	30,000,000	< 0.44 U	< 400 U
Deep	PA-24d	GCC5 & Proximal Wells	PA-24D-061224	06/12/2024	30,000,000	< 0.44 U	< 400 U
Deep	PA-24d	GCC5 & Proximal Wells	PA-24D-091024	09/10/2024	30,000,000	< 0.44 U	< 18 U
Deep	PA-24d	GCC5 & Proximal Wells	PA-24D-121124	12/11/2024	30,000,000	< 0.44 U	< 0.91 U
Deep	PA-24d	GCC5 & Proximal Wells	PA-24D-021925	02/19/2025	29,000,000	< 0.44	< 91
Deep	PA-25d	GCC6 & Proximal Wells	PA-25d-110519	11/05/2019	1,100	< 0.44 U	< 0.95 U
Deep	PA-25d	GCC6 & Proximal Wells	Pa-25d-021820	02/18/2020	22,100	< 0.025 U	< 0.95 U
Deep	PA-25d	GCC6 & Proximal Wells	Pa-25d-051820	05/18/2020	23,000	< 0.025 U	< 0.95 U
Deep	PA-25d	GCC6 & Proximal Wells	PA-25D-081820	08/18/2020	24,000	< 0.025 U	< 9.5 U
Deep	PA-25d	GCC6 & Proximal Wells	PA-25d-102720	10/27/2020	20,000	< 0.20 U	< 0.95 U
Deep	PA-25d	GCC6 & Proximal Wells	PA-25D-031821	03/18/2021	20,000	< 0.025 U	< 2.0 U
Deep	PA-25d	GCC6 & Proximal Wells	PA-25D-092121	09/22/2021	24,000	< 0.025 U	< 2.0 U
Deep	PA-25d	GCC6 & Proximal Wells	PA-25D-121421	12/14/2021	23,000	< 0.025	< 2.0
Deep	PA-25d	GCC6 & Proximal Wells	PA-25D-031422	03/14/2022	18,000 J-	< 0.060 U	< 2.0 U
Deep	PA-25d	GCC6 & Proximal Wells	PA-25D-060722	06/07/2022	23,000	< 0.060 U	< 2.0 U
Deep	PA-25d	GCC6 & Proximal Wells	PA-25D-110722	11/07/2022	34,000	< 0.060 U	< 2.0 U
Deep	PA-25d	GCC6 & Proximal Wells	PA-25D-030823	03/08/2023	11,000 J+	< 0.060 U	< 2.0 UJ
Deep	PA-25d	GCC6 & Proximal Wells	PA-25D-061323	06/13/2023	10,000	< 0.060	< 2.0
Deep	PA-25d	GCC6 & Proximal Wells	PA-25D-082223	08/22/2023	24,000	< 0.060 U	< 2.0 U
Deep	PA-25d	GCC6 & Proximal Wells	PA-25D-121123	12/11/2023	12,000	< 0.060 U	< 2.0 U
Deep	PA-25d	GCC6 & Proximal Wells	PA-25D-022724	02/27/2024	13,000	< 0.060 U	< 2.0 U
Deep	PA-25d	GCC6 & Proximal Wells	PA-25D-061124	06/11/2024	30,000	< 0.060 U	< 2.0 U
Deep	PA-25d	GCC6 & Proximal Wells	PA-25D-090924	09/09/2024	21,000	< 0.060 U	< 0.91 U
Deep	PA-25d	GCC6 & Proximal Wells	PA-25D-121024	12/10/2024	30,000 J+	< 0.060 U	< 0.91 U
Deep	PA-25d	GCC6 & Proximal Wells	PA-25D-021825	02/18/2025	32,000	< 0.060	< 0.91
Deep	PA-26d	GCC6 & Proximal Wells	PA-26d-110419	11/04/2019	7,400	< 0.44 U	< 0.95 U
Deep	PA-26d	GCC6 & Proximal Wells	Pa-26d-021320	02/13/2020	46,000	0.71	< 0.95 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-051820	05/18/2020	48,000	< 0.025 U	< 0.95 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-081920	08/19/2020	48,000	< 0.025 U	< 9.5 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26d-102820	10/28/2020	52,000	< 0.025 U	1.1 j
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-031621	03/16/2021	37,000	< 0.025 U	< 2.0 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-092321	09/23/2021	60,000	< 0.025 U	< 2.0 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-121321	12/13/2021	62,000	< 0.025	< 4.0
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-031522	03/15/2022	72,000 J-	< 0.060 U	< 2.0 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-060722	06/07/2022	63,000	< 0.060 U	< 2.0 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-110822	11/08/2022	6,500	< 0.060 U	< 2.0 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-030823	03/08/2023	69,000	< 0.060 U	< 2.0 UJ
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-061423	06/14/2023	67,000 J	< 0.060	< 2.0
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-082223	08/22/2023	74,000	< 0.060 U	< 2.0 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-121123	12/11/2023	27,000	< 0.060 U	< 2.0 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-022624	02/26/2024	64,000	< 0.060 U	< 2.0 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-061024	06/10/2024	80,000	< 0.060 U	< 2.0 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-090924	09/09/2024	60,000	< 0.060 U	< 0.91 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-121024	12/10/2024	80,000	< 0.060 U	< 0.91 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-022125	02/21/2025	84,000	< 0.060	< 0.91
Deep	PA-27d	GCC1 & Proximal Wells	PA-27d-102519	10/25/2019	1,150,000	< 0.44 U	< 48 U
Deep	PA-27d	GCC1 & Proximal Wells	Pa-27d-021420	02/14/2020	824,000	0.84 j	< 48 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-052120	05/21/2020	870,000	< 0.44 U	< 48 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-081820	08/18/2020	810,000 J+	0.52 j	< 95 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27d-110420	11/04/2020	1,100,000	3.5 J	< 19 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-032321	03/23/2021	710,000 J-	< 0.44 U	< 20 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-092221	09/22/2021	840,000	< 0.44 U	< 20 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-121321	12/13/2021	930,000	< 0.44	< 20
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-031622	03/16/2022	1,000,000	< 0.44 U	< 20 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-060822	06/08/2022	890,000	< 0.30 U	< 20 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-110822	11/08/2022	960,000	< 0.44 U	< 10 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-030823	03/08/2023	670,000	< 0.44 U	< 20 UJ
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-061423	06/14/2023	690,000	< 0.44	< 20
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-082223	08/22/2023	660,000	< 0.44 U	< 10 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-121223	12/12/2023	450,000	< 0.44 U	< 10 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-022724	02/27/2024	460,000	< 0.44 U	< 20 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-061224	06/12/2024	540,000	< 0.44 U	< 10 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-090924	09/09/2024	720,000	< 0.44 U	< 9.1 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-120924	12/09/2024	590,000	< 0.44 U	< 9.1 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-022125	02/21/2025	600,000	< 0.44	< 36
Deep	PA-30d	GCC2	PA-30d-103119	10/31/2019	170,000	4,900 J-	< 48 U

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Aquifer	Well ID	Cluster	Sample ID	Date	Chloride	Chlorobenzene	Perchlorate
					ug / L	ug / L	ug / L
Deep	PA-30d	GCC2	Pa-30d-022520	02/25/2020	207,000	5,700	< 190 U
Deep	PA-30d	GCC2	PA-30d-052120	05/21/2020	280,000	5,800	< 48 U
Deep	PA-30d	GCC2	PA-30D-082720	08/27/2020	320,000	5,800	< 95 U
Deep	PA-30d	GCC2	PA-30d-110520	11/05/2020	440,000	4,700	< 48 U
Deep	PA-30d	GCC2	PA-30D-040221	04/02/2021	56,000	4,600	< 100 U
Deep	PA-30d	GCC2	PA-30D-092421	09/24/2021	540,000	< 0.44 R	< 20 U
Deep	PA-30d	GCC2	PA-30D-121621	12/16/2021	490,000	3,500	< 200
Deep	PA-30d	GCC2	PA-30D-031722	03/17/2022	490,000	4,700	< 20 U
Deep	PA-30d	GCC2	PA-30D-060922	06/09/2022	460,000	6,600	< 20 U
Deep	PA-30d	GCC2	PA-30D-111022	11/10/2022	270,000	26,000	< 20 U
Deep	PA-30d	GCC2	PA-30D-030923	03/09/2023	300,000	24,000	< 20 UJ
Deep	PA-30d	GCC2	PA-30D-061623	06/16/2023	310,000	19,000	< 40
Deep	PA-30d	GCC2	PA-30D-082423	08/24/2023	320,000	20,000	< 20 U
Deep	PA-30d	GCC2	PA-30D-121323	12/13/2023	320,000	22,000	< 10 U
Deep	PA-30d	GCC2	PA-30D-022824	02/28/2024	370,000	18,000	< 20 U
Deep	PA-30d	GCC2	PA-30D-061424	06/14/2024	320,000	13,000	< 20 U
Deep	PA-30d	GCC2	PA-30D-091124	09/11/2024	270,000	8,200	< 18 U
Deep	PA-30d	GCC2	PA-30D-121224	12/12/2024	250,000	7,000	< 91 U
Deep	PA-30d	GCC2	PA-30D-022025	02/20/2025	280,000	6,700	< 91

Notes:

Bolded values indicate concentrations above the Reportable Detection Limit.

< = Compound not detected. Reportable detection limit shown.

µg/L = micrograms per liter

Qualifiers:

j = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

J+ = The concentration of the sample is considered to be biased high, as the associated QC results exceed the upper control limits.

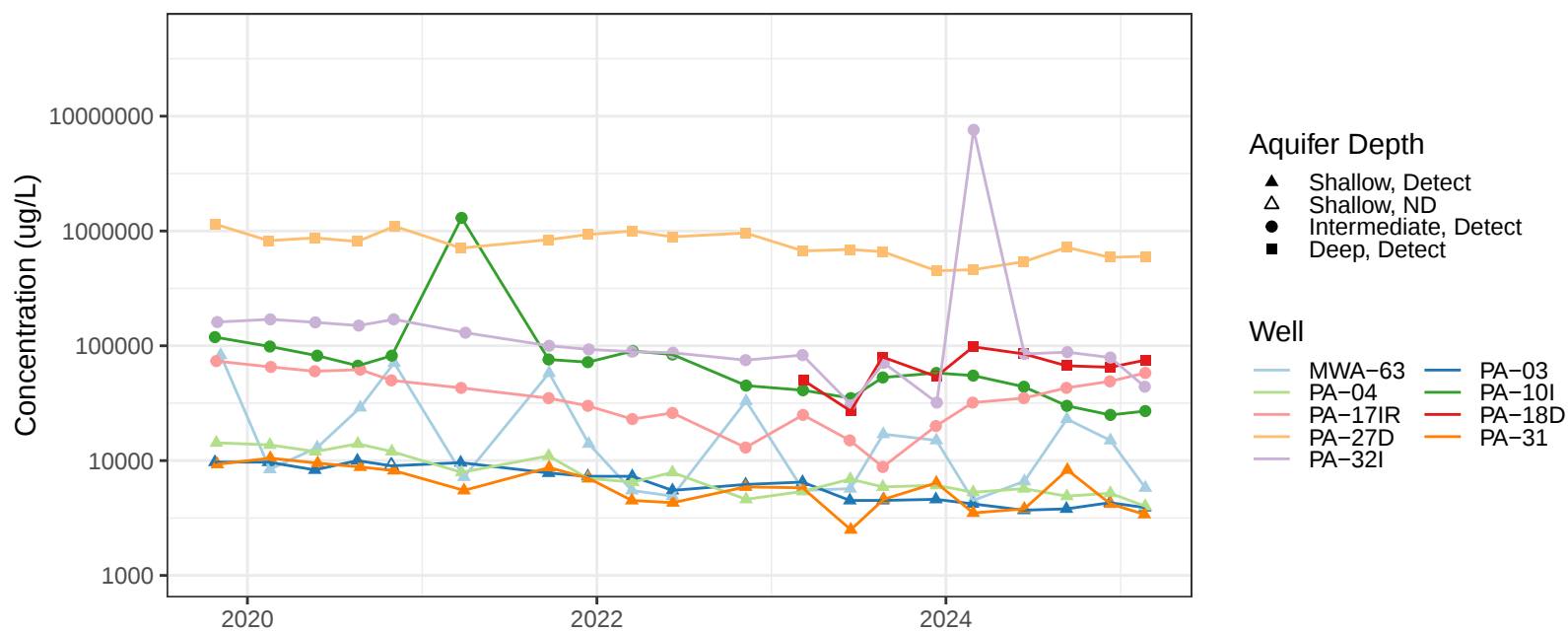
J- = The concentration of the sample is considered to be biased low, as the associated QC results are outside the lower control limits.

U = Compound not detected based on quality assurance review.

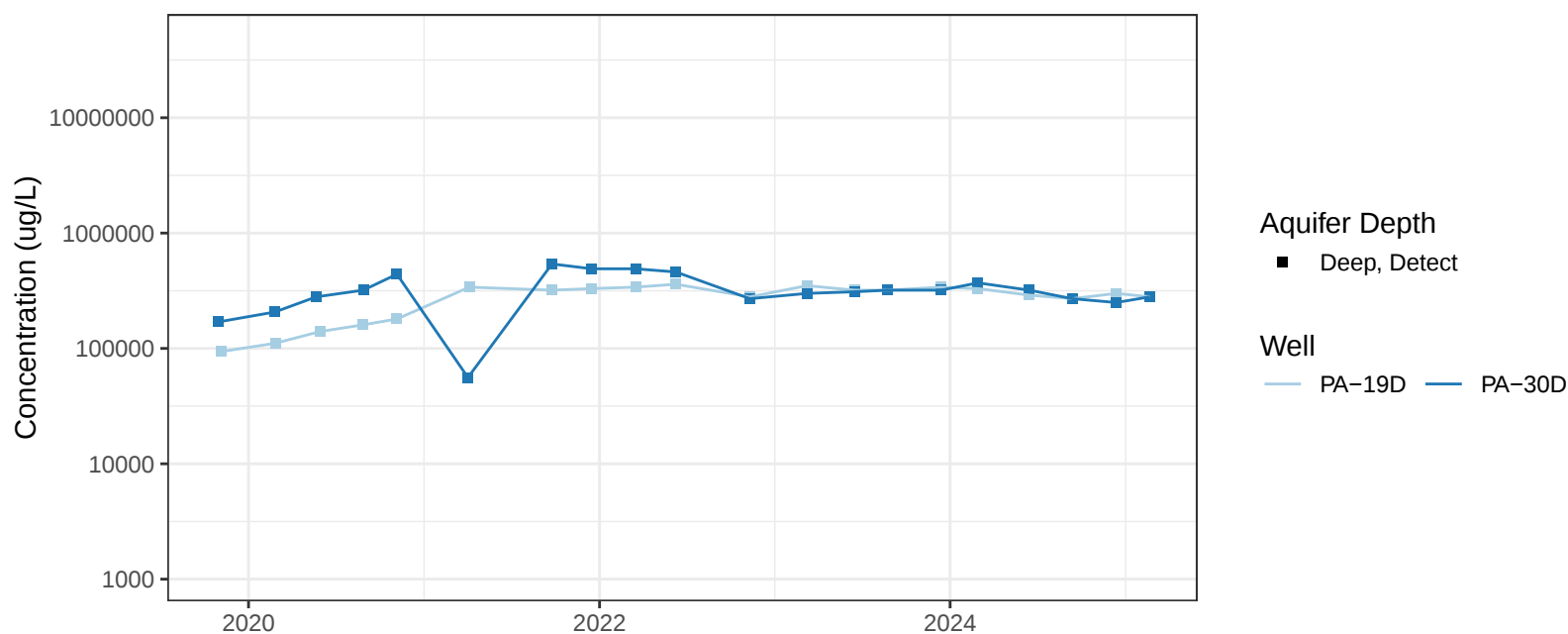
UJ = Analyte was analyzed for, but not detected. The detection limit is a quantitative estimate.

