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Arkema Quarter 2, 2024, Groundwater Monitoring Report

Arkema Inc. Facility, Portland, Oregon

PREPARED FOR
Legacy Site Services LLC

DATE
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Arkema Quarter 2, 2024, Groundwater Monitoring Report

Arkema Inc. Facility, Portland, Oregon

0732445



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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
ODEQ	Oregon Department of Environmental Quality
PCE	tetrachloroethene
QA/QC	quality assurance / quality control
QAPP	quality Assurance Project Plan
Report	Quarter 2, 2024, Groundwater Monitoring Report
SEE	System Effectiveness Evaluation
Site	Former Arkema Portland Plant at 6400 NW Front Avenue, Portland, Oregon



1. INTRODUCTION

Environmental Resources Management, Inc. (ERM) has prepared this *Arkema Quarter 2, 2024, 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 2, 2024, 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 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



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- 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.



2. FIELD PROCEDURES

ERM collected groundwater elevation data from 128 well locations on 7 June 2024 and groundwater samples from 30 well locations between 10 June and 14 June 2024. 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. 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 7 June 2024 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.

Monitoring well MWA-34i was abandoned and reinstalled during May 2024. Following a series of erroneous water level measurements, a camera inspection indicated well casing damage. The replacement monitoring well, MWA-34iR, was installed on 29 May 2024, and MWA-34i was abandoned per Oregon Administrative Rules 690-240-0510 on 30 May 2024.

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. There were no deviations to the scope of work of the Approved Groundwater Monitoring Program during the Quarter 2, 2024, groundwater sampling event.

2.5 DEVIATIONS FROM GROUNDWATER MONITORING WORK PLAN

Deviations outside of the Approved Groundwater Monitoring Program include select wells sampled during Quarter 2, 2024, with unstable turbidity and drawdown over 1 foot. Additional details including action items are provided below in Section 3.2.1.



3. GROUNDWATER MONITORING RESULTS

3.1 GROUNDWATER ELEVATIONS

On 7 June 2024, ERM manually measured depth to groundwater to the nearest 0.01 foot in 61 wells at the Site using an electronic water level indicator. For the additional 67 wells with functioning transducers, ERM collected transducer groundwater elevation data on 7 June 2024. 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 10 and 14 June 2024 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 2, 2024, groundwater monitoring event:

- Four monitoring locations (PA-19d, PA-20d, PA-23d, and PA-25d) did not stabilize for turbidity during the Quarter 2, 2024, groundwater monitoring event. Given the nature of analytes included in the monitoring program scope and the stabilization of other indicator parameters (dissolved oxygen, oxidation-reduction potential, specific conductance, and pH) consistent with ASTM International Standard D6771 (2018) as well as temperature, the unstable turbidity did not affect the quality of the data.
- One monitoring location (PA-19d) did not stabilize for oxygen-reduction potential (ORP) during the Quarter 2, 2024, groundwater monitoring event.
- Four monitoring locations (PA-19d, PA-20d, PA-21d, and PA-23d) did not stabilize for dissolved oxygen (DO) during the Quarter 2, 2024, groundwater monitoring event.
- Five monitoring locations (PA-19d, PA-20d, PA-21d, PA-23d, and PA-25d) 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. Monitoring wells were also gauged for total depth following sampling. Well drawdown will continue to be monitored and following the upcoming Quarter 3,



2024, monitoring event, monitoring wells with repeated excessive drawdown will be evaluated and considered for potential redevelopment.

3.2.2 ANALYTICAL RESULTS

Tables 4 and 5 present the analytical results for VOCs, and perchlorate and chloride, respectively, from the Quarter 2, 2024, 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 12 out of 30 samples. The highest detected concentration of chlorobenzene was 41,000 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 1 out of 30 samples. The highest detected concentration of 1,2-dichlorobenzene was 0.34 $\mu\text{g/L}$ 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 8.2 $\mu\text{g/L}$ at Shallow Zone monitoring well MWA-63.
- TCE was detected in 5 out of 30 samples. The highest detected concentration of TCE was 32 $\mu\text{g/L}$ at Shallow Zone monitoring well PA-19d.
- cis-1,2-DCE was detected in 9 out of 30 samples. The highest detected concentration of cis-1,2-DCE was 0.85 $\mu\text{g/L}$ at Shallow Zone monitoring well MWA-63.
- Vinyl chloride was detected in 2 out of 30 samples. The highest detected concentration of vinyl chloride was 0.20 $\mu\text{g/L}$ at Intermediate Zone piezometer PA-32i.

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 8 out of 30 samples. The highest detected concentration of perchlorate was 100,000 $\mu\text{g/L}$ at Deep Zone monitoring well MWA-31i(d).



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 30 out of 30 samples. The highest detected concentration of chloride was 31,000 milligrams per liter at Deep Zone piezometer PA-23d.



4. RECOMMENDATIONS

Following the Quarter 2, 2024, groundwater monitoring event, no changes are recommended to the GMWP at this time.

ERM will conduct the Quarter 3, 2024, groundwater monitoring event according to the following schedule:

- Water levels will be measured on 6 September 2024.
- Sampling will begin 9 September 2024 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 (October 2024).

The Quarter 3, 2024, Groundwater Monitoring Report will be submitted to the ODEQ within 60 days after data validation (December 2024).



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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- ERM. 2019. *Arkema Quarterly Groundwater Monitoring Work Plan*. Arkema Inc. Facility, Portland, Oregon. October 2019.
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- ODEQ (Oregon Department of Environmental Quality). 2019. *Draft GWET System Effectiveness Evaluation Report*. DEQ Review.
- ODEQ. 2021. *2021 GWET System Effectiveness Evaluation Report*. DEQ Review.





TABLES

Table 1
Groundwater Sampling Matrix
Arkema Quarter 2, 2024, 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			Volatiles Organic Compounds	Volatiles 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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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					
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 measured with transducer

Table 2
Groundwater Elevation Results
Arkema Quarter 2, 2024, 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*	6/7/2024	*	Shallow	36.20	--	11.33	
MWA-15r	6/7/2024	8:38:00 AM	Shallow	36.06	23.24	12.82	
MWA-18	6/7/2024	9:32:00 AM	Shallow	39.43	28.05	11.38	
MWA-19*	6/7/2024	*	Shallow	38.26	26.00	12.26	
MWA-20	6/7/2024	8:55:00 AM	Shallow	40.95	26.07	14.88	
MWA-22	6/7/2024	8:34:00 AM	Shallow	36.59	20.05	16.54	
MWA-24	6/7/2024	10:25:00 AM	Shallow	37.58	21.31	16.27	
MWA-29	6/7/2024	9:52:00 AM	Shallow	44.42	31.31	13.11	
MWA-33	6/7/2024	10:20:00 AM	Shallow	37.26	16.94	20.32	
MWA-40	6/7/2024	10:24:00 AM	Shallow	36.96	16.58	20.38	
MWA-41	6/7/2024	10:10:00 AM	Shallow	45.14	31.02	14.12	
MWA-42	6/7/2024	8:52:00 AM	Shallow	37.24	23.35	13.89	
MWA-43	6/7/2024	10:03:00 AM	Shallow	44.53	31.37	13.16	
MWA-46	6/7/2024	9:30:00 AM	Shallow	36.67	24.52	12.15	
MWA-47**	6/7/2024	9:42:00 AM	Shallow	39.02	26.38	12.64	
MWA-61	6/7/2024	8:18:00 AM	Shallow	36.21	24.85	11.36	
MWA-63	6/7/2024	7:20:00 AM	Shallow	36.29	23.07	13.22	
MWA-69*	6/7/2024	*	Shallow	33.73	--	11.23	X
MWA-71	6/7/2024	7:16:00 AM	Shallow	34.82	3.52	31.30	
MWA-72	6/7/2024	10:34:00 AM	Shallow	34.16	2.81	31.35	
MWA-73	6/7/2024	10:30:00 AM	Shallow	36.01	5.01	31.00	
MWA-82	6/7/2024	10:14:00 AM	Shallow	37.74	22.24	15.50	
PA-03*	6/7/2024	*	Shallow	37.10	--	26.59	
PA-04*	6/7/2024	*	Shallow	36.67	--	27.17	
PA-05**	6/7/2024	8:04:00 AM	Shallow	37.22	25.20	12.02	X
PA-06*	6/7/2024	*	Shallow	38.03	--	13.34	
PA-07*	6/7/2024	*	Shallow	39.30	--	15.15	
PA-08*	6/7/2024	*	Shallow	40.47	--	14.57	X
PA-09*	6/7/2024	*	Shallow	40.24	--	14.20	X
PA-28*	6/7/2024	*	Shallow	38.58	--	15.25	X
PA-31	6/7/2024	7:24:00 AM	Shallow	36.25	9.00	27.25	
PA-33	6/7/2024	7:25:00 AM	Shallow	36.29	9.70	26.59	
PA-35	6/7/2024	7:29:00 AM	Shallow	35.91	23.76	12.15	
PA-36	6/7/2024	8:01:00 AM	Shallow	36.90	25.25	11.65	
PA-38	6/7/2024	9:59:00 AM	Shallow	42.93	27.81	15.12	
PA-41	6/7/2024	9:55:00 AM	Shallow	39.69	25.88	13.81	
PA-42	6/7/2024	10:02:00 AM	Shallow	40.60	27.11	13.49	
PA-43	6/7/2024	10:13:00 AM	Shallow	40.41	25.81	14.60	
RP-02-31	6/7/2024	6:57:00 AM	Shallow	42.49	28.90	13.59	
RP-10-30	6/7/2024	7:02:00 AM	Shallow	37.47	7.30	30.17	
RW-05*	6/7/2024	*	Shallow	34.80	--	24.02	
RW-07*	6/7/2024	*	Shallow	33.98	--	11.97	
RW-08*	6/7/2024	*	Shallow	34.21	--	12.16	
RW-10*	6/7/2024	*	Shallow	34.33	--	12.93	
RW-12*	6/7/2024	*	Shallow	35.58	--	13.98	
RW-14*	6/7/2024	*	Shallow	36.08	--	14.89	
RW-15*	6/7/2024	*	Shallow	35.81	20.94	14.87	
RW-17*	6/7/2024	*	Shallow	36.55	--	15.15	
RW-18*	6/7/2024	*	Shallow	36.51	--	14.87	
RW-20*	6/7/2024	*	Shallow	37.07	--	14.98	
RW-22*	6/7/2024	*	Shallow	38.02	--	14.45	
RW-23*	6/7/2024	*	Shallow	33.63	--	11.66	
RW-25*	6/7/2024	*	Shallow	38.06	--	14.34	
EW-1*	6/7/2024	*	Shallow/Intermediate	33.84	--	14.91	
EW-2*	6/7/2024	*	Shallow/Intermediate	34.20	--	13.27	
EW-3*	6/7/2024	*	Shallow/Intermediate	34.43	--	9.76	
EW-4*	6/7/2024	*	Shallow/Intermediate	34.61	--	7.39	
EW-5*	6/7/2024	*	Shallow/Intermediate	35.03	--	4.27	
EW-6*	6/7/2024	*	Shallow/Intermediate	35.43	--	4.27	
EW-7*	6/7/2024	*	Shallow/Intermediate	35.24	--	9.24	
EW-8*	6/7/2024	*	Shallow/Intermediate	35.07	--	9.53	
EW-9*	6/7/2024	*	Shallow/Intermediate	36.77	--	-5.91	
EW-10*	6/7/2024	*	Shallow/Intermediate	36.35	--	-5.00	
EW-11*	6/7/2024	*	Shallow/Intermediate	37.38	--	-1.75	
EW-12*	6/7/2024	*	Shallow/Intermediate	38.24	--	-3.01	
EW-13*	6/7/2024	*	Shallow/Intermediate	39.79	--	-5.69	
EW-14*	6/7/2024	*	Shallow/Intermediate	40.03	--	-3.74	
MWA-83	6/7/2024	7:56:00 AM	Shallow/Intermediate	35.82	23.11	12.71	
MWA-84	6/7/2024	8:02:00 AM	Shallow/Intermediate	36.31	25.23	11.08	
MWA-85	6/7/2024	8:45:00 AM	Shallow/Intermediate	36.86	31.52	5.34	

Table 2
Groundwater Elevation Results
Arkema Quarter 2, 2024, 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-86	6/7/2024	8:47:00 AM	Shallow/Intermediate	37.15	30.40	6.75	
MWA-87	6/7/2024	9:37:00 AM	Shallow/Intermediate	37.68	36.28	1.40	
MWA-88	6/7/2024	9:39:00 AM	Shallow/Intermediate	39.36	40.45	-1.09	
MWA-89	6/7/2024	10:00:00 AM	Shallow/Intermediate	41.65	38.39	3.26	
MWA-07(i)	6/7/2024	10:30:00 AM	Intermediate	36.24	5.58	30.66	
MWA-08i*	6/7/2024	*	Intermediate	36.25	--	12.57	X
MWA-16i	6/7/2024	8:28:00 AM	Intermediate	36.58	23.68	12.90	
MWA-34iR	6/7/2024	9:13:00 AM	Intermediate	37.36	25.00	12.36	X
MWA-49i	6/7/2024	9:31:00 AM	Intermediate	36.68	23.73	12.95	
MWA-53i	6/7/2024	9:51:00 AM	Intermediate	44.63	31.53	13.10	
MWA-54i	6/7/2024	8:53:00 AM	Intermediate	37.35	24.03	13.32	
MWA-66i*	6/7/2024	*	Intermediate	33.35	--	12.32	
MWA-70i	6/7/2024	10:17:00 AM	Intermediate	37.62	16.92	20.70	
MWA-74i	6/7/2024	7:15:00 AM	Intermediate	34.72	9.43	25.29	
MWA-75i	6/7/2024	10:34:00 AM	Intermediate	34.09	21.00	13.09	
MWA-81i	6/7/2024	10:11:00 AM	Intermediate	44.62	31.43	13.19	
PA-10i*	6/7/2024	*	Intermediate	36.67	--	15.04	X
PA-11i*	6/7/2024	*	Intermediate	37.63	--	13.24	
PA-12i**	6/7/2024	8:49:00 AM	Intermediate	38.03	24.83	13.20	
PA-13i*	6/7/2024	*	Intermediate	38.48	--	12.49	
PA-14i*	6/7/2024	*	Intermediate	39.30	--	12.60	
PA-15i*	6/7/2024	*	Intermediate	40.62	--	12.26	
PA-16i*	6/7/2024	*	Intermediate	40.30	--	12.89	
PA-17iR*	6/7/2024	*	Intermediate	37.59	--	14.43	X
PA-29i*	6/7/2024	*	Intermediate	39.18	--	12.72	
PA-32i	6/7/2024	7:23:00 AM	Intermediate	36.28	21.30	14.98	
PA-34i	6/7/2024	7:26:00 AM	Intermediate	36.02	21.14	14.88	
PA-37i	6/7/2024	8:26:00 AM	Intermediate	36.54	23.60	12.94	
PA-39i	6/7/2024	9:56:00 AM	Intermediate	40.11	27.62	12.49	
PA-40i	6/7/2024	9:57:00 AM	Intermediate	41.47	28.96	12.51	
PA-44i**	6/7/2024	10:13:00 AM	Intermediate	40.36	27.55	12.81	
RW-06i*	6/7/2024	*	Intermediate	35.59	--	12.35	
RW-09i*	6/7/2024	*	Intermediate	33.73	--	12.74	
RW-11i*	6/7/2024	*	Intermediate	34.77	--	11.24	X
RW-13i*	6/7/2024	*	Intermediate	36.09	--	14.34	X
RW-16i*	6/7/2024	*	Intermediate	35.77	--	3.31	X
RW-19i*	6/7/2024	*	Intermediate	36.56	--	9.49	
RW-21i*	6/7/2024	*	Intermediate	37.38	--	12.58	
RW-24i*	6/7/2024	*	Intermediate	34.03	--	11.66	X
RW-26i*	6/7/2024	*	Intermediate	38.10	--	12.84	
MWA-11i(d)	6/7/2024	8:40:00 AM	Deep	36.49	22.88	13.61	
MWA-12i(d)	6/7/2024	10:31:00 AM	Deep	35.86	9.54	26.32	
MWA-31i(d)	6/7/2024	9:46:00 AM	Deep	38.36	26.04	12.32	
MWA-56d	6/7/2024	9:27:00 AM	Deep	36.68	24.15	12.53	
MWA-58d	6/7/2024	9:15:00 AM	Deep	37.97	25.36	12.61	X
PA-18d*	6/7/2024	*	Deep	36.55	--	13.08	
PA-19d**	6/7/2024	8:23:00 AM	Deep	36.65	24.51	12.14	
PA-20d*	6/7/2024	*	Deep	37.91	--	13.08	
PA-21d*	6/7/2024	*	Deep	34.36	--	11.43	X
PA-22d*	6/7/2024	*	Deep	38.75	--	13.28	X
PA-23d*	6/7/2024	*	Deep	39.31	--	13.02	
PA-24d*	6/7/2024	*	Deep	39.06	--	11.64	X
PA-25d*	6/7/2024	*	Deep	40.44	--	13.14	X
PA-26d*	6/7/2024	*	Deep	40.33	--	13.90	
PA-27d*	6/7/2024	*	Deep	37.10	--	13.66	
PA-30d*	6/7/2024	*	Deep	37.34	--	12.76	
MWA-76g	6/7/2024	10:34:00 AM	Gravel	34.96	9.10	25.86	
MWA-77g	6/7/2024	7:14:00 AM	Gravel	34.03	18.19	15.84	

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 7:02 AM and 10:34 AM for the groundwater elevation value.

Table 3
Field Parameters Measured in Groundwater
Arkema Quarter 2, 2024, 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	10-Jun-24	Shallow	MWA-41-061024	6.65	18.5	307.5	89.2	0.55	35.14
MWA-63	13-Jun-24	Shallow	MWA-63-061324	7.04	14.9	645	113.6	7.46	16.8
MWA-82	10-Jun-24	Shallow	MWA-82-061024	9.43	15.1	345	4.1	0.4	42.4
PA-03	12-Jun-24	Shallow	PA-03-061224	10.28	15.2	883	-284.1	0.35	15.3
PA-04	12-Jun-24	Shallow	PA-04-061224	9.6	17.8	817	-175.4	0.34	17.6
PA-08	10-Jun-24	Shallow	PA-08-061024	7.12	16.4	1344	-229.3	0.82	0
PA-09	10-Jun-24	Shallow	PA-09-061024	6.73	18.7	931	42.6	0.62	0
PA-31	13-Jun-24	Shallow	PA-31-061324	9.41	16.4	784	-5.1	8.09	166
MWA-81i	10-Jun-24	Intermediate	MWA-81i-061024	6.64	18.3	500	-15.3	0.78	3.74
PA-10i	12-Jun-24	Intermediate	PA-10i-061224	7.47	17.3	948	-178.5	0.26	2.96
PA-15i	12-Jun-24	Intermediate	PA-15i-061224	7.41	13.3	831	-88.7	0.73	172.18
PA-16i	10-Jun-24	Intermediate	PA-16i-061024	6.84	19.6	472	-207	0.46	NM
PA-17iR	12-Jun-24	Intermediate	PA-17iR-061224	9.26	15.4	933	-271.9	0.21	2.66
PA-32i	13-Jun-24	Intermediate	PA-32i-061324	7.44	16.3	1288	-166.9	0.41	1.38
PA-44i	11-Jun-24	Intermediate	PA-44i-061124	6.47	16.2	2074	25.1	1.03	65.15
MWA-11i(d)	13-Jun-24	Deep	MWA-11i(d)-061324	6.71	16.5	2218	-119.5	0.49	3.03
MWA-31i(d)	12-Jun-24	Deep	MWA-31i(d)-061224	6.55	18.1	57209	93	0.63	9.97
MWA-56d	12-Jun-24	Deep	MWA-56d-061224	6.63	16.7	38358	111.6	0.29	16.51
MWA-58d	12-Jun-24	Deep	MWA-58d-061224	6.57	16.6	51905	95.3	0.3	4.85
PA-18d	12-Jun-24	Deep	PA-18d-061224	8.26	18.85	1361	-184.1	0.23	2.94
PA-19d	13-Jun-24	Deep	PA-19d-061324	7.2	18.2	3097	-35.6	0.94	75.39
PA-20d	13-Jun-24	Deep	PA-20d-061324	6.76	16.2	3217	-68.5	0.4	85.11
PA-21d	13-Jun-24	Deep	PA-21d-061324	6.1	17.5	3747	-17.2	0.41	71.43
PA-22d	12-Jun-24	Deep	PA-22d-061224	7.17	17.3	16215	-6.5	0.87	4.82
PA-23d	11-Jun-24	Deep	PA-23d-061124	6.75	16.33	62.79	-85.7	4.52	31.5
PA-24d	12-Jun-24	Deep	PA-24d-061224	6.69	14.9	72238	-98.9	0.47	83.18
PA-25d	11-Jun-24	Deep	PA-25d-061124	7.17	18.5	659	-134	0.55	72.64
PA-26d	10-Jun-24	Deep	PA-26d-061024	6.73	19.7	643.0	-110.0	0.70	3.64
PA-27d	12-Jun-24	Deep	PA-27d-061224	6.98	18.8	2846	-145.8	0.26	9.95
PA-30d	14-Jun-24	Deep	PA-30d-061424	8.1	18.3	3245	-124.1	0.17	120.89

Notes:
uS/cm = microSiemens per centimeter
deg C = degrees Celsius
mg/L = milligrams per liter
mV = millivolts
NTU = nephelometric turbidity units
SU = standard units
NM = not measured

Table 4
Volatile Organic Compounds Results
Arkema Quarter 2, 2024, 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	6/10/2024	N	Shallow	MWA-41-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U
MWA-63	6/13/2024	N	Shallow	MWA-63-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.29 U	< 0.43 U	< 0.41 U	< 0.33 U	< 0.61 U
MWA-82	6/10/2024	N	Shallow	MWA-82-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U
PA-03	6/12/2024	N	Shallow	PA-03-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.15 j	< 0.035 U	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U
PA-03	6/12/2024	FD	Shallow	DUP-01-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	< 0.035 U	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U
PA-04	6/12/2024	N	Shallow	PA-04-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.15 j	0.17 j	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U
PA-08	6/10/2024	N	Shallow	PA-08-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.12 j	< 0.035 U	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U
PA-09	6/10/2024	N	Shallow	PA-09-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U
PA-31	6/13/2024	N	Shallow	PA-31-061324	< 0.11 U	0.19 j	< 0.056 U	< 0.070 U	0.19 j	0.52	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U
MWA-81i	6/10/2024	N	Intermediate	MWA-81i-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U
PA-10i	6/12/2024	N	Intermediate	PA-10i-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	0.080 j	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U
PA-15i	6/12/2024	N	Intermediate	PA-15i-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	< 0.035 U	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U
PA-16i	6/10/2024	N	Intermediate	PA-16i-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U
PA-17iR	6/12/2024	N	Intermediate	PA-17iR-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.11 j	0.16 j	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U
PA-32i	6/13/2024	N	Intermediate	PA-32i-061324	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.075 j	0.068 j	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U
PA-44i	6/11/2024	N	Intermediate	PA-44i-061124	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.23	< 0.035 U	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U
MWA-11i(d)	6/13/2024	N	Deep	MWA-11i(d)-061324	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U
MWA-31i(d)	6/12/2024	N	Deep	MWA-31i(d)-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 2.9 U	< 4.3 U	< 4.1 U	< 3.3 U	< 6.1 U
MWA-56d	6/12/2024	N	Deep	MWA-56d-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 2.9 U	< 4.3 U	< 4.1 U	< 3.3 U	< 6.1 U
MWA-58d	6/12/2024	N	Deep	MWA-58d-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 2.9 U	< 4.3 U	< 4.1 U	< 3.3 U	< 6.1 U
PA-18d	6/12/2024	N	Deep	PA-18d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.29 U	< 0.43 U	< 0.41 U	< 0.33 U	< 0.61 U
PA-19d	6/13/2024	N	Deep	PA-19d-061324	< 18 U	< 39 U	< 52 U	< 24 U	< 22 U	< 28 U	< 29 U	< 43 U	< 41 U	< 33 U	< 61 U
PA-20d	6/13/2024	N	Deep	PA-20d-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	1.1	< 0.28 U	< 0.29 U	< 0.43 U	< 0.41 U	< 0.33 U	< 0.61 U
PA-20d	6/13/2024	FD	Deep	DUP-02-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.95 j	< 0.28 U	< 0.29 U	< 0.43 U	< 0.41 U	< 0.33 U	< 0.61 U
PA-21d	6/13/2024	N	Deep	PA-21d-061324	< 180 U	< 390 U	< 520 U	< 240 U	< 220 U	< 280 U	< 290 U	< 430 U	< 410 U	< 330 U	< 610 U
PA-22d	6/12/2024	N	Deep	PA-22d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.29 U	< 0.43 U	< 0.41 U	< 0.33 U	< 0.61 U
PA-23d	6/11/2024	N	Deep	PA-23d-061124	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.29 U	< 0.43 U	< 0.41 U	< 0.33 U	< 0.61 U
PA-24d	6/12/2024	N	Deep	PA-24d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.29 U	< 0.43 U	< 0.41 U	< 0.33 U	< 0.61 U
PA-25d	6/11/2024	N	Deep	PA-25d-061124	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U
PA-26d	6/10/2024	N	Deep	PA-26d-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U
PA-27d	6/12/2024	N	Deep	PA-27d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.32 j	< 0.28 U	< 0.29 U	< 0.43 U	< 0.41 U	< 0.33 U	< 0.61 U
PA-30d	6/14/2024	N	Deep	PA-30d-061424	< 180 U	< 390 U	< 520 U	< 240 U	< 220 U	< 280 U	< 290 U	< 430 U	< 410 U	< 330 U	< 610 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.
UJ = Analyte was analyzed for, but not detected. The detection limit is a quantitative estimate.

Table 4
Volatile Organic Compounds Results
Arkema Quarter 2, 2024, 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	6/10/2024	N	Shallow	MWA-41-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.48 U	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U
MWA-63	6/13/2024	N	Shallow	MWA-63-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.57 U	< 0.46 U	< 0.42 U	< 0.18 U	< 0.55 U
MWA-82	6/10/2024	N	Shallow	MWA-82-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.48 U	< 0.30 U	< 0.12 U	< 0.060 U	< 0.19 U
PA-03	6/12/2024	N	Shallow	PA-03-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.15 j	< 0.035 U	< 0.48 U	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U
PA-03	6/12/2024	FD	Shallow	DUP-01-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	< 0.035 U	< 0.48 U	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U
PA-04	6/12/2024	N	Shallow	PA-04-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.15 j	0.17 j	< 0.48 U	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U
PA-08	6/10/2024	N	Shallow	PA-08-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.12 j	< 0.035 U	< 0.48 U	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U
PA-09	6/10/2024	N	Shallow	PA-09-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.48 U	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U
PA-31	6/13/2024	N	Shallow	PA-31-061324	< 0.11 U	0.19 j	< 0.056 U	< 0.070 U	0.19 j	0.52	< 0.48 U	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U
MWA-81i	6/10/2024	N	Intermediate	MWA-81i-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.48 U	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U
PA-10i	6/12/2024	N	Intermediate	PA-10i-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	0.080 j	< 0.48 U	< 0.30 U	< 0.12 U	< 0.060 U	< 0.19 U
PA-15i	6/12/2024	N	Intermediate	PA-15i-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	< 0.035 U	< 0.48 U	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U
PA-16i	6/10/2024	N	Intermediate	PA-16i-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.48 U	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U
PA-17iR	6/12/2024	N	Intermediate	PA-17iR-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.11 j	0.16 j	< 0.48 U	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U
PA-32i	6/13/2024	N	Intermediate	PA-32i-061324	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.075 j	0.068 j	< 0.48 U	0.34	< 0.12 U	< 0.060 U	< 0.19 U
PA-44i	6/11/2024	N	Intermediate	PA-44i-061124	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.23	< 0.035 U	< 0.48 U	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U
MWA-11i(d)	6/13/2024	N	Deep	MWA-11i(d)-061324	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.48 U	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U
MWA-31i(d)	6/12/2024	N	Deep	MWA-31i(d)-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 5.7 U	< 4.6 U	< 4.2 U	< 1.8 U	< 5.5 U
MWA-56d	6/12/2024	N	Deep	MWA-56d-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 5.7 U	< 4.6 U	< 4.2 U	< 1.8 U	< 5.5 U
MWA-58d	6/12/2024	N	Deep	MWA-58d-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 5.7 U	< 4.6 U	< 4.2 U	< 1.8 U	< 5.5 U
PA-18d	6/12/2024	N	Deep	PA-18d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.57 U	< 0.46 U	< 0.42 U	< 0.18 U	< 0.55 U
PA-19d	6/13/2024	N	Deep	PA-19d-061324	< 18 U	< 39 U	< 52 U	< 24 U	< 22 U	< 28 U	< 57 U	< 46 U	< 42 U	< 18 U	< 55 U
PA-20d	6/13/2024	N	Deep	PA-20d-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	1.1	< 0.28 U	< 0.57 U	< 0.46 U	< 0.42 U	< 0.18 U	< 0.55 U
PA-20d	6/13/2024	FD	Deep	DUP-02-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.95 j	< 0.28 U	< 0.57 U	< 0.46 U	0.42 j	< 0.18 U	< 0.55 U
PA-21d	6/13/2024	N	Deep	PA-21d-061324	< 180 U	< 390 U	< 520 U	< 240 U	< 220 U	< 280 U	< 570 U	< 460 U	< 420 U	< 180 U	< 550 U
PA-22d	6/12/2024	N	Deep	PA-22d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.57 U	< 0.46 U	< 0.42 U	< 0.18 U	< 0.55 U
PA-23d	6/11/2024	N	Deep	PA-23d-061124	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.57 U	< 0.46 U	< 0.42 U	< 0.18 U	< 0.55 U
PA-24d	6/12/2024	N	Deep	PA-24d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.57 U	< 0.46 U	< 0.42 U	< 0.18 U	< 0.55 U
PA-25d	6/11/2024	N	Deep	PA-25d-061124	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.48 U	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U
PA-26d	6/10/2024	N	Deep	PA-26d-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.48 U	< 0.038 U	0.36	< 0.060 U	< 0.19 U
PA-27d	6/12/2024	N	Deep	PA-27d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.32 j	< 0.28 U	< 0.57 U	< 0.46 U	< 0.42 U	< 0.18 U	< 0.55 U
PA-30d	6/14/2024	N	Deep	PA-30d-061424	< 180 U	< 390 U	< 520 U	< 240 U	< 220 U	< 280 U	< 570 U	< 460 U	< 420 U	< 180 U	< 550 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.
UJ = Analyte was analyzed for, but not detected. The detection limit is a quantitative estimate.

Table 4
Volatile Organic Compounds Results
Arkema Quarter 2, 2024, 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	6/10/2024	N	Shallow	MWA-41-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.050 U	< 0.056 U	< 0.050 U	< 0.060 U	< 2.5 U
MWA-63	6/13/2024	N	Shallow	MWA-63-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.48 U	< 0.35 U	< 0.46 U	< 0.32 U	< 4.7 U
MWA-82	6/10/2024	N	Shallow	MWA-82-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.050 U	< 0.056 U	< 0.050 U	< 0.060 U	< 2.5 U
PA-03	6/12/2024	N	Shallow	PA-03-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.15 j	< 0.035 U	< 0.050 U	< 0.056 U	< 0.050 U	< 0.060 U	< 2.5 U
PA-03	6/12/2024	FD	Shallow	DUP-01-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	< 0.035 U	< 0.050 U	< 0.056 U	< 0.050 U	< 0.060 U	< 2.5 U
PA-04	6/12/2024	N	Shallow	PA-04-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.15 j	0.17 j	< 0.050 U	< 0.056 U	< 0.050 U	< 0.060 U	< 2.5 U
PA-08	6/10/2024	N	Shallow	PA-08-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.12 j	< 0.035 U	< 0.050 U	< 0.056 U	< 0.050 U	< 0.060 U	< 2.5 U
PA-09	6/10/2024	N	Shallow	PA-09-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.050 U	< 0.056 U	< 0.050 U	< 0.060 U	< 2.5 U
PA-31	6/13/2024	N	Shallow	PA-31-061324	< 0.11 U	0.19 j	< 0.056 U	< 0.070 U	0.19 j	0.52	< 0.050 U	< 0.056 U	< 0.050 U	< 0.060 U	< 2.5 U
MWA-81i	6/10/2024	N	Intermediate	MWA-81i-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.050 U	< 0.056 U	< 0.050 U	< 0.060 U	< 2.5 U
PA-10i	6/12/2024	N	Intermediate	PA-10i-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	0.080 j	< 0.050 U	< 0.056 U	< 0.050 U	< 0.060 U	< 2.5 U
PA-15i	6/12/2024	N	Intermediate	PA-15i-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	< 0.035 U	< 0.050 U	< 0.056 U	< 0.050 U	< 0.060 UJ	< 2.5 U
PA-16i	6/10/2024	N	Intermediate	PA-16i-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.050 U	< 0.056 U	< 0.050 U	< 0.060 U	< 2.5 U
PA-17iR	6/12/2024	N	Intermediate	PA-17iR-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.11 j	0.16 j	< 0.050 U	< 0.056 U	< 0.050 U	< 0.060 U	< 2.5 U
PA-32i	6/13/2024	N	Intermediate	PA-32i-061324	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.075 j	0.068 j	< 0.050 U	< 0.056 U	< 0.050 U	< 0.060 U	< 2.5 U
PA-44i	6/11/2024	N	Intermediate	PA-44i-061124	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.23	< 0.035 U	< 0.050 U	< 0.056 U	< 0.050 U	< 0.060 UJ	< 2.5 U
MWA-11i(d)	6/13/2024	N	Deep	MWA-11i(d)-061324	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.050 U	< 0.056 U	< 0.050 U	< 0.060 U	< 2.5 U
MWA-31i(d)	6/12/2024	N	Deep	MWA-31i(d)-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 4.8 U	< 3.5 U	< 4.6 U	< 3.2 UJ	< 47 U
MWA-56d	6/12/2024	N	Deep	MWA-56d-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 4.8 U	< 3.5 U	< 4.6 U	< 3.2 UJ	< 47 U
MWA-58d	6/12/2024	N	Deep	MWA-58d-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 4.8 U	< 3.5 U	< 4.6 U	< 3.2 UJ	< 47 U
PA-18d	6/12/2024	N	Deep	PA-18d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.48 U	< 0.35 U	< 0.46 U	< 0.32 U	< 4.7 U
PA-19d	6/13/2024	N	Deep	PA-19d-061324	< 18 U	< 39 U	< 52 U	< 24 U	< 22 U	< 28 U	< 48 U	< 35 U	< 46 U	< 32 U	< 470 U
PA-20d	6/13/2024	N	Deep	PA-20d-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	1.1	< 0.28 U	< 0.48 U	< 0.35 U	< 0.46 U	< 0.32 U	< 4.7 U
PA-20d	6/13/2024	FD	Deep	DUP-02-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.95 j	< 0.28 U	< 0.48 U	< 0.35 U	< 0.46 U	< 0.32 U	< 4.7 U
PA-21d	6/13/2024	N	Deep	PA-21d-061324	< 180 U	< 390 U	< 520 U	< 240 U	< 220 U	< 280 U	< 480 U	< 350 U	< 460 U	< 320 U	< 4,700 U
PA-22d	6/12/2024	N	Deep	PA-22d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.48 U	< 0.35 U	< 0.46 U	< 0.32 UJ	< 4.7 U
PA-23d	6/11/2024	N	Deep	PA-23d-061124	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.48 U	< 0.35 U	< 0.46 U	< 0.32 UJ	< 4.7 U
PA-24d	6/12/2024	N	Deep	PA-24d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.48 U	< 0.35 U	< 0.46 U	< 0.32 UJ	< 4.7 U
PA-25d	6/11/2024	N	Deep	PA-25d-061124	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.050 U	< 0.056 U	< 0.050 U	< 0.060 UJ	< 2.5 U
PA-26d	6/10/2024	N	Deep	PA-26d-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.050 U	< 0.056 U	< 0.050 U	< 0.060 U	< 2.5 U
PA-27d	6/12/2024	N	Deep	PA-27d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.32 j	< 0.28 U	< 0.48 U	< 0.35 U	< 0.46 U	< 0.32 U	< 4.7 U
PA-30d	6/14/2024	N	Deep	PA-30d-061424	< 180 U	< 390 U	< 520 U	< 240 U	< 220 U	< 280 U	< 480 U	< 350 U	< 460 U	< 320 U	< 4,700 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.
UJ = Analyte was analyzed for, but not detected. The detection limit is a quantitative estimate.

Table 4
Volatile Organic Compounds Results
Arkema Quarter 2, 2024, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Analyte					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
Unit					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
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	6/10/2024	N	Shallow	MWA-41-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.12 U	< 0.25 U	< 2.7 U	< 3.1 U	< 0.030 U
MWA-63	6/13/2024	N	Shallow	MWA-63-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.38 U	< 0.28 U	< 2.5 U	< 3.2 U	< 0.24 U
MWA-82	6/10/2024	N	Shallow	MWA-82-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.12 U	< 0.25 U	< 2.7 U	< 3.1 U	< 0.20 U
PA-03	6/12/2024	N	Shallow	PA-03-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.15 j	< 0.035 U	< 0.12 U	< 0.25 U	< 2.7 U	< 3.1 U	< 0.20 U
PA-03	6/12/2024	FD	Shallow	DUP-01-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	< 0.035 U	< 0.12 U	< 0.25 U	< 2.7 U	< 3.1 U	< 0.20 U
PA-04	6/12/2024	N	Shallow	PA-04-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.15 j	0.17 j	< 0.12 U	< 0.25 U	< 2.7 U	< 3.1 U	< 0.20 U
PA-08	6/10/2024	N	Shallow	PA-08-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.12 j	< 0.035 U	< 0.12 U	< 0.25 U	< 2.7 U	< 3.1 U	< 0.030 U
PA-09	6/10/2024	N	Shallow	PA-09-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.12 U	< 0.25 U	< 2.7 U	< 3.1 U	< 0.030 U
PA-31	6/13/2024	N	Shallow	PA-31-061324	< 0.11 U	0.19 j	< 0.056 U	< 0.070 U	0.19 j	0.52	< 0.12 U	< 0.25 U	< 2.7 U	< 3.1 U	< 0.030 U
MWA-81i	6/10/2024	N	Intermediate	MWA-81i-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.12 U	< 0.25 U	< 2.7 U	< 3.1 U	< 0.030 U
PA-10i	6/12/2024	N	Intermediate	PA-10i-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	0.080 j	< 0.12 U	< 0.25 U	< 2.7 U	< 3.1 U	< 0.20 U
PA-15i	6/12/2024	N	Intermediate	PA-15i-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	< 0.035 U	< 0.12 U	< 0.25 U	< 2.7 U	< 3.1 U	< 0.030 U
PA-16i	6/10/2024	N	Intermediate	PA-16i-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.12 U	< 0.25 U	< 2.7 U	< 3.1 U	< 0.20 U
PA-17iR	6/12/2024	N	Intermediate	PA-17iR-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.11 j	0.16 j	< 0.12 U	< 0.25 U	< 2.7 U	< 3.1 U	< 0.20 U
PA-32i	6/13/2024	N	Intermediate	PA-32i-061324	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.075 j	0.068 j	< 0.12 U	< 0.25 U	< 2.7 U	< 3.1 U	< 0.20 U
PA-44i	6/11/2024	N	Intermediate	PA-44i-061124	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.23	< 0.035 U	< 0.12 U	< 0.25 U	< 2.7 U	< 3.1 U	< 0.030 U
MWA-11i(d)	6/13/2024	N	Deep	MWA-11i(d)-061324	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.12 U	< 0.25 U	< 2.7 U	< 3.1 U	< 0.20 U
MWA-31i(d)	6/12/2024	N	Deep	MWA-31i(d)-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 3.8 U	< 2.8 U	< 25 U	< 32 U	< 2.4 U
MWA-56d	6/12/2024	N	Deep	MWA-56d-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 3.8 U	< 2.8 U	< 25 U	< 32 U	< 2.4 U
MWA-58d	6/12/2024	N	Deep	MWA-58d-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 3.8 U	< 2.8 U	< 25 U	< 32 U	< 2.4 U
PA-18d	6/12/2024	N	Deep	PA-18d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.38 U	< 0.28 U	< 2.5 U	< 3.2 U	< 0.24 U
PA-19d	6/13/2024	N	Deep	PA-19d-061324	< 18 U	< 39 U	< 52 U	< 24 U	< 22 U	< 28 U	< 38 U	< 28 U	< 250 U	< 320 U	53 j
PA-20d	6/13/2024	N	Deep	PA-20d-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	1.1	< 0.28 U	< 0.38 U	< 0.28 U	< 2.5 U	< 3.2 U	< 0.24 U
PA-20d	6/13/2024	FD	Deep	DUP-02-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.95 j	< 0.28 U	< 0.38 U	< 0.28 U	< 2.5 U	< 3.2 U	< 0.24 U
PA-21d	6/13/2024	N	Deep	PA-21d-061324	< 180 U	< 390 U	< 520 U	< 240 U	< 220 U	< 280 U	< 380 U	< 280 U	< 2,500 U	< 3,200 U	< 240 U
PA-22d	6/12/2024	N	Deep	PA-22d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.38 U	< 0.28 U	< 2.5 U	< 3.2 U	< 0.24 U
PA-23d	6/11/2024	N	Deep	PA-23d-061124	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.38 U	< 0.28 U	< 2.5 U	< 3.2 U	< 0.24 U
PA-24d	6/12/2024	N	Deep	PA-24d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.38 U	< 0.28 U	< 2.5 U	< 3.2 U	< 0.24 U
PA-25d	6/11/2024	N	Deep	PA-25d-061124	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.12 U	< 0.25 U	< 2.7 U	< 3.1 U	< 0.030 U
PA-26d	6/10/2024	N	Deep	PA-26d-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.12 U	< 0.25 U	< 2.7 U	< 3.1 U	< 0.030 U
PA-27d	6/12/2024	N	Deep	PA-27d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.32 j	< 0.28 U	< 0.38 U	< 0.28 U	< 2.5 U	< 3.2 U	< 0.24 U
PA-30d	6/14/2024	N	Deep	PA-30d-061424	< 180 U	< 390 U	< 520 U	< 240 U	< 220 U	< 280 U	< 380 U	< 280 U	< 2,500 U	< 3,200 U	< 240 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.
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Table 4
Volatile Organic Compounds Results
Arkema Quarter 2, 2024, 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	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	6/10/2024	N	Shallow	MWA-41-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U	< 0.20 U
MWA-63	6/13/2024	N	Shallow	MWA-63-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.43 U	< 0.29 U	< 0.51 U	< 0.21 U	< 0.53 U
MWA-82	6/10/2024	N	Shallow	MWA-82-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U	< 0.20 U
PA-03	6/12/2024	N	Shallow	PA-03-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.15 j	< 0.035 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U	< 0.20 U
PA-03	6/12/2024	FD	Shallow	DUP-01-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	< 0.035 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U	< 0.20 U
PA-04	6/12/2024	N	Shallow	PA-04-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.15 j	0.17 j	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U	< 0.20 U
PA-08	6/10/2024	N	Shallow	PA-08-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.12 j	< 0.035 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U	< 0.20 U
PA-09	6/10/2024	N	Shallow	PA-09-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U	< 0.20 U
PA-31	6/13/2024	N	Shallow	PA-31-061324	< 0.11 U	0.19 j	< 0.056 U	< 0.070 U	0.19 j	0.52	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U	< 0.20 U
MWA-81i	6/10/2024	N	Intermediate	MWA-81i-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U	< 0.20 U
PA-10i	6/12/2024	N	Intermediate	PA-10i-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	0.080 j	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U	< 0.20 U
PA-15i	6/12/2024	N	Intermediate	PA-15i-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	< 0.035 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 UJ	< 0.20 U
PA-16i	6/10/2024	N	Intermediate	PA-16i-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U	< 0.20 U
PA-17iR	6/12/2024	N	Intermediate	PA-17iR-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.11 j	0.16 j	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U	< 0.20 U
PA-32i	6/13/2024	N	Intermediate	PA-32i-061324	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.075 j	0.068 j	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U	< 0.20 U
PA-44i	6/11/2024	N	Intermediate	PA-44i-061124	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.23	< 0.035 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 UJ	< 0.20 U
MWA-11i(d)	6/13/2024	N	Deep	MWA-11i(d)-061324	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U	< 0.20 U
MWA-31i(d)	6/12/2024	N	Deep	MWA-31i(d)-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 4.3 U	< 2.9 U	< 5.1 U	< 2.1 UJ	< 5.3 U
MWA-56d	6/12/2024	N	Deep	MWA-56d-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 4.3 U	< 2.9 U	< 5.1 U	< 2.1 UJ	< 5.3 U
MWA-58d	6/12/2024	N	Deep	MWA-58d-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 4.3 U	< 2.9 U	< 5.1 U	< 2.1 UJ	< 5.3 U
PA-18d	6/12/2024	N	Deep	PA-18d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.43 U	< 0.29 U	< 0.51 U	< 0.21 U	< 0.53 U
PA-19d	6/13/2024	N	Deep	PA-19d-061324	< 18 U	< 39 U	< 52 U	< 24 U	< 22 U	< 28 U	< 43 U	< 29 U	< 51 U	< 21 U	< 53 U
PA-20d	6/13/2024	N	Deep	PA-20d-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	1.1	< 0.28 U	< 0.43 U	< 0.29 U	< 0.51 U	< 0.21 U	< 0.53 U
PA-20d	6/13/2024	FD	Deep	DUP-02-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.95 j	< 0.28 U	< 0.43 U	< 0.29 U	< 0.51 U	< 0.21 U	0.61 j
PA-21d	6/13/2024	N	Deep	PA-21d-061324	< 180 U	< 390 U	< 520 U	< 240 U	< 220 U	< 280 U	< 430 U	< 290 U	< 510 U	< 210 U	< 530 U
PA-22d	6/12/2024	N	Deep	PA-22d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.43 U	< 0.29 U	< 0.51 U	< 0.21 UJ	< 0.53 U
PA-23d	6/11/2024	N	Deep	PA-23d-061124	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.43 U	< 0.29 U	< 0.51 U	< 0.21 UJ	< 0.53 U
PA-24d	6/12/2024	N	Deep	PA-24d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.43 U	< 0.29 U	< 0.51 U	< 0.21 UJ	< 0.53 U
PA-25d	6/11/2024	N	Deep	PA-25d-061124	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 UJ	< 0.20 U
PA-26d	6/10/2024	N	Deep	PA-26d-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U	< 0.20 U
PA-27d	6/12/2024	N	Deep	PA-27d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.32 j	< 0.28 U	< 0.43 U	< 0.29 U	< 0.51 U	< 0.21 U	< 0.53 U
PA-30d	6/14/2024	N	Deep	PA-30d-061424	< 180 U	< 390 U	< 520 U	< 240 U	< 220 U	< 280 U	< 430 U	< 290 U	< 510 U	< 210 U	< 530 U

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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	6/10/2024	N	Shallow	MWA-41-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.025 U	0.060 j	< 0.050 U	< 0.24 U	< 0.030 U
MWA-63	6/13/2024	N	Shallow	MWA-63-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.30 U	< 0.44 U	< 0.29 U	< 0.35 U	59
MWA-82	6/10/2024	N	Shallow	MWA-82-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.025 U	0.11 j	< 0.050 U	< 0.24 U	3.2
PA-03	6/12/2024	N	Shallow	PA-03-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.15 j	< 0.035 U	< 0.025 U	< 0.060 U	< 0.050 U	< 0.24 U	< 0.030 U
PA-03	6/12/2024	FD	Shallow	DUP-01-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	< 0.035 U	< 0.025 U	< 0.060 U	< 0.050 U	< 0.24 U	< 0.030 U
PA-04	6/12/2024	N	Shallow	PA-04-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.15 j	0.17 j	< 0.025 U	< 0.060 U	< 0.050 U	< 0.24 U	0.047 j
PA-08	6/10/2024	N	Shallow	PA-08-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.12 j	< 0.035 U	< 0.025 U	0.10 j	< 0.050 U	< 0.24 U	0.10 j
PA-09	6/10/2024	N	Shallow	PA-09-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.025 U	< 0.060 U	< 0.050 U	< 0.24 U	0.27
PA-31	6/13/2024	N	Shallow	PA-31-061324	< 0.11 U	0.19 j	< 0.056 U	< 0.070 U	0.19 j	0.52	< 0.025 U	< 0.060 U	< 0.050 U	< 0.24 U	0.049 j
MWA-81i	6/10/2024	N	Intermediate	MWA-81i-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.025 U	0.085 j	< 0.050 U	< 0.24 U	< 0.030 U
PA-10i	6/12/2024	N	Intermediate	PA-10i-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	0.080 j	< 0.025 U	0.71	< 0.050 U	< 0.24 U	< 0.030 U
PA-15i	6/12/2024	N	Intermediate	PA-15i-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	< 0.035 U	< 0.025 U	< 0.060 U	< 0.050 U	< 0.24 U	< 0.030 U
PA-16i	6/10/2024	N	Intermediate	PA-16i-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.025 U	< 0.060 U	< 0.050 U	< 0.24 U	< 0.030 U
PA-17iR	6/12/2024	N	Intermediate	PA-17iR-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.11 j	0.16 j	< 0.025 U	0.16 j	< 0.050 U	< 0.24 U	< 0.030 U
PA-32i	6/13/2024	N	Intermediate	PA-32i-061324	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.075 j	0.068 j	< 0.025 U	0.36	< 0.050 U	< 0.24 U	< 0.030 U
PA-44i	6/11/2024	N	Intermediate	PA-44i-061124	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.23	< 0.035 U	< 0.025 U	< 0.060 U	< 0.050 U	< 0.24 U	< 0.030 U
MWA-11i(d)	6/13/2024	N	Deep	MWA-11i(d)-061324	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.025 U	< 0.060 U	< 0.050 U	< 0.24 U	0.097 j
MWA-31i(d)	6/12/2024	N	Deep	MWA-31i(d)-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 3.0 U	< 4.4 U	< 2.9 U	< 3.5 U	59
MWA-56d	6/12/2024	N	Deep	MWA-56d-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 3.0 U	< 4.4 U	< 2.9 U	< 3.5 U	150
MWA-58d	6/12/2024	N	Deep	MWA-58d-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 3.0 U	< 4.4 U	< 2.9 U	< 3.5 U	140
PA-18d	6/12/2024	N	Deep	PA-18d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.30 U	< 0.44 U	< 0.29 U	< 0.35 U	< 0.26 U
PA-19d	6/13/2024	N	Deep	PA-19d-061324	< 18 U	< 39 U	< 52 U	< 24 U	< 22 U	< 28 U	< 30 U	12,000	< 29 U	< 35 U	< 26 U
PA-20d	6/13/2024	N	Deep	PA-20d-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	1.1	< 0.28 U	< 0.30 U	4.5	< 0.29 U	< 0.35 U	< 0.26 U
PA-20d	6/13/2024	FD	Deep	DUP-02-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.95 j	< 0.28 U	< 0.30 U	4.1	< 0.29 U	< 0.35 U	< 0.26 U
PA-21d	6/13/2024	N	Deep	PA-21d-061324	< 180 U	< 390 U	< 520 U	< 240 U	< 220 U	< 280 U	< 300 U	41,000	< 290 U	< 350 U	< 260 U
PA-22d	6/12/2024	N	Deep	PA-22d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.30 U	< 0.44 U	< 0.29 U	< 0.35 U	10
PA-23d	6/11/2024	N	Deep	PA-23d-061124	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.30 U	< 0.44 U	< 0.29 U	< 0.35 U	< 0.26 U
PA-24d	6/12/2024	N	Deep	PA-24d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.30 U	< 0.44 U	< 0.29 U	< 0.35 U	< 0.26 U
PA-25d	6/11/2024	N	Deep	PA-25d-061124	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.025 U	< 0.060 U	< 0.050 U	< 0.24 U	< 0.030 U
PA-26d	6/10/2024	N	Deep	PA-26d-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.025 U	< 0.060 U	< 0.050 U	< 0.24 U	< 0.030 U
PA-27d	6/12/2024	N	Deep	PA-27d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.32 j	< 0.28 U	< 0.30 U	< 0.44 U	< 0.29 U	< 0.35 U	< 0.26 U
PA-30d	6/14/2024	N	Deep	PA-30d-061424	< 180 U	< 390 U	< 520 U	< 240 U	< 220 U	< 280 U	< 300 U	13,000	< 290 U	< 350 U	< 260 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.
UJ = Analyte was analyzed for, but not detected. The detection limit is a quantitative estimate.

Table 4
Volatile Organic Compounds Results
Arkema Quarter 2, 2024, 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	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	6/10/2024	N	Shallow	MWA-41-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.14 U	< 0.055 U	< 0.090 U	< 0.055 U	< 0.062 U
MWA-63	6/13/2024	N	Shallow	MWA-63-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.28 U	0.85 j	< 0.42 U	< 0.43 U	< 0.34 U
MWA-82	6/10/2024	N	Shallow	MWA-82-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.14 U	< 0.055 U	< 0.090 U	< 0.055 U	< 0.062 U
PA-03	6/12/2024	N	Shallow	PA-03-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.15 j	< 0.035 U	< 0.14 U	< 0.055 U	< 0.090 U	< 0.055 U	< 0.062 U
PA-03	6/12/2024	FD	Shallow	DUP-01-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	< 0.035 U	< 0.14 U	< 0.055 U	< 0.090 U	< 0.055 U	< 0.062 U
PA-04	6/12/2024	N	Shallow	PA-04-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.15 j	0.17 j	< 0.14 U	< 0.055 U	< 0.090 U	< 0.055 U	< 0.062 U
PA-08	6/10/2024	N	Shallow	PA-08-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.12 j	< 0.035 U	< 0.14 U	0.097 j	< 0.090 U	< 0.055 U	< 0.062 U
PA-09	6/10/2024	N	Shallow	PA-09-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.14 U	< 0.055 U	< 0.090 U	< 0.055 U	< 0.062 U
PA-31	6/13/2024	N	Shallow	PA-31-061324	< 0.11 U	0.19 j	< 0.056 U	< 0.070 U	0.19 j	0.52	0.16 J-	< 0.055 U	< 0.090 U	< 0.055 U	< 0.062 U
MWA-81i	6/10/2024	N	Intermediate	MWA-81i-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.14 U	< 0.055 U	< 0.090 U	< 0.055 U	< 0.062 U
PA-10i	6/12/2024	N	Intermediate	PA-10i-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	0.080 j	< 0.14 U	0.12 j	< 0.090 U	< 0.055 U	< 0.062 U
PA-15i	6/12/2024	N	Intermediate	PA-15i-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	< 0.035 U	< 0.14 UJ	0.058 j	< 0.090 U	< 0.055 U	< 0.062 U
PA-16i	6/10/2024	N	Intermediate	PA-16i-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.14 UJ	0.078 j	< 0.090 U	< 0.055 U	< 0.062 U
PA-17iR	6/12/2024	N	Intermediate	PA-17iR-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.11 j	0.16 j	< 0.14 U	0.092 j	< 0.090 U	< 0.055 U	< 0.062 U
PA-32i	6/13/2024	N	Intermediate	PA-32i-061324	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.075 j	0.068 j	< 0.14 UJ	0.098 j	< 0.090 U	< 0.055 U	< 0.062 U
PA-44i	6/11/2024	N	Intermediate	PA-44i-061124	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.23	< 0.035 U	< 0.14 UJ	< 0.055 U	< 0.090 U	< 0.055 U	< 0.062 U
MWA-11i(d)	6/13/2024	N	Deep	MWA-11i(d)-061324	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.14 UJ	0.13 j	< 0.090 U	< 0.055 U	< 0.062 U
MWA-31i(d)	6/12/2024	N	Deep	MWA-31i(d)-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 2.8 UJ	< 3.5 U	< 4.2 U	< 4.3 U	< 3.4 U
MWA-56d	6/12/2024	N	Deep	MWA-56d-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 2.8 UJ	< 3.5 U	< 4.2 U	< 4.3 U	< 3.4 U
MWA-58d	6/12/2024	N	Deep	MWA-58d-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 2.8 UJ	< 3.5 U	< 4.2 U	< 4.3 U	< 3.4 U
PA-18d	6/12/2024	N	Deep	PA-18d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.28 U	< 0.35 U	< 0.42 U	< 0.43 U	< 0.34 U
PA-19d	6/13/2024	N	Deep	PA-19d-061324	< 18 U	< 39 U	< 52 U	< 24 U	< 22 U	< 28 U	< 28 UJ	< 35 U	< 42 U	< 43 U	< 34 U
PA-20d	6/13/2024	N	Deep	PA-20d-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	1.1	< 0.28 U	< 0.28 U	< 0.35 U	< 0.42 U	< 0.43 U	< 0.34 U
PA-20d	6/13/2024	FD	Deep	DUP-02-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.95 j	< 0.28 U	< 0.28 U	< 0.35 U	< 0.42 U	< 0.43 U	< 0.34 U
PA-21d	6/13/2024	N	Deep	PA-21d-061324	< 180 U	< 390 U	< 520 U	< 240 U	< 220 U	< 280 U	< 280 U	< 350 U	< 420 U	< 430 U	< 340 U
PA-22d	6/12/2024	N	Deep	PA-22d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.28 UJ	< 0.35 U	< 0.42 U	< 0.43 U	< 0.34 U
PA-23d	6/11/2024	N	Deep	PA-23d-061124	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.28 UJ	< 0.35 U	< 0.42 U	< 0.43 U	< 0.34 U
PA-24d	6/12/2024	N	Deep	PA-24d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.28 UJ	< 0.35 U	< 0.42 U	< 0.43 U	< 0.34 U
PA-25d	6/11/2024	N	Deep	PA-25d-061124	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.14 UJ	< 0.055 U	< 0.090 U	< 0.055 U	< 0.062 U
PA-26d	6/10/2024	N	Deep	PA-26d-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.14 U	< 0.055 U	< 0.090 U	< 0.055 U	< 0.062 U
PA-27d	6/12/2024	N	Deep	PA-27d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.32 j	< 0.28 U	< 0.28 U	0.68 j	< 0.42 U	< 0.43 U	< 0.34 U
PA-30d	6/14/2024	N	Deep	PA-30d-061424	< 180 U	< 390 U	< 520 U	< 240 U	< 220 U	< 280 U	< 280 UJ	< 350 U	< 420 U	< 430 U	< 340 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
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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 2, 2024, 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	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	6/10/2024	N	Shallow	MWA-41-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.13 U	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U
MWA-63	6/13/2024	N	Shallow	MWA-63-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.53 U	< 0.50 U	< 0.40 U	< 0.79 U	< 0.44 U
MWA-82	6/10/2024	N	Shallow	MWA-82-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.13 U	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U
PA-03	6/12/2024	N	Shallow	PA-03-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.15 j	< 0.035 U	< 0.13 U	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U
PA-03	6/12/2024	FD	Shallow	DUP-01-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	< 0.035 U	< 0.13 U	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U
PA-04	6/12/2024	N	Shallow	PA-04-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.15 j	0.17 j	< 0.13 U	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U
PA-08	6/10/2024	N	Shallow	PA-08-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.12 j	< 0.035 U	< 0.13 U	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U
PA-09	6/10/2024	N	Shallow	PA-09-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.13 U	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U
PA-31	6/13/2024	N	Shallow	PA-31-061324	< 0.11 U	0.19 j	< 0.056 U	< 0.070 U	0.19 j	0.52	< 0.13 U	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U
MWA-81i	6/10/2024	N	Intermediate	MWA-81i-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.13 U	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U
PA-10i	6/12/2024	N	Intermediate	PA-10i-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	0.080 j	< 0.13 U	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U
PA-15i	6/12/2024	N	Intermediate	PA-15i-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	< 0.035 U	< 0.13 U	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U
PA-16i	6/10/2024	N	Intermediate	PA-16i-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.13 U	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U
PA-17iR	6/12/2024	N	Intermediate	PA-17iR-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.11 j	0.16 j	< 0.13 U	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U
PA-32i	6/13/2024	N	Intermediate	PA-32i-061324	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.075 j	0.068 j	< 0.13 U	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U
PA-44i	6/11/2024	N	Intermediate	PA-44i-061124	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.23	< 0.035 U	< 0.13 U	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U
MWA-11i(d)	6/13/2024	N	Deep	MWA-11i(d)-061324	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.13 U	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U
MWA-31i(d)	6/12/2024	N	Deep	MWA-31i(d)-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 5.3 U	< 5.0 U	< 4.0 U	< 7.9 U	< 4.4 U
MWA-56d	6/12/2024	N	Deep	MWA-56d-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 5.3 U	< 5.0 U	< 4.0 U	< 7.9 U	< 4.4 U
MWA-58d	6/12/2024	N	Deep	MWA-58d-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 5.3 U	< 5.0 U	< 4.0 U	< 7.9 U	< 4.4 U
PA-18d	6/12/2024	N	Deep	PA-18d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.53 U	< 0.50 U	< 0.40 U	< 0.79 U	< 0.44 U
PA-19d	6/13/2024	N	Deep	PA-19d-061324	< 18 U	< 39 U	< 52 U	< 24 U	< 22 U	< 28 U	< 53 U	< 50 U	< 40 U	< 79 U	< 44 U
PA-20d	6/13/2024	N	Deep	PA-20d-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	1.1	< 0.28 U	< 0.53 U	< 0.50 U	< 0.40 U	< 0.79 U	< 0.44 U
PA-20d	6/13/2024	FD	Deep	DUP-02-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.95 j	< 0.28 U	< 0.53 U	< 0.50 U	< 0.40 U	< 0.79 U	< 0.44 U
PA-21d	6/13/2024	N	Deep	PA-21d-061324	< 180 U	< 390 U	< 520 U	< 240 U	< 220 U	< 280 U	< 530 U	< 500 U	< 400 U	< 790 U	< 440 U
PA-22d	6/12/2024	N	Deep	PA-22d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.53 U	< 0.50 U	< 0.40 U	< 0.79 U	< 0.44 U
PA-23d	6/11/2024	N	Deep	PA-23d-061124	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.53 U	< 0.50 U	< 0.40 U	< 0.79 U	< 0.44 U
PA-24d	6/12/2024	N	Deep	PA-24d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.53 U	< 0.50 U	< 0.40 U	< 0.79 U	< 0.44 U
PA-25d	6/11/2024	N	Deep	PA-25d-061124	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.13 U	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U
PA-26d	6/10/2024	N	Deep	PA-26d-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.13 U	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U
PA-27d	6/12/2024	N	Deep	PA-27d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.32 j	< 0.28 U	< 0.53 U	< 0.50 U	< 0.40 U	< 0.79 U	< 0.44 U
PA-30d	6/14/2024	N	Deep	PA-30d-061424	< 180 U	< 390 U	< 520 U	< 240 U	< 220 U	< 280 U	< 530 U	< 500 U	< 400 U	< 790 U	< 440 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
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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.
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Table 4
Volatile Organic Compounds Results
Arkema Quarter 2, 2024, 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	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	6/10/2024	N	Shallow	MWA-41-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.12 U	< 0.070 U	< 1.2 U	< 0.52 U	< 0.35 U
MWA-63	6/13/2024	N	Shallow	MWA-63-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.53 U	< 0.44 U	< 1.4 U	< 0.93 U	< 0.44 U
MWA-82	6/10/2024	N	Shallow	MWA-82-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.12 U	< 0.070 U	< 1.2 U	< 0.52 U	< 0.35 U
PA-03	6/12/2024	N	Shallow	PA-03-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.15 j	< 0.035 U	< 0.12 U	< 0.070 U	< 1.2 U	< 0.52 U	< 0.35 U
PA-03	6/12/2024	FD	Shallow	DUP-01-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	< 0.035 U	< 0.12 U	< 0.070 U	< 1.2 U	< 0.52 U	< 0.35 U
PA-04	6/12/2024	N	Shallow	PA-04-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.15 j	0.17 j	< 0.12 U	< 0.070 U	< 1.2 U	< 0.52 U	< 0.35 U
PA-08	6/10/2024	N	Shallow	PA-08-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.12 j	< 0.035 U	< 0.12 U	< 0.070 U	< 1.2 U	< 0.52 U	< 0.35 U
PA-09	6/10/2024	N	Shallow	PA-09-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.12 U	< 0.070 U	< 1.2 U	< 0.52 U	< 0.35 U
PA-31	6/13/2024	N	Shallow	PA-31-061324	< 0.11 U	0.19 j	< 0.056 U	< 0.070 U	0.19 j	0.52	< 0.12 U	< 0.070 U	< 1.2 U	< 0.52 U	< 0.35 U
MWA-81i	6/10/2024	N	Intermediate	MWA-81i-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.12 U	< 0.070 U	< 1.2 U	< 0.52 U	< 0.35 U
PA-10i	6/12/2024	N	Intermediate	PA-10i-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	0.080 j	< 0.12 U	< 0.070 U	< 1.2 U	< 0.52 U	< 0.35 U
PA-15i	6/12/2024	N	Intermediate	PA-15i-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	< 0.035 U	< 0.12 U	< 0.070 U	< 1.2 U	< 0.52 U	< 0.35 U
PA-16i	6/10/2024	N	Intermediate	PA-16i-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.12 U	< 0.070 U	< 1.2 U	< 0.52 U	< 0.35 U
PA-17iR	6/12/2024	N	Intermediate	PA-17iR-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.11 j	0.16 j	< 0.12 U	< 0.070 U	< 1.2 U	< 0.52 U	< 0.35 U
PA-32i	6/13/2024	N	Intermediate	PA-32i-061324	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.075 j	0.068 j	< 0.12 U	< 0.070 U	< 1.2 U	< 0.52 U	< 0.35 U
PA-44i	6/11/2024	N	Intermediate	PA-44i-061124	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.23	< 0.035 U	< 0.12 U	< 0.070 U	< 1.2 U	< 0.52 U	< 0.35 U
MWA-11i(d)	6/13/2024	N	Deep	MWA-11i(d)-061324	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.12 U	< 0.070 U	< 1.2 U	< 0.52 U	< 0.35 U
MWA-31i(d)	6/12/2024	N	Deep	MWA-31i(d)-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 5.3 U	< 4.4 U	< 14 U	< 9.3 U	< 4.4 U
MWA-56d	6/12/2024	N	Deep	MWA-56d-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 5.3 U	< 4.4 U	< 14 U	< 9.3 U	< 4.4 U
MWA-58d	6/12/2024	N	Deep	MWA-58d-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 5.3 U	< 4.4 U	< 14 U	< 9.3 U	< 4.4 U
PA-18d	6/12/2024	N	Deep	PA-18d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.53 U	< 0.44 U	< 1.4 U	< 0.93 U	< 0.44 U
PA-19d	6/13/2024	N	Deep	PA-19d-061324	< 18 U	< 39 U	< 52 U	< 24 U	< 22 U	< 28 U	< 53 U	< 44 U	< 140 U	< 93 U	< 44 U
PA-20d	6/13/2024	N	Deep	PA-20d-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	1.1	< 0.28 U	< 0.53 U	< 0.44 U	< 1.4 U	< 0.93 U	< 0.44 U
PA-20d	6/13/2024	FD	Deep	DUP-02-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.95 j	< 0.28 U	< 0.53 U	< 0.44 U	< 1.4 U	< 0.93 U	< 0.44 U
PA-21d	6/13/2024	N	Deep	PA-21d-061324	< 180 U	< 390 U	< 520 U	< 240 U	< 220 U	< 280 U	< 530 U	< 440 U	< 1,400 U	< 930 U	< 440 U
PA-22d	6/12/2024	N	Deep	PA-22d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.53 U	< 0.44 U	< 1.4 U	< 0.93 U	< 0.44 U
PA-23d	6/11/2024	N	Deep	PA-23d-061124	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.53 U	< 0.44 U	< 1.4 U	< 0.93 U	< 0.44 U
PA-24d	6/12/2024	N	Deep	PA-24d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.53 U	< 0.44 U	< 1.4 U	< 0.93 U	< 0.44 U
PA-25d	6/11/2024	N	Deep	PA-25d-061124	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.12 U	< 0.070 U	< 1.2 U	< 0.52 U	< 0.35 U
PA-26d	6/10/2024	N	Deep	PA-26d-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.12 U	0.091 J+	< 1.2 U	< 0.52 U	< 0.35 U
PA-27d	6/12/2024	N	Deep	PA-27d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.32 j	< 0.28 U	< 0.53 U	< 0.44 U	< 1.4 U	< 0.93 U	< 0.44 U
PA-30d	6/14/2024	N	Deep	PA-30d-061424	< 180 U	< 390 U	< 520 U	< 240 U	< 220 U	< 280 U	< 530 U	< 440 U	< 1,400 U	< 930 U	< 440 U

Notes:
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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	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	6/10/2024	N	Shallow	MWA-41-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.091 U	< 0.12 U	< 0.23 U	< 0.17 U	< 0.33 U
MWA-63	6/13/2024	N	Shallow	MWA-63-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.50 U	< 0.51 U	< 0.39 U	< 0.49 U	< 0.53 U
MWA-82	6/10/2024	N	Shallow	MWA-82-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.091 U	< 0.12 U	< 0.23 U	< 0.17 U	< 0.33 U
PA-03	6/12/2024	N	Shallow	PA-03-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.15 j	< 0.035 U	< 0.091 U	< 0.12 U	< 0.23 U	< 0.17 U	< 0.33 U
PA-03	6/12/2024	FD	Shallow	DUP-01-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	< 0.035 U	< 0.091 U	< 0.12 U	< 0.23 U	< 0.17 U	< 0.33 U
PA-04	6/12/2024	N	Shallow	PA-04-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.15 j	0.17 j	< 0.091 U	< 0.12 U	< 0.23 U	< 0.17 U	< 0.33 U
PA-08	6/10/2024	N	Shallow	PA-08-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.12 j	< 0.035 U	< 0.091 U	< 0.12 U	< 0.23 U	< 0.17 U	< 0.33 U
PA-09	6/10/2024	N	Shallow	PA-09-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.091 U	< 0.12 U	< 0.23 U	< 0.17 U	< 0.33 U
PA-31	6/13/2024	N	Shallow	PA-31-061324	< 0.11 U	0.19 j	< 0.056 U	< 0.070 U	0.19 j	0.52	< 0.091 U	< 0.12 U	< 0.23 U	< 0.17 U	< 0.33 U
MWA-81i	6/10/2024	N	Intermediate	MWA-81i-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.091 U	< 0.12 U	< 0.23 U	< 0.17 U	< 0.33 U
PA-10i	6/12/2024	N	Intermediate	PA-10i-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	0.080 j	< 0.091 U	< 0.12 U	< 0.23 U	< 0.17 U	< 0.33 U
PA-15i	6/12/2024	N	Intermediate	PA-15i-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	< 0.035 U	< 0.091 U	< 0.12 U	< 0.23 U	< 0.17 U	< 0.33 U
PA-16i	6/10/2024	N	Intermediate	PA-16i-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.091 U	< 0.12 U	< 0.23 U	< 0.17 U	< 0.33 U
PA-17iR	6/12/2024	N	Intermediate	PA-17iR-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.11 j	0.16 j	< 0.091 U	< 0.12 U	< 0.23 U	< 0.17 U	< 0.33 U
PA-32i	6/13/2024	N	Intermediate	PA-32i-061324	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.075 j	0.068 j	< 0.091 U	< 0.12 U	< 0.23 U	< 0.17 U	< 0.33 U
PA-44i	6/11/2024	N	Intermediate	PA-44i-061124	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.23	< 0.035 U	< 0.091 U	< 0.12 U	< 0.23 U	< 0.17 U	< 0.33 U
MWA-11i(d)	6/13/2024	N	Deep	MWA-11i(d)-061324	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.091 U	< 0.12 U	< 0.23 U	< 0.17 U	< 0.33 U
MWA-31i(d)	6/12/2024	N	Deep	MWA-31i(d)-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 5.0 U	< 5.1 U	< 3.9 U	< 4.9 U	< 5.3 U
MWA-56d	6/12/2024	N	Deep	MWA-56d-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 5.0 U	< 5.1 U	< 3.9 U	< 4.9 U	< 5.3 U
MWA-58d	6/12/2024	N	Deep	MWA-58d-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 5.0 U	< 5.1 U	< 3.9 U	< 4.9 U	< 5.3 U
PA-18d	6/12/2024	N	Deep	PA-18d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.50 U	< 0.51 U	< 0.39 U	< 0.49 U	< 0.53 U
PA-19d	6/13/2024	N	Deep	PA-19d-061324	< 18 U	< 39 U	< 52 U	< 24 U	< 22 U	< 28 U	< 50 U	< 51 U	< 39 U	< 49 U	< 53 U
PA-20d	6/13/2024	N	Deep	PA-20d-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	1.1	< 0.28 U	< 0.50 U	< 0.51 U	< 0.39 U	< 0.49 U	< 0.53 U
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PA-23d	6/11/2024	N	Deep	PA-23d-061124	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.50 U	< 0.51 U	< 0.39 U	< 0.49 U	< 0.53 U
PA-24d	6/12/2024	N	Deep	PA-24d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.50 U	< 0.51 U	< 0.39 U	< 0.49 U	< 0.53 U
PA-25d	6/11/2024	N	Deep	PA-25d-061124	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.091 U	< 0.12 U	< 0.23 U	< 0.17 U	< 0.33 U
PA-26d	6/10/2024	N	Deep	PA-26d-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.091 U	< 0.12 U	< 0.23 U	< 0.17 U	< 0.33 U
PA-27d	6/12/2024	N	Deep	PA-27d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.32 j	< 0.28 U	< 0.50 U	< 0.51 U	< 0.39 U	< 0.49 U	< 0.53 U
PA-30d	6/14/2024	N	Deep	PA-30d-061424	< 180 U	< 390 U	< 520 U	< 240 U	< 220 U	< 280 U	< 500 U	< 510 U	< 390 U	< 490 U	< 530 U

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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	6/10/2024	N	Shallow	MWA-41-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.26 U	< 0.084 U	< 0.050 U	< 0.033 U	< 0.092 U
MWA-63	6/13/2024	N	Shallow	MWA-63-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.58 U	8.2	< 0.39 U	< 0.39 U	< 0.41 U
MWA-82	6/10/2024	N	Shallow	MWA-82-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.26 U	0.63	< 0.050 U	< 0.033 U	< 0.092 U
PA-03	6/12/2024	N	Shallow	PA-03-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.15 j	< 0.035 U	< 0.26 U	< 0.084 U	0.14 j	< 0.033 U	< 0.092 U
PA-03	6/12/2024	FD	Shallow	DUP-01-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	< 0.035 U	< 0.26 U	< 0.084 U	0.15 j	< 0.033 U	< 0.092 U
PA-04	6/12/2024	N	Shallow	PA-04-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.15 j	0.17 j	< 0.26 U	0.15 j	< 0.050 U	< 0.033 U	< 0.092 U
PA-08	6/10/2024	N	Shallow	PA-08-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.12 j	< 0.035 U	< 0.26 U	0.16 j	< 0.050 U	< 0.033 U	< 0.092 U
PA-09	6/10/2024	N	Shallow	PA-09-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.26 U	0.31	< 0.050 U	< 0.033 U	< 0.092 U
PA-31	6/13/2024	N	Shallow	PA-31-061324	< 0.11 U	0.19 j	< 0.056 U	< 0.070 U	0.19 j	0.52	< 0.26 U	0.20 j	< 0.050 U	< 0.033 U	< 0.092 U
MWA-81i	6/10/2024	N	Intermediate	MWA-81i-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.26 U	< 0.084 U	< 0.050 U	< 0.033 U	< 0.092 U
PA-10i	6/12/2024	N	Intermediate	PA-10i-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	0.080 j	< 0.26 U	< 0.084 U	< 0.050 U	< 0.033 U	< 0.092 U
PA-15i	6/12/2024	N	Intermediate	PA-15i-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	< 0.035 U	< 0.26 U	< 0.084 U	< 0.050 U	< 0.033 U	< 0.092 U
PA-16i	6/10/2024	N	Intermediate	PA-16i-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.26 U	< 0.084 U	0.15 j	< 0.033 U	< 0.092 U
PA-17iR	6/12/2024	N	Intermediate	PA-17iR-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.11 j	0.16 j	< 0.26 U	< 0.084 U	0.16 j	< 0.033 U	< 0.092 U
PA-32i	6/13/2024	N	Intermediate	PA-32i-061324	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.075 j	0.068 j	< 0.26 U	< 0.084 U	< 0.050 U	< 0.033 U	< 0.092 U
PA-44i	6/11/2024	N	Intermediate	PA-44i-061124	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.23	< 0.035 U	< 0.26 U	< 0.084 U	< 0.050 U	< 0.033 U	< 0.092 U
MWA-11i(d)	6/13/2024	N	Deep	MWA-11i(d)-061324	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.26 U	0.12 j	< 0.050 U	< 0.033 U	< 0.092 U
MWA-31i(d)	6/12/2024	N	Deep	MWA-31i(d)-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 5.8 U	< 4.1 U	< 3.9 U	< 3.9 U	< 4.1 U
MWA-56d	6/12/2024	N	Deep	MWA-56d-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 5.8 U	< 4.1 U	< 3.9 U	< 3.9 U	< 4.1 U
MWA-58d	6/12/2024	N	Deep	MWA-58d-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 5.8 U	< 4.1 U	< 3.9 U	< 3.9 U	< 4.1 U
PA-18d	6/12/2024	N	Deep	PA-18d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.58 U	< 0.41 U	< 0.39 U	< 0.39 U	< 0.41 U
PA-19d	6/13/2024	N	Deep	PA-19d-061324	< 18 U	< 39 U	< 52 U	< 24 U	< 22 U	< 28 U	< 58 U	< 41 U	< 39 U	< 39 U	< 41 U
PA-20d	6/13/2024	N	Deep	PA-20d-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	1.1	< 0.28 U	< 0.58 U	< 0.41 U	< 0.39 U	< 0.39 U	< 0.41 U
PA-20d	6/13/2024	FD	Deep	DUP-02-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.95 j	< 0.28 U	< 0.58 U	< 0.41 U	< 0.39 U	< 0.39 U	< 0.41 U
PA-21d	6/13/2024	N	Deep	PA-21d-061324	< 180 U	< 390 U	< 520 U	< 240 U	< 220 U	< 280 U	< 580 U	< 410 U	< 390 U	< 390 U	< 410 U
PA-22d	6/12/2024	N	Deep	PA-22d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.58 U	< 0.41 U	< 0.39 U	< 0.39 U	< 0.41 U
PA-23d	6/11/2024	N	Deep	PA-23d-061124	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.58 U	< 0.41 U	< 0.39 U	< 0.39 U	< 0.41 U
PA-24d	6/12/2024	N	Deep	PA-24d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.58 U	< 0.41 U	< 0.39 U	< 0.39 U	< 0.41 U
PA-25d	6/11/2024	N	Deep	PA-25d-061124	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.26 U	< 0.084 U	< 0.050 U	< 0.033 U	< 0.092 U
PA-26d	6/10/2024	N	Deep	PA-26d-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.26 U	< 0.084 U	< 0.050 U	< 0.033 U	< 0.092 U
PA-27d	6/12/2024	N	Deep	PA-27d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.32 j	< 0.28 U	< 0.58 U	< 0.41 U	1.1	< 0.39 U	< 0.41 U
PA-30d	6/14/2024	N	Deep	PA-30d-061424	< 180 U	< 390 U	< 520 U	< 240 U	< 220 U	< 280 U	< 580 U	< 410 U	< 390 U	< 390 U	< 410 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.
UJ = Analyte was analyzed for, but not detected. The detection limit is a quantitative estimate.

