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# Arkema Quarter 3, 2025, Groundwater Monitoring Report

Arkema Inc. Facility, Portland, Oregon

PREPARED FOR  
Legacy Site Services LLC

DATE  
9 January 2026

REFERENCE  
0773823



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Arkema Inc. Facility, Portland, Oregon  
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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
IRAM	Interim Remedial Action Measure
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 3, 2025, Groundwater Monitoring Report
SEE	System Effectiveness Evaluation
Site	Former Arkema Portland Plant at 6400 NW Front Avenue, Portland, Oregon
TCE	trichloroethene
VOC	volatile organic compound



## 1. INTRODUCTION

Environmental Resources Management, Inc. (ERM) has prepared this *Arkema Quarter 3, 2025, Groundwater Monitoring Report* (Report) for the Arkema Inc. (Arkema) Facility (the Site) on behalf of Legacy Site Services, LLC (LSS), agent for 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 3, 2025, groundwater monitoring at the former Arkema Portland Plant at 6400 NW Front Avenue, Portland, Oregon.

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

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

Following the ODEQ review of the *2021 GWET System Effectiveness Evaluation 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 (VOC)
- Perchlorate
- Chloride



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

From 4 August 2025 through 19 September 2025, approximately 69 wells were abandoned in preparation for implementation of the Interim Remedial Action Measure 1 (IRAM 1) in situ stabilization remedy, in accordance with the *Well Decommissioning Work Plan* (ERM 2025) submitted to the ODEQ on 8 August 2025. Well decommissioning activities included the abandonment of seven monitoring wells, eight piezometers, and four recovery wells previously included in the Approved Groundwater Monitoring Program for groundwater elevation and/or groundwater sampling.



## 2. FIELD PROCEDURES

ERM collected groundwater elevation data from 111 well locations on 1 September 2025 and groundwater samples from 24 well locations between 2 September and 4 September 2025. The locations of all monitoring wells and piezometers are presented on Figure 1. A summary of groundwater level and sampling locations and analyses are displayed in Table 1.

Well abandonment activities occurred simultaneously with the Quarter 3 groundwater monitoring event and one well (MWA-15r) that was planned for abandonment had a groundwater level measurement collected on 1 September 2025 and two wells not planned for abandonment (RW-23 and RW-11i) did not receive groundwater level measurements due to transducers being shut off for the well abandonment work.

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

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

### 2.1 GROUNDWATER LEVEL MEASUREMENTS

As shown in Table 1, ERM collected groundwater elevation data on 1 September 2025 from 111 well locations using a combination of transducer and manual measurements. Manual measurements were measured to the nearest 0.01 foot using a water level indicator in accordance with the GMWP. For locations with functioning transducers, transducer data were used for reporting in lieu of collecting manual measurements. For locations with transducers where a manual measurement was collected, when drift was 0.1 foot or greater, the transducer was recalibrated.

### 2.2 GROUNDWATER SAMPLE COLLECTION PROCEDURES

During Quarter 3, 2025, ERM collected groundwater samples from 24 well locations in accordance with the Approved Groundwater Monitoring Program. One well (PA-16i) in the monitoring program was not sampled during the Quarter 3, 2025, event due to a stuck transducer that prevented access down the well. Five wells in the monitoring program (MWA-11i(d), PA-19d, PA-20d, PA-21d, PA-30d) were abandoned in August 2025, in preparation for the IRAM 1 in situ stabilization work mentioned above, and were not sampled in Quarter 3 2025. The remaining monitoring well network includes seven monitoring wells and 18 piezometers (Table 1). Sample collection procedures pertaining to the 25 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 Wilsonville 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. It was determined that the qualified data are acceptable for decision making and meet the overall objectives of the monitoring program.



## 2.5 DEVIATIONS FROM GROUNDWATER MONITORING WORK PLAN

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

- Well PA-16i was not sampled during Quarter 3, 2025, because the transducer was stuck and could not be removed. The transducer was freed following the event and the well will be sampled in Quarter 4, 2025.
- Select wells sampled during Quarter 3, 2025, had unstable field parameters and drawdown over 1 foot. Additional details are provided below in Section 3.2.1.
- Five wells regularly sampled for the monitoring program (MWA-11i(d), PA-19d, PA-20d, PA-21d, PA-30d) were abandoned, as mentioned above, in August 2025 and will no longer be sampled. An additional 14 wells regularly measured for water levels (MWA-02, MWA-15r, MWA-61, MWA-69, MWA-08i, MWA-66i, PA-05, PA-06, PA-11i, PA-12i, RW-08, RW-09i, RW-10, and RW-24i) were abandoned or set to be abandoned.



## 3. GROUNDWATER MONITORING RESULTS

### 3.1 GROUNDWATER ELEVATIONS

On 1 September 2025, ERM manually measured depth to groundwater to the nearest 0.01 foot in 54 wells at the Site using an electronic water level indicator. For the additional 57 wells with functioning transducers, ERM collected transducer groundwater elevation data on 1 September. 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 111 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 2 and 4 September 2025 at 24 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 3, 2025, groundwater monitoring event:

- Three monitoring locations (MWA-56d, PA-15i, PA-32i) did not stabilize for turbidity.
- One monitoring location (MWA-63) had drawdown greater than 1 foot.

Three well volumes were not purged prior to sampling at locations MWA-56d, MWA-63, PA-15i, and PA-32i. At the listed well locations where three well volumes were not collected, field parameters were close to stabilization and the quality of the data is not considered to be affected. Field staff will receive additional training regarding field parameter stabilization prior to the next groundwater monitoring event.

#### 3.2.2 ANALYTICAL RESULTS

Tables 4 and 5 present the analytical results for VOCs, and perchlorate and chloride, respectively, from the Quarter 3, 2025, groundwater monitoring event. Appendix B presents laboratory analytical reports. Appendix D includes previous groundwater monitoring data, beginning in October 2019, from well locations associated with the Approved Groundwater Monitoring Program. Appendix E includes historical groundwater data associated with the Site prior to implementation of the groundwater monitoring program in October 2019.



### 3.2.2.1 VOCS

The results for chlorobenzene in the Shallow, Intermediate, and Deep Zones are presented on Figures 5 through 7, respectively. Chlorobenzene was detected in 1 out of 24 samples. The only detected concentration of chlorobenzene was 0.19 j micrograms per liter ( $\mu\text{g/L}$ ) at Intermediate Zone piezometer PA-32i.

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 3 out of 24 samples. The highest detected concentration of 1,2-dichlorobenzene was 0.25 j  $\mu\text{g/L}$  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 24 samples. The highest detected concentration of PCE was 13  $\mu\text{g/L}$  at Shallow Zone monitoring well MWA-63.
- TCE was detected in 1 out of 24 samples. The only detected concentration of TCE was 2.8  $\mu\text{g/L}$  at Shallow Zone monitoring well MWA-63.
- cis-1,2-DCE was detected in 4 out of 24 samples. The highest detected concentration of cis-1,2-DCE was 4.2  $\mu\text{g/L}$  at Shallow Zone monitoring well MWA-63.
- Vinyl chloride was detected in 3 out of 24 samples. The highest detected concentration of vinyl chloride was 0.66  $\mu\text{g/L}$  at Intermediate Zone piezometer PA-10i.

### 3.2.2.2 PERCHLORATE

Perchlorate results for the Shallow, Intermediate, and Deep Zones are presented on Figures 14 through 16, respectively. Perchlorate was detected in 6 out of 24 samples. The highest detected concentration of perchlorate was 110,000  $\mu\text{g/L}$  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 24 out of 24 samples. The highest detected concentration of chloride was 110,000 milligrams per liter at Deep Zone piezometer PA-23d.



## 4. RECOMMENDATIONS

Following the Quarter 3, 2025, groundwater monitoring event, no additional changes are recommended to the GMWP at this time.

ERM will conduct the Quarter 4, 2025, groundwater monitoring event according to the following schedule:

- Water levels will be measured on 1 December 2025.
- Sampling will begin on 8 December 2025 and is expected to be completed over a 1-week period.
- Receipt of analytical results is anticipated to be completed over a period of 5 weeks from the completion of the sampling event (January 2026).

The Quarter 4, 2025, Groundwater Monitoring Report will be submitted to the ODEQ within 60 days after data validation (March 2026).



## 5. REFERENCES

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

**Table 1**  
**Groundwater Sampling Matrix**  
**Arkema Quarter 3, 2025, Groundwater Monitoring Report**  
**Arkema Inc. Facility**  
**Portland, Oregon**

Analyte			Volatiles Organic Compounds	Volatiles Organic Compounds	Chloride	Perchlorate	Comments
Analytical Method			8260C	8260C_LL <sup>a</sup>	300	314	
Location ID	Aquifer Classification	Groundwater Level Measurement					
MWA-02 <sup>c</sup>	Shallow	--	--	--	--	--	
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 <sup>c</sup>	Shallow	--	--	--	--	--	
MWA-63	Shallow	X	X	--	X	X	
MWA-69 <sup>c</sup>	Shallow	--	--	--	--	--	
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 <sup>d</sup>	Shallow	--	--	--	--	--	
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 <sup>a</sup>	300	314	
Location ID	Aquifer Classification	Groundwater Level Measurement					
RW-08 <sup>c</sup>	Shallow	--	--	--	--	--	
RW-10 <sup>c</sup>	Shallow	--	--	--	--	--	
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 <sup>d</sup>	Shallow	--	--	--	--	--	
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 <sup>c</sup>	Intermediate	--	--	--	--	--	
MWA-16i	Intermediate	X	--	--	--	--	
MWA-34iR <sup>b</sup>	Intermediate	X*	--	--	--	--	
MWA-49i	Intermediate	X	--	--	--	--	
MWA-53i	Intermediate	X	--	--	--	--	
MWA-54i	Intermediate	X	--	--	--	--	
MWA-66i <sup>c</sup>	Intermediate	--	--	--	--	--	
MWA-70i	Intermediate	X	--	--	--	--	
MWA-74i	Intermediate	X	--	--	--	--	
MWA-75i	Intermediate	X	--	--	--	--	
MWA-81i	Intermediate	X	--	X	X	X	

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**Groundwater Sampling Matrix**  
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Analyte			Volatiles Organic Compounds	Volatiles Organic Compounds	Chloride	Perchlorate	Comments
Analytical Method			8260C	8260C_LL <sup>a</sup>	300	314	
Location ID	Aquifer Classification	Groundwater Level Measurement					
PA-10i	Intermediate	X*	--	X	X	X	
PA-11i <sup>c</sup>	Intermediate	--	--	--	--	--	
PA-12i	Intermediate	X*	--	--	--	--	
PA-13i	Intermediate	X*	--	--	--	--	
PA-14i	Intermediate	X*	--	--	--	--	
PA-15i	Intermediate	X*	--	X	X	X	
PA-16i	Intermediate	X*	--	--	--	--	Not sampled due to obstruction
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 <sup>d</sup>	Intermediate	--	--	--	--	--	
RW-11i <sup>d</sup>	Intermediate	--	--	--	--	--	
RW-13i	Intermediate	X*	--	--	--	--	
RW-16i	Intermediate	X*	--	--	--	--	
RW-19i	Intermediate	X*	--	--	--	--	
RW-21i	Intermediate	X*	--	--	--	--	
RW-24i <sup>d</sup>	Intermediate	--	--	--	--	--	
RW-26i	Intermediate	X*	--	--	--	--	
MWA-11i(d) <sup>c</sup>	Deep	--	--	--	--	--	
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 <sup>c</sup>	Deep	--	--	--	--	--	
PA-20d <sup>c</sup>	Deep	X*	--	--	--	--	
PA-21d <sup>c</sup>	Deep	--	--	--	--	--	
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 <sup>c</sup>	Deep	--	--	--	--	--	
MWA-76g	Gravel	X	--	--	--	--	
MWA-77g	Gravel	X	--	--	--	--	

Notes:

<sup>a</sup> low level test

<sup>b</sup> MWA-34i was abandoned on 30 May 2024 and reinstalled as MWA-34iR on 29 May 2024.