R = Rejected. Quality control indicates that the data are unusable (compound may or not be present).

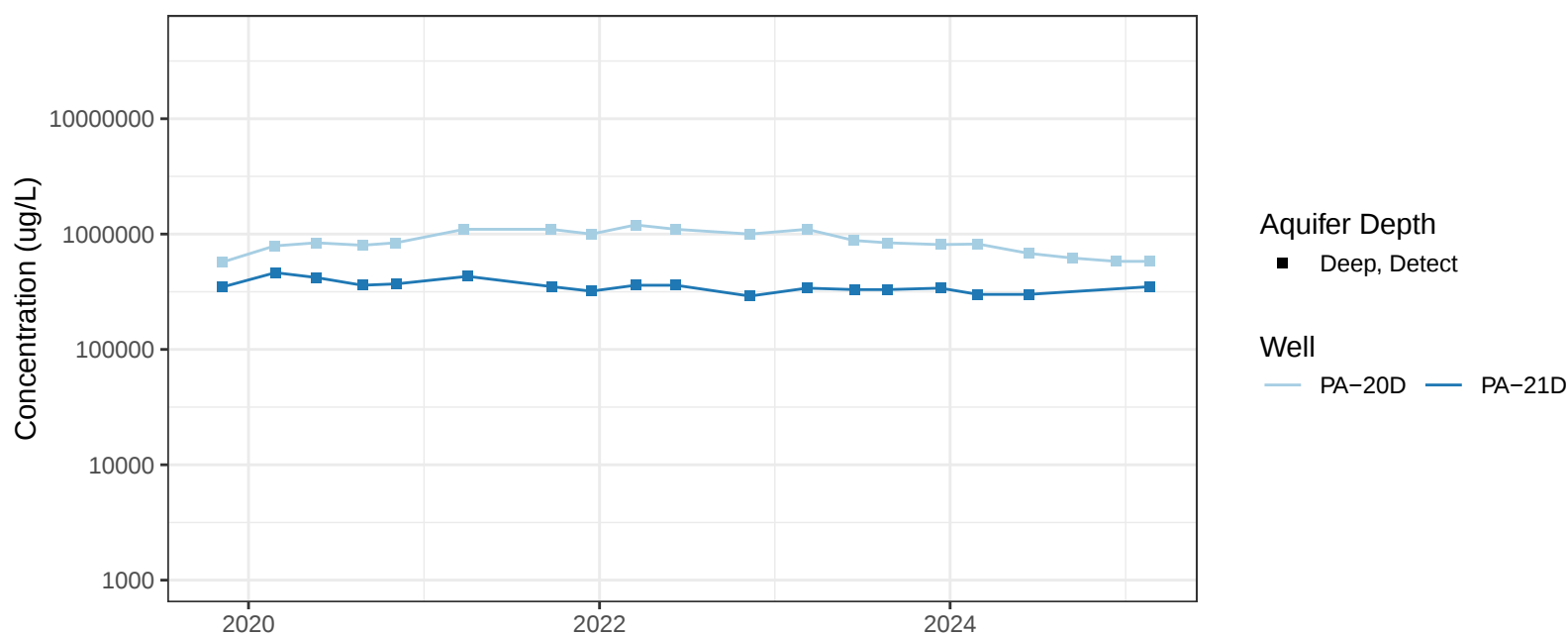
Chloride in GCC1 & Proximal Wells



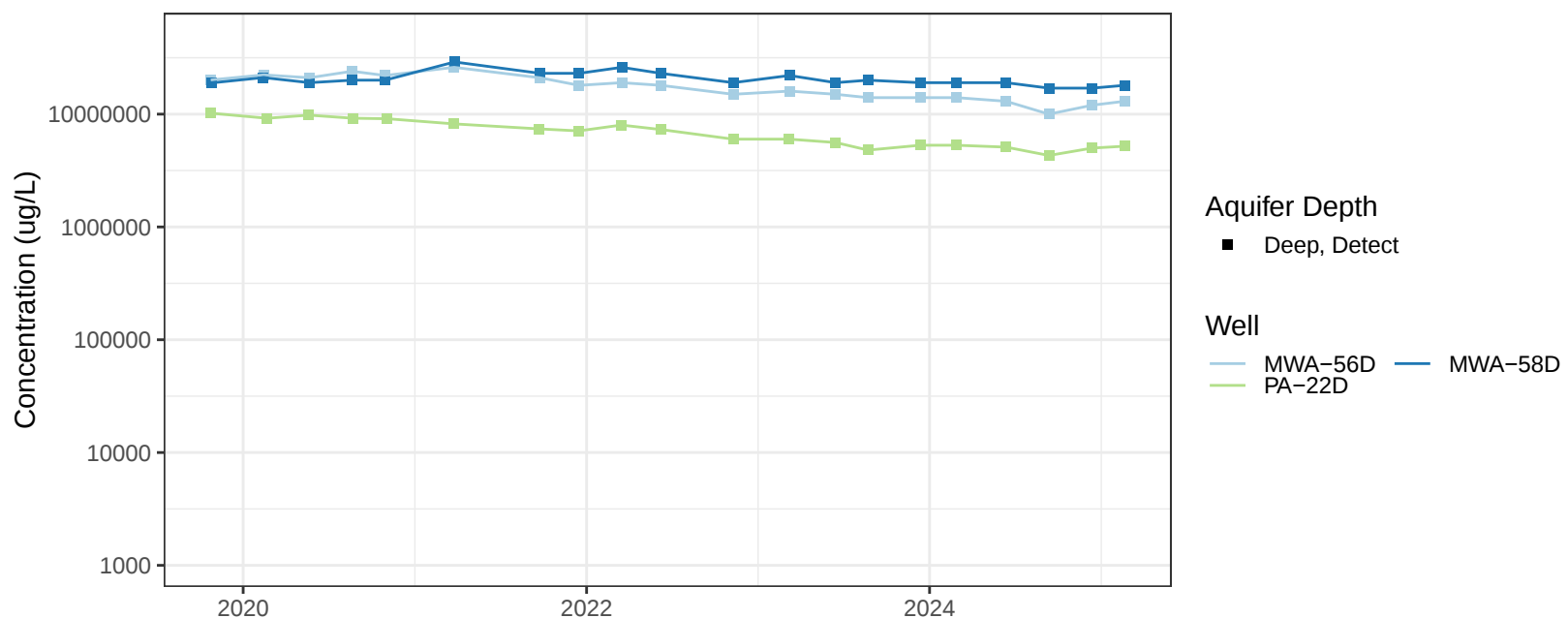
Chloride in GCC2



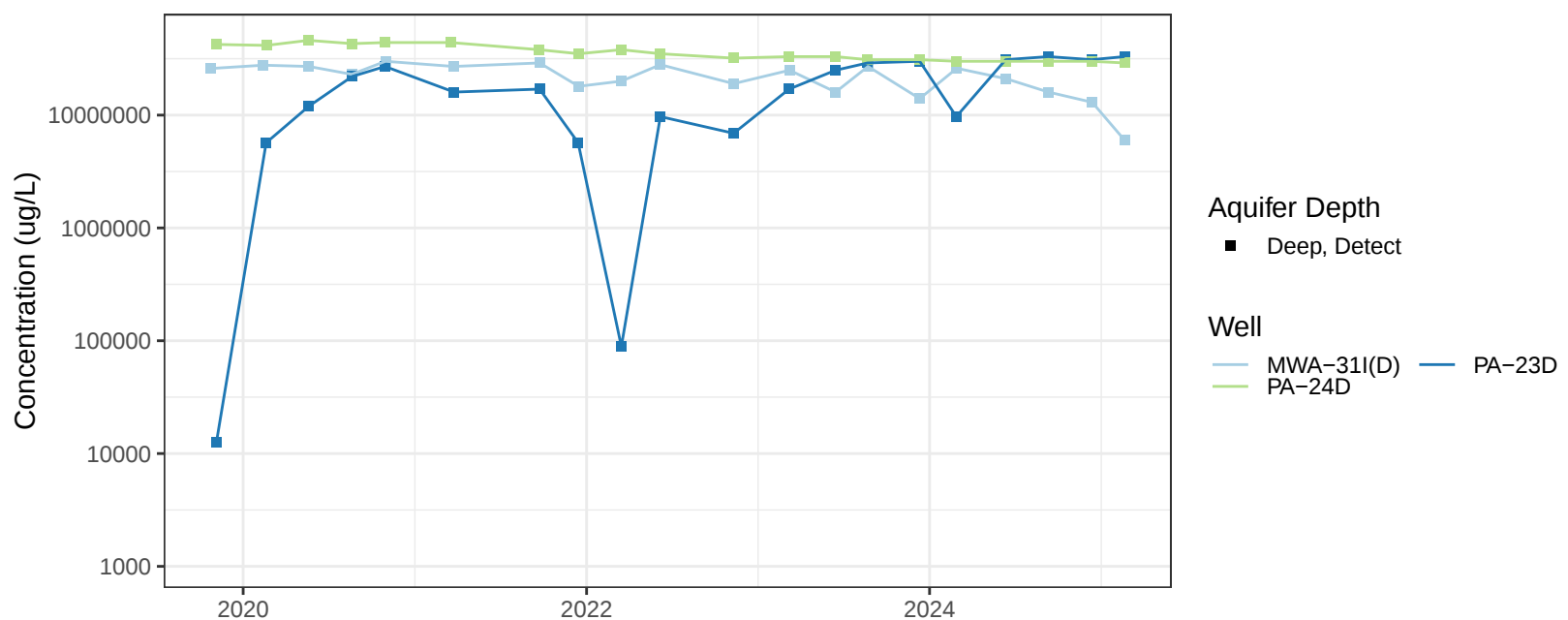
Chloride in GCC3