Table 4
Volatile Organic Compounds Results
Arkema Quarter 2, 2024, 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	Trichloroethene	Trichlorofluoromethane (Freon 11)	Vinyl chloride
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	6/10/2024	N	Shallow	MWA-41-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.066 U	< 0.12 U	< 0.040 U
MWA-63	6/13/2024	N	Shallow	MWA-63-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	1.4	< 0.36 U	< 0.22 U
MWA-82	6/10/2024	N	Shallow	MWA-82-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	0.20	< 0.12 U	< 0.040 U
PA-03	6/12/2024	N	Shallow	PA-03-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.15 j	< 0.035 U	< 0.066 U	< 0.12 U	< 0.040 U
PA-03	6/12/2024	FD	Shallow	DUP-01-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	< 0.035 U	< 0.066 U	< 0.12 U	< 0.040 U
PA-04	6/12/2024	N	Shallow	PA-04-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.15 j	0.17 j	0.095 j	< 0.12 U	< 0.040 U
PA-08	6/10/2024	N	Shallow	PA-08-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.12 j	< 0.035 U	0.096 j	< 0.12 U	< 0.040 U
PA-09	6/10/2024	N	Shallow	PA-09-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.066 U	< 0.12 U	< 0.040 U
PA-31	6/13/2024	N	Shallow	PA-31-061324	< 0.11 U	0.19 j	< 0.056 U	< 0.070 U	0.19 j	0.52	< 0.20 U	< 0.12 U	< 0.040 U
MWA-81i	6/10/2024	N	Intermediate	MWA-81i-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.066 U	< 0.12 U	< 0.040 U
PA-10i	6/12/2024	N	Intermediate	PA-10i-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	0.080 j	< 0.066 U	< 0.12 U	0.16
PA-15i	6/12/2024	N	Intermediate	PA-15i-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	< 0.035 U	< 0.066 U	< 0.12 U	< 0.040 U
PA-16i	6/10/2024	N	Intermediate	PA-16i-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.066 U	< 0.12 U	< 0.040 U
PA-17iR	6/12/2024	N	Intermediate	PA-17iR-061224	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.11 j	0.16 j	< 0.066 U	< 0.12 U	< 0.040 U
PA-32i	6/13/2024	N	Intermediate	PA-32i-061324	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.075 j	0.068 j	< 0.066 U	< 0.12 U	0.20
PA-44i	6/11/2024	N	Intermediate	PA-44i-061124	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.23	< 0.035 U	< 0.066 U	< 0.12 U	< 0.040 U
MWA-11i(d)	6/13/2024	N	Deep	MWA-11i(d)-061324	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.066 U	< 0.12 U	< 0.040 U
MWA-31i(d)	6/12/2024	N	Deep	MWA-31i(d)-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 2.6 U	< 3.6 U	< 2.2 U
MWA-56d	6/12/2024	N	Deep	MWA-56d-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 2.6 U	< 3.6 U	< 2.2 U
MWA-58d	6/12/2024	N	Deep	MWA-58d-061224	< 1.8 U	< 3.9 U	< 5.2 U	< 2.4 U	< 2.2 U	< 2.8 U	< 2.6 U	< 3.6 U	< 2.2 U
PA-18d	6/12/2024	N	Deep	PA-18d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.26 U	< 0.36 U	< 0.22 U
PA-19d	6/13/2024	N	Deep	PA-19d-061324	< 18 U	< 39 U	< 52 U	< 24 U	< 22 U	< 28 U	32 j	< 36 U	< 22 U
PA-20d	6/13/2024	N	Deep	PA-20d-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	1.1	< 0.28 U	< 0.26 U	< 0.36 U	< 0.22 U
PA-20d	6/13/2024	FD	Deep	DUP-02-061324	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.95 j	< 0.28 U	< 0.26 U	< 0.36 U	< 0.22 U
PA-21d	6/13/2024	N	Deep	PA-21d-061324	< 180 U	< 390 U	< 520 U	< 240 U	< 220 U	< 280 U	< 260 U	< 360 U	< 220 U
PA-22d	6/12/2024	N	Deep	PA-22d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.26 U	< 0.36 U	< 0.22 U
PA-23d	6/11/2024	N	Deep	PA-23d-061124	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.26 U	< 0.36 U	< 0.22 U
PA-24d	6/12/2024	N	Deep	PA-24d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.26 U	< 0.36 U	< 0.22 U
PA-25d	6/11/2024	N	Deep	PA-25d-061124	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.066 U	< 0.12 U	< 0.040 U
PA-26d	6/10/2024	N	Deep	PA-26d-061024	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.066 U	< 0.12 U	< 0.040 U
PA-27d	6/12/2024	N	Deep	PA-27d-061224	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.32 j	< 0.28 U	< 0.26 U	< 0.36 U	< 0.22 U
PA-30d	6/14/2024	N	Deep	PA-30d-061424	< 180 U	< 390 U	< 520 U	< 240 U	< 220 U	< 280 U	< 260 U	< 360 U	< 220 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.
UJ = Analyte was analyzed for, but not detected. The detection limit is a quantitative estimate.

Table 5
Additional Compounds Results
Arkema Quarter 2, 2024, 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	6/10/2024	N	Shallow	MWA-41-061024	7.6	2.6 j
MWA-63	6/13/2024	N	Shallow	MWA-63-061324	6.6	< 2.0 U
MWA-82	6/10/2024	N	Shallow	MWA-82-061024	11	270
PA-03	6/12/2024	N	Shallow	PA-03-061224	3.7	< 10 U
PA-03	6/12/2024	FD	Shallow	DUP-01-061224	3.8	< 4.0 U
PA-04	6/12/2024	N	Shallow	PA-04-061224	5.7	< 2.0 U
PA-08	6/10/2024	N	Shallow	PA-08-061024	190	19 j
PA-09	6/10/2024	N	Shallow	PA-09-061024	130	11 j
PA-31	6/13/2024	N	Shallow	PA-31-061324	3.8	< 10 U
MWA-81i	6/10/2024	N	Intermediate	MWA-81i-061024	26	< 2.0 U
PA-10i	6/12/2024	N	Intermediate	PA-10i-061224	44	< 10 U
PA-15i	6/12/2024	N	Intermediate	PA-15i-061224	86 J-	< 10 U
PA-16i	6/10/2024	N	Intermediate	PA-16i-061024	17	< 10 U
PA-17iR	6/12/2024	N	Intermediate	PA-17iR-061224	35	< 10 U
PA-32i	6/13/2024	N	Intermediate	PA-32i-061324	85	< 20 U
PA-44i	6/11/2024	N	Intermediate	PA-44i-061124	320	< 10 U
MWA-11i(d)	6/13/2024	N	Deep	MWA-11i(d)-061324	650	< 10 U
MWA-31i(d)	6/12/2024	N	Deep	MWA-31i(d)-061224	21,000	100,000
MWA-56d	6/12/2024	N	Deep	MWA-56d-061224	13,000	15,000
MWA-58d	6/12/2024	N	Deep	MWA-58d-061224	19,000	47,000
PA-18d	6/12/2024	N	Deep	PA-18d-061224	85	< 10 U
PA-19d	6/13/2024	N	Deep	PA-19d-061324	290	< 20 U
PA-20d	6/13/2024	N	Deep	PA-20d-061324	680	< 10 U
PA-20d	6/13/2024	FD	Deep	DUP-02-061324	690	< 10 U
PA-21d	6/13/2024	N	Deep	PA-21d-061324	300	< 10 U
PA-22d	6/12/2024	N	Deep	PA-22d-061224	5,100	14,000
PA-23d	6/11/2024	N	Deep	PA-23d-061124	31,000	< 400 U
PA-24d	6/12/2024	N	Deep	PA-24d-061224	30,000	< 400 U
PA-25d	6/11/2024	N	Deep	PA-25d-061124	30	< 2.0 U
PA-26d	6/10/2024	N	Deep	PA-26d-061024	80	< 2.0 U
PA-27d	6/12/2024	N	Deep	PA-27d-061224	540	< 10 U
PA-30d	6/14/2024	N	Deep	PA-30d-061424	320	< 20 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

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.

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



FIGURES

USGS 14211720 WILLAMETTE RIVER ELEVATION AT PORTLAND, OR (Morrison Bridge)

6/1/2024 6/6/2024 6/11/2024 6/16/2024 6/21/2024 6/26/2024 7/1/2024

16
14
12
10
8
6

River Elevation (ft NAVD88)

River Elevation
June 2024 Avg.: 9.99 ft NAVD88
Avg. during groundwater elevation event: 13.38 ft NAVD88

— River Gauge (USGS 14211720) — River Gauge During Groundwater Elevation Event

Willamette River

Groundwater Treatment Plant

Sand Filter Basin

Detention Basin

RP-02-31 13.59

RP-10-30 30.17

MWA-71 31.30

MWA-72 31.35

MWA-73 31.00

MWA-40 20.38

MWA-33 20.32

MWA-24 16.27

MWA-22 16.54

MWA-83 12.71

PA-03 26.59

PA-04 27.17

PA-31 27.25

PA-33 26.59

PA-35 12.15

RW-05 24.02

PA-36 11.65

RW-23 11.66

MWA-2 11.33

MWA-61 11.36

MWA-69 11.82

PA-05 12.02

MWA-84 11.08

MWA-85 5.34

MWA-15r 12.82

MWA-86 6.75

MWA-42 13.89

RW-10 12.93

RW-08 12.16

PA-06 13.34

RW-12 13.98

RW-14 14.89

RW-15 14.87

MWA-20 14.88

MWA-46 12.15

MWA-19 12.26

MWA-18 11.38

RW-17 15.15

RW-18 14.87

RW-20 14.98

PA-07 15.15

PA-41 13.81

MWA-29 13.11

MWA-43 13.16

PA-09 14.20

MWA-41 14.12

MWA-82 15.50

PA-43 14.60

PA-08 14.57

PA-38 15.12

MWA-89 3.26

MWA-87 1.40

PA-28 15.25

MWA-88 -1.09

27.70 Groundwater Elevation (ft NAVD88)

Legend

Shallow Zone Piezometer

Shallow Zone Monitoring Well

Active Recovery Well;
Not Used During Contouring

Shallow-Intermediate Zone Monitoring Well

Shallow Zone Groundwater Contours
(ft NAVD88) Dashed where Inferred

Target Capture Zone

Barrier Wall Alignment

Extraction Trench (Not To Scale)

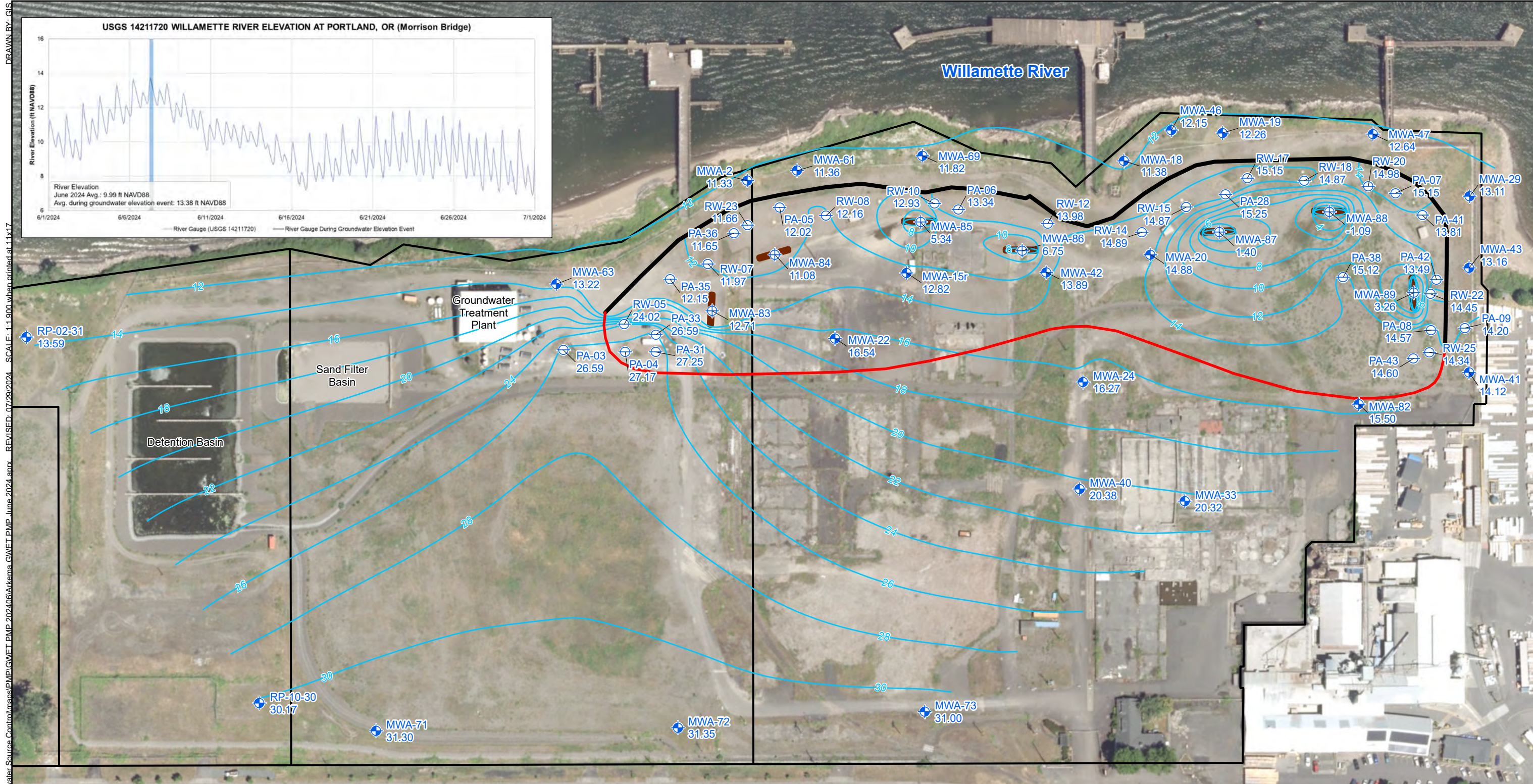
Notes:

* Value not used for contouring.
Water levels collected June 7, 2024.
ft NAVD88: feet North American Vertical Datum
of 1988.
Aerial Photo: City of Portland, Summer 2017.

0 160 320
Feet

Figure 2
June 2024 Shallow Zone Groundwater Contours
Quarter 2, 2024
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon

Environmental Resources Management
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Legend

- Shallow Zone Piezometer
- Shallow Zone Monitoring Well
- Active Recovery Well;
Not Used During Contouring
- Shallow-Intermediate Zone Monitoring Well

27.70 Groundwater Elevation (ft NAVD88)

- Shallow Zone Groundwater Contours
(ft NAVD88) Dashed where Inferred
- Target Capture Zone
- Barrier Wall Alignment
- Extraction Trench (Not To Scale)

Notes:

* Value not used for contouring.
Water levels collected June 7, 2024.
ft NAVD88: feet North American Vertical Datum
of 1988.
Aerial Photo: City of Portland, Summer 2017.

0 160 320
Feet

North Arrow

Figure 2
June 2024 Shallow Zone Groundwater Contours
Quarter 2, 2024
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon

Environmental Resources Management
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USGS 14211720 WILLAMETTE RIVER ELEVATION AT PORTLAND, OR (Morrison Bridge)

16
14
12
10
8
6
6/1/2024 6/6/2024 6/11/2024 6/16/2024 6/21/2024 6/26/2024 7/1/2024

River Elevation (ft NAVD88)

River Elevation
June 2024 Avg.: 9.99 ft NAVD88
Avg. during groundwater elevation event: 13.38 ft NAVD88

— River Gauge (USGS 14211720) — River Gauge During Groundwater Elevation Event

Groundwater Treatment Plant

Sand Filter Basin

Detention Basin

Willamette River

MWA-8i 12.57
PA-11i 13.24
RW-24i 11.66
MWA-84 11.08
PA-37i 12.94
RW-06i 12.35
PA-10i 15.04
PA-34i 14.88
PA-32i 14.98
MWA-83 12.71
MWA-66i 12.32
RW-09i 12.74
PA-12i 13.20
RW-11i 11.24
MWA-16i 12.90
RW-16i 3.31
PA-13i 12.49
RW-19i 9.49
PA-14i 12.59
MWA-53i 13.10
PA-29i 12.72
PA-15i 12.26
RW-26i 12.84
MWA-81i 13.19
PA-44i 12.81
PA-40i 12.51
RW-21i 12.58
PA-39i 12.49
MWA-89 3.26
MWA-87 1.40
MWA-88 -1.09
MWA-70i 20.70
MWA-74i 25.29
MWA-75i 13.09
MWA-07(i) 30.66
MWA-54i 13.32
RW-13i 14.34
MWA-86 6.75
MWA-85 5.34
MWA-74i 25.29
MWA-75i 13.09
MWA-07(i) 30.66

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16
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28
30

2
4
6
8
10
12
14
16
18
20
22
24
26
28
30

0
160
320
Feet

Legend

- Intermediate Zone Piezometer
- Intermediate Zone Monitoring Well
- Shallow-Intermediate Zone Monitoring Well
- 27.70 Groundwater Elevation (ft NAVD88)
- Intermediate Zone Groundwater Contours (ft NAVD88) Dashed where Inferred
- Target Capture Zone
- Barrier Wall Alignment
- Extraction Trench (Not To Scale)

Notes:

- * Value not used for contouring.
- Water levels collected June 7, 2024.
- ft NAVD88: feet North American Vertical Datum of 1988.
- Aerial Photo: City of Portland, Summer 2017.

Figure 3

June 2024 Intermediate Zone Groundwater Contours

Quarter 2, 2024

Groundwater Monitoring Report

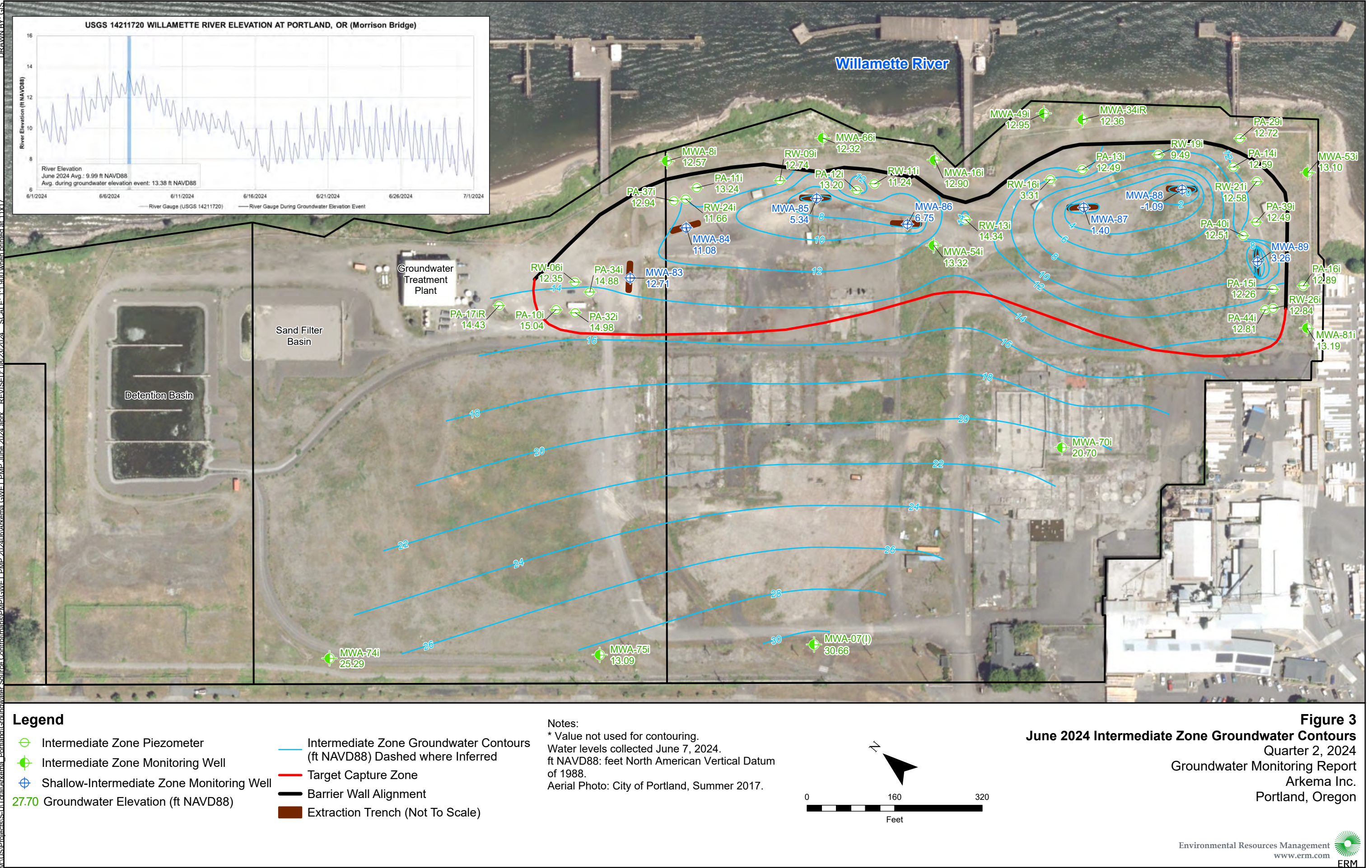
Arkema Inc.

Portland, Oregon

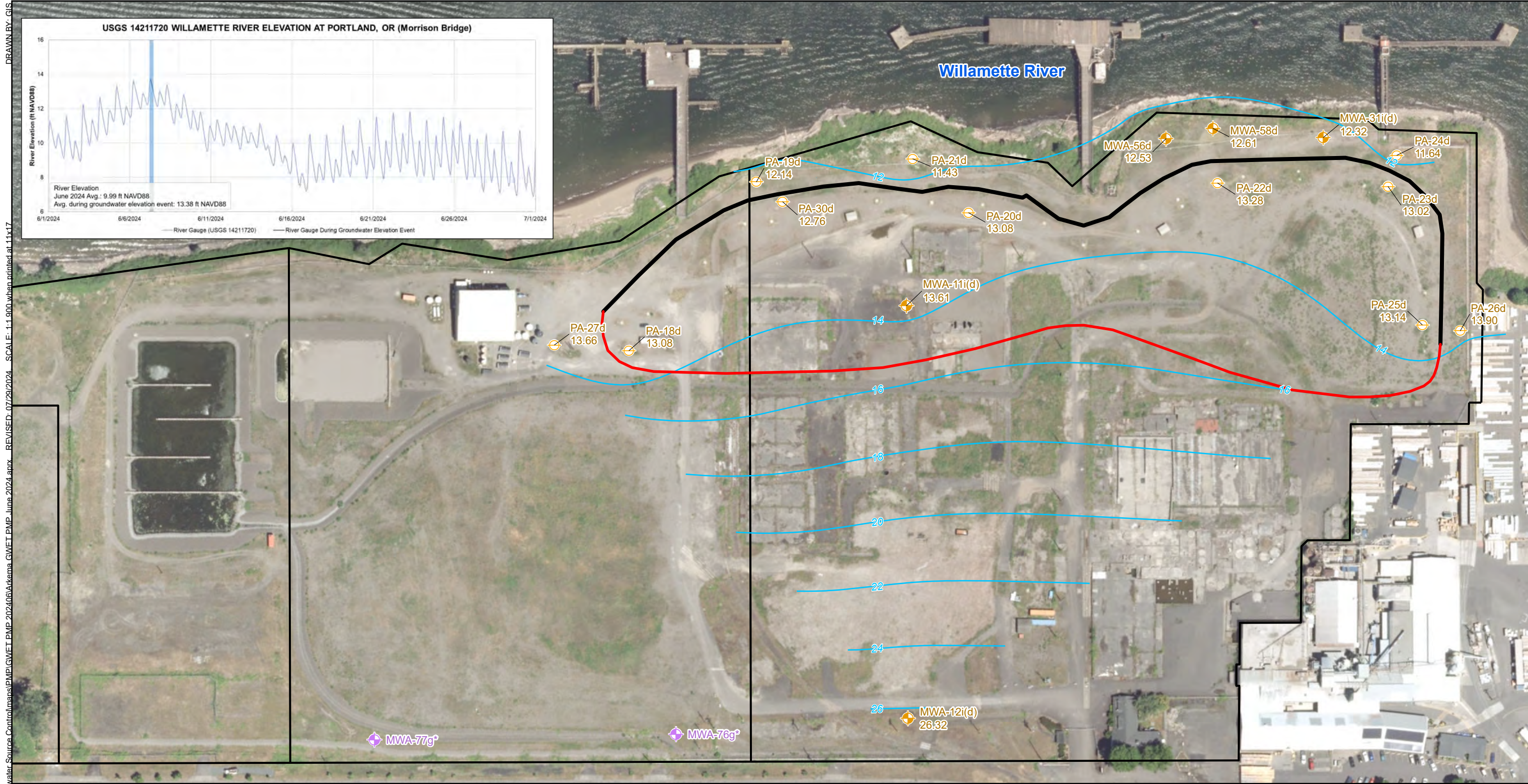
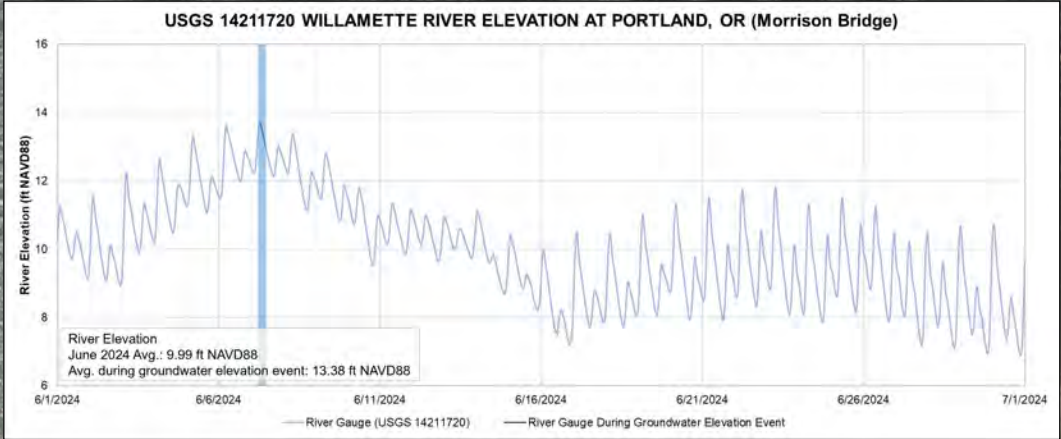
Environmental Resources Management

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ERM



MA\US\Projects\SLU\TotalArkema_GWET\Map\GWET_PMP_202406\Arkema_GWET_PMP_June_2024.aprx REVISED: 07/29/2024 SCALE: 1:1 900 when printed at 11x17 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 June 7, 2024.
ft NAVD88: feet North American Vertical Datum of 1988.
Aerial Photo: City of Portland, Summer 2017.

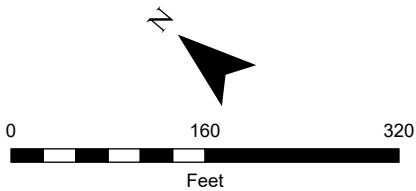


Figure 4
June 2024 Deep Zone Groundwater Contours
Quarter 2, 2024
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon

M:\US\Projects\S-U\Total\Arkema_Portland\Groundwater_Monitoring_Report\Data\Scripts\Arkema_Working\Maps\2024_Q2\Figure 5_Chlorobenzene_Shallow.mxd REVISED: 09/19/2024 SCALE: 1:1,440 when printed at 11x17 DRAWN BY: Jake Sullivan DATE: 9/19/2024



Legend

- | | |
|-----------------------|---|
| ● > 6,400 ug/L | — Target Capture Zone |
| ● >= 640 - 6,400 ug/L | — Barrier Wall Alignment |
| ● >= 64 - < 640 ug/L | — Parcel and Property Boundaries |
| ● < 64 ug/L | — Shallow Zone Groundwater Contours (ft NAVD88) June 2024 |
| ○ Not Detected | |
| ⊗ Not Sampled | |

Notes:
Samples collected June 10–14, 2024.
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

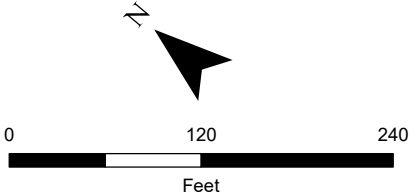
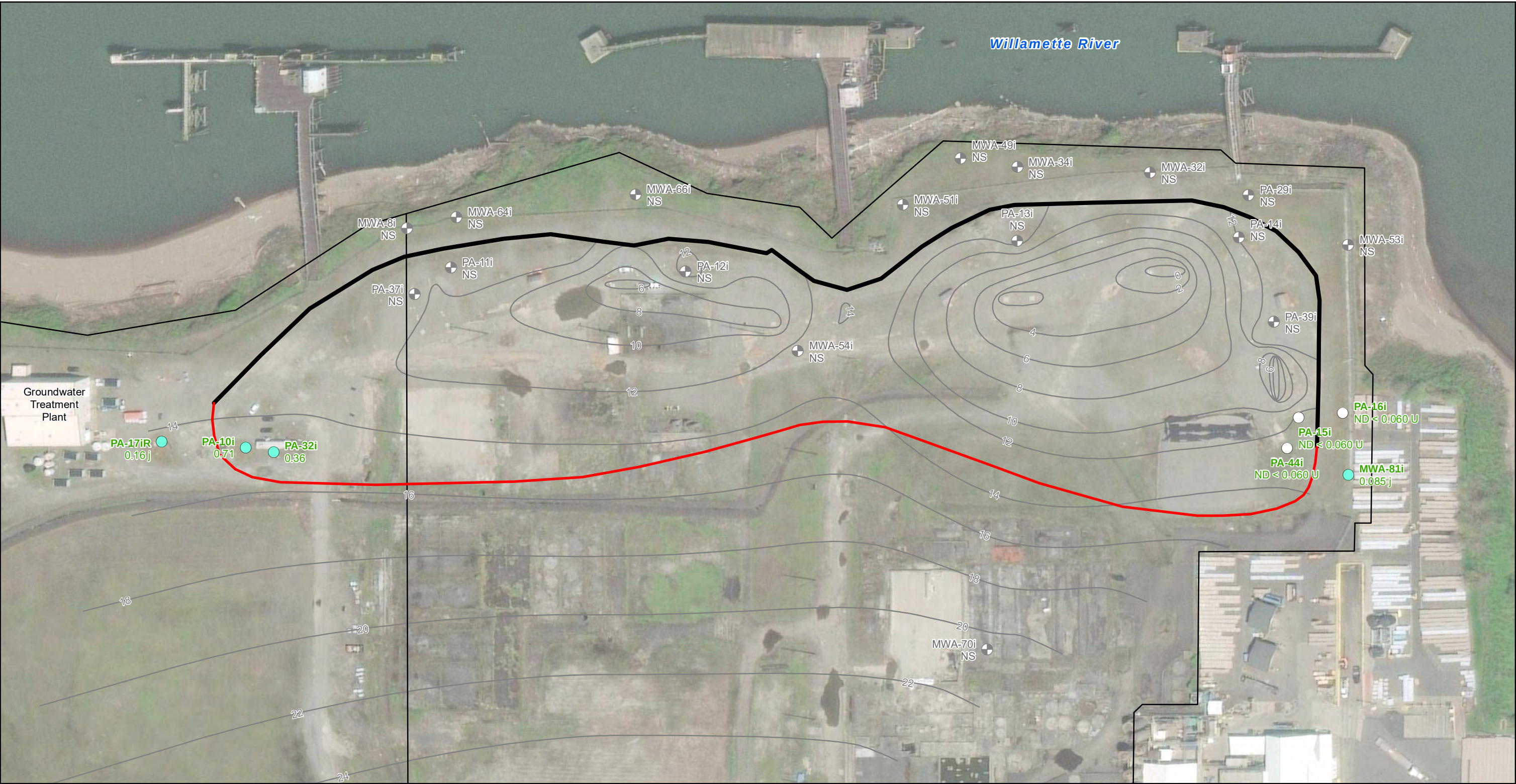


Figure 5
Chlorobenzene Groundwater Concentrations
Shallow Zone
Quarter 2, 2024
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon

M:\US\Projects\S-U\Total\Arkema_Portland\Groundwater_Monitoring_Report\Data\Scripts\Arkema_Working\Maps\2024_Q2\Figure 6 Chlorobenzene Intermediate.mxd REVISED: 09/19/2024 SCALE: 1:1,440 when printed at 11x17 DRAWN BY: Jake Sullivan DATE: 9/19/2024



Legend

- | | |
|-----------------------|--|
| ● > 6,400 ug/L | — Target Capture Zone |
| ● >= 640 - 6,400 ug/L | — Barrier Wall Alignment |
| ● >= 64 - < 640 ug/L | — Parcel and Property Boundaries |
| ● < 64 ug/L | — Intermediate Zone Groundwater Contours (ft NAVD88) June 2024 |
| ○ Not Detected | |
| ⊙ Not Sampled | |

Notes:
Samples collected June 10–14, 2024.
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

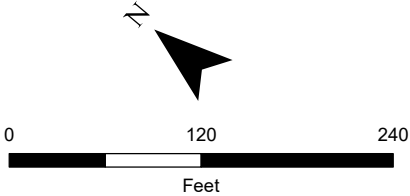


Figure 6
Chlorobenzene Groundwater Concentrations
Intermediate Zone
Quarter 2, 2024
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon

M:\US\Projects\S-U\Total\Arkema_Portland\Groundwater_Monitoring_Report\Data\Scripts\Arkema_Working\Maps2024\Q2\Figure 7 Chlorobenzene Deep.mxd, REVISED: 09/19/2024, SCALE: 1:1,440 when printed at 11x17
DRAWN BY: Jake Sullivan DATE: 9/19/2024



Legend

- > 6,400 ug/L
- >= 640 - 6,400 ug/L
- >= 64 - < 640 ug/L
- < 64 ug/L
- Not Detected
- Target Capture Zone
- Barrier Wall Alignment
- Parcel and Property Boundaries
- Deep Zone Groundwater Contours (ft NAVD88) June 2024

Notes:
Samples collected June 10–14, 2024.
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

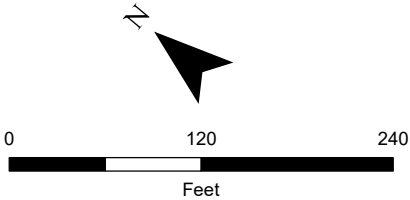


Figure 7
Chlorobenzene Groundwater Concentrations
Deep Zone
Quarter 2, 2024
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon

M:\US\Projects\S-U\Total\Arkema_Portland\Groundwater_Monitoring_Report\Data\Scripts\Arkema_Working\Maps\2024_Q2\Figure 8_12-Dichlorobenzene_Shallow.mxd REVISED: 09/19/2024 SCALE: 1:1,440 when printed at 11x17 DRAWN BY: Jake Sullivan DATE: 9/19/2024



Legend

- | | |
|-----------------------|---|
| ● > 1,400 ug/L | — Target Capture Zone |
| ● >= 140 - 1,400 ug/L | — Barrier Wall Alignment |
| ● >= 14 - < 140 ug/L | — Parcel and Property Boundaries |
| ● < 14 ug/L | — Shallow Zone Groundwater Contours (ft NAVD88) June 2024 |
| ○ Not Detected | |
| ⊗ Not Sampled | |

Notes:
Samples collected June 10–14, 2024.
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

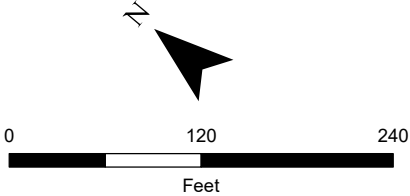


Figure 8
1,2-Dichlorobenzene Groundwater Concentrations
Shallow Zone
Quarter 2, 2024
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon

M:\US\Projects\S-U\Total\Arkema_Portland\Groundwater_Monitoring_Report\Data\Scripts\Arkema_Working\Maps2024_02\Figure 9_12-Dichlorobenzene Intermediate.mxd, REVISED: 09/19/2024, SCALE: 1:1,440 when printed at 11x17 DRAWN BY: Jake Sullivan DATE: 9/19/2024



Legend

- | | |
|-----------------------|--|
| ● > 1,400 ug/L | — Target Capture Zone |
| ● >= 140 - 1,400 ug/L | — Barrier Wall Alignment |
| ● >= 14 - < 140 ug/L | — Parcel and Property Boundaries |
| ● < 14 ug/L | — Intermediate Zone Groundwater Contours (ft NAVD88) June 2024 |
| ○ Not Detected | |
| ● Not Sampled | |

Notes:
Samples collected June 10–14, 2024.
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

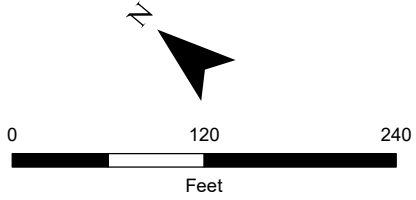


Figure 9
1,2-Dichlorobenzene Groundwater Concentrations
Intermediate Zone
Quarter 2, 2024
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon

M:\US\Projects\S-U\Total\Arkema - Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working\Maps2024\Q2\Figure 10 1,2-Dichlorobenzene Deep Zone Quarter 2, 2024.mxd, DATE: 9/19/2024, SCALE: 1:1,440 when printed at 11x17, DRAWN BY: Jake Sullivan



Legend

- > 1,400 ug/L
- >= 140 - 1,400 ug/L
- >= 14 - < 140 ug/L
- < 14 ug/L
- Not Detected
- Barrier Wall Alignment
- Parcel and Property Boundaries
- Deep Zone Groundwater Contours (ft NAVD88) June 2024
- Target Capture Zone

Notes:
Samples collected June 10–14, 2024.
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

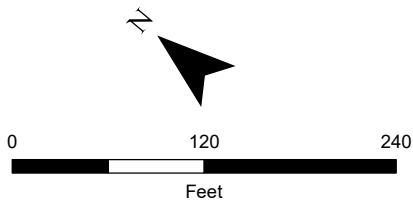


Figure 10
1,2-Dichlorobenzene Groundwater Concentrations
Deep Zone
Quarter 2, 2024
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon

M:\US\Projects\S-U\TotalArkema Portland\Groundwater Monitoring Report\Data Scripts\Arkema Working Maps\2024 Q2\Figure 11 VOCs PieChart Shallow.mxd REVISED: 09/19/2024 SCALE: 1:1,440 when printed at 11x17 DRAWN BY: GIS DATE: 9/19/2024



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) June 2024

Notes:
Samples collected June 10–14, 2024.
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 11

PCE, TCE, cis-1,2-DCE and Vinyl Chloride Groundwater Concentrations Shallow Zone
Quarter 2, 2024
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon

Environmental Resources Management
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M:\US\Projects\S-U\TotalArkema Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working\Maps\2024 Q2\Figure 12 VOCs PieChart Intermediate.mxd, REVISED: 09/19/2024, SCALE: 1:1,440 when printed at 11x17
DRAWN BY: GIS DATE: 9/19/2024



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) June 2024

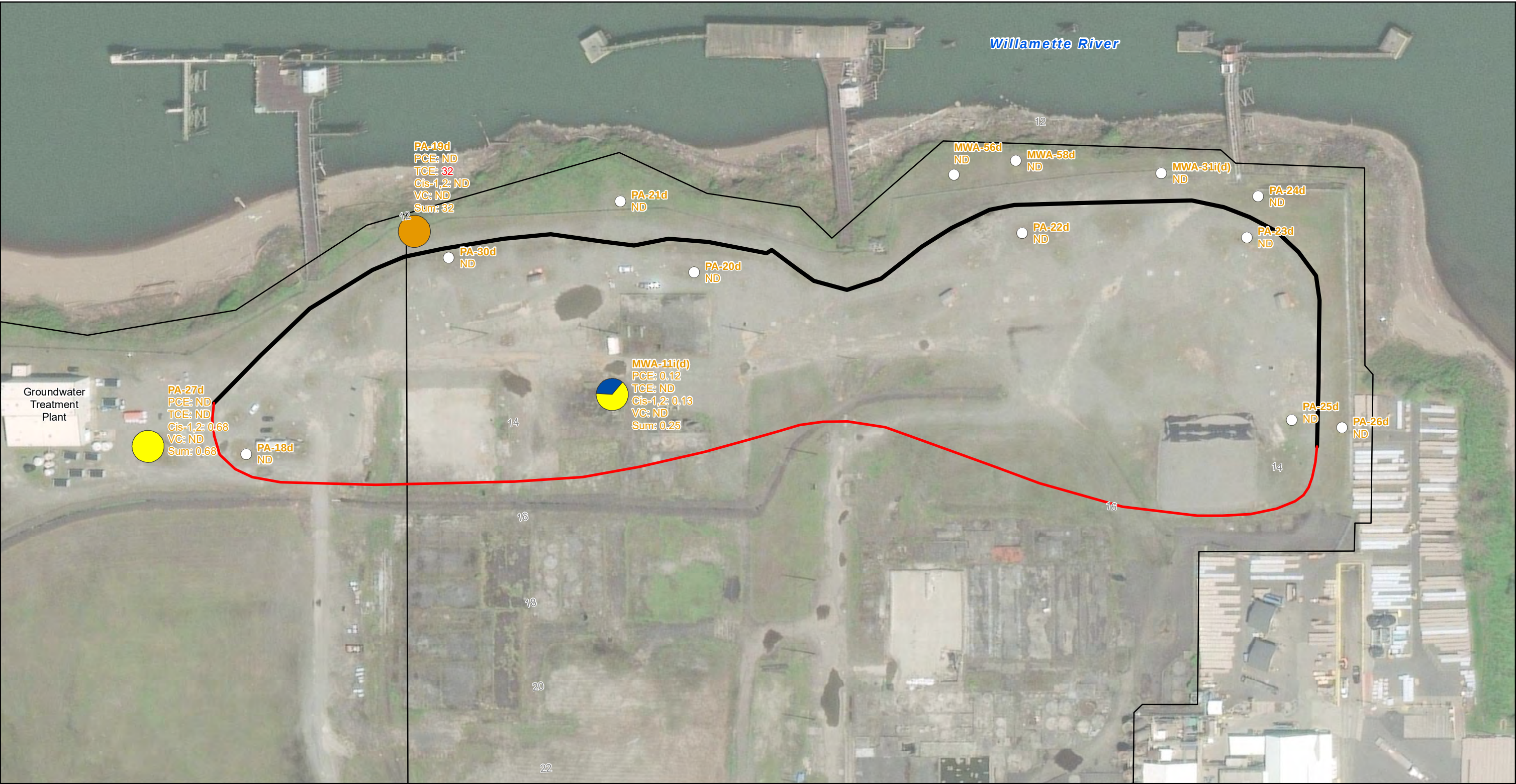
Notes:
Samples collected June 10–14, 2024.
All results in micrograms per liter (µg/L).
Results in **red** exceed screening criteria.
Screening criteria for tetrachloroethene (PCE) = 0.33 µg/L
Screening criteria for trichloroethene (TCE) = 3 µg/L
Screening criteria for cis-1,2-dichloroethene (Cis-1,2) = 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 2, 2024
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon

Environmental Resources Management
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ERM

0 120 240
Feet

M:\US\Projects\S-U\TotalArkema - Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working\Maps2024 Q2\Figure 13 VOCs PieChart Deep.mxd REVISED: 09/19/2024 SCALE: 1:1,440 when printed at 11x17 DRAWN BY: GIS DATE: 9/19/2024



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) June 2024

Notes:

Samples collected June 10–14, 2024.

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 13

PCE, TCE, cis-1,2-DCE and Vinyl Chloride Groundwater Concentrations Deep Zone

Quarter 2, 2024

Groundwater Monitoring Report

Arkema Inc.

Portland, Oregon

Environmental Resources Management

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M:\US\Projects\S-U\Total\Arkema_Portland\Groundwater_Monitoring_Report\Data\Scripts\Arkema_Working\Maps\2024_Q2\Figure 14_Perchlorate Shallow.mxd, REVISED: 09/19/2024, SCALE: 1:1,440 when printed at 11x17, DRAWN BY: Jake Sullivan, DATE: 9/19/2024



Legend

- | | |
|----------------------------|---|
| ● > 180,000 ug/L | — Target Capture Zone |
| ● >= 18,000 - 180,000 ug/L | — Barrier Wall Alignment |
| ● >= 1,800 - < 18,000 ug/L | — Parcel and Property Boundaries |
| ● < 1,800 ug/L | — Shallow Zone Groundwater Contours (ft NAVD88) June 2024 |
| ○ Not Detected | |
| ⊙ Not Sampled | |

Notes:
Samples collected June 10–14, 2024.
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

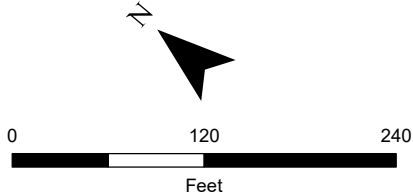
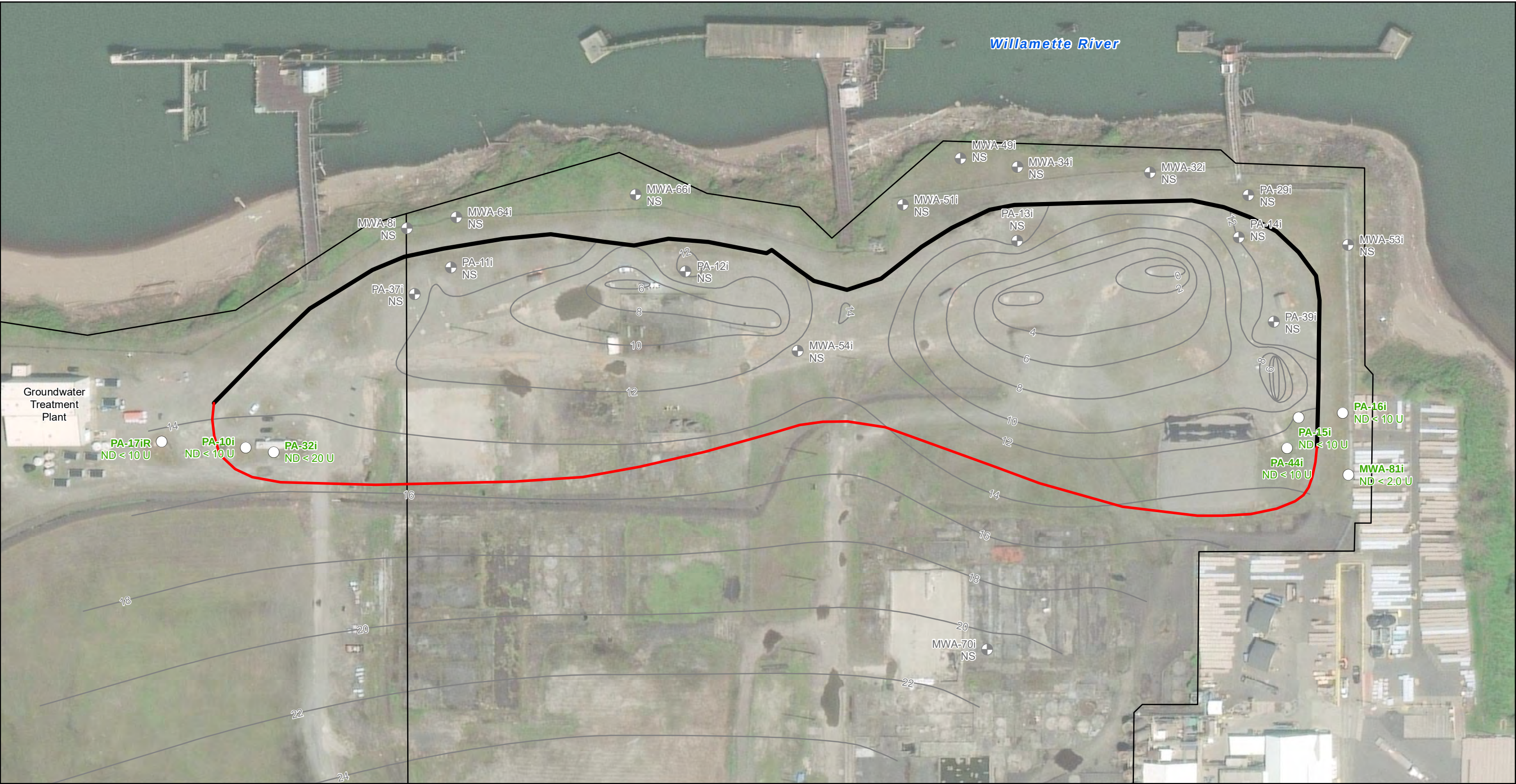


Figure 14
Perchlorate Groundwater Concentrations
Shallow Zone
Quarter 2, 2024
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon

M:\US\Projects\S-U\TotalArkema_Portland\Groundwater_Monitoring_Report\Data\Scripts\Arkema_Working\Maps\2024_Q2\Figure 15 Perchlorate Intermediate Zone.mxd REVISED: 09/19/2024 SCALE: 1:1,440 when printed at 11x17 DRAWN BY: Jake Sullivan DATE: 9/19/2024



Legend

- | | |
|----------------------------|--|
| ● > 180,000 ug/L | — Target Capture Zone |
| ● >= 18,000 - 180,000 ug/L | — Barrier Wall Alignment |
| ● >= 1,800 - < 18,000 ug/L | — Parcel and Property Boundaries |
| ● < 1,800 ug/L | — Intermediate Zone Groundwater Contours (ft NAVD88) June 2024 |
| ○ Not Detected | |
| ⊗ Not Sampled | |

Notes:
Samples collected June 10–14, 2024.
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

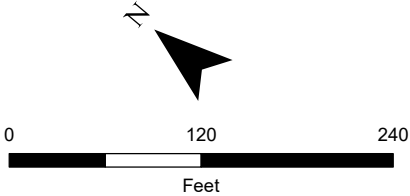


Figure 15
Perchlorate Groundwater Concentrations
Intermediate Zone

Quarter 2, 2024
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon

M:\US\Projects\S-U\TotalArkema_Portland\Groundwater_Monitoring_Report\Data\Scripts\Arkema_Working\Maps\2024_Q2\Figure 16_Perchlorate_Deep.mxd, REVISED: 09/19/2024, SCALE: 1:1,440 when printed at 11x17
DRAWN BY: Jake Sullivan DATE: 9/19/2024



Legend

- > 180,000 ug/L
- >= 18,000 - 180,000 ug/L
- >= 1,800 - < 18,000 ug/L
- < 1,800 ug/L
- Not Detected
- Barrier Wall Alignment
- Parcel and Property Boundaries
- Deep Zone Groundwater Contours (ft NAVD88) June 2024
- Target Capture Zone

Notes:
Samples collected June 10–14, 2024.
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

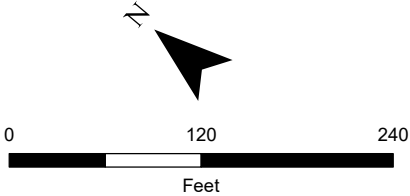


Figure 16
Perchlorate Groundwater Concentrations
Deep Zone
Quarter 2, 2024
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon

M:\US\Projects\S-U\Total\Arkema_Portland\Groundwater_Monitoring_Report\Data\Scripts\Arkema_Working\Maps\2024_Q2\Figure 17 Chloride Shallow.mxd REVISED: 09/19/2024 SCALE: 1:1,440 when printed at 11x17 DRAWN BY: Jake Sullivan DATE: 9/19/2024



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) June 2024

Notes:
Samples collected June 10–14, 2024.
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.

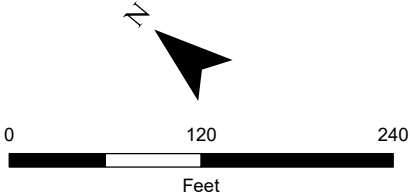
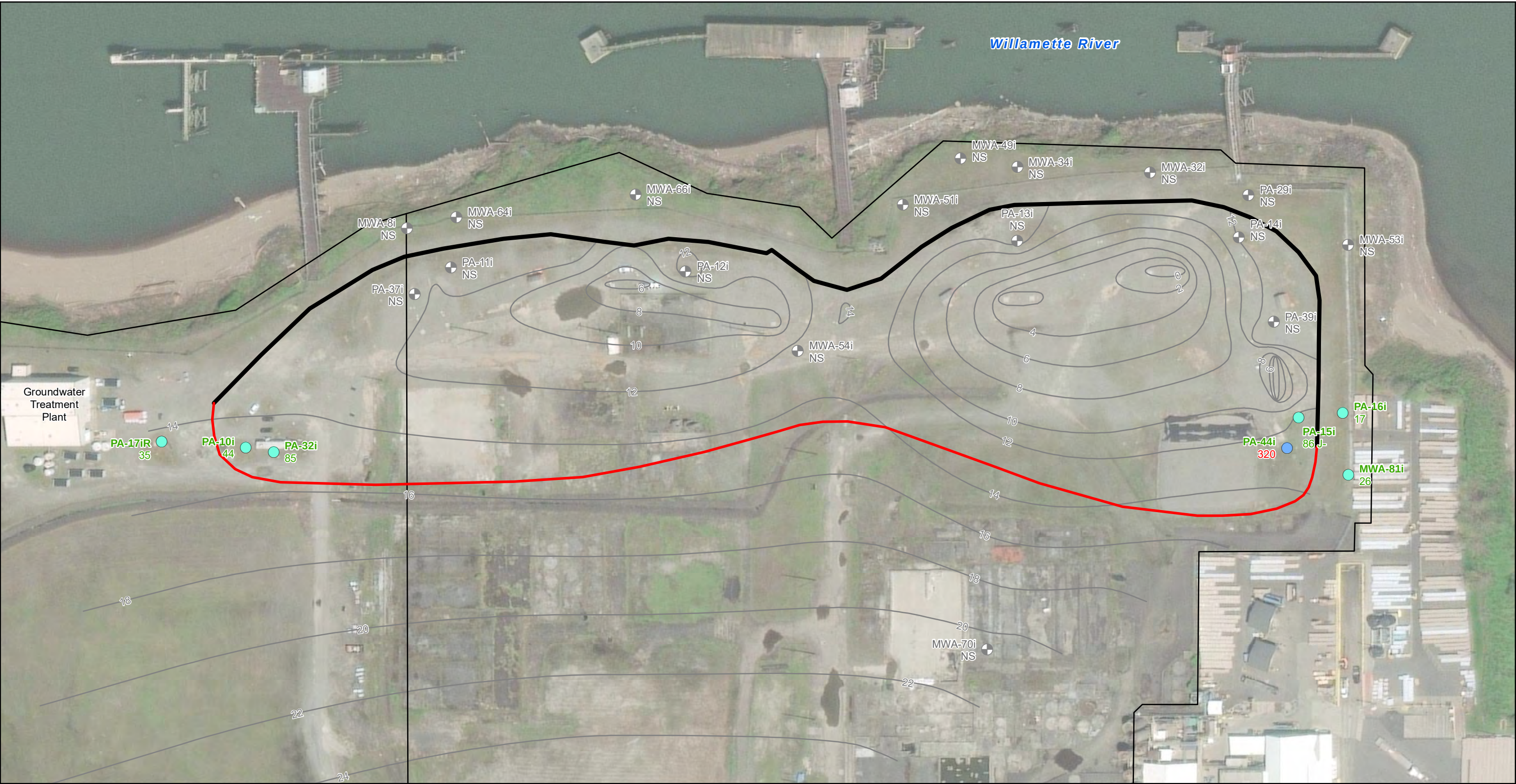


Figure 17
Chloride Groundwater Concentrations
Shallow Zone
Quarter 2, 2024
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon

M:\US\Projects\S-U\Total\Arkema_Portland\Groundwater_Monitoring_Report\Data\Scripts\Arkema_Working\Maps\2024_02\Figure 18_Chloride Intermediate Zone.mxd, REVISED: 09/19/2024, SCALE: 1:1,440 when printed at 11x17
DRAWN BY: Jake Sullivan DATE: 9/19/2024



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) June 2024

Notes:
Samples collected June 10–14, 2024.
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.

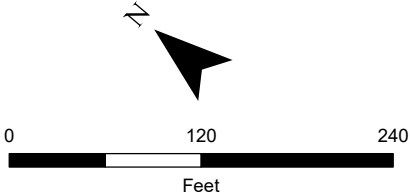


Figure 18
Chloride Groundwater Concentrations
Intermediate Zone
Quarter 2, 2024
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon

M:\US\Projects\S-U\TotalArkema_Portland\Groundwater_Monitoring_Report\Data\Scripts\Arkema_Working\Maps\2024_Q2\Figure 19_Chloride Deep.mxd REVISED: 09/19/2024. DRAWN BY: Jake Sullivan DATE: 9/19/2024 SCALE: 1:1,440 when printed at 11x17



Legend

- > 23,000 mg/L
- >= 2,300 - 23,000 mg/L
- >= 230 - < 2,300 mg/L
- < 230 mg/L
- Not Detected
- Barrier Wall Alignment
- Parcel and Property Boundaries
- Deep Zone Groundwater Contours (ft NAVD88) June 2024
- Target Capture Zone

Notes:
Samples collected June 10–14, 2024.
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.

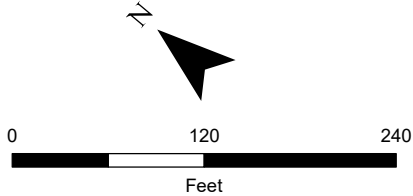


Figure 19
Chloride Groundwater Concentrations
Deep Zone
Quarter 2, 2024
Groundwater Monitoring Report
Arkema Inc.
Portland, Oregon



APPENDIX A FIELD FORMS



Low Flow Groundwater Sampling Field Data Form

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

Date: 2024/06/13
Clear

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 48 ()	Reference Elevation 36.49 (ft)
Site Address , Portland, US-OR	Purge Equipment Bladder pump	Depth to Water / Free Product 25.05 () / None
Project Number	Sample Equipment Bladder pump	Total Well Depth 52.15 ()
Project Name 20240610-GWMonitor	Average Purge Rate 200 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - ()
Sampler irene nichols-ferguson	Volume of Water in Well / Total Volume Purged 14.51 () / 5.4 ()	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
11:27	25.29	200	0.6	17.5	9	308	NM	6.78	6.9	8.63	NM	
11:30	25.31	200	1.2	16.9	9.17	310	NM	6.69	7.7	8.72	NM	
11:33	25.31	200	1.8	16.7	9.26	324	NM	6.53	10.5	9.4	NM	
11:36	25.34	200	2.4	16.6	8.62	1057	NM	2.92	-98.4	9.4	NM	
11:39	25.32	200	3	16.4	7.22	1938	NM	1.07	-108.4	4.96	NM	
11:42	25.32	200	3.6	16.6	6.92	2105	NM	0.71	-112.1	3.89	NM	
11:45	25.32	200	4.2	16.6	6.68	2162	NM	0.58	-115.5	2.94	NM	
11:48	25.32	200	4.8	16.55	6.73	2185	NM	0.51	-117.8	3.1	NM	
11:51	25.32	200	5.4	16.5	6.71	2218	NM	0.49	-119.5	3.03	NM	

Sample ID(s): MWA-11I(D)-061324	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF 	08/08/2024 03:37



Low Flow Groundwater Sampling Field Data Form

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

Date: 2024/06/12
sunny

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 57 ()	Reference Elevation 38.36 (ft)
Site Address , Portland, US-OR	Purge Equipment Bladder pump	Depth to Water / Free Product 27.94 () / None
Project Number	Sample Equipment Bladder pump	Total Well Depth 58.45 ()
Project Name 20240610-GWMonitor	Average Purge Rate 160 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - ()
Sampler Scott Terranova	Volume of Water in Well / Total Volume Purged 16.34 () / 2.88 ()	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
11:04	28	160	0.48	18.1	6.49	45898	NM	2.03	52.5	27.42	NM	
11:07	28	160	0.96	18.5	6.54	52259	NM	1.05	65.9	15.83	NM	
11:10	28	160	1.44	18	6.55	55195	NM	0.83	74.8	8.15	NM	
11:13	28	160	1.92	18.2	6.55	56387	NM	0.71	86.2	9.92	NM	
11:16	28.02	160	2.4	18.2	6.55	56904	NM	0.68	89.3	9.86	NM	
11:19	28.02	160	2.88	18.1	6.55	57209	NM	0.63	93	9.97	NM	

Sample ID(s): MWA-31I(D)-061224	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF 	08/09/2024 23:30



Low Flow Groundwater Sampling Field Data Form

Well ID: MWA-41
Well Permit No:

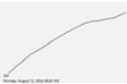
Date: 2024/06/10
sunny

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 37 ()	Reference Elevation 45.14 (ft)
Site Address , Portland, US-OR	Purge Equipment Bladder pump	Depth to Water / Free Product 31.25 () / None
Project Number	Sample Equipment Bladder pump	Total Well Depth 42.35 ()
Project Name 20240610-GWMonitor	Average Purge Rate 160 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - ()
Sampler Scott Terranova	Volume of Water in Well / Total Volume Purged 5.94 () / 3.36 ()	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
13:32	31.25	160	0.48	19.5	6.69	333.8	NM	2.3	62.2	30.82	NM	
13:35	31.25	160	0.96	18.7	6.67	317.7	NM	1.17	74.5	31.28	NM	
13:38	31.25	160	1.44	18.6	6.67	311.5	NM	0.82	83.1	39.82	NM	
13:41	31.25	160	1.92	18.4	6.67	307.7	NM	0.71	85.7	42.88	NM	
13:44	31.25	160	2.4	18.5	6.65	306.1	NM	0.62	88.7	37.58	NM	
13:47	31.25	160	2.88	18.5	6.65	306.9	NM	0.58	88.7	37.58	NM	
13:50	31.25	160	3.36	18.5	6.65	307.5	NM	0.55	89.2	35.14	NM	

Sample ID(s): MWA-41-061024	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			

INF



08/12/2024
15:43



Low Flow Groundwater Sampling Field Data Form

Well ID: MWA-56D
Well Permit No:

Date: 2024/06/12
Clear

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 58 ()	Reference Elevation 36.68 (ft)
Site Address , Portland, US-OR	Purge Equipment Bladder pump	Depth to Water / Free Product 25.68 () / None
Project Number	Sample Equipment Bladder pump	Total Well Depth 60.57 ()
Project Name 20240610-GWMonitor	Average Purge Rate 160 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - ()
Sampler Scott Terranova	Volume of Water in Well / Total Volume Purged 18.68 () / 3.36 ()	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
12:35	26.05	160	0.48	16.9	6.63	37698	NM	1.96	110.5	50.71	NM	
12:38	26.05	160	0.96	16.8	6.62	37921	NM	0.98	110.7	39.42	NM	
12:41	26.05	160	1.44	16.7	6.63	39146	NM	0.61	110.9	23.02	NM	
12:44	26.05	160	1.92	16.7	6.63	38254	NM	0.45	110.9	15.67	NM	
12:47	26.05	160	2.4	16.7	6.63	38306	NM	0.38	111.1	16.94	NM	
12:50	26.05	160	2.88	16.7	6.63	38338	NM	0.34	111.4	15.38	NM	
12:53	26.05	160	3.36	16.7	6.63	38358	NM	0.29	111.6	16.51	NM	

Sample ID(s): MWA-56D-061224	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF 	08/09/2024 23:32



Low Flow Groundwater Sampling Field Data Form

Well ID: MWA-58D
Well Permit No:

Date: 2024/06/12
Clear

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 58.25 ()	Reference Elevation 37.97 (ft)
Site Address , Portland, US-OR	Purge Equipment Bladder pump	Depth to Water / Free Product 27.45 () / None
Project Number	Sample Equipment Bladder pump	Total Well Depth 60.67 ()
Project Name 20240610-GWMonitor	Average Purge Rate 160 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - ()
Sampler Scott Terranova	Volume of Water in Well / Total Volume Purged 17.79 () / 4.03 (l)	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW (')	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.1pH 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
11:46	27.6	160	0.64	17.2	6.6	48320	NM	2.29	110.4	15.69	NM	
11:49	27.67	160	1.12	17	6.61	50451	NM	1.07	106.6	13.42	NM	
11:52	27.7	160	1.6	16.9	6.61	51290	NM	0.68	103.9	9.53	NM	
11:55	27.7	160	2.08	16.8	6.6	51445	NM	0.54	102.6	7.75	NM	
11:58	27.7	160	2.56	16.9	6.59	51623	NM	0.41	100.8	6.36	NM	
12:01	16.6	160	3.04	16.9	6.59	51767	NM	0.39	99.7	5.65	NM	
12:04	27.72	160	3.52	16.6	6.58	51923	NM	0.34	97.8	5.2	NM	
12:07	27.72	160	4	16.6	6.57	51905	NM	0.3	95.3	4.85	NM	

Sample ID(s): MWA-58D-061224	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF 	08/09/2024 23:31



Low Flow Groundwater Sampling Field Data Form

Well ID: MWA-63
Well Permit No:

Date: 2024/06/13
Clear

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 25 ()	Reference Elevation 36.29 (ft)
Site Address , Portland, US-OR	Purge Equipment Peristaltic pump	Depth to Water / Free Product 23.78 () / None
Project Number	Sample Equipment Peristaltic pump	Total Well Depth 30.45 ()
Project Name 20240610-GWMonitor	Average Purge Rate 100 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - ()
Sampler irene nichols-ferguson	Volume of Water in Well / Total Volume Purged 3.57 () / 2.4 ()	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
06:46	24.41	100	0.3	14.6	7.68	735	NM	8.14	59	14.4	NM	
06:49	24.32	100	0.6	14.5	7.33	674	NM	7.73	81.3	16.9	NM	
06:52	24.41	100	0.9	14.5	7.18	655	NM	7.57	95.9	19.4	NM	
06:55	24.45	100	1.2	14.6	7.14	655	NM	7.51	100.9	17.9	NM	
06:58	24.5	100	1.5	14.8	7.1	648	NM	7.5	105.4	18.4	NM	
07:01	24.56	100	1.8	14.8	7.07	643	NM	7.46	110	18.2	NM	
07:04	24.6	100	2.1	14.9	7.05	645	NM	7.48	112.6	17.1	NM	
07:07	24.6	100	2.4	14.9	7.04	645	NM	7.46	113.6	16.8	NM	

Sample ID(s): MWA-63-WG-061324	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF 	08/09/2024 02:50



Low Flow Groundwater Sampling Field Data Form

Well ID: MWA-81I
Well Permit No:

Date: 2024/06/10
sunny

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 50.5 ()	Reference Elevation 44.62 (ft)
Site Address , Portland, US-OR	Purge Equipment Bladder pump	Depth to Water / Free Product 32.35 () / None
Project Number	Sample Equipment Bladder pump	Total Well Depth 51.47 ()
Project Name 20240610-GWMonitor	Average Purge Rate 160 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - ()
Sampler Scott Terranova	Volume of Water in Well / Total Volume Purged 10.24 () / 2.98 ()	Well Construction

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

Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
12:58	32.35	160	0.58	18.9	6.65	478	NM	2.05	-22.5	11.15	NM	
13:01	32.35	160	1.06	18.9	6.65	491.9	NM	1.22	-18.5	7.67	NM	
13:04	32.35	160	1.54	18.6	6.65	498.1	NM	0.93	-17.8	5.8	NM	
13:07	32.35	160	2.02	18.6	6.64	499.5	NM	0.86	-16.9	4.76	NM	
13:10	32.35	160	2.5	18.4	6.64	501	NM	0.8	-15.9	3.93	NM	
13:13	32.35	160	2.98	18.3	6.64	500	NM	0.78	-15.3	3.74	NM	

Sample ID(s): MWA-81I-061024	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF 	08/09/2024 23:22



Low Flow Groundwater Sampling Field Data Form

Well ID: MWA-82
Well Permit No:

Date: 2024/06/10
sunny

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 27.5 ()	Reference Elevation 37.74 (ft)
Site Address , Portland, US-OR	Purge Equipment Bladder pump	Depth to Water / Free Product 22.34 () / None
Project Number	Sample Equipment Bladder pump	Total Well Depth 31.82 ()
Project Name 20240610-GWMonitor	Average Purge Rate 160 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - ()
Sampler Scott Terranova	Volume of Water in Well / Total Volume Purged 5.08 () / 3.36 (l)	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW (')	Flow Rate (mL/min)	Purge Volume (')	Temperature (C) ±3%	pH ±0.1pH 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
08:58	22.32	160	0.48	14.8	9.4	352.9	NM	1.69	7.9	43.8	NM	
09:01	22.32	160	0.96	14.8	9.41	347.5	NM	0.59	6.9	41.88	NM	
09:04	22.32	160	1.44	14.7	9.36	345.3	NM	0.64	7.2	40.5	NM	
09:07	22.34	160	1.92	14.8	9.48	347.9	NM	0.52	5	44.25	NM	
09:10	22.34	160	2.4	14.9	9.43	346.4	NM	0.48	5.2	41.53	NM	
09:13	22.34	160	2.88	14.9	9.43	345.2	NM	0.43	4.6	42.19	NM	
09:16	22.34	160	3.36	15.1	9.43	345	NM	0.4	4.1	42.4	NM	

Sample ID(s): MWA-82-061024	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF 	08/09/2024 23:21



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-19D
Well Permit No:

Date: 2024/06/13
clear

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 47.25 ()	Reference Elevation 36.65 (ft)
Site Address , Portland, US-OR	Purge Equipment Bladder pump	Depth to Water / Free Product 25.56 () / None
Project Number	Sample Equipment Bladder pump	Total Well Depth 49.27 ()
Project Name 20240610-GWMonitor	Average Purge Rate 150 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler scott terranova	Volume of Water in Well / Total Volume Purged 3.17 () / 10.64 ()	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
12:00	26.25	100	0.44	17.8	7.16	3180	NM	4.71	-49.8	13.94	NM	
12:03	27.5	100	0.74	17	7.46	3112	NM	6.91	-27	20.87	NM	
12:18	34.1	150	2.99	17	7.6	3101	NM	7.09	7.7	60.29	NM	
12:33	35.46	150	5.24	17.3	7.45	3159	NM	4.45	19.9	78.21	NM	
12:48	35.64	150	7.49	17.7	7.27	3171	NM	2.2	-2.4	62.39	NM	
13:03	35.79	150	9.74	18.2	7.2	3114	NM	1.2	-25.1	81.41	NM	
13:09	35.98	150	10.64	18.2	7.2	3097	NM	0.94	-35.6	75.39	NM	

Sample ID(s): PA-19D-061324	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			

INF



08/09/2024
23:35



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-20D
Well Permit No:

Date: 2024/06/13
clear

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 59.5 ()	Reference Elevation 37.91 (ft)
Site Address , Portland, US-OR	Purge Equipment Bladder pump	Depth to Water / Free Product 27.08 () / None
Project Number	Sample Equipment Bladder pump	Total Well Depth 63.92 ()
Project Name 20240610-GWMonitor	Average Purge Rate 141.7 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler Scott Terranova	Volume of Water in Well / Total Volume Purged 4.93 () / 16.5 ()	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
07:22	29.6	100	0.6	14.9	6.83	5281	NM	2.75	-66.4	11.2	NM	
07:47	39.9	150	4.35	15.4	7.02	3538	NM	7.75	-81.5	64.5	NM	
08:12	46.7	150	8.1	46.7	6.86	3439	NM	3.19	-81.6	79.1	NM	
08:37	47.5	150	11.85	15.9	6.78	3360	NM	0.78	-71.3	60.18	NM	
09:02	47.8	150	15.6	16.1	6.76	3246	NM	0.42	-67.1	70.95	NM	
09:08	47.6	150	16.5	16.2	6.76	3217	NM	0.4	-68.5	85.11	NM	

Sample ID(s): DUP-02-061324,PA-20D-061324	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF 	08/09/2024 23:33



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-21D
Well Permit No:

Date: 2024/06/13
clear

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 53.5 ()	Reference Elevation 34.36 (ft)
Site Address , Portland, US-OR	Purge Equipment Bladder pump	Depth to Water / Free Product 23.63 () / None
Project Number	Sample Equipment Bladder pump	Total Well Depth 57.12 ()
Project Name 20240610-GWMonitor	Average Purge Rate 150 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - ()
Sampler Scott Terranova	Volume of Water in Well / Total Volume Purged 17.93 () / 15.15 ()	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
09:46	25.9	100	0.6	16.7	6.34	3624	NM	3.12	-33.4	16.52	NM	
10:06	35.9	150	3.6	16.3	6.56	3624	NM	7.93	-54.9	30.87	NM	
10:26	44.5	150	6.6	16.7	6.31	3640	NM	4.21	-23.4	60.34	NM	
10:46	45.95	150	9.9	17.3	6.17	3738	NM	2.15	-16.9	75.64	NM	
11:06	46.85	150	12.3	17.4	6.13	3730	NM	0.85	-17.6	73.15	NM	
11:23	47.4	150	14.85	17.5	6.1	3747	NM	0.41	-17.2	71.43	NM	

Sample ID(s): PA-21D-061324	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF 	08/09/2024 23:34



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-22D
Well Permit No:

Date: 2024/06/12
Sunny

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 60 ()	Reference Elevation 38.75 (ft)
Site Address , Portland, US-OR	Purge Equipment Bladder pump	Depth to Water / Free Product 26.98 () / None
Project Number	Sample Equipment Bladder pump	Total Well Depth 63.77 ()
Project Name 20240610-GWMonitor	Average Purge Rate 100 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler Scott Terranova	Volume of Water in Well / Total Volume Purged 4.92 () / 2.1 ()	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
09:37	27.45	100	0.3	16.9	7.18	15911	NM	2.83	-45.6	10.14	NM	
09:40	27.55	100	0.6	17	7.18	15171	NM	1.67	-40	6.22	NM	
09:43	27.55	100	0.9	17.1	7.17	15145	NM	1.22	-18.3	5.18	NM	
09:46	27.55	100	1.2	17.1	7.17	15578	NM	1.03	-18.3	5.18	NM	
09:49	27.58	100	1.5	17.2	7.17	15959	NM	0.95	-13.1	4.96	NM	
09:52	27.6	100	1.8	17.2	7.17	16158	NM	0.9	-10.2	4.68	NM	
21:55	27.62	100	2.1	17.3	7.17	16215	NM	0.87	-6.5	4.82	NM	