<sup>c</sup> Abandoned in August 2025 or unable to be accessed due to well abandonment activities.

<sup>d</sup> = No water level taken due to transducers being off for well abandonment activities.

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

NTU = nephelometric turbidity unit

**Table 2  
Groundwater Elevation Results  
Arkema Quarter 3, 2025, Groundwater Monitoring Report  
Arkema Inc. Facility  
Portland, Oregon**

Well ID	Date	Time	Aquifer Unit	Top of Casing Elevation (ft NAVD88)	Depth to Water (ft)	Groundwater Elevation (ft NAVD88)	Transducer Recalibrated following Manual Measurement <sup>a</sup>
MWA-02 <sup>a</sup>	--	--	Shallow	--	--	--	
MWA-15r	2025-09-01	8:52:00 AM	Shallow	36.06	25.09	10.97	
MWA-18	2025-09-01	9:26:00 AM	Shallow	39.43	30.69	8.74	
MWA-19	2025-09-01	*	Shallow	38.26	--	8.8	
MWA-20	2025-09-01	9:12:00 AM	Shallow	40.95	27.75	13.2	
MWA-22	2025-09-01	8:49:00 AM	Shallow	36.59	22.35	14.24	
MWA-24	2025-09-01	10:57:00 AM	Shallow	37.58	23.1	14.48	
MWA-29	2025-09-01	9:38:00 AM	Shallow	44.42	35.52	8.9	
MWA-33	2025-09-01	10:47:00 AM	Shallow	37.26	17.7	19.56	
MWA-40	2025-09-01	10:55:00 AM	Shallow	36.96	18.23	18.73	
MWA-41	2025-09-01	10:40:00 AM	Shallow	45.14	33.78	11.36	
MWA-42	2025-09-01	9:05:00 AM	Shallow	37.24	24.9	12.34	
MWA-43	2025-09-01	10:27:00 AM	Shallow	44.53	35.03	9.5	
MWA-46	2025-09-01	9:23:00 AM	Shallow	36.67	27.96	8.71	
MWA-47	2025-09-01	*	Shallow	39.02	--	8.27	
MWA-61 <sup>a</sup>	--	--	Shallow	--	--	--	
MWA-63	2025-09-01	8:17:00 AM	Shallow	36.29	26.83	9.46	
MWA-69 <sup>a</sup>	--	--	Shallow	--	--	--	
MWA-71	2025-09-01	8:07:00 AM	Shallow	34.82	6.34	28.48	
MWA-72	2025-09-01	11:07:00 AM	Shallow	34.16	5.88	28.28	
MWA-73	2025-09-01	11:00:00 AM	Shallow	36.01	7.92	28.09	
MWA-82	2025-09-01	10:44:00 AM	Shallow	37.74	24.4	13.34	
PA-03	2025-09-01	*	Shallow	37.10	--	23.79	
PA-04	2025-09-01	*	Shallow	36.67	--	24.27	
PA-05 <sup>a</sup>	--	--	Shallow	--	--	--	
PA-06 <sup>a</sup>	--	--	Shallow	--	--	--	
PA-07	2025-09-01	*	Shallow	39.30	--	13.37	
PA-08	2025-09-01	*	Shallow	40.47	--	11.94	
PA-09	2025-09-01	*	Shallow	40.24	--	10.74	
PA-28	2025-09-01	*	Shallow	38.58	--	13.71	
PA-31	2025-09-01	8:22:00 AM	Shallow	36.25	11.93	24.32	
PA-33	2025-09-01	8:25:00 AM	Shallow	36.29	12.49	23.8	
PA-35	2025-09-01	8:32:00 AM	Shallow	35.91	27.18	8.73	
PA-36	2025-09-01	8:37:00 AM	Shallow	36.90	29.15	7.75	
PA-38	2025-09-01	10:23:00 AM	Shallow	42.93	29.69	13.24	
PA-41	2025-09-01	9:42:00 AM	Shallow	39.69	27.64	12.05	
PA-42	2025-09-01	10:25:00 AM	Shallow	40.60	28.58	12.02	
PA-43	2025-09-01	10:36:00 AM	Shallow	40.41	28.13	12.28	
RP-02-31	2025-09-01	8:00:00 AM	Shallow	42.49	31.85	10.64	
RP-10-30	2025-09-01	8:05:00 AM	Shallow	37.47	9.9	27.57	
RW-5	2025-09-01	*	Shallow	34.80	--	21.15	
RW-7	2025-09-01	*	Shallow	33.98	--	8.51	
RW-08 <sup>b</sup>	--	--	Shallow	--	--	--	
RW-10 <sup>b</sup>	--	--	Shallow	--	--	--	
RW-12	2025-09-01	*	Shallow	35.58	--	12.34	
RW-14	2025-09-01	*	Shallow	36.08	--	13.24	
RW-15	2025-09-01	*	Shallow	35.81	--	13.31	
RW-17	2025-09-01	*	Shallow	36.55	--	13.53	
RW-18	2025-09-01	*	Shallow	36.51	--	13.26	
RW-20	2025-09-01	*	Shallow	37.07	--	13.23	
RW-22	2025-09-01	*	Shallow	38.02	--	10.92	
RW-23 <sup>b</sup>	--	--	Shallow	--	--	--	
RW-25	2025-09-01	*	Shallow	38.06	--	12.13	
EW-1	2025-09-01	*	Shallow/Intermediate	33.84	--	11.31	
EW-2	2025-09-01	*	Shallow/Intermediate	34.20	--	12.03	
EW-3	2025-09-01	*	Shallow/Intermediate	34.43	--	1.33	
EW-4	2025-09-01	*	Shallow/Intermediate	34.61	--	0.12	
EW-5	2025-09-01	*	Shallow/Intermediate	35.03	--	4.56	
EW-6	2025-09-01	*	Shallow/Intermediate	35.43	--	5.66	
EW-7	2025-09-01	*	Shallow/Intermediate	35.24	--	5.67	
EW-8	2025-09-01	*	Shallow/Intermediate	35.07	--	6.23	
EW-9	2025-09-01	*	Shallow/Intermediate	36.77	--	2.09	
EW-10	2025-09-01	*	Shallow/Intermediate	36.35	--	2.37	
EW-11	2025-09-01	*	Shallow/Intermediate	37.38	--	0.62	
EW-12	2025-09-01	*	Shallow/Intermediate	38.24	--	-0.01	
EW-13	2025-09-01	*	Shallow/Intermediate	39.79	--	2.36	
EW-14	2025-09-01	*	Shallow/Intermediate	40.03	--	2.85	
MWA-83	2025-09-01	8:34:00 AM	Shallow/Intermediate	35.82	25.62	10.2	
MWA-84	2025-09-01	8:46:00 AM	Shallow/Intermediate	36.31	29.4	6.91	

**Table 2  
Groundwater Elevation Results  
Arkema Quarter 3, 2025, Groundwater Monitoring Report  
Arkema Inc. Facility  
Portland, Oregon**

Well ID	Date	Time	Aquifer Unit	Top of Casing Elevation (ft NAVD88)	Depth to Water (ft)	Groundwater Elevation (ft NAVD88)	Transducer Recalibrated following Manual Measurement <sup>a</sup>
MWA-85	2025-09-01	8:54:00 AM	Shallow/Intermediate	36.86	27.73	9.13	
MWA-86	2025-09-01	9:09:00 AM	Shallow/Intermediate	37.15	30.15	7	
MWA-87	2025-09-01	9:14:00 AM	Shallow/Intermediate	37.68	31.28	6.39	
MWA-88	2025-09-01	9:34:00 AM	Shallow/Intermediate	39.36	36.3	3.06	
MWA-89	2025-09-01	10:30:00 AM	Shallow/Intermediate	41.65	34.46	7.19	
MWA-07(i)	2025-09-01	11:01:00 AM	Intermediate	36.24	8.52	27.72	
MWA-08i <sup>a</sup>	--	--	Intermediate	--	--	--	
MWA-16i	2025-09-01	9:00:00 AM	Intermediate	36.58	29.2	7.38	
MWA-34iR	2025-09-01	*	Intermediate	37.36	--	8.16	
MWA-49i	2025-09-01	9:24:00 AM	Intermediate	36.68	29	7.68	
MWA-53i	2025-09-01	9:37:00 AM	Intermediate	44.63	36.85	7.78	
MWA-54i	2025-09-01	9:07:00 AM	Intermediate	37.35	26.38	10.97	
MWA-66i <sup>a</sup>	--	--	Intermediate	--	--	--	
MWA-70i	2025-09-01	10:50:00 AM	Intermediate	37.62	22.82	14.8	
MWA-74i	2025-09-01	8:09:00 AM	Intermediate	34.72	12.23	22.49	
MWA-75i	2025-09-01	11:08:00 AM	Intermediate	34.09	5.85	28.24	
MWA-81i	2025-09-01	10:38:00 AM	Intermediate	44.62	34.8	9.82	
PA-10i	2025-09-01	*	Intermediate	36.67	--	11.96	
PA-11i <sup>a</sup>	--	--	Intermediate	--	--	--	
PA-12i <sup>a</sup>	--	--	Intermediate	--	--	--	
PA-13i	2025-09-01	*	Intermediate	38.48	--	10.94	
PA-14i	2025-09-01	*	Intermediate	39.30	--	10.26	
PA-15i	2025-09-01	*	Intermediate	40.62	--	10.37	
PA-16i	2025-09-01	*	Intermediate	40.30	--	9.67	
PA-17iR	2025-09-01	*	Intermediate	37.59	--	10.44	
PA-29i	2025-09-01	*	Intermediate	39.18	--	8.04	
PA-32i	2025-09-01	8:24:00 AM	Intermediate	36.28	24.74	11.54	
PA-34i	2025-09-01	8:28:00 AM	Intermediate	36.02	24.62	11.4	
PA-37i	2025-09-01	8:41:00 AM	Intermediate	36.54	27.44	9.1	
PA-39i	2025-09-01	10:18:00 AM	Intermediate	40.11	29.95	10.16	
PA-40i	2025-09-01	10:21:00 AM	Intermediate	41.47	31.32	10.15	
PA-44i	2025-09-01	10:34:00 AM	Intermediate	40.36	30.37	9.99	
RW-09i <sup>b</sup>	--	--	Intermediate	--	--	--	
RW-11i <sup>b</sup>	--	--	Intermediate	--	--	--	
RW-13i	2025-09-01	*	Intermediate	36.09	--	12.47	
RW-16i	2025-09-01	*	Intermediate	35.77	--	12.58	
RW-19i	2025-09-01	*	Intermediate	36.56	--	10.58	
RW-21i	2025-09-01	*	Intermediate	37.38	--	10.38	
RW-24i <sup>b</sup>	--	--	Intermediate	--	--	--	
RW-26i	2025-09-01	*	Intermediate	38.10	--	10.28	
RW-6i	2025-09-01	*	Intermediate	35.59	--	11.38	
MWA-11i(d) <sup>a</sup>	--	--	Deep	--	--	--	
MWA-12i(d)	2025-09-01	11:02:00 AM	Deep	35.86	12.2	23.66	
MWA-31i(d)	2025-09-01	9:30:00 AM	Deep	38.36	31.78	6.58	
MWA-56d	2025-09-01	9:21:00 AM	Deep	36.68	29.28	7.4	
MWA-58d	2025-09-01	*	Deep	37.97	--	7.63	
PA-18d	2025-09-01	*	Deep	36.55	--	9.45	
PA-19d <sup>a</sup>	--	--	Deep	--	--	--	
PA-20d <sup>a</sup>	--	--	Deep	--	--	--	
PA-21d <sup>a</sup>	--	--	Deep	--	--	--	
PA-22d	2025-09-01	*	Deep	38.75	--	7.81	
PA-23d	2025-09-01	*	Deep	39.31	--	7.41	
PA-24d	2025-09-01	*	Deep	39.06	--	9.96	
PA-25d	2025-09-01	*	Deep	40.44	--	11.77	
PA-26d	2025-09-01	*	Deep	40.33	--	10.01	
PA-27d	2025-09-01	*	Deep	37.10	--	9.92	
PA-30d <sup>a</sup>	--	--	Deep	--	--	--	
MWA-76q	2025-09-01	11:10:00 AM	Gravel	34.96	11.7	23.26	
MWA-77q	2025-09-01	8:11:00 AM	Gravel	34.03	21.23	12.8	