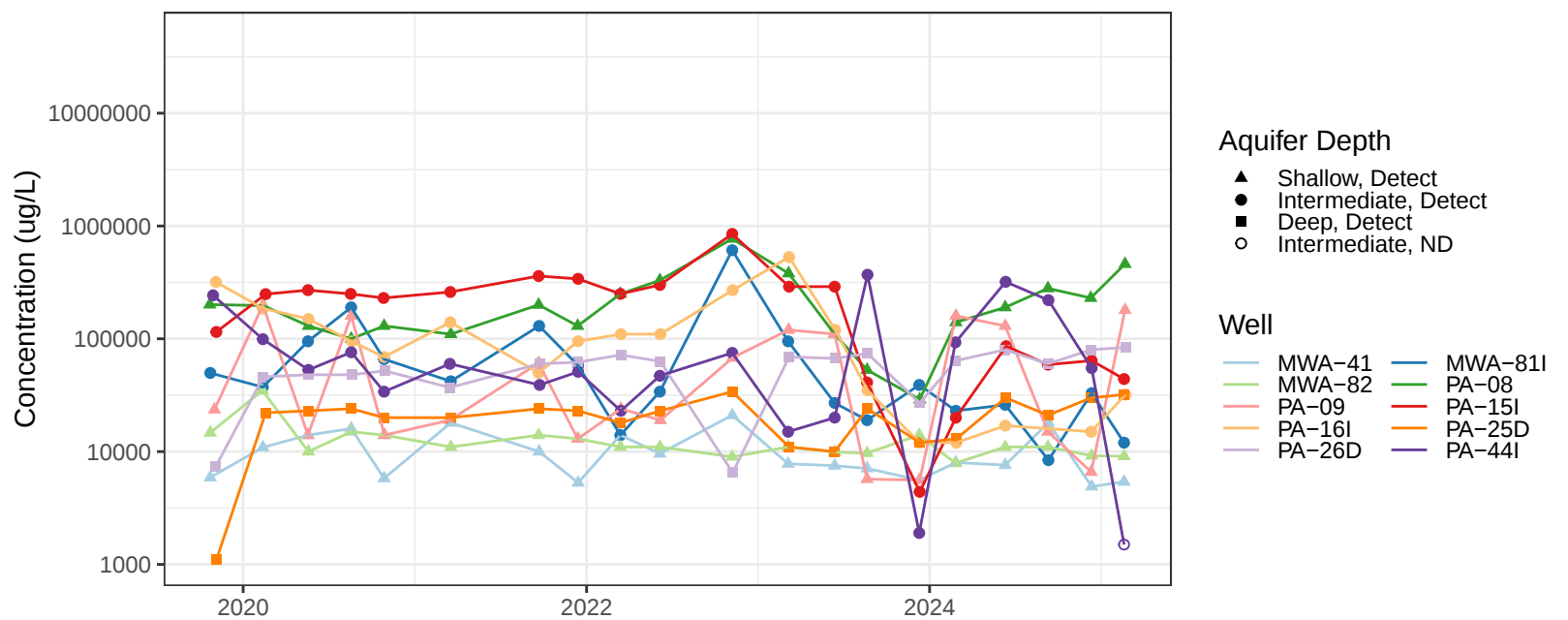
Chloride in GCC4 & Proximal Wells



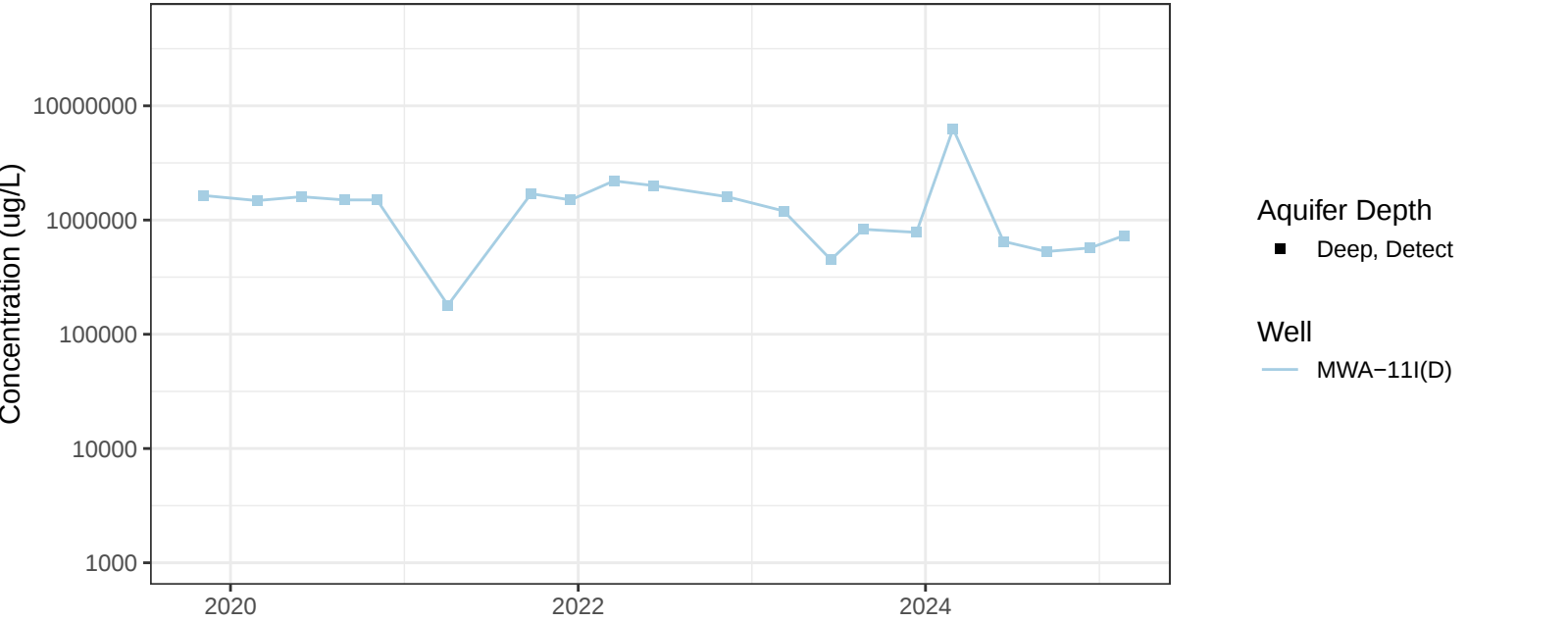
Chloride in GCC5 & Proximal Wells



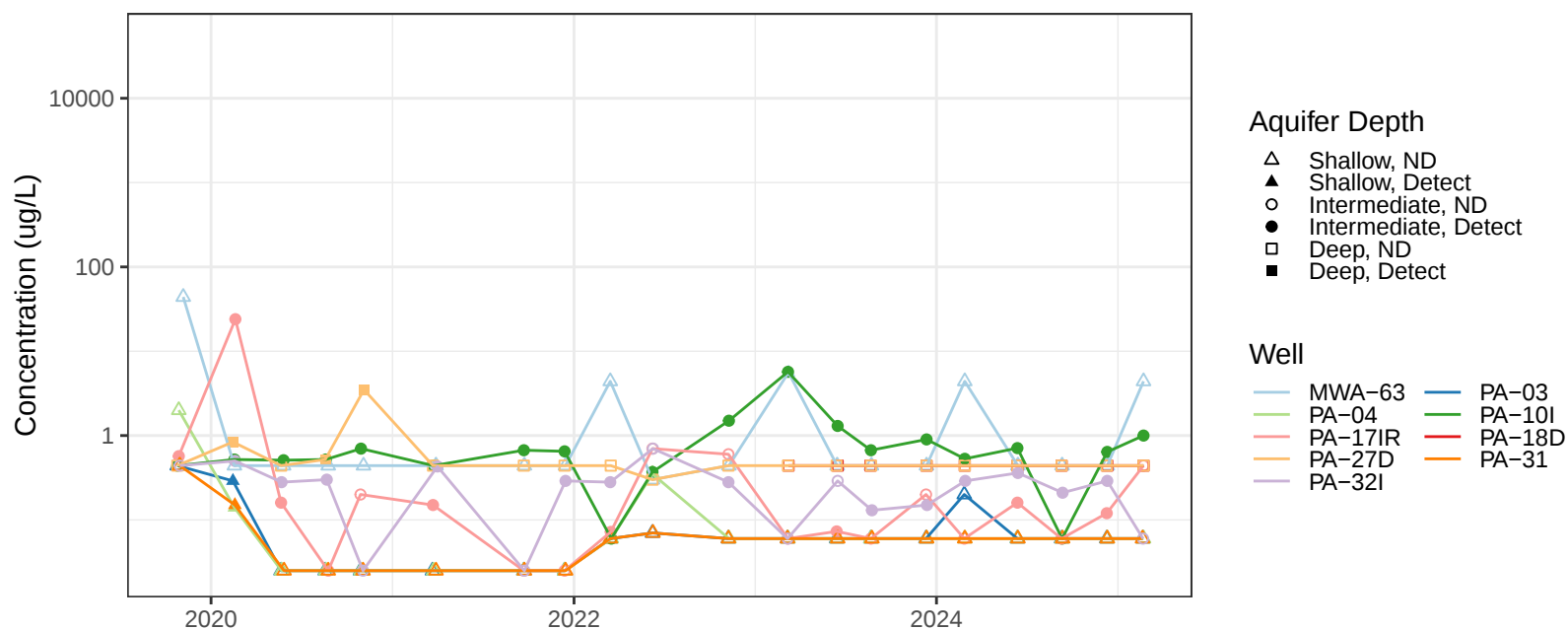
Chloride in GCC6 & Proximal Wells



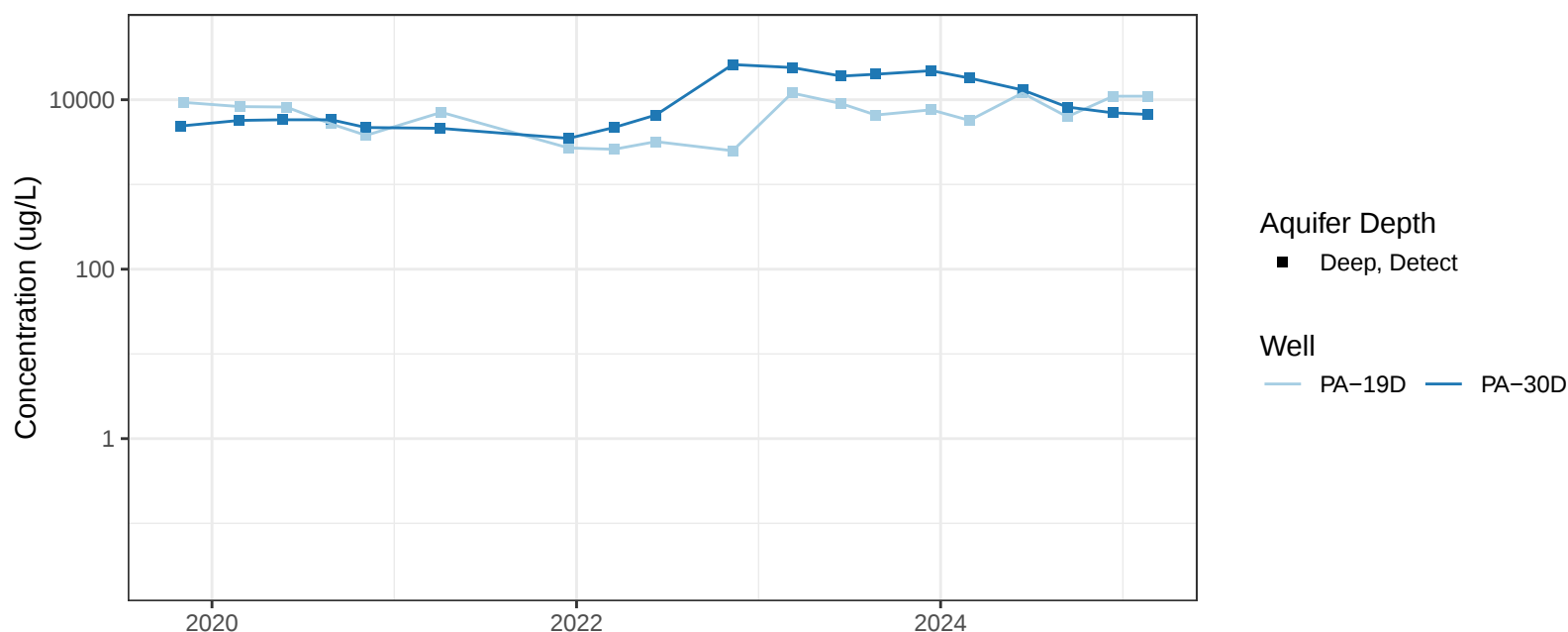
Chloride in Well Distal from BW and GCCs