Sample ID(s): PA-22D-061224	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF 	08/09/2024 23:29



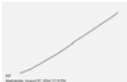
Low Flow Groundwater Sampling Field Data Form

Well ID: PA-23D
Well Permit No:

Date: 2024/06/11
Clear

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 80 ()	Reference Elevation 39.31 (ft)
Site Address , Portland, US-OR	Purge Equipment Bailer	Depth to Water / Free Product 27.61 () / None
Project Number	Sample Equipment Bailer	Total Well Depth 82.87 ()
Project Name 20240610-GWMonitor	Average Purge Rate 100 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler irene nichols-ferguson	Volume of Water in Well / Total Volume Purged 7.4 () / 26 (l)	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW (')	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.1pH 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
08:19	42.42	100	3	16	5.8	2238	NM	4.03	58.8	31.9	NM	
08:49	48.02	100	6	16.53	5.94	2246	NM	4	-116.5	25.9	NM	
09:20	49.92	100	9	16.3	6.4	60.24	NM	4.68	-78.9	11.8	NM	
09:47	52.95	100	12	17.25	6.64	60.82	NM	4.75	-67.9	22.9	NM	
10:13	54.05	100	15	16.6	5.32	61.27	NM	5.32	-78.5	25.7	NM	
10:34	55.15	100	18	16.25	6.73	61.91	NM	5.18	-85.2	18.3	NM	
10:57	56.46	100	21	16.35	6.74	62.72	NM	4.12	-83.4	37.6	NM	
11:20	56.46	100	24	16.4	6.74	61.57	NM	3.24	-88.4	36.4	NM	
11:34	56.7	100	26	16.33	6.75	62.79	NM	4.52	-85.7	31.5	NM	

Sample ID(s): PA-23D-061124	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF 	08/08/2024 00:15



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-24D
Well Permit No:

Date: 2024/06/12
Sunny

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 80.5 ()	Reference Elevation 39.06 (ft)
Site Address , Portland, US-OR	Purge Equipment Bladder pump	Depth to Water / Free Product 28.72 () / None
Project Number	Sample Equipment Bladder pump	Total Well Depth 84.87 ()
Project Name 20240610-GWMonitor	Average Purge Rate 133.3 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - ()
Sampler Scott Terranova	Volume of Water in Well / Total Volume Purged 30.06 () / 4.75 ()	Well Construction

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

Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
08:00	29.89	100	0.5	15.3	6.55	70670	NM	3.3	-71.4	15.84	NM	
08:15	26.2	150	2.75	15.2	6.67	71945	NM	0.69	-89.5	68.77	NM	
08:18	26	150	3.2	15.2	6.68	72093	NM	0.59	-91.3	75.94	NM	
08:21	26.1	150	3.65	15.1	6.7	72108	NM	0.56	-96.8	79.24	NM	
08:24	26.15	150	4.1	14.9	6.69	72231	NM	0.5	-94.2	81.63	NM	
08:27	26.08	100	4.55	14.9	6.69	72238	NM	0.47	-98.9	83.18	NM	

Sample ID(s): PA-24D-061224	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF 	08/09/2024 23:29



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-25D
Well Permit No:

Date: 2024/06/11
Sunny

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 80 ()	Reference Elevation 40.44 (ft)
Site Address , Portland, US-OR	Purge Equipment Bladder pump	Depth to Water / Free Product 27.2 () / None
Project Number	Sample Equipment Bladder pump	Total Well Depth 84.97 ()
Project Name 20240610-GWMonitor	Average Purge Rate 142.9 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - ()
Sampler Scott Terranova	Volume of Water in Well / Total Volume Purged 30.93 () / 25.8 ()	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
10:15	28.64	100	0.6	16.9	7.1	553	NM	2.1	-7.6	10.65	NM	
10:45	37.94	150	5.1	16.9	7.14	558	NM	1.88	-99.4	7.65	NM	
11:15	45.85	150	9.6	16.8	7.15	565	NM	3.51	-105	13.17	NM	
11:45	47.5	150	14.1	16.9	7.17	644	NM	1.28	-124.7	30.73	NM	
12:15	47.75	150	18.6	18.6	7.17	658	NM	0.61	-134.5	56.91	NM	
12:45	47.45	150	23.1	18	7.17	656	NM	0.6	-133	60.14	NM	
13:03	48	150	25.8	18.5	7.17	659	NM	0.55	-134	72.64	NM	

Sample ID(s): PA-25D-061124	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF 	08/09/2024 23:25



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-26D
Well Permit No:

Date: 2024/06/10
Clear

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 80 ()	Reference Elevation 40.33 (ft)
Site Address , Portland, US-OR	Purge Equipment Peristaltic pump	Depth to Water / Free Product 26.77 () / None
Project Number	Sample Equipment Peristaltic pump	Total Well Depth 82.95 ()
Project Name 20240610-GWMonitor	Average Purge Rate 100 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler irene nichols-ferguson	Volume of Water in Well / Total Volume Purged 7.52 () / 3.3 ()	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
11:52	27.98	100	0.3	19.58	6.41	213	NM	1.39	-145.7	10.3	NM	
11:55	27.98	100	0.6	27.98	6.44	229	NM	1.18	-143.7	7.9	NM	
11:58	27.98	100	0.9	19.6	6.44	374	NM	1.02	-141.5	7.61	NM	
12:01	27.98	100	1.2	19.5	6.5	374	NM	1.02	-138.9	7.37	NM	
12:04	27.98	100	1.5	19.4	6.55	558	NM	0.94	-134.8	4.48	NM	
12:07	27.98	100	1.8	19.4	6.6	602	NM	0.87	-130.3	4.57	NM	
12:10	27.98	100	2.1	19.38	6.64	630	NM	0.84	-124.8	5.52	NM	
12:13	27.98	100	2.4	19.43	6.68	639	NM	0.76	-121.2	5.58	NM	
12:16	27.98	100	2.7	19.6	6.7	647	NM	0.74	-116.5	4.73	NM	
12:19	27.98	100	3	19.7	6.72	647	NM	0.71	-112.6	4.6	NM	
12:22	27.98	100	3.3	19.7	6.73	643	NM	0.7	-110	3.64	NM	

Sample ID(s): PA-26D-061024	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF 	08/08/2024 00:31



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-30D
Well Permit No:

Date: 2024/06/14
Clear

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 49 ()	Reference Elevation 37.34 (ft)
Site Address , Portland, US-OR	Purge Equipment Bladder pump	Depth to Water / Free Product 26.4 () / None
Project Number	Sample Equipment Bladder pump	Total Well Depth 53.22 ()
Project Name 20240610-GWMonitor	Average Purge Rate 100 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - ()
Sampler scott terranova	Volume of Water in Well / Total Volume Purged 14.36 () / 2.24 (l)	Well Construction

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

Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
10:12	26.5	100	0.3	17.7	7.71	2765	NM	1.63	-80.3	85.02	NM	
10:15	26.5	100	0.6	18	7.85	2842	NM	0.5	-120.6	100.64	NM	
10:18	26.55	100	0.9	18.1	7.93	2946	NM	0.37	-124	120.18	NM	
10:21	26.53	100	1.2	18.1	8.01	3050	NM	0.29	-124.4	110.95	NM	
10:24	26.56	100	1.5	18.2	8.05	3139	NM	0.25	-124	115.13	NM	
10:27	26.52	100	1.8	18.2	8.07	3204	NM	0.21	-123.8	123.15	NM	
10:30	26.58	100	2.24	18.3	8.1	3245	NM	0.17	-124.1	120.89	NM	

Sample ID(s): PA-30D-061424	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF 	08/12/2024 15:47



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-32I
Well Permit No:

Date: 2024/06/13
Clear

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 38 ()	Reference Elevation 36.28 (ft)
Site Address , Portland, US-OR	Purge Equipment Bladder pump	Depth to Water / Free Product 22.47 () / None
Project Number	Sample Equipment Bladder pump	Total Well Depth 41.49 ()
Project Name 20240610-GWMonitor	Average Purge Rate 200 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - ()
Sampler irene nichols-ferguson	Volume of Water in Well / Total Volume Purged 10.18 () / 4.2 ()	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
10:14	22.4	200	0.6	17.65	7.84	944	NM	3.81	-28.7	39.4	NM	
10:17	22.4	200	1.2	16.6	7.56	1223	NM	0.92	-120.9	3.76	NM	
10:20	22.41	200	1.8	16.3	7.47	1306	NM	0.48	-153.5	2.47	NM	
10:23	22.44	200	2.4	16.2	7.45	1304	NM	0.52	-158.9	2.42	NM	
10:26	22.46	200	3	16.2	7.44	1293	NM	0.53	-162.5	2.24	NM	
10:29	22.46	200	3.6	16.2	7.43	1282	NM	0.52	-165.4	2.6	NM	
10:32	22.46	200	4.2	16.3	7.44	1288	NM	0.41	-166.9	1.38	NM	

Sample ID(s): PA-32I-061324	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF 	08/08/2024 03:51



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-03
Well Permit No:

Date: 2024/06/12
Clear

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 24 ()	Reference Elevation 37.1 (ft)
Site Address , Portland, US-OR	Purge Equipment Peristaltic pump	Depth to Water / Free Product 10.67 () / None
Project Number	Sample Equipment Peristaltic pump	Total Well Depth 26.09 ()
Project Name 20240610-GWMonitor	Average Purge Rate 100 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler irene nichols-ferguson	Volume of Water in Well / Total Volume Purged 2.06 () / 2.7 ()	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
06:43	11.29	100	0.3	15.3	10.25	1227	NM	0.62	-256.3	27.1	NM	
06:46	15.1	100	0.6	15.1	10.37	1028	NM	0.5	-265	20.3	NM	
06:49	11.29	100	0.9	15	10.33	953	NM	0.47	-267.2	19.6	NM	
06:52	11.45	100	1.2	15	10.3	914	NM	0.43	-266.2	20.7	NM	
06:55	11.45	100	1.5	15.1	10.31	903	NM	0.42	-272.7	19.4	NM	
06:58	11.44	100	1.8	15.2	10.29	894	NM	0.4	-276.9	17.8	NM	
07:01	11.59	100	2.1	15	10.29	889	NM	0.38	-279.3	15.1	NM	
07:04	11.59	100	2.4	15	10.29	880	NM	0.37	-280.1	14.7	NM	
07:07	11.59	100	2.7	15.2	10.28	883	NM	0.35	-284.1	15.3	NM	

Sample ID(s): DUP-01-061224,PA-03-061224	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF	08/09/2024 23:20



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-04
Well Permit No:

Date: 2024/06/12
Clear

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 25 ()	Reference Elevation 36.67 (ft)
Site Address , Portland, US-OR	Purge Equipment Peristaltic pump	Depth to Water / Free Product 9.48 () / None
Project Number	Sample Equipment Peristaltic pump	Total Well Depth 27.43 ()
Project Name 20240610-GWMonitor	Average Purge Rate 100 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler irene nichols-ferguson	Volume of Water in Well / Total Volume Purged 2.4 () / 3.3 ()	Well Construction

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

Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
11:41	9.75	100	0.3	19.25	8.6	1300	NM	2.41	-188.1	13.9	NM	
11:44	9.8	100	0.6	17.3	9.47	849	NM	0.66	-197.6	47.2	NM	
11:47	9.8	100	0.9	17.1	9.56	824	NM	0.43	-195.1	43	NM	
11:50	9.8	100	1.2	17	9.58	830	NM	0.37	-191.6	34	NM	
11:53	9.8	100	1.5	16.9	9.59	823	NM	0.35	-190.3	29.3	NM	
11:56	9.8	100	1.8	17.1	9.66	822	NM	0.33	-188.2	26.9	NM	
11:59	9.8	100	2.1	17.1	9.65	817	NM	0.32	-186.1	23.3	NM	
12:02	9.8	100	2.4	17.2	9.66	820	NM	0.32	-182.8	21	NM	
12:05	9.8	100	2.7	17.4	9.62	820	NM	0.32	-180.6	18.9	NM	
12:08	9.8	100	3	17.7	9.61	821	NM	0.34	-177	18.3	NM	
12:11	9.8	100	3.3	17.8	9.6	817	NM	0.34	-175.4	17.6	NM	

Sample ID(s): PA-4-061224	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF	08/09/2024 20:42



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-08
Well Permit No:

Date: 2024/06/10
Clear

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 29 ()	Reference Elevation 40.47 (ft)
Site Address , Portland, US-OR	Purge Equipment Peristaltic pump	Depth to Water / Free Product 26.34 () / None
Project Number	Sample Equipment Peristaltic pump	Total Well Depth 35.23 ()
Project Name 20240610-GWMonitor	Average Purge Rate 100 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler irene nichols-ferguson	Volume of Water in Well / Total Volume Purged 1.19 () / 3.9 ()	Well Construction

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

Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
08:44	26.4	100	0.3	15	7.01	1559	NM	2.75	-151.5	34.8	NM	
08:47	26.4	100	0.6	15	7.05	1546	NM	2.38	-228.6	68.9	NM	
08:50	26.4	100	0.9	15	7.05	1533	NM	1.39	-228.7	0	NM	
08:53	26.4	100	1.2	15.15	7.05	1524	NM	0.95	-221.3	0	NM	
08:56	26.4	100	1.5	15.4	7.09	1510	NM	0.84	-218.3	0	NM	
08:59	26.4	100	1.8	15.3	7.09	1486	NM	0.6	-216.1	0	NM	
09:02	16.4	100	2.1	15.3	7.09	1470	NM	0.55	-216	0	NM	
09:05	26.4	100	2.4	15.6	7.1	1454	NM	0.7	-214.7	0	NM	
09:08	26.4	100	2.7	15.6	7.11	1440	NM	1.01	-209.1	0	NM	
09:11	26.4	100	3	15.93	7.11	1420	NM	1.16	-210.2	0	NM	
09:14	26.4	100	3.3	16.2	7.11	1384	NM	0.73	-223.2	0	NM	
09:17	26.4	100	3.6	16.3	7.11	1377	NM	0.59	-229.3	0	NM	
09:20	26.4	100	3.9	16.4	7.12	1344	NM	0.82	-229.3	0	NM	

Sample ID(s): PA-08-WG-061024	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF 	08/08/2024 03:17



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-09
Well Permit No:

Date: 2024/06/10
Clear

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 29 ()	Reference Elevation 40.24 (ft)
Site Address , Portland, US-OR	Purge Equipment Peristaltic pump	Depth to Water / Free Product 26.67 () / None
Project Number	Sample Equipment Peristaltic pump	Total Well Depth 33.31 ()
Project Name 20240610-GWMonitor	Average Purge Rate 100 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler irene nichols-ferguson	Volume of Water in Well / Total Volume Purged 0.89 () / 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 ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
10:37	26.85	100	0.3	17.3	6.79	994	NM	0.76	-2.4	0	NM	
10:40	26.85	100	0.6	17.4	6.72	968	NM	0.74	10.3	0	NM	
10:43	26.85	100	0.9	17.5	6.73	957	NM	0.69	18.9	0	NM	
10:46	26.85	100	1.2	17.6	6.71	957	NM	0.69	23	0	NM	
10:49	26.85	100	1.5	17.6	6.73	944	NM	0.55	27.6	0	NM	
10:52	26.85	100	1.8	17.8	6.72	935	NM	0.63	31.3	0	NM	
10:55	26.85	100	2.1	18.2	6.73	934	NM	0.64	36.3	0	NM	
10:58	26.85	100	2.4	18.6	6.73	938	NM	0.63	38.8	0	NM	
11:01	26.85	100	2.7	18.7	6.73	931	NM	0.62	42.6	0	NM	

Sample ID(s): PA-09-061024	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF 	08/08/2024 00:46



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-10I
Well Permit No:

Date: 2024/06/12
Clear

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 35 ()	Reference Elevation 36.67 (ft)
Site Address , Portland, US-OR	Purge Equipment Peristaltic pump	Depth to Water / Free Product 29.9 () / None
Project Number	Sample Equipment Peristaltic pump	Total Well Depth 36.86 ()
Project Name 20240610-GWMonitor	Average Purge Rate 100 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler irene nichols-ferguson	Volume of Water in Well / Total Volume Purged 0.93 () / 2.4 ()	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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	29.9	100	0.3	17.7	8.22	748	NM	1.64	-103.8	7.65	NM	
12:33	29.93	100	0.6	17.18	7.7	898	NM	0.54	-158	14	NM	
12:36	29.93	100	0.9	17.2	7.61	922	NM	0.44	-165.2	14	NM	
12:39	29.93	100	1.2	17.23	7.53	941	NM	0.32	-174.4	8.38	NM	
12:42	29.93	100	1.5	17.3	7.51	939	NM	0.3	-174.4	5.8	NM	
12:45	29.93	100	1.8	17.3	7.51	948	NM	0.29	-175	4.35	NM	
12:48	29.93	100	2.1	17.4	7.48	974	NM	0.27	-177.3	3.41	NM	
12:51	29.93	100	2.4	17.3	7.47	948	NM	0.26	-178.5	2.96	NM	

Sample ID(s): PA-10I-061224	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF 	08/09/2024 03:08



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-15I
Well Permit No:

Date: 2024/06/12
Sunny

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 42.5 ()	Reference Elevation 40.62 (ft)
Site Address , Portland, US-OR	Purge Equipment Bladder pump	Depth to Water / Free Product 28.88 () / None
Project Number	Sample Equipment Bladder pump	Total Well Depth 47.57 ()
Project Name 20240610-GWMonitor	Average Purge Rate 100 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - ()
Sampler Scott Terranova	Volume of Water in Well / Total Volume Purged 10.01 () / 1.89 (l)	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
06:30	29.15	100	0.3	13.4	7.47	757	NM	2.2	-59.6	164.72	NM	
06:33	29.2	100	0.6	13.4	7.45	787	NM	1.09	-80.2	187.33	NM	
06:36	29.2	100	0.9	13.4	7.43	806	NM	0.85	-86.9	181.42	NM	
06:39	29.17	100	1.2	13.3	7.42	815	NM	0.78	-87.7	174.53	NM	
06:42	29.17	100	1.5	13.3	7.42	824	NM	0.74	-88.3	170.57	NM	
06:45	29.18	100	1.8	13.3	7.41	831	NM	0.73	-88.7	172.18	NM	

Sample ID(s): PA-15I-061224	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF 	08/09/2024 23:28



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-16I
Well Permit No:

Date: 2024/06/10
Clear

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 43 ()	Reference Elevation 40.3 (ft)
Site Address , Portland, US-OR	Purge Equipment Peristaltic pump	Depth to Water / Free Product 27.94 () / None
Project Number	Sample Equipment Peristaltic pump	Total Well Depth 44.65 ()
Project Name 20240610-GWMonitor	Average Purge Rate 100 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler irene nichols-ferguson	Volume of Water in Well / Total Volume Purged 2.24 () / 2.1 ()	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
13:27	28.23	100	0.3	19.6	6.38	307	NM	0.78	-169.2	NM	NM	
13:30	28.23	100	0.6	19.35	6.49	362	NM	0.67	-181	NM	NM	
13:33	28.23	100	0.9	19.3	6.57	392	NM	0.63	-190.1	NM	NM	
13:36	28.23	100	1.2	19.4	6.73	424	NM	0.58	-197	NM	NM	
13:39	28.23	100	1.5	19.4	6.73	438	NM	0.55	-202.8	NM	NM	
13:42	28.23	100	1.8	19.5	6.77	452	NM	0.52	-204.4	NM	NM	
13:46	28.23	100	2.1	19.6	6.84	472	NM	0.46	-207	NM	NM	

Sample ID(s): PA-16I-061024	Additional Comments Turbidity overrange on turbidity meter for all rounds of	SAMPLER NAME AND SIGNATURE INF	Date Time 08/08/2024 00:32
Analysis:			



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-17IR
Well Permit No:

Date: 2024/06/12
Clear

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 40 ()	Reference Elevation 37.59 (ft)
Site Address , Portland, US-OR	Purge Equipment Peristaltic pump	Depth to Water / Free Product 24.77 () / None
Project Number	Sample Equipment Peristaltic pump	Total Well Depth 42.98 ()
Project Name 20240610-GWMonitor	Average Purge Rate 100 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - (ft)
Sampler irene nichols-ferguson	Volume of Water in Well / Total Volume Purged 9.75 () / 3.9 ()	Well Construction

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

Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
08:32	25.15	100	0.3	16.38	9.49	1127	NM	0.49	-226.7	3.76	NM	
08:35	25.18	100	0.6	15.5	9.35	1059	NM	0.42	-230.6	2.6	NM	
08:38	25.63	100	0.9	15.2	9.3	991	NM	0.33	-231.8	2.65	NM	
08:41	25.63	100	1.2	15.3	8.95	646	NM	0.28	-220.5	3.16	NM	
08:44	25.63	100	1.5	15.1	8.78	573	NM	0.29	-228.9	3.07	NM	
08:47	25.63	100	1.8	15.3	8.79	563	NM	0.27	-241.8	3.22	NM	
08:50	25.63	100	2.1	15.4	8.94	624	NM	0.26	-251.1	2.95	NM	
08:53	25.63	100	2.4	15.3	9.04	668	NM	0.25	-255.9	3.1	NM	
08:56	25.63	100	2.7	15.3	9.12	738	NM	0.24	-260.2	2.24	NM	
08:59	25.63	100	3	15.28	9.18	800	NM	0.23	-263.1	1.87	NM	
09:02	25.63	100	3.3	15.23	9.2	858	NM	0.23	-264.4	1.68	NM	
09:05	25.63	100	3.6	15.33	9.22	886	NM	0.22	-267.4	1.8	NM	
09:08	25.63	100	3.9	15.4	9.26	933	NM	0.21	-271.9	2.66	NM	

Sample ID(s): PA-17IR-061224	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF	08/09/2024 23:04



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-18D
Well Permit No:

Date: 2024/06/12
Clear

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 42.5 ()	Reference Elevation 36.55 (ft)
Site Address , Portland, US-OR	Purge Equipment Peristaltic pump	Depth to Water / Free Product 25.83 () / None
Project Number	Sample Equipment Peristaltic pump	Total Well Depth 42.3 ()
Project Name 20240610-GWMonitor	Average Purge Rate 100 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler irene nichols-ferguson	Volume of Water in Well / Total Volume Purged 2.2 () / 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 ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
13:23	25.88	100	0.3	18.7	7.02	1061	NM	2.51	-118.9	3.03	NM	
13:26	26.15	100	0.6	18.3	8.26	1306	NM	0.82	-122.2	1.83	NM	
13:29	26.3	100	0.9	18.3	8.26	1315	NM	0.68	-135.2	1.96	NM	
13:32	26.41	100	1.2	18.53	8.24	1333	NM	0.37	-156.3	1.76	NM	
13:35	26.45	100	1.5	18.5	8.24	1330	NM	0.31	-172	3.4	NM	
13:38	26.45	100	1.8	18.6	8.25	1339	NM	0.27	-172	3.4	NM	
13:41	26.45	100	2.1	18.7	8.26	1355	NM	0.25	-179.3	3.01	NM	
13:44	26.45	200	2.4	18.85	8.26	1361	NM	0.23	-184.1	2.94	NM	

Sample ID(s): PA-18D-061224	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF 	08/09/2024 23:27



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-27D
Well Permit No:

Date: 2024/06/12
Clear

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 46.5 ()	Reference Elevation 37.1 (ft)
Site Address , Portland, US-OR	Purge Equipment Peristaltic pump	Depth to Water / Free Product 26.33 () / None
Project Number	Sample Equipment Peristaltic pump	Total Well Depth 47.3 ()
Project Name 20240610-GWMonitor	Average Purge Rate 100 (mL/min)	Well Diameter / Well Screen Interval 1 (in) / - ()
Sampler irene nichols-ferguson	Volume of Water in Well / Total Volume Purged 2.81 () / 2.7 ()	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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	26.6	100	0.3	17.53	8.22	2189	NM	2.4	-152.9	3.86	NM	
10:02	26.73	100	0.6	17.9	7.53	2650	NM	1.17	-156.2	4.15	NM	
10:05	26.76	100	0.9	17.9	7.31	2778	NM	0.55	-156.4	3.48	NM	
10:08	26.76	100	1.2	18.4	7.16	2988	NM	0.34	-150.5	4.42	NM	
10:11	26.76	100	1.5	18.4	7.08	3100	NM	0.29	-136.6	8.7	NM	
10:14	26.79	100	1.8	18.3	7.02	3073	NM	0.29	-134.3	10.29	NM	
10:17	26.77	100	2.1	18.4	7	3002	NM	0.28	-138.8	10.54	NM	
10:20	26.77	100	2.4	18.6	6.99	2922	NM	0.26	-141.6	9.82	NM	
10:23	26.77	100	2.7	18.8	6.98	2846	NM	0.26	-145.8	9.95	NM	

Sample ID(s): PA-27D-061224	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF	08/09/2024 21:07



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-31
Well Permit No:

Date: 2024/06/13
Clear

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 22.5 ()	Reference Elevation 36.25 (ft)
Site Address , Portland, US-OR	Purge Equipment Bladder pump	Depth to Water / Free Product 9.19 () / None
Project Number	Sample Equipment Bladder pump	Total Well Depth 25.17 ()
Project Name 20240610-GWMonitor	Average Purge Rate 300 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - ()
Sampler irene nichols-ferguson	Volume of Water in Well / Total Volume Purged 8.56 () / 10.8 ()	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
08:51	10.65	400	1.2	18.4	9.45	762	NM	4.66	-50.2	1231	NM	
08:54	9.8	400	2.4	15.1	9.43	794	NM	6.26	-40	NM	NM	
08:57	9.8	400	3.6	15.1	9.42	788	NM	6.35	-39.4	969	NM	
09:00	9.75	400	4.8	15	9.42	786	NM	6.84	-31.8	831	NM	
09:05	9.57	200	5.4	15.58	9.42	794	NM	6.87	-26.3	617	NM	
09:08	9.45	200	6	16.1	9.42	786	NM	6.7	-23.7	176	NM	
09:11	9.42	200	6.6	16.4	9.41	794	NM	6.95	-19.6	195	NM	
09:14	9.42	200	7.2	16.38	9.42	786	NM	7.25	-16.9	172	NM	
09:17	9.38	200	7.8	16.4	9.41	786	NM	7.52	-14.1	180	NM	
09:20	9.38	200	8.4	16.5	9.41	781	NM	7.55	-12.2	171	NM	
09:23	9.38	200	9	16.5	9.41	784	NM	7.67	-10.2	192	NM	
09:26	9.38	200	9.6	16.4	9.42	784	NM	7.94	-8	170	NM	
09:29	9.38	200	10.2	16.3	9.42	789	NM	8.09	-7	167	NM	
09:32	9.38	200	10.8	16.4	9.41	784	NM	8.09	-5.1	166	NM	

Sample ID(s): PA-31-061324	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF	08/08/2024 21:14



Low Flow Groundwater Sampling Field Data Form

Well ID: PA-44I
Well Permit No:

Date: 2024/06/11
sunny

Site ID ARKEMA-PORTLAND	Purge Method / Pump Intake Depth Low Flow / 43 ()	Reference Elevation 40.36 (ft)
Site Address , Portland, US-OR	Purge Equipment Bladder pump	Depth to Water / Free Product 28.48 () / None
Project Number	Sample Equipment Bladder pump	Total Well Depth 47.72 ()
Project Name 20240610-GWMonitor	Average Purge Rate 160 (mL/min)	Well Diameter / Well Screen Interval 2 (in) / - ()
Sampler Scott Terranova	Volume of Water in Well / Total Volume Purged 10.3 (gal) / 3.46 ()	Well Construction

Well Head Vapor Measurements PID: NA; FID: NA; CO: NA; CO2: NA; O2: NA; CH4: NA; H2S: NA												
Time	DTW ()	Flow Rate (mL/min)	Purge Volume ()	Temperature (C) ±3%	pH ±0.1pH 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
09:08	28.5	160	0.58	16.7	6.56	1422	NM	5.11	36.7	210.39	NM	
09:12	28.5	160	1.06	16.5	6.51	1780	NM	2.15	32.8	155.78	NM	
09:15	28.5	160	1.54	16.3	6.49	1889	NM	1.48	31.1	117.41	NM	
09:18	28.5	160	2.02	16.3	6.48	1994	NM	1.15	28.5	94.68	NM	
09:21	28.5	160	2.5	16.3	6.47	2055	NM	1.11	26.6	67.19	NM	
09:24	28.5	160	2.98	16.3	6.47	2069	NM	1.07	25.8	69.95	NM	
09:27	28.5	160	3.46	16.2	6.47	2074	NM	1.03	25.1	65.15	NM	

Sample ID(s): PA-44I-061124	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
Analysis:			
		INF 	08/09/2024 23:23



APPENDIX B LABORATORY ANALYTICAL REPORTS



ANALYTICAL REPORT

PREPARED FOR

Attn: Avery Soplata
ERM-West
1050 SW 6th Avenue
Suite 1650
Portland, Oregon 97204
Generated 6/21/2024 2:54:26 PM

JOB DESCRIPTION

Arkema - Q2 2024 Groundwater Event

JOB NUMBER

580-141081-1

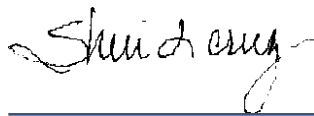
Eurofins Seattle

Job Notes

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Authorization



Generated
6/21/2024 2:54:26 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 - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Job ID: 580-141081-1

Eurofins Seattle

Job Narrative 580-141081-1

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

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

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

Receipt

The samples were received on 6/13/2024 12:20 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.6°C.

GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-462481 recovered outside acceptance criteria, low biased, for Chloromethane, Bromomethane and 2,2-Dichloropropane. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8260D: The following samples were diluted to bring the concentration of target analytes within the calibration range: MWA-31i(d)-061224 (580-141081-16) and MWA-56d-061224 (580-141081-18). Elevated reporting limits (RLs) are provided.

Method 8260D: The method blank for analytical batch 580-462616 contained Benzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-462616 recovered above the upper control limit for Acetone, Methyl tert-butyl ether, 2-Butanone (MEK), 1,2,3-Trichloropropane and 1,2-Dibromo-3-Chloropropane. 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-03-061224 (580-141081-19), DUP-01-061224 (580-141081-20), PA-17IR-061224 (580-141081-21), PA-27d-061224 (580-141081-22), PA-04-061224 (580-141081-23), PA-10i-061224 (580-141081-24), PA-18d-061224 (580-141081-25) and (CCVIS 580-462616/3).

Method 8260D_LL: The continuing calibration verification (CCV) associated with batch 580-462298 recovered above the upper control limit for Acetone, Methyl tert-butyl ether, 2-Butanone (MEK), 4-Methyl-2-pentanone (MIBK), 1,1,2,2-Tetrachloroethane, 1,2,3-Trichloropropane, 1,2-Dibromo-3-Chloropropane, Naphthalene and 1,2,3-Trichlorobenzene. 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-061024 (580-141081-1), MWA-82-061024 (580-141081-2), MWA-81i-061024 (580-141081-3), MWA-41-061024 (580-141081-4), PA-08-061024 (580-141081-5), PA-09-061024 (580-141081-6), PA-26d-061024 (580-141081-7) and (CCVIS 580-462298/3).

Method 8260D_LL: The method blank for analytical batch 580-462298 contained Benzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8260D_LL: The continuing calibration verification (CCV) associated with batch 580-462481 recovered outside acceptance criteria, low biased, for Chloromethane, Bromomethane and 2,2-Dichloropropane. 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 method blank for analytical batch 580-462616 contained Benzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8260D_LL: The continuing calibration verification (CCV) associated with batch 580-462616 recovered above the upper control limit for Acetone, Methyl tert-butyl ether, 2-Butanone (MEK), 1,2,3-Trichloropropane and 1,2-Dibromo-3-Chloropropane.

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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-03-061224 (580-141081-19), DUP-01-061224 (580-141081-20), PA-17iR-061224 (580-141081-21), PA-27d-061224 (580-141081-22), PA-04-061224 (580-141081-23), PA-10i-061224 (580-141081-24), PA-18d-061224 (580-141081-25) and (CCVIS 580-462616/3).

Method 8260D_LL: The method blank for analytical batch 580-462691 contained Benzene and Trichloroethene 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 580-462691 recovered above the upper control limit for Chloroethane, Acetone, Methyl tert-butyl ether, 2-Butanone (MEK), 2,2-Dichloropropane, Chlorobromomethane, Carbon tetrachloride, 1,1-Dichloropropene, 1,2-Dichloroethane, 4-Methyl-2-pentanone (MIBK), Dibromomethane, trans-1,3-Dichloropropene, Chlorodibromomethane, Ethylene Dibromide, 1,1,1,2-Tetrachloroethane, o-Xylene, Styrene, Bromoform, 1,2,3-Trichloropropane, 4-Chlorotoluene, 1,2-Dibromo-3-Chloropropane and 1,2,3-Trichlorobenzene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: PA-16i-061024 (580-141081-8).

Method 8260D_LL: The continuing calibration verification (CCV) associated with batch 580-462691 recovered outside acceptance criteria, low biased, for Chloromethane. 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.

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 in analytical batch 320-772645 were diluted to bring the concentration of target analytes within the calibration range: MWA-82-061024 (580-141081-2), (580-141081-B-2 MS) and (580-141081-B-2 MSD). Elevated reporting limits (RLs) are provided.

Method 314.0: The following sample in analytical batch 320-772645 was diluted due to the nature of the sample matrix and to protect instrumentation. The sample had a conductivity reading that was above the MCT, and the sample was very difficult to filter. Elevated reporting limits (RLs) are provided. PA-08-061024 (580-141081-5).

Method 314.0: The following sample in analytical batch 320-772645 was diluted due to the nature of the sample matrix and to protect instrumentation. The sample was a cloudy orange color and very difficult to filter. Elevated reporting limits (RLs) are provided. PA-09-061024 (580-141081-6)

Method 314.0: The following sample in analytical batch 320-772645 was diluted due to the nature of the sample matrix and to protect instrumentation. The sample was very difficult to filter and a cloudy brown color. Elevated reporting limits (RLs) are provided. PA-16i-061024 (580-141081-8)

Method 314.0: The following sample in analytical batch 320-772645 was diluted due to the nature of the sample matrix and to protect instrumentation. The sample was a cloudy brown color and very difficult to filter. Elevated reporting limits (RLs) are provided. PA-44i-061124 (580-141081-9)

Method 314.0: The following sample in analytical batch 320-772645 was diluted due to the nature of the sample matrix and to protect instrumentation. Elevated reporting limits (RLs) are provided.: DUP-01-061224 (580-141081-20)

Method 314.0: The following samples in analytical batch 320-772645 had conductivity measurements that exceeded the MCT conductivity. Per standard operating procedure, the samples were diluted. Elevated reporting limits (RLs) are provided. PA-03-061224 (580-141081-19), PA-17iR-061224 (580-141081-21) and PA-27d-061224 (580-141081-22)

Method 314.0: The following sample in analytical batch 320-772645 had an extremely high conductivity measurement that exceeded the MCT conductivity. Per standard operating procedure, the samples was diluted. PA-23d-061124 (580-141081-11). Elevated reporting limits (RLs) are provided.

Method 314.0: The following samples in analytical batch 320-772648 were diluted to bring the concentration of target analytes within the calibration range: PA-22d-061224 (580-141081-15), MWA-31i(d)-061224 (580-141081-16), MWA-58d-061224

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Case Narrative

Client: ERM-West
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(580-141081-17), MWA-56d-061224 (580-141081-18), (580-141081-B-15 MS) and (580-141081-B-15 MSD). Elevated reporting limits (RLs) are provided.

Method 314.0: The following sample in analytical batch 320-772648 had an extremely high conductivity reading that exceeded the MCT conductivity. Per standard operating procedure, the sample was diluted. Elevated reporting limits (RLs) are provided.

PA-24d-061224 (580-141081-14).

Method 314.0: The following samples in analytical batch 320-773540 had conductivity measurements that exceeded the conductivity of the MCT/INF. Per standard operating procedure, the samples were diluted. Elevated reporting limits (RLs) are provided.

PA-15i-061224 (580-141081-12), PA-15i-061224 (580-141081-12[MS]), PA-15i-061224 (580-141081-12[MSD]) and PA-18d-061224 (580-141081-25)

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

General Chemistry

Method 300.0_28D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 580-462809 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference is 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.

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Definitions/Glossary

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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
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 - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: TB-061024

Lab Sample ID: 580-141081-1

Date Collected: 06/10/24 00:01

Matrix: Water

Date Received: 06/13/24 12:20

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			06/14/24 17:15	1
Chloromethane	ND		0.50	0.14	ug/L			06/14/24 17:15	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/14/24 17:15	1
Bromomethane	ND		0.50	0.13	ug/L			06/14/24 17:15	1
Chloroethane	ND		0.50	0.24	ug/L			06/14/24 17:15	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/14/24 17:15	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/14/24 17:15	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			06/14/24 17:15	1
Acetone	ND		10	3.1	ug/L			06/14/24 17:15	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/14/24 17:15	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/14/24 17:15	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/14/24 17:15	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/14/24 17:15	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			06/14/24 17:15	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/14/24 17:15	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			06/14/24 17:15	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/14/24 17:15	1
Chloroform	ND		0.20	0.030	ug/L			06/14/24 17:15	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/14/24 17:15	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/14/24 17:15	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/14/24 17:15	1
Benzene	0.037	J B	0.20	0.030	ug/L			06/14/24 17:15	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/14/24 17:15	1
Trichloroethene	ND		0.20	0.066	ug/L			06/14/24 17:15	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/14/24 17:15	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/14/24 17:15	1
Dibromomethane	ND		0.20	0.062	ug/L			06/14/24 17:15	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/14/24 17:15	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/14/24 17:15	1
Toluene	ND		0.20	0.050	ug/L			06/14/24 17:15	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/14/24 17:15	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/14/24 17:15	1
Tetrachloroethene	ND		0.24	0.084	ug/L			06/14/24 17:15	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/14/24 17:15	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/14/24 17:15	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/14/24 17:15	1
Chlorobenzene	ND		0.20	0.060	ug/L			06/14/24 17:15	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/14/24 17:15	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/14/24 17:15	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/14/24 17:15	1
o-Xylene	ND		0.50	0.23	ug/L			06/14/24 17:15	1
Styrene	ND		1.0	0.33	ug/L			06/14/24 17:15	1
Bromoform	ND		0.50	0.16	ug/L			06/14/24 17:15	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/14/24 17:15	1
Bromobenzene	ND		0.20	0.038	ug/L			06/14/24 17:15	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/14/24 17:15	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/14/24 17:15	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/14/24 17:15	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/14/24 17:15	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: TB-061024

Lab Sample ID: 580-141081-1

Date Collected: 06/10/24 00:01

Matrix: Water

Date Received: 06/13/24 12:20

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			06/14/24 17:15	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/14/24 17:15	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/14/24 17:15	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/14/24 17:15	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/14/24 17:15	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/14/24 17:15	1
1,3-Dichlorobenzene	0.074	J	0.30	0.050	ug/L			06/14/24 17:15	1
1,4-Dichlorobenzene	0.077	J	0.30	0.050	ug/L			06/14/24 17:15	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/14/24 17:15	1
1,2-Dichlorobenzene	0.069	J	0.30	0.038	ug/L			06/14/24 17:15	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/14/24 17:15	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/14/24 17:15	1
Hexachlorobutadiene	0.20	J	0.50	0.16	ug/L			06/14/24 17:15	1
Naphthalene	ND		1.5	0.52	ug/L			06/14/24 17:15	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/14/24 17:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		06/14/24 17:15	1
Dibromofluoromethane (Surr)	102		80 - 120		06/14/24 17:15	1
4-Bromofluorobenzene (Surr)	100		80 - 120		06/14/24 17:15	1
1,2-Dichloroethane-d4 (Surr)	102		80 - 120		06/14/24 17:15	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: MWA-82-061024

Lab Sample ID: 580-141081-2

Date Collected: 06/10/24 09:17

Matrix: Water

Date Received: 06/13/24 12:20

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			06/14/24 19:34	1
Chloromethane	ND		0.50	0.14	ug/L			06/14/24 19:34	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/14/24 19:34	1
Bromomethane	ND		0.50	0.13	ug/L			06/14/24 19:34	1
Chloroethane	ND		0.50	0.24	ug/L			06/14/24 19:34	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/14/24 19:34	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/14/24 19:34	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			06/14/24 19:34	1
Acetone	ND		10	3.1	ug/L			06/14/24 19:34	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/14/24 19:34	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/14/24 19:34	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/14/24 19:34	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/14/24 19:34	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			06/14/24 19:34	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/14/24 19:34	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			06/14/24 19:34	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/14/24 19:34	1
Chloroform	3.2		0.20	0.030	ug/L			06/14/24 19:34	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/14/24 19:34	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/14/24 19:34	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/14/24 19:34	1
Benzene	0.037	J B	0.20	0.030	ug/L			06/14/24 19:34	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/14/24 19:34	1
Trichloroethene	0.20		0.20	0.066	ug/L			06/14/24 19:34	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/14/24 19:34	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/14/24 19:34	1
Dibromomethane	ND		0.20	0.062	ug/L			06/14/24 19:34	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/14/24 19:34	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/14/24 19:34	1
Toluene	ND		0.20	0.050	ug/L			06/14/24 19:34	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/14/24 19:34	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/14/24 19:34	1
Tetrachloroethene	0.63		0.24	0.084	ug/L			06/14/24 19:34	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/14/24 19:34	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/14/24 19:34	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/14/24 19:34	1
Chlorobenzene	0.11	J	0.20	0.060	ug/L			06/14/24 19:34	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/14/24 19:34	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/14/24 19:34	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/14/24 19:34	1
o-Xylene	ND		0.50	0.23	ug/L			06/14/24 19:34	1
Styrene	ND		1.0	0.33	ug/L			06/14/24 19:34	1
Bromoform	ND		0.50	0.16	ug/L			06/14/24 19:34	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/14/24 19:34	1
Bromobenzene	ND		0.20	0.038	ug/L			06/14/24 19:34	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/14/24 19:34	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/14/24 19:34	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/14/24 19:34	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/14/24 19:34	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: MWA-82-061024

Lab Sample ID: 580-141081-2

Date Collected: 06/10/24 09:17

Matrix: Water

Date Received: 06/13/24 12:20

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			06/14/24 19:34	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/14/24 19:34	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/14/24 19:34	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/14/24 19:34	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/14/24 19:34	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/14/24 19:34	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/14/24 19:34	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/14/24 19:34	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/14/24 19:34	1
1,2-Dichlorobenzene	0.047	J	0.30	0.038	ug/L			06/14/24 19:34	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/14/24 19:34	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/14/24 19:34	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/14/24 19:34	1
Naphthalene	ND		1.5	0.52	ug/L			06/14/24 19:34	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/14/24 19:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		06/14/24 19:34	1
Dibromofluoromethane (Surr)	104		80 - 120		06/14/24 19:34	1
4-Bromofluorobenzene (Surr)	102		80 - 120		06/14/24 19:34	1
1,2-Dichloroethane-d4 (Surr)	109		80 - 120		06/14/24 19:34	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	270		40	20	ug/L			06/17/24 13:58	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	11		1.5	0.43	mg/L			06/19/24 17:49	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: MWA-81i-061024

Lab Sample ID: 580-141081-3

Date Collected: 06/10/24 13:14

Matrix: Water

Date Received: 06/13/24 12:20

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			06/14/24 19:58	1
Chloromethane	ND		0.50	0.14	ug/L			06/14/24 19:58	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/14/24 19:58	1
Bromomethane	ND		0.50	0.13	ug/L			06/14/24 19:58	1
Chloroethane	ND		0.50	0.24	ug/L			06/14/24 19:58	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/14/24 19:58	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/14/24 19:58	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			06/14/24 19:58	1
Acetone	ND		10	3.1	ug/L			06/14/24 19:58	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/14/24 19:58	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/14/24 19:58	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/14/24 19:58	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/14/24 19:58	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			06/14/24 19:58	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/14/24 19:58	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			06/14/24 19:58	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/14/24 19:58	1
Chloroform	ND		0.20	0.030	ug/L			06/14/24 19:58	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/14/24 19:58	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/14/24 19:58	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/14/24 19:58	1
Benzene	ND		0.20	0.030	ug/L			06/14/24 19:58	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/14/24 19:58	1
Trichloroethene	ND		0.20	0.066	ug/L			06/14/24 19:58	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/14/24 19:58	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/14/24 19:58	1
Dibromomethane	ND		0.20	0.062	ug/L			06/14/24 19:58	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/14/24 19:58	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/14/24 19:58	1
Toluene	ND		0.20	0.050	ug/L			06/14/24 19:58	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/14/24 19:58	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/14/24 19:58	1
Tetrachloroethene	ND		0.24	0.084	ug/L			06/14/24 19:58	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/14/24 19:58	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/14/24 19:58	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/14/24 19:58	1
Chlorobenzene	0.085	J	0.20	0.060	ug/L			06/14/24 19:58	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/14/24 19:58	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/14/24 19:58	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/14/24 19:58	1
o-Xylene	ND		0.50	0.23	ug/L			06/14/24 19:58	1
Styrene	ND		1.0	0.33	ug/L			06/14/24 19:58	1
Bromoform	ND		0.50	0.16	ug/L			06/14/24 19:58	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/14/24 19:58	1
Bromobenzene	ND		0.20	0.038	ug/L			06/14/24 19:58	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/14/24 19:58	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/14/24 19:58	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/14/24 19:58	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/14/24 19:58	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: MWA-81i-061024

Lab Sample ID: 580-141081-3

Date Collected: 06/10/24 13:14

Matrix: Water

Date Received: 06/13/24 12:20

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			06/14/24 19:58	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/14/24 19:58	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/14/24 19:58	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/14/24 19:58	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/14/24 19:58	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/14/24 19:58	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/14/24 19:58	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/14/24 19:58	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/14/24 19:58	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			06/14/24 19:58	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/14/24 19:58	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/14/24 19:58	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/14/24 19:58	1
Naphthalene	ND		1.5	0.52	ug/L			06/14/24 19:58	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/14/24 19:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		06/14/24 19:58	1
Dibromofluoromethane (Surr)	105		80 - 120		06/14/24 19:58	1
4-Bromofluorobenzene (Surr)	101		80 - 120		06/14/24 19:58	1
1,2-Dichloroethane-d4 (Surr)	111		80 - 120		06/14/24 19:58	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		4.0	2.0	ug/L			06/17/24 14:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	26		1.5	0.43	mg/L			06/19/24 18:01	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: MWA-41-061024

Lab Sample ID: 580-141081-4

Date Collected: 06/10/24 13:50

Matrix: Water

Date Received: 06/13/24 12:20

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			06/14/24 20:21	1
Chloromethane	ND		0.50	0.14	ug/L			06/14/24 20:21	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/14/24 20:21	1
Bromomethane	ND		0.50	0.13	ug/L			06/14/24 20:21	1
Chloroethane	ND		0.50	0.24	ug/L			06/14/24 20:21	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/14/24 20:21	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/14/24 20:21	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			06/14/24 20:21	1
Acetone	ND		10	3.1	ug/L			06/14/24 20:21	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/14/24 20:21	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/14/24 20:21	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/14/24 20:21	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/14/24 20:21	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			06/14/24 20:21	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/14/24 20:21	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			06/14/24 20:21	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/14/24 20:21	1
Chloroform	ND		0.20	0.030	ug/L			06/14/24 20:21	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/14/24 20:21	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/14/24 20:21	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/14/24 20:21	1
Benzene	ND		0.20	0.030	ug/L			06/14/24 20:21	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/14/24 20:21	1
Trichloroethene	ND		0.20	0.066	ug/L			06/14/24 20:21	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/14/24 20:21	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/14/24 20:21	1
Dibromomethane	ND		0.20	0.062	ug/L			06/14/24 20:21	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/14/24 20:21	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/14/24 20:21	1
Toluene	ND		0.20	0.050	ug/L			06/14/24 20:21	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/14/24 20:21	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/14/24 20:21	1
Tetrachloroethene	ND		0.24	0.084	ug/L			06/14/24 20:21	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/14/24 20:21	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/14/24 20:21	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/14/24 20:21	1
Chlorobenzene	0.060	J	0.20	0.060	ug/L			06/14/24 20:21	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/14/24 20:21	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/14/24 20:21	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/14/24 20:21	1
o-Xylene	ND		0.50	0.23	ug/L			06/14/24 20:21	1
Styrene	ND		1.0	0.33	ug/L			06/14/24 20:21	1
Bromoform	ND		0.50	0.16	ug/L			06/14/24 20:21	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/14/24 20:21	1
Bromobenzene	ND		0.20	0.038	ug/L			06/14/24 20:21	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/14/24 20:21	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/14/24 20:21	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/14/24 20:21	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/14/24 20:21	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: MWA-41-061024

Lab Sample ID: 580-141081-4

Date Collected: 06/10/24 13:50

Matrix: Water

Date Received: 06/13/24 12:20

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			06/14/24 20:21	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/14/24 20:21	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/14/24 20:21	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/14/24 20:21	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/14/24 20:21	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/14/24 20:21	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/14/24 20:21	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/14/24 20:21	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/14/24 20:21	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			06/14/24 20:21	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/14/24 20:21	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/14/24 20:21	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/14/24 20:21	1
Naphthalene	ND		1.5	0.52	ug/L			06/14/24 20:21	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/14/24 20:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		06/14/24 20:21	1
Dibromofluoromethane (Surr)	105		80 - 120		06/14/24 20:21	1
4-Bromofluorobenzene (Surr)	103		80 - 120		06/14/24 20:21	1
1,2-Dichloroethane-d4 (Surr)	112		80 - 120		06/14/24 20:21	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	2.6	J	4.0	2.0	ug/L			06/17/24 15:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	7.6		1.5	0.43	mg/L			06/19/24 18:13	1

Client Sample Results

Client: ERM-West

Job ID: 580-141081-1

Project/Site: Arkema - Q2 2024 Groundwater Event

Client Sample ID: PA-08-061024

Lab Sample ID: 580-141081-5

Date Collected: 06/10/24 09:25

Matrix: Water

Date Received: 06/13/24 12:20

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			06/14/24 20:44	1
Chloromethane	ND		0.50	0.14	ug/L			06/14/24 20:44	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/14/24 20:44	1
Bromomethane	ND		0.50	0.13	ug/L			06/14/24 20:44	1
Chloroethane	ND		0.50	0.24	ug/L			06/14/24 20:44	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/14/24 20:44	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/14/24 20:44	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			06/14/24 20:44	1
Acetone	ND		10	3.1	ug/L			06/14/24 20:44	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/14/24 20:44	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/14/24 20:44	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/14/24 20:44	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/14/24 20:44	1
1,1-Dichloroethane	0.12	J	0.20	0.064	ug/L			06/14/24 20:44	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/14/24 20:44	1
cis-1,2-Dichloroethene	0.097	J	0.20	0.055	ug/L			06/14/24 20:44	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/14/24 20:44	1
Chloroform	0.10	J	0.20	0.030	ug/L			06/14/24 20:44	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/14/24 20:44	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/14/24 20:44	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/14/24 20:44	1
Benzene	ND		0.20	0.030	ug/L			06/14/24 20:44	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/14/24 20:44	1
Trichloroethene	0.096	J	0.20	0.066	ug/L			06/14/24 20:44	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/14/24 20:44	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/14/24 20:44	1
Dibromomethane	ND		0.20	0.062	ug/L			06/14/24 20:44	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/14/24 20:44	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/14/24 20:44	1
Toluene	ND		0.20	0.050	ug/L			06/14/24 20:44	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/14/24 20:44	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/14/24 20:44	1
Tetrachloroethene	0.16	J	0.24	0.084	ug/L			06/14/24 20:44	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/14/24 20:44	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/14/24 20:44	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/14/24 20:44	1
Chlorobenzene	0.10	J	0.20	0.060	ug/L			06/14/24 20:44	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/14/24 20:44	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/14/24 20:44	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/14/24 20:44	1
o-Xylene	ND		0.50	0.23	ug/L			06/14/24 20:44	1
Styrene	ND		1.0	0.33	ug/L			06/14/24 20:44	1
Bromoform	ND		0.50	0.16	ug/L			06/14/24 20:44	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/14/24 20:44	1
Bromobenzene	ND		0.20	0.038	ug/L			06/14/24 20:44	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/14/24 20:44	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/14/24 20:44	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/14/24 20:44	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/14/24 20:44	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-08-061024

Lab Sample ID: 580-141081-5

Date Collected: 06/10/24 09:25

Matrix: Water

Date Received: 06/13/24 12:20

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			06/14/24 20:44	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/14/24 20:44	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/14/24 20:44	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/14/24 20:44	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/14/24 20:44	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/14/24 20:44	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/14/24 20:44	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/14/24 20:44	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/14/24 20:44	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			06/14/24 20:44	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/14/24 20:44	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/14/24 20:44	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/14/24 20:44	1
Naphthalene	ND		1.5	0.52	ug/L			06/14/24 20:44	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/14/24 20:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		06/14/24 20:44	1
Dibromofluoromethane (Surr)	104		80 - 120		06/14/24 20:44	1
4-Bromofluorobenzene (Surr)	100		80 - 120		06/14/24 20:44	1
1,2-Dichloroethane-d4 (Surr)	111		80 - 120		06/14/24 20:44	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	19	J	20	10	ug/L			06/17/24 15:28	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	190		15	4.3	mg/L			06/19/24 18:37	10

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-09-061024

Lab Sample ID: 580-141081-6

Date Collected: 06/10/24 11:04

Matrix: Water

Date Received: 06/13/24 12:20

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			06/14/24 21:07	1
Chloromethane	ND		0.50	0.14	ug/L			06/14/24 21:07	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/14/24 21:07	1
Bromomethane	ND		0.50	0.13	ug/L			06/14/24 21:07	1
Chloroethane	ND		0.50	0.24	ug/L			06/14/24 21:07	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/14/24 21:07	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/14/24 21:07	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			06/14/24 21:07	1
Acetone	ND		10	3.1	ug/L			06/14/24 21:07	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/14/24 21:07	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/14/24 21:07	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/14/24 21:07	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/14/24 21:07	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			06/14/24 21:07	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/14/24 21:07	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			06/14/24 21:07	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/14/24 21:07	1
Chloroform	0.27		0.20	0.030	ug/L			06/14/24 21:07	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/14/24 21:07	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/14/24 21:07	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/14/24 21:07	1
Benzene	ND		0.20	0.030	ug/L			06/14/24 21:07	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/14/24 21:07	1
Trichloroethene	ND		0.20	0.066	ug/L			06/14/24 21:07	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/14/24 21:07	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/14/24 21:07	1
Dibromomethane	ND		0.20	0.062	ug/L			06/14/24 21:07	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/14/24 21:07	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/14/24 21:07	1
Toluene	ND		0.20	0.050	ug/L			06/14/24 21:07	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/14/24 21:07	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/14/24 21:07	1
Tetrachloroethene	0.31		0.24	0.084	ug/L			06/14/24 21:07	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/14/24 21:07	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/14/24 21:07	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/14/24 21:07	1
Chlorobenzene	ND		0.20	0.060	ug/L			06/14/24 21:07	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/14/24 21:07	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/14/24 21:07	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/14/24 21:07	1
o-Xylene	ND		0.50	0.23	ug/L			06/14/24 21:07	1
Styrene	ND		1.0	0.33	ug/L			06/14/24 21:07	1
Bromoform	ND		0.50	0.16	ug/L			06/14/24 21:07	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/14/24 21:07	1
Bromobenzene	ND		0.20	0.038	ug/L			06/14/24 21:07	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/14/24 21:07	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/14/24 21:07	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/14/24 21:07	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/14/24 21:07	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-09-061024

Lab Sample ID: 580-141081-6

Date Collected: 06/10/24 11:04

Matrix: Water

Date Received: 06/13/24 12:20

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			06/14/24 21:07	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/14/24 21:07	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/14/24 21:07	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/14/24 21:07	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/14/24 21:07	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/14/24 21:07	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/14/24 21:07	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/14/24 21:07	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/14/24 21:07	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			06/14/24 21:07	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/14/24 21:07	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/14/24 21:07	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/14/24 21:07	1
Naphthalene	ND		1.5	0.52	ug/L			06/14/24 21:07	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/14/24 21:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		06/14/24 21:07	1
Dibromofluoromethane (Surr)	105		80 - 120		06/14/24 21:07	1
4-Bromofluorobenzene (Surr)	102		80 - 120		06/14/24 21:07	1
1,2-Dichloroethane-d4 (Surr)	111		80 - 120		06/14/24 21:07	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	11	J	20	10	ug/L			06/17/24 15:46	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	130		15	4.3	mg/L			06/19/24 19:01	10

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-26d-061024

Lab Sample ID: 580-141081-7

Date Collected: 06/10/24 12:25

Matrix: Water

Date Received: 06/13/24 12:20

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			06/14/24 21:31	1
Chloromethane	ND		0.50	0.14	ug/L			06/14/24 21:31	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/14/24 21:31	1
Bromomethane	ND		0.50	0.13	ug/L			06/14/24 21:31	1
Chloroethane	ND		0.50	0.24	ug/L			06/14/24 21:31	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/14/24 21:31	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/14/24 21:31	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			06/14/24 21:31	1
Acetone	ND		10	3.1	ug/L			06/14/24 21:31	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/14/24 21:31	1
Methyl tert-butyl ether	0.091	J	0.30	0.070	ug/L			06/14/24 21:31	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/14/24 21:31	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/14/24 21:31	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			06/14/24 21:31	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/14/24 21:31	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			06/14/24 21:31	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/14/24 21:31	1
Chloroform	ND		0.20	0.030	ug/L			06/14/24 21:31	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/14/24 21:31	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/14/24 21:31	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/14/24 21:31	1
Benzene	ND		0.20	0.030	ug/L			06/14/24 21:31	1
1,2-Dichloroethane	0.36		0.25	0.12	ug/L			06/14/24 21:31	1
Trichloroethene	ND		0.20	0.066	ug/L			06/14/24 21:31	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/14/24 21:31	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/14/24 21:31	1
Dibromomethane	ND		0.20	0.062	ug/L			06/14/24 21:31	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/14/24 21:31	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/14/24 21:31	1
Toluene	ND		0.20	0.050	ug/L			06/14/24 21:31	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/14/24 21:31	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/14/24 21:31	1
Tetrachloroethene	ND		0.24	0.084	ug/L			06/14/24 21:31	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/14/24 21:31	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/14/24 21:31	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/14/24 21:31	1
Chlorobenzene	ND		0.20	0.060	ug/L			06/14/24 21:31	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/14/24 21:31	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/14/24 21:31	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/14/24 21:31	1
o-Xylene	ND		0.50	0.23	ug/L			06/14/24 21:31	1
Styrene	ND		1.0	0.33	ug/L			06/14/24 21:31	1
Bromoform	ND		0.50	0.16	ug/L			06/14/24 21:31	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/14/24 21:31	1
Bromobenzene	ND		0.20	0.038	ug/L			06/14/24 21:31	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/14/24 21:31	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/14/24 21:31	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/14/24 21:31	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/14/24 21:31	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-26d-061024

Lab Sample ID: 580-141081-7

Date Collected: 06/10/24 12:25

Matrix: Water

Date Received: 06/13/24 12:20

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			06/14/24 21:31	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/14/24 21:31	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/14/24 21:31	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/14/24 21:31	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/14/24 21:31	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/14/24 21:31	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/14/24 21:31	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/14/24 21:31	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/14/24 21:31	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			06/14/24 21:31	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/14/24 21:31	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/14/24 21:31	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/14/24 21:31	1
Naphthalene	ND		1.5	0.52	ug/L			06/14/24 21:31	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/14/24 21:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		06/14/24 21:31	1
Dibromofluoromethane (Surr)	105		80 - 120		06/14/24 21:31	1
4-Bromofluorobenzene (Surr)	101		80 - 120		06/14/24 21:31	1
1,2-Dichloroethane-d4 (Surr)	113		80 - 120		06/14/24 21:31	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		4.0	2.0	ug/L			06/17/24 16:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	80		1.5	0.43	mg/L			06/19/24 19:36	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-16i-061024

Lab Sample ID: 580-141081-8

Date Collected: 06/10/24 13:50

Matrix: Water

Date Received: 06/13/24 12:20

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			06/19/24 18:06	1
Chloromethane	ND		0.50	0.14	ug/L			06/19/24 18:06	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/19/24 18:06	1
Bromomethane	ND		0.50	0.13	ug/L			06/19/24 18:06	1
Chloroethane	ND		0.50	0.24	ug/L			06/19/24 18:06	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/19/24 18:06	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/19/24 18:06	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			06/19/24 18:06	1
Acetone	ND		10	3.1	ug/L			06/19/24 18:06	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/19/24 18:06	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/19/24 18:06	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/19/24 18:06	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/19/24 18:06	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			06/19/24 18:06	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/19/24 18:06	1
cis-1,2-Dichloroethene	0.078	J	0.20	0.055	ug/L			06/19/24 18:06	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/19/24 18:06	1
Chloroform	ND		0.20	0.030	ug/L			06/19/24 18:06	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/19/24 18:06	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/19/24 18:06	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/19/24 18:06	1
Benzene	0.097	J B	0.20	0.030	ug/L			06/19/24 18:06	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/19/24 18:06	1
Trichloroethene	ND		0.20	0.066	ug/L			06/19/24 18:06	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/19/24 18:06	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/19/24 18:06	1
Dibromomethane	ND		0.20	0.062	ug/L			06/19/24 18:06	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/19/24 18:06	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/19/24 18:06	1
Toluene	0.15	J	0.20	0.050	ug/L			06/19/24 18:06	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/19/24 18:06	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/19/24 18:06	1
Tetrachloroethene	ND		0.24	0.084	ug/L			06/19/24 18:06	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/19/24 18:06	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/19/24 18:06	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/19/24 18:06	1
Chlorobenzene	ND		0.20	0.060	ug/L			06/19/24 18:06	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/19/24 18:06	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/19/24 18:06	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/19/24 18:06	1
o-Xylene	ND		0.50	0.23	ug/L			06/19/24 18:06	1
Styrene	ND		1.0	0.33	ug/L			06/19/24 18:06	1
Bromoform	ND		0.50	0.16	ug/L			06/19/24 18:06	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/19/24 18:06	1
Bromobenzene	ND		0.20	0.038	ug/L			06/19/24 18:06	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/19/24 18:06	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/19/24 18:06	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/19/24 18:06	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/19/24 18:06	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-16i-061024

Lab Sample ID: 580-141081-8

Date Collected: 06/10/24 13:50

Matrix: Water

Date Received: 06/13/24 12:20

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			06/19/24 18:06	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/19/24 18:06	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/19/24 18:06	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/19/24 18:06	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/19/24 18:06	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/19/24 18:06	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 18:06	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 18:06	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/19/24 18:06	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			06/19/24 18:06	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/19/24 18:06	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/19/24 18:06	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/19/24 18:06	1
Naphthalene	ND		1.5	0.52	ug/L			06/19/24 18:06	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/19/24 18:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		06/19/24 18:06	1
Dibromofluoromethane (Surr)	107		80 - 120		06/19/24 18:06	1
4-Bromofluorobenzene (Surr)	101		80 - 120		06/19/24 18:06	1
1,2-Dichloroethane-d4 (Surr)	111		80 - 120		06/19/24 18:06	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		20	10	ug/L			06/17/24 16:57	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	17		1.5	0.43	mg/L			06/19/24 20:00	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-44i-061124

Lab Sample ID: 580-141081-9

Date Collected: 06/11/24 09:28

Matrix: Water

Date Received: 06/13/24 12:20

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			06/18/24 02:38	1
Chloromethane	ND		0.50	0.14	ug/L			06/18/24 02:38	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/18/24 02:38	1
Bromomethane	ND		0.50	0.13	ug/L			06/18/24 02:38	1
Chloroethane	ND		0.50	0.24	ug/L			06/18/24 02:38	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/18/24 02:38	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/18/24 02:38	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			06/18/24 02:38	1
Acetone	ND		10	3.1	ug/L			06/18/24 02:38	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/18/24 02:38	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/18/24 02:38	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/18/24 02:38	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/18/24 02:38	1
1,1-Dichloroethane	0.23		0.20	0.064	ug/L			06/18/24 02:38	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/18/24 02:38	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			06/18/24 02:38	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/18/24 02:38	1
Chloroform	ND		0.20	0.030	ug/L			06/18/24 02:38	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/18/24 02:38	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/18/24 02:38	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/18/24 02:38	1
Benzene	ND		0.20	0.030	ug/L			06/18/24 02:38	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/18/24 02:38	1
Trichloroethene	ND		0.20	0.066	ug/L			06/18/24 02:38	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/18/24 02:38	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/18/24 02:38	1
Dibromomethane	ND		0.20	0.062	ug/L			06/18/24 02:38	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/18/24 02:38	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/18/24 02:38	1
Toluene	ND		0.20	0.050	ug/L			06/18/24 02:38	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/18/24 02:38	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/18/24 02:38	1
Tetrachloroethene	ND		0.24	0.084	ug/L			06/18/24 02:38	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/18/24 02:38	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/18/24 02:38	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/18/24 02:38	1
Chlorobenzene	ND		0.20	0.060	ug/L			06/18/24 02:38	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/18/24 02:38	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/18/24 02:38	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/18/24 02:38	1
o-Xylene	ND		0.50	0.23	ug/L			06/18/24 02:38	1
Styrene	ND		1.0	0.33	ug/L			06/18/24 02:38	1
Bromoform	ND		0.50	0.16	ug/L			06/18/24 02:38	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/18/24 02:38	1
Bromobenzene	ND		0.20	0.038	ug/L			06/18/24 02:38	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/18/24 02:38	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/18/24 02:38	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/18/24 02:38	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/18/24 02:38	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-44i-061124

Lab Sample ID: 580-141081-9

Date Collected: 06/11/24 09:28

Matrix: Water

Date Received: 06/13/24 12:20

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			06/18/24 02:38	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/18/24 02:38	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/18/24 02:38	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/18/24 02:38	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/18/24 02:38	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/18/24 02:38	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/18/24 02:38	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/18/24 02:38	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/18/24 02:38	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			06/18/24 02:38	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/18/24 02:38	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/18/24 02:38	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/18/24 02:38	1
Naphthalene	ND		1.5	0.52	ug/L			06/18/24 02:38	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/18/24 02:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 120		06/18/24 02:38	1
Dibromofluoromethane (Surr)	101		80 - 120		06/18/24 02:38	1
4-Bromofluorobenzene (Surr)	99		80 - 120		06/18/24 02:38	1
1,2-Dichloroethane-d4 (Surr)	94		80 - 120		06/18/24 02:38	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		20	10	ug/L			06/17/24 17:15	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	320		150	43	mg/L			06/19/24 20:24	100

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-25d-061124

Lab Sample ID: 580-141081-10

Date Collected: 06/11/24 13:08

Matrix: Water

Date Received: 06/13/24 12:20

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			06/18/24 03:01	1
Chloromethane	ND		0.50	0.14	ug/L			06/18/24 03:01	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/18/24 03:01	1
Bromomethane	ND		0.50	0.13	ug/L			06/18/24 03:01	1
Chloroethane	ND		0.50	0.24	ug/L			06/18/24 03:01	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/18/24 03:01	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/18/24 03:01	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			06/18/24 03:01	1
Acetone	ND		10	3.1	ug/L			06/18/24 03:01	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/18/24 03:01	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/18/24 03:01	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/18/24 03:01	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/18/24 03:01	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			06/18/24 03:01	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/18/24 03:01	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			06/18/24 03:01	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/18/24 03:01	1
Chloroform	ND		0.20	0.030	ug/L			06/18/24 03:01	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/18/24 03:01	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/18/24 03:01	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/18/24 03:01	1
Benzene	ND		0.20	0.030	ug/L			06/18/24 03:01	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/18/24 03:01	1
Trichloroethene	ND		0.20	0.066	ug/L			06/18/24 03:01	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/18/24 03:01	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/18/24 03:01	1
Dibromomethane	ND		0.20	0.062	ug/L			06/18/24 03:01	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/18/24 03:01	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/18/24 03:01	1
Toluene	ND		0.20	0.050	ug/L			06/18/24 03:01	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/18/24 03:01	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/18/24 03:01	1
Tetrachloroethene	ND		0.24	0.084	ug/L			06/18/24 03:01	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/18/24 03:01	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/18/24 03:01	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/18/24 03:01	1
Chlorobenzene	ND		0.20	0.060	ug/L			06/18/24 03:01	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/18/24 03:01	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/18/24 03:01	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/18/24 03:01	1
o-Xylene	ND		0.50	0.23	ug/L			06/18/24 03:01	1
Styrene	ND		1.0	0.33	ug/L			06/18/24 03:01	1
Bromoform	ND		0.50	0.16	ug/L			06/18/24 03:01	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/18/24 03:01	1
Bromobenzene	ND		0.20	0.038	ug/L			06/18/24 03:01	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/18/24 03:01	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/18/24 03:01	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/18/24 03:01	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/18/24 03:01	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-25d-061124

Lab Sample ID: 580-141081-10

Date Collected: 06/11/24 13:08

Matrix: Water

Date Received: 06/13/24 12:20

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			06/18/24 03:01	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/18/24 03:01	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/18/24 03:01	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/18/24 03:01	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/18/24 03:01	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/18/24 03:01	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/18/24 03:01	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/18/24 03:01	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/18/24 03:01	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			06/18/24 03:01	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/18/24 03:01	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/18/24 03:01	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/18/24 03:01	1
Naphthalene	ND		1.5	0.52	ug/L			06/18/24 03:01	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/18/24 03:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		06/18/24 03:01	1
Dibromofluoromethane (Surr)	100		80 - 120		06/18/24 03:01	1
4-Bromofluorobenzene (Surr)	101		80 - 120		06/18/24 03:01	1
1,2-Dichloroethane-d4 (Surr)	93		80 - 120		06/18/24 03:01	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		4.0	2.0	ug/L			06/17/24 17:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	30		1.5	0.43	mg/L			06/19/24 20:36	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-23d-061124

Lab Sample ID: 580-141081-11

Date Collected: 06/11/24 11:45

Matrix: Water

Date Received: 06/13/24 12:20

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			06/18/24 03:24	1
Chloromethane	ND		1.0	0.28	ug/L			06/18/24 03:24	1
Vinyl chloride	ND		1.0	0.22	ug/L			06/18/24 03:24	1
Bromomethane	ND		1.0	0.21	ug/L			06/18/24 03:24	1
Chloroethane	ND		1.0	0.35	ug/L			06/18/24 03:24	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			06/18/24 03:24	1
Carbon disulfide	ND		1.0	0.53	ug/L			06/18/24 03:24	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			06/18/24 03:24	1
Acetone	ND		15	3.2	ug/L			06/18/24 03:24	1
Methylene Chloride	ND		5.0	1.4	ug/L			06/18/24 03:24	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			06/18/24 03:24	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			06/18/24 03:24	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/18/24 03:24	1
2-Butanone (MEK)	ND		15	4.7	ug/L			06/18/24 03:24	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			06/18/24 03:24	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			06/18/24 03:24	1
Chlorobromomethane	ND		1.0	0.29	ug/L			06/18/24 03:24	1
Chloroform	ND		1.0	0.26	ug/L			06/18/24 03:24	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			06/18/24 03:24	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			06/18/24 03:24	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			06/18/24 03:24	1
Benzene	ND		1.0	0.24	ug/L			06/18/24 03:24	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			06/18/24 03:24	1
Trichloroethene	ND		1.0	0.26	ug/L			06/18/24 03:24	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/18/24 03:24	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/18/24 03:24	1
Dibromomethane	ND		1.0	0.34	ug/L			06/18/24 03:24	1
Bromodichloromethane	ND		1.0	0.29	ug/L			06/18/24 03:24	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			06/18/24 03:24	1
Toluene	ND		1.0	0.39	ug/L			06/18/24 03:24	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			06/18/24 03:24	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			06/18/24 03:24	1
Tetrachloroethene	ND		1.0	0.41	ug/L			06/18/24 03:24	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			06/18/24 03:24	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			06/18/24 03:24	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			06/18/24 03:24	1
Chlorobenzene	ND		1.0	0.44	ug/L			06/18/24 03:24	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			06/18/24 03:24	1
Ethylbenzene	ND		1.0	0.50	ug/L			06/18/24 03:24	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			06/18/24 03:24	1
o-Xylene	ND		1.0	0.39	ug/L			06/18/24 03:24	1
Styrene	ND		1.0	0.53	ug/L			06/18/24 03:24	1
Bromoform	ND		1.0	0.51	ug/L			06/18/24 03:24	1
Isopropylbenzene	ND		1.0	0.44	ug/L			06/18/24 03:24	1
Bromobenzene	ND		1.0	0.43	ug/L			06/18/24 03:24	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			06/18/24 03:24	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			06/18/24 03:24	1
N-Propylbenzene	ND		1.0	0.50	ug/L			06/18/24 03:24	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			06/18/24 03:24	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-23d-061124

Lab Sample ID: 580-141081-11

Date Collected: 06/11/24 11:45

Matrix: Water

Date Received: 06/13/24 12:20

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			06/18/24 03:24	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			06/18/24 03:24	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			06/18/24 03:24	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			06/18/24 03:24	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			06/18/24 03:24	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			06/18/24 03:24	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			06/18/24 03:24	1
n-Butylbenzene	ND		1.0	0.44	ug/L			06/18/24 03:24	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			06/18/24 03:24	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			06/18/24 03:24	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			06/18/24 03:24	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			06/18/24 03:24	1
Naphthalene	ND		3.0	0.93	ug/L			06/18/24 03:24	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			06/18/24 03:24	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			06/18/24 03:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		06/18/24 03:24	1
1,2-Dichloroethane-d4 (Surr)	100		80 - 120		06/18/24 03:24	1
4-Bromofluorobenzene (Surr)	100		80 - 120		06/18/24 03:24	1
Dibromofluoromethane (Surr)	102		80 - 120		06/18/24 03:24	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		800	400	ug/L			06/17/24 19:20	200

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	31000		1500	430	mg/L			06/19/24 21:00	1000

Client Sample Results

Client: ERM-West

Job ID: 580-141081-1

Project/Site: Arkema - Q2 2024 Groundwater Event

Client Sample ID: PA-15i-061224

Lab Sample ID: 580-141081-12

Date Collected: 06/12/24 06:46

Matrix: Water

Date Received: 06/13/24 12:20

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			06/18/24 04:33	1
Chloromethane	ND		0.50	0.14	ug/L			06/18/24 04:33	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/18/24 04:33	1
Bromomethane	ND		0.50	0.13	ug/L			06/18/24 04:33	1
Chloroethane	ND		0.50	0.24	ug/L			06/18/24 04:33	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/18/24 04:33	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/18/24 04:33	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			06/18/24 04:33	1
Acetone	ND		10	3.1	ug/L			06/18/24 04:33	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/18/24 04:33	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/18/24 04:33	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/18/24 04:33	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/18/24 04:33	1
1,1-Dichloroethane	0.18	J	0.20	0.064	ug/L			06/18/24 04:33	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/18/24 04:33	1
cis-1,2-Dichloroethene	0.058	J	0.20	0.055	ug/L			06/18/24 04:33	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/18/24 04:33	1
Chloroform	ND		0.20	0.030	ug/L			06/18/24 04:33	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/18/24 04:33	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/18/24 04:33	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/18/24 04:33	1
Benzene	ND		0.20	0.030	ug/L			06/18/24 04:33	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/18/24 04:33	1
Trichloroethene	ND		0.20	0.066	ug/L			06/18/24 04:33	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/18/24 04:33	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/18/24 04:33	1
Dibromomethane	ND		0.20	0.062	ug/L			06/18/24 04:33	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/18/24 04:33	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/18/24 04:33	1
Toluene	ND		0.20	0.050	ug/L			06/18/24 04:33	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/18/24 04:33	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/18/24 04:33	1
Tetrachloroethene	ND		0.24	0.084	ug/L			06/18/24 04:33	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/18/24 04:33	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/18/24 04:33	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/18/24 04:33	1
Chlorobenzene	ND		0.20	0.060	ug/L			06/18/24 04:33	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/18/24 04:33	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/18/24 04:33	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/18/24 04:33	1
o-Xylene	ND		0.50	0.23	ug/L			06/18/24 04:33	1
Styrene	ND		1.0	0.33	ug/L			06/18/24 04:33	1
Bromoform	ND		0.50	0.16	ug/L			06/18/24 04:33	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/18/24 04:33	1
Bromobenzene	ND		0.20	0.038	ug/L			06/18/24 04:33	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/18/24 04:33	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/18/24 04:33	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/18/24 04:33	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/18/24 04:33	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-15i-061224