Notes:

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

<sup>a</sup> = Well abandoned in Quarter 3 2025 in preparation for IRAM #1 ISS work.

<sup>b</sup> = No water level taken due to transducers being off for well abandonment activities.

ft = feet

NAVD 88 = North American Vertical Datum 1988

Manual measurement data collected in field with tablet.

Transducer data was averaged between 8:00 AM and 11:10 PM for the groundwater elevation value.

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

				Analyte Method Unit	pH Field Measure SU	Temperature Field Measure deg C	Specific Conductivity Field Measure uS/cm	Oxidation-Reduction Potential Field Measure mV	Dissolved Oxygen Field Measure mg/L	Turbidity Field Measure NTU
Location ID	Sample Date	Aquifer Classification	Sample ID							
MWA-41	03-Sep-25	Shallow	MWA-41-090325	6.58	18.8	261.6	104.7	0.68	6.37	
MWA-63	04-Sep-25	Shallow	MWA-63-090425	6.99	20.4	824	123.7	5.68	7.16	
MWA-82	02-Sep-25	Shallow	MWA-82-090225	9.78	16.2	454.5	24.8	0.31	29.53	
PA-03	02-Sep-25	Shallow	PA-03-090225	10.28	18	726	-212.1	0.2	41.48	
PA-04	04-Sep-25	Shallow	PA-04-090425	10	20.8	720	-2.5	0.45	97.21	
PA-08	02-Sep-25	Shallow	PA-08-090225	6.78	16.9	2165	-23.9	0.51	24.38	
PA-09	02-Sep-25	Shallow	PA-09-090225	6.94	17.6	498.4	90.2	0.58	35.87	
PA-31	04-Sep-25	Shallow	PA-31-090425	9.6	21.8	769	-21	0.39	99.84	
MWA-81i	03-Sep-25	Intermediate	MWA-81i-090325	6.55	17	582	1.4	0.55	4.42	
PA-10i	04-Sep-25	Intermediate	PA-10i-090425	7.74	21	685	-116.4	0.22	9.28	
PA-15i	03-Sep-25	Intermediate	PA-15i-090325	7.38	19.8	661	-107.3	0.29	67.89	
PA-16i <sup>a</sup>	--	Intermediate	--	--	--	--	--	--	--	
PA-17iR	02-Sep-25	Intermediate	PA-17iR-090225	9.22	20.4	1278	-165.9	0.3	4.77	
PA-32i	04-Sep-25	Intermediate	PA-32i-090425	7.93	22.6	1418	-106.1	0.24	80.42	
PA-44i	03-Sep-25	Intermediate	PA-44i-090325	6.64	16.7	1390	-15.5	0.44	31.65	
MWA-31i(d)	04-Sep-25	Deep	MWA-31i(d)-090425	6.5	17.8	58468	84.3	0.66	9.45	
MWA-56d	04-Sep-25	Deep	MWA-56d-090425	6.58	17.9	35930	138.9	0.75	12.47	
MWA-58d	04-Sep-25	Deep	MWA-58d-090425	6.55	17.7	48371	115.6	0.68	7.5	
PA-18d	04-Sep-25	Deep	PA-18d-090425	8.51	24.7	1313	-65.4	0.38	98.23	
PA-22d	04-Sep-25	Deep	PA-22d-090425	7.1	17.8	15240	12.9	0.85	30.45	
PA-23d	03-Sep-25	Deep	PA-23d-090325	6.85	23.5	69656	-104.1	0.94	70.59	
PA-24d	04-Sep-25	Deep	PA-24d-090425	6.63	17.3	73642	-83.5	0.84	99.34	
PA-25d	03-Sep-25	Deep	PA-25d-090325	7.07	19.2	693	-115.6	1.01	12.05	
PA-26d	03-Sep-25	Deep	PA-26d-090325	6.9	22	649	-99.1	0.8	57.95	
PA-27d	02-Sep-25	Deep	PA-27d-090225	6.88	21.8	4351	-74.2	0.95	4.59	

**Notes:**

<sup>a</sup> Not sampled due to obstruction  
uS/cm = microSiemens per centimeter  
deg C = degrees Celsius  
mg/L = milligrams per liter  
mV = millivolts  
NTU = nephelometric turbidity units  
SU = standard units