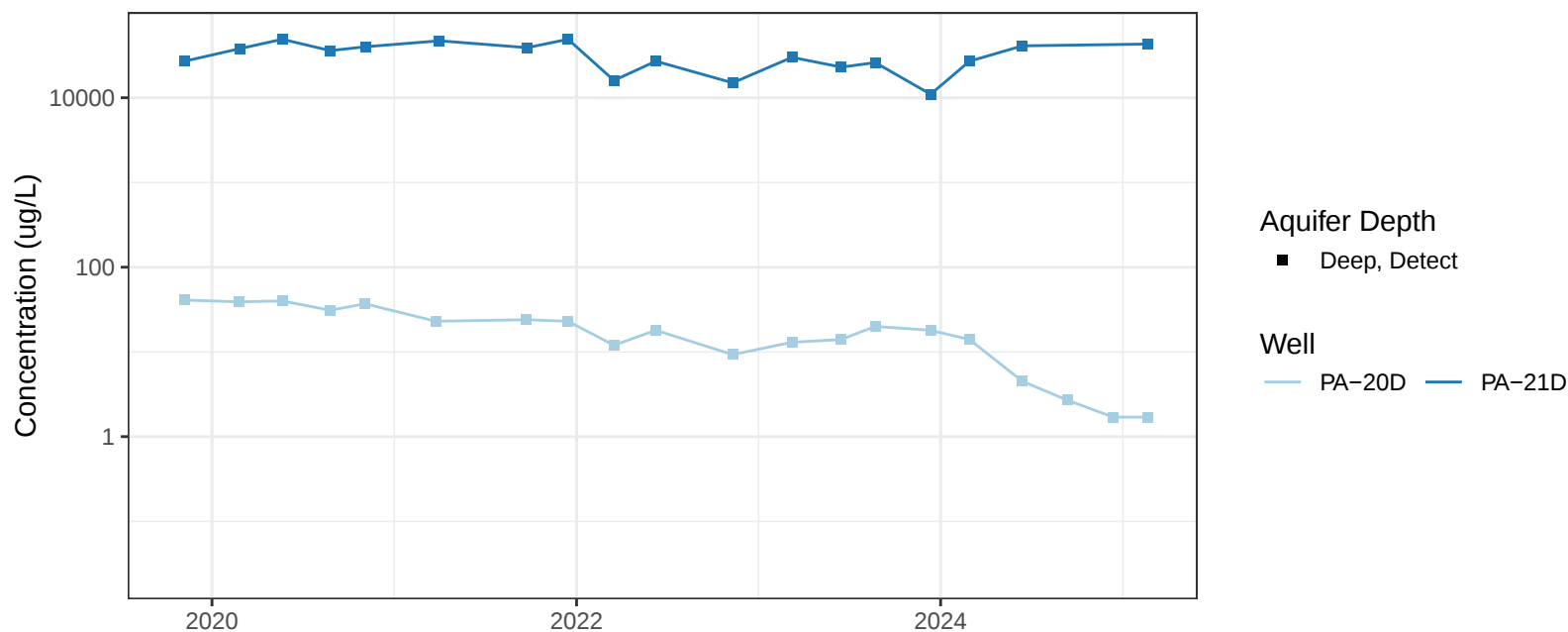
Chlorobenzene in GCC1 & Proximal Wells



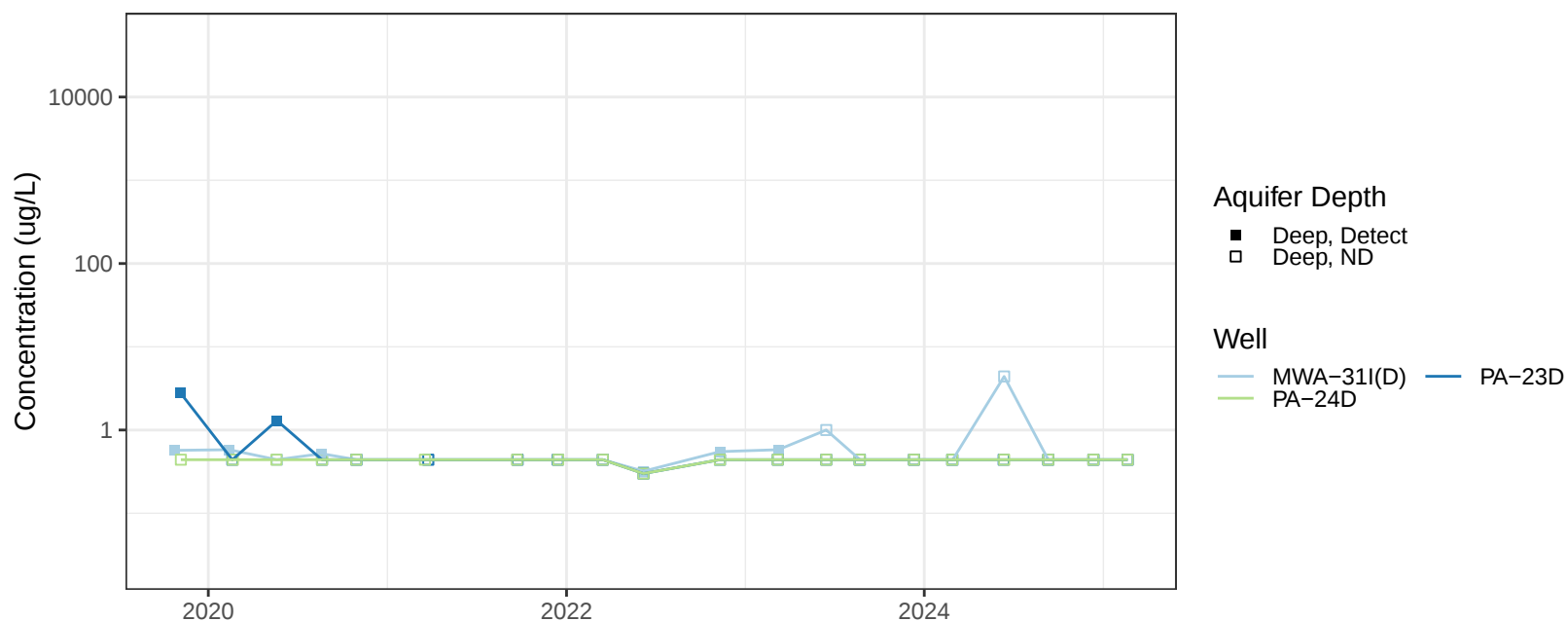
Chlorobenzene in GCC2



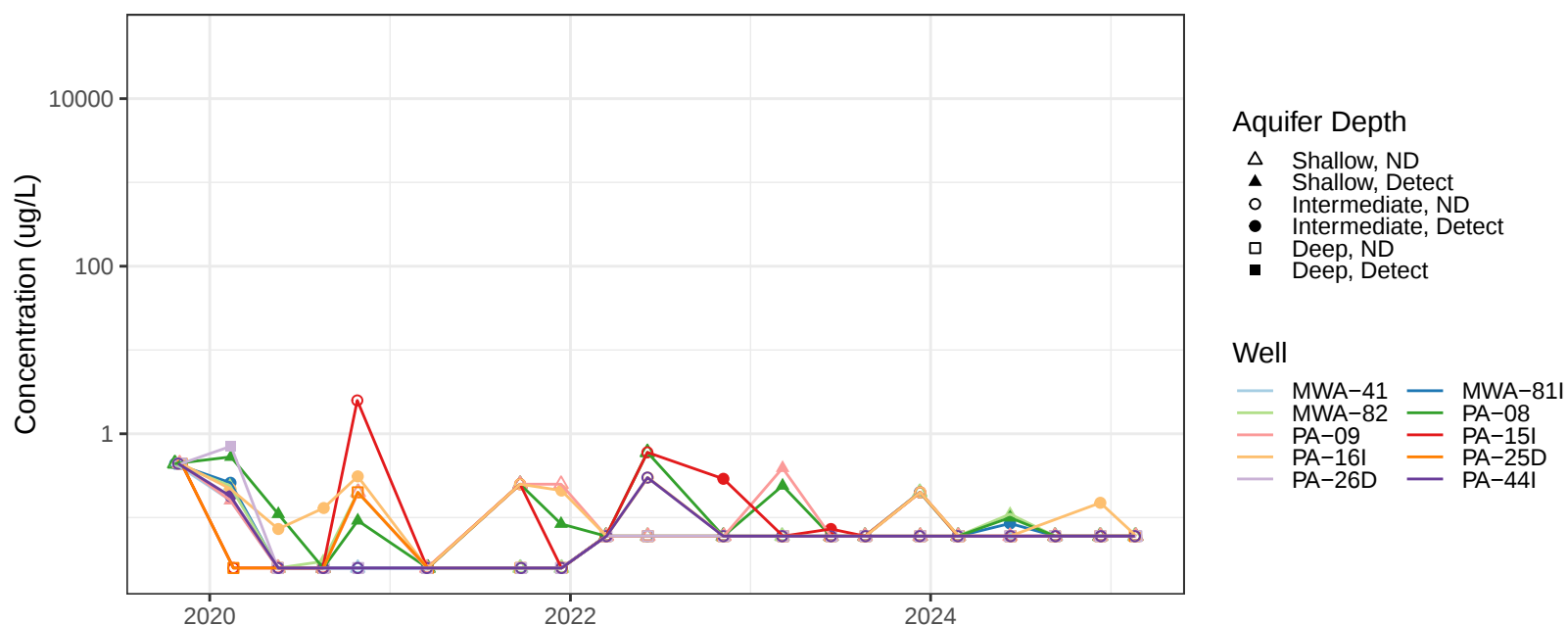
Chlorobenzene in GCC3



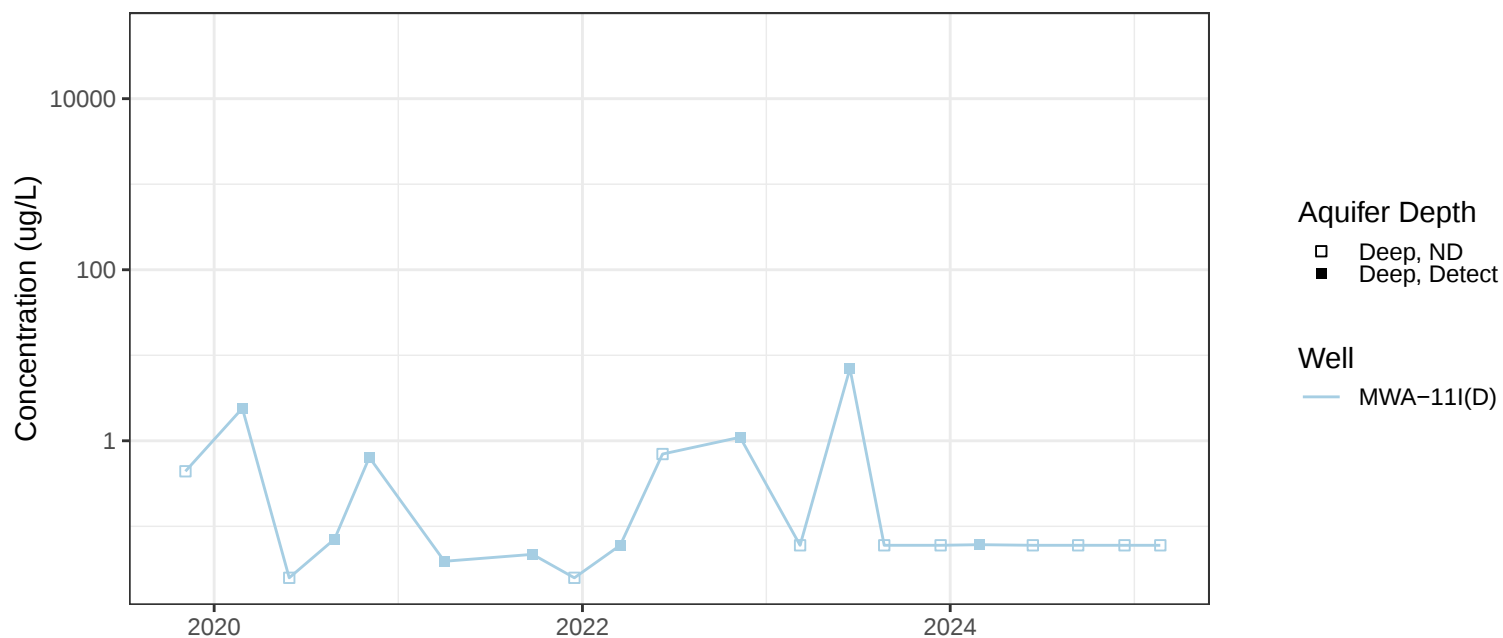
Chlorobenzene in GCC5 & Proximal Wells



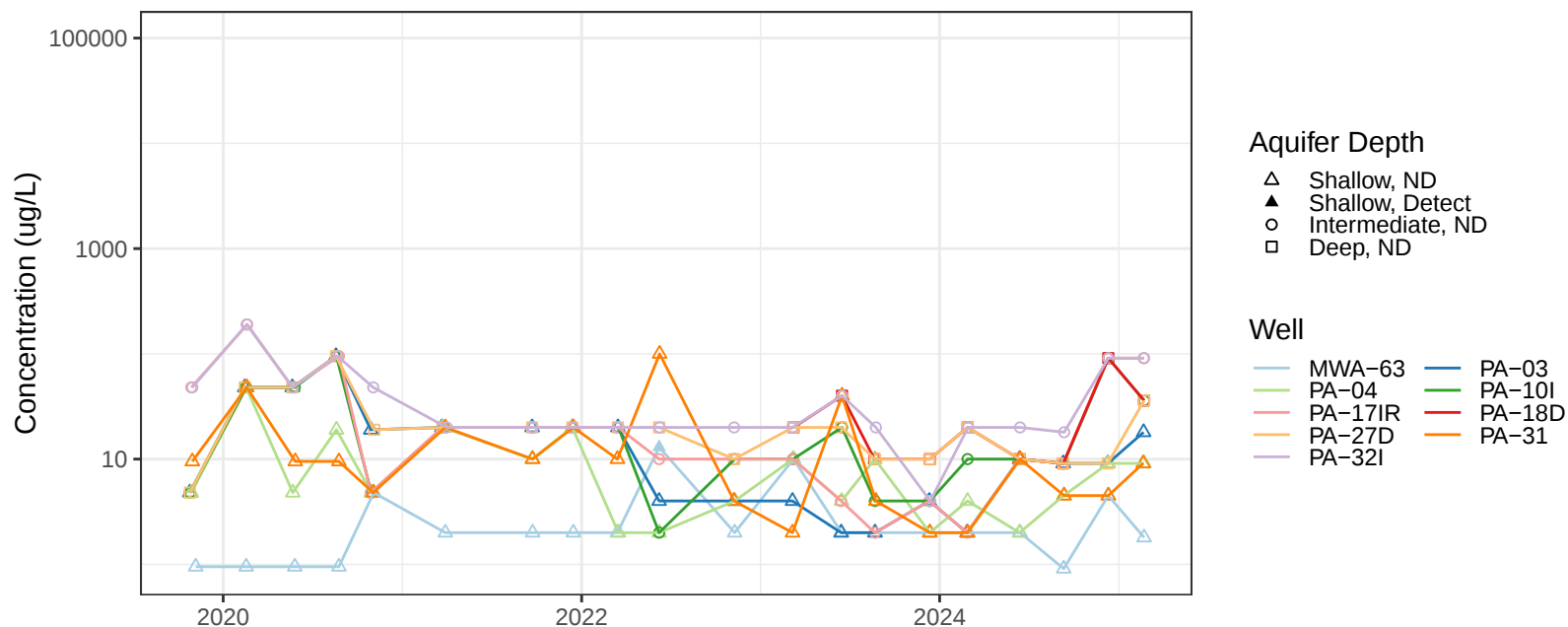
Chlorobenzene in GCC6 & Proximal Wells



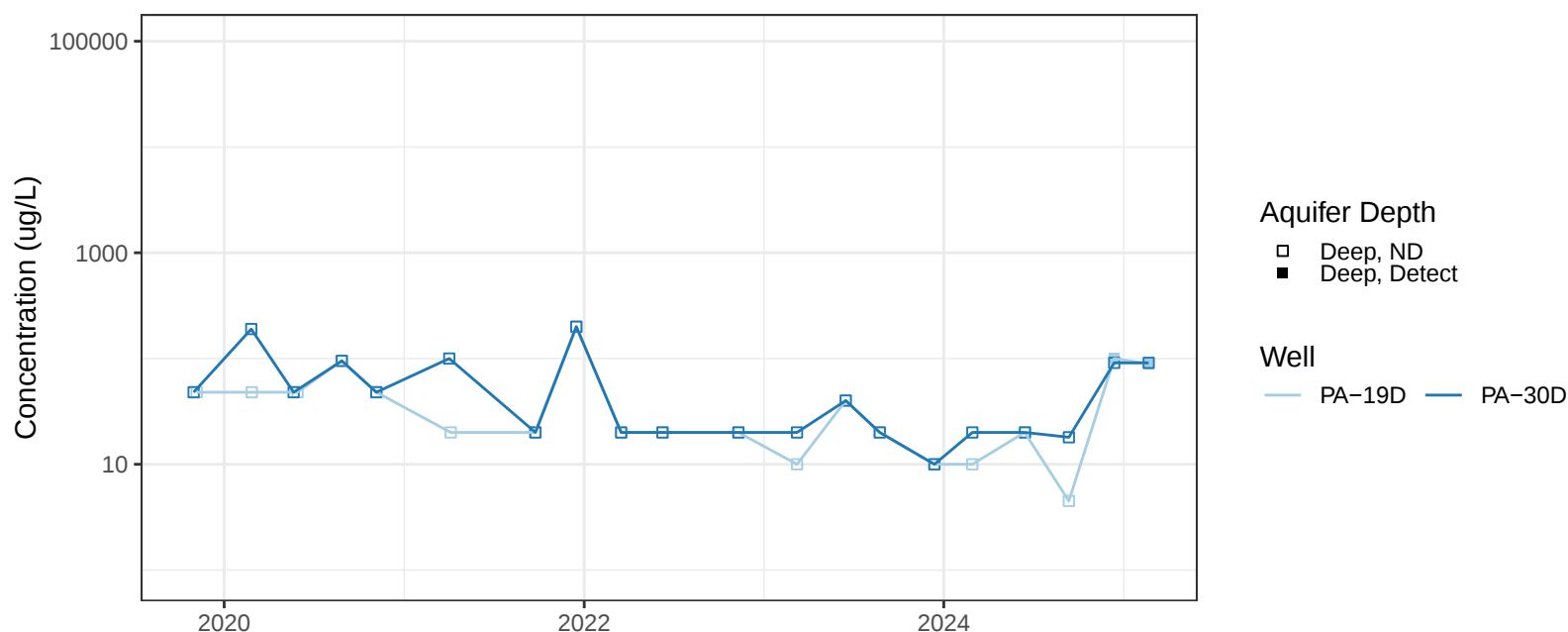
Chlorobenzene in Well Distal from BW and GCCs