Lab Sample ID: 580-141081-12

Date Collected: 06/12/24 06:46

Matrix: Water

Date Received: 06/13/24 12:20

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			06/18/24 04:33	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/18/24 04:33	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/18/24 04:33	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/18/24 04:33	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/18/24 04:33	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/18/24 04:33	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/18/24 04:33	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/18/24 04:33	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/18/24 04:33	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			06/18/24 04:33	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/18/24 04:33	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/18/24 04:33	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/18/24 04:33	1
Naphthalene	ND		1.5	0.52	ug/L			06/18/24 04:33	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/18/24 04:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		06/18/24 04:33	1
Dibromofluoromethane (Surr)	101		80 - 120		06/18/24 04:33	1
4-Bromofluorobenzene (Surr)	102		80 - 120		06/18/24 04:33	1
1,2-Dichloroethane-d4 (Surr)	94		80 - 120		06/18/24 04:33	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		20	10	ug/L			06/20/24 17:26	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	86	F1	1.5	0.43	mg/L			06/19/24 21:12	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: RB-01-061224

Lab Sample ID: 580-141081-13

Date Collected: 06/12/24 07:25

Matrix: Water

Date Received: 06/13/24 12:20

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			06/18/24 04:56	1
Chloromethane	ND		1.0	0.28	ug/L			06/18/24 04:56	1
Vinyl chloride	ND		1.0	0.22	ug/L			06/18/24 04:56	1
Bromomethane	ND		1.0	0.21	ug/L			06/18/24 04:56	1
Chloroethane	ND		1.0	0.35	ug/L			06/18/24 04:56	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			06/18/24 04:56	1
Carbon disulfide	ND		1.0	0.53	ug/L			06/18/24 04:56	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			06/18/24 04:56	1
Acetone	ND		15	3.2	ug/L			06/18/24 04:56	1
Methylene Chloride	ND		5.0	1.4	ug/L			06/18/24 04:56	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			06/18/24 04:56	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			06/18/24 04:56	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/18/24 04:56	1
2-Butanone (MEK)	ND		15	4.7	ug/L			06/18/24 04:56	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			06/18/24 04:56	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			06/18/24 04:56	1
Chlorobromomethane	ND		1.0	0.29	ug/L			06/18/24 04:56	1
Chloroform	ND		1.0	0.26	ug/L			06/18/24 04:56	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			06/18/24 04:56	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			06/18/24 04:56	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			06/18/24 04:56	1
Benzene	ND		1.0	0.24	ug/L			06/18/24 04:56	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			06/18/24 04:56	1
Trichloroethene	ND		1.0	0.26	ug/L			06/18/24 04:56	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/18/24 04:56	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/18/24 04:56	1
Dibromomethane	ND		1.0	0.34	ug/L			06/18/24 04:56	1
Bromodichloromethane	ND		1.0	0.29	ug/L			06/18/24 04:56	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			06/18/24 04:56	1
Toluene	ND		1.0	0.39	ug/L			06/18/24 04:56	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			06/18/24 04:56	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			06/18/24 04:56	1
Tetrachloroethene	ND		1.0	0.41	ug/L			06/18/24 04:56	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			06/18/24 04:56	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			06/18/24 04:56	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			06/18/24 04:56	1
Chlorobenzene	ND		1.0	0.44	ug/L			06/18/24 04:56	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			06/18/24 04:56	1
Ethylbenzene	ND		1.0	0.50	ug/L			06/18/24 04:56	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			06/18/24 04:56	1
o-Xylene	ND		1.0	0.39	ug/L			06/18/24 04:56	1
Styrene	ND		1.0	0.53	ug/L			06/18/24 04:56	1
Bromoform	ND		1.0	0.51	ug/L			06/18/24 04:56	1
Isopropylbenzene	ND		1.0	0.44	ug/L			06/18/24 04:56	1
Bromobenzene	ND		1.0	0.43	ug/L			06/18/24 04:56	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			06/18/24 04:56	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			06/18/24 04:56	1
N-Propylbenzene	ND		1.0	0.50	ug/L			06/18/24 04:56	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			06/18/24 04:56	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: RB-01-061224

Lab Sample ID: 580-141081-13

Date Collected: 06/12/24 07:25

Matrix: Water

Date Received: 06/13/24 12:20

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			06/18/24 04:56	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			06/18/24 04:56	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			06/18/24 04:56	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			06/18/24 04:56	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			06/18/24 04:56	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			06/18/24 04:56	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			06/18/24 04:56	1
n-Butylbenzene	ND		1.0	0.44	ug/L			06/18/24 04:56	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			06/18/24 04:56	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			06/18/24 04:56	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			06/18/24 04:56	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			06/18/24 04:56	1
Naphthalene	ND		3.0	0.93	ug/L			06/18/24 04:56	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			06/18/24 04:56	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			06/18/24 04:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		80 - 120		06/18/24 04:56	1
1,2-Dichloroethane-d4 (Surr)	93		80 - 120		06/18/24 04:56	1
4-Bromofluorobenzene (Surr)	99		80 - 120		06/18/24 04:56	1
Dibromofluoromethane (Surr)	101		80 - 120		06/18/24 04:56	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		4.0	2.0	ug/L			06/17/24 19:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	ND		1.5	0.43	mg/L			06/19/24 22:11	1

Client Sample Results

Client: ERM-West

Job ID: 580-141081-1

Project/Site: Arkema - Q2 2024 Groundwater Event

Client Sample ID: PA-24d-061224

Lab Sample ID: 580-141081-14

Date Collected: 06/12/24 08:28

Matrix: Water

Date Received: 06/13/24 12:20

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			06/18/24 03:47	1
Chloromethane	ND		1.0	0.28	ug/L			06/18/24 03:47	1
Vinyl chloride	ND		1.0	0.22	ug/L			06/18/24 03:47	1
Bromomethane	ND		1.0	0.21	ug/L			06/18/24 03:47	1
Chloroethane	ND		1.0	0.35	ug/L			06/18/24 03:47	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			06/18/24 03:47	1
Carbon disulfide	ND		1.0	0.53	ug/L			06/18/24 03:47	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			06/18/24 03:47	1
Acetone	ND		15	3.2	ug/L			06/18/24 03:47	1
Methylene Chloride	ND		5.0	1.4	ug/L			06/18/24 03:47	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			06/18/24 03:47	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			06/18/24 03:47	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/18/24 03:47	1
2-Butanone (MEK)	ND		15	4.7	ug/L			06/18/24 03:47	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			06/18/24 03:47	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			06/18/24 03:47	1
Chlorobromomethane	ND		1.0	0.29	ug/L			06/18/24 03:47	1
Chloroform	ND		1.0	0.26	ug/L			06/18/24 03:47	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			06/18/24 03:47	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			06/18/24 03:47	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			06/18/24 03:47	1
Benzene	ND		1.0	0.24	ug/L			06/18/24 03:47	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			06/18/24 03:47	1
Trichloroethene	ND		1.0	0.26	ug/L			06/18/24 03:47	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/18/24 03:47	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/18/24 03:47	1
Dibromomethane	ND		1.0	0.34	ug/L			06/18/24 03:47	1
Bromodichloromethane	ND		1.0	0.29	ug/L			06/18/24 03:47	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			06/18/24 03:47	1
Toluene	ND		1.0	0.39	ug/L			06/18/24 03:47	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			06/18/24 03:47	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			06/18/24 03:47	1
Tetrachloroethene	ND		1.0	0.41	ug/L			06/18/24 03:47	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			06/18/24 03:47	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			06/18/24 03:47	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			06/18/24 03:47	1
Chlorobenzene	ND		1.0	0.44	ug/L			06/18/24 03:47	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			06/18/24 03:47	1
Ethylbenzene	ND		1.0	0.50	ug/L			06/18/24 03:47	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			06/18/24 03:47	1
o-Xylene	ND		1.0	0.39	ug/L			06/18/24 03:47	1
Styrene	ND		1.0	0.53	ug/L			06/18/24 03:47	1
Bromoform	ND		1.0	0.51	ug/L			06/18/24 03:47	1
Isopropylbenzene	ND		1.0	0.44	ug/L			06/18/24 03:47	1
Bromobenzene	ND		1.0	0.43	ug/L			06/18/24 03:47	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			06/18/24 03:47	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			06/18/24 03:47	1
N-Propylbenzene	ND		1.0	0.50	ug/L			06/18/24 03:47	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			06/18/24 03:47	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-24d-061224

Lab Sample ID: 580-141081-14

Date Collected: 06/12/24 08:28

Matrix: Water

Date Received: 06/13/24 12:20

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			06/18/24 03:47	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			06/18/24 03:47	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			06/18/24 03:47	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			06/18/24 03:47	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			06/18/24 03:47	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			06/18/24 03:47	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			06/18/24 03:47	1
n-Butylbenzene	ND		1.0	0.44	ug/L			06/18/24 03:47	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			06/18/24 03:47	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			06/18/24 03:47	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			06/18/24 03:47	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			06/18/24 03:47	1
Naphthalene	ND		3.0	0.93	ug/L			06/18/24 03:47	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			06/18/24 03:47	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			06/18/24 03:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		80 - 120		06/18/24 03:47	1
1,2-Dichloroethane-d4 (Surr)	99		80 - 120		06/18/24 03:47	1
4-Bromofluorobenzene (Surr)	99		80 - 120		06/18/24 03:47	1
Dibromofluoromethane (Surr)	103		80 - 120		06/18/24 03:47	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		800	400	ug/L			06/17/24 15:28	200

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	30000		1500	430	mg/L			06/19/24 22:35	1000

Client Sample Results

Client: ERM-West

Job ID: 580-141081-1

Project/Site: Arkema - Q2 2024 Groundwater Event

Client Sample ID: PA-22d-061224

Lab Sample ID: 580-141081-15

Date Collected: 06/12/24 09:56

Matrix: Water

Date Received: 06/13/24 12:20

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			06/18/24 04:10	1
Chloromethane	ND		1.0	0.28	ug/L			06/18/24 04:10	1
Vinyl chloride	ND		1.0	0.22	ug/L			06/18/24 04:10	1
Bromomethane	ND		1.0	0.21	ug/L			06/18/24 04:10	1
Chloroethane	ND		1.0	0.35	ug/L			06/18/24 04:10	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			06/18/24 04:10	1
Carbon disulfide	ND		1.0	0.53	ug/L			06/18/24 04:10	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			06/18/24 04:10	1
Acetone	ND		15	3.2	ug/L			06/18/24 04:10	1
Methylene Chloride	ND		5.0	1.4	ug/L			06/18/24 04:10	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			06/18/24 04:10	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			06/18/24 04:10	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/18/24 04:10	1
2-Butanone (MEK)	ND		15	4.7	ug/L			06/18/24 04:10	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			06/18/24 04:10	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			06/18/24 04:10	1
Chlorobromomethane	ND		1.0	0.29	ug/L			06/18/24 04:10	1
Chloroform	10		1.0	0.26	ug/L			06/18/24 04:10	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			06/18/24 04:10	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			06/18/24 04:10	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			06/18/24 04:10	1
Benzene	ND		1.0	0.24	ug/L			06/18/24 04:10	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			06/18/24 04:10	1
Trichloroethene	ND		1.0	0.26	ug/L			06/18/24 04:10	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/18/24 04:10	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/18/24 04:10	1
Dibromomethane	ND		1.0	0.34	ug/L			06/18/24 04:10	1
Bromodichloromethane	ND		1.0	0.29	ug/L			06/18/24 04:10	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			06/18/24 04:10	1
Toluene	ND		1.0	0.39	ug/L			06/18/24 04:10	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			06/18/24 04:10	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			06/18/24 04:10	1
Tetrachloroethene	ND		1.0	0.41	ug/L			06/18/24 04:10	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			06/18/24 04:10	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			06/18/24 04:10	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			06/18/24 04:10	1
Chlorobenzene	ND		1.0	0.44	ug/L			06/18/24 04:10	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			06/18/24 04:10	1
Ethylbenzene	ND		1.0	0.50	ug/L			06/18/24 04:10	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			06/18/24 04:10	1
o-Xylene	ND		1.0	0.39	ug/L			06/18/24 04:10	1
Styrene	ND		1.0	0.53	ug/L			06/18/24 04:10	1
Bromoform	ND		1.0	0.51	ug/L			06/18/24 04:10	1
Isopropylbenzene	ND		1.0	0.44	ug/L			06/18/24 04:10	1
Bromobenzene	ND		1.0	0.43	ug/L			06/18/24 04:10	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			06/18/24 04:10	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			06/18/24 04:10	1
N-Propylbenzene	ND		1.0	0.50	ug/L			06/18/24 04:10	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			06/18/24 04:10	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-22d-061224

Lab Sample ID: 580-141081-15

Date Collected: 06/12/24 09:56

Matrix: Water

Date Received: 06/13/24 12:20

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			06/18/24 04:10	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			06/18/24 04:10	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			06/18/24 04:10	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			06/18/24 04:10	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			06/18/24 04:10	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			06/18/24 04:10	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			06/18/24 04:10	1
n-Butylbenzene	ND		1.0	0.44	ug/L			06/18/24 04:10	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			06/18/24 04:10	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			06/18/24 04:10	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			06/18/24 04:10	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			06/18/24 04:10	1
Naphthalene	ND		3.0	0.93	ug/L			06/18/24 04:10	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			06/18/24 04:10	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			06/18/24 04:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		06/18/24 04:10	1
1,2-Dichloroethane-d4 (Surr)	95		80 - 120		06/18/24 04:10	1
4-Bromofluorobenzene (Surr)	101		80 - 120		06/18/24 04:10	1
Dibromofluoromethane (Surr)	101		80 - 120		06/18/24 04:10	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	14000		2000	1000	ug/L			06/17/24 15:43	500

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	5100		150	43	mg/L			06/19/24 22:47	100

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: MWA-31i(d)-061224

Lab Sample ID: 580-141081-16

Date Collected: 06/12/24 11:20

Matrix: Water

Date Received: 06/13/24 12:20

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			06/18/24 08:25	10
Chloromethane	ND		10	2.8	ug/L			06/18/24 08:25	10
Vinyl chloride	ND		10	2.2	ug/L			06/18/24 08:25	10
Bromomethane	ND		10	2.1	ug/L			06/18/24 08:25	10
Chloroethane	ND		10	3.5	ug/L			06/18/24 08:25	10
Trichlorofluoromethane	ND		10	3.6	ug/L			06/18/24 08:25	10
Carbon disulfide	ND		10	5.3	ug/L			06/18/24 08:25	10
1,1-Dichloroethene	ND		10	2.8	ug/L			06/18/24 08:25	10
Acetone	ND		150	32	ug/L			06/18/24 08:25	10
Methylene Chloride	ND		50	14	ug/L			06/18/24 08:25	10
Methyl tert-butyl ether	ND		10	4.4	ug/L			06/18/24 08:25	10
trans-1,2-Dichloroethene	ND		10	3.9	ug/L			06/18/24 08:25	10
1,1-Dichloroethane	ND		10	2.2	ug/L			06/18/24 08:25	10
2-Butanone (MEK)	ND		150	47	ug/L			06/18/24 08:25	10
2,2-Dichloropropane	ND		10	3.2	ug/L			06/18/24 08:25	10
cis-1,2-Dichloroethene	ND		10	3.5	ug/L			06/18/24 08:25	10
Chlorobromomethane	ND		10	2.9	ug/L			06/18/24 08:25	10
Chloroform	59		10	2.6	ug/L			06/18/24 08:25	10
1,1,1-Trichloroethane	ND		10	3.9	ug/L			06/18/24 08:25	10
Carbon tetrachloride	ND		10	3.0	ug/L			06/18/24 08:25	10
1,1-Dichloropropene	ND		10	2.9	ug/L			06/18/24 08:25	10
Benzene	ND		10	2.4	ug/L			06/18/24 08:25	10
1,2-Dichloroethane	ND		10	4.2	ug/L			06/18/24 08:25	10
Trichloroethene	ND		10	2.6	ug/L			06/18/24 08:25	10
1,2-Dichloropropane	ND		10	1.8	ug/L			06/18/24 08:25	10
4-Methyl-2-pentanone (MIBK)	ND		50	25	ug/L			06/18/24 08:25	10
Dibromomethane	ND		10	3.4	ug/L			06/18/24 08:25	10
Bromodichloromethane	ND		10	2.9	ug/L			06/18/24 08:25	10
cis-1,3-Dichloropropene	ND		10	4.2	ug/L			06/18/24 08:25	10
Toluene	ND		10	3.9	ug/L			06/18/24 08:25	10
trans-1,3-Dichloropropene	ND		10	4.1	ug/L			06/18/24 08:25	10
1,1,2-Trichloroethane	ND		10	2.4	ug/L			06/18/24 08:25	10
Tetrachloroethene	ND		10	4.1	ug/L			06/18/24 08:25	10
1,3-Dichloropropane	ND		10	3.5	ug/L			06/18/24 08:25	10
Chlorodibromomethane	ND		10	4.3	ug/L			06/18/24 08:25	10
Ethylene Dibromide	ND		10	4.0	ug/L			06/18/24 08:25	10
Chlorobenzene	ND		10	4.4	ug/L			06/18/24 08:25	10
1,1,1,2-Tetrachloroethane	ND		10	1.8	ug/L			06/18/24 08:25	10
Ethylbenzene	ND		10	5.0	ug/L			06/18/24 08:25	10
m-Xylene & p-Xylene	ND		20	5.3	ug/L			06/18/24 08:25	10
o-Xylene	ND		10	3.9	ug/L			06/18/24 08:25	10
Styrene	ND		10	5.3	ug/L			06/18/24 08:25	10
Bromoform	ND		10	5.1	ug/L			06/18/24 08:25	10
Isopropylbenzene	ND		10	4.4	ug/L			06/18/24 08:25	10
Bromobenzene	ND		10	4.3	ug/L			06/18/24 08:25	10
1,1,2,2-Tetrachloroethane	ND		10	5.2	ug/L			06/18/24 08:25	10
1,2,3-Trichloropropane	ND		10	4.1	ug/L			06/18/24 08:25	10
N-Propylbenzene	ND		10	5.0	ug/L			06/18/24 08:25	10
2-Chlorotoluene	ND		10	5.1	ug/L			06/18/24 08:25	10

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: MWA-31i(d)-061224

Lab Sample ID: 580-141081-16

Date Collected: 06/12/24 11:20

Matrix: Water

Date Received: 06/13/24 12:20

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			06/18/24 08:25	10
tert-Butylbenzene	ND		20	5.8	ug/L			06/18/24 08:25	10
1,2,4-Trimethylbenzene	ND		30	6.1	ug/L			06/18/24 08:25	10
sec-Butylbenzene	ND		10	4.9	ug/L			06/18/24 08:25	10
4-Isopropyltoluene	ND		10	2.8	ug/L			06/18/24 08:25	10
1,3-Dichlorobenzene	ND		10	4.8	ug/L			06/18/24 08:25	10
1,4-Dichlorobenzene	ND		10	4.6	ug/L			06/18/24 08:25	10
n-Butylbenzene	ND		10	4.4	ug/L			06/18/24 08:25	10
1,2-Dichlorobenzene	ND		10	4.6	ug/L			06/18/24 08:25	10
1,2-Dibromo-3-Chloropropane	ND		30	5.7	ug/L			06/18/24 08:25	10
1,2,4-Trichlorobenzene	ND		10	3.3	ug/L			06/18/24 08:25	10
Hexachlorobutadiene	ND		30	7.9	ug/L			06/18/24 08:25	10
Naphthalene	ND		30	9.3	ug/L			06/18/24 08:25	10
1,2,3-Trichlorobenzene	ND		20	4.3	ug/L			06/18/24 08:25	10
1,3,5-Trimethylbenzene	ND		10	5.5	ug/L			06/18/24 08:25	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 120		06/18/24 08:25	10
1,2-Dichloroethane-d4 (Surr)	91		80 - 120		06/18/24 08:25	10
4-Bromofluorobenzene (Surr)	99		80 - 120		06/18/24 08:25	10
Dibromofluoromethane (Surr)	101		80 - 120		06/18/24 08:25	10

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	100000		8000	4000	ug/L			06/17/24 16:28	2000

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	21000		1500	430	mg/L			06/19/24 23:23	1000

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: MWA-58d-061224

Lab Sample ID: 580-141081-17

Date Collected: 06/12/24 12:08

Matrix: Water

Date Received: 06/13/24 12:20

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			06/18/24 08:48	10
Chloromethane	ND		10	2.8	ug/L			06/18/24 08:48	10
Vinyl chloride	ND		10	2.2	ug/L			06/18/24 08:48	10
Bromomethane	ND		10	2.1	ug/L			06/18/24 08:48	10
Chloroethane	ND		10	3.5	ug/L			06/18/24 08:48	10
Trichlorofluoromethane	ND		10	3.6	ug/L			06/18/24 08:48	10
Carbon disulfide	ND		10	5.3	ug/L			06/18/24 08:48	10
1,1-Dichloroethene	ND		10	2.8	ug/L			06/18/24 08:48	10
Acetone	ND		150	32	ug/L			06/18/24 08:48	10
Methylene Chloride	ND		50	14	ug/L			06/18/24 08:48	10
Methyl tert-butyl ether	ND		10	4.4	ug/L			06/18/24 08:48	10
trans-1,2-Dichloroethene	ND		10	3.9	ug/L			06/18/24 08:48	10
1,1-Dichloroethane	ND		10	2.2	ug/L			06/18/24 08:48	10
2-Butanone (MEK)	ND		150	47	ug/L			06/18/24 08:48	10
2,2-Dichloropropane	ND		10	3.2	ug/L			06/18/24 08:48	10
cis-1,2-Dichloroethene	ND		10	3.5	ug/L			06/18/24 08:48	10
Chlorobromomethane	ND		10	2.9	ug/L			06/18/24 08:48	10
Chloroform	140		10	2.6	ug/L			06/18/24 08:48	10
1,1,1-Trichloroethane	ND		10	3.9	ug/L			06/18/24 08:48	10
Carbon tetrachloride	ND		10	3.0	ug/L			06/18/24 08:48	10
1,1-Dichloropropene	ND		10	2.9	ug/L			06/18/24 08:48	10
Benzene	ND		10	2.4	ug/L			06/18/24 08:48	10
1,2-Dichloroethane	ND		10	4.2	ug/L			06/18/24 08:48	10
Trichloroethene	ND		10	2.6	ug/L			06/18/24 08:48	10
1,2-Dichloropropane	ND		10	1.8	ug/L			06/18/24 08:48	10
4-Methyl-2-pentanone (MIBK)	ND		50	25	ug/L			06/18/24 08:48	10
Dibromomethane	ND		10	3.4	ug/L			06/18/24 08:48	10
Bromodichloromethane	ND		10	2.9	ug/L			06/18/24 08:48	10
cis-1,3-Dichloropropene	ND		10	4.2	ug/L			06/18/24 08:48	10
Toluene	ND		10	3.9	ug/L			06/18/24 08:48	10
trans-1,3-Dichloropropene	ND		10	4.1	ug/L			06/18/24 08:48	10
1,1,2-Trichloroethane	ND		10	2.4	ug/L			06/18/24 08:48	10
Tetrachloroethene	ND		10	4.1	ug/L			06/18/24 08:48	10
1,3-Dichloropropane	ND		10	3.5	ug/L			06/18/24 08:48	10
Chlorodibromomethane	ND		10	4.3	ug/L			06/18/24 08:48	10
Ethylene Dibromide	ND		10	4.0	ug/L			06/18/24 08:48	10
Chlorobenzene	ND		10	4.4	ug/L			06/18/24 08:48	10
1,1,1,2-Tetrachloroethane	ND		10	1.8	ug/L			06/18/24 08:48	10
Ethylbenzene	ND		10	5.0	ug/L			06/18/24 08:48	10
m-Xylene & p-Xylene	ND		20	5.3	ug/L			06/18/24 08:48	10
o-Xylene	ND		10	3.9	ug/L			06/18/24 08:48	10
Styrene	ND		10	5.3	ug/L			06/18/24 08:48	10
Bromoform	ND		10	5.1	ug/L			06/18/24 08:48	10
Isopropylbenzene	ND		10	4.4	ug/L			06/18/24 08:48	10
Bromobenzene	ND		10	4.3	ug/L			06/18/24 08:48	10
1,1,2,2-Tetrachloroethane	ND		10	5.2	ug/L			06/18/24 08:48	10
1,2,3-Trichloropropane	ND		10	4.1	ug/L			06/18/24 08:48	10
N-Propylbenzene	ND		10	5.0	ug/L			06/18/24 08:48	10
2-Chlorotoluene	ND		10	5.1	ug/L			06/18/24 08:48	10

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: MWA-58d-061224

Lab Sample ID: 580-141081-17

Date Collected: 06/12/24 12:08

Matrix: Water

Date Received: 06/13/24 12:20

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			06/18/24 08:48	10
tert-Butylbenzene	ND		20	5.8	ug/L			06/18/24 08:48	10
1,2,4-Trimethylbenzene	ND		30	6.1	ug/L			06/18/24 08:48	10
sec-Butylbenzene	ND		10	4.9	ug/L			06/18/24 08:48	10
4-Isopropyltoluene	ND		10	2.8	ug/L			06/18/24 08:48	10
1,3-Dichlorobenzene	ND		10	4.8	ug/L			06/18/24 08:48	10
1,4-Dichlorobenzene	ND		10	4.6	ug/L			06/18/24 08:48	10
n-Butylbenzene	ND		10	4.4	ug/L			06/18/24 08:48	10
1,2-Dichlorobenzene	ND		10	4.6	ug/L			06/18/24 08:48	10
1,2-Dibromo-3-Chloropropane	ND		30	5.7	ug/L			06/18/24 08:48	10
1,2,4-Trichlorobenzene	ND		10	3.3	ug/L			06/18/24 08:48	10
Hexachlorobutadiene	ND		30	7.9	ug/L			06/18/24 08:48	10
Naphthalene	ND		30	9.3	ug/L			06/18/24 08:48	10
1,2,3-Trichlorobenzene	ND		20	4.3	ug/L			06/18/24 08:48	10
1,3,5-Trimethylbenzene	ND		10	5.5	ug/L			06/18/24 08:48	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		80 - 120		06/18/24 08:48	10
1,2-Dichloroethane-d4 (Surr)	93		80 - 120		06/18/24 08:48	10
4-Bromofluorobenzene (Surr)	99		80 - 120		06/18/24 08:48	10
Dibromofluoromethane (Surr)	100		80 - 120		06/18/24 08:48	10

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	47000		4000	2000	ug/L			06/17/24 16:43	1000

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	19000		1500	430	mg/L			06/19/24 23:47	1000

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: MWA-56d-061224

Lab Sample ID: 580-141081-18

Date Collected: 06/12/24 12:54

Matrix: Water

Date Received: 06/13/24 12:20

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			06/18/24 09:11	10
Chloromethane	ND		10	2.8	ug/L			06/18/24 09:11	10
Vinyl chloride	ND		10	2.2	ug/L			06/18/24 09:11	10
Bromomethane	ND		10	2.1	ug/L			06/18/24 09:11	10
Chloroethane	ND		10	3.5	ug/L			06/18/24 09:11	10
Trichlorofluoromethane	ND		10	3.6	ug/L			06/18/24 09:11	10
Carbon disulfide	ND		10	5.3	ug/L			06/18/24 09:11	10
1,1-Dichloroethene	ND		10	2.8	ug/L			06/18/24 09:11	10
Acetone	ND		150	32	ug/L			06/18/24 09:11	10
Methylene Chloride	ND		50	14	ug/L			06/18/24 09:11	10
Methyl tert-butyl ether	ND		10	4.4	ug/L			06/18/24 09:11	10
trans-1,2-Dichloroethene	ND		10	3.9	ug/L			06/18/24 09:11	10
1,1-Dichloroethane	ND		10	2.2	ug/L			06/18/24 09:11	10
2-Butanone (MEK)	ND		150	47	ug/L			06/18/24 09:11	10
2,2-Dichloropropane	ND		10	3.2	ug/L			06/18/24 09:11	10
cis-1,2-Dichloroethene	ND		10	3.5	ug/L			06/18/24 09:11	10
Chlorobromomethane	ND		10	2.9	ug/L			06/18/24 09:11	10
Chloroform	150		10	2.6	ug/L			06/18/24 09:11	10
1,1,1-Trichloroethane	ND		10	3.9	ug/L			06/18/24 09:11	10
Carbon tetrachloride	ND		10	3.0	ug/L			06/18/24 09:11	10
1,1-Dichloropropene	ND		10	2.9	ug/L			06/18/24 09:11	10
Benzene	ND		10	2.4	ug/L			06/18/24 09:11	10
1,2-Dichloroethane	ND		10	4.2	ug/L			06/18/24 09:11	10
Trichloroethene	ND		10	2.6	ug/L			06/18/24 09:11	10
1,2-Dichloropropane	ND		10	1.8	ug/L			06/18/24 09:11	10
4-Methyl-2-pentanone (MIBK)	ND		50	25	ug/L			06/18/24 09:11	10
Dibromomethane	ND		10	3.4	ug/L			06/18/24 09:11	10
Bromodichloromethane	ND		10	2.9	ug/L			06/18/24 09:11	10
cis-1,3-Dichloropropene	ND		10	4.2	ug/L			06/18/24 09:11	10
Toluene	ND		10	3.9	ug/L			06/18/24 09:11	10
trans-1,3-Dichloropropene	ND		10	4.1	ug/L			06/18/24 09:11	10
1,1,2-Trichloroethane	ND		10	2.4	ug/L			06/18/24 09:11	10
Tetrachloroethene	ND		10	4.1	ug/L			06/18/24 09:11	10
1,3-Dichloropropane	ND		10	3.5	ug/L			06/18/24 09:11	10
Chlorodibromomethane	ND		10	4.3	ug/L			06/18/24 09:11	10
Ethylene Dibromide	ND		10	4.0	ug/L			06/18/24 09:11	10
Chlorobenzene	ND		10	4.4	ug/L			06/18/24 09:11	10
1,1,1,2-Tetrachloroethane	ND		10	1.8	ug/L			06/18/24 09:11	10
Ethylbenzene	ND		10	5.0	ug/L			06/18/24 09:11	10
m-Xylene & p-Xylene	ND		20	5.3	ug/L			06/18/24 09:11	10
o-Xylene	ND		10	3.9	ug/L			06/18/24 09:11	10
Styrene	ND		10	5.3	ug/L			06/18/24 09:11	10
Bromoform	ND		10	5.1	ug/L			06/18/24 09:11	10
Isopropylbenzene	ND		10	4.4	ug/L			06/18/24 09:11	10
Bromobenzene	ND		10	4.3	ug/L			06/18/24 09:11	10
1,1,2,2-Tetrachloroethane	ND		10	5.2	ug/L			06/18/24 09:11	10
1,2,3-Trichloropropane	ND		10	4.1	ug/L			06/18/24 09:11	10
N-Propylbenzene	ND		10	5.0	ug/L			06/18/24 09:11	10
2-Chlorotoluene	ND		10	5.1	ug/L			06/18/24 09:11	10

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: MWA-56d-061224

Lab Sample ID: 580-141081-18

Date Collected: 06/12/24 12:54

Matrix: Water

Date Received: 06/13/24 12:20

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			06/18/24 09:11	10
tert-Butylbenzene	ND		20	5.8	ug/L			06/18/24 09:11	10
1,2,4-Trimethylbenzene	ND		30	6.1	ug/L			06/18/24 09:11	10
sec-Butylbenzene	ND		10	4.9	ug/L			06/18/24 09:11	10
4-Isopropyltoluene	ND		10	2.8	ug/L			06/18/24 09:11	10
1,3-Dichlorobenzene	ND		10	4.8	ug/L			06/18/24 09:11	10
1,4-Dichlorobenzene	ND		10	4.6	ug/L			06/18/24 09:11	10
n-Butylbenzene	ND		10	4.4	ug/L			06/18/24 09:11	10
1,2-Dichlorobenzene	ND		10	4.6	ug/L			06/18/24 09:11	10
1,2-Dibromo-3-Chloropropane	ND		30	5.7	ug/L			06/18/24 09:11	10
1,2,4-Trichlorobenzene	ND		10	3.3	ug/L			06/18/24 09:11	10
Hexachlorobutadiene	ND		30	7.9	ug/L			06/18/24 09:11	10
Naphthalene	ND		30	9.3	ug/L			06/18/24 09:11	10
1,2,3-Trichlorobenzene	ND		20	4.3	ug/L			06/18/24 09:11	10
1,3,5-Trimethylbenzene	ND		10	5.5	ug/L			06/18/24 09:11	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		06/18/24 09:11	10
1,2-Dichloroethane-d4 (Surr)	94		80 - 120		06/18/24 09:11	10
4-Bromofluorobenzene (Surr)	99		80 - 120		06/18/24 09:11	10
Dibromofluoromethane (Surr)	101		80 - 120		06/18/24 09:11	10

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	15000		4000	2000	ug/L			06/17/24 16:58	1000

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	13000		1500	430	mg/L			06/20/24 00:34	1000

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-03-061224

Lab Sample ID: 580-141081-19

Date Collected: 06/12/24 07:10

Matrix: Water

Date Received: 06/13/24 12:20

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			06/19/24 05:02	1
Chloromethane	ND		0.50	0.14	ug/L			06/19/24 05:02	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/19/24 05:02	1
Bromomethane	ND		0.50	0.13	ug/L			06/19/24 05:02	1
Chloroethane	ND		0.50	0.24	ug/L			06/19/24 05:02	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/19/24 05:02	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/19/24 05:02	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			06/19/24 05:02	1
Acetone	ND		10	3.1	ug/L			06/19/24 05:02	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/19/24 05:02	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/19/24 05:02	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/19/24 05:02	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/19/24 05:02	1
1,1-Dichloroethane	0.15	J	0.20	0.064	ug/L			06/19/24 05:02	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/19/24 05:02	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			06/19/24 05:02	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/19/24 05:02	1
Chloroform	ND		0.20	0.030	ug/L			06/19/24 05:02	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/19/24 05:02	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/19/24 05:02	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/19/24 05:02	1
Benzene	0.097	J B	0.20	0.030	ug/L			06/19/24 05:02	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/19/24 05:02	1
Trichloroethene	ND		0.20	0.066	ug/L			06/19/24 05:02	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/19/24 05:02	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/19/24 05:02	1
Dibromomethane	ND		0.20	0.062	ug/L			06/19/24 05:02	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/19/24 05:02	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/19/24 05:02	1
Toluene	0.14	J	0.20	0.050	ug/L			06/19/24 05:02	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/19/24 05:02	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/19/24 05:02	1
Tetrachloroethene	ND		0.24	0.084	ug/L			06/19/24 05:02	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/19/24 05:02	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/19/24 05:02	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/19/24 05:02	1
Chlorobenzene	ND		0.20	0.060	ug/L			06/19/24 05:02	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/19/24 05:02	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/19/24 05:02	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/19/24 05:02	1
o-Xylene	ND		0.50	0.23	ug/L			06/19/24 05:02	1
Styrene	ND		1.0	0.33	ug/L			06/19/24 05:02	1
Bromoform	ND		0.50	0.16	ug/L			06/19/24 05:02	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/19/24 05:02	1
Bromobenzene	ND		0.20	0.038	ug/L			06/19/24 05:02	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/19/24 05:02	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/19/24 05:02	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/19/24 05:02	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/19/24 05:02	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-03-061224

Lab Sample ID: 580-141081-19

Date Collected: 06/12/24 07:10

Matrix: Water

Date Received: 06/13/24 12:20

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			06/19/24 05:02	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/19/24 05:02	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/19/24 05:02	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/19/24 05:02	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/19/24 05:02	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/19/24 05:02	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 05:02	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 05:02	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/19/24 05:02	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			06/19/24 05:02	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/19/24 05:02	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/19/24 05:02	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/19/24 05:02	1
Naphthalene	ND		1.5	0.52	ug/L			06/19/24 05:02	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/19/24 05:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		06/19/24 05:02	1
Dibromofluoromethane (Surr)	108		80 - 120		06/19/24 05:02	1
4-Bromofluorobenzene (Surr)	102		80 - 120		06/19/24 05:02	1
1,2-Dichloroethane-d4 (Surr)	115		80 - 120		06/19/24 05:02	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		20	10	ug/L			06/17/24 18:27	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	3.7		1.5	0.43	mg/L			06/20/24 00:46	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: DUP-01-061224

Lab Sample ID: 580-141081-20

Date Collected: 06/12/24 07:11

Matrix: Water

Date Received: 06/13/24 12:20

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			06/19/24 05:25	1
Chloromethane	ND		0.50	0.14	ug/L			06/19/24 05:25	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/19/24 05:25	1
Bromomethane	ND		0.50	0.13	ug/L			06/19/24 05:25	1
Chloroethane	ND		0.50	0.24	ug/L			06/19/24 05:25	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/19/24 05:25	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/19/24 05:25	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			06/19/24 05:25	1
Acetone	ND		10	3.1	ug/L			06/19/24 05:25	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/19/24 05:25	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/19/24 05:25	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/19/24 05:25	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/19/24 05:25	1
1,1-Dichloroethane	0.18	J	0.20	0.064	ug/L			06/19/24 05:25	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/19/24 05:25	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			06/19/24 05:25	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/19/24 05:25	1
Chloroform	ND		0.20	0.030	ug/L			06/19/24 05:25	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/19/24 05:25	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/19/24 05:25	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/19/24 05:25	1
Benzene	0.096	J B	0.20	0.030	ug/L			06/19/24 05:25	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/19/24 05:25	1
Trichloroethene	ND		0.20	0.066	ug/L			06/19/24 05:25	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/19/24 05:25	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/19/24 05:25	1
Dibromomethane	ND		0.20	0.062	ug/L			06/19/24 05:25	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/19/24 05:25	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/19/24 05:25	1
Toluene	0.15	J	0.20	0.050	ug/L			06/19/24 05:25	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/19/24 05:25	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/19/24 05:25	1
Tetrachloroethene	ND		0.24	0.084	ug/L			06/19/24 05:25	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/19/24 05:25	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/19/24 05:25	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/19/24 05:25	1
Chlorobenzene	ND		0.20	0.060	ug/L			06/19/24 05:25	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/19/24 05:25	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/19/24 05:25	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/19/24 05:25	1
o-Xylene	ND		0.50	0.23	ug/L			06/19/24 05:25	1
Styrene	ND		1.0	0.33	ug/L			06/19/24 05:25	1
Bromoform	ND		0.50	0.16	ug/L			06/19/24 05:25	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/19/24 05:25	1
Bromobenzene	ND		0.20	0.038	ug/L			06/19/24 05:25	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/19/24 05:25	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/19/24 05:25	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/19/24 05:25	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/19/24 05:25	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: DUP-01-061224

Lab Sample ID: 580-141081-20

Date Collected: 06/12/24 07:11

Matrix: Water

Date Received: 06/13/24 12:20

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			06/19/24 05:25	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/19/24 05:25	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/19/24 05:25	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/19/24 05:25	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/19/24 05:25	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/19/24 05:25	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 05:25	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 05:25	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/19/24 05:25	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			06/19/24 05:25	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/19/24 05:25	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/19/24 05:25	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/19/24 05:25	1
Naphthalene	ND		1.5	0.52	ug/L			06/19/24 05:25	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/19/24 05:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		06/19/24 05:25	1
Dibromofluoromethane (Surr)	107		80 - 120		06/19/24 05:25	1
4-Bromofluorobenzene (Surr)	103		80 - 120		06/19/24 05:25	1
1,2-Dichloroethane-d4 (Surr)	113		80 - 120		06/19/24 05:25	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		8.0	4.0	ug/L			06/17/24 18:09	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	3.8		1.5	0.43	mg/L			06/20/24 03:33	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-17iR-061224

Lab Sample ID: 580-141081-21

Date Collected: 06/12/24 09:11

Matrix: Water

Date Received: 06/13/24 12:20

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			06/19/24 05:48	1
Chloromethane	ND		0.50	0.14	ug/L			06/19/24 05:48	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/19/24 05:48	1
Bromomethane	ND		0.50	0.13	ug/L			06/19/24 05:48	1
Chloroethane	ND		0.50	0.24	ug/L			06/19/24 05:48	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/19/24 05:48	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/19/24 05:48	1
1,1-Dichloroethene	0.16	J	0.20	0.035	ug/L			06/19/24 05:48	1
Acetone	ND		10	3.1	ug/L			06/19/24 05:48	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/19/24 05:48	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/19/24 05:48	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/19/24 05:48	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/19/24 05:48	1
1,1-Dichloroethane	0.11	J	0.20	0.064	ug/L			06/19/24 05:48	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/19/24 05:48	1
cis-1,2-Dichloroethene	0.092	J	0.20	0.055	ug/L			06/19/24 05:48	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/19/24 05:48	1
Chloroform	ND		0.20	0.030	ug/L			06/19/24 05:48	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/19/24 05:48	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/19/24 05:48	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/19/24 05:48	1
Benzene	0.12	J B	0.20	0.030	ug/L			06/19/24 05:48	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/19/24 05:48	1
Trichloroethene	ND		0.20	0.066	ug/L			06/19/24 05:48	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/19/24 05:48	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/19/24 05:48	1
Dibromomethane	ND		0.20	0.062	ug/L			06/19/24 05:48	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/19/24 05:48	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/19/24 05:48	1
Toluene	0.16	J	0.20	0.050	ug/L			06/19/24 05:48	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/19/24 05:48	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/19/24 05:48	1
Tetrachloroethene	ND		0.24	0.084	ug/L			06/19/24 05:48	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/19/24 05:48	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/19/24 05:48	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/19/24 05:48	1
Chlorobenzene	0.16	J	0.20	0.060	ug/L			06/19/24 05:48	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/19/24 05:48	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/19/24 05:48	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/19/24 05:48	1
o-Xylene	ND		0.50	0.23	ug/L			06/19/24 05:48	1
Styrene	ND		1.0	0.33	ug/L			06/19/24 05:48	1
Bromoform	ND		0.50	0.16	ug/L			06/19/24 05:48	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/19/24 05:48	1
Bromobenzene	ND		0.20	0.038	ug/L			06/19/24 05:48	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/19/24 05:48	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/19/24 05:48	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/19/24 05:48	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/19/24 05:48	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-17iR-061224

Lab Sample ID: 580-141081-21

Date Collected: 06/12/24 09:11

Matrix: Water

Date Received: 06/13/24 12:20

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			06/19/24 05:48	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/19/24 05:48	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/19/24 05:48	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/19/24 05:48	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/19/24 05:48	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/19/24 05:48	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 05:48	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 05:48	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/19/24 05:48	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			06/19/24 05:48	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/19/24 05:48	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/19/24 05:48	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/19/24 05:48	1
Naphthalene	ND		1.5	0.52	ug/L			06/19/24 05:48	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/19/24 05:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120		06/19/24 05:48	1
Dibromofluoromethane (Surr)	108		80 - 120		06/19/24 05:48	1
4-Bromofluorobenzene (Surr)	103		80 - 120		06/19/24 05:48	1
1,2-Dichloroethane-d4 (Surr)	117		80 - 120		06/19/24 05:48	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		20	10	ug/L			06/17/24 18:44	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	35		1.5	0.43	mg/L			06/20/24 03:45	1

Client Sample Results

Client: ERM-West

Job ID: 580-141081-1

Project/Site: Arkema - Q2 2024 Groundwater Event

Client Sample ID: PA-27d-061224

Lab Sample ID: 580-141081-22

Date Collected: 06/12/24 10:28

Matrix: Water

Date Received: 06/13/24 12:20

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			06/19/24 06:12	1
Chloromethane	ND		1.0	0.28	ug/L			06/19/24 06:12	1
Vinyl chloride	ND		1.0	0.22	ug/L			06/19/24 06:12	1
Bromomethane	ND		1.0	0.21	ug/L			06/19/24 06:12	1
Chloroethane	ND		1.0	0.35	ug/L			06/19/24 06:12	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			06/19/24 06:12	1
Carbon disulfide	ND		1.0	0.53	ug/L			06/19/24 06:12	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			06/19/24 06:12	1
Acetone	ND		15	3.2	ug/L			06/19/24 06:12	1
Methylene Chloride	ND		5.0	1.4	ug/L			06/19/24 06:12	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			06/19/24 06:12	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			06/19/24 06:12	1
1,1-Dichloroethane	0.32	J	1.0	0.22	ug/L			06/19/24 06:12	1
2-Butanone (MEK)	ND		15	4.7	ug/L			06/19/24 06:12	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			06/19/24 06:12	1
cis-1,2-Dichloroethene	0.68	J	1.0	0.35	ug/L			06/19/24 06:12	1
Chlorobromomethane	ND		1.0	0.29	ug/L			06/19/24 06:12	1
Chloroform	ND		1.0	0.26	ug/L			06/19/24 06:12	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			06/19/24 06:12	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			06/19/24 06:12	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			06/19/24 06:12	1
Benzene	ND		1.0	0.24	ug/L			06/19/24 06:12	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			06/19/24 06:12	1
Trichloroethene	ND		1.0	0.26	ug/L			06/19/24 06:12	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/19/24 06:12	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/19/24 06:12	1
Dibromomethane	ND		1.0	0.34	ug/L			06/19/24 06:12	1
Bromodichloromethane	ND		1.0	0.29	ug/L			06/19/24 06:12	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			06/19/24 06:12	1
Toluene	1.1		1.0	0.39	ug/L			06/19/24 06:12	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			06/19/24 06:12	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			06/19/24 06:12	1
Tetrachloroethene	ND		1.0	0.41	ug/L			06/19/24 06:12	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			06/19/24 06:12	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			06/19/24 06:12	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			06/19/24 06:12	1
Chlorobenzene	ND		1.0	0.44	ug/L			06/19/24 06:12	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			06/19/24 06:12	1
Ethylbenzene	ND		1.0	0.50	ug/L			06/19/24 06:12	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			06/19/24 06:12	1
o-Xylene	ND		1.0	0.39	ug/L			06/19/24 06:12	1
Styrene	ND		1.0	0.53	ug/L			06/19/24 06:12	1
Bromoform	ND		1.0	0.51	ug/L			06/19/24 06:12	1
Isopropylbenzene	ND		1.0	0.44	ug/L			06/19/24 06:12	1
Bromobenzene	ND		1.0	0.43	ug/L			06/19/24 06:12	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			06/19/24 06:12	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			06/19/24 06:12	1
N-Propylbenzene	ND		1.0	0.50	ug/L			06/19/24 06:12	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			06/19/24 06:12	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-27d-061224

Lab Sample ID: 580-141081-22

Date Collected: 06/12/24 10:28

Matrix: Water

Date Received: 06/13/24 12:20

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			06/19/24 06:12	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			06/19/24 06:12	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			06/19/24 06:12	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			06/19/24 06:12	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			06/19/24 06:12	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			06/19/24 06:12	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			06/19/24 06:12	1
n-Butylbenzene	ND		1.0	0.44	ug/L			06/19/24 06:12	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			06/19/24 06:12	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			06/19/24 06:12	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			06/19/24 06:12	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			06/19/24 06:12	1
Naphthalene	ND		3.0	0.93	ug/L			06/19/24 06:12	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			06/19/24 06:12	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			06/19/24 06:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		06/19/24 06:12	1
1,2-Dichloroethane-d4 (Surr)	116		80 - 120		06/19/24 06:12	1
4-Bromofluorobenzene (Surr)	103		80 - 120		06/19/24 06:12	1
Dibromofluoromethane (Surr)	108		80 - 120		06/19/24 06:12	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		20	10	ug/L			06/17/24 19:02	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	540		150	43	mg/L			06/20/24 04:09	100

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-04-061224

Lab Sample ID: 580-141081-23

Date Collected: 06/12/24 12:15

Matrix: Water

Date Received: 06/13/24 12:20

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			06/19/24 06:35	1
Chloromethane	ND		0.50	0.14	ug/L			06/19/24 06:35	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/19/24 06:35	1
Bromomethane	ND		0.50	0.13	ug/L			06/19/24 06:35	1
Chloroethane	ND		0.50	0.24	ug/L			06/19/24 06:35	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/19/24 06:35	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/19/24 06:35	1
1,1-Dichloroethene	0.17	J	0.20	0.035	ug/L			06/19/24 06:35	1
Acetone	ND		10	3.1	ug/L			06/19/24 06:35	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/19/24 06:35	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/19/24 06:35	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/19/24 06:35	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/19/24 06:35	1
1,1-Dichloroethane	0.15	J	0.20	0.064	ug/L			06/19/24 06:35	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/19/24 06:35	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			06/19/24 06:35	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/19/24 06:35	1
Chloroform	0.047	J	0.20	0.030	ug/L			06/19/24 06:35	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/19/24 06:35	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/19/24 06:35	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/19/24 06:35	1
Benzene	0.063	J B	0.20	0.030	ug/L			06/19/24 06:35	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/19/24 06:35	1
Trichloroethene	0.095	J	0.20	0.066	ug/L			06/19/24 06:35	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/19/24 06:35	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/19/24 06:35	1
Dibromomethane	ND		0.20	0.062	ug/L			06/19/24 06:35	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/19/24 06:35	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/19/24 06:35	1
Toluene	ND		0.20	0.050	ug/L			06/19/24 06:35	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/19/24 06:35	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/19/24 06:35	1
Tetrachloroethene	0.15	J	0.24	0.084	ug/L			06/19/24 06:35	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/19/24 06:35	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/19/24 06:35	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/19/24 06:35	1
Chlorobenzene	ND		0.20	0.060	ug/L			06/19/24 06:35	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/19/24 06:35	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/19/24 06:35	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/19/24 06:35	1
o-Xylene	ND		0.50	0.23	ug/L			06/19/24 06:35	1
Styrene	ND		1.0	0.33	ug/L			06/19/24 06:35	1
Bromoform	ND		0.50	0.16	ug/L			06/19/24 06:35	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/19/24 06:35	1
Bromobenzene	ND		0.20	0.038	ug/L			06/19/24 06:35	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/19/24 06:35	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/19/24 06:35	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/19/24 06:35	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/19/24 06:35	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-04-061224

Lab Sample ID: 580-141081-23

Date Collected: 06/12/24 12:15

Matrix: Water

Date Received: 06/13/24 12:20

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			06/19/24 06:35	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/19/24 06:35	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/19/24 06:35	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/19/24 06:35	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/19/24 06:35	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/19/24 06:35	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 06:35	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 06:35	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/19/24 06:35	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			06/19/24 06:35	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/19/24 06:35	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/19/24 06:35	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/19/24 06:35	1
Naphthalene	ND		1.5	0.52	ug/L			06/19/24 06:35	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/19/24 06:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		06/19/24 06:35	1
Dibromofluoromethane (Surr)	109		80 - 120		06/19/24 06:35	1
4-Bromofluorobenzene (Surr)	102		80 - 120		06/19/24 06:35	1
1,2-Dichloroethane-d4 (Surr)	117		80 - 120		06/19/24 06:35	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		4.0	2.0	ug/L			06/17/24 17:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	5.7		1.5	0.43	mg/L			06/20/24 04:21	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-10i-061224

Lab Sample ID: 580-141081-24

Date Collected: 06/12/24 12:55

Matrix: Water

Date Received: 06/13/24 12:20

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			06/19/24 06:58	1
Chloromethane	ND		0.50	0.14	ug/L			06/19/24 06:58	1
Vinyl chloride	0.16		0.10	0.040	ug/L			06/19/24 06:58	1
Bromomethane	ND		0.50	0.13	ug/L			06/19/24 06:58	1
Chloroethane	ND		0.50	0.24	ug/L			06/19/24 06:58	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/19/24 06:58	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/19/24 06:58	1
1,1-Dichloroethene	0.080	J	0.20	0.035	ug/L			06/19/24 06:58	1
Acetone	ND		10	3.1	ug/L			06/19/24 06:58	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/19/24 06:58	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/19/24 06:58	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/19/24 06:58	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/19/24 06:58	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			06/19/24 06:58	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/19/24 06:58	1
cis-1,2-Dichloroethene	0.12	J	0.20	0.055	ug/L			06/19/24 06:58	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/19/24 06:58	1
Chloroform	ND		0.20	0.030	ug/L			06/19/24 06:58	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/19/24 06:58	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/19/24 06:58	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/19/24 06:58	1
Benzene	0.070	J B	0.20	0.030	ug/L			06/19/24 06:58	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/19/24 06:58	1
Trichloroethene	ND		0.20	0.066	ug/L			06/19/24 06:58	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/19/24 06:58	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/19/24 06:58	1
Dibromomethane	ND		0.20	0.062	ug/L			06/19/24 06:58	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/19/24 06:58	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/19/24 06:58	1
Toluene	ND		0.20	0.050	ug/L			06/19/24 06:58	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/19/24 06:58	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/19/24 06:58	1
Tetrachloroethene	ND		0.24	0.084	ug/L			06/19/24 06:58	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/19/24 06:58	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/19/24 06:58	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/19/24 06:58	1
Chlorobenzene	0.71		0.20	0.060	ug/L			06/19/24 06:58	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/19/24 06:58	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/19/24 06:58	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/19/24 06:58	1
o-Xylene	ND		0.50	0.23	ug/L			06/19/24 06:58	1
Styrene	ND		1.0	0.33	ug/L			06/19/24 06:58	1
Bromoform	ND		0.50	0.16	ug/L			06/19/24 06:58	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/19/24 06:58	1
Bromobenzene	ND		0.20	0.038	ug/L			06/19/24 06:58	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/19/24 06:58	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/19/24 06:58	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/19/24 06:58	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/19/24 06:58	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-10i-061224

Lab Sample ID: 580-141081-24

Date Collected: 06/12/24 12:55

Matrix: Water

Date Received: 06/13/24 12:20

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			06/19/24 06:58	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/19/24 06:58	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/19/24 06:58	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/19/24 06:58	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/19/24 06:58	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/19/24 06:58	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 06:58	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 06:58	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/19/24 06:58	1
1,2-Dichlorobenzene	0.20	J	0.30	0.038	ug/L			06/19/24 06:58	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/19/24 06:58	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/19/24 06:58	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/19/24 06:58	1
Naphthalene	ND		1.5	0.52	ug/L			06/19/24 06:58	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/19/24 06:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		06/19/24 06:58	1
Dibromofluoromethane (Surr)	109		80 - 120		06/19/24 06:58	1
4-Bromofluorobenzene (Surr)	103		80 - 120		06/19/24 06:58	1
1,2-Dichloroethane-d4 (Surr)	115		80 - 120		06/19/24 06:58	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		20	10	ug/L			06/20/24 18:19	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	44		1.5	0.43	mg/L			06/20/24 04:33	1

Client Sample Results

Client: ERM-West

Job ID: 580-141081-1

Project/Site: Arkema - Q2 2024 Groundwater Event

Client Sample ID: PA-18d-061224

Lab Sample ID: 580-141081-25

Date Collected: 06/12/24 13:48

Matrix: Water

Date Received: 06/13/24 12:20

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			06/19/24 07:21	1
Chloromethane	ND		1.0	0.28	ug/L			06/19/24 07:21	1
Vinyl chloride	ND		1.0	0.22	ug/L			06/19/24 07:21	1
Bromomethane	ND		1.0	0.21	ug/L			06/19/24 07:21	1
Chloroethane	ND		1.0	0.35	ug/L			06/19/24 07:21	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			06/19/24 07:21	1
Carbon disulfide	ND		1.0	0.53	ug/L			06/19/24 07:21	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			06/19/24 07:21	1
Acetone	ND		15	3.2	ug/L			06/19/24 07:21	1
Methylene Chloride	ND		5.0	1.4	ug/L			06/19/24 07:21	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			06/19/24 07:21	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			06/19/24 07:21	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/19/24 07:21	1
2-Butanone (MEK)	ND		15	4.7	ug/L			06/19/24 07:21	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			06/19/24 07:21	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			06/19/24 07:21	1
Chlorobromomethane	ND		1.0	0.29	ug/L			06/19/24 07:21	1
Chloroform	ND		1.0	0.26	ug/L			06/19/24 07:21	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			06/19/24 07:21	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			06/19/24 07:21	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			06/19/24 07:21	1
Benzene	ND		1.0	0.24	ug/L			06/19/24 07:21	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			06/19/24 07:21	1
Trichloroethene	ND		1.0	0.26	ug/L			06/19/24 07:21	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/19/24 07:21	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/19/24 07:21	1
Dibromomethane	ND		1.0	0.34	ug/L			06/19/24 07:21	1
Bromodichloromethane	ND		1.0	0.29	ug/L			06/19/24 07:21	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			06/19/24 07:21	1
Toluene	ND		1.0	0.39	ug/L			06/19/24 07:21	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			06/19/24 07:21	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			06/19/24 07:21	1
Tetrachloroethene	ND		1.0	0.41	ug/L			06/19/24 07:21	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			06/19/24 07:21	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			06/19/24 07:21	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			06/19/24 07:21	1
Chlorobenzene	ND		1.0	0.44	ug/L			06/19/24 07:21	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			06/19/24 07:21	1
Ethylbenzene	ND		1.0	0.50	ug/L			06/19/24 07:21	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			06/19/24 07:21	1
o-Xylene	ND		1.0	0.39	ug/L			06/19/24 07:21	1
Styrene	ND		1.0	0.53	ug/L			06/19/24 07:21	1
Bromoform	ND		1.0	0.51	ug/L			06/19/24 07:21	1
Isopropylbenzene	ND		1.0	0.44	ug/L			06/19/24 07:21	1
Bromobenzene	ND		1.0	0.43	ug/L			06/19/24 07:21	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			06/19/24 07:21	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			06/19/24 07:21	1
N-Propylbenzene	ND		1.0	0.50	ug/L			06/19/24 07:21	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			06/19/24 07:21	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-18d-061224

Lab Sample ID: 580-141081-25

Date Collected: 06/12/24 13:48

Matrix: Water

Date Received: 06/13/24 12:20

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			06/19/24 07:21	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			06/19/24 07:21	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			06/19/24 07:21	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			06/19/24 07:21	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			06/19/24 07:21	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			06/19/24 07:21	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			06/19/24 07:21	1
n-Butylbenzene	ND		1.0	0.44	ug/L			06/19/24 07:21	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			06/19/24 07:21	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			06/19/24 07:21	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			06/19/24 07:21	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			06/19/24 07:21	1
Naphthalene	ND		3.0	0.93	ug/L			06/19/24 07:21	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			06/19/24 07:21	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			06/19/24 07:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		06/19/24 07:21	1
1,2-Dichloroethane-d4 (Surr)	116		80 - 120		06/19/24 07:21	1
4-Bromofluorobenzene (Surr)	102		80 - 120		06/19/24 07:21	1
Dibromofluoromethane (Surr)	108		80 - 120		06/19/24 07:21	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		20	10	ug/L			06/20/24 18:37	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	85		1.5	0.43	mg/L			06/20/24 04:45	1

QC Sample Results

Client: ERM-West

Job ID: 580-141081-1

Project/Site: Arkema - Q2 2024 Groundwater Event

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

Lab Sample ID: MB 580-462298/7

Matrix: Water

Analysis Batch: 462298

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			06/14/24 16:05	1
Chloromethane	ND		0.50	0.14	ug/L			06/14/24 16:05	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/14/24 16:05	1
Bromomethane	ND		0.50	0.13	ug/L			06/14/24 16:05	1
Chloroethane	ND		0.50	0.24	ug/L			06/14/24 16:05	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/14/24 16:05	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/14/24 16:05	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			06/14/24 16:05	1
Acetone	ND		10	3.1	ug/L			06/14/24 16:05	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/14/24 16:05	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/14/24 16:05	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/14/24 16:05	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/14/24 16:05	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			06/14/24 16:05	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/14/24 16:05	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			06/14/24 16:05	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/14/24 16:05	1
Chloroform	ND		0.20	0.030	ug/L			06/14/24 16:05	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/14/24 16:05	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/14/24 16:05	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/14/24 16:05	1
Benzene	0.0309	J	0.20	0.030	ug/L			06/14/24 16:05	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/14/24 16:05	1
Trichloroethene	ND		0.20	0.066	ug/L			06/14/24 16:05	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/14/24 16:05	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/14/24 16:05	1
Dibromomethane	ND		0.20	0.062	ug/L			06/14/24 16:05	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/14/24 16:05	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/14/24 16:05	1
Toluene	ND		0.20	0.050	ug/L			06/14/24 16:05	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/14/24 16:05	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/14/24 16:05	1
Tetrachloroethene	ND		0.24	0.084	ug/L			06/14/24 16:05	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/14/24 16:05	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/14/24 16:05	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/14/24 16:05	1
Chlorobenzene	ND		0.20	0.060	ug/L			06/14/24 16:05	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/14/24 16:05	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/14/24 16:05	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/14/24 16:05	1
o-Xylene	ND		0.50	0.23	ug/L			06/14/24 16:05	1
Styrene	ND		1.0	0.33	ug/L			06/14/24 16:05	1
Bromoform	ND		0.50	0.16	ug/L			06/14/24 16:05	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/14/24 16:05	1
Bromobenzene	ND		0.20	0.038	ug/L			06/14/24 16:05	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/14/24 16:05	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/14/24 16:05	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/14/24 16:05	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

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

Lab Sample ID: MB 580-462298/7

Matrix: Water

Analysis Batch: 462298

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			06/14/24 16:05	1
4-Chlorotoluene	ND		0.30	0.12	ug/L			06/14/24 16:05	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/14/24 16:05	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/14/24 16:05	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/14/24 16:05	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/14/24 16:05	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/14/24 16:05	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/14/24 16:05	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/14/24 16:05	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/14/24 16:05	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			06/14/24 16:05	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/14/24 16:05	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/14/24 16:05	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/14/24 16:05	1
Naphthalene	ND		1.5	0.52	ug/L			06/14/24 16:05	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/14/24 16:05	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 120		06/14/24 16:05	1
Dibromofluoromethane (Surr)	102		80 - 120		06/14/24 16:05	1
4-Bromofluorobenzene (Surr)	95		80 - 120		06/14/24 16:05	1
1,2-Dichloroethane-d4 (Surr)	104		80 - 120		06/14/24 16:05	1

Lab Sample ID: LCS 580-462298/4

Matrix: Water

Analysis Batch: 462298

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	3.81		ug/L		76	20 - 150
Chloromethane	5.00	3.86		ug/L		77	32 - 150
Vinyl chloride	5.00	4.82		ug/L		96	41 - 150
Bromomethane	5.00	6.01		ug/L		120	51 - 148
Chloroethane	5.00	5.42		ug/L		108	54 - 140
Carbon disulfide	5.00	5.43		ug/L		109	54 - 142
Trichlorofluoromethane	5.00	4.90		ug/L		98	60 - 132
1,1-Dichloroethene	5.00	5.12		ug/L		102	60 - 129
Acetone	25.0	29.2		ug/L		117	49 - 150
Methylene Chloride	5.00	5.76		ug/L		115	40 - 142
Methyl tert-butyl ether	5.00	5.69		ug/L		114	61 - 131
2-Butanone (MEK)	25.0	29.1		ug/L		116	37 - 150
trans-1,2-Dichloroethene	5.00	5.43		ug/L		109	69 - 121
1,1-Dichloroethane	5.00	5.56		ug/L		111	74 - 120
2,2-Dichloropropane	5.00	5.37		ug/L		107	55 - 140
cis-1,2-Dichloroethene	5.00	5.50		ug/L		110	72 - 120
Chlorobromomethane	5.00	5.46		ug/L		109	79 - 121
Chloroform	5.00	5.44		ug/L		109	75 - 120
1,1,1-Trichloroethane	5.00	5.27		ug/L		105	70 - 121
Carbon tetrachloride	5.00	5.41		ug/L		108	66 - 130

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

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

Lab Sample ID: LCS 580-462298/4

Matrix: Water

Analysis Batch: 462298

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	5.42		ug/L		108	72 - 125
Benzene	5.00	5.03		ug/L		101	80 - 120
1,2-Dichloroethane	5.00	5.60		ug/L		112	74 - 127
Trichloroethene	5.00	5.13		ug/L		103	72 - 120
1,2-Dichloropropane	5.00	5.53		ug/L		111	69 - 130
4-Methyl-2-pentanone (MIBK)	25.0	27.6		ug/L		110	63 - 137
Dibromomethane	5.00	5.70		ug/L		114	65 - 141
Dichlorobromomethane	5.00	5.37		ug/L		107	74 - 131
cis-1,3-Dichloropropene	5.00	4.75		ug/L		95	77 - 131
Toluene	5.00	4.95		ug/L		99	80 - 126
trans-1,3-Dichloropropene	5.00	5.49		ug/L		110	71 - 138
1,1,2-Trichloroethane	5.00	5.44		ug/L		109	73 - 127
Tetrachloroethene	5.00	4.90		ug/L		98	75 - 124
1,3-Dichloropropane	5.00	5.32		ug/L		106	69 - 138
Chlorodibromomethane	5.00	5.31		ug/L		106	62 - 141
Ethylene Dibromide	5.00	5.43		ug/L		109	61 - 143
Chlorobenzene	5.00	5.22		ug/L		104	74 - 123
1,1,1,2-Tetrachloroethane	5.00	5.42		ug/L		108	69 - 127
Ethylbenzene	5.00	5.34		ug/L		107	80 - 124
m-Xylene & p-Xylene	5.00	5.39		ug/L		108	75 - 124
o-Xylene	5.00	5.57		ug/L		111	71 - 124
Styrene	5.00	5.40		ug/L		108	74 - 127
Bromoform	5.00	5.49		ug/L		110	48 - 127
Isopropylbenzene	5.00	5.56		ug/L		111	71 - 123
Bromobenzene	5.00	5.25		ug/L		105	74 - 130
1,1,2,2-Tetrachloroethane	5.00	5.88		ug/L		118	67 - 136
1,2,3-Trichloropropane	5.00	5.90		ug/L		118	67 - 135
N-Propylbenzene	5.00	5.50		ug/L		110	72 - 126
2-Chlorotoluene	5.00	5.42		ug/L		108	73 - 120
4-Chlorotoluene	5.00	5.72		ug/L		114	75 - 124
1,3,5-Trimethylbenzene	5.00	5.50		ug/L		110	75 - 123
tert-Butylbenzene	5.00	4.92		ug/L		98	70 - 129
1,2,4-Trimethylbenzene	5.00	5.13		ug/L		103	71 - 127
sec-Butylbenzene	5.00	4.87		ug/L		97	75 - 126
4-Isopropyltoluene	5.00	4.97		ug/L		99	78 - 125
1,3-Dichlorobenzene	5.00	5.18		ug/L		104	72 - 125
1,4-Dichlorobenzene	5.00	5.32		ug/L		106	71 - 129
n-Butylbenzene	5.00	5.11		ug/L		102	69 - 127
1,2-Dichlorobenzene	5.00	5.50		ug/L		110	72 - 129
1,2-Dibromo-3-Chloropropane	5.00	5.94		ug/L		119	55 - 135
1,2,4-Trichlorobenzene	5.00	5.54		ug/L		111	60 - 130
Hexachlorobutadiene	5.00	5.15		ug/L		103	63 - 130
Naphthalene	5.00	5.63		ug/L		113	54 - 137
1,2,3-Trichlorobenzene	5.00	5.76		ug/L		115	60 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

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

Lab Sample ID: LCS 580-462298/4

Matrix: Water

Analysis Batch: 462298

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	105		80 - 120
1,2-Dichloroethane-d4 (Surr)	104		80 - 120

Lab Sample ID: LCSD 580-462298/5

Matrix: Water

Analysis Batch: 462298

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	3.57		ug/L		71	20 - 150	7	30
Chloromethane	5.00	3.71		ug/L		74	32 - 150	4	33
Vinyl chloride	5.00	4.24		ug/L		85	41 - 150	13	32
Bromomethane	5.00	5.13		ug/L		103	51 - 148	16	35
Chloroethane	5.00	4.54		ug/L		91	54 - 140	18	33
Carbon disulfide	5.00	5.44		ug/L		109	54 - 142	0	34
Trichlorofluoromethane	5.00	4.54		ug/L		91	60 - 132	8	32
1,1-Dichloroethene	5.00	5.17		ug/L		103	60 - 129	1	29
Acetone	25.0	34.2		ug/L		137	49 - 150	16	24
Methylene Chloride	5.00	6.04		ug/L		121	40 - 142	5	25
Methyl tert-butyl ether	5.00	5.91		ug/L		118	61 - 131	4	27
2-Butanone (MEK)	25.0	35.0		ug/L		140	37 - 150	19	35
trans-1,2-Dichloroethene	5.00	5.37		ug/L		107	69 - 121	1	27
1,1-Dichloroethane	5.00	5.58		ug/L		112	74 - 120	0	26
2,2-Dichloropropane	5.00	5.34		ug/L		107	55 - 140	1	31
cis-1,2-Dichloroethene	5.00	5.37		ug/L		107	72 - 120	2	22
Chlorobromomethane	5.00	5.49		ug/L		110	79 - 121	1	20
Chloroform	5.00	5.41		ug/L		108	75 - 120	0	21
1,1,1-Trichloroethane	5.00	5.06		ug/L		101	70 - 121	4	24
Carbon tetrachloride	5.00	5.00		ug/L		100	66 - 130	8	24
1,1-Dichloropropene	5.00	5.26		ug/L		105	72 - 125	3	23
Benzene	5.00	5.21		ug/L		104	80 - 120	3	22
1,2-Dichloroethane	5.00	5.52		ug/L		110	74 - 127	1	21
Trichloroethene	5.00	5.18		ug/L		104	72 - 120	1	22
1,2-Dichloropropane	5.00	5.63		ug/L		113	69 - 130	2	22
4-Methyl-2-pentanone (MIBK)	25.0	29.0		ug/L		116	63 - 137	5	26
Dibromomethane	5.00	5.53		ug/L		111	65 - 141	3	22
Dichlorobromomethane	5.00	5.30		ug/L		106	74 - 131	1	21
cis-1,3-Dichloropropene	5.00	4.94		ug/L		99	77 - 131	4	24
Toluene	5.00	4.87		ug/L		97	80 - 126	2	20
trans-1,3-Dichloropropene	5.00	5.55		ug/L		111	71 - 138	1	26
1,1,2-Trichloroethane	5.00	5.62		ug/L		112	73 - 127	3	22
Tetrachloroethene	5.00	5.01		ug/L		100	75 - 124	2	20
1,3-Dichloropropane	5.00	5.58		ug/L		112	69 - 138	5	19
Chlorodibromomethane	5.00	5.36		ug/L		107	62 - 141	1	22
Ethylene Dibromide	5.00	5.54		ug/L		111	61 - 143	2	22
Chlorobenzene	5.00	5.21		ug/L		104	74 - 123	0	21
1,1,1,2-Tetrachloroethane	5.00	5.38		ug/L		108	69 - 127	1	22
Ethylbenzene	5.00	5.32		ug/L		106	80 - 124	0	22
m-Xylene & p-Xylene	5.00	5.20		ug/L		104	75 - 124	4	22

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QC Sample Results

Client: ERM-West

Job ID: 580-141081-1

Project/Site: Arkema - Q2 2024 Groundwater Event

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

Lab Sample ID: LCSD 580-462298/5

Matrix: Water

Analysis Batch: 462298

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	5.33		ug/L		107	71 - 124	4	23
Styrene	5.00	5.20		ug/L		104	74 - 127	4	22
Bromoform	5.00	5.32		ug/L		106	48 - 127	3	23
Isopropylbenzene	5.00	5.40		ug/L		108	71 - 123	3	23
Bromobenzene	5.00	5.21		ug/L		104	74 - 130	1	23
1,1,2,2-Tetrachloroethane	5.00	5.93		ug/L		119	67 - 136	1	24
1,2,3-Trichloropropane	5.00	5.95		ug/L		119	67 - 135	1	25
N-Propylbenzene	5.00	5.33		ug/L		107	72 - 126	3	20
2-Chlorotoluene	5.00	5.28		ug/L		106	73 - 120	3	22
4-Chlorotoluene	5.00	5.64		ug/L		113	75 - 124	1	23
1,3,5-Trimethylbenzene	5.00	5.20		ug/L		104	75 - 123	6	23
tert-Butylbenzene	5.00	5.00		ug/L		100	70 - 129	2	24
1,2,4-Trimethylbenzene	5.00	5.29		ug/L		106	71 - 127	3	23
sec-Butylbenzene	5.00	4.92		ug/L		98	75 - 126	1	23
4-Isopropyltoluene	5.00	5.01		ug/L		100	78 - 125	1	24
1,3-Dichlorobenzene	5.00	5.20		ug/L		104	72 - 125	0	22
1,4-Dichlorobenzene	5.00	5.34		ug/L		107	71 - 129	0	22
n-Butylbenzene	5.00	4.99		ug/L		100	69 - 127	2	24
1,2-Dichlorobenzene	5.00	5.42		ug/L		108	72 - 129	2	22
1,2-Dibromo-3-Chloropropane	5.00	5.73		ug/L		115	55 - 135	4	29
1,2,4-Trichlorobenzene	5.00	5.22		ug/L		104	60 - 130	6	26
Hexachlorobutadiene	5.00	4.91		ug/L		98	63 - 130	5	26
Naphthalene	5.00	5.52		ug/L		110	54 - 137	2	28
1,2,3-Trichlorobenzene	5.00	5.65		ug/L		113	60 - 136	2	28

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120
4-Bromofluorobenzene (Surr)	100		80 - 120
1,2-Dichloroethane-d4 (Surr)	103		80 - 120

Lab Sample ID: MB 580-462481/7

Matrix: Water

Analysis Batch: 462481

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			06/18/24 01:51	1
Chloromethane	ND		0.50	0.14	ug/L			06/18/24 01:51	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/18/24 01:51	1
Bromomethane	ND		0.50	0.13	ug/L			06/18/24 01:51	1
Chloroethane	ND		0.50	0.24	ug/L			06/18/24 01:51	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/18/24 01:51	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/18/24 01:51	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			06/18/24 01:51	1
Acetone	ND		10	3.1	ug/L			06/18/24 01:51	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/18/24 01:51	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/18/24 01:51	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/18/24 01:51	1

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QC Sample Results

Client: ERM-West

Job ID: 580-141081-1

Project/Site: Arkema - Q2 2024 Groundwater Event

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

Lab Sample ID: MB 580-462481/7

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 462481

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/18/24 01:51	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			06/18/24 01:51	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/18/24 01:51	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			06/18/24 01:51	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/18/24 01:51	1
Chloroform	ND		0.20	0.030	ug/L			06/18/24 01:51	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/18/24 01:51	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/18/24 01:51	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/18/24 01:51	1
Benzene	ND		0.20	0.030	ug/L			06/18/24 01:51	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/18/24 01:51	1
Trichloroethene	ND		0.20	0.066	ug/L			06/18/24 01:51	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/18/24 01:51	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/18/24 01:51	1
Dibromomethane	ND		0.20	0.062	ug/L			06/18/24 01:51	1
Bromodichloromethane	ND		0.20	0.060	ug/L			06/18/24 01:51	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/18/24 01:51	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/18/24 01:51	1
Toluene	ND		0.20	0.050	ug/L			06/18/24 01:51	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/18/24 01:51	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/18/24 01:51	1
Tetrachloroethene	ND		0.24	0.084	ug/L			06/18/24 01:51	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/18/24 01:51	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/18/24 01:51	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/18/24 01:51	1
Chlorobenzene	ND		0.20	0.060	ug/L			06/18/24 01:51	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/18/24 01:51	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/18/24 01:51	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/18/24 01:51	1
o-Xylene	ND		0.50	0.23	ug/L			06/18/24 01:51	1
Styrene	ND		1.0	0.33	ug/L			06/18/24 01:51	1
Bromoform	ND		0.50	0.16	ug/L			06/18/24 01:51	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/18/24 01:51	1
Bromobenzene	ND		0.20	0.038	ug/L			06/18/24 01:51	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/18/24 01:51	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/18/24 01:51	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/18/24 01:51	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/18/24 01:51	1
4-Chlorotoluene	ND		0.30	0.12	ug/L			06/18/24 01:51	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/18/24 01:51	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/18/24 01:51	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/18/24 01:51	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/18/24 01:51	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/18/24 01:51	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/18/24 01:51	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/18/24 01:51	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/18/24 01:51	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			06/18/24 01:51	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/18/24 01:51	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