**Table 4  
Volatile Organic Compounds Results  
Arkema Quarter 3, 2025, 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	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene	1,2-Dibromo-3-chloropropane
Unit					µg/L	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	0.076	NE	NE
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID												
MWA-41	9/3/2025	N	Shallow	MWA-41-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 0.084 UJ	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U	< 0.48 U
MWA-41	9/3/2025	FD	Shallow	DUP-01-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 0.084 UJ	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U	< 0.48 U
MWA-63	9/4/2025	N	Shallow	MWA-63-090425	< 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	< 0.57 U
MWA-82	9/2/2025	N	Shallow	MWA-82-090225	< 0.11 U	< 0.025	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035	< 0.084	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U	< 0.48 U
PA-03	9/2/2025	N	Shallow	PA-03-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.18 J+</b>	< 0.035 U	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U	< 0.48 U
PA-04	9/4/2025	N	Shallow	PA-04-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.36</b>	<b>0.33</b>	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U	< 0.48 U
PA-08	9/2/2025	N	Shallow	PA-08-090225	< 0.11 U	< 0.025	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035	< 0.084	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U	< 0.48 U
PA-09	9/2/2025	N	Shallow	PA-09-090225	< 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	< 0.48 U
PA-31	9/4/2025	N	Shallow	PA-31-090425	< 0.11 U	<b>0.20</b>	< 0.056 U	< 0.070 U	<b>0.11 j</b>	<b>0.47</b>	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U	< 0.48 U
MWA-81i	9/3/2025	N	Intermediate	MWA-81I-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 0.084 UJ	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U	< 0.48 U
PA-10i	9/4/2025	N	Intermediate	PA-10I-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	<b>0.18 j</b>	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U	< 0.48 U
PA-15i	9/3/2025	N	Intermediate	PA-15I-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.25</b>	< 0.035 U	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	<b>0.23 j</b>	< 0.48 U
PA-17iR	9/2/2025	N	Intermediate	PA-17IR-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	<b>0.12 J+</b>	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U	< 0.48 U
PA-32i	9/4/2025	N	Intermediate	PA-32I-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.18 j</b>	<b>0.044 j</b>	< 0.084 U	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U	< 0.48 U
PA-44i	9/3/2025	N	Intermediate	PA-44I-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	<b>0.34</b>	< 0.035 UJ	< 0.084 UJ	< 0.47 U	< 0.050 U	< 0.36 U	< 0.23 U	< 0.48 U
MWA-31i(d)	9/4/2025	N	Deep	MWA-31I(D)-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.57 J+</b>	< 0.28 U	< 0.29 U	< 0.43 U	< 0.41 U	< 0.33 U	< 0.61 U	< 0.57 U
MWA-56d	9/4/2025	N	Deep	MWA-56D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 2.4 U	< 0.22 U	< 0.28 U	< 2.9 U	< 0.43 U	< 0.41 U	< 0.33 U	< 0.61 U	< 0.57 U
MWA-58d	9/4/2025	N	Deep	MWA-58D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.31 J+</b>	< 0.28 U	< 0.29 U	< 0.43 U	< 0.41 U	< 0.33 U	< 0.61 U	< 0.57 U
MWA-58d	9/4/2025	FD	Deep	DUP-02-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.31 J+</b>	< 0.28 U	< 0.29 U	< 0.43 U	< 0.41 U	< 0.33 U	< 0.61 U	< 0.57 U
PA-18d	9/4/2025	N	Deep	PA-18D-090425	< 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	< 0.57 U
PA-22d	9/4/2025	N	Deep	PA-22D-090425	< 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	< 0.57 U
PA-23d	9/3/2025	N	Deep	PA-23D-090325	< 0.18 U	< 0.39 UJ	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 UJ	< 0.29 UJ	< 0.43 U	< 0.41 U	< 0.33 U	< 0.61 U	< 0.57 U
PA-24d	9/4/2025	N	Deep	PA-24D-090425	< 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	< 0.57 U
PA-25d	9/3/2025	N	Deep	PA-25D-090325	< 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	<b>0.29 j</b>	< 0.48 U
PA-26d	9/3/2025	N	Deep	PA-26D-090325	< 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	<b>0.25 j</b>	< 0.48 U
PA-27d	9/2/2025	N	Deep	PA-27D-090225	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.43 J+</b>	< 0.28 U	< 0.29 U	< 0.43 U	< 0.41 U	< 0.33 U	< 0.61 U	< 0.57 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  
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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 3, 2025, 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	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,3-Dichloropropane
Unit					µg/L	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	14	3.7	1.5	NE	10	NE
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID												
MWA-41	9/3/2025	N	Shallow	MWA-41-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U	< 0.050 U	< 0.056 U
MWA-41	9/3/2025	FD	Shallow	DUP-01-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U	< 0.050 U	< 0.056 U
MWA-63	9/4/2025	N	Shallow	MWA-63-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.46 U	< 0.42 U	< 0.18 U	< 0.55 U	< 0.48 U	< 0.35 U
MWA-82	9/2/2025	N	Shallow	MWA-82-090225	< 0.11 U	< 0.025	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035	<b>0.053 j</b>	< 0.12 U	< 0.060 U	< 0.19 U	< 0.050 U	< 0.056 U
PA-03	9/2/2025	N	Shallow	PA-03-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.18 J+</b>	< 0.035 U	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U	< 0.050 U	< 0.056 U
PA-04	9/4/2025	N	Shallow	PA-04-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.36</b>	<b>0.33</b>	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U	< 0.050 U	< 0.056 U
PA-08	9/2/2025	N	Shallow	PA-08-090225	< 0.11 U	< 0.025	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U	< 0.050 U	< 0.056 U
PA-09	9/2/2025	N	Shallow	PA-09-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U	< 0.050 U	< 0.056 U
PA-31	9/4/2025	N	Shallow	PA-31-090425	< 0.11 U	<b>0.20</b>	< 0.056 U	< 0.070 U	<b>0.11 j</b>	<b>0.47</b>	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U	< 0.050 U	< 0.056 U
MWA-81i	9/3/2025	N	Intermediate	MWA-81I-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U	< 0.050 U	< 0.056 U
PA-10i	9/4/2025	N	Intermediate	PA-10I-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	<b>0.18 j</b>	<b>0.15 j</b>	< 0.12 U	< 0.060 U	< 0.19 U	< 0.050 U	< 0.056 U
PA-15i	9/3/2025	N	Intermediate	PA-15I-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.25</b>	< 0.035 U	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U	< 0.050 U	< 0.056 U
PA-17iR	9/2/2025	N	Intermediate	PA-17IR-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	<b>0.12 J+</b>	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U	< 0.050 U	< 0.056 U
PA-32i	9/4/2025	N	Intermediate	PA-32I-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.18 j</b>	<b>0.044 j</b>	<b>0.25 j</b>	< 0.12 U	< 0.060 U	< 0.19 U	< 0.050 U	< 0.056 U
PA-44i	9/3/2025	N	Intermediate	PA-44I-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	<b>0.34</b>	< 0.035 UJ	< 0.038 U	< 0.12 U	< 0.060 U	< 0.19 U	< 0.050 U	< 0.056 U
MWA-31i(d)	9/4/2025	N	Deep	MWA-31I(D)-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.57 J+</b>	< 0.28 U	< 0.46 U	< 0.42 U	< 0.18 U	< 0.55 U	< 0.48 U	< 0.35 U
MWA-56d	9/4/2025	N	Deep	MWA-56D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 2.4 U	< 0.22 U	< 0.28 U	< 0.46 U	< 4.2 U	< 1.8 U	< 0.55 U	< 0.48 U	< 0.35 U
MWA-58d	9/4/2025	N	Deep	MWA-58D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.31 J+</b>	< 0.28 U	< 0.46 U	< 0.42 U	< 0.18 U	< 0.55 U	< 0.48 U	< 0.35 U
MWA-58d	9/4/2025	FD	Deep	DUP-02-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.31 J+</b>	< 0.28 U	< 0.46 U	< 0.42 U	< 0.18 U	< 0.55 U	< 0.48 U	< 0.35 U
PA-18d	9/4/2025	N	Deep	PA-18D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.46 U	< 0.42 U	< 0.18 U	< 0.55 U	< 0.48 U	< 0.35 U
PA-22d	9/4/2025	N	Deep	PA-22D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.46 U	< 0.42 U	< 0.18 U	< 0.55 U	< 0.48 U	< 0.35 U
PA-23d	9/3/2025	N	Deep	PA-23D-090325	< 0.18 U	< 0.39 UJ	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 UJ	< 0.46 U	< 0.42 U	< 0.18 U	< 0.55 U	< 0.48 U	< 0.35 U
PA-24d	9/4/2025	N	Deep	PA-24D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.46 U	<b>0.75 J+</b>	< 0.18 U	< 0.55 U	< 0.48 U	< 0.35 U
PA-25d	9/3/2025	N	Deep	PA-25D-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.038 U	< 0.12 U	< 0.060 U	<b>0.19 j</b>	< 0.050 U	< 0.056 U
PA-26d	9/3/2025	N	Deep	PA-26D-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.038 U	<b>0.63</b>	< 0.060 U	< 0.19 U	< 0.050 U	< 0.056 U
PA-27d	9/2/2025	N	Deep	PA-27D-090225	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.43 J+</b>	< 0.28 U	< 0.46 U	< 0.42 U	< 0.18 U	< 0.55 U	< 0.48 U	< 0.35 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.  
 UJ = Analyte was analyzed for, but not detected. The detection limit is a quantitative estimate.

**Table 4  
Volatile Organic Compounds Results  
Arkema Quarter 3, 2025, 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	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone (Methyl ethyl ketone)	4-Chlorotoluene	4-Isopropyltoluene	4-Methyl-2-pentanone
Unit					µg/L	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	15	NE	14000	NE	NE	NE
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID												
MWA-41	9/3/2025	N	Shallow	MWA-41-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 0.050 U	< 0.060 U	< 2.5 U	< 0.12 U	< 0.25 U	< 2.7 U
MWA-41	9/3/2025	FD	Shallow	DUP-01-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 0.050 U	< 0.060 U	< 2.5 U	< 0.12 U	< 0.25 U	< 2.7 U
MWA-63	9/4/2025	N	Shallow	MWA-63-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.46 U	< 0.32 U	< 4.7 U	< 0.38 U	< 0.28 U	< 2.5 U
MWA-82	9/2/2025	N	Shallow	MWA-82-090225	< 0.11 U	< 0.025	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035	< 0.050 U	< 0.060 U	< 2.5 U	< 0.12 U	< 0.25 U	< 2.7 U
PA-03	9/2/2025	N	Shallow	PA-03-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.18 J+</b>	< 0.035 U	< 0.050 U	< 0.060 U	< 2.5 U	< 0.12 U	< 0.25 U	< 2.7 U
PA-04	9/4/2025	N	Shallow	PA-04-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.36</b>	<b>0.33</b>	< 0.050 U	< 0.060 U	< 2.5 U	< 0.12 U	< 0.25 U	< 2.7 U
PA-08	9/2/2025	N	Shallow	PA-08-090225	< 0.11 U	< 0.025	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035	< 0.050 U	< 0.060 U	< 2.5 U	< 0.12 U	< 0.25 U	< 2.7 U
PA-09	9/2/2025	N	Shallow	PA-09-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.050 U	< 0.060 U	< 2.5 U	< 0.12 U	< 0.25 U	< 2.7 U
PA-31	9/4/2025	N	Shallow	PA-31-090425	< 0.11 U	<b>0.20</b>	< 0.056 U	< 0.070 U	<b>0.11 j</b>	<b>0.47</b>	< 0.050 U	< 0.060 U	< 2.5 U	< 0.12 U	< 0.25 U	< 2.7 U
MWA-81i	9/3/2025	N	Intermediate	MWA-81I-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 0.050 U	< 0.060 U	< 2.5 U	< 0.12 U	< 0.25 U	< 2.7 U
PA-10i	9/4/2025	N	Intermediate	PA-10I-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	<b>0.18 j</b>	< 0.050 U	< 0.060 U	< 2.5 U	< 0.12 U	< 0.25 U	< 2.7 U
PA-15i	9/3/2025	N	Intermediate	PA-15I-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.25</b>	< 0.035 U	< 0.050 U	< 0.060 U	< 2.5 U	< 0.12 U	< 0.25 U	< 2.7 U
PA-17iR	9/2/2025	N	Intermediate	PA-17IR-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	<b>0.12 J+</b>	< 0.050 U	< 0.060 U	< 2.5 U	< 0.12 U	< 0.25 U	< 2.7 U
PA-32i	9/4/2025	N	Intermediate	PA-32I-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.18 j</b>	<b>0.044 j</b>	< 0.050 U	< 0.060 U	< 2.5 U	< 0.12 U	< 0.25 U	< 2.7 U
PA-44i	9/3/2025	N	Intermediate	PA-44I-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	<b>0.34</b>	< 0.035 UJ	< 0.050 U	< 0.060 U	< 2.5 U	< 0.12 U	< 0.25 U	< 2.7 U
MWA-31i(d)	9/4/2025	N	Deep	MWA-31I(D)-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.57 J+</b>	< 0.28 U	< 0.46 U	< 0.32 U	< 4.7 U	< 0.38 U	< 0.28 U	< 2.5 U
MWA-56d	9/4/2025	N	Deep	MWA-56D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 2.4 U	< 0.22 U	< 0.28 U	< 0.46 U	< 0.32 U	< 4.7 U	< 0.38 U	< 0.28 U	< 2.5 U
MWA-58d	9/4/2025	N	Deep	MWA-58D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.31 J+</b>	< 0.28 U	< 0.46 U	< 0.32 U	< 4.7 U	< 0.38 U	< 0.28 U	< 2.5 U
MWA-58d	9/4/2025	FD	Deep	DUP-02-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.31 J+</b>	< 0.28 U	< 0.46 U	< 0.32 U	< 4.7 U	< 0.38 U	< 0.28 U	< 2.5 U
PA-18d	9/4/2025	N	Deep	PA-18D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.46 U	< 0.32 U	< 4.7 U	< 0.38 U	< 0.28 U	< 2.5 U
PA-22d	9/4/2025	N	Deep	PA-22D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.46 U	< 0.32 U	< 4.7 U	< 0.38 U	< 0.28 U	< 2.5 U
PA-23d	9/3/2025	N	Deep	PA-23D-090325	< 0.18 U	< 0.39 UJ	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 UJ	< 0.46 U	< 0.32 U	< 4.7 U	< 0.38 U	< 0.28 U	< 2.5 U
PA-24d	9/4/2025	N	Deep	PA-24D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.46 U	< 0.32 U	< 4.7 U	< 0.38 U	< 0.28 U	< 2.5 U
PA-25d	9/3/2025	N	Deep	PA-25D-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.050 U	< 0.060 U	< 2.5 U	< 0.12 U	< 0.25 U	< 2.7 U
PA-26d	9/3/2025	N	Deep	PA-26D-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.050 U	< 0.060 U	< 2.5 U	< 0.12 U	< 0.25 U	< 2.7 U
PA-27d	9/2/2025	N	Deep	PA-27D-090225	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.43 J+</b>	< 0.28 U	< 0.46 U	< 0.32 U	< 4.7 U	< 0.38 U	< 0.28 U	< 2.5 U