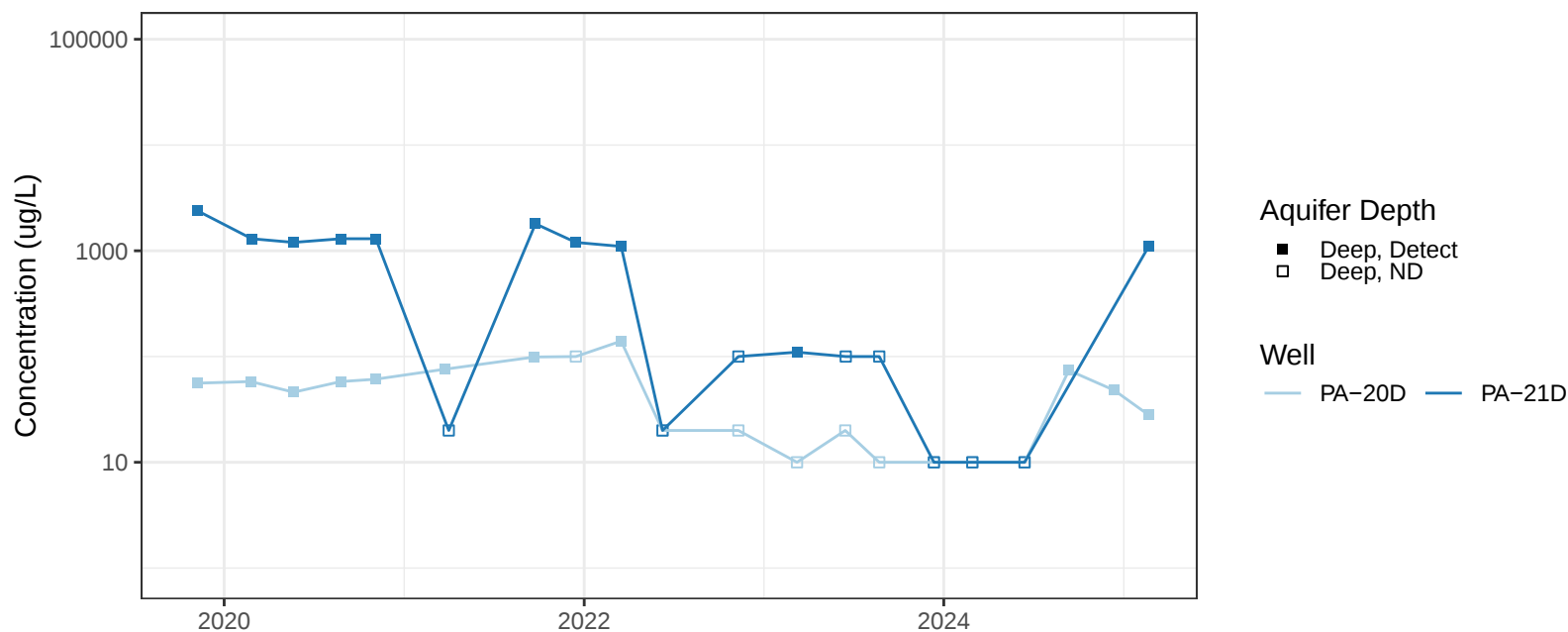
Perchlorate in GCC1 & Proximal Wells



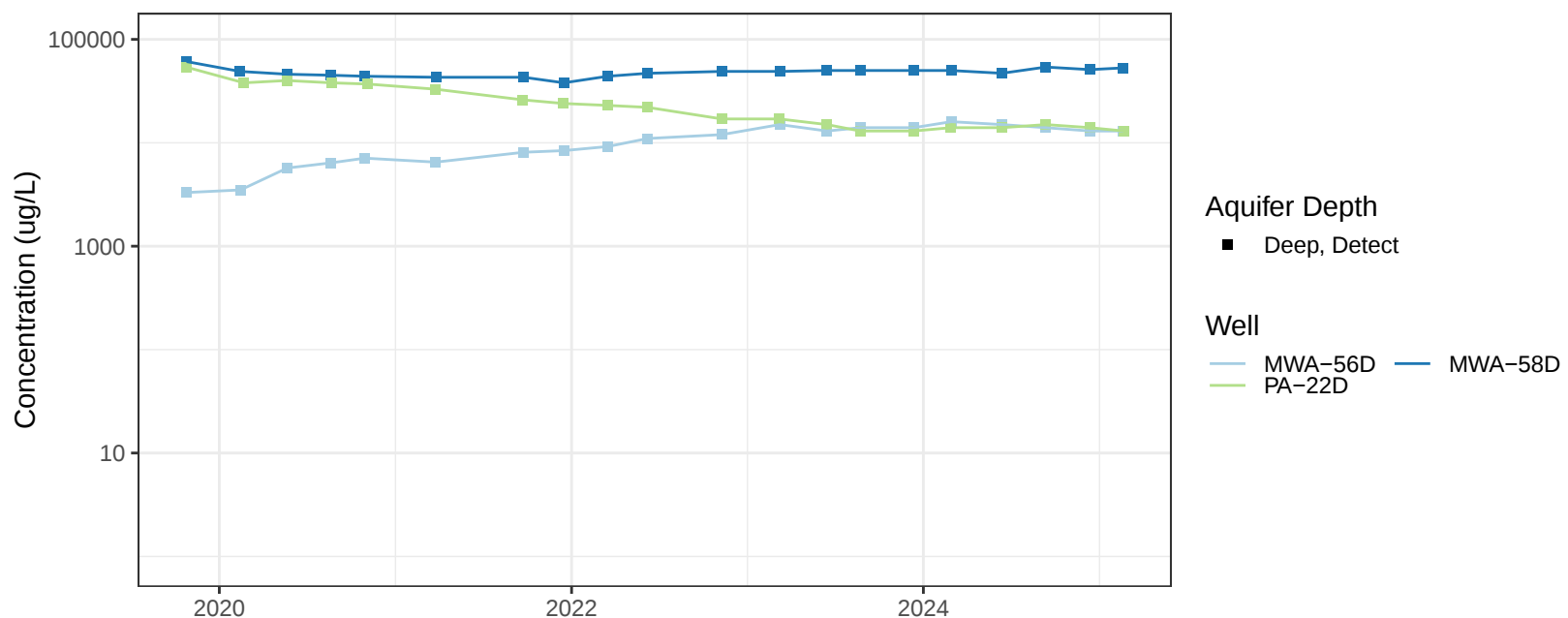
Perchlorate in GCC2



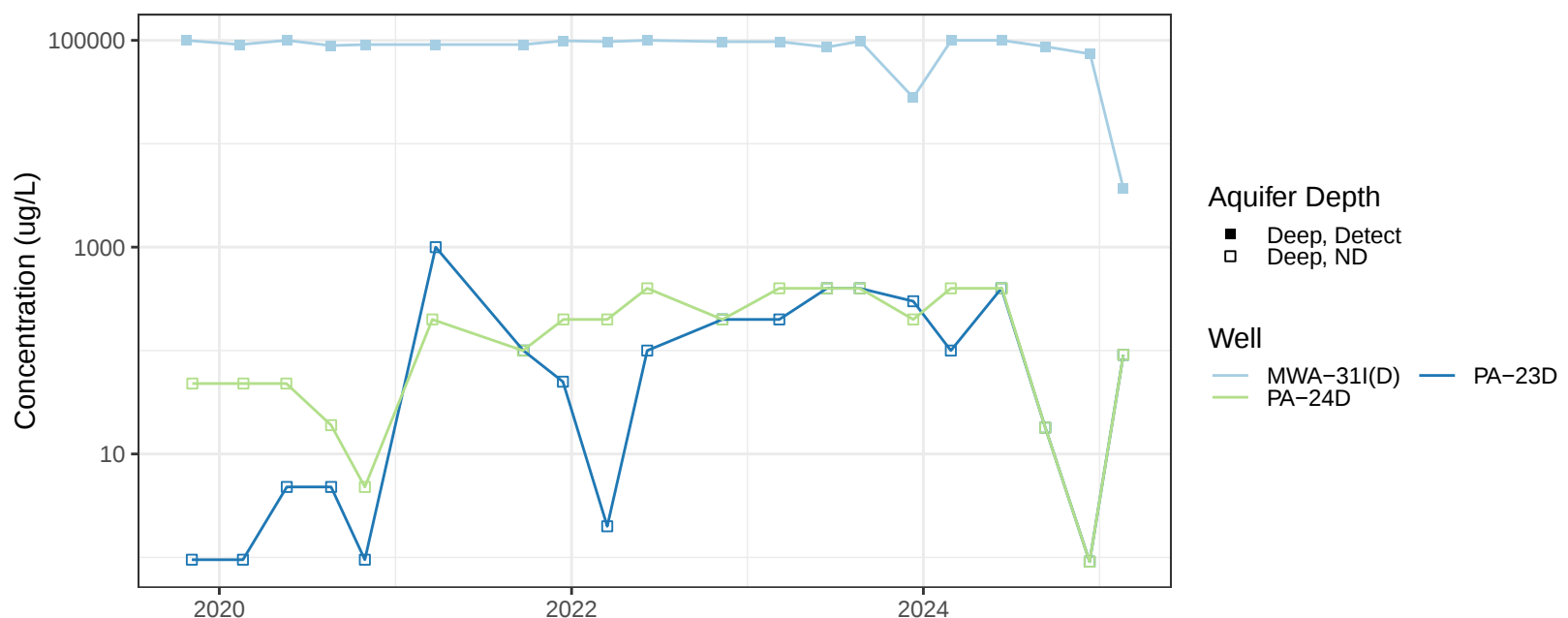
Perchlorate in GCC3



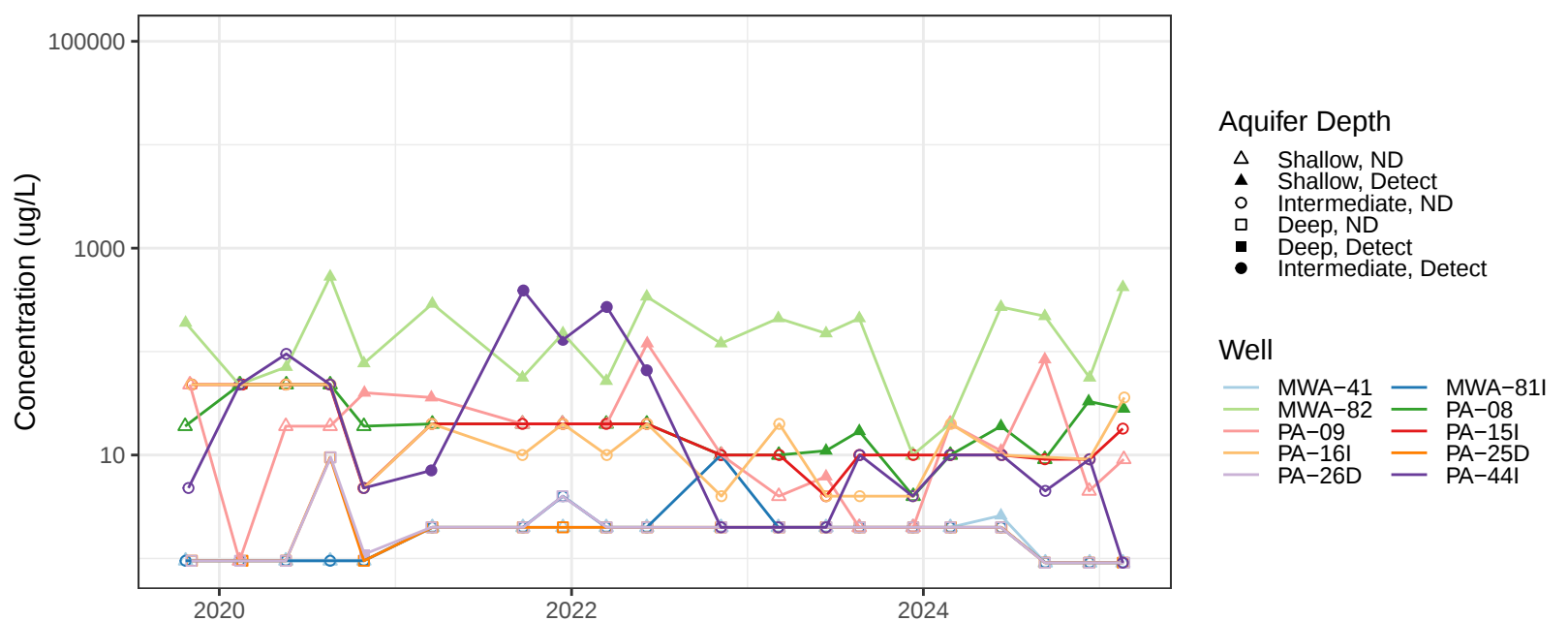
Perchlorate in GCC4 & Proximal Wells



Perchlorate in GCC5 & Proximal Wells



Perchlorate in GCC6 & Proximal Wells





APPENDIX E HISTORICAL DATA TABLE

Appendix E
Historical Data Table
Arkema Quarter 1, 2025, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Aquifer	Well ID	Sample ID	Date	2,4'-DDD	4,4'-DDD	2,4'-DDE	4,4'-DDE	2,4'-DDT	4,4'-DDT	Total of 2,4' and 4,4'-DDD, -DDE, - DDT	Chloride	Chlorobenzene	Chromium (VI)	Perchlorate
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Shallow	MWA-2	GAMWA210297	1/2/1997		< 0.1 U		< 0.1 U		0.12	0.12 T		< 5 U		
Shallow	MWA-2	GAMWA210397	3/12/1997		< 0.1 UJ		< 0.1 UJ		< 0.1 UJ	< 0.1 UJT		7		
Shallow	MWA-2	GAMWA210697	6/24/1997		< 0.1 UJ		< 0.1 UJ		< 0.1 UJ	< 0.1 UJT		6,000		
Shallow	MWA-2	GAMWA210997	9/30/1997		0.17 J		< 0.1 UJ		< 0.1 UJ	0.17 JT		9,000		
Shallow	MWA-2	GW059801	5/28/1998		0.25 J		< 0.04 U		0.33 J	0.58 JT	10,400	4		
Shallow	MWA-2	GW019907	1/27/1999		0.32		0.04		0.18	0.54 T	41,100 T	94		
Shallow	MWA-2	GW029906	4/27/1999		0.8		< 0.04 U		0.6	1.4 T	16,800	970 J		
Shallow	MWA-2	GW039907	8/24/1999		0.7		< 0.4 UJ		< 0.4 UJ	0.7 T	33,800	4,400		
Shallow	MWA-2	GW049905	11/16/1999		0.39 J		< 0.04 UJ		< 0.24 U	0.39 JT	41,700	2,100		
Shallow	MWA-2	GW010111	3/29/2001		0.57		< 0.1 U		< 0.1 U	0.57 T	158,000 J	4,300		
Shallow	MWA-2	GW020106	6/12/2001		0.4		0.055		< 0.05 UJ	0.455 T	384,000	4,600		
Shallow	MWA-2	GW04100205	4/10/2002		0.41		< 0.099 U		< 0.099 U	0.41 T	1,400,000	27,000		
Shallow	MWA-2	GW-060903-01	6/9/2003		< 1.70 U		< 1.70 U		< 2.80 U	< 2.8 UT	981,000	13,700		1,400
Shallow	MWA-2	MWA-2-111004	11/10/2004		< 0.500 UJ		< 0.500 UJ		< 0.500 UJ	< 0.5 UJT		30,200		
Shallow	MWA-2	MWA-2-031005	3/10/2005		< 2.50 UJ		< 2.50 UJ		< 2.50 UJ	< 2.5 UJT		15,400		
Shallow	MWA-2	MWA-2-062205	6/22/2005		3.35		< 0.500 UJ		< 0.500 UJ	3.35 T		12,200		
Shallow	MWA-2	MWA-2-091505	9/15/2005		0.543 J		< 0.184 U		0.0789 J	0.8089 JT		21,900		
Shallow	MWA-2	MWA-2-102705	10/27/2005		0.477		0.0965		< 0.236 UJ	0.5735 T		23,500		
Shallow	MWA-2	MWA-2-122005	12/20/2005		0.312		< 0.239 UJ		< 0.239 UJ	0.312 T		16,200		
Shallow	MWA-2	MWA-2-011306	1/13/2006		0.510		< 0.0971 UJ		< 0.0971 UJ	0.51 T		4		
Shallow	MWA-2	MWA-2-032906	3/29/2006		0.240		< 0.0952 UJ		0.190	0.43 T		4,050		
Shallow	MWA-2	MWA-2-040407	4/4/2007		0.292		< 0.287 U		< 0.191 U	0.292 A	376,000	2,570		73.8
Shallow	MWA-2	MWA-2-080609	8/6/2009		< 0.286 U		< 0.286 U		0.191	0.191 A	340,000	18,200		3.9
Shallow	MWA-15R	GW010117	3/30/2001		37		< 10 U		450	487 T	1960,000 J	260,000		
Shallow	MWA-15R	GW020121	6/15/2001		7.4		< 0.96 U		73 J	80.4 JT	1,560,000	210,000		
Shallow	MWA-15R	GW04160201	4/16/2002		25		4.2 J		75 J	104 JT	407,000	48,000		
Shallow	MWA-15R	GW-061003-04	6/10/2003		28.4 J		< 3.40 U		113	141 JT	388,000	13,300		350
Shallow	MWA-15R	MWA-15R-100203	10/2/2003									27,200		
Shallow	MWA-15R	MWA-15R-111403	11/14/2003									163,000		
Shallow	MWA-15R	MWA-15R-011304	1/13/2004									64,400		
Shallow	MWA-15R	MWA-15R-013004	1/30/2004									24,600		
Shallow	MWA-15R	MWA-15R-030204	3/2/2004									2,450		
Shallow	MWA-15R	MWA-15R-111004	11/10/2004		27.7		< 5.00 UJ		86.2	113 T		154,000		
Shallow	MWA-15R	MWA-15R-031005	3/10/2005		79.7		< 25.0 UJ		534	613.7 T		97,000		
Shallow	MWA-15R	MWA-15R-062205	6/22/2005		40.9		9.88		193	243.78 T		87,700		
Shallow	MWA-15R	MWA-15R-091605	9/16/2005		73.2		11.2 J		619 J	703 JT		240,000		
Shallow	MWA-15R	MWA-15R-122105	12/21/2005		10.1		1.53		86.5	98.13 T		217,000		
Shallow	MWA-15R	MWA-15R-033006	3/30/2006		124		24		458	606 T		72,900		
Shallow	MWA-15R	MWA-15R-041707	4/17/2007		48.3 J		7.71		207	263 JA	129,000	34		
Shallow	MWA-15R	MWA-15R-081909	8/19/2009		111		21.9		702	835 A	156,000	23,500	< 25 UJ	
Shallow	MWA-15R	MWA-15R-090309	9/3/2009		377		52.1		5,210	5,640 A				
Shallow	MWA-18	GW010105	3/27/2001						0.046 J	0.046 JT	1,200,000	41		
Shallow	MWA-18	GW020110	6/13/2001		0.015 J		< 0.0094 U		< 0.026 U	0.015 JT	894,000 J	34	< 50 UJ	
Shallow	MWA-18	GW04040203	4/4/2002		< 0.0096 U		< 0.0096 U		< 0.019 U	< 0.019 UT	2,210,000	8		
Shallow	MWA-18	GW-060603-03	6/6/2003		< 0.0170 U		< 0.0170 U		< 0.0280 U	< 0.028 UT	1,410,000	< 3.06 U		< 25 U
Shallow	MWA-18	MWA-18-050505	5/5/2005								612,000		833	
Shallow	MWA-18	MWA-18-071405	7/14/2005										676	
Shallow	MWA-18	MWA-18	8/3/2005		< 0.0500 U		< 0.0500 U		< 0.0500 U	< 0.05 UT		0.580		
Shallow	MWA-18	MWA-18-081605	8/16/2005										248	
Shallow	MWA-18	MWA-18-091205	9/12/2005								410,000		1,180	3.4
Shallow	MWA-18	MWA-18-120805	12/8/2005										5.90 J	
Shallow	MWA-18	MWA-18-011006	1/10/2006										30.0	
Shallow	MWA-18	MWA-18-021306	2/13/2006										< 4.55 U	
Shallow	MWA-18	MWA-18-072606	7/26/2006										3.4	
Shallow	MWA-18	MWA-18-041107	4/11/2007		< 0.0971 U		< 0.0971 U		< 0.0971 U	< 0.0971 UA	233,000	1.33	2.2 J	< 8.0 U

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Aquifer	Well ID	Sample ID	Date	2,4'-DDD	4,4'-DDD	2,4'-DDE	4,4'-DDE	2,4'-DDT	4,4'-DDT	Total of 2,4' and 4,4'-DDD, -DDE, - DDT	Chloride	Chlorobenzene	Chromium (VI)	Perchlorate
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Shallow	MWA-18	MWA-18-081009	8/10/2009		0.0155		0.00671 J		0.00789 J	0.0301 JA	270,000	0.930 J	340 J	< 4 U
Shallow	MWA-19	GW010104	3/27/2001		< 0.02 UJ		< 0.02 UJ		0.095 J	0.095 JT	5,540,000	< 0.5 U		
Shallow	MWA-19	GW020112	6/13/2001		< 0.0099 U		< 0.0099 U		< 0.016 U	< 0.016 UT	12,700,000 J	< 0.5 U	< 50 UJ	
Shallow	MWA-19	GW04040204	4/4/2002		< 0.0097 U		< 0.0097 U		0.1	0.1 T	13,100,000	< 0.5 U		
Shallow	MWA-19	GW-060603-04	6/6/2003		0.0935		< 0.0170 U		0.23	0.324 T	5,180,000	< 0.64 U		< 82 U
Shallow	MWA-19	MWA-19-050605	5/6/2005								2,100,000		2,680	
Shallow	MWA-19	MWA-19-071305	7/13/2005										159	
Shallow	MWA-19	MWA-19	8/3/2005		0.114		< 0.0500 U		0.576	0.69 T		3.14		
Shallow	MWA-19	MWA-19-081705	8/17/2005										407	
Shallow	MWA-19	MWA-19-091305	9/13/2005								1,240,000		824	< 1 U
Shallow	MWA-19	MWA-19-120805	12/8/2005										101	
Shallow	MWA-19	MWA-19-010906	1/9/2006										33.2	
Shallow	MWA-19	MWA-19-021006	2/10/2006										12.1	
Shallow	MWA-19	MWA-19-072606	7/26/2006										56.8	
Shallow	MWA-19	MWA-19-040907	4/9/2007		0.0743 J		< 0.0966 U		0.242	0.316 JA	737,000	1.79	11.3	< 80.0 U
Shallow	MWA-19	MWA-19-081009	8/10/2009		0.183 J		0.175 J		1.14	1.5 JA	406,000	0.390 J	500 J	< 40 U
Shallow	MWA-20	GW010103	3/27/2001						0.088 J	0.088 JT	2,810,000 T	2,700		
Shallow	MWA-20	GW020114	6/13/2001						0.052 J	0.052 JT	1,780,000 J	1,100	59.5	