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

Lab Sample ID: MB 580-462481/7

Matrix: Water

Analysis Batch: 462481

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/18/24 01:51	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/18/24 01:51	1
Naphthalene	ND		1.5	0.52	ug/L			06/18/24 01:51	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/18/24 01:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		80 - 120		06/18/24 01:51	1
Dibromofluoromethane (Surr)	100		80 - 120		06/18/24 01:51	1
4-Bromofluorobenzene (Surr)	98		80 - 120		06/18/24 01:51	1
1,2-Dichloroethane-d4 (Surr)	94		80 - 120		06/18/24 01:51	1

Lab Sample ID: LCS 580-462481/4

Matrix: Water

Analysis Batch: 462481

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	3.53		ug/L		71	20 - 150
Chloromethane	5.00	3.74		ug/L		75	32 - 150
Vinyl chloride	5.00	4.07		ug/L		81	41 - 150
Bromomethane	5.00	3.88		ug/L		78	51 - 148
Chloroethane	5.00	4.34		ug/L		87	54 - 140
Carbon disulfide	5.00	4.35		ug/L		87	54 - 142
Trichlorofluoromethane	5.00	4.27		ug/L		85	60 - 132
1,1-Dichloroethene	5.00	4.25		ug/L		85	60 - 129
Acetone	25.0	24.8		ug/L		99	49 - 150
Methylene Chloride	5.00	4.27	J	ug/L		85	40 - 142
Methyl tert-butyl ether	5.00	4.55		ug/L		91	61 - 131
2-Butanone (MEK)	25.0	22.6		ug/L		90	37 - 150
trans-1,2-Dichloroethene	5.00	4.17		ug/L		83	69 - 121
1,1-Dichloroethane	5.00	4.21		ug/L		84	74 - 120
2,2-Dichloropropane	5.00	3.64		ug/L		73	55 - 140
cis-1,2-Dichloroethene	5.00	4.29		ug/L		86	72 - 120
Chlorobromomethane	5.00	4.38		ug/L		88	79 - 121
Chloroform	5.00	4.14		ug/L		83	75 - 120
1,1,1-Trichloroethane	5.00	4.29		ug/L		86	70 - 121
Carbon tetrachloride	5.00	4.25		ug/L		85	66 - 130
1,1-Dichloropropene	5.00	4.28		ug/L		86	72 - 125
Benzene	5.00	4.40		ug/L		88	80 - 120
1,2-Dichloroethane	5.00	4.08		ug/L		82	74 - 127
Trichloroethene	5.00	4.51		ug/L		90	72 - 120
1,2-Dichloropropane	5.00	4.43		ug/L		89	69 - 130
4-Methyl-2-pentanone (MIBK)	25.0	23.6		ug/L		94	63 - 137
Dibromomethane	5.00	4.34		ug/L		87	65 - 141
Bromodichloromethane	5.00	4.44		ug/L		89	74 - 131
Dichlorobromomethane	5.00	4.44		ug/L		89	74 - 131
cis-1,3-Dichloropropene	5.00	4.25		ug/L		85	77 - 131
Toluene	5.00	4.42		ug/L		88	80 - 126
trans-1,3-Dichloropropene	5.00	4.58		ug/L		92	71 - 138

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

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

Lab Sample ID: LCS 580-462481/4

Matrix: Water

Analysis Batch: 462481

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,2-Trichloroethane	5.00	4.62		ug/L		92	73 - 127
Tetrachloroethene	5.00	4.41		ug/L		88	75 - 124
1,3-Dichloropropane	5.00	4.52		ug/L		90	69 - 138
Chlorodibromomethane	5.00	4.60		ug/L		92	62 - 141
Ethylene Dibromide	5.00	4.63		ug/L		93	61 - 143
Chlorobenzene	5.00	4.46		ug/L		89	74 - 123
1,1,1,2-Tetrachloroethane	5.00	4.56		ug/L		91	69 - 127
Ethylbenzene	5.00	4.35		ug/L		87	80 - 124
m-Xylene & p-Xylene	5.00	4.27		ug/L		85	75 - 124
o-Xylene	5.00	4.36		ug/L		87	71 - 124
Styrene	5.00	4.55		ug/L		91	74 - 127
Bromoform	5.00	4.39		ug/L		88	48 - 127
Isopropylbenzene	5.00	4.97		ug/L		99	71 - 123
Bromobenzene	5.00	4.50		ug/L		90	74 - 130
1,1,2,2-Tetrachloroethane	5.00	4.77		ug/L		95	67 - 136
1,2,3-Trichloropropane	5.00	4.76		ug/L		95	67 - 135
N-Propylbenzene	5.00	4.56		ug/L		91	72 - 126
2-Chlorotoluene	5.00	4.50		ug/L		90	73 - 120
4-Chlorotoluene	5.00	4.61		ug/L		92	75 - 124
1,3,5-Trimethylbenzene	5.00	4.49		ug/L		90	75 - 123
tert-Butylbenzene	5.00	4.69		ug/L		94	70 - 129
1,2,4-Trimethylbenzene	5.00	4.52		ug/L		90	71 - 127
sec-Butylbenzene	5.00	4.65		ug/L		93	75 - 126
4-Isopropyltoluene	5.00	4.53		ug/L		91	78 - 125
1,3-Dichlorobenzene	5.00	4.57		ug/L		91	72 - 125
1,4-Dichlorobenzene	5.00	4.46		ug/L		89	71 - 129
n-Butylbenzene	5.00	4.35		ug/L		87	69 - 127
1,2-Dichlorobenzene	5.00	4.73		ug/L		95	72 - 129
1,2-Dibromo-3-Chloropropane	5.00	4.56		ug/L		91	55 - 135
1,2,4-Trichlorobenzene	5.00	4.65		ug/L		93	60 - 130
Hexachlorobutadiene	5.00	4.15		ug/L		83	63 - 130
Naphthalene	5.00	4.91		ug/L		98	54 - 137
1,2,3-Trichlorobenzene	5.00	4.75		ug/L		95	60 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	96		80 - 120
4-Bromofluorobenzene (Surr)	98		80 - 120
1,2-Dichloroethane-d4 (Surr)	90		80 - 120

Lab Sample ID: LCSD 580-462481/5

Matrix: Water

Analysis Batch: 462481

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	3.56		ug/L		71	20 - 150	1	30
Chloromethane	5.00	3.76		ug/L		75	32 - 150	0	33
Vinyl chloride	5.00	4.13		ug/L		83	41 - 150	1	32

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

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

Lab Sample ID: LCSD 580-462481/5

Matrix: Water

Analysis Batch: 462481

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
Bromomethane	5.00	3.91		ug/L		78	51 - 148	1	35
Chloroethane	5.00	4.35		ug/L		87	54 - 140	0	33
Carbon disulfide	5.00	4.33		ug/L		87	54 - 142	0	34
Trichlorofluoromethane	5.00	4.26		ug/L		85	60 - 132	0	32
1,1-Dichloroethene	5.00	4.26		ug/L		85	60 - 129	0	29
Acetone	25.0	26.6		ug/L		106	49 - 150	7	24
Methylene Chloride	5.00	4.33	J	ug/L		87	40 - 142	1	25
Methyl tert-butyl ether	5.00	4.55		ug/L		91	61 - 131	0	27
2-Butanone (MEK)	25.0	23.0		ug/L		92	37 - 150	2	35
trans-1,2-Dichloroethene	5.00	4.24		ug/L		85	69 - 121	2	27
1,1-Dichloroethane	5.00	4.17		ug/L		83	74 - 120	1	26
2,2-Dichloropropane	5.00	3.64		ug/L		73	55 - 140	0	31
cis-1,2-Dichloroethene	5.00	4.38		ug/L		88	72 - 120	2	22
Chlorobromomethane	5.00	4.41		ug/L		88	79 - 121	1	20
Chloroform	5.00	4.19		ug/L		84	75 - 120	1	21
1,1,1-Trichloroethane	5.00	4.33		ug/L		87	70 - 121	1	24
Carbon tetrachloride	5.00	4.25		ug/L		85	66 - 130	0	24
1,1-Dichloropropene	5.00	4.30		ug/L		86	72 - 125	0	23
Benzene	5.00	4.44		ug/L		89	80 - 120	1	22
1,2-Dichloroethane	5.00	4.17		ug/L		83	74 - 127	2	21
Trichloroethene	5.00	4.64		ug/L		93	72 - 120	3	22
1,2-Dichloropropane	5.00	4.47		ug/L		89	69 - 130	1	22
4-Methyl-2-pentanone (MIBK)	25.0	23.4		ug/L		94	63 - 137	1	26
Dibromomethane	5.00	4.48		ug/L		90	65 - 141	3	22
Bromodichloromethane	5.00	4.48		ug/L		90	74 - 131	1	21
Dichlorobromomethane	5.00	4.48		ug/L		90	74 - 131	1	21
cis-1,3-Dichloropropene	5.00	4.13		ug/L		83	77 - 131	3	24
Toluene	5.00	4.37		ug/L		87	80 - 126	1	20
trans-1,3-Dichloropropene	5.00	4.59		ug/L		92	71 - 138	0	26
1,1,2-Trichloroethane	5.00	4.64		ug/L		93	73 - 127	0	22
Tetrachloroethene	5.00	4.56		ug/L		91	75 - 124	3	20
1,3-Dichloropropane	5.00	4.58		ug/L		92	69 - 138	1	19
Chlorodibromomethane	5.00	4.52		ug/L		90	62 - 141	2	22
Ethylene Dibromide	5.00	4.62		ug/L		92	61 - 143	0	22
Chlorobenzene	5.00	4.36		ug/L		87	74 - 123	2	21
1,1,1,2-Tetrachloroethane	5.00	4.53		ug/L		91	69 - 127	1	22
Ethylbenzene	5.00	4.32		ug/L		86	80 - 124	1	22
m-Xylene & p-Xylene	5.00	4.27		ug/L		85	75 - 124	0	22
o-Xylene	5.00	4.29		ug/L		86	71 - 124	2	23
Styrene	5.00	4.41		ug/L		88	74 - 127	3	22
Bromoform	5.00	4.42		ug/L		88	48 - 127	1	23
Isopropylbenzene	5.00	4.89		ug/L		98	71 - 123	2	23
Bromobenzene	5.00	4.50		ug/L		90	74 - 130	0	23
1,1,2,2-Tetrachloroethane	5.00	4.63		ug/L		93	67 - 136	3	24
1,2,3-Trichloropropane	5.00	4.80		ug/L		96	67 - 135	1	25
N-Propylbenzene	5.00	4.49		ug/L		90	72 - 126	2	20
2-Chlorotoluene	5.00	4.41		ug/L		88	73 - 120	2	22
4-Chlorotoluene	5.00	4.46		ug/L		89	75 - 124	3	23
1,3,5-Trimethylbenzene	5.00	4.44		ug/L		89	75 - 123	1	23

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

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

Lab Sample ID: LCSD 580-462481/5

Matrix: Water

Analysis Batch: 462481

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
tert-Butylbenzene	5.00	4.58		ug/L		92	70 - 129	2	24
1,2,4-Trimethylbenzene	5.00	4.38		ug/L		88	71 - 127	3	23
sec-Butylbenzene	5.00	4.57		ug/L		91	75 - 126	2	23
4-Isopropyltoluene	5.00	4.55		ug/L		91	78 - 125	0	24
1,3-Dichlorobenzene	5.00	4.59		ug/L		92	72 - 125	0	22
1,4-Dichlorobenzene	5.00	4.34		ug/L		87	71 - 129	3	22
n-Butylbenzene	5.00	4.31		ug/L		86	69 - 127	1	24
1,2-Dichlorobenzene	5.00	4.67		ug/L		93	72 - 129	1	22
1,2-Dibromo-3-Chloropropane	5.00	4.74		ug/L		95	55 - 135	4	29
1,2,4-Trichlorobenzene	5.00	4.61		ug/L		92	60 - 130	1	26
Hexachlorobutadiene	5.00	4.17		ug/L		83	63 - 130	1	26
Naphthalene	5.00	4.86		ug/L		97	54 - 137	1	28
1,2,3-Trichlorobenzene	5.00	4.58		ug/L		92	60 - 136	4	28

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
Toluene-d8 (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	97		80 - 120
4-Bromofluorobenzene (Surr)	98		80 - 120
1,2-Dichloroethane-d4 (Surr)	92		80 - 120

Lab Sample ID: 580-141081-12 MS

Matrix: Water

Analysis Batch: 462481

Client Sample ID: PA-15i-061224

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Dichlorodifluoromethane	ND		5.00	4.14		ug/L		83	20 - 150
Chloromethane	ND		5.00	4.44		ug/L		89	32 - 150
Vinyl chloride	ND		5.00	4.73		ug/L		95	41 - 150
Bromomethane	ND		5.00	3.68		ug/L		74	51 - 148
Chloroethane	ND		5.00	4.87		ug/L		97	54 - 140
Carbon disulfide	ND		5.00	4.98		ug/L		100	54 - 142
Trichlorofluoromethane	ND		5.00	4.85		ug/L		97	60 - 132
1,1-Dichloroethene	ND		5.00	4.92		ug/L		98	60 - 129
Acetone	ND		25.0	21.6		ug/L		86	49 - 150
Methylene Chloride	ND		5.00	4.41	J	ug/L		88	40 - 142
Methyl tert-butyl ether	ND		5.00	4.75		ug/L		95	61 - 131
2-Butanone (MEK)	ND		25.0	18.9		ug/L		76	37 - 150
trans-1,2-Dichloroethene	ND		5.00	4.69		ug/L		94	69 - 121
1,1-Dichloroethane	0.18	J	5.00	4.99		ug/L		96	74 - 120
2,2-Dichloropropane	ND		5.00	3.05		ug/L		61	55 - 140
cis-1,2-Dichloroethene	0.058	J	5.00	4.97		ug/L		98	72 - 120
Chlorobromomethane	ND		5.00	4.87		ug/L		97	79 - 121
Chloroform	ND		5.00	4.63		ug/L		93	75 - 120
1,1,1-Trichloroethane	ND		5.00	4.86		ug/L		97	70 - 121
Carbon tetrachloride	ND		5.00	4.82		ug/L		96	66 - 130
1,1-Dichloropropene	ND		5.00	4.77		ug/L		95	72 - 125
Benzene	ND		5.00	4.85		ug/L		97	80 - 120
1,2-Dichloroethane	ND		5.00	4.39		ug/L		88	74 - 127

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

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

Lab Sample ID: 580-141081-12 MS

Matrix: Water

Analysis Batch: 462481

Client Sample ID: PA-15i-061224

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Trichloroethene	ND		5.00	4.95		ug/L		99	72 - 120
1,2-Dichloropropane	ND		5.00	4.89		ug/L		98	69 - 130
4-Methyl-2-pentanone (MIBK)	ND		25.0	23.1		ug/L		92	63 - 137
Dibromomethane	ND		5.00	4.83		ug/L		97	65 - 141
Dichlorobromomethane	ND		5.00	4.80		ug/L		96	74 - 131
cis-1,3-Dichloropropene	ND		5.00	4.22		ug/L		84	77 - 131
Toluene	ND		5.00	4.73		ug/L		95	80 - 126
trans-1,3-Dichloropropene	ND		5.00	4.50		ug/L		90	71 - 138
1,1,2-Trichloroethane	ND		5.00	4.86		ug/L		97	73 - 127
Tetrachloroethene	ND		5.00	4.99		ug/L		100	75 - 124
1,3-Dichloropropane	ND		5.00	4.61		ug/L		92	69 - 138
Chlorodibromomethane	ND		5.00	4.83		ug/L		97	62 - 141
Ethylene Dibromide	ND		5.00	4.78		ug/L		96	61 - 143
Chlorobenzene	ND		5.00	4.77		ug/L		95	74 - 123
1,1,1,2-Tetrachloroethane	ND		5.00	4.80		ug/L		96	69 - 127
Ethylbenzene	ND		5.00	4.69		ug/L		94	80 - 124
m-Xylene & p-Xylene	ND		5.00	4.56		ug/L		91	75 - 124
o-Xylene	ND		5.00	4.79		ug/L		96	71 - 124
Styrene	ND		5.00	4.57		ug/L		91	74 - 127
Bromoform	ND		5.00	4.39		ug/L		88	48 - 127
Isopropylbenzene	ND		5.00	5.31		ug/L		106	71 - 123
Bromobenzene	ND		5.00	4.67		ug/L		93	74 - 130
1,1,2,2-Tetrachloroethane	ND		5.00	4.58		ug/L		92	67 - 136
1,2,3-Trichloropropane	ND		5.00	4.49		ug/L		90	67 - 135
N-Propylbenzene	ND		5.00	4.77		ug/L		95	72 - 126
2-Chlorotoluene	ND		5.00	4.75		ug/L		95	73 - 120
4-Chlorotoluene	ND		5.00	4.80		ug/L		96	75 - 124
1,3,5-Trimethylbenzene	ND		5.00	4.77		ug/L		95	75 - 123
tert-Butylbenzene	ND		5.00	5.00		ug/L		100	70 - 129
1,2,4-Trimethylbenzene	ND		5.00	4.60		ug/L		92	71 - 127
sec-Butylbenzene	ND		5.00	4.97		ug/L		99	75 - 126
4-Isopropyltoluene	ND		5.00	4.85		ug/L		97	78 - 125
1,3-Dichlorobenzene	ND		5.00	4.68		ug/L		94	72 - 125
1,4-Dichlorobenzene	ND		5.00	4.54		ug/L		91	71 - 129
n-Butylbenzene	ND		5.00	4.48		ug/L		90	69 - 127
1,2-Dichlorobenzene	ND		5.00	4.80		ug/L		96	72 - 129
1,2-Dibromo-3-Chloropropane	ND		5.00	4.58		ug/L		92	55 - 135
1,2,4-Trichlorobenzene	ND		5.00	4.45		ug/L		89	60 - 130
Hexachlorobutadiene	ND		5.00	4.22		ug/L		84	63 - 130
Naphthalene	ND		5.00	4.69		ug/L		94	54 - 137
1,2,3-Trichlorobenzene	ND		5.00	4.46		ug/L		89	60 - 136
Surrogate	MS %Recovery	MS Qualifier	Limits						
Toluene-d8 (Surr)	100		80 - 120						
Dibromofluoromethane (Surr)	99		80 - 120						
4-Bromofluorobenzene (Surr)	98		80 - 120						
1,2-Dichloroethane-d4 (Surr)	92		80 - 120						

QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

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

Lab Sample ID: 580-141081-12 MSD

Matrix: Water

Analysis Batch: 462481

Client Sample ID: PA-15i-061224

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	3.98		ug/L		80	20 - 150	4	30
Chloromethane	ND		5.00	4.40		ug/L		88	32 - 150	1	33
Vinyl chloride	ND		5.00	4.67		ug/L		93	41 - 150	1	32
Bromomethane	ND		5.00	3.84		ug/L		77	51 - 148	4	35
Chloroethane	ND		5.00	4.58		ug/L		92	54 - 140	6	33
Carbon disulfide	ND		5.00	4.88		ug/L		98	54 - 142	2	34
Trichlorofluoromethane	ND		5.00	4.82		ug/L		96	60 - 132	1	32
1,1-Dichloroethene	ND		5.00	4.76		ug/L		95	60 - 129	3	29
Acetone	ND		25.0	21.2		ug/L		85	49 - 150	2	24
Methylene Chloride	ND		5.00	4.26	J	ug/L		85	40 - 142	4	25
Methyl tert-butyl ether	ND		5.00	4.81		ug/L		96	61 - 131	1	27
2-Butanone (MEK)	ND		25.0	19.5		ug/L		78	37 - 150	3	35
trans-1,2-Dichloroethene	ND		5.00	4.69		ug/L		94	69 - 121	0	27
1,1-Dichloroethane	0.18	J	5.00	4.74		ug/L		91	74 - 120	5	26
2,2-Dichloropropane	ND		5.00	3.16		ug/L		63	55 - 140	3	31
cis-1,2-Dichloroethene	0.058	J	5.00	4.80		ug/L		95	72 - 120	3	22
Chlorobromomethane	ND		5.00	4.68		ug/L		94	79 - 121	4	20
Chloroform	ND		5.00	4.53		ug/L		91	75 - 120	2	21
1,1,1-Trichloroethane	ND		5.00	4.92		ug/L		98	70 - 121	1	24
Carbon tetrachloride	ND		5.00	4.82		ug/L		96	66 - 130	0	24
1,1-Dichloropropene	ND		5.00	4.97		ug/L		99	72 - 125	4	23
Benzene	ND		5.00	4.90		ug/L		98	80 - 120	1	22
1,2-Dichloroethane	ND		5.00	4.40		ug/L		88	74 - 127	0	21
Trichloroethene	ND		5.00	5.06		ug/L		101	72 - 120	2	22
1,2-Dichloropropane	ND		5.00	4.95		ug/L		99	69 - 130	1	22
4-Methyl-2-pentanone (MIBK)	ND		25.0	23.1		ug/L		93	63 - 137	0	26
Dibromomethane	ND		5.00	4.72		ug/L		94	65 - 141	2	22
Dichlorobromomethane	ND		5.00	4.67		ug/L		93	74 - 131	3	21
cis-1,3-Dichloropropene	ND		5.00	4.33		ug/L		87	77 - 131	3	24
Toluene	ND		5.00	4.86		ug/L		97	80 - 126	3	20
trans-1,3-Dichloropropene	ND		5.00	4.67		ug/L		93	71 - 138	4	26
1,1,2-Trichloroethane	ND		5.00	5.01		ug/L		100	73 - 127	3	22
Tetrachloroethene	ND		5.00	4.95		ug/L		99	75 - 124	1	20
1,3-Dichloropropane	ND		5.00	4.74		ug/L		95	69 - 138	3	19
Chlorodibromomethane	ND		5.00	4.88		ug/L		98	62 - 141	1	22
Ethylene Dibromide	ND		5.00	4.89		ug/L		98	61 - 143	2	22
Chlorobenzene	ND		5.00	4.77		ug/L		95	74 - 123	0	21
1,1,1,2-Tetrachloroethane	ND		5.00	5.00		ug/L		100	69 - 127	4	22
Ethylbenzene	ND		5.00	4.77		ug/L		95	80 - 124	2	22
m-Xylene & p-Xylene	ND		5.00	4.62		ug/L		92	75 - 124	2	22
o-Xylene	ND		5.00	4.76		ug/L		95	71 - 124	1	23
Styrene	ND		5.00	4.59		ug/L		92	74 - 127	0	22
Bromoform	ND		5.00	4.43		ug/L		89	48 - 127	1	23
Isopropylbenzene	ND		5.00	5.51		ug/L		110	71 - 123	4	23
Bromobenzene	ND		5.00	4.86		ug/L		97	74 - 130	4	23
1,1,2,2-Tetrachloroethane	ND		5.00	4.74		ug/L		95	67 - 136	4	24
1,2,3-Trichloropropane	ND		5.00	4.86		ug/L		97	67 - 135	8	25
N-Propylbenzene	ND		5.00	5.01		ug/L		100	72 - 126	5	20

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QC Sample Results

Client: ERM-West

Job ID: 580-141081-1

Project/Site: Arkema - Q2 2024 Groundwater Event

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

Lab Sample ID: 580-141081-12 MSD

Client Sample ID: PA-15i-061224

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 462481

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2-Chlorotoluene	ND		5.00	4.93		ug/L		99	73 - 120	4	22
4-Chlorotoluene	ND		5.00	4.99		ug/L		100	75 - 124	4	23
1,3,5-Trimethylbenzene	ND		5.00	5.09		ug/L		102	75 - 123	7	23
tert-Butylbenzene	ND		5.00	5.20		ug/L		104	70 - 129	4	24
1,2,4-Trimethylbenzene	ND		5.00	4.94		ug/L		99	71 - 127	7	23
sec-Butylbenzene	ND		5.00	5.21		ug/L		104	75 - 126	5	23
4-Isopropyltoluene	ND		5.00	5.11		ug/L		102	78 - 125	5	24
1,3-Dichlorobenzene	ND		5.00	4.89		ug/L		98	72 - 125	4	22
1,4-Dichlorobenzene	ND		5.00	4.75		ug/L		95	71 - 129	5	22
n-Butylbenzene	ND		5.00	4.78		ug/L		96	69 - 127	6	24
1,2-Dichlorobenzene	ND		5.00	4.86		ug/L		97	72 - 129	1	22
1,2-Dibromo-3-Chloropropane	ND		5.00	4.45		ug/L		89	55 - 135	3	29
1,2,4-Trichlorobenzene	ND		5.00	4.76		ug/L		95	60 - 130	7	26
Hexachlorobutadiene	ND		5.00	4.54		ug/L		91	63 - 130	7	26
Naphthalene	ND		5.00	4.74		ug/L		95	54 - 137	1	28
1,2,3-Trichlorobenzene	ND		5.00	4.67		ug/L		93	60 - 136	4	28

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	96		80 - 120
4-Bromofluorobenzene (Surr)	98		80 - 120
1,2-Dichloroethane-d4 (Surr)	91		80 - 120

Lab Sample ID: MB 580-462616/7

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 462616

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			06/19/24 01:09	1
Chloromethane	ND		0.50	0.14	ug/L			06/19/24 01:09	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/19/24 01:09	1
Bromomethane	ND		0.50	0.13	ug/L			06/19/24 01:09	1
Chloroethane	ND		0.50	0.24	ug/L			06/19/24 01:09	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/19/24 01:09	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/19/24 01:09	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			06/19/24 01:09	1
Acetone	ND		10	3.1	ug/L			06/19/24 01:09	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/19/24 01:09	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/19/24 01:09	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/19/24 01:09	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/19/24 01:09	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			06/19/24 01:09	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/19/24 01:09	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			06/19/24 01:09	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/19/24 01:09	1
Chloroform	ND		0.20	0.030	ug/L			06/19/24 01:09	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/19/24 01:09	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/19/24 01:09	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

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

Lab Sample ID: MB 580-462616/7

Matrix: Water

Analysis Batch: 462616

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/19/24 01:09	1
Benzene	0.0553	J	0.20	0.030	ug/L			06/19/24 01:09	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/19/24 01:09	1
Trichloroethene	ND		0.20	0.066	ug/L			06/19/24 01:09	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/19/24 01:09	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/19/24 01:09	1
Dibromomethane	ND		0.20	0.062	ug/L			06/19/24 01:09	1
Bromodichloromethane	ND		0.20	0.060	ug/L			06/19/24 01:09	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/19/24 01:09	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/19/24 01:09	1
Toluene	ND		0.20	0.050	ug/L			06/19/24 01:09	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/19/24 01:09	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/19/24 01:09	1
Tetrachloroethene	ND		0.24	0.084	ug/L			06/19/24 01:09	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/19/24 01:09	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/19/24 01:09	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/19/24 01:09	1
Chlorobenzene	ND		0.20	0.060	ug/L			06/19/24 01:09	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/19/24 01:09	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/19/24 01:09	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/19/24 01:09	1
o-Xylene	ND		0.50	0.23	ug/L			06/19/24 01:09	1
Styrene	ND		1.0	0.33	ug/L			06/19/24 01:09	1
Bromoform	ND		0.50	0.16	ug/L			06/19/24 01:09	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/19/24 01:09	1
Bromobenzene	ND		0.20	0.038	ug/L			06/19/24 01:09	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/19/24 01:09	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/19/24 01:09	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/19/24 01:09	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/19/24 01:09	1
4-Chlorotoluene	ND		0.30	0.12	ug/L			06/19/24 01:09	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/19/24 01:09	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/19/24 01:09	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/19/24 01:09	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/19/24 01:09	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/19/24 01:09	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 01:09	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 01:09	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/19/24 01:09	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			06/19/24 01:09	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/19/24 01:09	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/19/24 01:09	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/19/24 01:09	1
Naphthalene	ND		1.5	0.52	ug/L			06/19/24 01:09	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/19/24 01:09	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		06/19/24 01:09	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

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

Lab Sample ID: MB 580-462616/7

Matrix: Water

Analysis Batch: 462616

Client Sample ID: Method Blank

Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	107		80 - 120		06/19/24 01:09	1
4-Bromofluorobenzene (Surr)	101		80 - 120		06/19/24 01:09	1
1,2-Dichloroethane-d4 (Surr)	113		80 - 120		06/19/24 01:09	1

Lab Sample ID: LCS 580-462616/4

Matrix: Water

Analysis Batch: 462616

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	4.25		ug/L		85	20 - 150
Chloromethane	5.00	4.08		ug/L		82	32 - 150
Vinyl chloride	5.00	5.00		ug/L		100	41 - 150
Bromomethane	5.00	6.59		ug/L		132	51 - 148
Chloroethane	5.00	5.27		ug/L		105	54 - 140
Carbon disulfide	5.00	5.76		ug/L		115	54 - 142
Trichlorofluoromethane	5.00	5.38		ug/L		108	60 - 132
1,1-Dichloroethene	5.00	5.45		ug/L		109	60 - 129
Acetone	25.0	32.4		ug/L		130	49 - 150
Methylene Chloride	5.00	6.15		ug/L		123	40 - 142
Methyl tert-butyl ether	5.00	6.02		ug/L		120	61 - 131
2-Butanone (MEK)	25.0	31.5		ug/L		126	37 - 150
trans-1,2-Dichloroethene	5.00	5.41		ug/L		108	69 - 121
1,1-Dichloroethane	5.00	5.77		ug/L		115	74 - 120
2,2-Dichloropropane	5.00	4.77		ug/L		95	55 - 140
cis-1,2-Dichloroethene	5.00	5.47		ug/L		109	72 - 120
Chlorobromomethane	5.00	5.79		ug/L		116	79 - 121
Chloroform	5.00	5.72		ug/L		114	75 - 120
1,1,1-Trichloroethane	5.00	5.70		ug/L		114	70 - 121
Carbon tetrachloride	5.00	5.52		ug/L		110	66 - 130
1,1-Dichloropropene	5.00	5.63		ug/L		113	72 - 125
Benzene	5.00	5.37		ug/L		107	80 - 120
1,2-Dichloroethane	5.00	5.96		ug/L		119	74 - 127
Trichloroethene	5.00	5.43		ug/L		109	72 - 120
1,2-Dichloropropane	5.00	5.83		ug/L		117	69 - 130
4-Methyl-2-pentanone (MIBK)	25.0	28.8		ug/L		115	63 - 137
Dibromomethane	5.00	5.85		ug/L		117	65 - 141
Bromodichloromethane	5.00	5.73		ug/L		115	74 - 131
Dichlorobromomethane	5.00	5.73		ug/L		115	74 - 131
cis-1,3-Dichloropropene	5.00	4.80		ug/L		96	77 - 131
Toluene	5.00	5.10		ug/L		102	80 - 126
trans-1,3-Dichloropropene	5.00	5.49		ug/L		110	71 - 138
1,1,2-Trichloroethane	5.00	5.70		ug/L		114	73 - 127
Tetrachloroethene	5.00	4.97		ug/L		99	75 - 124
1,3-Dichloropropane	5.00	5.55		ug/L		111	69 - 138
Chlorodibromomethane	5.00	5.55		ug/L		111	62 - 141
Ethylene Dibromide	5.00	5.68		ug/L		114	61 - 143
Chlorobenzene	5.00	5.12		ug/L		102	74 - 123
1,1,1,2-Tetrachloroethane	5.00	5.39		ug/L		108	69 - 127

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

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

Lab Sample ID: LCS 580-462616/4

Matrix: Water

Analysis Batch: 462616

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylbenzene	5.00	5.33		ug/L		107	80 - 124
m-Xylene & p-Xylene	5.00	5.34		ug/L		107	75 - 124
o-Xylene	5.00	5.35		ug/L		107	71 - 124
Styrene	5.00	5.13		ug/L		103	74 - 127
Bromoform	5.00	5.54		ug/L		111	48 - 127
Isopropylbenzene	5.00	5.41		ug/L		108	71 - 123
Bromobenzene	5.00	4.98		ug/L		100	74 - 130
1,1,2,2-Tetrachloroethane	5.00	5.62		ug/L		112	67 - 136
1,2,3-Trichloropropane	5.00	5.97		ug/L		119	67 - 135
N-Propylbenzene	5.00	5.16		ug/L		103	72 - 126
2-Chlorotoluene	5.00	5.14		ug/L		103	73 - 120
4-Chlorotoluene	5.00	5.35		ug/L		107	75 - 124
1,3,5-Trimethylbenzene	5.00	5.08		ug/L		102	75 - 123
tert-Butylbenzene	5.00	4.94		ug/L		99	70 - 129
1,2,4-Trimethylbenzene	5.00	5.07		ug/L		101	71 - 127
sec-Butylbenzene	5.00	4.79		ug/L		96	75 - 126
4-Isopropyltoluene	5.00	4.84		ug/L		97	78 - 125
1,3-Dichlorobenzene	5.00	4.99		ug/L		100	72 - 125
1,4-Dichlorobenzene	5.00	5.12		ug/L		102	71 - 129
n-Butylbenzene	5.00	4.67		ug/L		93	69 - 127
1,2-Dichlorobenzene	5.00	5.21		ug/L		104	72 - 129
1,2-Dibromo-3-Chloropropane	5.00	5.61		ug/L		112	55 - 135
1,2,4-Trichlorobenzene	5.00	4.97		ug/L		99	60 - 130
Hexachlorobutadiene	5.00	4.82		ug/L		96	63 - 130
Naphthalene	5.00	5.23		ug/L		105	54 - 137
1,2,3-Trichlorobenzene	5.00	5.30		ug/L		106	60 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	104		80 - 120
4-Bromofluorobenzene (Surr)	105		80 - 120
1,2-Dichloroethane-d4 (Surr)	108		80 - 120

Lab Sample ID: LCSD 580-462616/5

Matrix: Water

Analysis Batch: 462616

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	4.23		ug/L		85	20 - 150	1	30
Chloromethane	5.00	3.99		ug/L		80	32 - 150	2	33
Vinyl chloride	5.00	4.97		ug/L		99	41 - 150	1	32
Bromomethane	5.00	6.35		ug/L		127	51 - 148	4	35
Chloroethane	5.00	5.39		ug/L		108	54 - 140	2	33
Carbon disulfide	5.00	5.59		ug/L		112	54 - 142	3	34
Trichlorofluoromethane	5.00	5.34		ug/L		107	60 - 132	1	32
1,1-Dichloroethene	5.00	5.46		ug/L		109	60 - 129	0	29
Acetone	25.0	30.6		ug/L		122	49 - 150	6	24
Methylene Chloride	5.00	6.08		ug/L		122	40 - 142	1	25

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QC Sample Results

Client: ERM-West

Job ID: 580-141081-1

Project/Site: Arkema - Q2 2024 Groundwater Event

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

Lab Sample ID: LCSD 580-462616/5

Matrix: Water

Analysis Batch: 462616

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
Methyl tert-butyl ether	5.00	5.99		ug/L		120	61 - 131	1	27
2-Butanone (MEK)	25.0	30.5		ug/L		122	37 - 150	3	35
trans-1,2-Dichloroethene	5.00	5.31		ug/L		106	69 - 121	2	27
1,1-Dichloroethane	5.00	5.79		ug/L		116	74 - 120	0	26
2,2-Dichloropropane	5.00	4.78		ug/L		96	55 - 140	0	31
cis-1,2-Dichloroethene	5.00	5.64		ug/L		113	72 - 120	3	22
Chlorobromomethane	5.00	5.79		ug/L		116	79 - 121	0	20
Chloroform	5.00	5.61		ug/L		112	75 - 120	2	21
1,1,1-Trichloroethane	5.00	5.60		ug/L		112	70 - 121	2	24
Carbon tetrachloride	5.00	5.58		ug/L		112	66 - 130	1	24
1,1-Dichloropropene	5.00	5.63		ug/L		113	72 - 125	0	23
Benzene	5.00	5.27		ug/L		105	80 - 120	2	22
1,2-Dichloroethane	5.00	5.85		ug/L		117	74 - 127	2	21
Trichloroethene	5.00	5.21		ug/L		104	72 - 120	4	22
1,2-Dichloropropane	5.00	5.67		ug/L		113	69 - 130	3	22
4-Methyl-2-pentanone (MIBK)	25.0	28.1		ug/L		112	63 - 137	3	26
Dibromomethane	5.00	5.75		ug/L		115	65 - 141	2	22
Bromodichloromethane	5.00	5.73		ug/L		115	74 - 131	0	21
Dichlorobromomethane	5.00	5.73		ug/L		115	74 - 131	0	21
cis-1,3-Dichloropropene	5.00	4.74		ug/L		95	77 - 131	1	24
Toluene	5.00	5.12		ug/L		102	80 - 126	0	20
trans-1,3-Dichloropropene	5.00	5.40		ug/L		108	71 - 138	2	26
1,1,2-Trichloroethane	5.00	5.54		ug/L		111	73 - 127	3	22
Tetrachloroethene	5.00	5.08		ug/L		102	75 - 124	2	20
1,3-Dichloropropane	5.00	5.51		ug/L		110	69 - 138	1	19
Chlorodibromomethane	5.00	5.50		ug/L		110	62 - 141	1	22
Ethylene Dibromide	5.00	5.63		ug/L		113	61 - 143	1	22
Chlorobenzene	5.00	5.18		ug/L		104	74 - 123	1	21
1,1,1,2-Tetrachloroethane	5.00	5.46		ug/L		109	69 - 127	1	22
Ethylbenzene	5.00	5.42		ug/L		108	80 - 124	2	22
m-Xylene & p-Xylene	5.00	5.27		ug/L		105	75 - 124	1	22
o-Xylene	5.00	5.41		ug/L		108	71 - 124	1	23
Styrene	5.00	5.14		ug/L		103	74 - 127	0	22
Bromoform	5.00	5.45		ug/L		109	48 - 127	2	23
Isopropylbenzene	5.00	5.37		ug/L		107	71 - 123	1	23
Bromobenzene	5.00	5.14		ug/L		103	74 - 130	3	23
1,1,2,2-Tetrachloroethane	5.00	5.49		ug/L		110	67 - 136	2	24
1,2,3-Trichloropropane	5.00	5.78		ug/L		116	67 - 135	3	25
N-Propylbenzene	5.00	5.21		ug/L		104	72 - 126	1	20
2-Chlorotoluene	5.00	5.12		ug/L		102	73 - 120	0	22
4-Chlorotoluene	5.00	5.49		ug/L		110	75 - 124	3	23
1,3,5-Trimethylbenzene	5.00	5.23		ug/L		105	75 - 123	3	23
tert-Butylbenzene	5.00	4.98		ug/L		100	70 - 129	1	24
1,2,4-Trimethylbenzene	5.00	5.16		ug/L		103	71 - 127	2	23
sec-Butylbenzene	5.00	4.85		ug/L		97	75 - 126	1	23
4-Isopropyltoluene	5.00	4.90		ug/L		98	78 - 125	1	24
1,3-Dichlorobenzene	5.00	5.14		ug/L		103	72 - 125	3	22
1,4-Dichlorobenzene	5.00	5.09		ug/L		102	71 - 129	1	22
n-Butylbenzene	5.00	4.63		ug/L		93	69 - 127	1	24

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

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

Lab Sample ID: LCSD 580-462616/5

Matrix: Water

Analysis Batch: 462616

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
1,2-Dichlorobenzene	5.00	5.31		ug/L		106	72 - 129	2	22
1,2-Dibromo-3-Chloropropane	5.00	5.55		ug/L		111	55 - 135	1	29
1,2,4-Trichlorobenzene	5.00	5.11		ug/L		102	60 - 130	3	26
Hexachlorobutadiene	5.00	4.76		ug/L		95	63 - 130	1	26
Naphthalene	5.00	5.19		ug/L		104	54 - 137	1	28
1,2,3-Trichlorobenzene	5.00	5.43		ug/L		109	60 - 136	2	28

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
Toluene-d8 (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	104		80 - 120
4-Bromofluorobenzene (Surr)	104		80 - 120
1,2-Dichloroethane-d4 (Surr)	109		80 - 120

Lab Sample ID: MB 580-462691/7

Matrix: Water

Analysis Batch: 462691

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			06/19/24 14:55	1
Chloromethane	ND		0.50	0.14	ug/L			06/19/24 14:55	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/19/24 14:55	1
Bromomethane	ND		0.50	0.13	ug/L			06/19/24 14:55	1
Chloroethane	ND		0.50	0.24	ug/L			06/19/24 14:55	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/19/24 14:55	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/19/24 14:55	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			06/19/24 14:55	1
Acetone	ND		10	3.1	ug/L			06/19/24 14:55	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/19/24 14:55	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/19/24 14:55	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/19/24 14:55	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/19/24 14:55	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			06/19/24 14:55	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/19/24 14:55	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			06/19/24 14:55	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/19/24 14:55	1
Chloroform	ND		0.20	0.030	ug/L			06/19/24 14:55	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/19/24 14:55	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/19/24 14:55	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/19/24 14:55	1
Benzene	0.0748	J	0.20	0.030	ug/L			06/19/24 14:55	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/19/24 14:55	1
Trichloroethene	0.113	J	0.20	0.066	ug/L			06/19/24 14:55	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/19/24 14:55	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/19/24 14:55	1
Dibromomethane	ND		0.20	0.062	ug/L			06/19/24 14:55	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/19/24 14:55	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/19/24 14:55	1
Toluene	ND		0.20	0.050	ug/L			06/19/24 14:55	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

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

Lab Sample ID: MB 580-462691/7

Matrix: Water

Analysis Batch: 462691

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/19/24 14:55	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/19/24 14:55	1
Tetrachloroethene	ND		0.24	0.084	ug/L			06/19/24 14:55	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/19/24 14:55	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/19/24 14:55	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/19/24 14:55	1
Chlorobenzene	ND		0.20	0.060	ug/L			06/19/24 14:55	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/19/24 14:55	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/19/24 14:55	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/19/24 14:55	1
o-Xylene	ND		0.50	0.23	ug/L			06/19/24 14:55	1
Styrene	ND		1.0	0.33	ug/L			06/19/24 14:55	1
Bromoform	ND		0.50	0.16	ug/L			06/19/24 14:55	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/19/24 14:55	1
Bromobenzene	ND		0.20	0.038	ug/L			06/19/24 14:55	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/19/24 14:55	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/19/24 14:55	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/19/24 14:55	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/19/24 14:55	1
4-Chlorotoluene	ND		0.30	0.12	ug/L			06/19/24 14:55	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/19/24 14:55	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/19/24 14:55	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/19/24 14:55	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/19/24 14:55	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/19/24 14:55	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 14:55	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 14:55	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/19/24 14:55	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			06/19/24 14:55	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/19/24 14:55	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/19/24 14:55	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/19/24 14:55	1
Naphthalene	ND		1.5	0.52	ug/L			06/19/24 14:55	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/19/24 14:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		06/19/24 14:55	1
Dibromofluoromethane (Surr)	107		80 - 120		06/19/24 14:55	1
4-Bromofluorobenzene (Surr)	101		80 - 120		06/19/24 14:55	1
1,2-Dichloroethane-d4 (Surr)	111		80 - 120		06/19/24 14:55	1

Lab Sample ID: LCS 580-462691/4

Matrix: Water

Analysis Batch: 462691

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	4.40		ug/L		88	20 - 150
Chloromethane	5.00	3.75		ug/L		75	32 - 150

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

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

Lab Sample ID: LCS 580-462691/4

Matrix: Water

Analysis Batch: 462691

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Vinyl chloride	5.00	4.83		ug/L		97	41 - 150
Bromomethane	5.00	6.35		ug/L		127	51 - 148
Chloroethane	5.00	6.43		ug/L		129	54 - 140
Carbon disulfide	5.00	5.93		ug/L		119	54 - 142
Trichlorofluoromethane	5.00	5.67		ug/L		113	60 - 132
1,1-Dichloroethene	5.00	5.74		ug/L		115	60 - 129
Acetone	25.0	31.6		ug/L		126	49 - 150
Methylene Chloride	5.00	5.44		ug/L		109	40 - 142
Methyl tert-butyl ether	5.00	6.09		ug/L		122	61 - 131
2-Butanone (MEK)	25.0	32.2		ug/L		129	37 - 150
trans-1,2-Dichloroethene	5.00	5.71		ug/L		114	69 - 121
1,1-Dichloroethane	5.00	5.87		ug/L		117	74 - 120
2,2-Dichloropropane	5.00	6.00		ug/L		120	55 - 140
cis-1,2-Dichloroethene	5.00	5.85		ug/L		117	72 - 120
Chlorobromomethane	5.00	5.99		ug/L		120	79 - 121
Chloroform	5.00	5.89		ug/L		118	75 - 120
1,1,1-Trichloroethane	5.00	6.05		ug/L		121	70 - 121
Carbon tetrachloride	5.00	5.94		ug/L		119	66 - 130
1,1-Dichloropropene	5.00	5.79		ug/L		116	72 - 125
Benzene	5.00	5.47		ug/L		109	80 - 120
1,2-Dichloroethane	5.00	6.24		ug/L		125	74 - 127
Trichloroethene	5.00	5.61		ug/L		112	72 - 120
1,2-Dichloropropane	5.00	5.88		ug/L		118	69 - 130
4-Methyl-2-pentanone (MIBK)	25.0	27.7		ug/L		111	63 - 137
Dibromomethane	5.00	5.85		ug/L		117	65 - 141
Dichlorobromomethane	5.00	6.00		ug/L		120	74 - 131
cis-1,3-Dichloropropene	5.00	5.02		ug/L		100	77 - 131
Toluene	5.00	5.16		ug/L		103	80 - 126
trans-1,3-Dichloropropene	5.00	5.72		ug/L		114	71 - 138
1,1,2-Trichloroethane	5.00	5.46		ug/L		109	73 - 127
Tetrachloroethene	5.00	5.12		ug/L		102	75 - 124
1,3-Dichloropropane	5.00	5.41		ug/L		108	69 - 138
Chlorodibromomethane	5.00	5.68		ug/L		114	62 - 141
Ethylene Dibromide	5.00	5.71		ug/L		114	61 - 143
Chlorobenzene	5.00	5.20		ug/L		104	74 - 123
1,1,1,2-Tetrachloroethane	5.00	5.60		ug/L		112	69 - 127
Ethylbenzene	5.00	5.43		ug/L		109	80 - 124
m-Xylene & p-Xylene	5.00	5.36		ug/L		107	75 - 124
o-Xylene	5.00	5.43		ug/L		109	71 - 124
Styrene	5.00	5.11		ug/L		102	74 - 127
Bromoform	5.00	5.70		ug/L		114	48 - 127
Isopropylbenzene	5.00	5.51		ug/L		110	71 - 123
Bromobenzene	5.00	5.05		ug/L		101	74 - 130
1,1,2,2-Tetrachloroethane	5.00	5.43		ug/L		109	67 - 136
1,2,3-Trichloropropane	5.00	5.76		ug/L		115	67 - 135
N-Propylbenzene	5.00	5.29		ug/L		106	72 - 126
2-Chlorotoluene	5.00	5.09		ug/L		102	73 - 120
4-Chlorotoluene	5.00	5.45		ug/L		109	75 - 124
1,3,5-Trimethylbenzene	5.00	5.21		ug/L		104	75 - 123

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

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

Lab Sample ID: LCS 580-462691/4

Matrix: Water

Analysis Batch: 462691

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
tert-Butylbenzene	5.00	4.98		ug/L		100	70 - 129
1,2,4-Trimethylbenzene	5.00	5.17		ug/L		103	71 - 127
sec-Butylbenzene	5.00	4.88		ug/L		98	75 - 126
4-Isopropyltoluene	5.00	4.96		ug/L		99	78 - 125
1,3-Dichlorobenzene	5.00	5.08		ug/L		102	72 - 125
1,4-Dichlorobenzene	5.00	5.16		ug/L		103	71 - 129
n-Butylbenzene	5.00	4.89		ug/L		98	69 - 127
1,2-Dichlorobenzene	5.00	5.23		ug/L		105	72 - 129
1,2-Dibromo-3-Chloropropane	5.00	5.70		ug/L		114	55 - 135
1,2,4-Trichlorobenzene	5.00	5.13		ug/L		103	60 - 130
Hexachlorobutadiene	5.00	5.25		ug/L		105	63 - 130
Naphthalene	5.00	5.09		ug/L		102	54 - 137
1,2,3-Trichlorobenzene	5.00	5.47		ug/L		109	60 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	106		80 - 120
4-Bromofluorobenzene (Surr)	106		80 - 120
1,2-Dichloroethane-d4 (Surr)	111		80 - 120

Lab Sample ID: LCSD 580-462691/5

Matrix: Water

Analysis Batch: 462691

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	4.40		ug/L		88	20 - 150	0	30
Chloromethane	5.00	3.78		ug/L		76	32 - 150	1	33
Vinyl chloride	5.00	4.79		ug/L		96	41 - 150	1	32
Bromomethane	5.00	6.11		ug/L		122	51 - 148	4	35
Chloroethane	5.00	4.87		ug/L		97	54 - 140	27	33
Carbon disulfide	5.00	5.97		ug/L		119	54 - 142	1	34
Trichlorofluoromethane	5.00	5.56		ug/L		111	60 - 132	2	32
1,1-Dichloroethene	5.00	5.69		ug/L		114	60 - 129	1	29
Acetone	25.0	31.4		ug/L		126	49 - 150	1	24
Methylene Chloride	5.00	5.26		ug/L		105	40 - 142	3	25
Methyl tert-butyl ether	5.00	5.88		ug/L		118	61 - 131	3	27
2-Butanone (MEK)	25.0	31.7		ug/L		127	37 - 150	2	35
trans-1,2-Dichloroethene	5.00	5.78		ug/L		116	69 - 121	1	27
1,1-Dichloroethane	5.00	5.95		ug/L		119	74 - 120	1	26
2,2-Dichloropropane	5.00	6.01		ug/L		120	55 - 140	0	31
cis-1,2-Dichloroethene	5.00	5.72		ug/L		114	72 - 120	2	22
Chlorobromomethane	5.00	5.95		ug/L		119	79 - 121	1	20
Chloroform	5.00	5.92		ug/L		118	75 - 120	0	21
1,1,1-Trichloroethane	5.00	5.88		ug/L		118	70 - 121	3	24
Carbon tetrachloride	5.00	5.92		ug/L		118	66 - 130	0	24
1,1-Dichloropropene	5.00	6.00		ug/L		120	72 - 125	3	23
Benzene	5.00	5.42		ug/L		108	80 - 120	1	22
1,2-Dichloroethane	5.00	5.98		ug/L		120	74 - 127	4	21

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

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

Lab Sample ID: LCSD 580-462691/5

Matrix: Water

Analysis Batch: 462691

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
Trichloroethene	5.00	5.54		ug/L		111	72 - 120	1	22
1,2-Dichloropropane	5.00	5.82		ug/L		116	69 - 130	1	22
4-Methyl-2-pentanone (MIBK)	25.0	27.3		ug/L		109	63 - 137	2	26
Dibromomethane	5.00	5.99		ug/L		120	65 - 141	2	22
Dichlorobromomethane	5.00	5.95		ug/L		119	74 - 131	1	21
cis-1,3-Dichloropropene	5.00	5.04		ug/L		101	77 - 131	0	24
Toluene	5.00	5.18		ug/L		104	80 - 126	0	20
trans-1,3-Dichloropropene	5.00	5.70		ug/L		114	71 - 138	0	26
1,1,2-Trichloroethane	5.00	5.57		ug/L		111	73 - 127	2	22
Tetrachloroethene	5.00	5.16		ug/L		103	75 - 124	1	20
1,3-Dichloropropane	5.00	5.57		ug/L		111	69 - 138	3	19
Chlorodibromomethane	5.00	5.62		ug/L		112	62 - 141	1	22
Ethylene Dibromide	5.00	5.66		ug/L		113	61 - 143	1	22
Chlorobenzene	5.00	5.30		ug/L		106	74 - 123	2	21
1,1,1,2-Tetrachloroethane	5.00	5.56		ug/L		111	69 - 127	1	22
Ethylbenzene	5.00	5.39		ug/L		108	80 - 124	1	22
m-Xylene & p-Xylene	5.00	5.35		ug/L		107	75 - 124	0	22
o-Xylene	5.00	5.47		ug/L		109	71 - 124	1	23
Styrene	5.00	5.29		ug/L		106	74 - 127	3	22
Bromoform	5.00	5.55		ug/L		111	48 - 127	3	23
Isopropylbenzene	5.00	5.54		ug/L		111	71 - 123	0	23
Bromobenzene	5.00	5.08		ug/L		102	74 - 130	1	23
1,1,2,2-Tetrachloroethane	5.00	5.49		ug/L		110	67 - 136	1	24
1,2,3-Trichloropropane	5.00	5.78		ug/L		116	67 - 135	0	25
N-Propylbenzene	5.00	5.28		ug/L		106	72 - 126	0	20
2-Chlorotoluene	5.00	5.18		ug/L		104	73 - 120	2	22
4-Chlorotoluene	5.00	5.68		ug/L		114	75 - 124	4	23
1,3,5-Trimethylbenzene	5.00	5.20		ug/L		104	75 - 123	0	23
tert-Butylbenzene	5.00	4.93		ug/L		99	70 - 129	1	24
1,2,4-Trimethylbenzene	5.00	5.30		ug/L		106	71 - 127	2	23
sec-Butylbenzene	5.00	4.96		ug/L		99	75 - 126	1	23
4-Isopropyltoluene	5.00	4.97		ug/L		99	78 - 125	0	24
1,3-Dichlorobenzene	5.00	5.18		ug/L		104	72 - 125	2	22
1,4-Dichlorobenzene	5.00	5.30		ug/L		106	71 - 129	3	22
n-Butylbenzene	5.00	4.91		ug/L		98	69 - 127	1	24
1,2-Dichlorobenzene	5.00	5.28		ug/L		106	72 - 129	1	22
1,2-Dibromo-3-Chloropropane	5.00	5.68		ug/L		114	55 - 135	0	29
1,2,4-Trichlorobenzene	5.00	4.95		ug/L		99	60 - 130	4	26
Hexachlorobutadiene	5.00	5.08		ug/L		102	63 - 130	3	26
Naphthalene	5.00	4.92		ug/L		98	54 - 137	3	28
1,2,3-Trichlorobenzene	5.00	5.24		ug/L		105	60 - 136	4	28

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	106		80 - 120
4-Bromofluorobenzene (Surr)	104		80 - 120
1,2-Dichloroethane-d4 (Surr)	109		80 - 120

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Method: 314.0 - Perchlorate (IC)

Lab Sample ID: MB 320-772645/5

Matrix: Water

Analysis Batch: 772645

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		4.0	2.0	ug/L			06/17/24 13:18	1

Lab Sample ID: LCS 320-772645/6

Matrix: Water

Analysis Batch: 772645

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	50.0	52.2		ug/L		104	85 - 115

Lab Sample ID: MRL 320-772645/4

Matrix: Water

Analysis Batch: 772645

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	4.00	3.64	J	ug/L		91	75 - 125

Lab Sample ID: 580-141081-2 MS

Matrix: Water

Analysis Batch: 772645

Client Sample ID: MWA-82-061024

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	270		500	824		ug/L		111	80 - 120

Lab Sample ID: 580-141081-2 MSD

Matrix: Water

Analysis Batch: 772645

Client Sample ID: MWA-82-061024

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perchlorate	270		500	800		ug/L		106	80 - 120	3	20

Lab Sample ID: MB 320-772648/12

Matrix: Water

Analysis Batch: 772648

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		4.0	2.0	ug/L			06/17/24 14:58	1

Lab Sample ID: LCS 320-772648/13

Matrix: Water

Analysis Batch: 772648

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	50.0	51.5		ug/L		103	85 - 115

Lab Sample ID: MRL 320-772648/11

Matrix: Water

Analysis Batch: 772648

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	4.00	4.38		ug/L		110	75 - 125

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Method: 314.0 - Perchlorate (IC)

Lab Sample ID: 580-141081-15 MS

Matrix: Water

Analysis Batch: 772648

Client Sample ID: PA-22d-061224

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	14000		25000	38700		ug/L		100	80 - 120

Lab Sample ID: 580-141081-15 MSD

Matrix: Water

Analysis Batch: 772648

Client Sample ID: PA-22d-061224

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perchlorate	14000		25000	38900		ug/L		101	80 - 120	1	20

Lab Sample ID: MB 320-773540/5

Matrix: Water

Analysis Batch: 773540

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		4.0	2.0	ug/L			06/20/24 16:50	1

Lab Sample ID: LCS 320-773540/6

Matrix: Water

Analysis Batch: 773540

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	50.0	48.3		ug/L		97	85 - 115

Lab Sample ID: MRL 320-773540/4

Matrix: Water

Analysis Batch: 773540

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	4.00	3.59	J	ug/L		90	75 - 125

Lab Sample ID: 580-141081-12 MS

Matrix: Water

Analysis Batch: 773540

Client Sample ID: PA-15i-061224

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	ND		250	241		ug/L		97	80 - 120

Lab Sample ID: 580-141081-12 MSD

Matrix: Water

Analysis Batch: 773540

Client Sample ID: PA-15i-061224

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		250	246		ug/L		98	80 - 120	2	20

QC Sample Results

Client: ERM-West

Job ID: 580-141081-1

Project/Site: Arkema - Q2 2024 Groundwater Event

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-462809/3

Matrix: Water

Analysis Batch: 462809

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			06/19/24 17:13	1

Lab Sample ID: LCS 580-462809/4

Matrix: Water

Analysis Batch: 462809

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	51.9		mg/L		104	90 - 110

Lab Sample ID: LCSD 580-462809/5

Matrix: Water

Analysis Batch: 462809

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	51.8		mg/L		104	90 - 110	0	15

Lab Sample ID: 580-141081-12 MS

Matrix: Water

Analysis Batch: 462809

Client Sample ID: PA-15i-061224

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	86	F1	50.0	128	F1	mg/L		83	90 - 110

Lab Sample ID: 580-141081-12 MSD

Matrix: Water

Analysis Batch: 462809

Client Sample ID: PA-15i-061224

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	86	F1	50.0	123	F1	mg/L		73	90 - 110	4	15

Lab Sample ID: MB 580-462820/3

Matrix: Water

Analysis Batch: 462820

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			06/20/24 02:57	1

Lab Sample ID: LCS 580-462820/4

Matrix: Water

Analysis Batch: 462820

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	52.0		mg/L		104	90 - 110

Lab Sample ID: LCSD 580-462820/5

Matrix: Water

Analysis Batch: 462820

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	52.0		mg/L		104	90 - 110	0	15

Eurofins Seattle

Lab Chronicle

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: TB-061024

Lab Sample ID: 580-141081-1

Date Collected: 06/10/24 00:01

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462298	AA	EET SEA	06/14/24 17:15

Client Sample ID: MWA-82-061024

Lab Sample ID: 580-141081-2

Date Collected: 06/10/24 09:17

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462298	AA	EET SEA	06/14/24 19:34
Total/NA	Analysis	314.0		10	772645	JCB	EET SAC	06/17/24 13:58
Total/NA	Analysis	300.0		1	462809	CA	EET SEA	06/19/24 17:49

Client Sample ID: MWA-81i-061024

Lab Sample ID: 580-141081-3

Date Collected: 06/10/24 13:14

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462298	AA	EET SEA	06/14/24 19:58
Total/NA	Analysis	314.0		1	772645	JCB	EET SAC	06/17/24 14:52
Total/NA	Analysis	300.0		1	462809	CA	EET SEA	06/19/24 18:01

Client Sample ID: MWA-41-061024

Lab Sample ID: 580-141081-4

Date Collected: 06/10/24 13:50

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462298	AA	EET SEA	06/14/24 20:21
Total/NA	Analysis	314.0		1	772645	JCB	EET SAC	06/17/24 15:10
Total/NA	Analysis	300.0		1	462809	CA	EET SEA	06/19/24 18:13

Client Sample ID: PA-08-061024

Lab Sample ID: 580-141081-5

Date Collected: 06/10/24 09:25

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462298	AA	EET SEA	06/14/24 20:44
Total/NA	Analysis	314.0		5	772645	JCB	EET SAC	06/17/24 15:28
Total/NA	Analysis	300.0		10	462809	CA	EET SEA	06/19/24 18:37

Client Sample ID: PA-09-061024

Lab Sample ID: 580-141081-6

Date Collected: 06/10/24 11:04

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462298	AA	EET SEA	06/14/24 21:07
Total/NA	Analysis	314.0		5	772645	JCB	EET SAC	06/17/24 15:46

Eurofins Seattle

Lab Chronicle

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-09-061024

Lab Sample ID: 580-141081-6

Date Collected: 06/10/24 11:04

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		10	462809	CA	EET SEA	06/19/24 19:01

Client Sample ID: PA-26d-061024

Lab Sample ID: 580-141081-7

Date Collected: 06/10/24 12:25

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462298	AA	EET SEA	06/14/24 21:31
Total/NA	Analysis	314.0		1	772645	JCB	EET SAC	06/17/24 16:03
Total/NA	Analysis	300.0		1	462809	CA	EET SEA	06/19/24 19:36

Client Sample ID: PA-16i-061024

Lab Sample ID: 580-141081-8

Date Collected: 06/10/24 13:50

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462691	AA	EET SEA	06/19/24 18:06
Total/NA	Analysis	314.0		5	772645	JCB	EET SAC	06/17/24 16:57
Total/NA	Analysis	300.0		1	462809	CA	EET SEA	06/19/24 20:00

Client Sample ID: PA-44i-061124

Lab Sample ID: 580-141081-9

Date Collected: 06/11/24 09:28

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462481	AA	EET SEA	06/18/24 02:38
Total/NA	Analysis	314.0		5	772645	JCB	EET SAC	06/17/24 17:15
Total/NA	Analysis	300.0		100	462809	CA	EET SEA	06/19/24 20:24

Client Sample ID: PA-25d-061124

Lab Sample ID: 580-141081-10

Date Collected: 06/11/24 13:08

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462481	AA	EET SEA	06/18/24 03:01
Total/NA	Analysis	314.0		1	772645	JCB	EET SAC	06/17/24 17:33
Total/NA	Analysis	300.0		1	462809	CA	EET SEA	06/19/24 20:36

Client Sample ID: PA-23d-061124

Lab Sample ID: 580-141081-11

Date Collected: 06/11/24 11:45

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462481	AA	EET SEA	06/18/24 03:24
Total/NA	Analysis	314.0		200	772645	JCB	EET SAC	06/17/24 19:20

Eurofins Seattle

Lab Chronicle

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-23d-061124

Lab Sample ID: 580-141081-11

Date Collected: 06/11/24 11:45

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1000	462809	CA	EET SEA	06/19/24 21:00

Client Sample ID: PA-15i-061224

Lab Sample ID: 580-141081-12

Date Collected: 06/12/24 06:46

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462481	AA	EET SEA	06/18/24 04:33
Total/NA	Analysis	314.0		5	773540	CFR	EET SAC	06/20/24 17:26
Total/NA	Analysis	300.0		1	462809	CA	EET SEA	06/19/24 21:12

Client Sample ID: RB-01-061224

Lab Sample ID: 580-141081-13

Date Collected: 06/12/24 07:25

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462481	AA	EET SEA	06/18/24 04:56
Total/NA	Analysis	314.0		1	772645	JCB	EET SAC	06/17/24 19:38
Total/NA	Analysis	300.0		1	462809	CA	EET SEA	06/19/24 22:11

Client Sample ID: PA-24d-061224

Lab Sample ID: 580-141081-14

Date Collected: 06/12/24 08:28

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462481	AA	EET SEA	06/18/24 03:47
Total/NA	Analysis	314.0		200	772648	JCB	EET SAC	06/17/24 15:28
Total/NA	Analysis	300.0		1000	462809	CA	EET SEA	06/19/24 22:35

Client Sample ID: PA-22d-061224

Lab Sample ID: 580-141081-15

Date Collected: 06/12/24 09:56

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462481	AA	EET SEA	06/18/24 04:10
Total/NA	Analysis	314.0		500	772648	JCB	EET SAC	06/17/24 15:43
Total/NA	Analysis	300.0		100	462809	CA	EET SEA	06/19/24 22:47

Client Sample ID: MWA-31i(d)-061224

Lab Sample ID: 580-141081-16

Date Collected: 06/12/24 11:20

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		10	462481	AA	EET SEA	06/18/24 08:25
Total/NA	Analysis	314.0		2000	772648	JCB	EET SAC	06/17/24 16:28

Eurofins Seattle

Lab Chronicle

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: MWA-31i(d)-061224

Lab Sample ID: 580-141081-16

Date Collected: 06/12/24 11:20

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1000	462809	CA	EET SEA	06/19/24 23:23

Client Sample ID: MWA-58d-061224

Lab Sample ID: 580-141081-17

Date Collected: 06/12/24 12:08

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		10	462481	AA	EET SEA	06/18/24 08:48
Total/NA	Analysis	314.0		1000	772648	JCB	EET SAC	06/17/24 16:43
Total/NA	Analysis	300.0		1000	462809	CA	EET SEA	06/19/24 23:47

Client Sample ID: MWA-56d-061224

Lab Sample ID: 580-141081-18

Date Collected: 06/12/24 12:54

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		10	462481	AA	EET SEA	06/18/24 09:11
Total/NA	Analysis	314.0		1000	772648	JCB	EET SAC	06/17/24 16:58
Total/NA	Analysis	300.0		1000	462809	CA	EET SEA	06/20/24 00:34

Client Sample ID: PA-03-061224

Lab Sample ID: 580-141081-19

Date Collected: 06/12/24 07:10

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462616	AA	EET SEA	06/19/24 05:02
Total/NA	Analysis	314.0		5	772645	JCB	EET SAC	06/17/24 18:27
Total/NA	Analysis	300.0		1	462809	CA	EET SEA	06/20/24 00:46

Client Sample ID: DUP-01-061224

Lab Sample ID: 580-141081-20

Date Collected: 06/12/24 07:11

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462616	AA	EET SEA	06/19/24 05:25
Total/NA	Analysis	314.0		2	772645	JCB	EET SAC	06/17/24 18:09
Total/NA	Analysis	300.0		1	462820	CA	EET SEA	06/20/24 03:33

Client Sample ID: PA-17iR-061224

Lab Sample ID: 580-141081-21

Date Collected: 06/12/24 09:11

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462616	AA	EET SEA	06/19/24 05:48
Total/NA	Analysis	314.0		5	772645	JCB	EET SAC	06/17/24 18:44

Eurofins Seattle

Lab Chronicle

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Client Sample ID: PA-17iR-061224

Lab Sample ID: 580-141081-21

Date Collected: 06/12/24 09:11

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	300.0		1	462820	CA	EET SEA	06/20/24 03:45

Client Sample ID: PA-27d-061224

Lab Sample ID: 580-141081-22

Date Collected: 06/12/24 10:28

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462616	AA	EET SEA	06/19/24 06:12
Total/NA	Analysis	314.0		5	772645	JCB	EET SAC	06/17/24 19:02
Total/NA	Analysis	300.0		100	462820	CA	EET SEA	06/20/24 04:09

Client Sample ID: PA-04-061224

Lab Sample ID: 580-141081-23

Date Collected: 06/12/24 12:15

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462616	AA	EET SEA	06/19/24 06:35
Total/NA	Analysis	314.0		1	772645	JCB	EET SAC	06/17/24 17:51
Total/NA	Analysis	300.0		1	462820	CA	EET SEA	06/20/24 04:21

Client Sample ID: PA-10i-061224

Lab Sample ID: 580-141081-24

Date Collected: 06/12/24 12:55

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462616	AA	EET SEA	06/19/24 06:58
Total/NA	Analysis	314.0		5	773540	CFR	EET SAC	06/20/24 18:19
Total/NA	Analysis	300.0		1	462820	CA	EET SEA	06/20/24 04:33

Client Sample ID: PA-18d-061224

Lab Sample ID: 580-141081-25

Date Collected: 06/12/24 13:48

Matrix: Water

Date Received: 06/13/24 12:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462616	AA	EET SEA	06/19/24 07:21
Total/NA	Analysis	314.0		5	773540	CFR	EET SAC	06/20/24 18:37
Total/NA	Analysis	300.0		1	462820	CA	EET SEA	06/20/24 04:45

Laboratory References:

EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

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

Eurofins Seattle

Accreditation/Certification Summary

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141081-1

Laboratory: Eurofins Seattle

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

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4167	07-07-24

Laboratory: Eurofins Sacramento

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

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4040	01-29-25

1
2
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11
12

Sample Summary

Client: ERM-West

Job ID: 580-141081-1

Project/Site: Arkema - Q2 2024 Groundwater Event

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-141081-1	TB-061024	Water	06/10/24 00:01	06/13/24 12:20
580-141081-2	MWA-82-061024	Water	06/10/24 09:17	06/13/24 12:20
580-141081-3	MWA-81i-061024	Water	06/10/24 13:14	06/13/24 12:20
580-141081-4	MWA-41-061024	Water	06/10/24 13:50	06/13/24 12:20
580-141081-5	PA-08-061024	Water	06/10/24 09:25	06/13/24 12:20
580-141081-6	PA-09-061024	Water	06/10/24 11:04	06/13/24 12:20
580-141081-7	PA-26d-061024	Water	06/10/24 12:25	06/13/24 12:20
580-141081-8	PA-16i-061024	Water	06/10/24 13:50	06/13/24 12:20
580-141081-9	PA-44i-061124	Water	06/11/24 09:28	06/13/24 12:20
580-141081-10	PA-25d-061124	Water	06/11/24 13:08	06/13/24 12:20
580-141081-11	PA-23d-061124	Water	06/11/24 11:45	06/13/24 12:20
580-141081-12	PA-15i-061224	Water	06/12/24 06:46	06/13/24 12:20
580-141081-13	RB-01-061224	Water	06/12/24 07:25	06/13/24 12:20
580-141081-14	PA-24d-061224	Water	06/12/24 08:28	06/13/24 12:20
580-141081-15	PA-22d-061224	Water	06/12/24 09:56	06/13/24 12:20
580-141081-16	MWA-31i(d)-061224	Water	06/12/24 11:20	06/13/24 12:20
580-141081-17	MWA-58d-061224	Water	06/12/24 12:08	06/13/24 12:20
580-141081-18	MWA-56d-061224	Water	06/12/24 12:54	06/13/24 12:20
580-141081-19	PA-03-061224	Water	06/12/24 07:10	06/13/24 12:20
580-141081-20	DUP-01-061224	Water	06/12/24 07:11	06/13/24 12:20
580-141081-21	PA-17iR-061224	Water	06/12/24 09:11	06/13/24 12:20
580-141081-22	PA-27d-061224	Water	06/12/24 10:28	06/13/24 12:20
580-141081-23	PA-04-061224	Water	06/12/24 12:15	06/13/24 12:20
580-141081-24	PA-10i-061224	Water	06/12/24 12:55	06/13/24 12:20
580-141081-25	PA-18d-061224	Water	06/12/24 13:48	06/13/24 12:20

Chain of Custody Record

Client Information		Sampler: ST/INF		Lab PM: Cruz, Sheri L		Carrier Tracking No(s):		COC No:	
Client Contact: Avery Soplata and Andrew Gardner		Phone:		E-Mail: sheri.cruz@testamericainc.com				Page: 1 of 3	
Company: ERM-West		Due Date Requested:		Analysis Requested				Job #:	
Address: 1050 SW 6th Avenue Suite 1650		TAT Requested (days): 15BD		8260C regular level standard VOA list-Seattle		8260C LL - Standard VOA list-Seattle		Preservation Codes:	
City: Portland				Field Filtered Sample (Yes or No)		314 Perchlorate		Total Number of Containers	
State, Zip: OR, 97204				Perform MS/MSD (Yes or No)		300.0 28D-Chloride-Seattle			
Phone:		PO #: PN 0732445.207		Matrix		Preservation Code:		Special Instructions/Note:	
Email: avery.soplata@erm.com andrew.gardner@erm.com		WO #:		Sample Type (C=Comp, G=grab)		Sample Time			
Project Name: Arkema - Q2 2024 Groundwater event		Project #: 0732445		Sample Date		Sample Time			
Site:		SSOW#:							
Sample Identification		Sample Date		Sample Time		Sample Type		Matrix	
TB-061024		6/10/24		0915		G		Water	
MW-A-82-061024				1314		G		Water	
MW-A-81-061024				1350		G		Water	
MW-A-41-061024				0925		G		Water	
PA-08-061024				1104		G		Water	
PA-26d-061024				1225		G		Water	
PA-16-061024				1350		G		Water	
PA-44-061024		6/11/24		0928		G		Water	
PA-25d-061124				1300		G		Water	
PA-23d-061124				1145		G		Water	
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:		Date/Time:		Date/Time:		Company	
Relinquished by:		Date/Time:		Date/Time:		Date/Time:		Company	
Relinquished by:		Date/Time:		Date/Time:		Date/Time:		Company	
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		0.5 / 0.6 10X5CIR			

Chain of Custody Record

Client Information		Lab PM:		Carrier Tracking No(s):		COC No:							
Client Contact:		Cruz, Sheri L											
Avery Soplata and Andrew Gardner		E-Mail:				Page: 2 of 3							
Company:		sheril.cruz@testamericainc.com				Job #:							
ERM-West													
Address:		1050 SW 6th Avenue Suite 1650											
City:		Portland											
State, Zip:		OR, 97204											
Phone:		PN 0732445.207											
Email:		avery.soplata@erm.com andrew.gardner@erm.com											
Project Name:		0732445											
Arkema - Q2 2024 Groundwater event													
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 MSD (Yes or No)	8260C regular level standard VOA list-Seattle	8260C LL - Standard VOA list-Seattle	300.0 28D-Chloride-Seattle	314 Perchlorate	MS/MS D	Total Number of containers	Special Instructions/Note:
PA-157-061224	6/12/24	0646	G	Water			X	X	X	X	X	15	
RB-01-061224		0725		Water			X	X	X	X		5	
PA-24d-061224		0828		Water			X	X	X	X		5	
PA-22d-061224		0956		Water			X	X	X	X		5	
MWA-31(d)-061224		1120		Water			X	X	X	X		5	
MWA-58d-061224		1208		Water			X	X	X	X		5	
MWA-56d-061224		1254		Water			X	X	X	X		5	
PA-03-061224		0710		Water			X	X	X	X		5	
Dup-01-061224		0711		Water			X	X	X	X		5	
PA-17i-R-061224		0911					X	X	X	X		5	
PA-07d-061224		1028					X	X	X	X		5	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)													
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months													
Special Instructions/QC Requirements: please run at lowest dilution possible for ND.													
Empty Kit Relinquished by:													
Relinquished by: <i>gk</i> Date: 6/13/24 Time: 0955 Company: ERM													
Relinquished by: <i>AMM</i> Date: 6/13/24 Time: 1220 Company: M.E.													
Relinquished by: <i>AMM</i> Date: 6/13/24 Time: 1220 Company: M.E.													
Custody Seals Intact ☐ Yes ☐ No													
Custody Seal No.: 0.5/0.6													
Cooler Temperature(s) °C and Other Remarks:													