Notes:  
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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 3, 2025, 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	Acetone	Benzene	Bromobenzene	Bromodichloromethane	Bromoform	Bromomethane
Unit					µg/L	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	1500	1.4	NE	1.7	14	150
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID												
MWA-41	9/3/2025	N	Shallow	MWA-41-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 3.1 U	< 0.030 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U
MWA-41	9/3/2025	FD	Shallow	DUP-01-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 3.1 U	< 0.030 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U
MWA-63	9/4/2025	N	Shallow	MWA-63-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 15 U	< 0.24 U	< 0.43 U	< 0.29 U	< 0.51 U	< 0.21 U
MWA-82	9/2/2025	N	Shallow	MWA-82-090225	< 0.11 U	< 0.025	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035	< 3.1 U	< 0.030 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U
PA-03	9/2/2025	N	Shallow	PA-03-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.18 J+</b>	< 0.035 U	< 3.1 U	<b>0.061 J+</b>	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U
PA-04	9/4/2025	N	Shallow	PA-04-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.36</b>	<b>0.33</b>	< 3.1 U	< 0.030 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U
PA-08	9/2/2025	N	Shallow	PA-08-090225	< 0.11 U	< 0.025	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035	< 3.1 U	< 0.030 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U
PA-09	9/2/2025	N	Shallow	PA-09-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 3.1 U	< 0.030 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U
PA-31	9/4/2025	N	Shallow	PA-31-090425	< 0.11 U	<b>0.20</b>	< 0.056 U	< 0.070 U	<b>0.11 j</b>	<b>0.47</b>	< 3.1 U	< 0.030 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U
MWA-81i	9/3/2025	N	Intermediate	MWA-81I-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 3.1 U	< 0.030 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U
PA-10i	9/4/2025	N	Intermediate	PA-10I-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	<b>0.18 j</b>	< 3.1 U	< 0.030 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U
PA-15i	9/3/2025	N	Intermediate	PA-15I-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.25</b>	< 0.035 U	< 3.1 U	< 0.030 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U
PA-17iR	9/2/2025	N	Intermediate	PA-17IR-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	<b>0.12 J+</b>	< 3.1 U	<b>0.097 J+</b>	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U
PA-32i	9/4/2025	N	Intermediate	PA-32I-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.18 j</b>	<b>0.044 j</b>	< 10 U	<b>0.077 j</b>	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U
PA-44i	9/3/2025	N	Intermediate	PA-44I-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	<b>0.34</b>	< 0.035 UJ	< 3.1 U	< 0.030 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U
MWA-31i(d)	9/4/2025	N	Deep	MWA-31I(D)-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.57 J+</b>	< 0.28 U	< 15 U	< 0.24 U	< 0.43 U	< 0.29 U	< 0.51 U	< 0.21 U
MWA-56d	9/4/2025	N	Deep	MWA-56D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 2.4 U	< 0.22 U	< 0.28 U	< 15 U	< 2.4 U	< 0.43 U	< 2.9 U	< 0.51 U	< 0.21 U
MWA-58d	9/4/2025	N	Deep	MWA-58D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.31 J+</b>	< 0.28 U	< 3.2 U	< 0.24 U	< 0.43 U	<b>0.86 J+</b>	< 0.51 U	< 0.21 U
MWA-58d	9/4/2025	FD	Deep	DUP-02-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.31 J+</b>	< 0.28 U	< 3.2 U	< 0.24 U	< 0.43 U	<b>0.88 j</b>	< 0.51 U	< 0.21 U
PA-18d	9/4/2025	N	Deep	PA-18D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 3.2 U	< 0.24 U	< 0.43 U	< 0.29 U	< 0.51 U	< 0.21 U
PA-22d	9/4/2025	N	Deep	PA-22D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 3.2 U	< 0.24 U	< 0.43 U	< 0.29 U	< 0.51 U	< 0.21 U
PA-23d	9/3/2025	N	Deep	PA-23D-090325	< 0.18 U	< 0.39 UJ	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 UJ	< 3.2 U	< 0.24 U	< 0.43 U	< 0.29 U	< 0.51 U	< 0.21 U
PA-24d	9/4/2025	N	Deep	PA-24D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 15 U	< 0.24 U	< 0.43 U	< 0.29 U	< 0.51 U	< 0.21 U
PA-25d	9/3/2025	N	Deep	PA-25D-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 3.1 U	< 0.030 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U
PA-26d	9/3/2025	N	Deep	PA-26D-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 3.1 U	< 0.030 U	< 0.038 U	< 0.060 U	< 0.16 U	< 0.13 U
PA-27d	9/2/2025	N	Deep	PA-27D-090225	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.43 J+</b>	< 0.28 U	< 3.2 U	< 0.24 U	< 0.43 U	< 0.29 U	< 0.51 U	< 0.21 U

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

Qualifiers - Organic:  
 j = The analyte was positively identified below the RDL; associated numerical value is the approximate concentration of the analyte in the sample.  
 J- = The concentration of the sample is considered to be biased low, as the associated QC results are outside the lower control limits.  
 J+ = The concentration of the sample is considered to be biased high, as the associated QC results exceed the upper control limits.  
 U = Analyte was analyzed for, but not detected above, the limit displayed.  
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**Table 4  
Volatile Organic Compounds Results  
Arkema Quarter 3, 2025, 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	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Chlorobromomethane	Chloroethane	Chloroform
Unit					µg/L	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	0.92	0.16	64	NE	NE	28
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID												
MWA-41	9/3/2025	N	Shallow	MWA-41-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 0.20 UJ	< 0.025 UJ	< 0.060 U	< 0.050 U	< 0.24 U	< 0.030 U
MWA-41	9/3/2025	FD	Shallow	DUP-01-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 0.20 UJ	< 0.025 UJ	< 0.060 U	< 0.050 U	< 0.24 U	< 0.030 U
MWA-63	9/4/2025	N	Shallow	MWA-63-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.53 U	< 0.30 U	< 0.44 U	< 0.29 U	< 0.35 U	<b>110</b>
MWA-82	9/2/2025	N	Shallow	MWA-82-090225	< 0.11 U	< 0.025	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035	< 0.20	< 0.025	< 0.060 U	< 0.050 U	< 0.24 U	<b>1.3</b>
PA-03	9/2/2025	N	Shallow	PA-03-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.18 J+</b>	< 0.035 U	< 0.20 U	< 0.025 U	< 0.060 U	< 0.050 U	< 0.24 U	< 0.030 U
PA-04	9/4/2025	N	Shallow	PA-04-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.36</b>	<b>0.33</b>	< 0.20 U	< 0.025 U	< 0.060 U	< 0.050 U	< 0.24 U	<b>0.13 j</b>
PA-08	9/2/2025	N	Shallow	PA-08-090225	< 0.11 U	< 0.025	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035	< 0.20	< 0.025	< 0.060 U	< 0.050 U	< 0.24 U	<b>0.24</b>
PA-09	9/2/2025	N	Shallow	PA-09-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.20 U	< 0.025 U	< 0.060 U	< 0.050 U	< 0.24 U	<b>0.10 J+</b>
PA-31	9/4/2025	N	Shallow	PA-31-090425	< 0.11 U	<b>0.20</b>	< 0.056 U	< 0.070 U	<b>0.11 j</b>	<b>0.47</b>	< 0.20 U	< 0.025 U	< 0.060 U	< 0.050 U	< 0.24 U	<b>0.047 j</b>
MWA-81i	9/3/2025	N	Intermediate	MWA-81I-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 0.20 UJ	< 0.025 UJ	< 0.060 U	< 0.050 U	< 0.24 U	< 0.030 U
PA-10i	9/4/2025	N	Intermediate	PA-10I-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	<b>0.18 j</b>	< 0.20 U	< 0.025 U	< 0.060 U	< 0.050 U	< 0.24 U	< 0.030 U
PA-15i	9/3/2025	N	Intermediate	PA-15I-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.25</b>	< 0.035 U	< 0.20 U	< 0.025 U	< 0.060 U	< 0.050 U	< 0.24 U	< 0.030 U
PA-17iR	9/2/2025	N	Intermediate	PA-17IR-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	<b>0.12 J+</b>	<b>0.21 J+</b>	< 0.025 U	< 0.060 U	< 0.050 U	< 0.24 U	< 0.030 U
PA-32i	9/4/2025	N	Intermediate	PA-32I-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.18 j</b>	<b>0.044 j</b>	< 0.20 U	< 0.025 U	<b>0.19 j</b>	< 0.050 U	<b>0.30 j</b>	< 0.030 U
PA-44i	9/3/2025	N	Intermediate	PA-44I-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	<b>0.34</b>	< 0.035 UJ	< 0.20 UJ	< 0.025 UJ	< 0.060 U	< 0.050 U	< 0.24 U	< 0.030 U
MWA-31i(d)	9/4/2025	N	Deep	MWA-31I(D)-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.57 J+</b>	< 0.28 U	< 0.53 U	< 0.30 U	< 0.44 U	< 0.29 U	< 0.35 U	<b>89 J+</b>
MWA-56d	9/4/2025	N	Deep	MWA-56D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 2.4 U	< 0.22 U	< 0.28 U	< 0.53 U	< 3.0 U	< 0.44 U	< 0.29 U	< 0.35 U	<b>150</b>
MWA-58d	9/4/2025	N	Deep	MWA-58D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.31 J+</b>	< 0.28 U	< 0.53 U	< 0.30 U	< 0.44 U	< 0.29 U	< 0.35 U	<b>180</b>
MWA-58d	9/4/2025	FD	Deep	DUP-02-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.31 J+</b>	< 0.28 U	< 0.53 U	< 0.30 U	< 0.44 U	< 0.29 U	< 0.35 U	<b>180</b>
PA-18d	9/4/2025	N	Deep	PA-18D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.53 U	< 0.30 U	< 0.44 U	< 0.29 U	< 0.35 U	< 0.26 U
PA-22d	9/4/2025	N	Deep	PA-22D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.53 U	< 0.30 U	< 0.44 U	< 0.29 U	< 0.35 U	<b>21</b>
PA-23d	9/3/2025	N	Deep	PA-23D-090325	< 0.18 U	< 0.39 UJ	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 UJ	< 0.53 UJ	< 0.30 UJ	< 0.44 U	< 0.29 U	< 0.35 U	<b>0.37 J+</b>
PA-24d	9/4/2025	N	Deep	PA-24D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.53 U	< 0.30 U	< 0.44 U	< 0.29 U	< 0.35 U	< 0.26 U
PA-25d	9/3/2025	N	Deep	PA-25D-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.20 U	< 0.025 U	< 0.060 U	< 0.050 U	< 0.24 U	< 0.030 U
PA-26d	9/3/2025	N	Deep	PA-26D-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.20 U	< 0.025 U	< 0.060 U	< 0.050 U	< 0.24 U	< 0.030 U
PA-27d	9/2/2025	N	Deep	PA-27D-090225	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.43 J+</b>	< 0.28 U	< 0.53 U	< 0.30 U	< 0.44 U	< 0.29 U	< 0.35 U	< 0.26 U