Shallow	MWA-20	GW04090204	4/9/2002								1,135,000 T	1,900		
Shallow	MWA-20	GW-060503-03	6/5/2003		0.0688 J				0.213 J	0.282 JT	1,500,000	215		
Shallow	MWA-20	MWA-20-050905	5/9/2005										436	
Shallow	MWA-20	MWA-20-071305	7/13/2005										74.1	
Shallow	MWA-20	MWA-20	8/4/2005		< 0.0500 U		< 0.0500 U		< 0.0500 U	< 0.05 UT		1,540		
Shallow	MWA-20	MWA-20-081505	8/15/2005										676	
Shallow	MWA-20	MWA-20-090705	9/7/2005										573	
Shallow	MWA-20	MWA-20-121205	12/12/2005										9.67 J	
Shallow	MWA-20	MWA-20-011006	1/10/2006										52.5	
Shallow	MWA-20	MWA-20-020906	2/9/2006										43.8	
Shallow	MWA-20	MWA-20-072506	7/25/2006										14.36 J	
Shallow	MWA-20	MWA-20-041107	4/11/2007		< 0.0485 U		< 0.0485 U		0.0692 J	0.0692 J	583,000	1,500 J	8.6	< 33.9 U
Shallow	MWA-20	MWA-20-081709	8/17/2009		< 0.00952 U		< 0.00952 U		0.00836 J	0.00836 JA	164,000	1,780	67 J	< 40 U
Shallow	MWA-22	GW020122	6/15/2001		0.83		< 0.096 U		0.15	0.98 T	4,870,000	38		
Shallow	MWA-22	GW04110203	4/11/2002		< 0.099 U		< 0.099 U		< 0.099 U	< 0.099 UT	5,430,000	310		
Shallow	MWA-22	GW-061003-02	6/10/2003		< 0.13 U		< 0.0170 UJ		< 0.348 U	< 0.348 UT	6,210,000	128		
Shallow	MWA-22	MWA-22	8/1/2005		0.115		< 0.0500 U		1.29	1.405 T		6,460		
Shallow	MWA-22	MWA-22-041607	4/16/2007		0.133		< 0.0976 U		< 0.0976 U	0.133 A	4,200,000	538	103	
Shallow	MWA-22	MWA-22-081909	8/19/2009		< 0.144 U		< 0.0962 U		< 0.0962 U	< 0.144 UA	2,870,000	123	48 J	< 40 U
Shallow	MWA-22	MWA-22-022119	2/21/2019	< 0.10 UJ	0.026 J-	< 0.10 UJ	0.0060 J-	< 0.10 UJ	< 0.010 UJ	0.032		3,400	< 13 UJ	< 48
Shallow	MWA-24	GW11150102	11/15/2001									< 2.5 U		
Shallow	MWA-24	GW04080201	4/8/2002								408,000			
Shallow	MWA-24	GW-060503-04	6/5/2003		< 0.232 U		< 0.0340 U		< 0.0560 U	< 0.232 UT	583,000			
Shallow	MWA-24	MWA-24-050505	5/5/2005								529,000		52.8 J	
Shallow	MWA-24	MWA-24-071205	7/12/2005										54.1 J	
Shallow	MWA-24	MWA-24-081105	8/11/2005										35.5	
Shallow	MWA-24	MWA-24-090705	9/7/2005										20.3	
Shallow	MWA-24	MWA-24-091405	9/14/2005											30
Shallow	MWA-24	MWA-24-120705	12/7/2005										63.5	
Shallow	MWA-24	MWA-24-011106	1/11/2006										31.9	
Shallow	MWA-24	MWA-24-020806	2/8/2006										30.6	
Shallow	MWA-24	MWA-24-072506	7/25/2006										24	
Shallow	MWA-24	MWA-24-040307	4/3/2007								274,000	1.90 J	76.2	258 J
Shallow	MWA-24	MWA-24-080509	8/5/2009								237,000	< 0.500 U	86 J	17.9
Shallow	MWA-29	GW04080204	4/8/2002		< 0.0096 U		< 0.0096 U		< 0.0096 U	< 0.0096 UT	21,900,000	< 0.5 U		
Shallow	MWA-29	GW-060403-06	6/4/2003		< 0.0170 UJ		< 0.0170 UJ		< 0.0280 UJ	< 0.028 UJT	11,700,000			< 110 U
Shallow	MWA-29	MWA-29-050905	5/9/2005								9,100,000		14.1	

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Aquifer	Well ID	Sample ID	Date	2,4'-DDD	4,4'-DDD	2,4'-DDE	4,4'-DDE	2,4'-DDT	4,4'-DDT	Total of 2,4' and 4,4'-DDD, -DDE, - DDT	Chloride	Chlorobenzene	Chromium (VI)	Perchlorate
				µg / L	µg / L	µg / L	µg / L	µg / L	µg / L	µg / L	µg / L	µg / L	µg / L	µg / L
Shallow	MWA-29	MWA-29-071805	7/18/2005										< 4.55 U	
Shallow	MWA-29	MWA-29-081205	8/12/2005										< 4.55 U	
Shallow	MWA-29	MWA-29-091205	9/12/2005								12,600,000		107	4,800
Shallow	MWA-29	MWA-29-120805	12/8/2005										186	
Shallow	MWA-29	MWA-29-010606	1/6/2006										14.1	
Shallow	MWA-29	MWA-29-020806	2/8/2006										19.5	
Shallow	MWA-29	MWA-29-072406	7/24/2006										< 20 U	
Shallow	MWA-29	MWA-29-041607	4/16/2007		< 0.0966 U		< 0.0966 U		< 0.0966 U	< 0.0966 UA	9,710,000		< 20 UJ	243
Shallow	MWA-29	MWA-29-080609	8/6/2009		< 0.00952 U		< 0.00952 U		< 0.00952 U	< 0.00952 UA	3,750,000		< 25 UJ	< 20 U
Shallow	MWA-30	GW04120203	4/12/2002		0.18		0.021 J		0.012	0.213 JT	179,000,000	< 0.5 U		
Shallow	MWA-30	GW-060403-08	6/4/2003		< 0.0170 UJ		< 0.0170 UJ		< 0.0280 UJ	< 0.028 UJT	164,000,000			7,900
Shallow	MWA-30	MWA-30-050605	5/6/2005								104,000,000		3,040	
Shallow	MWA-30	MWA-30-051005	5/10/2005											621
Shallow	MWA-30	MWA-30-071805	7/18/2005										13.0	
Shallow	MWA-30	MWA-30	8/3/2005		< 0.0500 U		< 0.0500 U		< 0.0500 U	< 0.05 UT		< 0.136 U		
Shallow	MWA-30	MWA-30-081705	8/17/2005										6,270	
Shallow	MWA-30	MWA-30-010606	1/6/2006										32.8	
Shallow	MWA-30	MWA-30-021006	2/10/2006										< 4.55 U	
Shallow	MWA-30	MWA-30-072606	7/26/2006										< 2 U	
Shallow	MWA-30	MWA-30-040507	4/5/2007		< 0.0962 U		< 0.0962 U		< 0.0962 U	< 0.0962 UA	39,400,000	0.900	8.5 J	< 80.0 U
Shallow	MWA-30	MWA-30-081009	8/10/2009		0.148		< 0.00943 U		< 0.00943 U	0.148 A	12,900,000	< 2.00 UJ	1,100 J	< 80 U
Shallow	MWA-33	GW-060503-05	6/5/2003								198,000	< 2.51 U		540
Shallow	MWA-33	GW-061103-02	6/11/2003		< 0.0170 UJ		< 0.0170 UJ		< 0.518 U	< 0.518 UT	286,000			320
Shallow	MWA-33	MWA-33-050505	5/5/2005										44.6	
Shallow	MWA-33	MWA-33-071405	7/14/2005										51.8	
Shallow	MWA-33	MWA-33-081105	8/11/2005										36.2	
Shallow	MWA-33	MWA-33-090705	9/7/2005										30.2	
Shallow	MWA-33	MWA-33-091405	9/14/2005											1,500
Shallow	MWA-33	MWA-33-120805	12/8/2005										17.7	
Shallow	MWA-33	MWA-33-011106	1/11/2006										8.74 J	
Shallow	MWA-33	MWA-33-020806	2/8/2006										14.8	
Shallow	MWA-33	MWA-33-072406	7/24/2006										11 J	
Shallow	MWA-33	MWA-33-040307	4/3/2007		0.0688 J		0.106		0.0892 J	0.264 JA	336,000		11.9	< 20.0 U
Shallow	MWA-33	MWA-33-080509	8/5/2009		< 0.0952 U		< 0.0952 U		< 0.0952 U	< 0.0952 UA	929,000		14 J	< 8 U
Shallow	MWA-40	MWA-40-050505	5/5/2005										< 4.55 U	
Shallow	MWA-40	MWA-40-071205	7/12/2005										< 4.55 U	
Shallow	MWA-40	MWA-40-081105	8/11/2005										< 4.55 U	
Shallow	MWA-40	MWA-40-090705	9/7/2005										4.76 J	
Shallow	MWA-40	MWA-40-120705	12/7/2005										< 4.55 U	
Shallow	MWA-40	MWA-40-011106	1/11/2006										< 4.55 U	
Shallow	MWA-40	MWA-40-020806	2/8/2006										< 4.55 U	
Shallow	MWA-40	MWA-40-072406	7/24/2006										9.5 J	
Shallow	MWA-40	MWA-40-040307	4/3/2007								294,000		21.7	< 400 U
Shallow	MWA-40	MWA-40-080509	8/5/2009								220,000		42 J	< 20 U
Shallow	MWA-41	MWA-41-050905	5/9/2005										< 4.55 U	
Shallow	MWA-41	MWA-41-071505	7/15/2005										< 4.55 U	
Shallow	MWA-41	MWA-41-081205	8/12/2005										< 4.55 U	
Shallow	MWA-41	MWA-41-090705	9/7/2005										< 4.55 U	
Shallow	MWA-41	MWA-41-120805	12/8/2005										0.600 J	
Shallow	MWA-41	MWA-41-010506	1/5/2006										< 4.55 U	
Shallow	MWA-41	MWA-41-020806	2/8/2006										< 4.55 U	
Shallow	MWA-41	MWA-41-072406	7/24/2006										15.1 J	
Shallow	MWA-41	MWA-41-041607	4/16/2007								26,600		< 0.6 U	1.7 J
Shallow	MWA-41	MWA-41-080609	8/6/2009								26,300		< 25 UJ	< 4 U
Shallow	MWA-42	MWA-42-050505	5/5/2005										56.2	