Client Information				Lab PM: Cruz, Sheri L		Carrier Tracking No(s):		OCC No:	
Client Contact:				Phone:		E-Mail:		Page: 3 of 3	
Company:				Address:		Job #:		Job #:	
Avery Soplat and Andrew Gardner				1050 SW 6th Avenue Suite 1650		158D		Preservation Codes:	
ERM-West				City: Portland		TAT Requested (days):		A - HCL	
ERM-West				State, Zip: OR, 97204		PO #:		B - NaOH	
ERM-West				Phone:		WO #:		C - Zn Acetate	
ERM-West				Email: avery.soplat@erm.com andrew.gardner@erm.com		Project #:		D - Nitric Acid	
ERM-West				Project Name: Arkema - Q2 2024 Groundwater event		SSOW#:		E - NaHSO4	
ERM-West				Site:		Sample Date		F - MeOH	
ERM-West				Sample Time		Sample Type (C=Comp, G=grab)		G - Anchor	
ERM-West				Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)		Preservation Code		H - Ascorbic Acid	
ERM-West				Sample Identification		Sample Date		I - Ice	
ERM-West				Sample Time		Sample Type (C=Comp, G=grab)		J - DI Water	
ERM-West				Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)		Preservation Code		K - EDTA	
ERM-West				Sample Date		Sample Type (C=Comp, G=grab)		L - EDA	
ERM-West				Sample Time		Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)		Other:	
ERM-West				Sample Identification		Sample Date		Total Number of containers	
ERM-West				Sample Time		Sample Type (C=Comp, G=grab)		Special Instructions/Note:	
ERM-West				Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)		Preservation Code			
ERM-West				Sample Date		Sample Type (C=Comp, G=grab)			
ERM-West				Sample Time		Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)			
ERM-West				Sample Identification		Sample Date			
ERM-West				Sample Time		Sample Type (C=Comp, G=grab)			
ERM-West				Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)		Preservation Code			
ERM-West				Sample Date		Sample Type (C=Comp, G=grab)			
ERM-West				Sample Time		Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)			
ERM-West				Sample Identification		Sample Date			
ERM-West				Sample Time		Sample Type (C=Comp, G=grab)			
ERM-West				Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)		Preservation Code			
ERM-West				Sample Date		Sample Type (C=Comp, G=grab)			
ERM-West				Sample Time		Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)			
ERM-West				Sample Identification		Sample Date			
ERM-West				Sample Time		Sample Type (C=Comp, G=grab)			
ERM-West				Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)		Preservation Code			
ERM-West				Sample Date		Sample Type (C=Comp, G=grab)			
ERM-West				Sample Time		Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)			
ERM-West				Sample Identification		Sample Date			
ERM-West				Sample Time		Sample Type (C=Comp, G=grab)			
ERM-West				Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)		Preservation Code			
ERM-West				Sample Date		Sample Type (C=Comp, G=grab)			
ERM-West				Sample Time		Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)			
ERM-West				Sample Identification		Sample Date			
ERM-West				Sample Time		Sample Type (C=Comp, G=grab)			
ERM-West				Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)		Preservation Code			
ERM-West				Sample Date		Sample Type (C=Comp, G=grab)			
ERM-West				Sample Time		Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)			
ERM-West				Sample Identification		Sample Date			
ERM-West				Sample Time		Sample Type (C=Comp, G=grab)			
ERM-West				Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)		Preservation Code			
ERM-West				Sample Date		Sample Type (C=Comp, G=grab)			
ERM-West				Sample Time		Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)			
ERM-West				Sample Identification		Sample Date			
ERM-West				Sample Time		Sample Type (C=Comp, G=grab)			
ERM-West				Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)		Preservation Code			
ERM-West				Sample Date		Sample Type (C=Comp, G=grab)			
ERM-West				Sample Time		Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)			
ERM-West				Sample Identification		Sample Date			
ERM-West				Sample Time		Sample Type (C=Comp, G=grab)			
ERM-West				Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)		Preservation Code			
ERM-West				Sample Date		Sample Type (C=Comp, G=grab)			
ERM-West				Sample Time		Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)			
ERM-West				Sample Identification		Sample Date			
ERM-West				Sample Time		Sample Type (C=Comp, G=grab)			
ERM-West				Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)		Preservation Code			
ERM-West				Sample Date		Sample Type (C=Comp, G=grab)			
ERM-West				Sample Time		Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)			
ERM-West				Sample Identification		Sample Date			
ERM-West				Sample Time		Sample Type (C=Comp, G=grab)			
ERM-West				Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)		Preservation Code			
ERM-West				Sample Date		Sample Type (C=Comp, G=grab)			
ERM-West				Sample Time		Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)			
ERM-West				Sample Identification		Sample Date			
ERM-West				Sample Time		Sample Type (C=Comp, G=grab)			
ERM-West				Sample Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air)		Preservation Code			
ERM-West				Sample Date		Sample Type (C=Comp, G=grab)			
ERM-West				Sample Time					

Eurofins TestAmerica, Seattle

5755 8th Street East

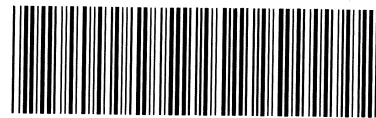
Tacoma, WA 98424

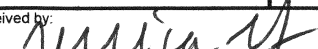
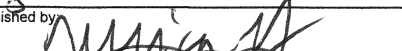
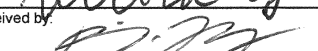
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

Environment Testing
TestAmerica

Client Information		Sampler: ST/INF		Lab PM: Cruz, Sheri L		Carrier Tracking No(s):		COC No:					
Client Contact: Avery Soplat and Andrew Gardner		Phone:		E-Mail: sheri.cruz@testamericainc.com				Page: 1 of 3					
Company: ERM-West						Analysis Requested		Job #:					
Address: 1050 SW 6th Avenue Suite 1650		Due Date Requested:						Preservation Codes:					
City: Portland		TAT Requested (days): 15BD						A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA					
State, Zip: OR, 97204		PO #: PN 0732445.207						M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)					
Phone:		WO #:						Other:					
Email: avery.soplat@erm.com andrew.gardner@erm.com		Project #: 0732445											
Project Name: Arkema - Q2 2024 Groundwater event		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)	Perform MS/MSD (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	Special Instructions/Note:
								A	A	N	N		
TB-061024		6/10/24		G	Water				X			2	
MWA-82-061024			0915		Water				X	X	X	5	
MWA-819-061024			1314		Water				X	X	X	5	
MWA-41-061024			1350		Water				X	X	X	5	
PA-08-061024			0925		Water				X	X	X	5	
PA-09-061024			1104		Water				X	X	X	5	
PA-26d-061024			1225		Water				X	X	X	5	
PA-16i-061024			1350		Water				X	X	X	5	
PA-44i-061024		6/11/24	0928	G	Water				X	X	X		
PA-25d-061124			1300						X	X	X		
PA-23d-061124			1145						X	X	X		


580-141081 Chain of Custody

Possible Hazard Identification				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological				☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months			
Deliverable Requested: I, II, III, IV, Other (specify)				Special Instructions/QC Requirements: please run at lowest dilution possible for ND.			
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: 		Date/Time: 6/13/24 0955		Company: ERM		Received by: 	
Relinquished by: 		Date/Time: 6/13/24 1220		Company: M-E		Received by: 	
Relinquished by: 		Date/Time: 6/13/24 1700		Company: EETN		Received by: 	
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 0.5 / 0.6 PDXSIR			

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

Client Information		Sampler: ST/INF		Lab PM: Cruz, Sheri L		Carrier Tracking No(s):		COC No:						
Client Contact: Avery Soplat and Andrew Gardner		Phone:		E-Mail: sheri.cruz@testamericainc.com				Page: 2 of 3						
Company: ERM-West						Analysis Requested		Job #:						
Address: 1050 SW 6th Avenue Suite 1650		Due Date Requested:						Preservation Codes:						
City: Portland		TAT Requested (days): 15BD						A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)						
State, Zip: OR, 97204		PO #: PN 0732445.207												
Phone:		WO #:												
Email: avery.soplat@erm.com andrew.gardner@erm.com		Project #: 0732445												
Project Name: Arkema - Q2 2024 Groundwater event		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)	Perform MS/MSD (Yes or No)	8260C regular level standard VOA list-Seattle	8260C_LL - Standard VOA list-Seattle	300.0_28D-Chloride-Seattle	314 Perchlorate	MS/MSD	Total Number of containers	Special Instructions/Note:
PA-157-061224		6/12/24	0646	G	Water			X	X	X		X	15	
RB-01-061224			0725		Water			X		X	X		5	
PA-24d-061224			0828		Water			X		X	X		5	
PA-22d-061224			0956		Water			X		X	X		5	
MWA-31(d)-061224			1120		Water			X		X	X		5	
MWA-58d-061224			1208		Water			X		X	X		5	
MWA-56d-061224			1254		Water			X		X	X		5	
PA-03-061224			0710		Water			X	X	X	X		5	
Dup-01-061224			0711		Water				X	X	X		5	
PA-17iR-061224			0911						X	X	X		5	
PA-37d-061224			1028					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: please run at lowest dilution possible for ND.														
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:								
Relinquished by:		Date/Time: 6/13/24 0955		Company: ERM		Received by:		Date/Time: 6/13/24 0955		Company: M.E.				
Relinquished by:		Date/Time: 6/13/24 1220		Company: M.E.		Received by:		Date/Time: 6/13/24 1220		Company: EET				
Relinquished by:		Date/Time: 6/13/24 1720		Company: EET		Received by:		Date/Time: 6/14/24 1025		Company: EETW				
Custody Seal Intact: ☒ Yes ☐ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 0.5 / 0.6										

 eurofins | Environment Testing
TestAmerica

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: ERM-West

Job Number: 580-141081-1

Login Number: 141081

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	Preservation labels on samples match COC
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (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: 580-141081-1

Login Number: 141081

List Number: 2

Creator: Simmons, Jason C

List Source: Eurofins Sacramento

List Creation: 06/14/24 03:18 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	2462435
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.5c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing

Sacramento Sample Receiving Notes (SSRN)

Job _____



580 141081 Field Sheet

Tracking #

726071604265

SO PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSL / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations
File in the job folder with the COC

Therm. ID L-11 Corr. Factor (+/-) _____ °C

Ice / Wet / Gel _____ Other _____

Cooler Custody Seal 2462435

Cooler ID: _____

Temp Observed 25 °C Corrected 25 °C

From: Temp Blank ☐ Sample ☒

Opening/Processing The Shipment

	Yes	No	NA
Cooler compromised/tampered with?	☐	☒	☐
Cooler Temperature is acceptable?	☒	☐	☐
Frozen samples show signs of thaw?	☐	☐	☒

Initials: [Signature] Date 6.14.24

Unpacking/Labeling The Samples

	Yes	No	NA
Containers are not broken or leaking?	☒	☐	☐
Samples compromised/tampered with?	☐	☒	☐
COC is complete w/o discrepancies	☒	☐	☐
Sample custody seal?	☐	☐	☒
Sample containers have legible labels?	☒	☐	☐
Sample date/times are provided?	☒	☐	☐
Appropriate containers are used?	☒	☐	☐
Sample bottles are completely filled?	☒	☐	☐
Sample preservatives verified?	☐	☐	☒
Is the Field Sampler's name on COC?	☐	☐	☒
Samples w/o discrepancies?	☒	☐	☐
Zero headspace?*	☐	☐	☒
Alkalinity has no headspace?	☐	☐	☒
Perchlorate has headspace?	☒	☐	☒
(Methods 314, 331, 6850)			
Multiphasic samples are not present?	☒	☐	☐

Initials: [Signature] Date 6.14.24

Notes: _____

Trizma Lot #(s) _____

Ammonium

Acetate Lot #(s) _____



Environment Testing

Sacramento Sample Receiving Notes (SSRN)

Job: _____



580 141081 Field Sheet

Tracking #

726071604265

SO PO / FO / SAT / 2-Day / Ground / UPS / CDO / Courier
GSL / OnTrac / Goldstreak / USPS / Other _____

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC

Therm. ID L-11 Corr Factor (+/-) _____ °C

Ice / Wet / Gel _____ Other _____

Cooler Custody Seal: 2462435

Cooler ID _____

Temp Observed: 25 °C Corrected: 25 °C
From Temp Blank ☐ Sample ☒

Opening/Processing The Shipment

	Yes	No	NA
Cooler compromised/tampered with?	☐	☒	☐
Cooler Temperature is acceptable?	☒	☐	☐
Frozen samples show signs of thaw?	☐	☐	☒

Initials: [Signature] Date: 6.14.24

Unpacking/Labeling The Samples

	Yes	No	NA
Containers are not broken or leaking?	☒	☐	☐
Samples compromised/tampered with?	☐	☒	☐
COC is complete w/o discrepancies	☒	☐	☐
Sample custody seal?	☐	☐	☒
Sample containers have legible labels?	☒	☐	☐
Sample date/times are provided?	☒	☐	☐
Appropriate containers are used?	☒	☐	☐
Sample bottles are completely filled?	☒	☐	☐
Sample preservatives verified?	☐	☐	☒
Is the Field Sampler's name on COC?	☐	☐	☒
Samples w/o discrepancies?	☒	☐	☐
Zero headspace?*	☐	☐	☒
Alkalinity has no headspace?	☐	☐	☒
Perchlorate has headspace?	☒	☐	☒
(Methods 314, 381, 6850)			
Multiphasic samples are not present?	☒	☐	☐

Notes: _____

Trizma Lot #(s) _____

Ammonium

Acetate Lot #(s). _____



ANALYTICAL REPORT

PREPARED FOR

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

Generated 6/26/2024 6:01:09 PM Revision 1

JOB DESCRIPTION

Arkema - Q2 2024 Groundwater Event

JOB NUMBER

580-141133-1

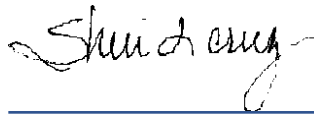
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Job Notes

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

Authorization



Authorized for release by
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(253)922-2310

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Case Narrative

Client: ERM-West
Project: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Job ID: 580-141133-1

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Job Narrative 580-141133-1

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

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

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

Receipt

The samples were received on 6/14/2024 1:20 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.5°C.

GC/MS VOA

Method 8260D: The method blank for analytical batch 580-462616 contained Benzene above the method detection limit. This target analyte concentration was less than the reporting limit (RL) in the method blank; therefore, re-extraction and/or re-analysis of samples was not performed.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-462616 recovered above the upper control limit for Acetone, Methyl tert-butyl ether, 2-Butanone (MEK), 1,2,3-Trichloropropane and 1,2-Dibromo-3-Chloropropane. 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-061324-A (580-141133-1), RB-02-061324 (580-141133-2), PA-20d-061324 (580-141133-3), Dup-02-061324 (580-141133-4), PA-21d-061324 (580-141133-5) and (CCVIS 580-462616/3).

Method 8260D_LL: The continuing calibration verification (CCV) associated with batch 580-462616 recovered above the upper control limit for Acetone, Methyl tert-butyl ether, 2-Butanone (MEK), 1,2,3-Trichloropropane and 1,2-Dibromo-3-Chloropropane. 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-061324-A (580-141133-1), RB-02-061324 (580-141133-2), PA-20d-061324 (580-141133-3), Dup-02-061324 (580-141133-4), PA-21d-061324 (580-141133-5) and (CCVIS 580-462616/3).

Method 8260D: The method blank for analytical batch 580-462691 contained Benzene and Trichloroethene 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 580-462691 recovered above the upper control limit for Chloroethane, Acetone, Methyl tert-butyl ether, 2-Butanone (MEK), 2,2-Dichloropropane, Chlorobromomethane, Carbon tetrachloride, 1,1-Dichloropropene, 1,2-Dichloroethane, 4-Methyl-2-pentanone (MIBK), Dibromomethane, trans-1,3-Dichloropropene, Chlorodibromomethane, Ethylene Dibromide, 1,1,1,2-Tetrachloroethane, o-Xylene, Styrene, Bromoform, 1,2,3-Trichloropropane, 4-Chlorotoluene, 1,2-Dibromo-3-Chloropropane and 1,2,3-Trichlorobenzene. 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-19d-061324 (580-141133-6), PA-31-061324 (580-141133-8), PA-32i-061324 (580-141133-9), MWA-11i(d)-061324 (580-141133-10) and PA-30d-061424 (580-141133-11).

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-462691 recovered outside acceptance criteria, low biased, for Chloromethane. 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 continuing calibration verification (CCV) associated with batch 580-462691 recovered above the upper control limit for Chloroethane, Acetone, Methyl tert-butyl ether, 2-Butanone (MEK), 2,2-Dichloropropane, Chlorobromomethane, Carbon tetrachloride, 1,1-Dichloropropene, 1,2-Dichloroethane, 4-Methyl-2-pentanone (MIBK), Dibromomethane, trans-1,3-Dichloropropene, Chlorodibromomethane, Ethylene Dibromide, 1,1,1,2-Tetrachloroethane, o-Xylene, Styrene, Bromoform, 1,2,3-Trichloropropane, 4-Chlorotoluene, 1,2-Dibromo-3-Chloropropane and 1,2,3-Trichlorobenzene. 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-19d-061324 (580-141133-6), PA-31-061324 (580-141133-8), PA-32i-061324 (580-141133-9), MWA-11i(d)-061324

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Case Narrative

Client: ERM-West
Project: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Job ID: 580-141133-1 (Continued)

Eurofins Seattle

(580-141133-10) and PA-30d-061424 (580-141133-11).

Method 8260D_LL: The continuing calibration verification (CCV) associated with batch 580-462691 recovered outside acceptance criteria, low biased, for Chloromethane. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-462988 recovered above the upper control limit for 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: MWA-63-061324 (580-141133-7) and (CCVIS 580-462988/4).

Method 8260D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 580-462988 were outside control limits for one or more analytes. See QC Sample Results for detail. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery is within acceptance limits.

Method 8260D: The following samples were diluted to bring the concentration of target analytes within the calibration range: PA-19d-061324 (580-141133-6) and PA-30d-061424 (580-141133-11). Elevated reporting limits (RLs) are provided.

Method 8260D: The following sample was diluted to bring the concentration of target analytes within the calibration range: PA-21d-061324 (580-141133-5). 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.

HPLC/IC

Method 314.0: The following samples in analytical batch 320-773540 had conductivity measurements that exceeded the conductivity of the MCT/INF. Per standard operating procedure, the samples were diluted. Elevated reporting limits (RLs) are provided. PA-20d-061324 (580-141133-3), Dup-02-061324 (580-141133-4), PA-21d-061324 (580-141133-5), PA-19d-061324 (580-141133-6) and MWA-11i(d)-061324 (580-141133-10)

Method 314.0: The following samples in analytical batch 320-773540 either had a conductivity measurement that exceeded the MCT/INF sample, or were a very dark color and difficult to filter. The samples were diluted per standard operating procedure and to protect instrumentation. Elevated reporting limits (RLs) are provided. PA-31-061324 (580-141133-8), PA-32i-061324 (580-141133-9) and PA-30d-061424 (580-141133-11)

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
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
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.
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.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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 - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: TB-061324-A

Lab Sample ID: 580-141133-1

Date Collected: 06/13/24 00:01

Matrix: Water

Date Received: 06/14/24 13:20

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			06/19/24 02:19	1
Chloromethane	ND		0.50	0.14	ug/L			06/19/24 02:19	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/19/24 02:19	1
Bromomethane	ND		0.50	0.13	ug/L			06/19/24 02:19	1
Chloroethane	ND		0.50	0.24	ug/L			06/19/24 02:19	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/19/24 02:19	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/19/24 02:19	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			06/19/24 02:19	1
Acetone	ND		10	3.1	ug/L			06/19/24 02:19	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/19/24 02:19	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/19/24 02:19	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/19/24 02:19	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/19/24 02:19	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			06/19/24 02:19	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/19/24 02:19	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			06/19/24 02:19	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/19/24 02:19	1
Chloroform	ND		0.20	0.030	ug/L			06/19/24 02:19	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/19/24 02:19	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/19/24 02:19	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/19/24 02:19	1
Benzene	0.050	J B	0.20	0.030	ug/L			06/19/24 02:19	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/19/24 02:19	1
Trichloroethene	ND		0.20	0.066	ug/L			06/19/24 02:19	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/19/24 02:19	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/19/24 02:19	1
Dibromomethane	ND		0.20	0.062	ug/L			06/19/24 02:19	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/19/24 02:19	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/19/24 02:19	1
Toluene	ND		0.20	0.050	ug/L			06/19/24 02:19	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/19/24 02:19	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/19/24 02:19	1
Tetrachloroethene	ND		0.24	0.084	ug/L			06/19/24 02:19	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/19/24 02:19	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/19/24 02:19	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/19/24 02:19	1
Chlorobenzene	ND		0.20	0.060	ug/L			06/19/24 02:19	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/19/24 02:19	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/19/24 02:19	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/19/24 02:19	1
o-Xylene	ND		0.50	0.23	ug/L			06/19/24 02:19	1
Styrene	ND		1.0	0.33	ug/L			06/19/24 02:19	1
Bromoform	ND		0.50	0.16	ug/L			06/19/24 02:19	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/19/24 02:19	1
Bromobenzene	ND		0.20	0.038	ug/L			06/19/24 02:19	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/19/24 02:19	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/19/24 02:19	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/19/24 02:19	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/19/24 02:19	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: TB-061324-A

Lab Sample ID: 580-141133-1

Date Collected: 06/13/24 00:01

Matrix: Water

Date Received: 06/14/24 13:20

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			06/19/24 02:19	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/19/24 02:19	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/19/24 02:19	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/19/24 02:19	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/19/24 02:19	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/19/24 02:19	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 02:19	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 02:19	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/19/24 02:19	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			06/19/24 02:19	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/19/24 02:19	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/19/24 02:19	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/19/24 02:19	1
Naphthalene	ND		1.5	0.52	ug/L			06/19/24 02:19	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/19/24 02:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		06/19/24 02:19	1
Dibromofluoromethane (Surr)	106		80 - 120		06/19/24 02:19	1
4-Bromofluorobenzene (Surr)	102		80 - 120		06/19/24 02:19	1
1,2-Dichloroethane-d4 (Surr)	111		80 - 120		06/19/24 02:19	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: RB-02-061324

Lab Sample ID: 580-141133-2

Date Collected: 06/13/24 05:30

Matrix: Water

Date Received: 06/14/24 13:20

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			06/19/24 02:42	1
Chloromethane	ND		0.50	0.14	ug/L			06/19/24 02:42	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/19/24 02:42	1
Bromomethane	ND		0.50	0.13	ug/L			06/19/24 02:42	1
Chloroethane	ND		0.50	0.24	ug/L			06/19/24 02:42	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/19/24 02:42	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/19/24 02:42	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			06/19/24 02:42	1
Acetone	ND		10	3.1	ug/L			06/19/24 02:42	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/19/24 02:42	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/19/24 02:42	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/19/24 02:42	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/19/24 02:42	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			06/19/24 02:42	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/19/24 02:42	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			06/19/24 02:42	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/19/24 02:42	1
Chloroform	ND		0.20	0.030	ug/L			06/19/24 02:42	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/19/24 02:42	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/19/24 02:42	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/19/24 02:42	1
Benzene	0.048	J B	0.20	0.030	ug/L			06/19/24 02:42	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/19/24 02:42	1
Trichloroethene	ND		0.20	0.066	ug/L			06/19/24 02:42	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/19/24 02:42	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/19/24 02:42	1
Dibromomethane	ND		0.20	0.062	ug/L			06/19/24 02:42	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/19/24 02:42	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/19/24 02:42	1
Toluene	ND		0.20	0.050	ug/L			06/19/24 02:42	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/19/24 02:42	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/19/24 02:42	1
Tetrachloroethene	ND		0.24	0.084	ug/L			06/19/24 02:42	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/19/24 02:42	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/19/24 02:42	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/19/24 02:42	1
Chlorobenzene	ND		0.20	0.060	ug/L			06/19/24 02:42	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/19/24 02:42	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/19/24 02:42	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/19/24 02:42	1
o-Xylene	ND		0.50	0.23	ug/L			06/19/24 02:42	1
Styrene	ND		1.0	0.33	ug/L			06/19/24 02:42	1
Bromoform	ND		0.50	0.16	ug/L			06/19/24 02:42	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/19/24 02:42	1
Bromobenzene	ND		0.20	0.038	ug/L			06/19/24 02:42	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/19/24 02:42	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/19/24 02:42	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/19/24 02:42	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/19/24 02:42	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: RB-02-061324

Lab Sample ID: 580-141133-2

Date Collected: 06/13/24 05:30

Matrix: Water

Date Received: 06/14/24 13:20

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			06/19/24 02:42	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/19/24 02:42	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/19/24 02:42	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/19/24 02:42	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/19/24 02:42	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/19/24 02:42	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 02:42	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 02:42	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/19/24 02:42	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			06/19/24 02:42	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/19/24 02:42	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/19/24 02:42	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/19/24 02:42	1
Naphthalene	ND		1.5	0.52	ug/L			06/19/24 02:42	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/19/24 02:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		06/19/24 02:42	1
Dibromofluoromethane (Surr)	105		80 - 120		06/19/24 02:42	1
4-Bromofluorobenzene (Surr)	102		80 - 120		06/19/24 02:42	1
1,2-Dichloroethane-d4 (Surr)	111		80 - 120		06/19/24 02:42	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		4.0	2.0	ug/L			06/20/24 20:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	ND		1.5	0.43	mg/L			06/20/24 05:32	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: PA-20d-061324

Lab Sample ID: 580-141133-3

Date Collected: 06/13/24 09:09

Matrix: Water

Date Received: 06/14/24 13:20

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			06/19/24 08:08	1
Chloromethane	ND		1.0	0.28	ug/L			06/19/24 08:08	1
Vinyl chloride	ND		1.0	0.22	ug/L			06/19/24 08:08	1
Bromomethane	ND		1.0	0.21	ug/L			06/19/24 08:08	1
Chloroethane	ND		1.0	0.35	ug/L			06/19/24 08:08	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			06/19/24 08:08	1
Carbon disulfide	ND		1.0	0.53	ug/L			06/19/24 08:08	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			06/19/24 08:08	1
Acetone	ND		15	3.2	ug/L			06/19/24 08:08	1
Methylene Chloride	ND		5.0	1.4	ug/L			06/19/24 08:08	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			06/19/24 08:08	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			06/19/24 08:08	1
1,1-Dichloroethane	1.1		1.0	0.22	ug/L			06/19/24 08:08	1
2-Butanone (MEK)	ND		15	4.7	ug/L			06/19/24 08:08	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			06/19/24 08:08	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			06/19/24 08:08	1
Chlorobromomethane	ND		1.0	0.29	ug/L			06/19/24 08:08	1
Chloroform	ND		1.0	0.26	ug/L			06/19/24 08:08	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			06/19/24 08:08	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			06/19/24 08:08	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			06/19/24 08:08	1
Benzene	ND		1.0	0.24	ug/L			06/19/24 08:08	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			06/19/24 08:08	1
Trichloroethene	ND		1.0	0.26	ug/L			06/19/24 08:08	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/19/24 08:08	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/19/24 08:08	1
Dibromomethane	ND		1.0	0.34	ug/L			06/19/24 08:08	1
Bromodichloromethane	ND		1.0	0.29	ug/L			06/19/24 08:08	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			06/19/24 08:08	1
Toluene	ND		1.0	0.39	ug/L			06/19/24 08:08	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			06/19/24 08:08	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			06/19/24 08:08	1
Tetrachloroethene	ND		1.0	0.41	ug/L			06/19/24 08:08	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			06/19/24 08:08	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			06/19/24 08:08	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			06/19/24 08:08	1
Chlorobenzene	4.5		1.0	0.44	ug/L			06/19/24 08:08	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			06/19/24 08:08	1
Ethylbenzene	ND		1.0	0.50	ug/L			06/19/24 08:08	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			06/19/24 08:08	1
o-Xylene	ND		1.0	0.39	ug/L			06/19/24 08:08	1
Styrene	ND		1.0	0.53	ug/L			06/19/24 08:08	1
Bromoform	ND		1.0	0.51	ug/L			06/19/24 08:08	1
Isopropylbenzene	ND		1.0	0.44	ug/L			06/19/24 08:08	1
Bromobenzene	ND		1.0	0.43	ug/L			06/19/24 08:08	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			06/19/24 08:08	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			06/19/24 08:08	1
N-Propylbenzene	ND		1.0	0.50	ug/L			06/19/24 08:08	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			06/19/24 08:08	1

Eurofins Seattle

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: PA-20d-061324

Lab Sample ID: 580-141133-3

Date Collected: 06/13/24 09:09

Matrix: Water

Date Received: 06/14/24 13:20

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			06/19/24 08:08	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			06/19/24 08:08	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			06/19/24 08:08	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			06/19/24 08:08	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			06/19/24 08:08	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			06/19/24 08:08	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			06/19/24 08:08	1
n-Butylbenzene	ND		1.0	0.44	ug/L			06/19/24 08:08	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			06/19/24 08:08	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			06/19/24 08:08	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			06/19/24 08:08	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			06/19/24 08:08	1
Naphthalene	ND		3.0	0.93	ug/L			06/19/24 08:08	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			06/19/24 08:08	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			06/19/24 08:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		06/19/24 08:08	1
1,2-Dichloroethane-d4 (Surr)	114		80 - 120		06/19/24 08:08	1
4-Bromofluorobenzene (Surr)	102		80 - 120		06/19/24 08:08	1
Dibromofluoromethane (Surr)	108		80 - 120		06/19/24 08:08	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		20	10	ug/L			06/20/24 18:55	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	680		150	43	mg/L			06/20/24 05:56	100

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: Dup-02-061324

Lab Sample ID: 580-141133-4

Date Collected: 06/13/24 09:10

Matrix: Water

Date Received: 06/14/24 13:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		2.0	0.53	ug/L			06/19/24 23:20	1
Chloromethane	ND		1.0	0.28	ug/L			06/19/24 23:20	1
Vinyl chloride	ND		1.0	0.22	ug/L			06/19/24 23:20	1
Bromomethane	ND		1.0	0.21	ug/L			06/19/24 23:20	1
Chloroethane	ND		1.0	0.35	ug/L			06/19/24 23:20	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			06/19/24 23:20	1
Carbon disulfide	0.61	J	1.0	0.53	ug/L			06/19/24 23:20	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			06/19/24 23:20	1
Acetone	ND		15	3.2	ug/L			06/19/24 23:20	1
Methylene Chloride	ND		5.0	1.4	ug/L			06/19/24 23:20	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			06/19/24 23:20	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			06/19/24 23:20	1
1,1-Dichloroethane	0.95	J	1.0	0.22	ug/L			06/19/24 23:20	1
2-Butanone (MEK)	ND		15	4.7	ug/L			06/19/24 23:20	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			06/19/24 23:20	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			06/19/24 23:20	1
Chlorobromomethane	ND		1.0	0.29	ug/L			06/19/24 23:20	1
Chloroform	ND		1.0	0.26	ug/L			06/19/24 23:20	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			06/19/24 23:20	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			06/19/24 23:20	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			06/19/24 23:20	1
Benzene	ND		1.0	0.24	ug/L			06/19/24 23:20	1
1,2-Dichloroethane	0.42	J	1.0	0.42	ug/L			06/19/24 23:20	1
Trichloroethene	ND		1.0	0.26	ug/L			06/19/24 23:20	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/19/24 23:20	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/19/24 23:20	1
Dibromomethane	ND		1.0	0.34	ug/L			06/19/24 23:20	1
Bromodichloromethane	ND		1.0	0.29	ug/L			06/19/24 23:20	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			06/19/24 23:20	1
Toluene	ND		1.0	0.39	ug/L			06/19/24 23:20	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			06/19/24 23:20	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			06/19/24 23:20	1
Tetrachloroethene	ND		1.0	0.41	ug/L			06/19/24 23:20	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			06/19/24 23:20	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			06/19/24 23:20	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			06/19/24 23:20	1
Chlorobenzene	4.1		1.0	0.44	ug/L			06/19/24 23:20	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			06/19/24 23:20	1
Ethylbenzene	ND		1.0	0.50	ug/L			06/19/24 23:20	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			06/19/24 23:20	1
o-Xylene	ND		1.0	0.39	ug/L			06/19/24 23:20	1
Styrene	ND		1.0	0.53	ug/L			06/19/24 23:20	1
Bromoform	ND		1.0	0.51	ug/L			06/19/24 23:20	1
Isopropylbenzene	ND		1.0	0.44	ug/L			06/19/24 23:20	1
Bromobenzene	ND		1.0	0.43	ug/L			06/19/24 23:20	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			06/19/24 23:20	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			06/19/24 23:20	1
N-Propylbenzene	ND		1.0	0.50	ug/L			06/19/24 23:20	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			06/19/24 23:20	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: Dup-02-061324

Lab Sample ID: 580-141133-4

Date Collected: 06/13/24 09:10

Matrix: Water

Date Received: 06/14/24 13:20

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			06/19/24 23:20	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			06/19/24 23:20	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			06/19/24 23:20	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			06/19/24 23:20	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			06/19/24 23:20	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			06/19/24 23:20	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			06/19/24 23:20	1
n-Butylbenzene	ND		1.0	0.44	ug/L			06/19/24 23:20	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			06/19/24 23:20	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			06/19/24 23:20	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			06/19/24 23:20	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			06/19/24 23:20	1
Naphthalene	ND		3.0	0.93	ug/L			06/19/24 23:20	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			06/19/24 23:20	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			06/19/24 23:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		06/19/24 23:20	1
1,2-Dichloroethane-d4 (Surr)	104		80 - 120		06/19/24 23:20	1
4-Bromofluorobenzene (Surr)	108		80 - 120		06/19/24 23:20	1
Dibromofluoromethane (Surr)	103		80 - 120		06/19/24 23:20	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		20	10	ug/L			06/20/24 19:13	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	690		150	43	mg/L			06/20/24 06:20	100

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: PA-21d-061324

Lab Sample ID: 580-141133-5

Date Collected: 06/13/24 11:24

Matrix: Water

Date Received: 06/14/24 13:20

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			06/19/24 08:54	1000
Chloromethane	ND		1000	280	ug/L			06/19/24 08:54	1000
Vinyl chloride	ND		1000	220	ug/L			06/19/24 08:54	1000
Bromomethane	ND		1000	210	ug/L			06/19/24 08:54	1000
Chloroethane	ND		1000	350	ug/L			06/19/24 08:54	1000
Trichlorofluoromethane	ND		1000	360	ug/L			06/19/24 08:54	1000
Carbon disulfide	ND		1000	530	ug/L			06/19/24 08:54	1000
1,1-Dichloroethene	ND		1000	280	ug/L			06/19/24 08:54	1000
Acetone	ND		15000	3200	ug/L			06/19/24 08:54	1000
Methylene Chloride	ND		5000	1400	ug/L			06/19/24 08:54	1000
Methyl tert-butyl ether	ND		1000	440	ug/L			06/19/24 08:54	1000
trans-1,2-Dichloroethene	ND		1000	390	ug/L			06/19/24 08:54	1000
1,1-Dichloroethane	ND		1000	220	ug/L			06/19/24 08:54	1000
2-Butanone (MEK)	ND		15000	4700	ug/L			06/19/24 08:54	1000
2,2-Dichloropropane	ND		1000	320	ug/L			06/19/24 08:54	1000
cis-1,2-Dichloroethene	ND		1000	350	ug/L			06/19/24 08:54	1000
Chlorobromomethane	ND		1000	290	ug/L			06/19/24 08:54	1000
Chloroform	ND		1000	260	ug/L			06/19/24 08:54	1000
1,1,1-Trichloroethane	ND		1000	390	ug/L			06/19/24 08:54	1000
Carbon tetrachloride	ND		1000	300	ug/L			06/19/24 08:54	1000
1,1-Dichloropropene	ND		1000	290	ug/L			06/19/24 08:54	1000
Benzene	ND		1000	240	ug/L			06/19/24 08:54	1000
1,2-Dichloroethane	ND		1000	420	ug/L			06/19/24 08:54	1000
Trichloroethene	ND		1000	260	ug/L			06/19/24 08:54	1000
1,2-Dichloropropane	ND		1000	180	ug/L			06/19/24 08:54	1000
4-Methyl-2-pentanone (MIBK)	ND		5000	2500	ug/L			06/19/24 08:54	1000
Dibromomethane	ND		1000	340	ug/L			06/19/24 08:54	1000
Bromodichloromethane	ND		1000	290	ug/L			06/19/24 08:54	1000
cis-1,3-Dichloropropene	ND		1000	420	ug/L			06/19/24 08:54	1000
Toluene	ND		1000	390	ug/L			06/19/24 08:54	1000
trans-1,3-Dichloropropene	ND		1000	410	ug/L			06/19/24 08:54	1000
1,1,2-Trichloroethane	ND		1000	240	ug/L			06/19/24 08:54	1000
Tetrachloroethene	ND		1000	410	ug/L			06/19/24 08:54	1000
1,3-Dichloropropane	ND		1000	350	ug/L			06/19/24 08:54	1000
Chlorodibromomethane	ND		1000	430	ug/L			06/19/24 08:54	1000
Ethylene Dibromide	ND		1000	400	ug/L			06/19/24 08:54	1000
Chlorobenzene	41000		1000	440	ug/L			06/19/24 08:54	1000
1,1,1,2-Tetrachloroethane	ND		1000	180	ug/L			06/19/24 08:54	1000
Ethylbenzene	ND		1000	500	ug/L			06/19/24 08:54	1000
m-Xylene & p-Xylene	ND		2000	530	ug/L			06/19/24 08:54	1000
o-Xylene	ND		1000	390	ug/L			06/19/24 08:54	1000
Styrene	ND		1000	530	ug/L			06/19/24 08:54	1000
Bromoform	ND		1000	510	ug/L			06/19/24 08:54	1000
Isopropylbenzene	ND		1000	440	ug/L			06/19/24 08:54	1000
Bromobenzene	ND		1000	430	ug/L			06/19/24 08:54	1000
1,1,2,2-Tetrachloroethane	ND		1000	520	ug/L			06/19/24 08:54	1000
1,2,3-Trichloropropane	ND		1000	410	ug/L			06/19/24 08:54	1000
N-Propylbenzene	ND		1000	500	ug/L			06/19/24 08:54	1000
2-Chlorotoluene	ND		1000	510	ug/L			06/19/24 08:54	1000

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: PA-21d-061324

Lab Sample ID: 580-141133-5

Date Collected: 06/13/24 11:24

Matrix: Water

Date Received: 06/14/24 13:20

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			06/19/24 08:54	1000
tert-Butylbenzene	ND		2000	580	ug/L			06/19/24 08:54	1000
1,2,4-Trimethylbenzene	ND		3000	610	ug/L			06/19/24 08:54	1000
sec-Butylbenzene	ND		1000	490	ug/L			06/19/24 08:54	1000
4-Isopropyltoluene	ND		1000	280	ug/L			06/19/24 08:54	1000
1,3-Dichlorobenzene	ND		1000	480	ug/L			06/19/24 08:54	1000
1,4-Dichlorobenzene	ND		1000	460	ug/L			06/19/24 08:54	1000
n-Butylbenzene	ND		1000	440	ug/L			06/19/24 08:54	1000
1,2-Dichlorobenzene	ND		1000	460	ug/L			06/19/24 08:54	1000
1,2-Dibromo-3-Chloropropane	ND		3000	570	ug/L			06/19/24 08:54	1000
1,2,4-Trichlorobenzene	ND		1000	330	ug/L			06/19/24 08:54	1000
Hexachlorobutadiene	ND		3000	790	ug/L			06/19/24 08:54	1000
Naphthalene	ND		3000	930	ug/L			06/19/24 08:54	1000
1,2,3-Trichlorobenzene	ND		2000	430	ug/L			06/19/24 08:54	1000
1,3,5-Trimethylbenzene	ND		1000	550	ug/L			06/19/24 08:54	1000

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		06/19/24 08:54	1000
1,2-Dichloroethane-d4 (Surr)	114		80 - 120		06/19/24 08:54	1000
4-Bromofluorobenzene (Surr)	102		80 - 120		06/19/24 08:54	1000
Dibromofluoromethane (Surr)	108		80 - 120		06/19/24 08:54	1000

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		20	10	ug/L			06/20/24 19:31	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	300		150	43	mg/L			06/20/24 06:44	100

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: PA-19d-061324

Lab Sample ID: 580-141133-6

Date Collected: 06/13/24 13:10

Matrix: Water

Date Received: 06/14/24 13:20

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			06/19/24 21:35	100
Chloromethane	ND		100	28	ug/L			06/19/24 21:35	100
Vinyl chloride	ND		100	22	ug/L			06/19/24 21:35	100
Bromomethane	ND		100	21	ug/L			06/19/24 21:35	100
Chloroethane	ND		100	35	ug/L			06/19/24 21:35	100
Trichlorofluoromethane	ND		100	36	ug/L			06/19/24 21:35	100
Carbon disulfide	ND		100	53	ug/L			06/19/24 21:35	100
1,1-Dichloroethene	ND		100	28	ug/L			06/19/24 21:35	100
Acetone	ND		1500	320	ug/L			06/19/24 21:35	100
Methylene Chloride	ND		500	140	ug/L			06/19/24 21:35	100
Methyl tert-butyl ether	ND		100	44	ug/L			06/19/24 21:35	100
trans-1,2-Dichloroethene	ND		100	39	ug/L			06/19/24 21:35	100
1,1-Dichloroethane	ND		100	22	ug/L			06/19/24 21:35	100
2-Butanone (MEK)	ND		1500	470	ug/L			06/19/24 21:35	100
2,2-Dichloropropane	ND		100	32	ug/L			06/19/24 21:35	100
cis-1,2-Dichloroethene	ND		100	35	ug/L			06/19/24 21:35	100
Chlorobromomethane	ND		100	29	ug/L			06/19/24 21:35	100
Chloroform	ND		100	26	ug/L			06/19/24 21:35	100
1,1,1-Trichloroethane	ND		100	39	ug/L			06/19/24 21:35	100
Carbon tetrachloride	ND		100	30	ug/L			06/19/24 21:35	100
1,1-Dichloropropene	ND		100	29	ug/L			06/19/24 21:35	100
Benzene	53	J B	100	24	ug/L			06/19/24 21:35	100
1,2-Dichloroethane	ND		100	42	ug/L			06/19/24 21:35	100
Trichloroethene	32	J B	100	26	ug/L			06/19/24 21:35	100
1,2-Dichloropropane	ND		100	18	ug/L			06/19/24 21:35	100
4-Methyl-2-pentanone (MIBK)	ND		500	250	ug/L			06/19/24 21:35	100
Dibromomethane	ND		100	34	ug/L			06/19/24 21:35	100
Bromodichloromethane	ND		100	29	ug/L			06/19/24 21:35	100
cis-1,3-Dichloropropene	ND		100	42	ug/L			06/19/24 21:35	100
Toluene	ND		100	39	ug/L			06/19/24 21:35	100
trans-1,3-Dichloropropene	ND		100	41	ug/L			06/19/24 21:35	100
1,1,2-Trichloroethane	ND		100	24	ug/L			06/19/24 21:35	100
Tetrachloroethene	ND		100	41	ug/L			06/19/24 21:35	100
1,3-Dichloropropane	ND		100	35	ug/L			06/19/24 21:35	100
Chlorodibromomethane	ND		100	43	ug/L			06/19/24 21:35	100
Ethylene Dibromide	ND		100	40	ug/L			06/19/24 21:35	100
1,1,1,2-Tetrachloroethane	ND		100	18	ug/L			06/19/24 21:35	100
Ethylbenzene	ND		100	50	ug/L			06/19/24 21:35	100
m-Xylene & p-Xylene	ND		200	53	ug/L			06/19/24 21:35	100
o-Xylene	ND		100	39	ug/L			06/19/24 21:35	100
Styrene	ND		100	53	ug/L			06/19/24 21:35	100
Bromoform	ND		100	51	ug/L			06/19/24 21:35	100
Isopropylbenzene	ND		100	44	ug/L			06/19/24 21:35	100
Bromobenzene	ND		100	43	ug/L			06/19/24 21:35	100
1,1,2,2-Tetrachloroethane	ND		100	52	ug/L			06/19/24 21:35	100
1,2,3-Trichloropropane	ND		100	41	ug/L			06/19/24 21:35	100
N-Propylbenzene	ND		100	50	ug/L			06/19/24 21:35	100
2-Chlorotoluene	ND		100	51	ug/L			06/19/24 21:35	100
4-Chlorotoluene	ND		100	38	ug/L			06/19/24 21:35	100

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: PA-19d-061324

Lab Sample ID: 580-141133-6

Date Collected: 06/13/24 13:10

Matrix: Water

Date Received: 06/14/24 13:20

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			06/19/24 21:35	100
1,2,4-Trimethylbenzene	ND		300	61	ug/L			06/19/24 21:35	100
sec-Butylbenzene	ND		100	49	ug/L			06/19/24 21:35	100
4-Isopropyltoluene	ND		100	28	ug/L			06/19/24 21:35	100
1,3-Dichlorobenzene	ND		100	48	ug/L			06/19/24 21:35	100
1,4-Dichlorobenzene	ND		100	46	ug/L			06/19/24 21:35	100
n-Butylbenzene	ND		100	44	ug/L			06/19/24 21:35	100
1,2-Dichlorobenzene	ND		100	46	ug/L			06/19/24 21:35	100
1,2-Dibromo-3-Chloropropane	ND		300	57	ug/L			06/19/24 21:35	100
1,2,4-Trichlorobenzene	ND		100	33	ug/L			06/19/24 21:35	100
Hexachlorobutadiene	ND		300	79	ug/L			06/19/24 21:35	100
Naphthalene	ND		300	93	ug/L			06/19/24 21:35	100
1,2,3-Trichlorobenzene	ND		200	43	ug/L			06/19/24 21:35	100
1,3,5-Trimethylbenzene	ND		100	55	ug/L			06/19/24 21:35	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		06/19/24 21:35	100
1,2-Dichloroethane-d4 (Surr)	113		80 - 120		06/19/24 21:35	100
4-Bromofluorobenzene (Surr)	98		80 - 120		06/19/24 21:35	100
Dibromofluoromethane (Surr)	107		80 - 120		06/19/24 21:35	100

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	12000		500	220	ug/L			06/21/24 02:51	500

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	93		80 - 120		06/21/24 02:51	500
1,2-Dichloroethane-d4 (Surr)	105		80 - 120		06/21/24 02:51	500
4-Bromofluorobenzene (Surr)	113		80 - 120		06/21/24 02:51	500
Dibromofluoromethane (Surr)	108		80 - 120		06/21/24 02:51	500

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		40	20	ug/L			06/20/24 22:12	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	290		150	43	mg/L			06/20/24 07:08	100

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: MWA-63-061324

Lab Sample ID: 580-141133-7

Date Collected: 06/13/24 07:11

Matrix: Water

Date Received: 06/14/24 13:20

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			06/21/24 17:15	1
Chloromethane	ND		1.0	0.28	ug/L			06/21/24 17:15	1
Vinyl chloride	ND		1.0	0.22	ug/L			06/21/24 17:15	1
Bromomethane	ND		1.0	0.21	ug/L			06/21/24 17:15	1
Chloroethane	ND		1.0	0.35	ug/L			06/21/24 17:15	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			06/21/24 17:15	1
Carbon disulfide	ND		1.0	0.53	ug/L			06/21/24 17:15	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			06/21/24 17:15	1
Acetone	ND		15	3.2	ug/L			06/21/24 17:15	1
Methylene Chloride	ND		5.0	1.4	ug/L			06/21/24 17:15	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			06/21/24 17:15	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			06/21/24 17:15	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/21/24 17:15	1
2-Butanone (MEK)	ND		15	4.7	ug/L			06/21/24 17:15	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			06/21/24 17:15	1
cis-1,2-Dichloroethene	0.85	J	1.0	0.35	ug/L			06/21/24 17:15	1
Chlorobromomethane	ND		1.0	0.29	ug/L			06/21/24 17:15	1
Chloroform	59		1.0	0.26	ug/L			06/21/24 17:15	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			06/21/24 17:15	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			06/21/24 17:15	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			06/21/24 17:15	1
Benzene	ND		1.0	0.24	ug/L			06/21/24 17:15	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			06/21/24 17:15	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/21/24 17:15	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/21/24 17:15	1
Dibromomethane	ND		1.0	0.34	ug/L			06/21/24 17:15	1
Bromodichloromethane	ND		1.0	0.29	ug/L			06/21/24 17:15	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			06/21/24 17:15	1
Toluene	ND		1.0	0.39	ug/L			06/21/24 17:15	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			06/21/24 17:15	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			06/21/24 17:15	1
Tetrachloroethene	8.2		1.0	0.41	ug/L			06/21/24 17:15	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			06/21/24 17:15	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			06/21/24 17:15	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			06/21/24 17:15	1
Chlorobenzene	ND		1.0	0.44	ug/L			06/21/24 17:15	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			06/21/24 17:15	1
Ethylbenzene	ND		1.0	0.50	ug/L			06/21/24 17:15	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			06/21/24 17:15	1
o-Xylene	ND		1.0	0.39	ug/L			06/21/24 17:15	1
Styrene	ND		1.0	0.53	ug/L			06/21/24 17:15	1
Bromoform	ND		1.0	0.51	ug/L			06/21/24 17:15	1
Isopropylbenzene	ND		1.0	0.44	ug/L			06/21/24 17:15	1
Bromobenzene	ND		1.0	0.43	ug/L			06/21/24 17:15	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			06/21/24 17:15	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			06/21/24 17:15	1
N-Propylbenzene	ND		1.0	0.50	ug/L			06/21/24 17:15	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			06/21/24 17:15	1
4-Chlorotoluene	ND		1.0	0.38	ug/L			06/21/24 17:15	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: MWA-63-061324

Lab Sample ID: 580-141133-7

Date Collected: 06/13/24 07:11

Matrix: Water

Date Received: 06/14/24 13:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
tert-Butylbenzene	ND		2.0	0.58	ug/L			06/21/24 17:15	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			06/21/24 17:15	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			06/21/24 17:15	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			06/21/24 17:15	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			06/21/24 17:15	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			06/21/24 17:15	1
n-Butylbenzene	ND		1.0	0.44	ug/L			06/21/24 17:15	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			06/21/24 17:15	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			06/21/24 17:15	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			06/21/24 17:15	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			06/21/24 17:15	1
Naphthalene	ND		3.0	0.93	ug/L			06/21/24 17:15	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			06/21/24 17:15	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			06/21/24 17:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		06/21/24 17:15	1
1,2-Dichloroethane-d4 (Surr)	99		80 - 120		06/21/24 17:15	1
4-Bromofluorobenzene (Surr)	103		80 - 120		06/21/24 17:15	1
Dibromofluoromethane (Surr)	101		80 - 120		06/21/24 17:15	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	1.4		1.0	0.26	ug/L			06/25/24 17:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		80 - 120		06/25/24 17:20	1
1,2-Dichloroethane-d4 (Surr)	93		80 - 120		06/25/24 17:20	1
4-Bromofluorobenzene (Surr)	98		80 - 120		06/25/24 17:20	1
Dibromofluoromethane (Surr)	100		80 - 120		06/25/24 17:20	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		4.0	2.0	ug/L			06/20/24 20:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	6.6		1.5	0.43	mg/L			06/20/24 07:44	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: PA-31-061324

Lab Sample ID: 580-141133-8

Date Collected: 06/13/24 09:34

Matrix: Water

Date Received: 06/14/24 13:20

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			06/19/24 18:29	1
Chloromethane	0.16	J	0.50	0.14	ug/L			06/19/24 18:29	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/19/24 18:29	1
Bromomethane	ND		0.50	0.13	ug/L			06/19/24 18:29	1
Chloroethane	ND		0.50	0.24	ug/L			06/19/24 18:29	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/19/24 18:29	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/19/24 18:29	1
1,1-Dichloroethene	0.52		0.20	0.035	ug/L			06/19/24 18:29	1
Acetone	ND		10	3.1	ug/L			06/19/24 18:29	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/19/24 18:29	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/19/24 18:29	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/19/24 18:29	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/19/24 18:29	1
1,1-Dichloroethane	0.19	J	0.20	0.064	ug/L			06/19/24 18:29	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/19/24 18:29	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			06/19/24 18:29	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/19/24 18:29	1
Chloroform	0.049	J	0.20	0.030	ug/L			06/19/24 18:29	1
1,1,1-Trichloroethane	0.19	J	0.20	0.025	ug/L			06/19/24 18:29	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/19/24 18:29	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/19/24 18:29	1
Benzene	ND		0.20	0.030	ug/L			06/19/24 18:29	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/19/24 18:29	1
Trichloroethene	0.11	J B	0.20	0.066	ug/L			06/19/24 18:29	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/19/24 18:29	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/19/24 18:29	1
Dibromomethane	ND		0.20	0.062	ug/L			06/19/24 18:29	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/19/24 18:29	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/19/24 18:29	1
Toluene	ND		0.20	0.050	ug/L			06/19/24 18:29	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/19/24 18:29	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/19/24 18:29	1
Tetrachloroethene	0.20	J	0.24	0.084	ug/L			06/19/24 18:29	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/19/24 18:29	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/19/24 18:29	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/19/24 18:29	1
Chlorobenzene	ND		0.20	0.060	ug/L			06/19/24 18:29	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/19/24 18:29	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/19/24 18:29	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/19/24 18:29	1
o-Xylene	ND		0.50	0.23	ug/L			06/19/24 18:29	1
Styrene	ND		1.0	0.33	ug/L			06/19/24 18:29	1
Bromoform	ND		0.50	0.16	ug/L			06/19/24 18:29	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/19/24 18:29	1
Bromobenzene	ND		0.20	0.038	ug/L			06/19/24 18:29	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/19/24 18:29	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/19/24 18:29	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/19/24 18:29	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/19/24 18:29	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: PA-31-061324

Lab Sample ID: 580-141133-8

Date Collected: 06/13/24 09:34

Matrix: Water

Date Received: 06/14/24 13:20

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			06/19/24 18:29	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/19/24 18:29	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/19/24 18:29	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/19/24 18:29	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/19/24 18:29	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/19/24 18:29	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 18:29	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 18:29	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/19/24 18:29	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			06/19/24 18:29	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/19/24 18:29	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/19/24 18:29	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/19/24 18:29	1
Naphthalene	ND		1.5	0.52	ug/L			06/19/24 18:29	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/19/24 18:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		06/19/24 18:29	1
Dibromofluoromethane (Surr)	108		80 - 120		06/19/24 18:29	1
4-Bromofluorobenzene (Surr)	101		80 - 120		06/19/24 18:29	1
1,2-Dichloroethane-d4 (Surr)	113		80 - 120		06/19/24 18:29	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		20	10	ug/L			06/20/24 22:30	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	3.8		1.5	0.43	mg/L			06/20/24 08:19	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: PA-32i-061324

Lab Sample ID: 580-141133-9

Date Collected: 06/13/24 10:34

Matrix: Water

Date Received: 06/14/24 13:20

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			06/19/24 18:52	1
Chloromethane	ND		0.50	0.14	ug/L			06/19/24 18:52	1
Vinyl chloride	0.20		0.10	0.040	ug/L			06/19/24 18:52	1
Bromomethane	ND		0.50	0.13	ug/L			06/19/24 18:52	1
Chloroethane	ND		0.50	0.24	ug/L			06/19/24 18:52	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/19/24 18:52	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/19/24 18:52	1
1,1-Dichloroethene	0.068	J	0.20	0.035	ug/L			06/19/24 18:52	1
Acetone	ND		10	3.1	ug/L			06/19/24 18:52	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/19/24 18:52	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/19/24 18:52	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/19/24 18:52	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/19/24 18:52	1
1,1-Dichloroethane	0.075	J	0.20	0.064	ug/L			06/19/24 18:52	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/19/24 18:52	1
cis-1,2-Dichloroethene	0.098	J	0.20	0.055	ug/L			06/19/24 18:52	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/19/24 18:52	1
Chloroform	ND		0.20	0.030	ug/L			06/19/24 18:52	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/19/24 18:52	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/19/24 18:52	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/19/24 18:52	1
Benzene	0.17	J B	0.20	0.030	ug/L			06/19/24 18:52	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/19/24 18:52	1
Trichloroethene	ND		0.20	0.066	ug/L			06/19/24 18:52	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/19/24 18:52	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/19/24 18:52	1
Dibromomethane	ND		0.20	0.062	ug/L			06/19/24 18:52	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/19/24 18:52	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/19/24 18:52	1
Toluene	ND		0.20	0.050	ug/L			06/19/24 18:52	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/19/24 18:52	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/19/24 18:52	1
Tetrachloroethene	ND		0.24	0.084	ug/L			06/19/24 18:52	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/19/24 18:52	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/19/24 18:52	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/19/24 18:52	1
Chlorobenzene	0.36		0.20	0.060	ug/L			06/19/24 18:52	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/19/24 18:52	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/19/24 18:52	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/19/24 18:52	1
o-Xylene	ND		0.50	0.23	ug/L			06/19/24 18:52	1
Styrene	ND		1.0	0.33	ug/L			06/19/24 18:52	1
Bromoform	ND		0.50	0.16	ug/L			06/19/24 18:52	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/19/24 18:52	1
Bromobenzene	ND		0.20	0.038	ug/L			06/19/24 18:52	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/19/24 18:52	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/19/24 18:52	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/19/24 18:52	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/19/24 18:52	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: PA-32i-061324

Lab Sample ID: 580-141133-9

Date Collected: 06/13/24 10:34

Matrix: Water

Date Received: 06/14/24 13:20

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			06/19/24 18:52	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/19/24 18:52	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/19/24 18:52	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/19/24 18:52	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/19/24 18:52	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/19/24 18:52	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 18:52	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 18:52	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/19/24 18:52	1
1,2-Dichlorobenzene	0.34		0.30	0.038	ug/L			06/19/24 18:52	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/19/24 18:52	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/19/24 18:52	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/19/24 18:52	1
Naphthalene	ND		1.5	0.52	ug/L			06/19/24 18:52	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/19/24 18:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		06/19/24 18:52	1
Dibromofluoromethane (Surr)	107		80 - 120		06/19/24 18:52	1
4-Bromofluorobenzene (Surr)	101		80 - 120		06/19/24 18:52	1
1,2-Dichloroethane-d4 (Surr)	114		80 - 120		06/19/24 18:52	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		40	20	ug/L			06/20/24 21:36	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	85		1.5	0.43	mg/L			06/20/24 08:31	1

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: MWA-11i(d)-061324

Lab Sample ID: 580-141133-10

Date Collected: 06/13/24 11:54

Matrix: Water

Date Received: 06/14/24 13:20

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			06/19/24 19:15	1
Chloromethane	ND		0.50	0.14	ug/L			06/19/24 19:15	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/19/24 19:15	1
Bromomethane	ND		0.50	0.13	ug/L			06/19/24 19:15	1
Chloroethane	ND		0.50	0.24	ug/L			06/19/24 19:15	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/19/24 19:15	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/19/24 19:15	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			06/19/24 19:15	1
Acetone	ND		10	3.1	ug/L			06/19/24 19:15	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/19/24 19:15	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/19/24 19:15	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/19/24 19:15	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/19/24 19:15	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			06/19/24 19:15	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/19/24 19:15	1
cis-1,2-Dichloroethene	0.13	J	0.20	0.055	ug/L			06/19/24 19:15	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/19/24 19:15	1
Chloroform	0.097	J	0.20	0.030	ug/L			06/19/24 19:15	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/19/24 19:15	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/19/24 19:15	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/19/24 19:15	1
Benzene	0.093	J B	0.20	0.030	ug/L			06/19/24 19:15	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/19/24 19:15	1
Trichloroethene	ND		0.20	0.066	ug/L			06/19/24 19:15	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/19/24 19:15	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/19/24 19:15	1
Dibromomethane	ND		0.20	0.062	ug/L			06/19/24 19:15	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/19/24 19:15	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/19/24 19:15	1
Toluene	ND		0.20	0.050	ug/L			06/19/24 19:15	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/19/24 19:15	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/19/24 19:15	1
Tetrachloroethene	0.12	J	0.24	0.084	ug/L			06/19/24 19:15	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/19/24 19:15	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/19/24 19:15	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/19/24 19:15	1
Chlorobenzene	ND		0.20	0.060	ug/L			06/19/24 19:15	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/19/24 19:15	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/19/24 19:15	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/19/24 19:15	1
o-Xylene	ND		0.50	0.23	ug/L			06/19/24 19:15	1
Styrene	ND		1.0	0.33	ug/L			06/19/24 19:15	1
Bromoform	ND		0.50	0.16	ug/L			06/19/24 19:15	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/19/24 19:15	1
Bromobenzene	ND		0.20	0.038	ug/L			06/19/24 19:15	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/19/24 19:15	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/19/24 19:15	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/19/24 19:15	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/19/24 19:15	1

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: MWA-11i(d)-061324

Lab Sample ID: 580-141133-10

Date Collected: 06/13/24 11:54

Matrix: Water

Date Received: 06/14/24 13:20

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			06/19/24 19:15	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/19/24 19:15	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/19/24 19:15	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/19/24 19:15	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/19/24 19:15	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/19/24 19:15	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 19:15	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 19:15	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/19/24 19:15	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			06/19/24 19:15	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/19/24 19:15	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/19/24 19:15	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/19/24 19:15	1
Naphthalene	ND		1.5	0.52	ug/L			06/19/24 19:15	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/19/24 19:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120		06/19/24 19:15	1
Dibromofluoromethane (Surr)	109		80 - 120		06/19/24 19:15	1
4-Bromofluorobenzene (Surr)	101		80 - 120		06/19/24 19:15	1
1,2-Dichloroethane-d4 (Surr)	114		80 - 120		06/19/24 19:15	1

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		20	10	ug/L			06/20/24 22:47	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	650		15	4.3	mg/L			06/20/24 08:55	10

Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: PA-30d-061424

Lab Sample ID: 580-141133-11

Date Collected: 06/14/24 10:31

Matrix: Water

Date Received: 06/14/24 13:20

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			06/19/24 21:58	1000
Chloromethane	ND		1000	280	ug/L			06/19/24 21:58	1000
Vinyl chloride	ND		1000	220	ug/L			06/19/24 21:58	1000
Bromomethane	ND		1000	210	ug/L			06/19/24 21:58	1000
Chloroethane	ND		1000	350	ug/L			06/19/24 21:58	1000
Trichlorofluoromethane	ND		1000	360	ug/L			06/19/24 21:58	1000
Carbon disulfide	ND		1000	530	ug/L			06/19/24 21:58	1000
1,1-Dichloroethene	ND		1000	280	ug/L			06/19/24 21:58	1000
Acetone	ND		15000	3200	ug/L			06/19/24 21:58	1000
Methylene Chloride	ND		5000	1400	ug/L			06/19/24 21:58	1000
Methyl tert-butyl ether	ND		1000	440	ug/L			06/19/24 21:58	1000
trans-1,2-Dichloroethene	ND		1000	390	ug/L			06/19/24 21:58	1000
1,1-Dichloroethane	ND		1000	220	ug/L			06/19/24 21:58	1000
2-Butanone (MEK)	ND		15000	4700	ug/L			06/19/24 21:58	1000
2,2-Dichloropropane	ND		1000	320	ug/L			06/19/24 21:58	1000
cis-1,2-Dichloroethene	ND		1000	350	ug/L			06/19/24 21:58	1000
Chlorobromomethane	ND		1000	290	ug/L			06/19/24 21:58	1000
Chloroform	ND		1000	260	ug/L			06/19/24 21:58	1000
1,1,1-Trichloroethane	ND		1000	390	ug/L			06/19/24 21:58	1000
Carbon tetrachloride	ND		1000	300	ug/L			06/19/24 21:58	1000
1,1-Dichloropropene	ND		1000	290	ug/L			06/19/24 21:58	1000
Benzene	ND		1000	240	ug/L			06/19/24 21:58	1000
1,2-Dichloroethane	ND		1000	420	ug/L			06/19/24 21:58	1000
Trichloroethene	ND		1000	260	ug/L			06/19/24 21:58	1000
1,2-Dichloropropane	ND		1000	180	ug/L			06/19/24 21:58	1000
4-Methyl-2-pentanone (MIBK)	ND		5000	2500	ug/L			06/19/24 21:58	1000
Dibromomethane	ND		1000	340	ug/L			06/19/24 21:58	1000
Bromodichloromethane	ND		1000	290	ug/L			06/19/24 21:58	1000
cis-1,3-Dichloropropene	ND		1000	420	ug/L			06/19/24 21:58	1000
Toluene	ND		1000	390	ug/L			06/19/24 21:58	1000
trans-1,3-Dichloropropene	ND		1000	410	ug/L			06/19/24 21:58	1000
1,1,2-Trichloroethane	ND		1000	240	ug/L			06/19/24 21:58	1000
Tetrachloroethene	ND		1000	410	ug/L			06/19/24 21:58	1000
1,3-Dichloropropane	ND		1000	350	ug/L			06/19/24 21:58	1000
Chlorodibromomethane	ND		1000	430	ug/L			06/19/24 21:58	1000
Ethylene Dibromide	ND		1000	400	ug/L			06/19/24 21:58	1000
Chlorobenzene	13000		1000	440	ug/L			06/19/24 21:58	1000
1,1,1,2-Tetrachloroethane	ND		1000	180	ug/L			06/19/24 21:58	1000
Ethylbenzene	ND		1000	500	ug/L			06/19/24 21:58	1000
m-Xylene & p-Xylene	ND		2000	530	ug/L			06/19/24 21:58	1000
o-Xylene	ND		1000	390	ug/L			06/19/24 21:58	1000
Styrene	ND		1000	530	ug/L			06/19/24 21:58	1000
Bromoform	ND		1000	510	ug/L			06/19/24 21:58	1000
Isopropylbenzene	ND		1000	440	ug/L			06/19/24 21:58	1000
Bromobenzene	ND		1000	430	ug/L			06/19/24 21:58	1000
1,1,2,2-Tetrachloroethane	ND		1000	520	ug/L			06/19/24 21:58	1000
1,2,3-Trichloropropane	ND		1000	410	ug/L			06/19/24 21:58	1000
N-Propylbenzene	ND		1000	500	ug/L			06/19/24 21:58	1000
2-Chlorotoluene	ND		1000	510	ug/L			06/19/24 21:58	1000

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Client Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: PA-30d-061424

Lab Sample ID: 580-141133-11

Date Collected: 06/14/24 10:31

Matrix: Water

Date Received: 06/14/24 13:20

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			06/19/24 21:58	1000
tert-Butylbenzene	ND		2000	580	ug/L			06/19/24 21:58	1000
1,2,4-Trimethylbenzene	ND		3000	610	ug/L			06/19/24 21:58	1000
sec-Butylbenzene	ND		1000	490	ug/L			06/19/24 21:58	1000
4-Isopropyltoluene	ND		1000	280	ug/L			06/19/24 21:58	1000
1,3-Dichlorobenzene	ND		1000	480	ug/L			06/19/24 21:58	1000
1,4-Dichlorobenzene	ND		1000	460	ug/L			06/19/24 21:58	1000
n-Butylbenzene	ND		1000	440	ug/L			06/19/24 21:58	1000
1,2-Dichlorobenzene	ND		1000	460	ug/L			06/19/24 21:58	1000
1,2-Dibromo-3-Chloropropane	ND		3000	570	ug/L			06/19/24 21:58	1000
1,2,4-Trichlorobenzene	ND		1000	330	ug/L			06/19/24 21:58	1000
Hexachlorobutadiene	ND		3000	790	ug/L			06/19/24 21:58	1000
Naphthalene	ND		3000	930	ug/L			06/19/24 21:58	1000
1,2,3-Trichlorobenzene	ND		2000	430	ug/L			06/19/24 21:58	1000
1,3,5-Trimethylbenzene	ND		1000	550	ug/L			06/19/24 21:58	1000

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		06/19/24 21:58	1000
1,2-Dichloroethane-d4 (Surr)	111		80 - 120		06/19/24 21:58	1000
4-Bromofluorobenzene (Surr)	100		80 - 120		06/19/24 21:58	1000
Dibromofluoromethane (Surr)	108		80 - 120		06/19/24 21:58	1000

Method: EPA 314.0 - Perchlorate (IC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		40	20	ug/L			06/20/24 21:54	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	320		15	4.3	mg/L			06/20/24 13:06	10

QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

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

Lab Sample ID: MB 580-462616/7

Matrix: Water

Analysis Batch: 462616

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			06/19/24 01:09	1
Chloromethane	ND		0.50	0.14	ug/L			06/19/24 01:09	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/19/24 01:09	1
Bromomethane	ND		0.50	0.13	ug/L			06/19/24 01:09	1
Chloroethane	ND		0.50	0.24	ug/L			06/19/24 01:09	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/19/24 01:09	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/19/24 01:09	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			06/19/24 01:09	1
Acetone	ND		10	3.1	ug/L			06/19/24 01:09	1
Methylene Chloride	ND		5.0	1.2	ug/L			06/19/24 01:09	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/19/24 01:09	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/19/24 01:09	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/19/24 01:09	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			06/19/24 01:09	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/19/24 01:09	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			06/19/24 01:09	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/19/24 01:09	1
Chloroform	ND		0.20	0.030	ug/L			06/19/24 01:09	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/19/24 01:09	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/19/24 01:09	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/19/24 01:09	1
Benzene	0.0553	J	0.20	0.030	ug/L			06/19/24 01:09	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/19/24 01:09	1
Trichloroethene	ND		0.20	0.066	ug/L			06/19/24 01:09	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/19/24 01:09	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/19/24 01:09	1
Dibromomethane	ND		0.20	0.062	ug/L			06/19/24 01:09	1
Bromodichloromethane	ND		0.20	0.060	ug/L			06/19/24 01:09	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/19/24 01:09	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/19/24 01:09	1
Toluene	ND		0.20	0.050	ug/L			06/19/24 01:09	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/19/24 01:09	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/19/24 01:09	1
Tetrachloroethene	ND		0.24	0.084	ug/L			06/19/24 01:09	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/19/24 01:09	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/19/24 01:09	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/19/24 01:09	1
Chlorobenzene	ND		0.20	0.060	ug/L			06/19/24 01:09	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/19/24 01:09	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/19/24 01:09	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/19/24 01:09	1
o-Xylene	ND		0.50	0.23	ug/L			06/19/24 01:09	1
Styrene	ND		1.0	0.33	ug/L			06/19/24 01:09	1
Bromoform	ND		0.50	0.16	ug/L			06/19/24 01:09	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/19/24 01:09	1
Bromobenzene	ND		0.20	0.038	ug/L			06/19/24 01:09	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/19/24 01:09	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/19/24 01:09	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

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

Lab Sample ID: MB 580-462616/7

Matrix: Water

Analysis Batch: 462616

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		0.30	0.091	ug/L			06/19/24 01:09	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/19/24 01:09	1
4-Chlorotoluene	ND		0.30	0.12	ug/L			06/19/24 01:09	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/19/24 01:09	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/19/24 01:09	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/19/24 01:09	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/19/24 01:09	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/19/24 01:09	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 01:09	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 01:09	1
n-Butylbenzene	ND		1.0	0.35	ug/L			06/19/24 01:09	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			06/19/24 01:09	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/19/24 01:09	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/19/24 01:09	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/19/24 01:09	1
Naphthalene	ND		1.5	0.52	ug/L			06/19/24 01:09	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/19/24 01:09	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		06/19/24 01:09	1
Dibromofluoromethane (Surr)	107		80 - 120		06/19/24 01:09	1
4-Bromofluorobenzene (Surr)	101		80 - 120		06/19/24 01:09	1
1,2-Dichloroethane-d4 (Surr)	113		80 - 120		06/19/24 01:09	1

Lab Sample ID: LCS 580-462616/4

Matrix: Water

Analysis Batch: 462616

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	4.25		ug/L		85	20 - 150
Chloromethane	5.00	4.08		ug/L		82	32 - 150
Vinyl chloride	5.00	5.00		ug/L		100	41 - 150
Bromomethane	5.00	6.59		ug/L		132	51 - 148
Chloroethane	5.00	5.27		ug/L		105	54 - 140
Carbon disulfide	5.00	5.76		ug/L		115	54 - 142
Trichlorofluoromethane	5.00	5.38		ug/L		108	60 - 132
1,1-Dichloroethene	5.00	5.45		ug/L		109	60 - 129
Acetone	25.0	32.4		ug/L		130	49 - 150
Methylene Chloride	5.00	6.15		ug/L		123	40 - 142
Methyl tert-butyl ether	5.00	6.02		ug/L		120	61 - 131
2-Butanone (MEK)	25.0	31.5		ug/L		126	37 - 150
trans-1,2-Dichloroethene	5.00	5.41		ug/L		108	69 - 121
1,1-Dichloroethane	5.00	5.77		ug/L		115	74 - 120
2,2-Dichloropropane	5.00	4.77		ug/L		95	55 - 140
cis-1,2-Dichloroethene	5.00	5.47		ug/L		109	72 - 120
Chlorobromomethane	5.00	5.79		ug/L		116	79 - 121
Chloroform	5.00	5.72		ug/L		114	75 - 120
1,1,1-Trichloroethane	5.00	5.70		ug/L		114	70 - 121

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

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

Lab Sample ID: LCS 580-462616/4

Matrix: Water

Analysis Batch: 462616

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Carbon tetrachloride	5.00	5.52		ug/L		110	66 - 130
1,1-Dichloropropene	5.00	5.63		ug/L		113	72 - 125
Benzene	5.00	5.37		ug/L		107	80 - 120
1,2-Dichloroethane	5.00	5.96		ug/L		119	74 - 127
Trichloroethene	5.00	5.43		ug/L		109	72 - 120
1,2-Dichloropropane	5.00	5.83		ug/L		117	69 - 130
4-Methyl-2-pentanone (MIBK)	25.0	28.8		ug/L		115	63 - 137
Dibromomethane	5.00	5.85		ug/L		117	65 - 141
Bromodichloromethane	5.00	5.73		ug/L		115	74 - 131
Dichlorobromomethane	5.00	5.73		ug/L		115	74 - 131
cis-1,3-Dichloropropene	5.00	4.80		ug/L		96	77 - 131
Toluene	5.00	5.10		ug/L		102	80 - 126
trans-1,3-Dichloropropene	5.00	5.49		ug/L		110	71 - 138
1,1,2-Trichloroethane	5.00	5.70		ug/L		114	73 - 127
Tetrachloroethene	5.00	4.97		ug/L		99	75 - 124
1,3-Dichloropropane	5.00	5.55		ug/L		111	69 - 138
Chlorodibromomethane	5.00	5.55		ug/L		111	62 - 141
Ethylene Dibromide	5.00	5.68		ug/L		114	61 - 143
Chlorobenzene	5.00	5.12		ug/L		102	74 - 123
1,1,1,2-Tetrachloroethane	5.00	5.39		ug/L		108	69 - 127
Ethylbenzene	5.00	5.33		ug/L		107	80 - 124
m-Xylene & p-Xylene	5.00	5.34		ug/L		107	75 - 124
o-Xylene	5.00	5.35		ug/L		107	71 - 124
Styrene	5.00	5.13		ug/L		103	74 - 127
Bromoform	5.00	5.54		ug/L		111	48 - 127
Isopropylbenzene	5.00	5.41		ug/L		108	71 - 123
Bromobenzene	5.00	4.98		ug/L		100	74 - 130
1,1,2,2-Tetrachloroethane	5.00	5.62		ug/L		112	67 - 136
1,2,3-Trichloropropane	5.00	5.97		ug/L		119	67 - 135
N-Propylbenzene	5.00	5.16		ug/L		103	72 - 126
2-Chlorotoluene	5.00	5.14		ug/L		103	73 - 120
4-Chlorotoluene	5.00	5.35		ug/L		107	75 - 124
1,3,5-Trimethylbenzene	5.00	5.08		ug/L		102	75 - 123
tert-Butylbenzene	5.00	4.94		ug/L		99	70 - 129
1,2,4-Trimethylbenzene	5.00	5.07		ug/L		101	71 - 127
sec-Butylbenzene	5.00	4.79		ug/L		96	75 - 126
4-Isopropyltoluene	5.00	4.84		ug/L		97	78 - 125
1,3-Dichlorobenzene	5.00	4.99		ug/L		100	72 - 125
1,4-Dichlorobenzene	5.00	5.12		ug/L		102	71 - 129
n-Butylbenzene	5.00	4.67		ug/L		93	69 - 127
1,2-Dichlorobenzene	5.00	5.21		ug/L		104	72 - 129
1,2-Dibromo-3-Chloropropane	5.00	5.61		ug/L		112	55 - 135
1,2,4-Trichlorobenzene	5.00	4.97		ug/L		99	60 - 130
Hexachlorobutadiene	5.00	4.82		ug/L		96	63 - 130
Naphthalene	5.00	5.23		ug/L		105	54 - 137
1,2,3-Trichlorobenzene	5.00	5.30		ug/L		106	60 - 136

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

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

Lab Sample ID: LCS 580-462616/4

Matrix: Water

Analysis Batch: 462616

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	104		80 - 120
4-Bromofluorobenzene (Surr)	105		80 - 120
1,2-Dichloroethane-d4 (Surr)	108		80 - 120

Lab Sample ID: LCSD 580-462616/5

Matrix: Water

Analysis Batch: 462616

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	4.23		ug/L		85	20 - 150	1	30
Chloromethane	5.00	3.99		ug/L		80	32 - 150	2	33
Vinyl chloride	5.00	4.97		ug/L		99	41 - 150	1	32
Bromomethane	5.00	6.35		ug/L		127	51 - 148	4	35
Chloroethane	5.00	5.39		ug/L		108	54 - 140	2	33
Carbon disulfide	5.00	5.59		ug/L		112	54 - 142	3	34
Trichlorofluoromethane	5.00	5.34		ug/L		107	60 - 132	1	32
1,1-Dichloroethene	5.00	5.46		ug/L		109	60 - 129	0	29
Acetone	25.0	30.6		ug/L		122	49 - 150	6	24
Methylene Chloride	5.00	6.08		ug/L		122	40 - 142	1	25
Methyl tert-butyl ether	5.00	5.99		ug/L		120	61 - 131	1	27
2-Butanone (MEK)	25.0	30.5		ug/L		122	37 - 150	3	35
trans-1,2-Dichloroethene	5.00	5.31		ug/L		106	69 - 121	2	27
1,1-Dichloroethane	5.00	5.79		ug/L		116	74 - 120	0	26
2,2-Dichloropropane	5.00	4.78		ug/L		96	55 - 140	0	31
cis-1,2-Dichloroethene	5.00	5.64		ug/L		113	72 - 120	3	22
Chlorobromomethane	5.00	5.79		ug/L		116	79 - 121	0	20
Chloroform	5.00	5.61		ug/L		112	75 - 120	2	21
1,1,1-Trichloroethane	5.00	5.60		ug/L		112	70 - 121	2	24
Carbon tetrachloride	5.00	5.58		ug/L		112	66 - 130	1	24
1,1-Dichloropropene	5.00	5.63		ug/L		113	72 - 125	0	23
Benzene	5.00	5.27		ug/L		105	80 - 120	2	22
1,2-Dichloroethane	5.00	5.85		ug/L		117	74 - 127	2	21
Trichloroethene	5.00	5.21		ug/L		104	72 - 120	4	22
1,2-Dichloropropane	5.00	5.67		ug/L		113	69 - 130	3	22
4-Methyl-2-pentanone (MIBK)	25.0	28.1		ug/L		112	63 - 137	3	26
Dibromomethane	5.00	5.75		ug/L		115	65 - 141	2	22
Bromodichloromethane	5.00	5.73		ug/L		115	74 - 131	0	21
Dichlorobromomethane	5.00	5.73		ug/L		115	74 - 131	0	21
cis-1,3-Dichloropropene	5.00	4.74		ug/L		95	77 - 131	1	24
Toluene	5.00	5.12		ug/L		102	80 - 126	0	20
trans-1,3-Dichloropropene	5.00	5.40		ug/L		108	71 - 138	2	26
1,1,2-Trichloroethane	5.00	5.54		ug/L		111	73 - 127	3	22
Tetrachloroethene	5.00	5.08		ug/L		102	75 - 124	2	20
1,3-Dichloropropane	5.00	5.51		ug/L		110	69 - 138	1	19
Chlorodibromomethane	5.00	5.50		ug/L		110	62 - 141	1	22
Ethylene Dibromide	5.00	5.63		ug/L		113	61 - 143	1	22
Chlorobenzene	5.00	5.18		ug/L		104	74 - 123	1	21