Notes:  
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Unit					µg/L	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	590	NE	1.3	NE	NE
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID												
MWA-41	9/3/2025	N	Shallow	MWA-41-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 0.14 U	< 0.055 U	< 0.090 U	< 0.055 U	< 0.062 U	< 0.13 U
MWA-41	9/3/2025	FD	Shallow	DUP-01-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 0.14 U	< 0.055 U	< 0.090 U	< 0.055 U	< 0.062 U	< 0.13 U
MWA-63	9/4/2025	N	Shallow	MWA-63-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.28 U	<b>4.2</b>	< 0.42 U	< 0.43 U	< 0.34 U	< 0.53 U
MWA-82	9/2/2025	N	Shallow	MWA-82-090225	< 0.11 U	< 0.025	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035	< 0.14 U	< 0.055 U	< 0.090 U	< 0.055 U	< 0.062 U	< 0.13 U
PA-03	9/2/2025	N	Shallow	PA-03-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.18 J+</b>	< 0.035 U	< 0.14 U	< 0.055 U	< 0.090 U	< 0.055 U	< 0.062 U	< 0.13 U
PA-04	9/4/2025	N	Shallow	PA-04-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.36</b>	<b>0.33</b>	< 0.14 U	< 0.055 U	< 0.090 U	< 0.055 U	< 0.062 U	< 0.13 U
PA-08	9/2/2025	N	Shallow	PA-08-090225	< 0.11 U	< 0.025	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035	< 0.14 U	< 0.055 U	< 0.090 U	< 0.055 U	< 0.062 U	< 0.13 U
PA-09	9/2/2025	N	Shallow	PA-09-090225	< 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	< 0.13 U
PA-31	9/4/2025	N	Shallow	PA-31-090425	< 0.11 U	<b>0.20</b>	< 0.056 U	< 0.070 U	<b>0.11 j</b>	<b>0.47</b>	< 0.14 U	< 0.055 U	< 0.090 U	< 0.055 U	< 0.062 U	< 0.13 U
MWA-81i	9/3/2025	N	Intermediate	MWA-81I-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 0.14 U	< 0.055 U	< 0.090 U	< 0.055 U	< 0.062 U	< 0.13 U
PA-10i	9/4/2025	N	Intermediate	PA-10I-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	<b>0.18 j</b>	< 0.14 U	< 0.055 U	< 0.090 U	< 0.055 U	< 0.062 U	< 0.13 U
PA-15i	9/3/2025	N	Intermediate	PA-15I-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.25</b>	< 0.035 U	< 0.14 U	<b>0.068 j</b>	< 0.090 U	< 0.055 U	< 0.062 U	< 0.13 U
PA-17iR	9/2/2025	N	Intermediate	PA-17IR-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	<b>0.12 J+</b>	< 0.14 U	<b>0.078 J+</b>	< 0.090 U	< 0.055 U	< 0.062 U	< 0.13 U
PA-32i	9/4/2025	N	Intermediate	PA-32I-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.18 j</b>	<b>0.044 j</b>	< 0.14 U	< 0.055 U	< 0.090 U	< 0.055 U	< 0.062 U	< 0.13 U
PA-44i	9/3/2025	N	Intermediate	PA-44I-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	<b>0.34</b>	< 0.035 UJ	< 0.14 U	< 0.055 U	< 0.090 U	< 0.055 U	< 0.062 U	< 0.13 U
MWA-31i(d)	9/4/2025	N	Deep	MWA-31I(D)-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.57 J+</b>	< 0.28 U	< 0.28 U	< 0.35 U	< 0.42 U	< 0.43 U	< 0.34 U	< 0.53 U
MWA-56d	9/4/2025	N	Deep	MWA-56D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 2.4 U	< 0.22 U	< 0.28 U	< 0.28 U	< 0.35 U	< 4.2 U	< 0.43 U	< 3.4 U	< 0.53 U
MWA-58d	9/4/2025	N	Deep	MWA-58D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.31 J+</b>	< 0.28 U	< 0.28 U	< 0.35 U	< 0.42 U	< 0.43 U	< 0.34 U	< 0.53 U
MWA-58d	9/4/2025	FD	Deep	DUP-02-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.31 J+</b>	< 0.28 U	< 0.28 U	< 0.35 U	< 0.42 U	< 0.43 U	< 0.34 U	< 0.53 U
PA-18d	9/4/2025	N	Deep	PA-18D-090425	< 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	< 0.53 U
PA-22d	9/4/2025	N	Deep	PA-22D-090425	< 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	< 0.53 U
PA-23d	9/3/2025	N	Deep	PA-23D-090325	< 0.18 U	< 0.39 UJ	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 UJ	< 0.28 U	< 0.35 U	< 0.42 U	< 0.43 U	< 0.34 U	< 0.53 U
PA-24d	9/4/2025	N	Deep	PA-24D-090425	< 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	< 0.53 U
PA-25d	9/3/2025	N	Deep	PA-25D-090325	< 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	< 0.13 U
PA-26d	9/3/2025	N	Deep	PA-26D-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	<b>0.20 j</b>	< 0.055 U	< 0.090 U	< 0.055 U	< 0.062 U	< 0.13 U
PA-27d	9/2/2025	N	Deep	PA-27D-090225	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.43 J+</b>	< 0.28 U	< 0.28 U	<b>0.86 J+</b>	< 0.42 U	< 0.43 U	< 0.34 U	< 0.53 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 3, 2025, 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	Ethylbenzene	Ethylene dibromide	Hexachlorobutadiene	Isopropylbenzene (Cumene)	m,p-Xylenes	Methyl tert-butyl ether
Unit					µg/L	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	7.3	NE	0.01	NE	1.8	NE
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID												
MWA-41	9/3/2025	N	Shallow	MWA-41-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 0.082 U	< 0.067 U	< 0.16 UJ	< 0.27 UJ	< 0.12 U	< 0.070 U
MWA-41	9/3/2025	FD	Shallow	DUP-01-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 0.082 U	< 0.067 U	< 0.16 UJ	< 0.27 UJ	< 0.12 U	< 0.070 U
MWA-63	9/4/2025	N	Shallow	MWA-63-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.50 U	< 0.40 U	< 0.79 U	< 0.44 U	< 0.53 U	< 0.44 U
MWA-82	9/2/2025	N	Shallow	MWA-82-090225	< 0.11 U	< 0.025	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035	< 0.082 U	< 0.067 U	< 0.16	< 0.27	< 0.12 U	< 0.070 U
PA-03	9/2/2025	N	Shallow	PA-03-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.18 J+</b>	< 0.035 U	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U	< 0.12 U	< 0.070 U
PA-04	9/4/2025	N	Shallow	PA-04-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.36</b>	<b>0.33</b>	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U	< 0.12 U	< 0.070 U
PA-08	9/2/2025	N	Shallow	PA-08-090225	< 0.11 U	< 0.025	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035	< 0.082 U	< 0.067 U	< 0.16	< 0.27	< 0.12 U	< 0.070 U
PA-09	9/2/2025	N	Shallow	PA-09-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U	< 0.12 U	< 0.070 U
PA-31	9/4/2025	N	Shallow	PA-31-090425	< 0.11 U	<b>0.20</b>	< 0.056 U	< 0.070 U	<b>0.11 j</b>	<b>0.47</b>	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U	< 0.12 U	< 0.070 U
MWA-81i	9/3/2025	N	Intermediate	MWA-81I-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 0.082 U	< 0.067 U	< 0.16 UJ	< 0.27 UJ	< 0.12 U	< 0.070 U
PA-10i	9/4/2025	N	Intermediate	PA-10I-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	<b>0.18 j</b>	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U	< 0.12 U	< 0.070 U
PA-15i	9/3/2025	N	Intermediate	PA-15I-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.25</b>	< 0.035 U	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U	< 0.12 U	< 0.070 U
PA-17iR	9/2/2025	N	Intermediate	PA-17IR-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	<b>0.12 J+</b>	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U	< 0.12 U	< 0.070 U
PA-32i	9/4/2025	N	Intermediate	PA-32I-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.18 j</b>	<b>0.044 j</b>	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U	< 0.12 U	< 0.070 U
PA-44i	9/3/2025	N	Intermediate	PA-44I-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	<b>0.34</b>	< 0.035 UJ	< 0.082 U	< 0.067 U	< 0.16 UJ	< 0.27 UJ	< 0.12 U	< 0.070 U
MWA-31i(d)	9/4/2025	N	Deep	MWA-31I(D)-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.57 J+</b>	< 0.28 U	< 0.50 U	< 0.40 U	< 0.79 U	< 0.44 U	< 0.53 U	< 0.44 U
MWA-56d	9/4/2025	N	Deep	MWA-56D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 2.4 U	< 0.22 U	< 0.28 U	< 0.50 U	< 0.40 U	< 0.79 U	< 0.44 U	< 0.53 U	< 0.44 U
MWA-58d	9/4/2025	N	Deep	MWA-58D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.31 J+</b>	< 0.28 U	< 0.50 U	< 0.40 U	< 0.79 U	< 0.44 U	< 0.53 U	< 0.44 U
MWA-58d	9/4/2025	FD	Deep	DUP-02-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.31 J+</b>	< 0.28 U	< 0.50 U	< 0.40 U	< 0.79 U	< 0.44 U	< 0.53 U	< 0.44 U
PA-18d	9/4/2025	N	Deep	PA-18D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.50 U	< 0.40 U	< 0.79 U	< 0.44 U	< 0.53 U	< 0.44 U
PA-22d	9/4/2025	N	Deep	PA-22D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.50 U	< 0.40 U	< 0.79 U	< 0.44 U	< 0.53 U	< 0.44 U
PA-23d	9/3/2025	N	Deep	PA-23D-090325	< 0.18 U	< 0.39 UJ	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 UJ	< 0.50 U	< 0.40 U	< 0.79 UJ	< 0.44 UJ	< 0.53 U	< 0.44 U
PA-24d	9/4/2025	N	Deep	PA-24D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.50 U	< 0.40 U	< 0.79 U	< 0.44 U	< 0.53 U	< 0.44 U
PA-25d	9/3/2025	N	Deep	PA-25D-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U	< 0.12 U	< 0.070 U
PA-26d	9/3/2025	N	Deep	PA-26D-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.082 U	< 0.067 U	< 0.16 U	< 0.27 U	< 0.12 U	<b>0.18 J+</b>
PA-27d	9/2/2025	N	Deep	PA-27D-090225	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.43 J+</b>	< 0.28 U	< 0.50 U	< 0.40 U	< 0.79 U	< 0.44 U	< 0.53 U	< 0.44 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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 NE = Not Established  
 SW8260C analyses performed by TestAmerica - Seattle, WA of Seattle.