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Aquifer	Well ID	Sample ID	Date	2,4'-DDD	4,4'-DDD	2,4'-DDE	4,4'-DDE	2,4'-DDT	4,4'-DDT	Total of 2,4' and 4,4'-DDD, -DDE, - DDT	Chloride	Chlorobenzene	Chromium (VI)	Perchlorate
				µg / L	µg / L	µg / L	µg / L	µg / L	µg / L	µg / L	µg / L	µg / L	µg / L	µg / L
Shallow	MWA-42	MWA-42-071205	7/12/2005										< 4.55 U	
Shallow	MWA-42	MWA-42	8/2/2005		< 0.250 UJ		< 0.250 UJ		< 0.250 UJ	< 0.25 UJT		94.0		
Shallow	MWA-42	MWA-42-081505	8/15/2005										11.9	
Shallow	MWA-42	MWA-42-090805	9/8/2005								913,000			
Shallow	MWA-42	MWA-42-092305	9/23/2005										46.7	
Shallow	MWA-42	MWA-42-120705	12/7/2005										27.7	
Shallow	MWA-42	MWA-42-011106	1/11/2006										5.77 J	
Shallow	MWA-42	MWA-42-020906	2/9/2006										6.26 J	
Shallow	MWA-42	MWA-42-072506	7/25/2006										8.6 J	
Shallow	MWA-42	MWA-42-040307	4/3/2007		0.101		0.197		0.111	0.409 A	45,000	3.35	7.4	< 80.0 U
Shallow	MWA-42	MWA-42-081709	8/17/2009		0.104		0.152		< 0.0952 U	0.256 A	816,000	129	< 25 UJ	< 40 U
Shallow	MWA-46	MWA-46-050605	5/6/2005										49.5 J	
Shallow	MWA-46	MWA-46-071405	7/14/2005										41.1	
Shallow	MWA-46	MWA-46	8/4/2005		< 0.0500 U		< 0.0500 U		0.611 J	0.611 JT		40.2		
Shallow	MWA-46	MWA-46-081605	8/16/2005										20.3	
Shallow	MWA-46	MWA-46-091305	9/13/2005								1,250,000		43.3	< 1 U
Shallow	MWA-46	MWA-46-120905	12/9/2005										16.7	
Shallow	MWA-46	MWA-46-010906	1/9/2006										< 4.55 U	
Shallow	MWA-46	MWA-46-021306	2/13/2006										5.14 J	
Shallow	MWA-46	MWA-46-072606	7/26/2006										35.4	
Shallow	MWA-46	MWA-46-041107	4/11/2007		< 0.0980 U		< 0.0980 U		0.323	0.323 A	1,820,000	938	22	< 80.0 U
Shallow	MWA-46	MWA-46-081009	8/10/2009		0.429		0.176 J		0.728	1.33 JA	651,000	1.54	< 250 UJ	< 40 U
Shallow	MWA-47	MWA-47-050605	5/6/2005										< 4.55 U	
Shallow	MWA-47	MWA-47-071905	7/19/2005										< 40.0 UJ	
Shallow	MWA-47	MWA-47-081705	8/17/2005										4.63 J	
Shallow	MWA-47	MWA-47-090905	9/9/2005								9,690,000		< 4.55 U	66,000
Shallow	MWA-47	MWA-47-121205	12/12/2005										< 4.55 U	
Shallow	MWA-47	MWA-47-010606	1/6/2006										14.3	
Shallow	MWA-47	MWA-47-021006	2/10/2006										< 4.55 U	
Shallow	MWA-47	MWA-47-072606	7/26/2006										< 2 U	
Shallow	MWA-47	MWA-47-040507	4/5/2007		0.265		0.0489 J		0.152	0.466 JA	3,690,000	0.540	< 20 UJ	82.3
Shallow	MWA-47	MWA-47-080609	8/6/2009		0.200		0.0353 J		0.0931 J	0.328 JA	2,110,000	0.880 J	110 J	< 20 U
Shallow	MWA-47	MWA-47-022119	2/21/2019	0.040 j	0.067	< 0.10	< 0.0050	< 0.10	0.041	0.148		33	1.1	3.9 j
Shallow	MWA-61	MWA-61	8/1/2005		< 2.50 UJ		< 2.50 UJ		< 2.50 UJ	< 2.5 UJT		5,800		
Shallow	MWA-61	MWA-61-102605	10/26/2005		0.109		< 0.236 UJ		0.129	0.238 T		2,100		
Shallow	MWA-61	MWA-61-112105	11/21/2005		0.11		0.0557 J		0.204	0.369 JT		133		
Shallow	MWA-61	MWA-61-011306	1/13/2006		0.545		< 0.0472 U		0.124	0.669 T		465		
Shallow	MWA-61	MWA-61-040407	4/4/2007		0.567		< 0.0980 U		< 0.0980 U	0.567 A	683,000	325		343
Shallow	MWA-61	MWA-61-081009	8/10/2009		0.356 J		< 0.476 U		< 0.476 U	0.356 JA	473,000	715 J		489
Shallow	MWA-61	MWA-61-022119	2/21/2019	0.27 J+	0.50 J+	< 0.10	0.016 J+	< 0.10	0.029 J+	0.815		690	< 1.0	37
Shallow	MWA-63	MWA-63-102705	10/27/2005		< 0.0472 U		< 0.0472 U		< 0.0472 U	< 0.0472 UT		7.60		
Shallow	MWA-63	MWA-63-112105	11/21/2005		< 0.0495 U		< 0.0495 U		0.0533 J	0.0533 JT		< 0.272 U		
Shallow	MWA-63	MWA-63-040407	4/4/2007		< 0.00995 UJ		< 0.00995 UJ		0.00603 J	0.00603 JA	358,000	0.180 J		< 4.0 U
Shallow	MWA-63	MWA-63-080509	8/5/2009		< 0.00952 U		< 0.00952 U		0.00574 J	0.00574 JA	690,000	< 100 U		< 8 U
Shallow	MWA-63	MWA-63-022119	2/21/2019	< 0.10	< 0.0050	< 0.10	< 0.0050	< 0.10	< 0.010	< 0.10		5,800	< 1.0 UJ	< 4.0
Shallow	MWA-69	MWA-69	8/2/2005		17.3		< 5.00 UJ		51.1	68.4 T		9,010		
Shallow	MWA-69	MWA-69-102505	10/25/2005		3.93		0.289		6.84	11.059 T		2,690		
Shallow	MWA-69	MWA-69-112205	11/22/2005		4.36		0.425		9.33	14.115 T		3,640		
Shallow	MWA-69	MWA-69-011606	1/16/2006		8.64		0.838		29.5	38.978 T		166		
Shallow	MWA-69	MWA-69-041707	4/17/2007		15.6		1.05 J		46.4 J	62.9 JA	511,000	5,360		29.5 J
Shallow	MWA-69	MWA-69-081109	8/11/2009		50.0		4.16		57.9	112.06	297,000	6,930		< 20 U
Shallow	MWA-69	MWA-69-090309	9/3/2009		7.45		0.369		5.95	13.8 A				
Intermediate	MWA-8I	GWG001	11/24/1998									1,700		
Intermediate	MWA-8I	GW019906	1/27/1999		5.3 J		0.07 J		1 J	6.37 JT	2,660,000	4,800		
Intermediate	MWA-8I	GW029908	4/27/1999		0.16 J		< 0.04 UJ		< 0.04 UJ	0.16 JT	2,290,000	4,300 J		

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				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Intermediate	MWA-8I	GW039905	8/24/1999		0.05 J		< 0.04 UJ		< 0.04 UJ	0.05 JT	2,660,000	3,400		
Intermediate	MWA-8I	GW049906	11/16/1999		0.08 J					0.08 JT	2,530,000	2,800		
Intermediate	MWA-8I	GW010112	3/29/2001		< 0.1 U		< 0.1 U		< 0.1 U	< 0.1 UT	1,660,000 J	4,100		
Intermediate	MWA-8I	GW020107	6/12/2001		0.11 J					0.11 JT	1,420,000	1,400		
Intermediate	MWA-8I	GW04100206	4/10/2002		0.08		< 0.0097 U		0.012	0.092 T	2,110,000	940		
Intermediate	MWA-8I	GW-060903-02	6/9/2003		< 0.0170 U		< 0.0170 U		< 0.0280 U	< 0.028 UT	2,380,000	23		< 20 U
Intermediate	MWA-8I	MWA-8I-111004	11/10/2004		< 0.0500 U		< 0.0500 U		0.590	0.59 T		24		
Intermediate	MWA-8I	MWA-8I-031005	3/10/2005		< 0.0500 U		< 0.0500 U		0.138 J	0.138 JT		185		
Intermediate	MWA-8I	MWA-8I-062105	6/21/2005		< 0.0500 U		< 0.0500 U		< 0.0500 U	< 0.05 UT		27		
Intermediate	MWA-8I	MWA-8I-091505	9/15/2005		< 0.00103 U		< 0.00367 U		0.0243 J	0.0243 JT		122		
Intermediate	MWA-8I	MWA-8I-102705	10/27/2005		< 0.0472 U		< 0.0472 U		< 0.0472 U	< 0.0472 UT		215		
Intermediate	MWA-8I	MWA-8I-112105	11/21/2005		< 0.0472 U		< 0.0472 U		0.0678 J	0.0678 JT		46		
Intermediate	MWA-8I	MWA-8I-122005	12/20/2005		< 0.0957 UJ		< 0.0957 UJ		< 0.0957 UJ	< 0.0957 UJT		25		
Intermediate	MWA-8I	MWA-8I-032906	3/29/2006		< 0.0490 U		< 0.0490 U		< 0.0490 U	< 0.049 UT		18		
Intermediate	MWA-8I	MWA-8I-040407	4/4/2007		< 0.0976 U		< 0.0976 U		< 0.0976 U	< 0.0976 UA	1,420,000	4,910		< 200 U
Intermediate	MWA-8I	MWA-8I-080609	8/6/2009		< 0.0190 U		< 0.0190 U		0.0194	0.0194 A	1,020,000	746		< 20 U
Intermediate	MWA-32I	GW-060403-10	6/4/2003		< 0.0170 UJ		< 0.0170 UJ		< 0.0280 UJ	< 0.028 UJT	31,000,000			200,000
Intermediate	MWA-32I	MWA-32I-050605	5/6/2005								17,600,000		176	
Intermediate	MWA-32I	MWA-32I-051005	5/10/2005											158,000
Intermediate	MWA-32I	MWA-32I-071805	7/18/2005										119	
Intermediate	MWA-32I	MWA-32I	8/3/2005		< 0.0500 U		< 0.0500 U		< 0.0500 U	< 0.05 UT		1		
Intermediate	MWA-32I	MWA-32I-081705	8/17/2005										555	
Intermediate	MWA-32I	MWA-32I-091405	9/14/2005								13,700,000		386	160,000
Intermediate	MWA-32I	MWA-32I-120905	12/9/2005										14.4	
Intermediate	MWA-32I	MWA-32I-010606	1/6/2006										6.55 J	
Intermediate	MWA-32I	MWA-32I-021006	2/10/2006										6.72 J	
Intermediate	MWA-32I	MWA-32I-072606	7/26/2006										< 2 U	
Intermediate	MWA-32I	MWA-32I-040507	4/5/2007		0.0818 J		< 0.0952 U		< 0.0952 U	0.0818 JA	33,800,000	0.470 J	8 J	131 J
Intermediate	MWA-32I	MWA-32I-081009	8/10/2009		0.0568 J		< 0.0962 U		< 0.0962 U	0.0568 JA	2,520,000	0.180 J	210 J	29,900
Intermediate	MWA-34I	GW-060603-05	6/6/2003		0.0892		< 0.0170 U		0.327	0.416 T	3,040,000	666		4,600
Intermediate	MWA-34I	MWA-34I-050605	5/6/2005								5,260,000		35.8	
Intermediate	MWA-34I	MWA-34I-071805	7/18/2005										17.6	
Intermediate	MWA-34I	MWA-34I	8/3/2005		< 0.0500 U		< 0.0500 U		< 0.0500 U	< 0.05 UT		1,540		
Intermediate	MWA-34I	MWA-34I-081705	8/17/2005										192	
Intermediate	MWA-34I	MWA-34I-091305	9/13/2005								4,580,000		26.9	5,900
Intermediate	MWA-34I	MWA-34I-120905	12/9/2005										30.2	
Intermediate	MWA-34I	MWA-34I-010906	1/9/2006										13.5	
Intermediate	MWA-34I	MWA-34I-021006	2/10/2006										12.3	
Intermediate	MWA-34I	MWA-34I-072606	7/26/2006										34.5	
Intermediate	MWA-34I	MWA-34I-040907	4/9/2007		< 0.0971 U		< 0.0971 U		< 0.0971 U	< 0.0971 UA	1,400,000	3,920	32.6	< 80.0 U
Intermediate	MWA-34I	MWA-34I-081109	8/11/2009		< 0.0200 U		< 0.0200 U		< 0.0200 U	< 0.02 UA	740,000	3,240	< 250 UJ	< 40 U
Intermediate	MWA-49I	MWA-49I-050605	5/6/2005										< 4.55 U	
Intermediate	MWA-49I	MWA-49I-071405	7/14/2005										< 4.55 U	
Intermediate	MWA-49I	MWA-49I	8/3/2005		< 0.0500 U		< 0.0500 U		0.204	0.204 T		6		
Intermediate	MWA-49I	MWA-49I-081605	8/16/2005										< 4.55 U	
Intermediate	MWA-49I	MWA-49I-091305	9/13/2005								10,600,000		< 4.55 U	160,000
Intermediate	MWA-49I	MWA-49I-120905	12/9/2005										< 4.55 U	
Intermediate	MWA-49I	MWA-49I-010906	1/9/2006										< 4.55 U	
Intermediate	MWA-49I	MWA-49I-021306	2/13/2006										< 4.55 U	
Intermediate	MWA-49I	MWA-49I-072606	7/26/2006										< 2 U	
Intermediate	MWA-49I	MWA-49I-041107	4/11/2007		< 0.0971 U		< 0.0971 U		0.135	0.135 A	11,000,000	0.780 J	0.9 J	42,800
Intermediate	MWA-49I	MWA-49I-081009	8/10/2009		0.0402 J		0.0394 J		0.269	0.349 JA	7,560,000	< 10.0 U	< 25 UJ	58,900
Intermediate	MWA-51I	MWA-51I-050505	5/5/2005										48.5	
Intermediate	MWA-51I	MWA-51I-071405	7/14/2005										63.1	
Intermediate	MWA-51I	MWA-51I	8/3/2005		< 0.0500 U		< 0.0500 U		1.21	1.21 T		845		