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

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

Lab Sample ID: LCSD 580-462616/5

Matrix: Water

Analysis Batch: 462616

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
1,1,1,2-Tetrachloroethane	5.00	5.46		ug/L		109	69 - 127	1	22
Ethylbenzene	5.00	5.42		ug/L		108	80 - 124	2	22
m-Xylene & p-Xylene	5.00	5.27		ug/L		105	75 - 124	1	22
o-Xylene	5.00	5.41		ug/L		108	71 - 124	1	23
Styrene	5.00	5.14		ug/L		103	74 - 127	0	22
Bromoform	5.00	5.45		ug/L		109	48 - 127	2	23
Isopropylbenzene	5.00	5.37		ug/L		107	71 - 123	1	23
Bromobenzene	5.00	5.14		ug/L		103	74 - 130	3	23
1,1,2,2-Tetrachloroethane	5.00	5.49		ug/L		110	67 - 136	2	24
1,2,3-Trichloropropane	5.00	5.78		ug/L		116	67 - 135	3	25
N-Propylbenzene	5.00	5.21		ug/L		104	72 - 126	1	20
2-Chlorotoluene	5.00	5.12		ug/L		102	73 - 120	0	22
4-Chlorotoluene	5.00	5.49		ug/L		110	75 - 124	3	23
1,3,5-Trimethylbenzene	5.00	5.23		ug/L		105	75 - 123	3	23
tert-Butylbenzene	5.00	4.98		ug/L		100	70 - 129	1	24
1,2,4-Trimethylbenzene	5.00	5.16		ug/L		103	71 - 127	2	23
sec-Butylbenzene	5.00	4.85		ug/L		97	75 - 126	1	23
4-Isopropyltoluene	5.00	4.90		ug/L		98	78 - 125	1	24
1,3-Dichlorobenzene	5.00	5.14		ug/L		103	72 - 125	3	22
1,4-Dichlorobenzene	5.00	5.09		ug/L		102	71 - 129	1	22
n-Butylbenzene	5.00	4.63		ug/L		93	69 - 127	1	24
1,2-Dichlorobenzene	5.00	5.31		ug/L		106	72 - 129	2	22
1,2-Dibromo-3-Chloropropane	5.00	5.55		ug/L		111	55 - 135	1	29
1,2,4-Trichlorobenzene	5.00	5.11		ug/L		102	60 - 130	3	26
Hexachlorobutadiene	5.00	4.76		ug/L		95	63 - 130	1	26
Naphthalene	5.00	5.19		ug/L		104	54 - 137	1	28
1,2,3-Trichlorobenzene	5.00	5.43		ug/L		109	60 - 136	2	28

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	104		80 - 120
4-Bromofluorobenzene (Surr)	104		80 - 120
1,2-Dichloroethane-d4 (Surr)	109		80 - 120

Lab Sample ID: MB 580-462691/7

Matrix: Water

Analysis Batch: 462691

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			06/19/24 14:55	1
Chloromethane	ND		0.50	0.14	ug/L			06/19/24 14:55	1
Vinyl chloride	ND		0.10	0.040	ug/L			06/19/24 14:55	1
Bromomethane	ND		0.50	0.13	ug/L			06/19/24 14:55	1
Chloroethane	ND		0.50	0.24	ug/L			06/19/24 14:55	1
Carbon disulfide	ND		0.40	0.20	ug/L			06/19/24 14:55	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			06/19/24 14:55	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			06/19/24 14:55	1
Acetone	ND		10	3.1	ug/L			06/19/24 14:55	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

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

Lab Sample ID: MB 580-462691/7

Matrix: Water

Analysis Batch: 462691

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		5.0	1.2	ug/L			06/19/24 14:55	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			06/19/24 14:55	1
2-Butanone (MEK)	ND		10	2.5	ug/L			06/19/24 14:55	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			06/19/24 14:55	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			06/19/24 14:55	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			06/19/24 14:55	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			06/19/24 14:55	1
Chlorobromomethane	ND		0.20	0.050	ug/L			06/19/24 14:55	1
Chloroform	ND		0.20	0.030	ug/L			06/19/24 14:55	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			06/19/24 14:55	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			06/19/24 14:55	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			06/19/24 14:55	1
Benzene	0.0748	J	0.20	0.030	ug/L			06/19/24 14:55	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			06/19/24 14:55	1
Trichloroethene	0.113	J	0.20	0.066	ug/L			06/19/24 14:55	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			06/19/24 14:55	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			06/19/24 14:55	1
Dibromomethane	ND		0.20	0.062	ug/L			06/19/24 14:55	1
Bromodichloromethane	ND		0.20	0.060	ug/L			06/19/24 14:55	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			06/19/24 14:55	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			06/19/24 14:55	1
Toluene	ND		0.20	0.050	ug/L			06/19/24 14:55	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			06/19/24 14:55	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			06/19/24 14:55	1
Tetrachloroethene	ND		0.24	0.084	ug/L			06/19/24 14:55	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			06/19/24 14:55	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			06/19/24 14:55	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			06/19/24 14:55	1
Chlorobenzene	ND		0.20	0.060	ug/L			06/19/24 14:55	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			06/19/24 14:55	1
Ethylbenzene	ND		0.20	0.082	ug/L			06/19/24 14:55	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			06/19/24 14:55	1
o-Xylene	ND		0.50	0.23	ug/L			06/19/24 14:55	1
Styrene	ND		1.0	0.33	ug/L			06/19/24 14:55	1
Bromoform	ND		0.50	0.16	ug/L			06/19/24 14:55	1
Isopropylbenzene	ND		1.0	0.27	ug/L			06/19/24 14:55	1
Bromobenzene	ND		0.20	0.038	ug/L			06/19/24 14:55	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			06/19/24 14:55	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			06/19/24 14:55	1
N-Propylbenzene	ND		0.30	0.091	ug/L			06/19/24 14:55	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			06/19/24 14:55	1
4-Chlorotoluene	ND		0.30	0.12	ug/L			06/19/24 14:55	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			06/19/24 14:55	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			06/19/24 14:55	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			06/19/24 14:55	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			06/19/24 14:55	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			06/19/24 14:55	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 14:55	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			06/19/24 14:55	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

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

Lab Sample ID: MB 580-462691/7

Matrix: Water

Analysis Batch: 462691

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	0.35	ug/L			06/19/24 14:55	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			06/19/24 14:55	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			06/19/24 14:55	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			06/19/24 14:55	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			06/19/24 14:55	1
Naphthalene	ND		1.5	0.52	ug/L			06/19/24 14:55	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			06/19/24 14:55	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		06/19/24 14:55	1
Dibromofluoromethane (Surr)	107		80 - 120		06/19/24 14:55	1
4-Bromofluorobenzene (Surr)	101		80 - 120		06/19/24 14:55	1
1,2-Dichloroethane-d4 (Surr)	111		80 - 120		06/19/24 14:55	1

Lab Sample ID: LCS 580-462691/4

Matrix: Water

Analysis Batch: 462691

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	4.40		ug/L		88	20 - 150
Chloromethane	5.00	3.75		ug/L		75	32 - 150
Vinyl chloride	5.00	4.83		ug/L		97	41 - 150
Bromomethane	5.00	6.35		ug/L		127	51 - 148
Chloroethane	5.00	6.43		ug/L		129	54 - 140
Carbon disulfide	5.00	5.93		ug/L		119	54 - 142
Trichlorofluoromethane	5.00	5.67		ug/L		113	60 - 132
1,1-Dichloroethene	5.00	5.74		ug/L		115	60 - 129
Acetone	25.0	31.6		ug/L		126	49 - 150
Methylene Chloride	5.00	5.44		ug/L		109	40 - 142
Methyl tert-butyl ether	5.00	6.09		ug/L		122	61 - 131
2-Butanone (MEK)	25.0	32.2		ug/L		129	37 - 150
trans-1,2-Dichloroethene	5.00	5.71		ug/L		114	69 - 121
1,1-Dichloroethane	5.00	5.87		ug/L		117	74 - 120
2,2-Dichloropropane	5.00	6.00		ug/L		120	55 - 140
cis-1,2-Dichloroethene	5.00	5.85		ug/L		117	72 - 120
Chlorobromomethane	5.00	5.99		ug/L		120	79 - 121
Chloroform	5.00	5.89		ug/L		118	75 - 120
1,1,1-Trichloroethane	5.00	6.05		ug/L		121	70 - 121
Carbon tetrachloride	5.00	5.94		ug/L		119	66 - 130
1,1-Dichloropropene	5.00	5.79		ug/L		116	72 - 125
Benzene	5.00	5.47		ug/L		109	80 - 120
1,2-Dichloroethane	5.00	6.24		ug/L		125	74 - 127
Trichloroethene	5.00	5.61		ug/L		112	72 - 120
1,2-Dichloropropane	5.00	5.88		ug/L		118	69 - 130
4-Methyl-2-pentanone (MIBK)	25.0	27.7		ug/L		111	63 - 137
Dibromomethane	5.00	5.85		ug/L		117	65 - 141
Bromodichloromethane	5.00	6.00		ug/L		120	74 - 131
Dichlorobromomethane	5.00	6.00		ug/L		120	74 - 131

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

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

Lab Sample ID: LCS 580-462691/4

Matrix: Water

Analysis Batch: 462691

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
cis-1,3-Dichloropropene	5.00	5.02		ug/L		100	77 - 131
Toluene	5.00	5.16		ug/L		103	80 - 126
trans-1,3-Dichloropropene	5.00	5.72		ug/L		114	71 - 138
1,1,2-Trichloroethane	5.00	5.46		ug/L		109	73 - 127
Tetrachloroethene	5.00	5.12		ug/L		102	75 - 124
1,3-Dichloropropane	5.00	5.41		ug/L		108	69 - 138
Chlorodibromomethane	5.00	5.68		ug/L		114	62 - 141
Ethylene Dibromide	5.00	5.71		ug/L		114	61 - 143
Chlorobenzene	5.00	5.20		ug/L		104	74 - 123
1,1,1,2-Tetrachloroethane	5.00	5.60		ug/L		112	69 - 127
Ethylbenzene	5.00	5.43		ug/L		109	80 - 124
m-Xylene & p-Xylene	5.00	5.36		ug/L		107	75 - 124
o-Xylene	5.00	5.43		ug/L		109	71 - 124
Styrene	5.00	5.11		ug/L		102	74 - 127
Bromoform	5.00	5.70		ug/L		114	48 - 127
Isopropylbenzene	5.00	5.51		ug/L		110	71 - 123
Bromobenzene	5.00	5.05		ug/L		101	74 - 130
1,1,2,2-Tetrachloroethane	5.00	5.43		ug/L		109	67 - 136
1,2,3-Trichloropropane	5.00	5.76		ug/L		115	67 - 135
N-Propylbenzene	5.00	5.29		ug/L		106	72 - 126
2-Chlorotoluene	5.00	5.09		ug/L		102	73 - 120
4-Chlorotoluene	5.00	5.45		ug/L		109	75 - 124
1,3,5-Trimethylbenzene	5.00	5.21		ug/L		104	75 - 123
tert-Butylbenzene	5.00	4.98		ug/L		100	70 - 129
1,2,4-Trimethylbenzene	5.00	5.17		ug/L		103	71 - 127
sec-Butylbenzene	5.00	4.88		ug/L		98	75 - 126
4-Isopropyltoluene	5.00	4.96		ug/L		99	78 - 125
1,3-Dichlorobenzene	5.00	5.08		ug/L		102	72 - 125
1,4-Dichlorobenzene	5.00	5.16		ug/L		103	71 - 129
n-Butylbenzene	5.00	4.89		ug/L		98	69 - 127
1,2-Dichlorobenzene	5.00	5.23		ug/L		105	72 - 129
1,2-Dibromo-3-Chloropropane	5.00	5.70		ug/L		114	55 - 135
1,2,4-Trichlorobenzene	5.00	5.13		ug/L		103	60 - 130
Hexachlorobutadiene	5.00	5.25		ug/L		105	63 - 130
Naphthalene	5.00	5.09		ug/L		102	54 - 137
1,2,3-Trichlorobenzene	5.00	5.47		ug/L		109	60 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	106		80 - 120
4-Bromofluorobenzene (Surr)	106		80 - 120
1,2-Dichloroethane-d4 (Surr)	111		80 - 120

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

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

Lab Sample ID: LCSD 580-462691/5

Matrix: Water

Analysis Batch: 462691

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	4.40		ug/L		88	20 - 150	0	30
Chloromethane	5.00	3.78		ug/L		76	32 - 150	1	33
Vinyl chloride	5.00	4.79		ug/L		96	41 - 150	1	32
Bromomethane	5.00	6.11		ug/L		122	51 - 148	4	35
Chloroethane	5.00	4.87		ug/L		97	54 - 140	27	33
Carbon disulfide	5.00	5.97		ug/L		119	54 - 142	1	34
Trichlorofluoromethane	5.00	5.56		ug/L		111	60 - 132	2	32
1,1-Dichloroethene	5.00	5.69		ug/L		114	60 - 129	1	29
Acetone	25.0	31.4		ug/L		126	49 - 150	1	24
Methylene Chloride	5.00	5.26		ug/L		105	40 - 142	3	25
Methyl tert-butyl ether	5.00	5.88		ug/L		118	61 - 131	3	27
2-Butanone (MEK)	25.0	31.7		ug/L		127	37 - 150	2	35
trans-1,2-Dichloroethene	5.00	5.78		ug/L		116	69 - 121	1	27
1,1-Dichloroethane	5.00	5.95		ug/L		119	74 - 120	1	26
2,2-Dichloropropane	5.00	6.01		ug/L		120	55 - 140	0	31
cis-1,2-Dichloroethene	5.00	5.72		ug/L		114	72 - 120	2	22
Chlorobromomethane	5.00	5.95		ug/L		119	79 - 121	1	20
Chloroform	5.00	5.92		ug/L		118	75 - 120	0	21
1,1,1-Trichloroethane	5.00	5.88		ug/L		118	70 - 121	3	24
Carbon tetrachloride	5.00	5.92		ug/L		118	66 - 130	0	24
1,1-Dichloropropene	5.00	6.00		ug/L		120	72 - 125	3	23
Benzene	5.00	5.42		ug/L		108	80 - 120	1	22
1,2-Dichloroethane	5.00	5.98		ug/L		120	74 - 127	4	21
Trichloroethene	5.00	5.54		ug/L		111	72 - 120	1	22
1,2-Dichloropropane	5.00	5.82		ug/L		116	69 - 130	1	22
4-Methyl-2-pentanone (MIBK)	25.0	27.3		ug/L		109	63 - 137	2	26
Dibromomethane	5.00	5.99		ug/L		120	65 - 141	2	22
Bromodichloromethane	5.00	5.95		ug/L		119	74 - 131	1	21
Dichlorobromomethane	5.00	5.95		ug/L		119	74 - 131	1	21
cis-1,3-Dichloropropene	5.00	5.04		ug/L		101	77 - 131	0	24
Toluene	5.00	5.18		ug/L		104	80 - 126	0	20
trans-1,3-Dichloropropene	5.00	5.70		ug/L		114	71 - 138	0	26
1,1,2-Trichloroethane	5.00	5.57		ug/L		111	73 - 127	2	22
Tetrachloroethene	5.00	5.16		ug/L		103	75 - 124	1	20
1,3-Dichloropropane	5.00	5.57		ug/L		111	69 - 138	3	19
Chlorodibromomethane	5.00	5.62		ug/L		112	62 - 141	1	22
Ethylene Dibromide	5.00	5.66		ug/L		113	61 - 143	1	22
Chlorobenzene	5.00	5.30		ug/L		106	74 - 123	2	21
1,1,1,2-Tetrachloroethane	5.00	5.56		ug/L		111	69 - 127	1	22
Ethylbenzene	5.00	5.39		ug/L		108	80 - 124	1	22
m-Xylene & p-Xylene	5.00	5.35		ug/L		107	75 - 124	0	22
o-Xylene	5.00	5.47		ug/L		109	71 - 124	1	23
Styrene	5.00	5.29		ug/L		106	74 - 127	3	22
Bromoform	5.00	5.55		ug/L		111	48 - 127	3	23
Isopropylbenzene	5.00	5.54		ug/L		111	71 - 123	0	23
Bromobenzene	5.00	5.08		ug/L		102	74 - 130	1	23
1,1,2,2-Tetrachloroethane	5.00	5.49		ug/L		110	67 - 136	1	24
1,2,3-Trichloropropane	5.00	5.78		ug/L		116	67 - 135	0	25

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

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

Lab Sample ID: LCSD 580-462691/5

Matrix: Water

Analysis Batch: 462691

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
N-Propylbenzene	5.00	5.28		ug/L		106	72 - 126	0	20
2-Chlorotoluene	5.00	5.18		ug/L		104	73 - 120	2	22
4-Chlorotoluene	5.00	5.68		ug/L		114	75 - 124	4	23
1,3,5-Trimethylbenzene	5.00	5.20		ug/L		104	75 - 123	0	23
tert-Butylbenzene	5.00	4.93		ug/L		99	70 - 129	1	24
1,2,4-Trimethylbenzene	5.00	5.30		ug/L		106	71 - 127	2	23
sec-Butylbenzene	5.00	4.96		ug/L		99	75 - 126	1	23
4-Isopropyltoluene	5.00	4.97		ug/L		99	78 - 125	0	24
1,3-Dichlorobenzene	5.00	5.18		ug/L		104	72 - 125	2	22
1,4-Dichlorobenzene	5.00	5.30		ug/L		106	71 - 129	3	22
n-Butylbenzene	5.00	4.91		ug/L		98	69 - 127	1	24
1,2-Dichlorobenzene	5.00	5.28		ug/L		106	72 - 129	1	22
1,2-Dibromo-3-Chloropropane	5.00	5.68		ug/L		114	55 - 135	0	29
1,2,4-Trichlorobenzene	5.00	4.95		ug/L		99	60 - 130	4	26
Hexachlorobutadiene	5.00	5.08		ug/L		102	63 - 130	3	26
Naphthalene	5.00	4.92		ug/L		98	54 - 137	3	28
1,2,3-Trichlorobenzene	5.00	5.24		ug/L		105	60 - 136	4	28

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	106		80 - 120
4-Bromofluorobenzene (Surr)	104		80 - 120
1,2-Dichloroethane-d4 (Surr)	109		80 - 120

Lab Sample ID: MB 580-462734/11

Matrix: Water

Analysis Batch: 462734

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			06/19/24 20:28	1
Chloromethane	ND		1.0	0.28	ug/L			06/19/24 20:28	1
Vinyl chloride	ND		1.0	0.22	ug/L			06/19/24 20:28	1
Bromomethane	ND		1.0	0.21	ug/L			06/19/24 20:28	1
Chloroethane	ND		1.0	0.35	ug/L			06/19/24 20:28	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			06/19/24 20:28	1
Carbon disulfide	ND		1.0	0.53	ug/L			06/19/24 20:28	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			06/19/24 20:28	1
Acetone	ND		15	3.2	ug/L			06/19/24 20:28	1
Methylene Chloride	ND		5.0	1.4	ug/L			06/19/24 20:28	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			06/19/24 20:28	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			06/19/24 20:28	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/19/24 20:28	1
2-Butanone (MEK)	ND		15	4.7	ug/L			06/19/24 20:28	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			06/19/24 20:28	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			06/19/24 20:28	1
Chlorobromomethane	ND		1.0	0.29	ug/L			06/19/24 20:28	1
Chloroform	ND		1.0	0.26	ug/L			06/19/24 20:28	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			06/19/24 20:28	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

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

Lab Sample ID: MB 580-462734/11

Matrix: Water

Analysis Batch: 462734

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		1.0	0.30	ug/L			06/19/24 20:28	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			06/19/24 20:28	1
Benzene	ND		1.0	0.24	ug/L			06/19/24 20:28	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			06/19/24 20:28	1
Trichloroethene	ND		1.0	0.26	ug/L			06/19/24 20:28	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/19/24 20:28	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/19/24 20:28	1
Dibromomethane	ND		1.0	0.34	ug/L			06/19/24 20:28	1
Bromodichloromethane	ND		1.0	0.29	ug/L			06/19/24 20:28	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			06/19/24 20:28	1
Toluene	ND		1.0	0.39	ug/L			06/19/24 20:28	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			06/19/24 20:28	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			06/19/24 20:28	1
Tetrachloroethene	ND		1.0	0.41	ug/L			06/19/24 20:28	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			06/19/24 20:28	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			06/19/24 20:28	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			06/19/24 20:28	1
Chlorobenzene	ND		1.0	0.44	ug/L			06/19/24 20:28	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			06/19/24 20:28	1
Ethylbenzene	ND		1.0	0.50	ug/L			06/19/24 20:28	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			06/19/24 20:28	1
o-Xylene	ND		1.0	0.39	ug/L			06/19/24 20:28	1
Styrene	ND		1.0	0.53	ug/L			06/19/24 20:28	1
Bromoform	ND		1.0	0.51	ug/L			06/19/24 20:28	1
Isopropylbenzene	ND		1.0	0.44	ug/L			06/19/24 20:28	1
Bromobenzene	ND		1.0	0.43	ug/L			06/19/24 20:28	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			06/19/24 20:28	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			06/19/24 20:28	1
N-Propylbenzene	ND		1.0	0.50	ug/L			06/19/24 20:28	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			06/19/24 20:28	1
4-Chlorotoluene	ND		1.0	0.38	ug/L			06/19/24 20:28	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			06/19/24 20:28	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			06/19/24 20:28	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			06/19/24 20:28	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			06/19/24 20:28	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			06/19/24 20:28	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			06/19/24 20:28	1
n-Butylbenzene	ND		1.0	0.44	ug/L			06/19/24 20:28	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			06/19/24 20:28	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			06/19/24 20:28	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			06/19/24 20:28	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			06/19/24 20:28	1
Naphthalene	ND		3.0	0.93	ug/L			06/19/24 20:28	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			06/19/24 20:28	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			06/19/24 20:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		06/19/24 20:28	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

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

Lab Sample ID: MB 580-462734/11

Matrix: Water

Analysis Batch: 462734

Client Sample ID: Method Blank

Prep Type: Total/NA

Surrogate	%Recovery	MB MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		80 - 120		06/19/24 20:28	1
4-Bromofluorobenzene (Surr)	109		80 - 120		06/19/24 20:28	1
Dibromofluoromethane (Surr)	106		80 - 120		06/19/24 20:28	1

Lab Sample ID: LCS 580-462734/6

Matrix: Water

Analysis Batch: 462734

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	8.48		ug/L		85	20 - 150
Chloromethane	10.0	9.49		ug/L		95	25 - 150
Vinyl chloride	10.0	9.77		ug/L		98	31 - 150
Bromomethane	10.0	10.7		ug/L		107	36 - 150
Chloroethane	10.0	10.1		ug/L		101	38 - 150
Trichlorofluoromethane	10.0	10.1		ug/L		101	45 - 148
Carbon disulfide	10.0	9.74		ug/L		97	63 - 134
1,1-Dichloroethene	10.0	10.6		ug/L		106	70 - 129
Acetone	50.0	53.4		ug/L		107	44 - 150
Methylene Chloride	10.0	10.8		ug/L		108	77 - 125
Methyl tert-butyl ether	10.0	10.1		ug/L		101	72 - 120
trans-1,2-Dichloroethene	10.0	9.90		ug/L		99	75 - 120
1,1-Dichloroethane	10.0	10.2		ug/L		102	80 - 120
2-Butanone (MEK)	50.0	47.1		ug/L		94	65 - 137
2,2-Dichloropropane	10.0	10.5		ug/L		105	66 - 126
cis-1,2-Dichloroethene	10.0	10.1		ug/L		101	76 - 120
Chlorobromomethane	10.0	10.2		ug/L		102	78 - 120
Chloroform	10.0	10.3		ug/L		103	78 - 127
1,1,1-Trichloroethane	10.0	9.95		ug/L		100	74 - 130
Carbon tetrachloride	10.0	9.53		ug/L		95	72 - 129
1,1-Dichloropropene	10.0	9.58		ug/L		96	74 - 120
Benzene	10.0	10.0		ug/L		100	80 - 122
1,2-Dichloroethane	10.0	9.97		ug/L		100	69 - 126
Trichloroethene	10.0	9.97		ug/L		100	80 - 125
1,2-Dichloropropane	10.0	9.64		ug/L		96	80 - 120
4-Methyl-2-pentanone (MIBK)	50.0	48.8		ug/L		98	59 - 141
Dibromomethane	10.0	9.95		ug/L		100	80 - 120
Bromodichloromethane	10.0	9.41		ug/L		94	75 - 124
cis-1,3-Dichloropropene	10.0	8.76		ug/L		88	77 - 120
Toluene	10.0	9.81		ug/L		98	80 - 120
trans-1,3-Dichloropropene	10.0	9.24		ug/L		92	76 - 122
1,1,2-Trichloroethane	10.0	10.1		ug/L		101	80 - 121
Tetrachloroethene	10.0	9.08		ug/L		91	76 - 125
1,3-Dichloropropane	10.0	9.32		ug/L		93	79 - 120
Chlorodibromomethane	10.0	8.85		ug/L		89	73 - 125
Ethylene Dibromide	10.0	9.10		ug/L		91	79 - 126
Chlorobenzene	10.0	9.87		ug/L		99	80 - 120
1,1,1,2-Tetrachloroethane	10.0	10.3		ug/L		103	79 - 120
Ethylbenzene	10.0	9.95		ug/L		99	80 - 120

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

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

Lab Sample ID: LCS 580-462734/6

Matrix: Water

Analysis Batch: 462734

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
m-Xylene & p-Xylene	10.0	10.5		ug/L		105	80 - 120
o-Xylene	10.0	10.5		ug/L		105	80 - 120
Styrene	10.0	10.1		ug/L		101	76 - 122
Bromoform	10.0	7.85		ug/L		79	56 - 139
Isopropylbenzene	10.0	10.6		ug/L		106	80 - 123
Bromobenzene	10.0	9.65		ug/L		97	80 - 120
1,1,2,2-Tetrachloroethane	10.0	9.45		ug/L		95	74 - 124
1,2,3-Trichloropropane	10.0	9.71		ug/L		97	76 - 124
N-Propylbenzene	10.0	9.45		ug/L		95	80 - 122
2-Chlorotoluene	10.0	9.84		ug/L		98	80 - 120
4-Chlorotoluene	10.0	9.52		ug/L		95	73 - 129
tert-Butylbenzene	10.0	9.83		ug/L		98	75 - 123
1,2,4-Trimethylbenzene	10.0	9.77		ug/L		98	80 - 120
sec-Butylbenzene	10.0	9.69		ug/L		97	78 - 122
4-Isopropyltoluene	10.0	9.78		ug/L		98	77 - 126
1,3-Dichlorobenzene	10.0	9.91		ug/L		99	77 - 127
1,4-Dichlorobenzene	10.0	9.49		ug/L		95	80 - 120
n-Butylbenzene	10.0	9.90		ug/L		99	57 - 133
1,2-Dichlorobenzene	10.0	9.75		ug/L		97	80 - 120
1,2-Dibromo-3-Chloropropane	10.0	8.23		ug/L		82	65 - 133
1,2,4-Trichlorobenzene	10.0	9.38		ug/L		94	61 - 148
Hexachlorobutadiene	10.0	10.5		ug/L		105	74 - 131
Naphthalene	10.0	8.63		ug/L		86	63 - 150
1,2,3-Trichlorobenzene	10.0	8.96		ug/L		90	65 - 150
1,3,5-Trimethylbenzene	10.0	9.93		ug/L		99	80 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	102		80 - 120
4-Bromofluorobenzene (Surr)	107		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120

Lab Sample ID: LCSD 580-462734/7

Matrix: Water

Analysis Batch: 462734

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	8.68		ug/L		87	20 - 150	2	33
Chloromethane	10.0	9.97		ug/L		100	25 - 150	5	26
Vinyl chloride	10.0	10.3		ug/L		103	31 - 150	6	26
Bromomethane	10.0	11.0		ug/L		110	36 - 150	2	33
Chloroethane	10.0	11.0		ug/L		110	38 - 150	9	28
Trichlorofluoromethane	10.0	10.2		ug/L		102	45 - 148	1	35
Carbon disulfide	10.0	10.1		ug/L		101	63 - 134	3	24
1,1-Dichloroethene	10.0	11.3		ug/L		113	70 - 129	6	23
Acetone	50.0	55.9		ug/L		112	44 - 150	5	33
Methylene Chloride	10.0	11.3		ug/L		113	77 - 125	5	18
Methyl tert-butyl ether	10.0	10.5		ug/L		105	72 - 120	4	18

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

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

Lab Sample ID: LCSD 580-462734/7

Matrix: Water

Analysis Batch: 462734

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
trans-1,2-Dichloroethene	10.0	10.2		ug/L		102	75 - 120	3	21
1,1-Dichloroethane	10.0	10.6		ug/L		106	80 - 120	4	15
2-Butanone (MEK)	50.0	47.9		ug/L		96	65 - 137	2	34
2,2-Dichloropropane	10.0	11.0		ug/L		110	66 - 126	4	22
cis-1,2-Dichloroethene	10.0	10.6		ug/L		106	76 - 120	5	20
Chlorobromomethane	10.0	10.6		ug/L		106	78 - 120	4	13
Chloroform	10.0	10.9		ug/L		109	78 - 127	5	14
1,1,1-Trichloroethane	10.0	10.5		ug/L		105	74 - 130	5	19
Carbon tetrachloride	10.0	9.74		ug/L		97	72 - 129	2	19
1,1-Dichloropropene	10.0	9.83		ug/L		98	74 - 120	3	14
Benzene	10.0	10.0		ug/L		100	80 - 122	0	14
1,2-Dichloroethane	10.0	10.6		ug/L		106	69 - 126	6	11
Trichloroethene	10.0	10.1		ug/L		101	80 - 125	1	13
1,2-Dichloropropane	10.0	10.1		ug/L		101	80 - 120	4	14
4-Methyl-2-pentanone (MIBK)	50.0	50.5		ug/L		101	59 - 141	3	22
Dibromomethane	10.0	10.4		ug/L		104	80 - 120	4	11
Bromodichloromethane	10.0	9.15		ug/L		92	75 - 124	3	13
cis-1,3-Dichloropropene	10.0	8.26		ug/L		83	77 - 120	6	35
Toluene	10.0	9.74		ug/L		97	80 - 120	1	13
trans-1,3-Dichloropropene	10.0	8.25		ug/L		83	76 - 122	11	20
1,1,2-Trichloroethane	10.0	9.65		ug/L		97	80 - 121	4	14
Tetrachloroethene	10.0	8.46		ug/L		85	76 - 125	7	13
1,3-Dichloropropane	10.0	9.05		ug/L		90	79 - 120	3	19
Chlorodibromomethane	10.0	8.64		ug/L		86	73 - 125	2	13
Ethylene Dibromide	10.0	9.02		ug/L		90	79 - 126	1	12
Chlorobenzene	10.0	9.74		ug/L		97	80 - 120	1	10
1,1,1,2-Tetrachloroethane	10.0	10.9		ug/L		109	79 - 120	5	16
Ethylbenzene	10.0	9.86		ug/L		99	80 - 120	1	14
m-Xylene & p-Xylene	10.0	10.4		ug/L		104	80 - 120	1	14
o-Xylene	10.0	10.7		ug/L		107	80 - 120	2	16
Styrene	10.0	10.1		ug/L		101	76 - 122	0	16
Bromoform	10.0	8.51		ug/L		85	56 - 139	8	21
Isopropylbenzene	10.0	10.9		ug/L		109	80 - 123	3	19
Bromobenzene	10.0	9.33		ug/L		93	80 - 120	3	24
1,1,2,2-Tetrachloroethane	10.0	9.34		ug/L		93	74 - 124	1	25
1,2,3-Trichloropropane	10.0	9.37		ug/L		94	76 - 124	4	26
N-Propylbenzene	10.0	9.25		ug/L		92	80 - 122	2	22
2-Chlorotoluene	10.0	9.69		ug/L		97	80 - 120	1	20
4-Chlorotoluene	10.0	9.53		ug/L		95	73 - 129	0	29
tert-Butylbenzene	10.0	9.91		ug/L		99	75 - 123	1	21
1,2,4-Trimethylbenzene	10.0	9.98		ug/L		100	80 - 120	2	16
sec-Butylbenzene	10.0	9.89		ug/L		99	78 - 122	2	15
4-Isopropyltoluene	10.0	10.0		ug/L		100	77 - 126	2	20
1,3-Dichlorobenzene	10.0	9.88		ug/L		99	77 - 127	0	35
1,4-Dichlorobenzene	10.0	9.67		ug/L		97	80 - 120	2	17
n-Butylbenzene	10.0	10.1		ug/L		101	57 - 133	2	14
1,2-Dichlorobenzene	10.0	10.2		ug/L		102	80 - 120	4	15
1,2-Dibromo-3-Chloropropane	10.0	8.62		ug/L		86	65 - 133	5	25
1,2,4-Trichlorobenzene	10.0	10.0		ug/L		100	61 - 148	6	27

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

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

Lab Sample ID: LCSD 580-462734/7

Matrix: Water

Analysis Batch: 462734

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
Hexachlorobutadiene	10.0	11.0		ug/L		110	74 - 131	5	22
Naphthalene	10.0	8.99		ug/L		90	63 - 150	4	33
1,2,3-Trichlorobenzene	10.0	9.68		ug/L		97	65 - 150	8	33
1,3,5-Trimethylbenzene	10.0	10.1		ug/L		101	80 - 122	2	21

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	98		80 - 120
1,2-Dichloroethane-d4 (Surr)	106		80 - 120
4-Bromofluorobenzene (Surr)	108		80 - 120
Dibromofluoromethane (Surr)	108		80 - 120

Lab Sample ID: MB 580-462865/11

Matrix: Water

Analysis Batch: 462865

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		1.0	0.44	ug/L			06/20/24 20:46	1

Lab Sample ID: LCS 580-462865/6

Matrix: Water

Analysis Batch: 462865

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorobenzene	5.00	4.79		ug/L		96	80 - 120

Lab Sample ID: LCSD 580-462865/7

Matrix: Water

Analysis Batch: 462865

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
Chlorobenzene	5.00	4.75		ug/L		95	80 - 120	1	10

Lab Sample ID: MB 580-462988/11

Matrix: Water

Analysis Batch: 462988

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			06/21/24 15:40	1
Chloromethane	ND		1.0	0.28	ug/L			06/21/24 15:40	1
Vinyl chloride	ND		1.0	0.22	ug/L			06/21/24 15:40	1
Bromomethane	ND		1.0	0.21	ug/L			06/21/24 15:40	1
Chloroethane	ND		1.0	0.35	ug/L			06/21/24 15:40	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			06/21/24 15:40	1
Carbon disulfide	ND		1.0	0.53	ug/L			06/21/24 15:40	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			06/21/24 15:40	1
Acetone	ND		15	3.2	ug/L			06/21/24 15:40	1
Methylene Chloride	ND		5.0	1.4	ug/L			06/21/24 15:40	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			06/21/24 15:40	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			06/21/24 15:40	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

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

Lab Sample ID: MB 580-462988/11

Matrix: Water

Analysis Batch: 462988

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethane	ND		1.0	0.22	ug/L			06/21/24 15:40	1
2-Butanone (MEK)	ND		15	4.7	ug/L			06/21/24 15:40	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			06/21/24 15:40	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			06/21/24 15:40	1
Chlorobromomethane	ND		1.0	0.29	ug/L			06/21/24 15:40	1
Chloroform	ND		1.0	0.26	ug/L			06/21/24 15:40	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			06/21/24 15:40	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			06/21/24 15:40	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			06/21/24 15:40	1
Benzene	ND		1.0	0.24	ug/L			06/21/24 15:40	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			06/21/24 15:40	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			06/21/24 15:40	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/21/24 15:40	1
Dibromomethane	ND		1.0	0.34	ug/L			06/21/24 15:40	1
Bromodichloromethane	ND		1.0	0.29	ug/L			06/21/24 15:40	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			06/21/24 15:40	1
Toluene	ND		1.0	0.39	ug/L			06/21/24 15:40	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			06/21/24 15:40	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			06/21/24 15:40	1
Tetrachloroethene	ND		1.0	0.41	ug/L			06/21/24 15:40	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			06/21/24 15:40	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			06/21/24 15:40	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			06/21/24 15:40	1
Chlorobenzene	ND		1.0	0.44	ug/L			06/21/24 15:40	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			06/21/24 15:40	1
Ethylbenzene	ND		1.0	0.50	ug/L			06/21/24 15:40	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			06/21/24 15:40	1
o-Xylene	ND		1.0	0.39	ug/L			06/21/24 15:40	1
Styrene	ND		1.0	0.53	ug/L			06/21/24 15:40	1
Bromoform	ND		1.0	0.51	ug/L			06/21/24 15:40	1
Isopropylbenzene	ND		1.0	0.44	ug/L			06/21/24 15:40	1
Bromobenzene	ND		1.0	0.43	ug/L			06/21/24 15:40	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			06/21/24 15:40	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			06/21/24 15:40	1
N-Propylbenzene	ND		1.0	0.50	ug/L			06/21/24 15:40	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			06/21/24 15:40	1
4-Chlorotoluene	ND		1.0	0.38	ug/L			06/21/24 15:40	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			06/21/24 15:40	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			06/21/24 15:40	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			06/21/24 15:40	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			06/21/24 15:40	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			06/21/24 15:40	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			06/21/24 15:40	1
n-Butylbenzene	ND		1.0	0.44	ug/L			06/21/24 15:40	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			06/21/24 15:40	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			06/21/24 15:40	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			06/21/24 15:40	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			06/21/24 15:40	1
Naphthalene	ND		3.0	0.93	ug/L			06/21/24 15:40	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

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

Lab Sample ID: MB 580-462988/11

Matrix: Water

Analysis Batch: 462988

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			06/21/24 15:40	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			06/21/24 15:40	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		80 - 120					06/21/24 15:40	1
1,2-Dichloroethane-d4 (Surr)	100		80 - 120					06/21/24 15:40	1
4-Bromofluorobenzene (Surr)	103		80 - 120					06/21/24 15:40	1
Dibromofluoromethane (Surr)	102		80 - 120					06/21/24 15:40	1

Lab Sample ID: LCS 580-462988/6

Matrix: Water

Analysis Batch: 462988

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	4.49		ug/L		90	20 - 150
Chloromethane	5.00	5.07		ug/L		101	25 - 150
Vinyl chloride	5.00	5.28		ug/L		106	31 - 150
Bromomethane	5.00	5.81		ug/L		116	36 - 150
Chloroethane	5.00	5.03		ug/L		101	38 - 150
Trichlorofluoromethane	5.00	4.91		ug/L		98	45 - 148
Carbon disulfide	5.00	4.63		ug/L		93	63 - 134
1,1-Dichloroethene	5.00	4.77		ug/L		95	70 - 129
Acetone	25.0	24.5		ug/L		98	44 - 150
Methylene Chloride	5.00	4.96	J	ug/L		99	77 - 125
Methyl tert-butyl ether	5.00	5.73		ug/L		115	72 - 120
trans-1,2-Dichloroethene	5.00	5.01		ug/L		100	75 - 120
1,1-Dichloroethane	5.00	4.98		ug/L		100	80 - 120
2-Butanone (MEK)	25.0	25.6		ug/L		102	65 - 137
2,2-Dichloropropane	5.00	5.73		ug/L		115	66 - 126
cis-1,2-Dichloroethene	5.00	5.01		ug/L		100	76 - 120
Chlorobromomethane	5.00	5.29		ug/L		106	78 - 120
Chloroform	5.00	5.02		ug/L		100	78 - 127
1,1,1-Trichloroethane	5.00	5.28		ug/L		106	74 - 130
Carbon tetrachloride	5.00	5.14		ug/L		103	72 - 129
1,1-Dichloropropene	5.00	5.02		ug/L		100	74 - 120
Benzene	5.00	4.72		ug/L		94	80 - 122
1,2-Dichloroethane	5.00	5.04		ug/L		101	69 - 126
1,2-Dichloropropane	5.00	5.13		ug/L		103	80 - 120
4-Methyl-2-pentanone (MIBK)	25.0	25.9		ug/L		103	59 - 141
Dibromomethane	5.00	5.38		ug/L		108	80 - 120
Bromodichloromethane	5.00	4.99		ug/L		100	75 - 124
cis-1,3-Dichloropropene	5.00	4.69		ug/L		94	77 - 120
Toluene	5.00	5.00		ug/L		100	80 - 120
trans-1,3-Dichloropropene	5.00	5.25		ug/L		105	76 - 122
1,1,2-Trichloroethane	5.00	5.15		ug/L		103	80 - 121
Tetrachloroethene	5.00	4.62		ug/L		92	76 - 125
1,3-Dichloropropane	5.00	5.08		ug/L		102	79 - 120
Chlorodibromomethane	5.00	4.76		ug/L		95	73 - 125

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

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

Lab Sample ID: LCS 580-462988/6

Matrix: Water

Analysis Batch: 462988

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Ethylene Dibromide	5.00	5.32		ug/L		106	79 - 126
Chlorobenzene	5.00	5.03		ug/L		101	80 - 120
1,1,1,2-Tetrachloroethane	5.00	5.15		ug/L		103	79 - 120
Ethylbenzene	5.00	5.13		ug/L		103	80 - 120
m-Xylene & p-Xylene	5.00	5.17		ug/L		103	80 - 120
o-Xylene	5.00	5.25		ug/L		105	80 - 120
Styrene	5.00	5.08		ug/L		102	76 - 122
Bromoform	5.00	4.77		ug/L		95	56 - 139
Isopropylbenzene	5.00	5.57		ug/L		111	80 - 123
Bromobenzene	5.00	4.95		ug/L		99	80 - 120
1,1,2,2-Tetrachloroethane	5.00	4.88		ug/L		98	74 - 124
1,2,3-Trichloropropane	5.00	5.03		ug/L		101	76 - 124
N-Propylbenzene	5.00	5.05		ug/L		101	80 - 122
2-Chlorotoluene	5.00	5.11		ug/L		102	80 - 120
4-Chlorotoluene	5.00	5.27		ug/L		105	73 - 129
tert-Butylbenzene	5.00	5.05		ug/L		101	75 - 123
1,2,4-Trimethylbenzene	5.00	5.02		ug/L		100	80 - 120
sec-Butylbenzene	5.00	5.21		ug/L		104	78 - 122
4-Isopropyltoluene	5.00	5.12		ug/L		102	77 - 126
1,3-Dichlorobenzene	5.00	5.08		ug/L		102	77 - 127
1,4-Dichlorobenzene	5.00	4.90		ug/L		98	80 - 120
n-Butylbenzene	5.00	4.79		ug/L		96	57 - 133
1,2-Dichlorobenzene	5.00	5.17		ug/L		103	80 - 120
1,2-Dibromo-3-Chloropropane	5.00	4.60		ug/L		92	65 - 133
1,2,4-Trichlorobenzene	5.00	5.21		ug/L		104	61 - 148
Hexachlorobutadiene	5.00	4.89		ug/L		98	74 - 131
Naphthalene	5.00	5.44		ug/L		109	63 - 150
1,2,3-Trichlorobenzene	5.00	4.81		ug/L		96	65 - 150
1,3,5-Trimethylbenzene	5.00	5.17		ug/L		103	80 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 120
1,2-Dichloroethane-d4 (Surr)	100		80 - 120
4-Bromofluorobenzene (Surr)	104		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120

Lab Sample ID: LCSD 580-462988/7

Matrix: Water

Analysis Batch: 462988

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	4.48		ug/L		90	20 - 150	0	33
Chloromethane	5.00	5.24		ug/L		105	25 - 150	3	26
Vinyl chloride	5.00	5.42		ug/L		108	31 - 150	3	26
Bromomethane	5.00	5.83		ug/L		117	36 - 150	0	33
Chloroethane	5.00	5.20		ug/L		104	38 - 150	3	28
Trichlorofluoromethane	5.00	5.01		ug/L		100	45 - 148	2	35
Carbon disulfide	5.00	4.80		ug/L		96	63 - 134	4	24

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

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

Lab Sample ID: LCSD 580-462988/7

Matrix: Water

Analysis Batch: 462988

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-Dichloroethene	5.00	4.95		ug/L		99	70 - 129	4	23
Acetone	25.0	28.5		ug/L		114	44 - 150	15	33
Methylene Chloride	5.00	5.10		ug/L		102	77 - 125	3	18
Methyl tert-butyl ether	5.00	5.67		ug/L		113	72 - 120	1	18
trans-1,2-Dichloroethene	5.00	5.03		ug/L		101	75 - 120	0	21
1,1-Dichloroethane	5.00	5.05		ug/L		101	80 - 120	1	15
2-Butanone (MEK)	25.0	27.2		ug/L		109	65 - 137	6	34
2,2-Dichloropropane	5.00	5.70		ug/L		114	66 - 126	0	22
cis-1,2-Dichloroethene	5.00	4.97		ug/L		99	76 - 120	1	20
Chlorobromomethane	5.00	5.02		ug/L		100	78 - 120	5	13
Chloroform	5.00	5.01		ug/L		100	78 - 127	0	14
1,1,1-Trichloroethane	5.00	5.31		ug/L		106	74 - 130	1	19
Carbon tetrachloride	5.00	5.13		ug/L		103	72 - 129	0	19
1,1-Dichloropropene	5.00	5.02		ug/L		100	74 - 120	0	14
Benzene	5.00	4.78		ug/L		96	80 - 122	1	14
1,2-Dichloroethane	5.00	4.92		ug/L		98	69 - 126	3	11
1,2-Dichloropropane	5.00	5.20		ug/L		104	80 - 120	1	14
4-Methyl-2-pentanone (MIBK)	25.0	25.7		ug/L		103	59 - 141	1	22
Dibromomethane	5.00	5.36		ug/L		107	80 - 120	0	11
Bromodichloromethane	5.00	5.10		ug/L		102	75 - 124	2	13
cis-1,3-Dichloropropene	5.00	4.82		ug/L		96	77 - 120	3	35
Toluene	5.00	5.01		ug/L		100	80 - 120	0	13
trans-1,3-Dichloropropene	5.00	5.37		ug/L		107	76 - 122	2	20
1,1,2-Trichloroethane	5.00	5.23		ug/L		105	80 - 121	2	14
Tetrachloroethene	5.00	4.85		ug/L		97	76 - 125	5	13
1,3-Dichloropropane	5.00	5.14		ug/L		103	79 - 120	1	19
Chlorodibromomethane	5.00	4.91		ug/L		98	73 - 125	3	13
Ethylene Dibromide	5.00	5.45		ug/L		109	79 - 126	2	12
Chlorobenzene	5.00	5.08		ug/L		102	80 - 120	1	10
1,1,1,2-Tetrachloroethane	5.00	5.30		ug/L		106	79 - 120	3	16
Ethylbenzene	5.00	5.17		ug/L		103	80 - 120	1	14
m-Xylene & p-Xylene	5.00	5.23		ug/L		105	80 - 120	1	14
o-Xylene	5.00	5.25		ug/L		105	80 - 120	0	16
Styrene	5.00	5.22		ug/L		104	76 - 122	3	16
Bromoform	5.00	4.93		ug/L		99	56 - 139	3	21
Isopropylbenzene	5.00	5.72		ug/L		114	80 - 123	3	19
Bromobenzene	5.00	5.17		ug/L		103	80 - 120	4	24
1,1,2,2-Tetrachloroethane	5.00	5.04		ug/L		101	74 - 124	3	25
1,2,3-Trichloropropane	5.00	5.09		ug/L		102	76 - 124	1	26
N-Propylbenzene	5.00	5.21		ug/L		104	80 - 122	3	22
2-Chlorotoluene	5.00	5.21		ug/L		104	80 - 120	2	20
4-Chlorotoluene	5.00	5.41		ug/L		108	73 - 129	3	29
tert-Butylbenzene	5.00	5.12		ug/L		102	75 - 123	1	21
1,2,4-Trimethylbenzene	5.00	5.06		ug/L		101	80 - 120	1	16
sec-Butylbenzene	5.00	5.36		ug/L		107	78 - 122	3	15
4-Isopropyltoluene	5.00	5.35		ug/L		107	77 - 126	4	20
1,3-Dichlorobenzene	5.00	5.22		ug/L		104	77 - 127	3	35
1,4-Dichlorobenzene	5.00	5.11		ug/L		102	80 - 120	4	17
n-Butylbenzene	5.00	4.89		ug/L		98	57 - 133	2	14

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

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

Lab Sample ID: LCSD 580-462988/7

Matrix: Water

Analysis Batch: 462988

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
1,2-Dichlorobenzene	5.00	5.32		ug/L		106	80 - 120	3	15
1,2-Dibromo-3-Chloropropane	5.00	4.61		ug/L		92	65 - 133	0	25
1,2,4-Trichlorobenzene	5.00	5.33		ug/L		107	61 - 148	2	27
Hexachlorobutadiene	5.00	5.02		ug/L		100	74 - 131	3	22
Naphthalene	5.00	5.42		ug/L		108	63 - 150	1	33
1,2,3-Trichlorobenzene	5.00	4.98		ug/L		100	65 - 150	3	33
1,3,5-Trimethylbenzene	5.00	5.29		ug/L		106	80 - 122	2	21

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 120
1,2-Dichloroethane-d4 (Surr)	99		80 - 120
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	102		80 - 120

Lab Sample ID: 580-141133-7 MS

Matrix: Water

Analysis Batch: 462988

Client Sample ID: MWA-63-061324

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Dichlorodifluoromethane	ND		5.00	4.94		ug/L		99	20 - 150
Chloromethane	ND		5.00	5.73		ug/L		115	25 - 150
Vinyl chloride	ND		5.00	5.79		ug/L		116	31 - 150
Bromomethane	ND		5.00	5.24		ug/L		105	36 - 150
Chloroethane	ND		5.00	5.51		ug/L		110	38 - 150
Trichlorofluoromethane	ND		5.00	5.66		ug/L		113	45 - 148
Carbon disulfide	ND		5.00	5.37		ug/L		107	63 - 134
1,1-Dichloroethene	ND		5.00	5.50		ug/L		110	70 - 129
Acetone	ND		25.0	24.0		ug/L		96	44 - 150
Methylene Chloride	ND		5.00	5.21		ug/L		104	77 - 125
Methyl tert-butyl ether	ND		5.00	5.73		ug/L		115	72 - 120
trans-1,2-Dichloroethene	ND		5.00	5.34		ug/L		107	75 - 120
1,1-Dichloroethane	ND		5.00	5.55		ug/L		111	80 - 120
2-Butanone (MEK)	ND		25.0	25.9		ug/L		104	65 - 137
2,2-Dichloropropane	ND		5.00	6.02		ug/L		120	66 - 126
cis-1,2-Dichloroethene	0.85 J		5.00	6.26		ug/L		108	76 - 120
Chlorobromomethane	ND		5.00	5.48		ug/L		110	78 - 120
Chloroform	59		5.00	63.5 4		ug/L		97	78 - 127
1,1,1-Trichloroethane	ND		5.00	5.72		ug/L		114	74 - 130
Carbon tetrachloride	ND		5.00	5.61		ug/L		112	72 - 129
1,1-Dichloropropene	ND		5.00	5.48		ug/L		110	74 - 120
Benzene	ND		5.00	5.03		ug/L		101	80 - 122
1,2-Dichloroethane	ND		5.00	5.23		ug/L		105	69 - 126
1,2-Dichloropropane	ND		5.00	5.24		ug/L		105	80 - 120
4-Methyl-2-pentanone (MIBK)	ND		25.0	24.8		ug/L		99	59 - 141
Dibromomethane	ND		5.00	5.28		ug/L		106	80 - 120
Bromodichloromethane	ND		5.00	5.17		ug/L		103	75 - 124
cis-1,3-Dichloropropene	ND		5.00	4.77		ug/L		95	77 - 120
Toluene	ND		5.00	5.23		ug/L		105	80 - 120

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

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

Lab Sample ID: 580-141133-7 MS

Matrix: Water

Analysis Batch: 462988

Client Sample ID: MWA-63-061324

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
trans-1,3-Dichloropropene	ND		5.00	5.35		ug/L		107	76 - 122
1,1,2-Trichloroethane	ND		5.00	5.09		ug/L		102	80 - 121
Tetrachloroethene	8.2		5.00	12.8		ug/L		93	76 - 125
1,3-Dichloropropane	ND		5.00	5.08		ug/L		102	79 - 120
Chlorodibromomethane	ND		5.00	4.81		ug/L		96	73 - 125
Ethylene Dibromide	ND		5.00	5.44		ug/L		109	79 - 126
Chlorobenzene	ND		5.00	5.17		ug/L		103	80 - 120
1,1,1,2-Tetrachloroethane	ND		5.00	5.26		ug/L		105	79 - 120
Ethylbenzene	ND		5.00	5.37		ug/L		107	80 - 120
m-Xylene & p-Xylene	ND		5.00	5.37		ug/L		107	80 - 120
o-Xylene	ND		5.00	5.34		ug/L		107	80 - 120
Styrene	ND		5.00	5.17		ug/L		103	76 - 122
Bromoform	ND		5.00	4.68		ug/L		94	56 - 139
Isopropylbenzene	ND		5.00	5.79		ug/L		116	80 - 123
Bromobenzene	ND		5.00	5.09		ug/L		102	80 - 120
1,1,2,2-Tetrachloroethane	ND		5.00	4.75		ug/L		95	74 - 124
1,2,3-Trichloropropane	ND		5.00	4.78		ug/L		96	76 - 124
N-Propylbenzene	ND		5.00	5.25		ug/L		105	80 - 122
2-Chlorotoluene	ND		5.00	5.27		ug/L		105	80 - 120
4-Chlorotoluene	ND		5.00	5.48		ug/L		110	73 - 129
tert-Butylbenzene	ND		5.00	5.48		ug/L		110	75 - 123
1,2,4-Trimethylbenzene	ND		5.00	5.01		ug/L		100	80 - 120
sec-Butylbenzene	ND		5.00	5.54		ug/L		111	78 - 122
4-Isopropyltoluene	ND		5.00	5.44		ug/L		109	77 - 126
1,3-Dichlorobenzene	ND		5.00	5.13		ug/L		103	77 - 127
1,4-Dichlorobenzene	ND		5.00	4.98		ug/L		100	80 - 120
n-Butylbenzene	ND		5.00	5.00		ug/L		100	57 - 133
1,2-Dichlorobenzene	ND		5.00	5.10		ug/L		102	80 - 120
1,2-Dibromo-3-Chloropropane	ND		5.00	4.64		ug/L		93	65 - 133
1,2,4-Trichlorobenzene	ND		5.00	5.04		ug/L		101	61 - 148
Hexachlorobutadiene	ND		5.00	4.96		ug/L		99	74 - 131
Naphthalene	ND		5.00	4.92		ug/L		98	63 - 150
1,2,3-Trichlorobenzene	ND		5.00	4.65		ug/L		93	65 - 150
1,3,5-Trimethylbenzene	ND		5.00	5.37		ug/L		107	80 - 122

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 120
1,2-Dichloroethane-d4 (Surr)	99		80 - 120
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	100		80 - 120

Lab Sample ID: 580-141133-7 MSD

Matrix: Water

Analysis Batch: 462988

Client Sample ID: MWA-63-061324

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Dichlorodifluoromethane	ND		5.00	5.14		ug/L		103	20 - 150	4	33
Chloromethane	ND		5.00	5.71		ug/L		114	25 - 150	0	26

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

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

Lab Sample ID: 580-141133-7 MSD

Matrix: Water

Analysis Batch: 462988

Client Sample ID: MWA-63-061324

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Vinyl chloride	ND		5.00	5.64		ug/L		113	31 - 150	3	26
Bromomethane	ND		5.00	5.27		ug/L		105	36 - 150	0	33
Chloroethane	ND		5.00	5.82		ug/L		116	38 - 150	5	28
Trichlorofluoromethane	ND		5.00	5.77		ug/L		115	45 - 148	2	35
Carbon disulfide	ND		5.00	5.51		ug/L		110	63 - 134	3	24
1,1-Dichloroethene	ND		5.00	5.62		ug/L		112	70 - 129	2	23
Acetone	ND		25.0	24.0		ug/L		96	44 - 150	0	33
Methylene Chloride	ND		5.00	5.28		ug/L		106	77 - 125	1	18
Methyl tert-butyl ether	ND		5.00	6.02		ug/L		120	72 - 120	5	18
trans-1,2-Dichloroethene	ND		5.00	5.46		ug/L		109	75 - 120	2	21
1,1-Dichloroethane	ND		5.00	5.77		ug/L		115	80 - 120	4	15
2-Butanone (MEK)	ND		25.0	25.8		ug/L		103	65 - 137	0	34
2,2-Dichloropropane	ND		5.00	6.31		ug/L		126	66 - 126	5	22
cis-1,2-Dichloroethene	0.85	J	5.00	6.59		ug/L		115	76 - 120	5	20
Chlorobromomethane	ND		5.00	5.51		ug/L		110	78 - 120	1	13
Chloroform	59		5.00	63.4	4	ug/L		93	78 - 127	0	14
1,1,1-Trichloroethane	ND		5.00	6.03		ug/L		121	74 - 130	5	19
Carbon tetrachloride	ND		5.00	6.04		ug/L		121	72 - 129	7	19
1,1-Dichloropropene	ND		5.00	5.65		ug/L		113	74 - 120	3	14
Benzene	ND		5.00	5.17		ug/L		103	80 - 122	3	14
1,2-Dichloroethane	ND		5.00	5.41		ug/L		108	69 - 126	3	11
1,2-Dichloropropane	ND		5.00	5.49		ug/L		110	80 - 120	5	14
4-Methyl-2-pentanone (MIBK)	ND		25.0	24.4		ug/L		98	59 - 141	2	22
Dibromomethane	ND		5.00	5.59		ug/L		112	80 - 120	6	11
Bromodichloromethane	ND		5.00	5.50		ug/L		110	75 - 124	6	13
cis-1,3-Dichloropropene	ND		5.00	4.96		ug/L		99	77 - 120	4	35
Toluene	ND		5.00	5.45		ug/L		109	80 - 120	4	13
trans-1,3-Dichloropropene	ND		5.00	5.49		ug/L		110	76 - 122	3	20
1,1,2-Trichloroethane	ND		5.00	5.04		ug/L		101	80 - 121	1	14
Tetrachloroethene	8.2		5.00	13.2		ug/L		100	76 - 125	3	13
1,3-Dichloropropane	ND		5.00	5.24		ug/L		105	79 - 120	3	19
Chlorodibromomethane	ND		5.00	5.11		ug/L		102	73 - 125	6	13
Ethylene Dibromide	ND		5.00	5.44		ug/L		109	79 - 126	0	12
Chlorobenzene	ND		5.00	5.40		ug/L		108	80 - 120	4	10
1,1,1,2-Tetrachloroethane	ND		5.00	5.58		ug/L		112	79 - 120	6	16
Ethylbenzene	ND		5.00	5.64		ug/L		113	80 - 120	5	14
m-Xylene & p-Xylene	ND		5.00	5.58		ug/L		112	80 - 120	4	14
o-Xylene	ND		5.00	5.61		ug/L		112	80 - 120	5	16
Styrene	ND		5.00	5.46		ug/L		109	76 - 122	5	16
Bromoform	ND		5.00	4.95		ug/L		99	56 - 139	6	21
Isopropylbenzene	ND		5.00	6.20	F1	ug/L		124	80 - 123	7	19
Bromobenzene	ND		5.00	5.27		ug/L		105	80 - 120	3	24
1,1,2,2-Tetrachloroethane	ND		5.00	4.95		ug/L		99	74 - 124	4	25
1,2,3-Trichloropropane	ND		5.00	4.98		ug/L		100	76 - 124	4	26
N-Propylbenzene	ND		5.00	5.69		ug/L		114	80 - 122	8	22
2-Chlorotoluene	ND		5.00	5.53		ug/L		111	80 - 120	5	20
4-Chlorotoluene	ND		5.00	5.60		ug/L		112	73 - 129	2	29
tert-Butylbenzene	ND		5.00	5.70		ug/L		114	75 - 123	4	21
1,2,4-Trimethylbenzene	ND		5.00	5.32		ug/L		106	80 - 120	6	16

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

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

Lab Sample ID: 580-141133-7 MSD

Matrix: Water

Analysis Batch: 462988

Client Sample ID: MWA-63-061324

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
sec-Butylbenzene	ND		5.00	5.83		ug/L		117	78 - 122	5	15
4-Isopropyltoluene	ND		5.00	5.83		ug/L		117	77 - 126	7	20
1,3-Dichlorobenzene	ND		5.00	5.39		ug/L		108	77 - 127	5	35
1,4-Dichlorobenzene	ND		5.00	5.35		ug/L		107	80 - 120	7	17
n-Butylbenzene	ND		5.00	5.32		ug/L		106	57 - 133	6	14
1,2-Dichlorobenzene	ND		5.00	5.33		ug/L		107	80 - 120	4	15
1,2-Dibromo-3-Chloropropane	ND		5.00	4.42		ug/L		88	65 - 133	5	25
1,2,4-Trichlorobenzene	ND		5.00	5.26		ug/L		105	61 - 148	4	27
Hexachlorobutadiene	ND		5.00	5.32		ug/L		106	74 - 131	7	22
Naphthalene	ND		5.00	5.13		ug/L		103	63 - 150	4	33
1,2,3-Trichlorobenzene	ND		5.00	4.79		ug/L		96	65 - 150	3	33
1,3,5-Trimethylbenzene	ND		5.00	5.69		ug/L		114	80 - 122	6	21

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 120
1,2-Dichloroethane-d4 (Surr)	98		80 - 120
4-Bromofluorobenzene (Surr)	104		80 - 120
Dibromofluoromethane (Surr)	101		80 - 120

Lab Sample ID: MB 580-463187/11

Matrix: Water

Analysis Batch: 463187

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Trichloroethene	ND		1.0	0.26	ug/L			06/25/24 14:38	1
Surrogate	MB	MB	Limits				Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier							
Toluene-d8 (Surr)	99		80 - 120					06/25/24 14:38	1
1,2-Dichloroethane-d4 (Surr)	92		80 - 120					06/25/24 14:38	1
4-Bromofluorobenzene (Surr)	101		80 - 120					06/25/24 14:38	1
Dibromofluoromethane (Surr)	103		80 - 120					06/25/24 14:38	1

Lab Sample ID: LCS 580-463187/6

Matrix: Water

Analysis Batch: 463187

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Trichloroethene			5.00	4.42		ug/L		88	80 - 125		
Surrogate	LCS %Recovery	LCS Qualifier	Limits								
Toluene-d8 (Surr)	102		80 - 120								
1,2-Dichloroethane-d4 (Surr)	92		80 - 120								
4-Bromofluorobenzene (Surr)	99		80 - 120								
Dibromofluoromethane (Surr)	100		80 - 120								

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

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

Lab Sample ID: LCSD 580-463187/7

Matrix: Water

Analysis Batch: 463187

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
Trichloroethene			5.00	4.28		ug/L		86	80 - 125	3	13
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits								
Toluene-d8 (Surr)	101		80 - 120								
1,2-Dichloroethane-d4 (Surr)	91		80 - 120								
4-Bromofluorobenzene (Surr)	98		80 - 120								
Dibromofluoromethane (Surr)	100		80 - 120								

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

Lab Sample ID: 580-141133-7 MS

Matrix: Water

Analysis Batch: 463187

Client Sample ID: MWA-63-061324

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Trichloroethene - RA	1.4		5.00	6.34		ug/L		98	80 - 125		
Surrogate	MS %Recovery	MS Qualifier	Limits								
Toluene-d8 (Surr) - RA	101		80 - 120								
1,2-Dichloroethane-d4 (Surr) - RA	91		80 - 120								
4-Bromofluorobenzene (Surr) - RA	98		80 - 120								
Dibromofluoromethane (Surr) - RA	102		80 - 120								

Lab Sample ID: 580-141133-7 MSD

Matrix: Water

Analysis Batch: 463187

Client Sample ID: MWA-63-061324

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Trichloroethene - RA	1.4		5.00	6.51		ug/L		102	80 - 125	3	13
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
Toluene-d8 (Surr) - RA	101		80 - 120								
1,2-Dichloroethane-d4 (Surr) - RA	89		80 - 120								
4-Bromofluorobenzene (Surr) - RA	98		80 - 120								
Dibromofluoromethane (Surr) - RA	100		80 - 120								

Method: 314.0 - Perchlorate (IC)

Lab Sample ID: MB 320-773540/5

Matrix: Water

Analysis Batch: 773540

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		4.0	2.0	ug/L			06/20/24 16:50	1

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QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Method: 314.0 - Perchlorate (IC)

Lab Sample ID: LCS 320-773540/6
Matrix: Water
Analysis Batch: 773540

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	50.0	48.3		ug/L		97	85 - 115

Lab Sample ID: MRL 320-773540/4
Matrix: Water
Analysis Batch: 773540

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	4.00	3.59	J	ug/L		90	75 - 125

Lab Sample ID: 580-141133-7 MS
Matrix: Water
Analysis Batch: 773540

Client Sample ID: MWA-63-061324
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	ND		50.0	49.3		ug/L		99	80 - 120

Lab Sample ID: 580-141133-7 MSD
Matrix: Water
Analysis Batch: 773540

Client Sample ID: MWA-63-061324
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		50.0	47.7		ug/L		96	80 - 120	3	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-462820/3
Matrix: Water
Analysis Batch: 462820

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			06/20/24 02:57	1

Lab Sample ID: LCS 580-462820/4
Matrix: Water
Analysis Batch: 462820

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	52.0		mg/L		104	90 - 110

Lab Sample ID: LCSD 580-462820/5
Matrix: Water
Analysis Batch: 462820

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	52.0		mg/L		104	90 - 110	0	15

Eurofins Seattle

QC Sample Results

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 580-141133-7 MS

Matrix: Water

Analysis Batch: 462820

Client Sample ID: MWA-63-061324

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	6.6		50.0	60.5		mg/L		108	90 - 110

Lab Sample ID: 580-141133-7 MSD

Matrix: Water

Analysis Batch: 462820

Client Sample ID: MWA-63-061324

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	6.6		50.0	58.2		mg/L		103	90 - 110	4	15

Lab Sample ID: MB 580-463091/3

Matrix: Water

Analysis Batch: 463091

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			06/20/24 10:07	1

Lab Sample ID: LCS 580-463091/4

Matrix: Water

Analysis Batch: 463091

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	51.9		mg/L		104	90 - 110

Lab Sample ID: LCSD 580-463091/5

Matrix: Water

Analysis Batch: 463091

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	52.0		mg/L		104	90 - 110	0	15

Lab Chronicle

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: TB-061324-A

Lab Sample ID: 580-141133-1

Date Collected: 06/13/24 00:01

Matrix: Water

Date Received: 06/14/24 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462616	AA	EET SEA	06/19/24 02:19

Client Sample ID: RB-02-061324

Lab Sample ID: 580-141133-2

Date Collected: 06/13/24 05:30

Matrix: Water

Date Received: 06/14/24 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462616	AA	EET SEA	06/19/24 02:42
Total/NA	Analysis	314.0		1	773540	CFR	EET SAC	06/20/24 20:24
Total/NA	Analysis	300.0		1	462820	CA	EET SEA	06/20/24 05:32

Client Sample ID: PA-20d-061324

Lab Sample ID: 580-141133-3

Date Collected: 06/13/24 09:09

Matrix: Water

Date Received: 06/14/24 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462616	AA	EET SEA	06/19/24 08:08
Total/NA	Analysis	314.0		5	773540	CFR	EET SAC	06/20/24 18:55
Total/NA	Analysis	300.0		100	462820	CA	EET SEA	06/20/24 05:56

Client Sample ID: Dup-02-061324

Lab Sample ID: 580-141133-4

Date Collected: 06/13/24 09:10

Matrix: Water

Date Received: 06/14/24 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462734	AA	EET SEA	06/19/24 23:20
Total/NA	Analysis	314.0		5	773540	CFR	EET SAC	06/20/24 19:13
Total/NA	Analysis	300.0		100	462820	CA	EET SEA	06/20/24 06:20

Client Sample ID: PA-21d-061324

Lab Sample ID: 580-141133-5

Date Collected: 06/13/24 11:24

Matrix: Water

Date Received: 06/14/24 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1000	462616	AA	EET SEA	06/19/24 08:54
Total/NA	Analysis	314.0		5	773540	CFR	EET SAC	06/20/24 19:31
Total/NA	Analysis	300.0		100	462820	CA	EET SEA	06/20/24 06:44

Client Sample ID: PA-19d-061324

Lab Sample ID: 580-141133-6

Date Collected: 06/13/24 13:10

Matrix: Water

Date Received: 06/14/24 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D	DL	500	462865	AA	EET SEA	06/21/24 02:51
Total/NA	Analysis	8260D		100	462691	AA	EET SEA	06/19/24 21:35

Eurofins Seattle

Lab Chronicle

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: PA-19d-061324

Lab Sample ID: 580-141133-6

Date Collected: 06/13/24 13:10

Matrix: Water

Date Received: 06/14/24 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	314.0		10	773540	CFR	EET SAC	06/20/24 22:12
Total/NA	Analysis	300.0		100	462820	CA	EET SEA	06/20/24 07:08

Client Sample ID: MWA-63-061324

Lab Sample ID: 580-141133-7

Date Collected: 06/13/24 07:11

Matrix: Water

Date Received: 06/14/24 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D	RA	1	463187	AA	EET SEA	06/25/24 17:20
Total/NA	Analysis	8260D		1	462988	AA	EET SEA	06/21/24 17:15
Total/NA	Analysis	314.0		1	773540	CFR	EET SAC	06/20/24 20:42
Total/NA	Analysis	300.0		1	462820	CA	EET SEA	06/20/24 07:44

Client Sample ID: PA-31-061324

Lab Sample ID: 580-141133-8

Date Collected: 06/13/24 09:34

Matrix: Water

Date Received: 06/14/24 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462691	AA	EET SEA	06/19/24 18:29
Total/NA	Analysis	314.0		5	773540	CFR	EET SAC	06/20/24 22:30
Total/NA	Analysis	300.0		1	462820	CA	EET SEA	06/20/24 08:19

Client Sample ID: PA-32i-061324

Lab Sample ID: 580-141133-9

Date Collected: 06/13/24 10:34

Matrix: Water

Date Received: 06/14/24 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462691	AA	EET SEA	06/19/24 18:52
Total/NA	Analysis	314.0		10	773540	CFR	EET SAC	06/20/24 21:36
Total/NA	Analysis	300.0		1	462820	CA	EET SEA	06/20/24 08:31

Client Sample ID: MWA-11i(d)-061324

Lab Sample ID: 580-141133-10

Date Collected: 06/13/24 11:54

Matrix: Water

Date Received: 06/14/24 13:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	462691	AA	EET SEA	06/19/24 19:15
Total/NA	Analysis	314.0		5	773540	CFR	EET SAC	06/20/24 22:47
Total/NA	Analysis	300.0		10	462820	CA	EET SEA	06/20/24 08:55

Eurofins Seattle

Lab Chronicle

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Client Sample ID: PA-30d-061424
Date Collected: 06/14/24 10:31
Date Received: 06/14/24 13:20

Lab Sample ID: 580-141133-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1000	462691	AA	EET SEA	06/19/24 21:58
Total/NA	Analysis	314.0		10	773540	CFR	EET SAC	06/20/24 21:54
Total/NA	Analysis	300.0		10	463091	CA	EET SEA	06/20/24 13:06

Laboratory References:
EET SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600
EET SEA = Eurofins Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Laboratory: Eurofins Seattle

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

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4167	07-07-24

Laboratory: Eurofins Sacramento

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

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4040	01-29-25

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Sample Summary

Client: ERM-West
Project/Site: Arkema - Q2 2024 Groundwater Event

Job ID: 580-141133-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-141133-1	TB-061324-A	Water	06/13/24 00:01	06/14/24 13:20
580-141133-2	RB-02-061324	Water	06/13/24 05:30	06/14/24 13:20
580-141133-3	PA-20d-061324	Water	06/13/24 09:09	06/14/24 13:20
580-141133-4	Dup-02-061324	Water	06/13/24 09:10	06/14/24 13:20
580-141133-5	PA-21d-061324	Water	06/13/24 11:24	06/14/24 13:20
580-141133-6	PA-19d-061324	Water	06/13/24 13:10	06/14/24 13:20
580-141133-7	MWA-63-061324	Water	06/13/24 07:11	06/14/24 13:20
580-141133-8	PA-31-061324	Water	06/13/24 09:34	06/14/24 13:20
580-141133-9	PA-32i-061324	Water	06/13/24 10:34	06/14/24 13:20
580-141133-10	MWA-11i(d)-061324	Water	06/13/24 11:54	06/14/24 13:20
580-141133-11	PA-30d-061424	Water	06/14/24 10:31	06/14/24 13:20

Chain of Custody Record



580-141133 Chain of Custody

Client Information		Sampler: ST/INF		Lab PM: Cruz, Sheri L.		COC No:	
Client Contact: Avery Soplat and Andrew Gardner		Phone:		E-Mail: sheri.cruz@testamericainc.com		Page: 1 of 1	
Company: ERM-West		Due Date Requested:		Analysis Requested		Job #:	
Address: 1050 SW 6th Avenue Suite 1650		TAT Requested (days): 15BD		Field Filtered Sample (Yes or No) 8260C regular level standard VOA list-Seattle 8260C_LL - Standard VOA list-Seattle 300.0_280-Chloride-Seattle 314 Perchlorate MS/MSD Total Number of containers		Preservation Codes:	
City: Portland		PO #: PN 0732445.207				A - HCL M - Hexane	
State, Zip: OR, 97204		WO #:				B - NaOH N - None	
Phone:		Project #: 0732445				C - Zn Acetate O - AsNaO2	
Email: avery.soplat@erm.com andrew.gardner@erm.com		SSOW#:				D - Nitric Acid P - Na2O4S	
Project Name: Arkema - Q2 2024 Groundwater event		Project #:				Q - Na2SO3	
Site:		SSOW#:				R - Na2S2O3	
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/sol, ST=Tissue, A=Air)	Special Instructions/Note:	
				Preservation Code:			
TB-061324-A		6/13/24		G	Water	X	
RB-02-061324			0530		Water	X	
PA-20d-061324			0909		Water	X	
Dup-02-061324			0910		Water	X	
PA-21d-061324			1124		Water	X	
PA-19d-061324			1310		Water	X	
MWA-63-061324			0711		Water	X	
PA-31-061324			0934		Water	X	
PA-32-061324			1034		Water	X	
MWA-11(d)-061324		✓	1154	↓	↓	X	
PA-30d-061424		6/14/24	1031	G	↓	X	
Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological		☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months					
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements: please run at lowest dilution possible for ND.					
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by:		Date/Time: 6/14/24		Company: ERM		Received by:	
Relinquished by:		Date/Time:		Company:		Date/Time: 6/14/24 1320	
Relinquished by:		Date/Time:		Company:		Company: GET	
Custody Seals Intact: ☐ Yes ☐ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 0-4/0.5 PDC-SC IN			

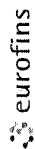
Chain of Custody Record



Client Information		Sampler: ST/INF		Lab PM: Cruz, Sheri L		580-141133 Chain of Custody		COC No:						
Client Contact: Avery Soplat and Andrew Gardner		Phone:		E-Mail: sheri.cruz@testamericainc.com				Page: 1 of 1						
Company: ERM-West		Due Date Requested:		Analysis Requested		Preservation Codes:		Job #:						
Address: 1050 SW 6th Avenue Suite 1650		TAT Requested (days): 15BD												
City: Portland														
State, Zip: OR, 97204														
Phone:		PO #: PN 0732445.207												
Email: avery.soplat@erm.com andrew.gardner@erm.com		WO #:												
Project Name: Arkema - Q2 2024 Groundwater event		Project #: 0732445												
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)	8260C regular level standard VOA list-Seattle	8260C_LL - Standard VOA list-Seattle	300.0_28D-Chloride-Seattle	314 Perchlorate	MS/MSD	Total Number of containers	Special Instructions/Note:
TB-061324-A		6/13/24		G	Water			X					2	
RB-02-061324			0530		Water			X	X	X			5	
PA-20d-061324			0909		Water			X	X	X			5	
Dup-02-061324			0910		Water			X	X	X			5	
PA-21d-061324			1124		Water			X	X	X			8	Dil VOC
PA-19d-061324			1310		Water			X	X	X			8	Dil VOC
MWA-63-061324			0711		Water			X	X	X		X	15	
PA-31-061324			0934		Water				X	X	X		5	
PA-32i-061324			1034		Water				X	X	X		5	
MWA-11(d)-061324			1154						X	X	X		5	
PA-30d-061424		6/14/24	1031	G				X		X	X		8	Dil VOC
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)								
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological						☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months								
Deliverable Requested: I, II, III, IV, Other (specify)						Special Instructions/QC Requirements: please run at lowest dilution possible for ND.								
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:								
Relinquished by: [Signature]		Date/Time: 6/14/24		Company: ERM		Received by: [Signature]		Date/Time: 6/14/24 1320		Company: EET				
Relinquished by: [Signature]		Date/Time: 6/14/24 1200		Company: EET		Received by: [Signature]		Date/Time: 6/15/24 0920		Company: EETN				
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: 0.4/0.5 PDC - SC IA								

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

Chain of Custody Record



Eurofins Environmental Testing

Client Information (Sub Contract Lab)		Sampler	Lab P/N:	Carrier Tracking No(s)	COC No:
Client Contact:		Phone:	Cruz, Shen L		580-134516.1
Shipping/Receiving			E-Mail:	State of Origin:	Page: Page 1 of 2
Company:			Shen, Cruz@eurofins.com	Oregon	Job #: 580-141133-1
Eurofins Environment Testing Northern Ca			Accreditations Required (See note)		Preservation Codes:
Address:		Due Date Requested	Analysis Requested		
880 Riverside Parkway,		7/8/2024			
City:		TAT Requested (days):			
West Sacramento					
State/Zip:					
CA, 95605					
Phone:		PO #:			
916-373-5600(Tel) 916-372-1059(Fax)					
Email:		WO #:			
Project Name:		Project #:			
Arkema - Q2 2024 Groundwater Event		58016290			
Site:		SSOW#:			
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=Water, S=Solid, O=Other, A=Air)
RB-02-061324 (580-141133-2)		6/13/24	05:30 Pacific		Water
PA-20d-061324 (580-141133-3)		6/13/24	09:09 Pacific		Water
Dup-02-061324 (580-141133-4)		6/13/24	09:10 Pacific		Water
PA-21d-061324 (580-141133-5)		6/13/24	11:24 Pacific		Water
PA-19d-061324 (580-141133-6)		6/13/24	13:10 Pacific		Water
MWA-63-061324 (580-141133-7)		6/13/24	07:11 Pacific		Water
MWA-63-061324 (580-141133-7MS)		6/13/24	07:11 Pacific	MS	Water
MWA-63-061324 (580-141133-7MSD)		6/13/24	07:11 Pacific	MSD	Water
PA-31-061324 (580-141133-8)		6/13/24	09:34 Pacific		Water
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/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					
Unconfirmed					
Deliverable Requested I, II, III, IV, Other (specify)					
Primary Deliverable Rank: 2					
Empty Kit Relinquished by					
Date:					
Relinquished by					
Date/Time: 6/14/24 14:50					
Company:					
Relinquished by					
Date/Time:					
Company:					
Relinquished by					
Date/Time:					
Company:					
Cooler Temperature(s) °C and Other Remarks:					
Custody Seal No					
Yes No					

[illegible]

Login Sample Receipt Checklist

Client: ERM-West

Job Number: 580-141133-1

Login Number: 141133

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	Preservation labels on samples match COC
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (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: 580-141133-1

Login Number: 141133

List Number: 2

Creator: Simmons, Jason C

List Source: Eurofins Sacramento

List Creation: 06/15/24 03:41 PM

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	2462447
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	1.1c
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Environment Testing

Sacramento Sample
Receiving Notes (SSRN)

Job _____



580-141133 Field Sheet

Tracking #

726071604460SO / PO / FO / (SAT) 2-Day / Ground / UPS / CDO / Courier
GSL / OnTrac / Goldstreak / USPS / Other _____Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations
File in the job folder with the COCTherm. ID 611 Corr. Factor (+/-) _____ °CIce 1 Wet 1 Gel _____ Other _____Cooler Custody Seal: 2462447

Cooler ID _____

Temp Observed: 1.1 °C Corrected 1.1 °CFrom Temp Blank ☐ Sample ☒

Opening/Processing The Shipment

Yes No NA

Cooler compromised/tampered with? ☐ ☒ ☐Cooler Temperature is acceptable? ☒ ☐ ☐Frozen samples show signs of thaw? ☐ ☐ ☒Initials [Signature] Date 6.15.24

Unpacking/Labeling The Samples

Yes No NA

Containers are not broken or leaking? ☒ ☐ ☐Samples compromised/tampered with? ☐ ☒ ☐COC is complete w/o discrepancies ☒ ☐ ☐Sample custody seal? ☐ ☐ ☒Sample containers have legible labels? ☒ ☐ ☐Sample date/times are provided? ☒ ☐ ☐Appropriate containers are used? ☒ ☐ ☐Sample bottles are completely filled? ☐ ☒ ☐Sample preservatives verified? ☐ ☐ ☒Is the Field Sampler's name on COC? ☐ ☐ ☒Samples w/o discrepancies? ☒ ☐ ☐Zero headspace?* ☐ ☐ ☒Alkalinity has no headspace? ☐ ☐ ☒Perchlorate has headspace? ☒ ☐ ☐

(Methods 314, 331, 6850)

Multiphasic samples are not present? ☒ ☐ ☐

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials [Signature] Date 6.15.24

Notes: _____

Trizma Lot #(s) _____

Ammonium

Acetate Lot #(s) _____

Login Completion

Yes No NA

Receipt Temperature on COC? ☒ ☐ ☐NCM Filed? ☐ ☐ ☒Samples received within hold time? ☐ ☐ ☒Log Release checked in TALS? ☐ ☐ ☒Initials [Signature] Date 6.15.24



APPENDIX C DATA VALIDATION MEMOS



MEMO

TO	Sarah Seekins
FROM	Rachel James
DATE	2024-07-10
REFERENCE	0732445
SUBJECT	Data Review of Arkema, Second Quarter 2024 Groundwater. Samples Collected June 2024: Eurofins, Data Package(s) 580-141081-1 and 580-141133-1 Rev(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. Additional assessment of hexavalent chromium holding time was obtained from *Federal Register/Vol. 72, No. 47/Monday, March 12, 2007/Rules and Regulations, Table II.-- Required Containers, Preservation Techniques, and Holding Times*.