Qualifiers - Organic:  
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 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 3, 2025, 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	Methylene chloride	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Chlorotoluene (2-chlorotoluene)	o-Xylene
Unit					µg/L	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	59	12	NE	NE	NE	13
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID												
MWA-41	9/3/2025	N	Shallow	MWA-41-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 1.2 U	< 0.52 U	< 0.35 U	< 0.091 U	< 0.12 U	< 0.23 U
MWA-41	9/3/2025	FD	Shallow	DUP-01-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 1.2 U	< 0.52 U	< 0.35 U	< 0.091 U	< 0.12 U	< 0.23 U
MWA-63	9/4/2025	N	Shallow	MWA-63-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 1.4 U	< 0.93 U	< 0.44 U	< 0.50 U	< 0.51 U	< 0.39 U
MWA-82	9/2/2025	N	Shallow	MWA-82-090225	< 0.11 U	< 0.025	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035	< 1.2 U	< 0.52 U	< 0.35 U	< 0.091 U	< 0.12 U	< 0.23 U
PA-03	9/2/2025	N	Shallow	PA-03-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.18 J+</b>	< 0.035 U	< 1.2 U	< 0.52 U	< 0.35 U	< 0.091 U	< 0.12 U	< 0.23 U
PA-04	9/4/2025	N	Shallow	PA-04-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.36</b>	<b>0.33</b>	< 1.2 U	< 0.52 U	< 0.35 U	< 0.091 U	< 0.12 U	< 0.23 U
PA-08	9/2/2025	N	Shallow	PA-08-090225	< 0.11 U	< 0.025	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035	< 1.2 U	< 0.52 U	< 0.35 U	< 0.091 U	< 0.12 U	< 0.23 U
PA-09	9/2/2025	N	Shallow	PA-09-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 1.2 U	< 0.52 U	< 0.35 U	< 0.091 U	< 0.12 U	< 0.23 U
PA-31	9/4/2025	N	Shallow	PA-31-090425	< 0.11 U	<b>0.20</b>	< 0.056 U	< 0.070 U	<b>0.11 j</b>	<b>0.47</b>	< 1.2 U	< 0.52 U	< 0.35 U	< 0.091 U	< 0.12 U	< 0.23 U
MWA-81i	9/3/2025	N	Intermediate	MWA-81I-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 1.2 U	< 0.52 U	< 0.35 U	< 0.091 U	< 0.12 U	< 0.23 U
PA-10i	9/4/2025	N	Intermediate	PA-10I-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	<b>0.18 j</b>	< 1.2 U	< 0.52 U	< 0.35 U	< 0.091 U	< 0.12 U	< 0.23 U
PA-15i	9/3/2025	N	Intermediate	PA-15I-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.25</b>	< 0.035 U	< 1.2 U	< 0.52 U	< 0.35 U	< 0.091 U	< 0.12 U	< 0.23 U
PA-17iR	9/2/2025	N	Intermediate	PA-17IR-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	<b>0.12 J+</b>	< 1.2 U	< 0.52 U	< 0.35 U	< 0.091 U	< 0.12 U	< 0.23 U
PA-32i	9/4/2025	N	Intermediate	PA-32I-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.18 j</b>	<b>0.044 j</b>	< 1.2 U	< 0.52 U	< 0.35 U	< 0.091 U	< 0.12 U	< 0.23 U
PA-44i	9/3/2025	N	Intermediate	PA-44I-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	<b>0.34</b>	< 0.035 UJ	< 1.2 U	< 0.52 U	< 0.35 U	< 0.091 U	< 0.12 U	< 0.23 U
MWA-31i(d)	9/4/2025	N	Deep	MWA-31I(D)-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.57 J+</b>	< 0.28 U	< 1.4 U	< 0.93 U	< 0.44 U	< 0.50 U	< 0.51 U	< 0.39 U
MWA-56d	9/4/2025	N	Deep	MWA-56D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 2.4 U	< 0.22 U	< 0.28 U	< 1.4 U	< 0.93 U	< 0.44 U	< 0.50 U	< 0.51 U	< 0.39 U
MWA-58d	9/4/2025	N	Deep	MWA-58D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.31 J+</b>	< 0.28 U	< 1.4 U	< 0.93 U	< 0.44 U	< 0.50 U	< 0.51 U	< 0.39 U
MWA-58d	9/4/2025	FD	Deep	DUP-02-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.31 J+</b>	< 0.28 U	< 1.4 U	< 0.93 U	< 0.44 U	< 0.50 U	< 0.51 U	< 0.39 U
PA-18d	9/4/2025	N	Deep	PA-18D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 1.4 U	< 0.93 U	< 0.44 U	< 0.50 U	< 0.51 U	< 0.39 U
PA-22d	9/4/2025	N	Deep	PA-22D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 1.4 U	< 0.93 U	< 0.44 U	< 0.50 U	< 0.51 U	< 0.39 U
PA-23d	9/3/2025	N	Deep	PA-23D-090325	< 0.18 U	< 0.39 UJ	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 UJ	< 1.4 U	< 0.93 U	< 0.44 U	< 0.50 U	< 0.51 U	< 0.39 U
PA-24d	9/4/2025	N	Deep	PA-24D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 1.4 U	< 0.93 U	< 0.44 U	< 0.50 U	< 0.51 U	< 0.39 U
PA-25d	9/3/2025	N	Deep	PA-25D-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 1.2 U	< 0.52 U	< 0.35 U	< 0.091 U	< 0.12 U	< 0.23 U
PA-26d	9/3/2025	N	Deep	PA-26D-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 1.2 U	< 0.52 U	< 0.35 U	< 0.091 U	< 0.12 U	< 0.23 U
PA-27d	9/2/2025	N	Deep	PA-27D-090225	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.43 J+</b>	< 0.28 U	< 1.4 U	< 0.93 U	< 0.44 U	< 0.50 U	< 0.51 U	< 0.39 U

Notes:  
 Bolded values indicate concentrations above the Method Detection Limit.  
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 N = Normal Environmental Sample  
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 SW8260C analyses performed by TestAmerica - Seattle, WA of Seattle.

Qualifiers - Organic:  
 j = The analyte was positively identified below the RDL; associated numerical value is the approximate concentration of the analyte in the sample.  
 J- = The concentration of the sample is considered to be biased low, as the associated QC results are outside the lower control limits.  
 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 3, 2025, 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	sec-Butylbenzene	Styrene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene
Unit					µg/L	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	0.33	9.8	1000
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID												
MWA-41	9/3/2025	N	Shallow	MWA-41-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 0.17 U	< 0.33 U	< 0.26 U	< 0.084 UJ	< 0.050 U	< 0.033 U
MWA-41	9/3/2025	FD	Shallow	DUP-01-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 0.17 U	< 0.33 U	< 0.26 U	< 0.084 UJ	< 0.050 U	< 0.033 U
MWA-63	9/4/2025	N	Shallow	MWA-63-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.49 U	< 0.53 U	< 0.58 U	13	< 0.39 U	< 0.39 U
MWA-82	9/2/2025	N	Shallow	MWA-82-090225	< 0.11 U	< 0.025	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035	< 0.17 U	< 0.33 U	< 0.26 U	0.31 j	< 0.050 U	< 0.033 U
PA-03	9/2/2025	N	Shallow	PA-03-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 J+	< 0.035 U	< 0.17 U	< 0.33 U	< 0.26 U	< 0.084 U	0.15 j	< 0.033 U
PA-04	9/4/2025	N	Shallow	PA-04-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.36	0.33	< 0.17 U	< 0.33 U	< 0.26 U	0.14 j	< 0.050 U	< 0.033 U
PA-08	9/2/2025	N	Shallow	PA-08-090225	< 0.11 U	< 0.025	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035	< 0.17 U	< 0.33 U	< 0.26 U	0.13 j	< 0.050 U	< 0.033 U
PA-09	9/2/2025	N	Shallow	PA-09-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.17 U	< 0.33 U	< 0.26 U	0.19 j	< 0.050 U	< 0.033 U
PA-31	9/4/2025	N	Shallow	PA-31-090425	< 0.11 U	0.20	< 0.056 U	< 0.070 U	0.11 j	0.47	< 0.17 U	< 0.33 U	< 0.26 U	0.18 j	< 0.050 U	< 0.033 U
MWA-81i	9/3/2025	N	Intermediate	MWA-81I-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 0.17 U	< 0.33 U	< 0.26 U	< 0.084 UJ	< 0.050 U	< 0.033 U
PA-10i	9/4/2025	N	Intermediate	PA-10I-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	0.18 j	< 0.17 U	< 0.33 U	< 0.26 U	< 0.084 U	< 0.050 U	< 0.033 U
PA-15i	9/3/2025	N	Intermediate	PA-15I-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.25	< 0.035 U	< 0.17 U	< 0.33 U	< 0.26 U	< 0.084 U	< 0.050 U	< 0.033 U
PA-17iR	9/2/2025	N	Intermediate	PA-17IR-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	0.12 J+	< 0.17 U	< 0.33 U	< 0.26 U	< 0.084 U	< 0.050 U	< 0.033 U
PA-32i	9/4/2025	N	Intermediate	PA-32I-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	0.18 j	0.044 j	< 0.17 U	< 0.33 U	< 0.26 U	< 0.084 U	0.074 j	< 0.033 U
PA-44i	9/3/2025	N	Intermediate	PA-44I-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	0.34	< 0.035 UJ	< 0.17 U	< 0.33 U	< 0.26 U	< 0.084 UJ	< 0.050 U	< 0.033 U
MWA-31i(d)	9/4/2025	N	Deep	MWA-31I(D)-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.57 J+	< 0.28 U	< 0.49 U	< 0.53 U	< 0.58 U	0.47 j	< 0.39 U	< 0.39 U
MWA-56d	9/4/2025	N	Deep	MWA-56D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 2.4 U	< 0.22 U	< 0.28 U	< 0.49 U	< 0.53 UJ	< 0.58 U	< 0.41 U	< 3.9 U	< 0.39 U
MWA-58d	9/4/2025	N	Deep	MWA-58D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.31 J+	< 0.28 U	< 0.49 U	< 0.53 U	< 0.58 U	< 0.41 U	< 0.39 U	< 0.39 U
MWA-58d	9/4/2025	FD	Deep	DUP-02-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.31 J+	< 0.28 U	< 0.49 U	< 0.53 U	< 0.58 U	< 0.41 U	< 0.39 U	< 0.39 U
PA-18d	9/4/2025	N	Deep	PA-18D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.49 U	< 0.53 U	< 0.58 U	< 0.41 U	< 0.39 U	< 0.39 U
PA-22d	9/4/2025	N	Deep	PA-22D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.49 U	< 0.53 U	< 0.58 U	< 0.41 U	< 0.39 U	< 0.39 U
PA-23d	9/3/2025	N	Deep	PA-23D-090325	< 0.18 U	< 0.39 UJ	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 UJ	< 0.49 U	< 0.53 U	< 0.58 U	< 0.41 UJ	< 0.39 U	< 0.39 U
PA-24d	9/4/2025	N	Deep	PA-24D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.49 U	< 0.53 U	< 0.58 U	< 0.41 U	< 0.39 U	< 0.39 U
PA-25d	9/3/2025	N	Deep	PA-25D-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.17 U	< 0.33 U	< 0.26 U	< 0.084 U	< 0.050 U	< 0.033 U
PA-26d	9/3/2025	N	Deep	PA-26D-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.17 U	< 0.33 U	< 0.26 U	< 0.084 U	< 0.050 U	< 0.033 U
PA-27d	9/2/2025	N	Deep	PA-27D-090225	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	0.43 J+	< 0.28 U	< 0.49 U	< 0.53 U	< 0.58 U	< 0.41 U	< 0.39 U	< 0.39 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  
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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.  
 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 3, 2025, 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	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane (Freon 11)	Vinyl chloride
Unit					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	3	NE	0.24
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID										
MWA-41	9/3/2025	N	Shallow	MWA-41-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 0.092 U	< 0.066 U	< 0.12 U	< 0.040 U
MWA-41	9/3/2025	FD	Shallow	DUP-01-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 0.092 U	< 0.066 U	< 0.12 U	< 0.040 U
MWA-63	9/4/2025	N	Shallow	MWA-63-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.41 U	<b>2.8</b>	< 0.36 U	< 0.22 U
MWA-82	9/2/2025	N	Shallow	MWA-82-090225	< 0.11 U	< 0.025	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035	< 0.092 U	< 0.066 U	< 0.12 U	< 0.040 U
PA-03	9/2/2025	N	Shallow	PA-03-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.18 J+</b>	< 0.035 U	< 0.092 U	< 0.066 U	< 0.12 U	< 0.040 U
PA-04	9/4/2025	N	Shallow	PA-04-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.36</b>	<b>0.33</b>	< 0.092 U	< 0.066 U	< 0.12 U	< 0.040 U
PA-08	9/2/2025	N	Shallow	PA-08-090225	< 0.11 U	< 0.025	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035	< 0.092 U	< 0.066 U	< 0.12 U	< 0.040 U
PA-09	9/2/2025	N	Shallow	PA-09-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.092 U	< 0.066 U	< 0.12 U	< 0.040 U
PA-31	9/4/2025	N	Shallow	PA-31-090425	< 0.11 U	<b>0.20</b>	< 0.056 U	< 0.070 U	<b>0.11 j</b>	<b>0.47</b>	< 0.092 U	< 0.066 U	< 0.12 U	< 0.040 U
MWA-81i	9/3/2025	N	Intermediate	MWA-81I-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 UJ	< 0.092 U	< 0.066 U	< 0.12 U	< 0.040 U
PA-10i	9/4/2025	N	Intermediate	PA-10I-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	<b>0.18 j</b>	< 0.092 U	< 0.066 U	< 0.12 U	<b>0.66</b>
PA-15i	9/3/2025	N	Intermediate	PA-15I-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.25</b>	< 0.035 U	< 0.092 U	< 0.066 U	< 0.12 U	< 0.040 U
PA-17iR	9/2/2025	N	Intermediate	PA-17IR-090225	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	<b>0.12 J+</b>	< 0.092 U	< 0.066 U	< 0.12 U	< 0.040 U
PA-32i	9/4/2025	N	Intermediate	PA-32I-090425	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	<b>0.18 j</b>	<b>0.044 j</b>	< 0.092 U	< 0.066 U	< 0.12 U	<b>0.15</b>
PA-44i	9/3/2025	N	Intermediate	PA-44I-090325	< 0.11 U	< 0.025 UJ	< 0.056 U	< 0.070 U	<b>0.34</b>	< 0.035 UJ	< 0.092 U	< 0.066 U	< 0.12 U	< 0.040 U
MWA-31i(d)	9/4/2025	N	Deep	MWA-31I(D)-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.57 J+</b>	< 0.28 U	< 0.41 U	< 0.26 U	< 0.36 U	< 0.22 U
MWA-56d	9/4/2025	N	Deep	MWA-56D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 2.4 U	< 0.22 U	< 0.28 U	< 4.1 U	< 2.6 U	< 0.36 U	< 0.22 U
MWA-58d	9/4/2025	N	Deep	MWA-58D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.31 J+</b>	< 0.28 U	< 0.41 U	< 0.26 U	< 0.36 U	< 0.22 U
MWA-58d	9/4/2025	FD	Deep	DUP-02-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.31 J+</b>	< 0.28 U	< 0.41 U	< 0.26 U	< 0.36 U	< 0.22 U
PA-18d	9/4/2025	N	Deep	PA-18D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.41 U	< 0.26 U	< 0.36 U	<b>0.23 j</b>
PA-22d	9/4/2025	N	Deep	PA-22D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.41 U	< 0.26 U	< 0.36 U	< 0.22 U
PA-23d	9/3/2025	N	Deep	PA-23D-090325	< 0.18 U	< 0.39 UJ	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 UJ	< 0.41 U	< 0.26 U	< 0.36 U	< 0.22 U
PA-24d	9/4/2025	N	Deep	PA-24D-090425	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	< 0.22 U	< 0.28 U	< 0.41 U	< 0.26 U	< 0.36 U	< 0.22 U
PA-25d	9/3/2025	N	Deep	PA-25D-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.092 U	< 0.066 U	< 0.12 U	< 0.040 U
PA-26d	9/3/2025	N	Deep	PA-26D-090325	< 0.11 U	< 0.025 U	< 0.056 U	< 0.070 U	< 0.064 U	< 0.035 U	< 0.092 U	< 0.066 U	< 0.12 U	< 0.040 U
PA-27d	9/2/2025	N	Deep	PA-27D-090225	< 0.18 U	< 0.39 U	< 0.52 U	< 0.24 U	<b>0.43 J+</b>	< 0.28 U	< 0.41 U	< 0.26 U	< 0.36 U	< 0.22 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  
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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.  
 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 3, 2025, Groundwater Monitoring Report**  
**Arkema Inc. Facility**  
**Portland, Oregon**