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				µg / L	µg / L	µg / L	µg / L	µg / L	µg / L	µg / L	µg / L	µg / L	µg / L	µg / L
Intermediate	MWA-51I	MWA-51I-081605	8/16/2005										24.3	
Intermediate	MWA-51I	MWA-51I-091305	9/13/2005								8,910,000		46.8	590
Intermediate	MWA-51I	MWA-51I-120805	12/8/2005										22.0	
Intermediate	MWA-51I	MWA-51I-011006	1/10/2006										< 4.55 U	
Intermediate	MWA-51I	MWA-51I-021306	2/13/2006										10.7	
Intermediate	MWA-51I	MWA-51I-041107	4/11/2007		0.103		< 0.0962 U		0.0572 J	0.16 JA	4,640,000	358	31.3	54.6 J
Intermediate	MWA-51I	MWA-51I-081009	8/10/2009		0.113		< 0.0962 U		0.0363 J	0.149 JA	2,780,000	336 J	< 250 UJ	< 40 U
Intermediate	MWA-53I	MWA-53I-050905	5/9/2005										< 4.55 U	
Intermediate	MWA-53I	MWA-53I-071805	7/18/2005										< 4.55 U	
Intermediate	MWA-53I	MWA-53I-081205	8/12/2005										< 4.55 U	
Intermediate	MWA-53I	MWA-53I-091205	9/12/2005								14,300,000		< 4.55 U	1,400
Intermediate	MWA-53I	MWA-53I-120805	12/8/2005										1.10 J	
Intermediate	MWA-53I	MWA-53I-010606	1/6/2006										< 4.55 U	
Intermediate	MWA-53I	MWA-53I-020806	2/8/2006										< 4.55 U	
Intermediate	MWA-53I	MWA-53I-072406	7/24/2006										6.8 J	
Intermediate	MWA-53I	MWA-53I-041607	4/16/2007								16,200,000		< 6 UJ	209
Intermediate	MWA-53I	MWA-53I-080609	8/6/2009								5,980,000		< 25 UJ	< 20 U
Intermediate	MWA-54I	MWA-54I-050505	5/5/2005										54.8	
Intermediate	MWA-54I	MWA-54I-071205	7/12/2005										< 136 U	
Intermediate	MWA-54I	MWA-54I-081505	8/15/2005										< 4.55 U	
Intermediate	MWA-54I	MWA-54I-090805	9/8/2005								5,540,000			
Intermediate	MWA-54I	MWA-54I-092305	9/23/2005										6.34 J	
Intermediate	MWA-54I	MWA-54I-120705	12/7/2005										7.20 J	
Intermediate	MWA-54I	MWA-54I-011106	1/11/2006										11.3	
Intermediate	MWA-54I	MWA-54I-020906	2/9/2006										11.3	
Intermediate	MWA-54I	MWA-54I-07506	7/25/2006										17.5 J	
Intermediate	MWA-54I	MWA-54I-040307	4/3/2007		< 0.0962 U		< 0.0962 U		< 0.0962 U	< 0.0962 UA	3,090,000	9	14.4	< 40.0 U
Intermediate	MWA-54I	MWA-54I-081909	8/19/2009		0.0380 J		0.00781 J		0.0103 J	0.0561	2,750,000	7	210 J	< 40 U
Intermediate	MWA-64I	MWA-64I	8/1/2005		0.207		< 0.0500 U		0.309	0.516 T		2,320		
Intermediate	MWA-64I	MWA-64I-040407	4/4/2007		0.0563 J		< 0.0966 U		< 0.0966 U	0.0563 JA	1,910,000	17,500		< 400 U
Intermediate	MWA-64I	MWA-64I-080609	8/6/2009		0.0290 J		< 0.0952 U		0.0319 J	0.0609 JA	1,590,000	2,070		< 40 U
Intermediate	MWA-66I	MWA-66I	8/2/2005		< 0.500 UJ		< 0.500 UJ		< 0.500 UJ	< 0.5 UJT		12,900		
Intermediate	MWA-66I	MWA-66I-041707	4/17/2007		< 0.0957 U		< 0.0957 U		< 0.0957 U	< 0.0957 UA	1,890,000	8,160		39.0 J
Intermediate	MWA-66I	MWA-66I-081109	8/11/2009		< 0.0340 U		< 0.00971 U		0.00620 J	0.0062 JA	1,720,000	7,780	< 25 UJ	1,240
Intermediate	MWA-70I	MWA-70I-B	4/19/2006								68,000	< 0.17 U	< 1.62 U	< 200 U
Intermediate	MWA-70I	MWA-70I-040307	4/3/2007								4,090,000		1.4 J	< 40.0 U
Intermediate	MWA-70I	MWA-70I-080509	8/5/2009								5,200,000		< 25 U	< 20 U
Deep	MWA-11I(D)	GWG004	12/7/1998									49		
Deep	MWA-11I(D)	GW019916	1/29/1999		< 0.04 U		< 0.04 U		0.2	0.2 T	612,000	2.5		
Deep	MWA-11I(D)	GW029905	4/27/1999		0.19		< 0.04 U		0.08	0.27 T	637,000	< 0.5 UJ		
Deep	MWA-11I(D)	GW039916	8/26/1999		0.12		< 0.04 U		0.05	0.17 T	802,000	< 0.5 U		
Deep	MWA-11I(D)	GW049914	11/17/1999		0.1 J		< 0.04 UJ		< 0.04 UJ	0.1 JT	963,000	< 1 U		
Deep	MWA-11I(D)	GW010118	3/30/2001		0.25		< 0.1 U		0.7	0.95 T	768,000 J	< 0.5 U		
Deep	MWA-11I(D)	GW020119	6/15/2001		0.25		0.01 J		0.48	0.74 JT	773,000	< 0.5 U		
Deep	MWA-11I(D)	GW04110204	4/11/2002		< 0.16 U		< 0.0097 U		< 0.085 U	< 0.16 UT	833,000	< 1.4 U		
Deep	MWA-11I(D)	GW-061003-03	6/10/2003		1.2		< 0.0170 U		< 0.573 U	1.2 T	550,000	< 0.71 U		< 20 U
Deep	MWA-11I(D)	MWA-11	8/1/2005		0.593		< 0.0500 U		0.0829 J	0.6759 JT		0.810		
Deep	MWA-11I(D)	MWA-11I-041707	4/17/2007		0.0722 J		< 0.0971 U		0.0591 J	0.131 JA	1,210,000	1.92		< 8.0 U
Deep	MWA-11I(D)	MWA-11I-081909	8/19/2009		0.658		0.0459 J		0.0599 J	0.764 JA	1,090,000	< 0.780 U	40 J	< 4 U
Deep	MWA-31I(D)	GW04080205	4/8/2002		< 0.0097 U		< 0.0097 U		< 0.0097 U	< 0.0097 UT	39,100,000	< 0.5 U		
Deep	MWA-31I(D)	GW-060403-07	6/4/2003		< 0.0170 U		< 0.0170 U		< 0.0280 U	< 0.028 UT	61,100,000			4,700
Deep	MWA-31I(D)	MWA-31I-050605	5/6/2005								62,100,000		726	
Deep	MWA-31I(D)	MWA-31I-071805	7/18/2005										250	
Deep	MWA-31I(D)	MWA-31I-081705	8/17/2005										142	
Deep	MWA-31I(D)	MWA-31I-091405	9/14/2005								57,900,000		1,020	

Appendix E
Historical Data Table
Arkema Quarter 1, 2025, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Aquifer	Well ID	Sample ID	Date	2,4'-DDD	4,4'-DDD	2,4'-DDE	4,4'-DDE	2,4'-DDT	4,4'-DDT	Total of 2,4' and 4,4'-DDD, -DDE, - DDT	Chloride	Chlorobenzene	Chromium (VI)	Perchlorate
				µg / L	µg / L	µg / L	µg / L	µg / L	µg / L	µg / L	µg / L	µg / L	µg / L	µg / L
Deep	MWA-31I(D)	MWA-31I-120905	12/9/2005										25.1	
Deep	MWA-31I(D)	MWA-31I-010906	1/9/2006										45.3	
Deep	MWA-31I(D)	MWA-31I-021006	2/10/2006										104	
Deep	MWA-31I(D)	MWA-31I-072606	7/26/2006										< 2 U	
Deep	MWA-31I(D)	MWA-31I(D)-040507	4/5/2007		< 0.0962 U		< 0.0962 U		< 0.0962 U	< 0.0962 UA	53,700,000	0.640	< 6 UJ	5,730
Deep	MWA-31I(D)	MWA-31I(D)-081009	8/10/2009		< 0.00952 U		< 0.00952 U		< 0.00952 U	< 0.00952 UA	54,300,000	< 2.50 UJ	9,300 J	1,840
Deep	MWA-56D	MWA-56D-050605	5/6/2005										< 4.55 U	
Deep	MWA-56D	MWA-56D-071405	7/14/2005										22.3	
Deep	MWA-56D	MWA-56D-081605	8/16/2005										< 4.55 U	
Deep	MWA-56D	MWA-56D-091305	9/13/2005								30,800,000		< 4.55 U	
Deep	MWA-56D	MWA-56D-120905	12/9/2005										< 4.55 UJ	
Deep	MWA-56D	MWA-56D-010906	1/9/2006										< 4.55 U	
Deep	MWA-56D	MWA-56D-021306	2/13/2006										< 4.55 U	
Deep	MWA-56D	MWA-56D-072606	7/26/2006										< 2 U	
Deep	MWA-56D	MWA-56D-041107	4/11/2007		< 0.0971 U		< 0.0971 U		< 0.0971 U	< 0.0971 UA	27,900,000	< 2.50 U	< 2 UJ	2,430
Deep	MWA-56D	MWA-56D-081009	8/10/2009		< 0.00976 U		< 0.00976 U		0.00690 J	0.0069 JA	22,800,000	< 5.00 U	< 25 UJ	2,140
Deep	MWA-58D	MWA-58D-050605	5/6/2005										< 4.55 U	
Deep	MWA-58D	MWA-58D-071405	7/14/2005										< 4.55 U	
Deep	MWA-58D	MWA-58D-081705	8/17/2005										< 4.55 U	
Deep	MWA-58D	MWA-58D-091305	9/13/2005								60,700,000		< 4.55 U	
Deep	MWA-58D	MWA-58D-120905	12/9/2005										< 4.55 UJ	
Deep	MWA-58D	MWA-58D-010906	1/9/2006										< 4.55 U	
Deep	MWA-58D	MWA-58D-021006	2/10/2006										< 4.55 U	
Deep	MWA-58D	MWA-58D-072606	7/26/2006										< 2 U	
Deep	MWA-58D	MWA-58D-040907	4/9/2007		< 0.0962 U		< 0.0962 U		< 0.0962 U	< 0.0962 UA	53,600,000	< 2.50 U	57.5	59,600
Deep	MWA-58D	MWA-58D-081009	8/10/2009		< 0.00943 U		< 0.00943 U		0.0286	0.0286 A	33,600,000	2.00 J	< 25 UJ	128,000

Notes:
Bolded values indicate concentrations above the Reportable Detection Limit.
< = Compound not detected. Reportable detection limit shown.
µg/L = micrograms per liter
DDD = Dichlorodiphenyldichloroethane
DDE = Dichlorodiphenyldichloroethylene
DDT = Dichlorodiphenyltrichloroethane

Qualifiers:
A = Total value based on limited number of analytes.
j = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.
J+ = The concentration of the sample is considered to be biased high, as the associated QC results exceed the upper control limits.
J- = The concentration of the sample is considered to be biased low, as the associated QC results are outside the lower control limits.
T = Sample temperature did not meet quality control criteria.
U = Compound not detected based on quality assurance review.
UJ = Analyte was analyzed for, but not detected. The detection limit is a quantitative estimate.
R = Rejected. Quality control indicates that the data are unusable (compound may or not be present).



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