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 re-analyses 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 and rinse.
- **Laboratory Control Spike Samples:** Laboratory control spike sample preparation frequency and recoveries were reviewed as applicable.
- **Matrix Spike Samples:** Matrix spike and post-digestion spike sample preparation frequency and recoveries were reviewed as applicable.
- **Surrogate Spikes:** The addition of appropriate surrogates and their recoveries were evaluated.
- **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: Matrix Spike Evaluation

Table 5: Field Duplicate Evaluation

CHAIN-OF-CUSTODY DISCREPANCIES

The laboratory did not note discrepancies between the chains-of-custody and the received sample containers.

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 within five times the blank concentration (ten times for inorganics or common laboratory contaminants) and 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 and rinse 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 within five times the blank concentration (ten times for inorganics or common laboratory contaminants) and 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. The LCS/LCSD recoveries and RPDs indicate acceptable laboratory accuracy and precision.

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 4. 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 RECOVERY 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 5.

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
Second Quarter 2024 Groundwater
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Analyte	Reason	ERM Qualifier
580-141081-1	MWA-31I(D)-061224	8260D	Chloromethane Bromomethane 2,2-Dichloropropane	Batch 580-462481 CCV low bias	UJ
	MWA-56D-061224				UJ
	MWA-58D-061224				UJ
	PA-15I-061224				UJ
	PA-22D-061224				UJ
	PA-23D-061124				UJ
	PA-24D-061224				UJ
	PA-25D-061124				UJ
	PA-44I-061124				UJ
	RB-01-061224				UJ
	None for qualification, samples ND	8260D	Acetone	Batch 580-462298 CCV high bias	--
			2-Butanone		--
			4-Methyl-2-pentanone		--
			1,1,2,2-Tetrachloroethane		--
			1,2,3-Trichloropropane		--
			1,2-Dibromo-3-Chloropropane		--
			Naphthalene		--
			1,2,3-Trichlorobenzene		--
	PA-26D-061024		Methyl tert-butyl ether		J+
580-141081-1 580-141133-1 Rev(1)	None for qualification, samples ND	8260D	Acetone	Batch 580-462616 CCV high bias	--
			Methyl tert-butyl ether		--
			2-Butanone		--
			1,2,3-Trichloropropane		--
			1,2-Dibromo-3-Chloropropane		--

Table 1
Case Narrative Evaluation
Second Quarter 2024 Groundwater
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Analyte	Reason	ERM Qualifier
580-141081-1 580-141133-1 Rev(1)	None for qualification, samples ND	8260D	Chloroethane	Batch 580-462691 CCV high bias	--
			Acetone		--
			Methyl tert-butyl ether		--
			2-Butanone		--
			2,2-Dichloropropane		--
			Chlorobromomethane		--
			Carbon tetrachloride		--
			1,1-Dichloropropene		--
			1,2-Dichloroethane		--
			4-Methyl-2-pentanone		--
			Dibromomethane		--
			trans-1,3-Dichloropropene		--
			Chlorodibromomethane		--
			Ethylene Dibromide		--
			1,1,1,2-Tetrachloroethane		--
			o-Xylene		--
			Styrene		--
			Bromoform		--
			1,2,3-Trichloropropane		--
			4-Chlorotoluene		--
			1,2-Dibromo-3-Chloropropane		--
			1,2,3-Trichlorobenzene		--

Table 1
Case Narrative Evaluation
Second Quarter 2024 Groundwater
Arkema
Portland, Oregon

Lab Package	Sample ID	Method	Analyte	Reason	ERM Qualifier
580-141081-1 580-141133-1 Rev(1)	MWA-11I(D)-061324	8260D	Chloromethane	Batch 580-462691 CCV low bias	UJ
	PA-16I-061024				UJ
	PA-19D-061324				UJ
	PA-30D-061424				UJ
	PA-31-061324				J-
	PA-32I-061324				UJ
580-141133-1 Rev(1)	None for qualification, sample ND	8260D	2,2-Dichloropropane	Batch 580-462988 CCV high bias	--

Notes:

-- = not applicable; associated data not affected

CCV = continuing calibration verification

J+ = detected results are estimated with a high bias

J- = detected results are estimated with a low bias

ND = not detected

UJ = non-detected, estimated report limit

Table 2
Laboratory Blank Evaluation
Second Quarter 2024 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
580-141081-1	MB 580-462298/7	Benzene	0.0309	0.20	MWA-82-061024	0.037	0.20	µg/L	0.20 U
					TB-061024	0.037	0.20	µg/L	0.20 U
580-141081-1 580-141133-1 Rev(1)	MB 580-462616/7	Benzene	0.0553	0.20	DUP-01-061224	0.096	0.20	µg/L	0.20 U
					PA-03-061224	0.097	0.20	µg/L	0.20 U
					PA-04-061224	0.063	0.20	µg/L	0.20 U
					PA-10I-061224	0.070	0.20	µg/L	0.20 U
					PA-17IR-061224	0.12	0.20	µg/L	0.20 U
					RB-02-061324	0.048	0.20	µg/L	0.20 U
					TB-061324-A	0.050	0.20	µg/L	0.20 U
	MB 580-462691/7	Benzene	0.0748	0.20	MWA-11I(D)-061324	0.093	0.20	µg/L	0.20 U
					PA-16I-061024	0.097	0.20	µg/L	0.20 U
					PA-32I-061324	0.17	0.20	µg/L	0.20 U
		Trichloroethene	0.113	0.20	PA-31-061324	0.11	0.20	µg/L	0.20 U

Notes:

Conc. = concentration

MB = method blank

µg/L = micrograms per liter

RL = reporting limit

U = non-detected

Table 3
Field Blank Evaluation
Second Quarter 2024 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
580-141081-1	TB-061024	1,3-Dichlorobenzene	0.074	0.30	None for qualification, samples ND	--	--	µg/L	--
		1,4-Dichlorobenzene	0.077	0.30		--	--	µg/L	--
		1,2-Dichlorobenzene	0.069	0.30	MWA-82-061024	0.047	0.30	µg/L	0.30 U
					PA-101-061224	0.20	0.30	µg/L	0.30 U
		Hexachlorobutadiene	0.20	0.50	None for qualification, samples ND	--	--	µg/L	--

Notes:

-- = not applicable; associated data not affected

Conc. = concentration

µg/L = micrograms per liter

ND = not detected

RL = reporting limit

TB = trip blank

U = non-detected

Table 4
Matrix Spike Evaluation
Second Quarter 2024 Groundwater
Arkema
Portland, Oregon

Lab Package	Spike Sample ID	Associated Sample	Analyte	Recovery (%)	Limit (%)	RPD	RPD Limit	Result	Units	ERM Qualifier
580-141081-1	PA-15i-061224 MS/MSD	PA-15i-061224	Chloride	83/73	90-110	Pass	15	86	mg/L	J-
580-141133-1 Rev(1)	MWA-63-061324 MS/MSD	None for qualification, one recovery passes	Isopropylbenzene	Pass/124	80-123	Pass	19	--	--	--

Notes:

-- = not applicable; associated data not affected

J- = detected results are estimated with a low bias

MS = matrix spike

MSD = matrix spike duplicate

mg/L = milligrams per liter

RPD = relative percent difference

Table 5
Field Duplicate Evaluation
Second Quarter 2024 Groundwater
Arkema
Portland, Oregon

Lab Package	Primary / Duplicate Sample ID	Analyte	Concentration		Report Limit		Units	AbD	RPD	Limit	ERM Qualifier
			Sample	Duplicate	Sample	Duplicate					
580-141081-1	PA-03-061224/ DUP-01-061224	1,1-Dichloroethane	0.15	0.18	0.20	0.20	µg/L	--	--	NA	--
		Benzene	0.097	0.096	0.20	0.20	µg/L	--	--	NA	--
		Toluene	0.14	0.15	0.20	0.20	µg/L	--	--	NA	--
		Chloride	3.7	3.8	1.5	1.5	mg/L	0.1	--	3.0	--
580-141133-1 Rev(1)	PA-20d-061324/ Dup-02-061324	Carbon disulfide	ND	0.61	1.0	1.0	µg/L	--	--	NA	--
		1,1-Dichloroethane	1.1	0.95	1.0	1.0	µg/L	0.2	--	2.0	--
		1,2-Dichloroethane	ND	0.42	1.0	1.0	µg/L	--	--	NA	--
		Chlorobenzene	4.5	4.1	1.0	1.0	µg/L	0.4	--	2.0	--
		Chloride	680	690	150	150	mg/L	10	--	300	--

Notes:

-- = not applicable; associated data not affected

AbD = absolute Difference

µg/L = micrograms per liter

mg/L = milligrams per liter

NA = not applicable

ND = not detected

RPD = relative percent difference



APPENDIX D PRIOR GROUNDWATER MONITORING PROGRAM DATA TABLES AND GRAPHS

Appendix D
Prior Groundwater Monitoring Plan Data Table
Arkema Quarter 2, 2024, 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-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	< 0.44 U	< 0.95 U
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-052620	05/26/2020	13,000	< 0.44 U	< 0.95 U
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-082420	08/24/2020	29,000	< 0.44 U	< 0.95 U
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-110320	11/03/2020	71,000	< 0.44 U	< 4.8 U
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-032921	03/29/2021	7,200 J	< 0.44 U	< 2.0 U
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-092321	09/23/2021	58,000 J	< 0.44 UJ	< 2.0 U
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-121521	12/15/2021	14,000	< 0.44	< 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	< 0.44 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	< 0.44	< 2.0
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-082323	08/23/2023	17,000	< 0.44 U	< 2.0 U
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-121223	12/12/2023	15,000	< 0.44 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	< 0.44 U	< 2.0 U
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-102319	10/23/2019	14,700	< 0.44 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

Appendix D
Prior Groundwater Monitoring Plan Data Table
Arkema Quarter 2, 2024, 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-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	PA-03	GCC1 & Proximal Wells	PA-03-102519	10/25/2019	9,700	< 0.44 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
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-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

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Aquifer	Well ID	Cluster	Sample ID	Date	Chloride	Chlorobenzene	Perchlorate
					ug / L	ug / L	ug / L
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-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-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

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Aquifer	Well ID	Cluster	Sample ID	Date	Chloride	Chlorobenzene	Perchlorate
					ug / L	ug / L	ug / L
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-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
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
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	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

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Aquifer	Well ID	Cluster	Sample ID	Date	Chloride	Chlorobenzene	Perchlorate
					ug / L	ug / L	ug / L
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-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
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-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

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Aquifer	Well ID	Cluster	Sample ID	Date	Chloride	Chlorobenzene	Perchlorate
					ug /L	ug /L	ug /L
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-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-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

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					ug / L	ug / L	ug / L
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-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
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
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-31i(d)	GCC5 & Proximal Wells	MWA-31i(d)-102419	10/24/2019	25,900,000	0.57 j	100,000

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					ug / L	ug / L	ug / L
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-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
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56D-061224	06/12/2024	13,000,000	< 4.4 U	15,000
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

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					ug / L	ug / L	ug / L
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	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-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-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

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					ug / L	ug / L	ug / L
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
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-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

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Aquifer	Well ID	Cluster	Sample ID	Date	Chloride	Chlorobenzene	Perchlorate
					ug / L	ug / L	ug / L
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-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-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
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

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Aquifer	Well ID	Cluster	Sample ID	Date	Chloride	Chlorobenzene	Perchlorate
					ug / L	ug / L	ug / L
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-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-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-27d	GCC1 & Proximal Wells	PA-27d-102519	10/25/2019	1,150,000	< 0.44 U	< 4.8 U
Deep	PA-27d	GCC1 & Proximal Wells	Pa-27d-021420	02/14/2020	824,000	0.84 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-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-30d	GCC2	PA-30d-103119	10/31/2019	170,000	4,900 J-	< 48 U
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

Notes:

Bolded values indicate concentrations above the Reportable Detection Limit.

< = Compound not detected. Reportable detection limit shown.

µg/L = micrograms per liter

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Aquifer	Well ID	Cluster	Sample ID	Date	Chloride	Chlorobenzene	Perchlorate
					ug / L	ug / L	ug / L

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.

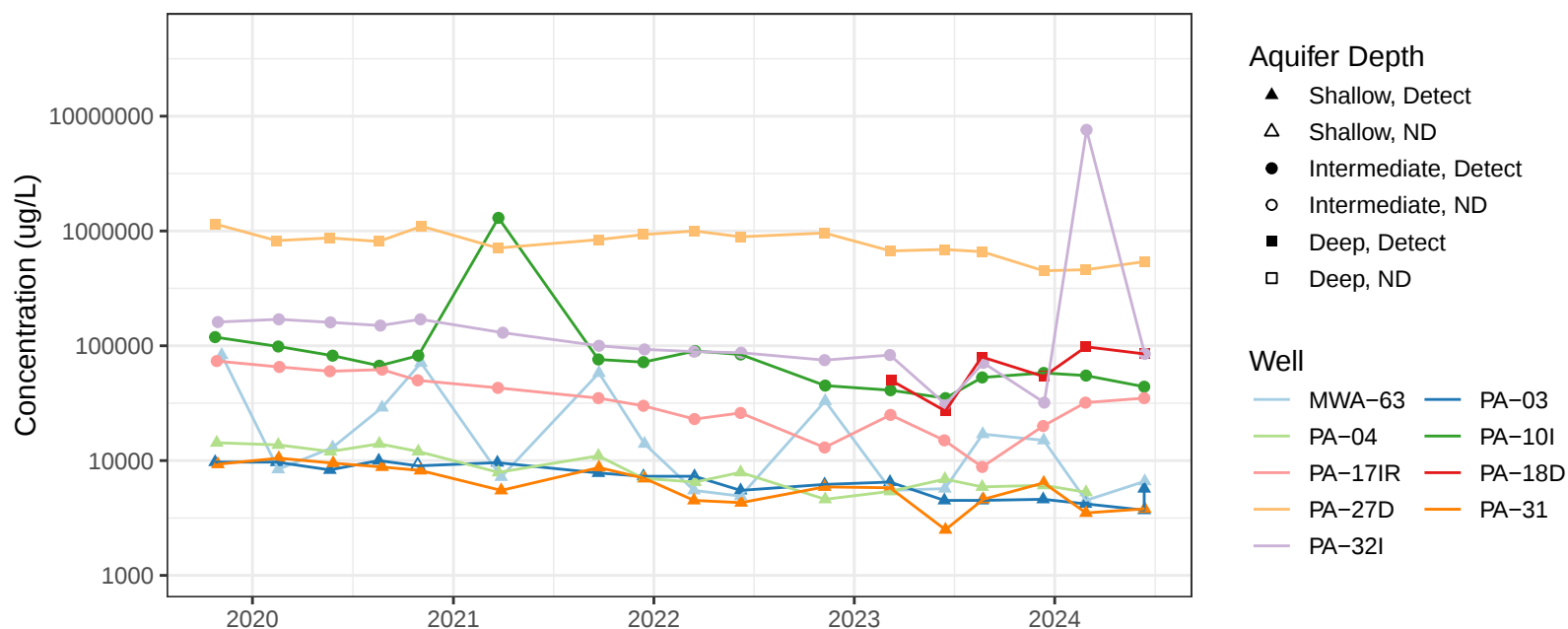
J- = The concentration of the sample is considered to be biased low, as the associated QC results are outside the lower control limits.

U = Compound not detected based on quality assurance review.

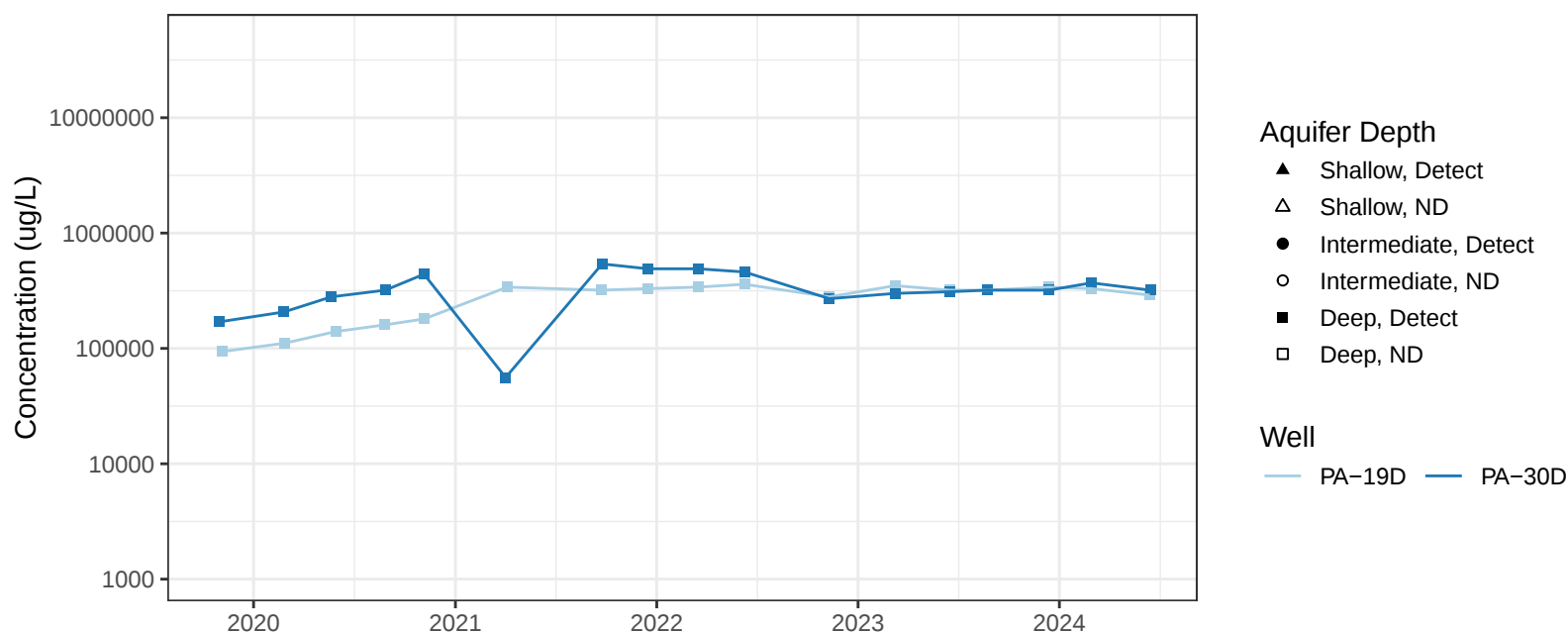
UJ = Analyte was analyzed for, but not detected. The detection limit is a quantitative estimate.

R = Rejected. Quality control indicates that the data are unusable (compound may or not be present).

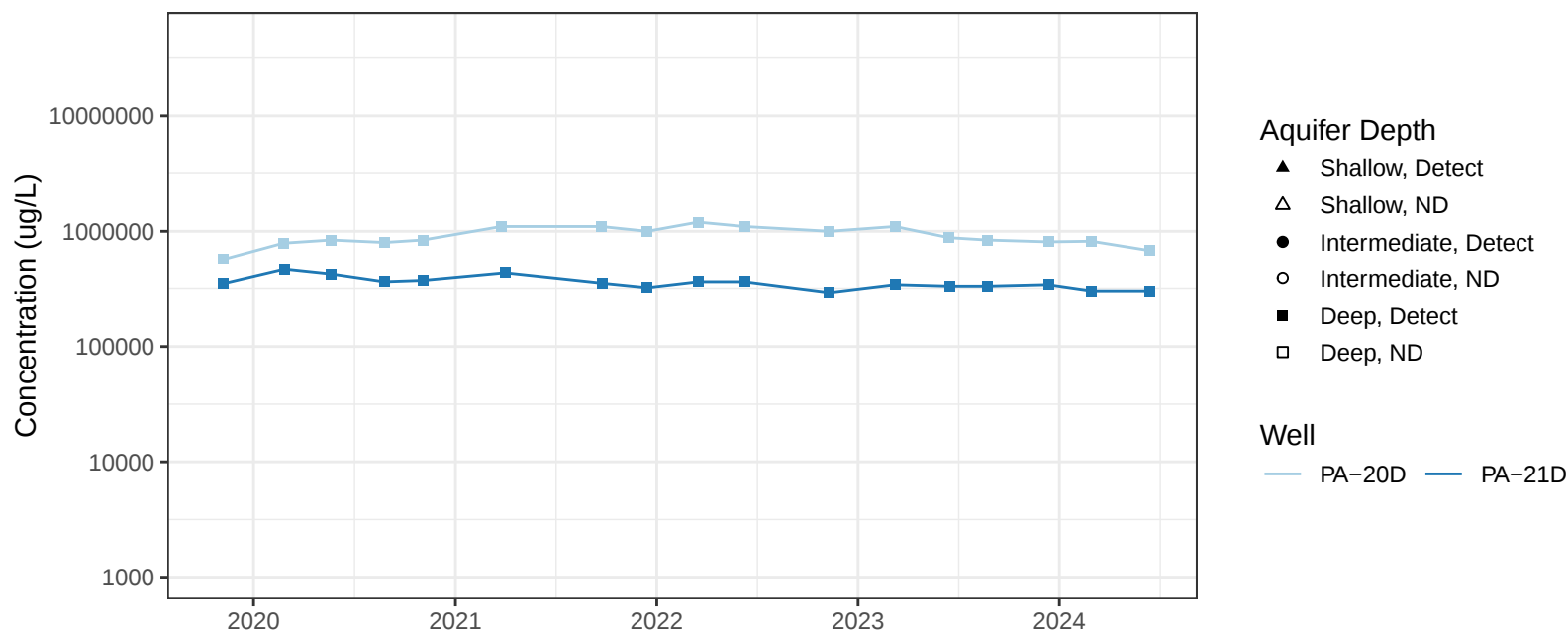
Chloride in GCC1 & Proximal Wells



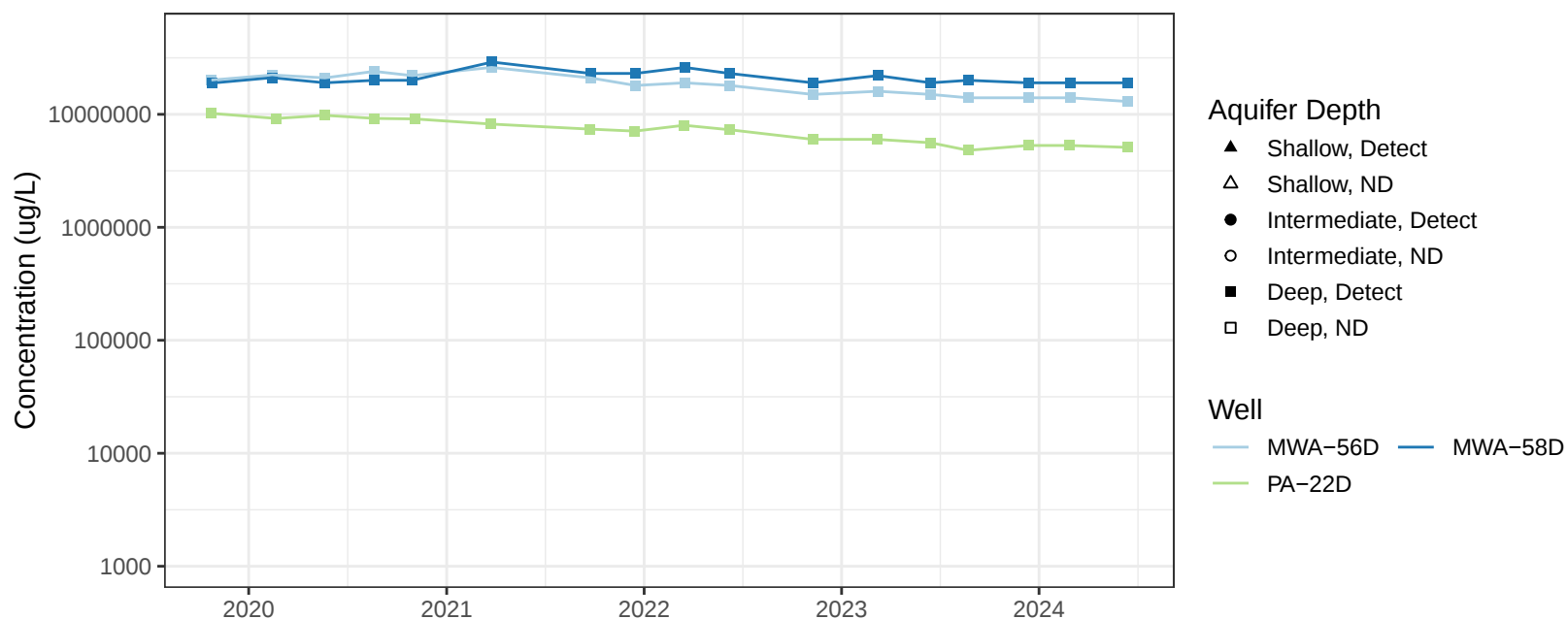
Chloride in GCC2



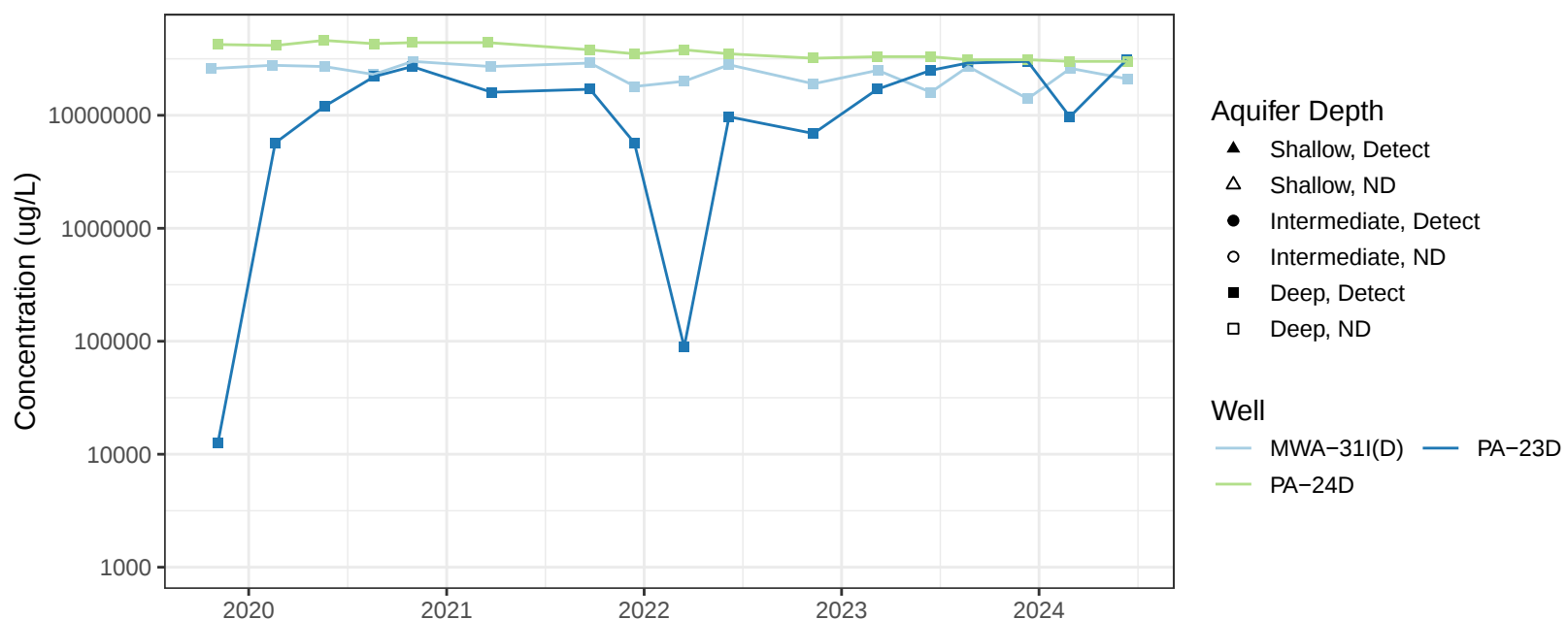
Chloride in GCC3



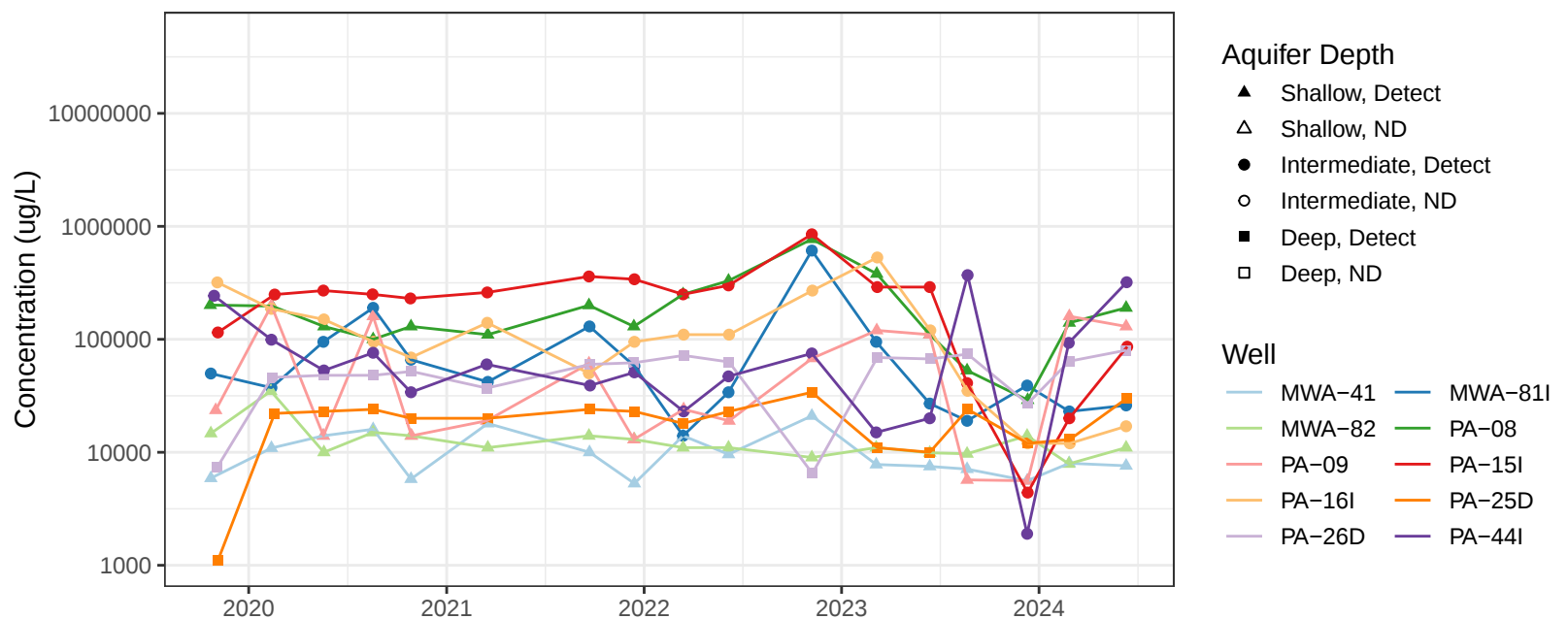
Chloride in GCC4 & Proximal Wells



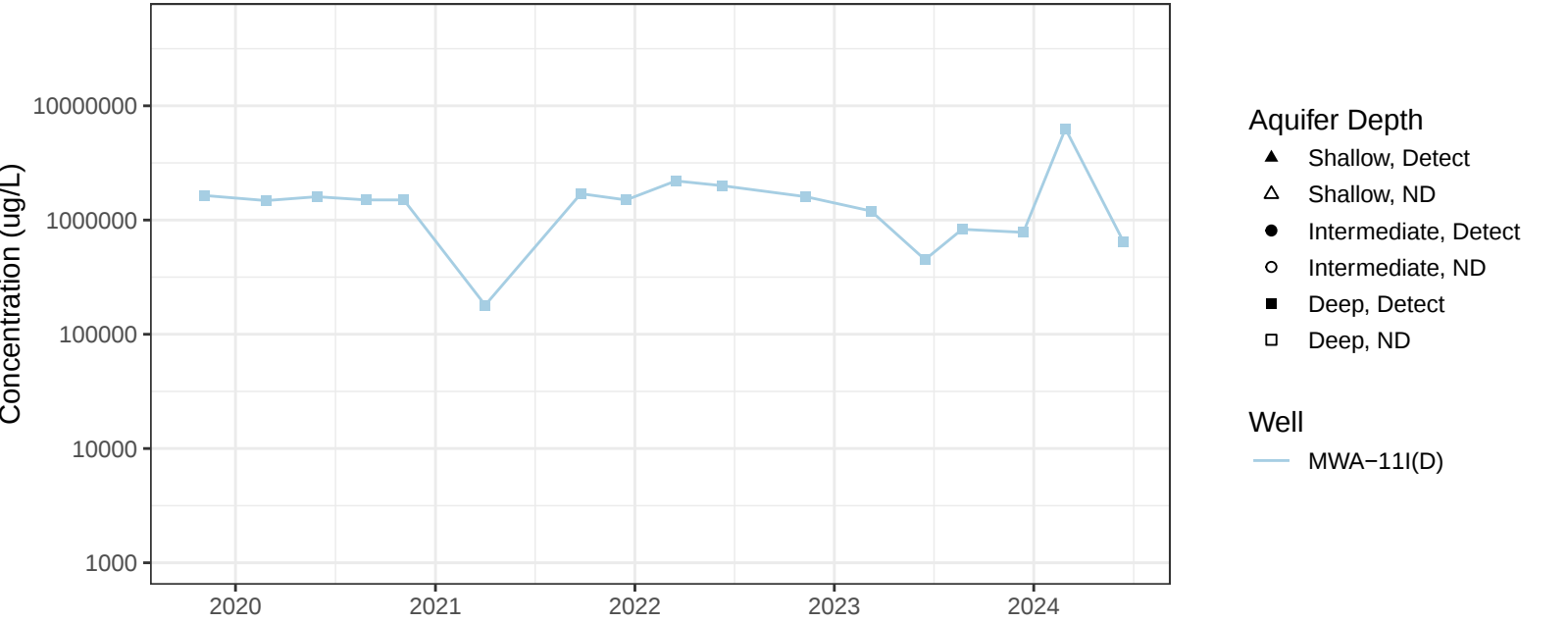
Chloride in GCC5 & Proximal Wells



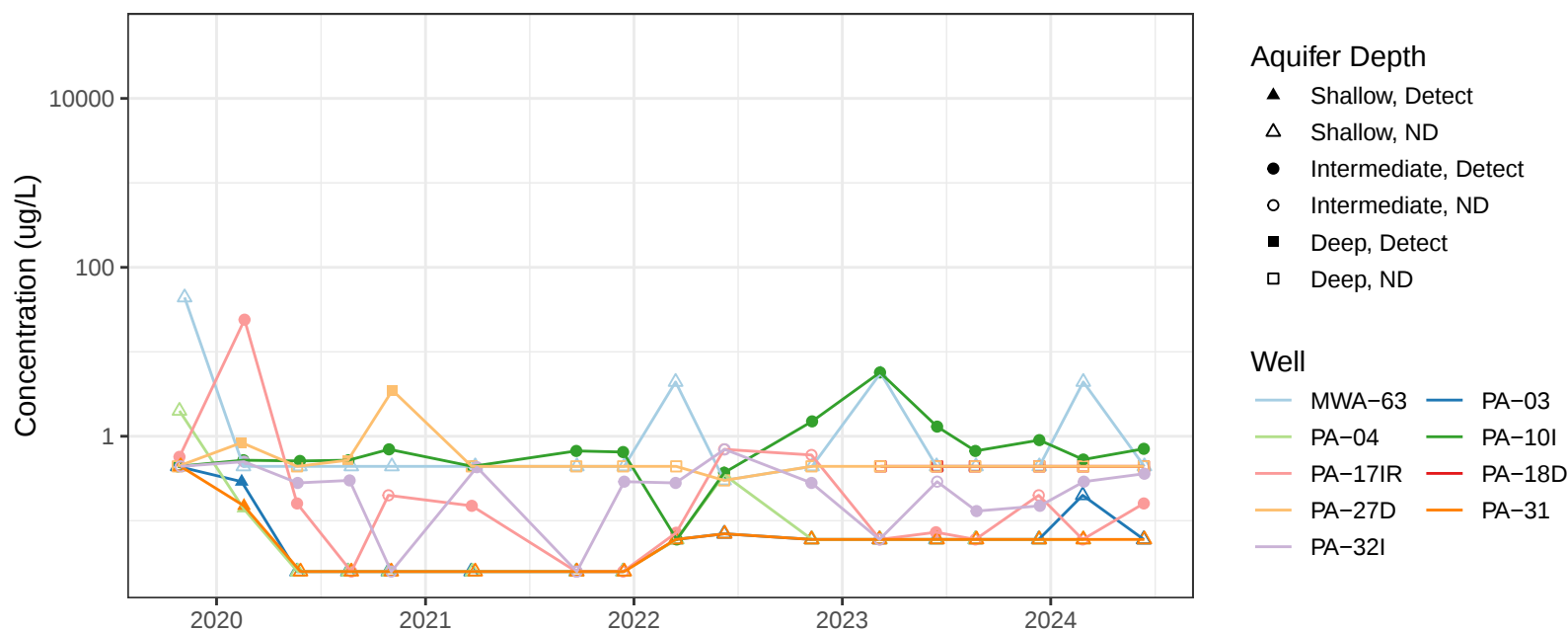
Chloride in GCC6 & Proximal Wells



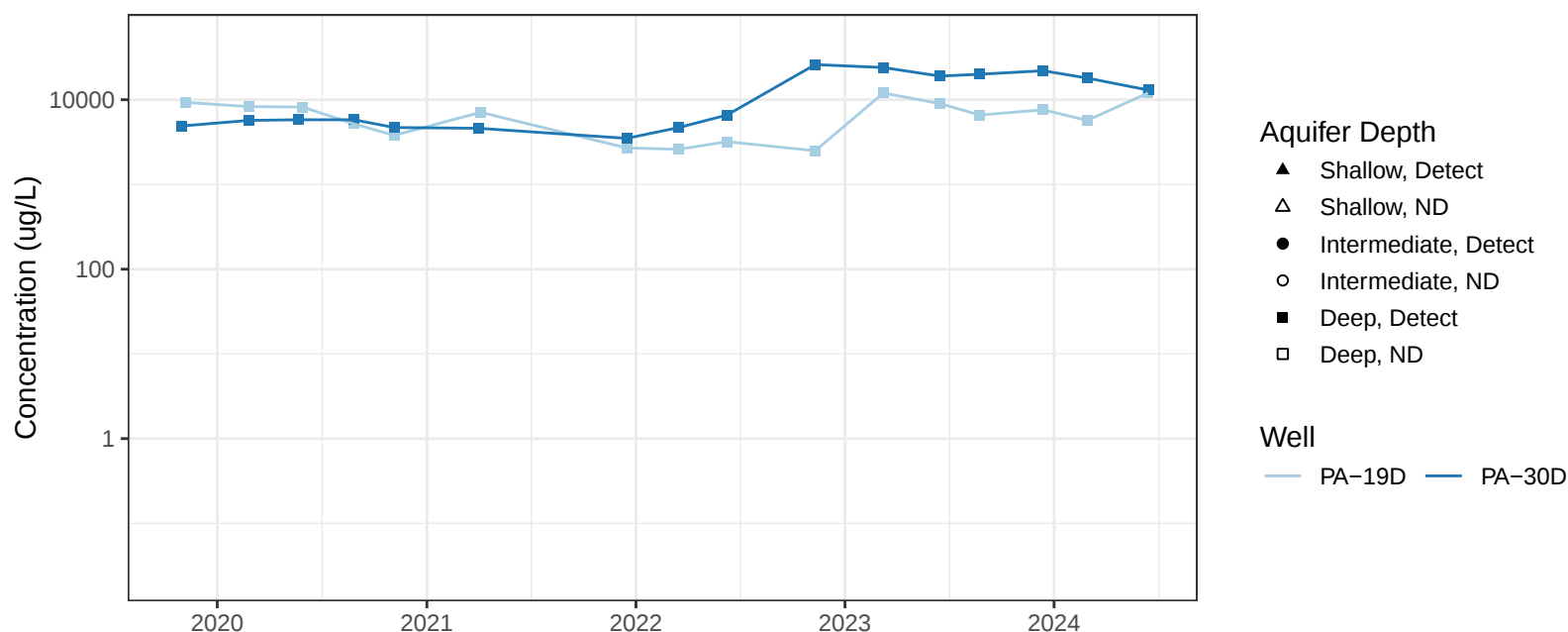
Chloride in Well Distal from BW and GCCs



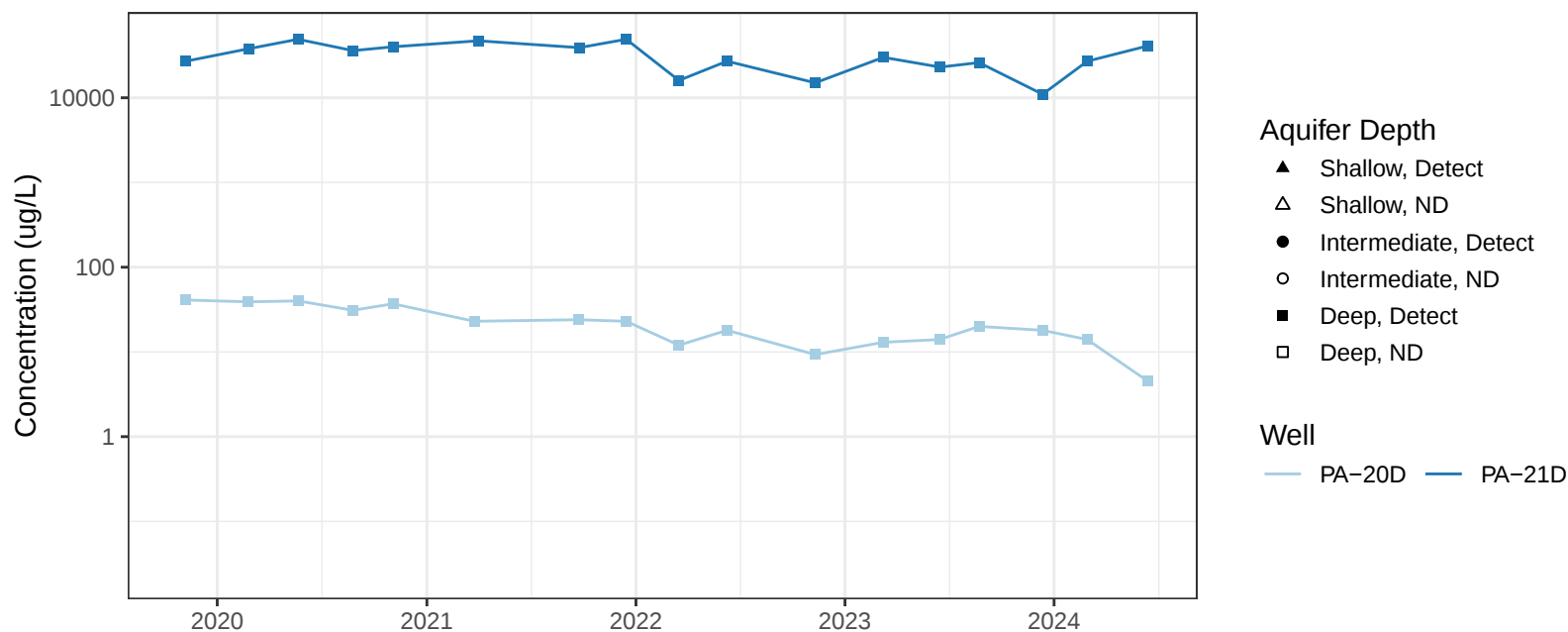
Chlorobenzene in GCC1 & Proximal Wells



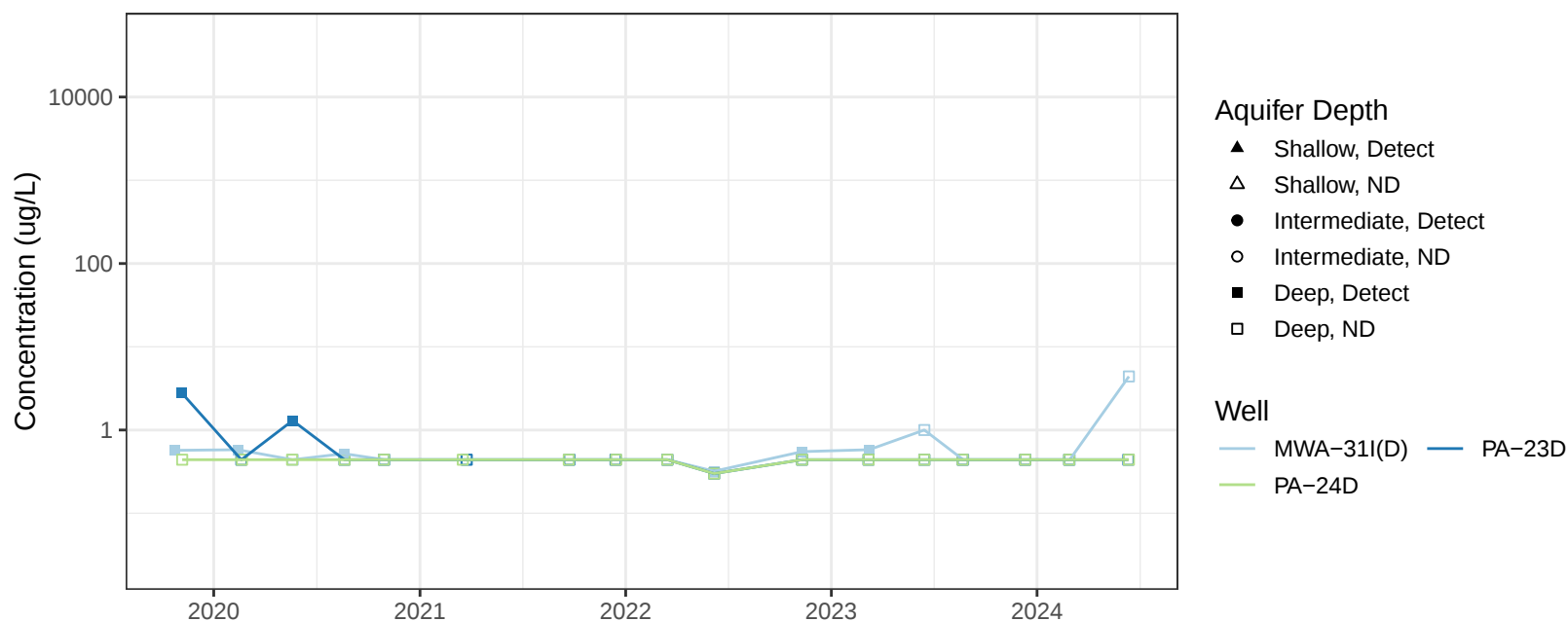
Chlorobenzene in GCC2



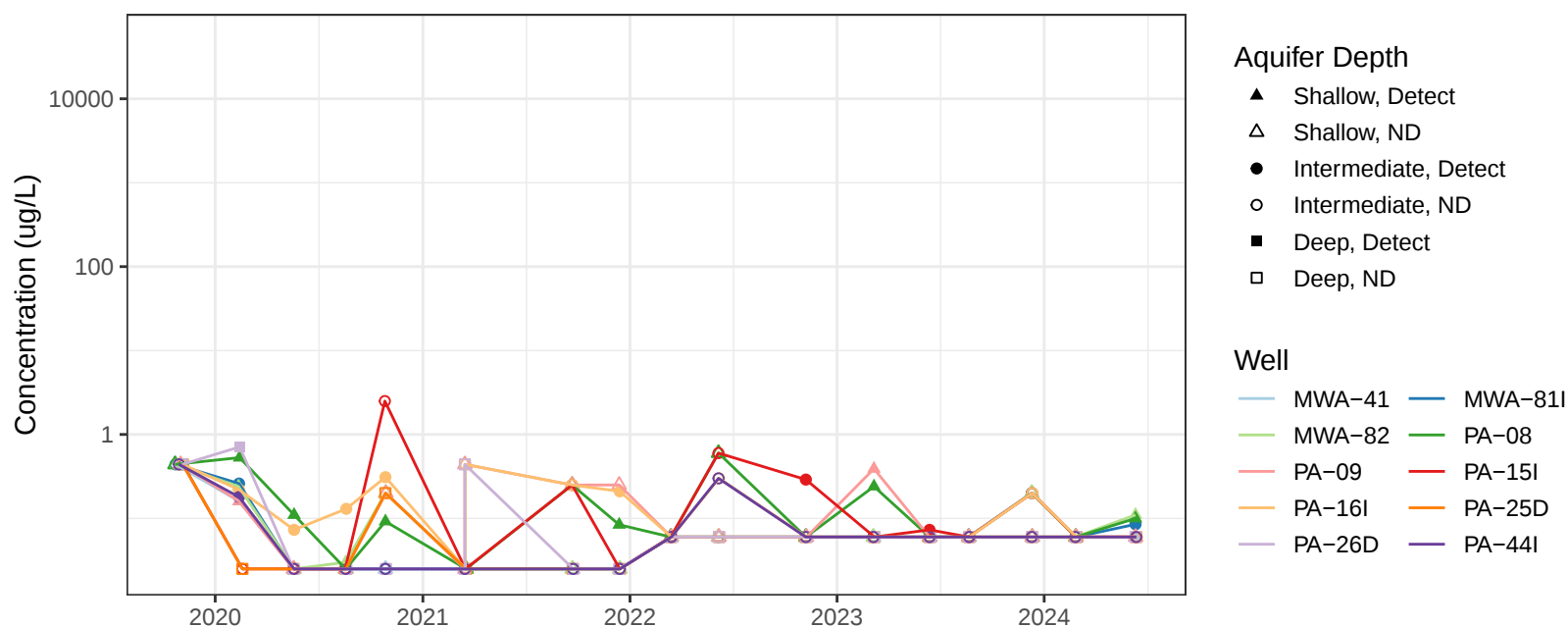
Chlorobenzene in GCC3



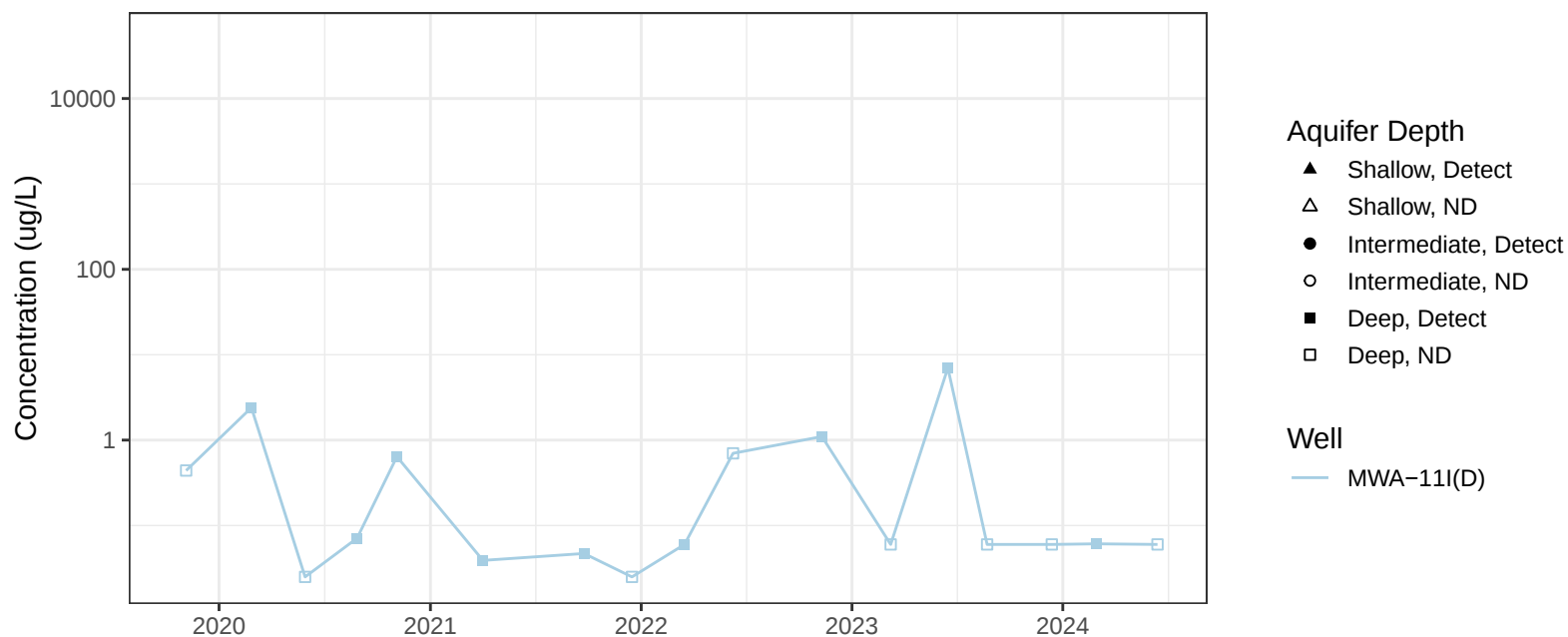
Chlorobenzene in GCC5 & Proximal Wells



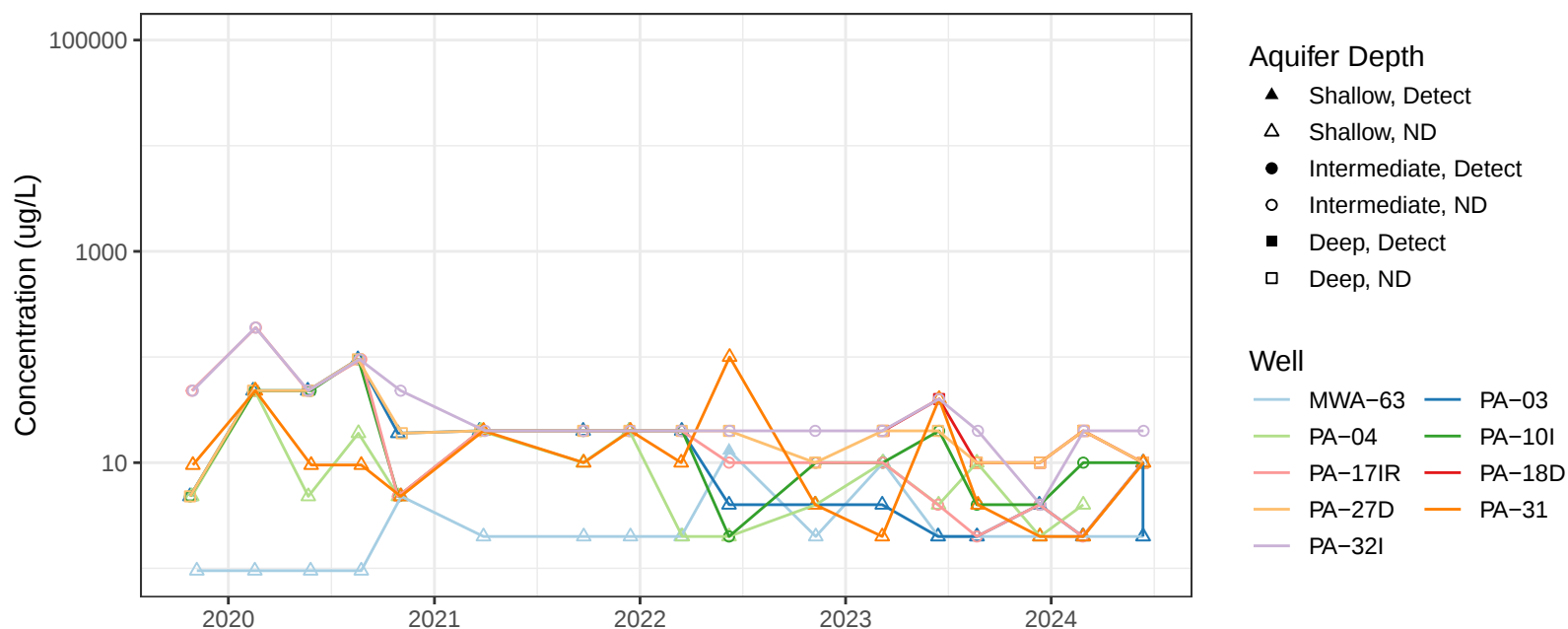
Chlorobenzene in GCC6 & Proximal Wells



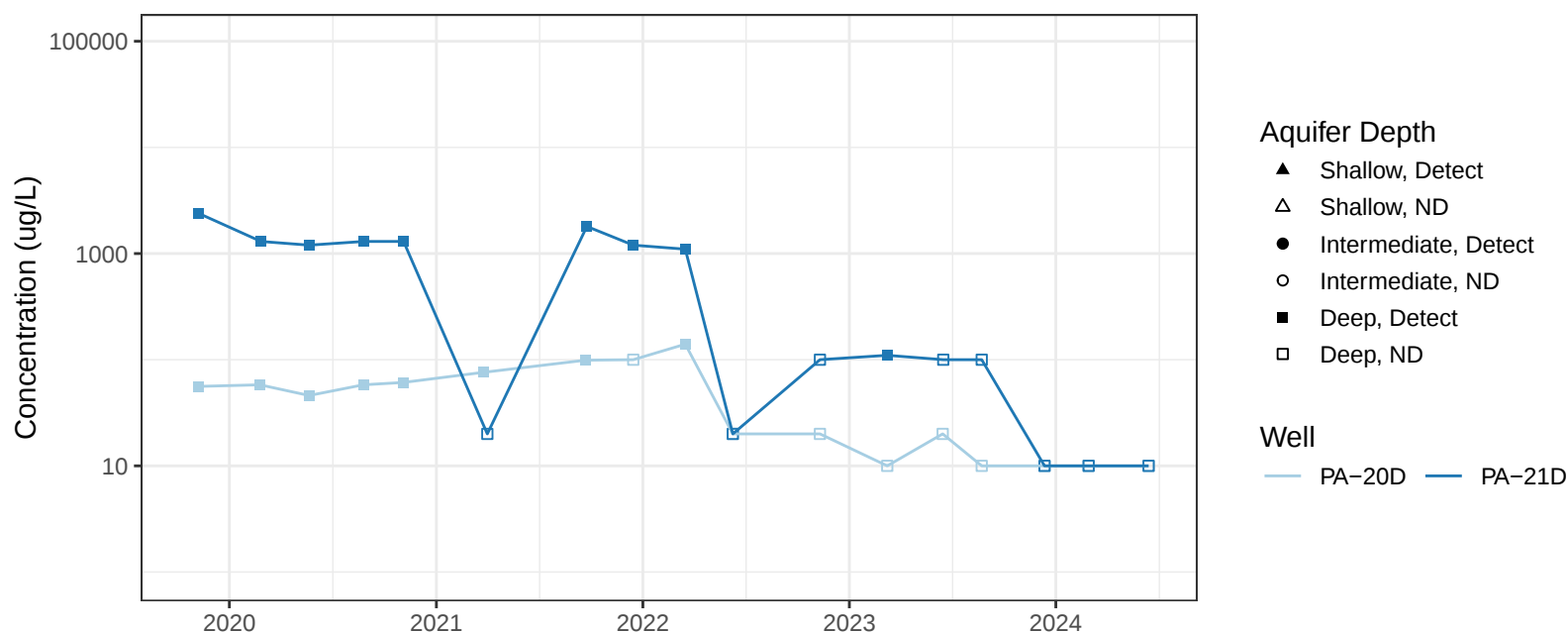
Chlorobenzene in Well Distal from BW and GCCs



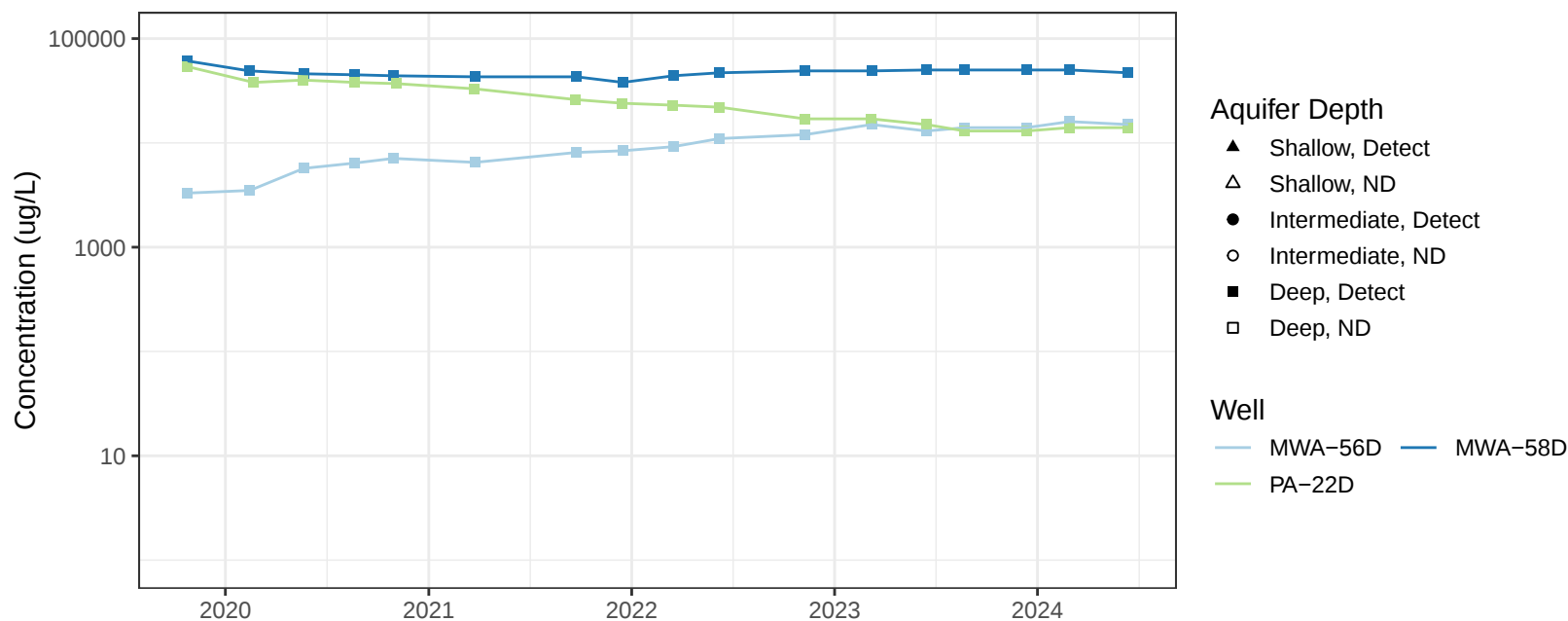
Perchlorate in GCC1 & Proximal Wells



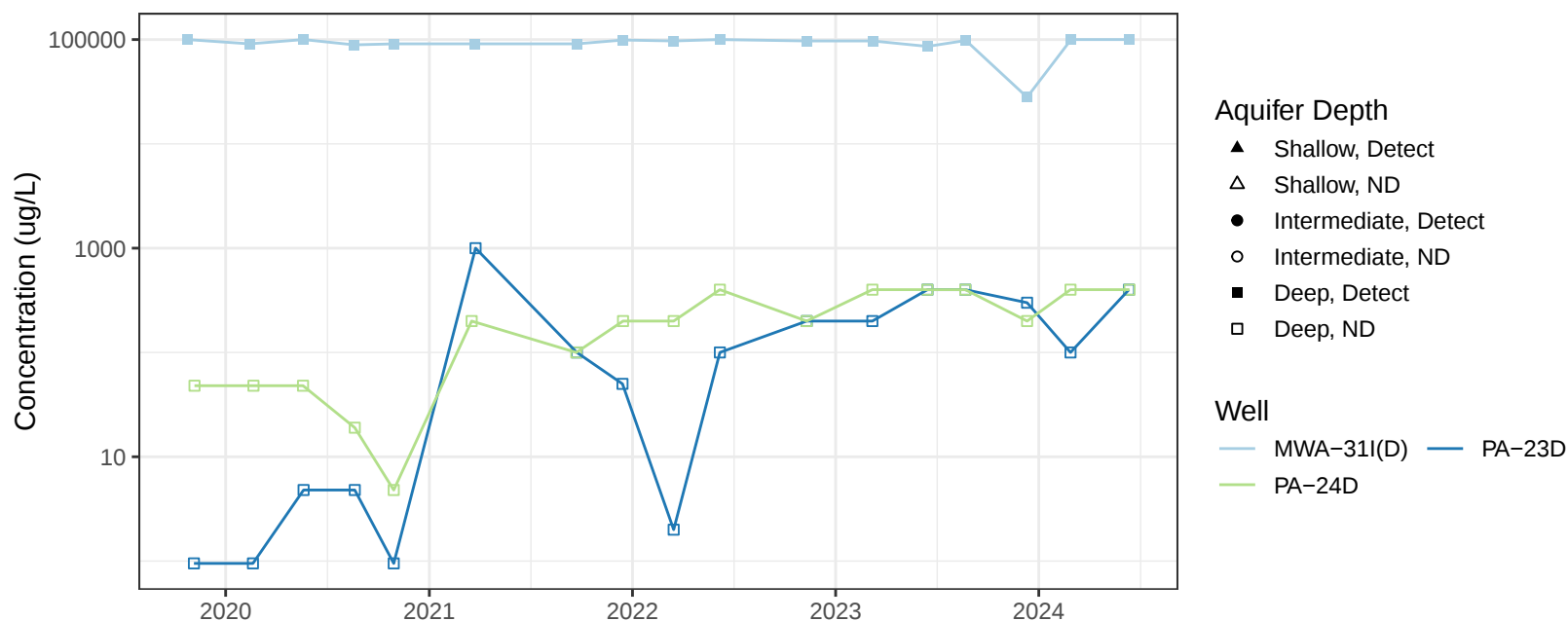
Perchlorate in GCC3



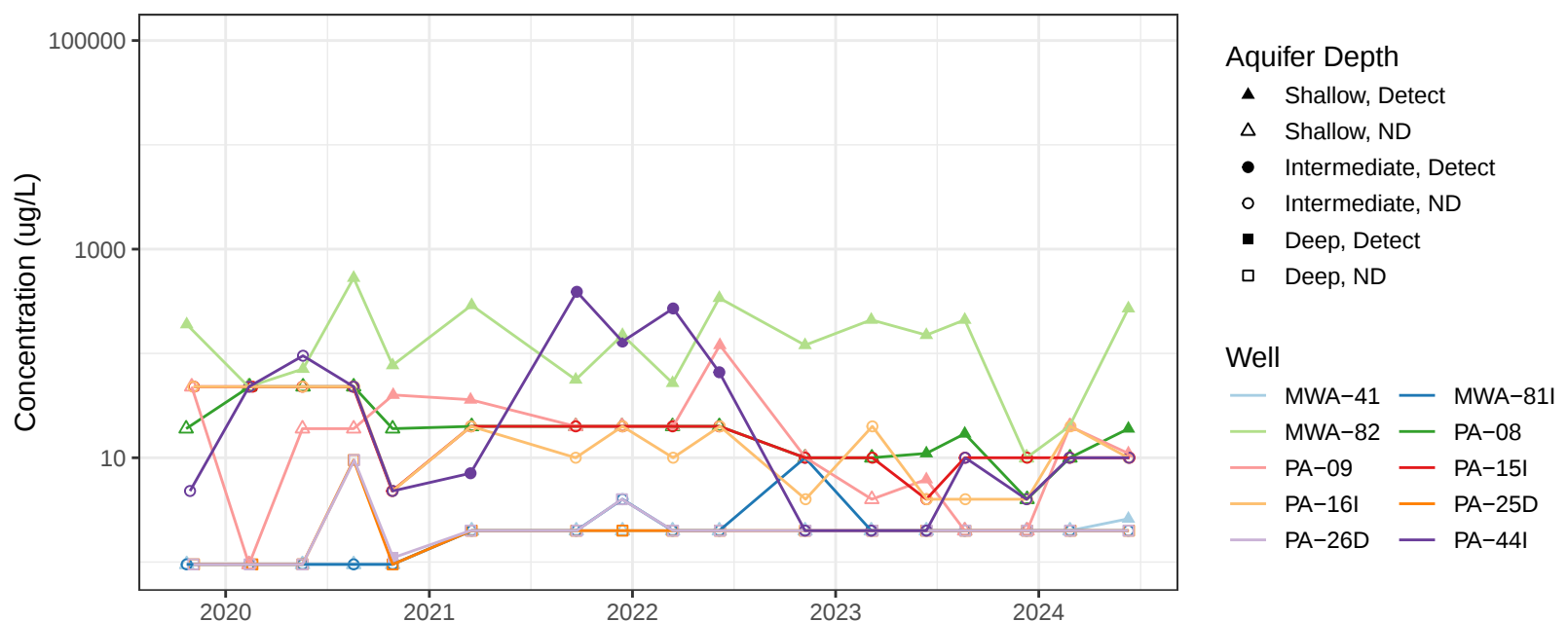
Perchlorate in GCC4 & Proximal Wells



Perchlorate in GCC5 & Proximal Wells



Perchlorate in GCC6 & Proximal Wells





APPENDIX E HISTORICAL DATA TABLE

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Historical Data Table
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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-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

Appendix E
Historical Data Table
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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	

Appendix E
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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	

Appendix E
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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	

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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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