					Analyte Unit	Chloride mg/L	Perchlorate 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	9/3/2025	N	Shallow	MWA-41-090325	<b>4.2 J+</b>		< 0.91 U
MWA-41	9/3/2025	FD	Shallow	DUP-01-090325	<b>4.3 J+</b>		< 0.91 U
MWA-63	9/4/2025	N	Shallow	MWA-63-090425	<b>20</b>		< 0.91 U
MWA-82	9/2/2025	N	Shallow	MWA-82-090225	<b>8.8</b>		<b>150</b>
PA-03	9/2/2025	N	Shallow	PA-03-090225	<b>3.6 J+</b>		< 4.5 U
PA-04	9/4/2025	N	Shallow	PA-04-090425	<b>5.0</b>		< 4.5 U
PA-08	9/2/2025	N	Shallow	PA-08-090225	<b>430</b>		< 4.5 U
PA-09	9/2/2025	N	Shallow	PA-09-090225	<b>32</b>		<b>4.8 j</b>
PA-31	9/4/2025	N	Shallow	PA-31-090425	<b>7.6</b>		< 4.5 U
MWA-81i	9/3/2025	N	Intermediate	MWA-81i-090325	<b>38</b>		< 0.91 U
PA-10i	9/4/2025	N	Intermediate	PA-10i-090425	<b>5.0</b>		< 4.5 U
PA-15i	9/3/2025	N	Intermediate	PA-15i-090325	<b>42</b>		< 4.5 U
PA-17iR	9/2/2025	N	Intermediate	PA-17iR-090225	<b>41</b>		< 4.5 U
PA-32i	9/4/2025	N	Intermediate	PA-32i-090425	<b>67</b>		< 4.5 U
PA-44i	9/3/2025	N	Intermediate	PA-44i-090325	<b>190</b>		< 4.5 U
MWA-31i(d)	9/4/2025	N	Deep	MWA-31i(d)-090425	<b>22,000</b>		<b>110,000</b>
MWA-56d	9/4/2025	N	Deep	MWA-56d-090425	<b>12,000 J</b>		<b>14,000 J</b>
MWA-58d	9/4/2025	N	Deep	MWA-58d-090425	<b>18,000</b>		<b>53,000</b>
MWA-58d	9/4/2025	FD	Deep	DUP-02-090425	<b>18,000 J</b>		<b>52,000 J</b>
PA-18d	9/4/2025	N	Deep	PA-18d-090425	<b>72</b>		< 4.5 U
PA-22d	9/4/2025	N	Deep	PA-22d-090425	<b>7,700</b>		<b>12,000</b>
PA-23d	9/3/2025	N	Deep	PA-23d-090325	<b>110,000</b>		< 91 U
PA-24d	9/4/2025	N	Deep	PA-24d-090425	<b>29,000</b>		< 36 U
PA-25d	9/3/2025	N	Deep	PA-25d-090325	<b>22</b>		< 0.91 U
PA-26d	9/3/2025	N	Deep	PA-26d-090325	<b>87</b>		< 0.91 U
PA-27d	9/2/2025	N	Deep	PA-27d-090225	<b>860</b>		< 4.5 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.

J = The concentration of the sample is considered estimated.

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

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



## FIGURES

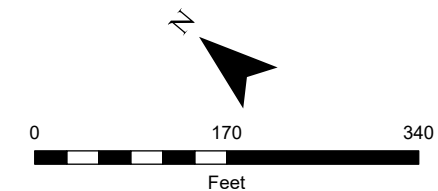
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**Legend**

- |                                   |                                 |                                  |
|-----------------------------------|---------------------------------|----------------------------------|
| Shallow Zone Monitoring Well      | Intermediate Zone Piezometer    | Abandoned Monitoring Well        |
| Intermediate Zone Monitoring Well | Deep Zone Piezometer            | Abandoned Piezometer             |
| Deep Zone Monitoring Well         | Shallow Zone Recovery Well      | Abandoned Recovery Well          |
| Gravel Zone Monitoring Well       | Intermediate Zone Recovery Well | Barrier Wall Alignment           |
| Shallow Zone Piezometer           | Trench Extraction Well          | Parcel and Property Boundaries   |
|                                   |                                 | Extraction Trench (Not To Scale) |

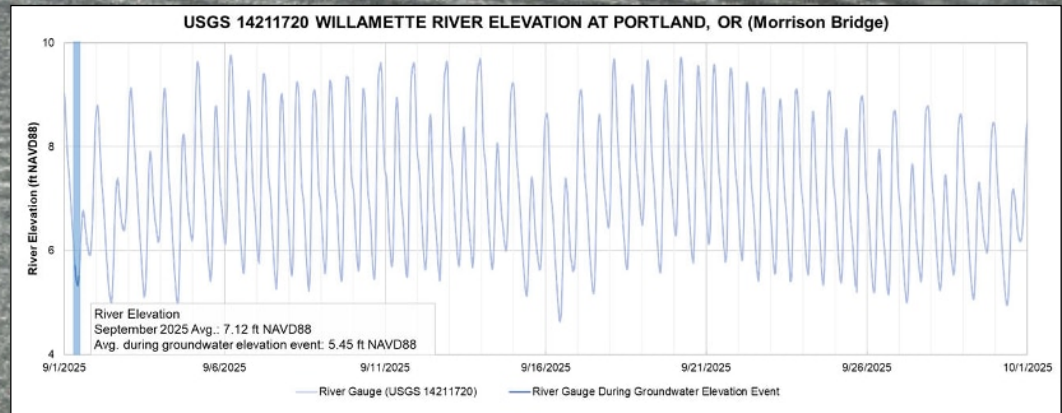
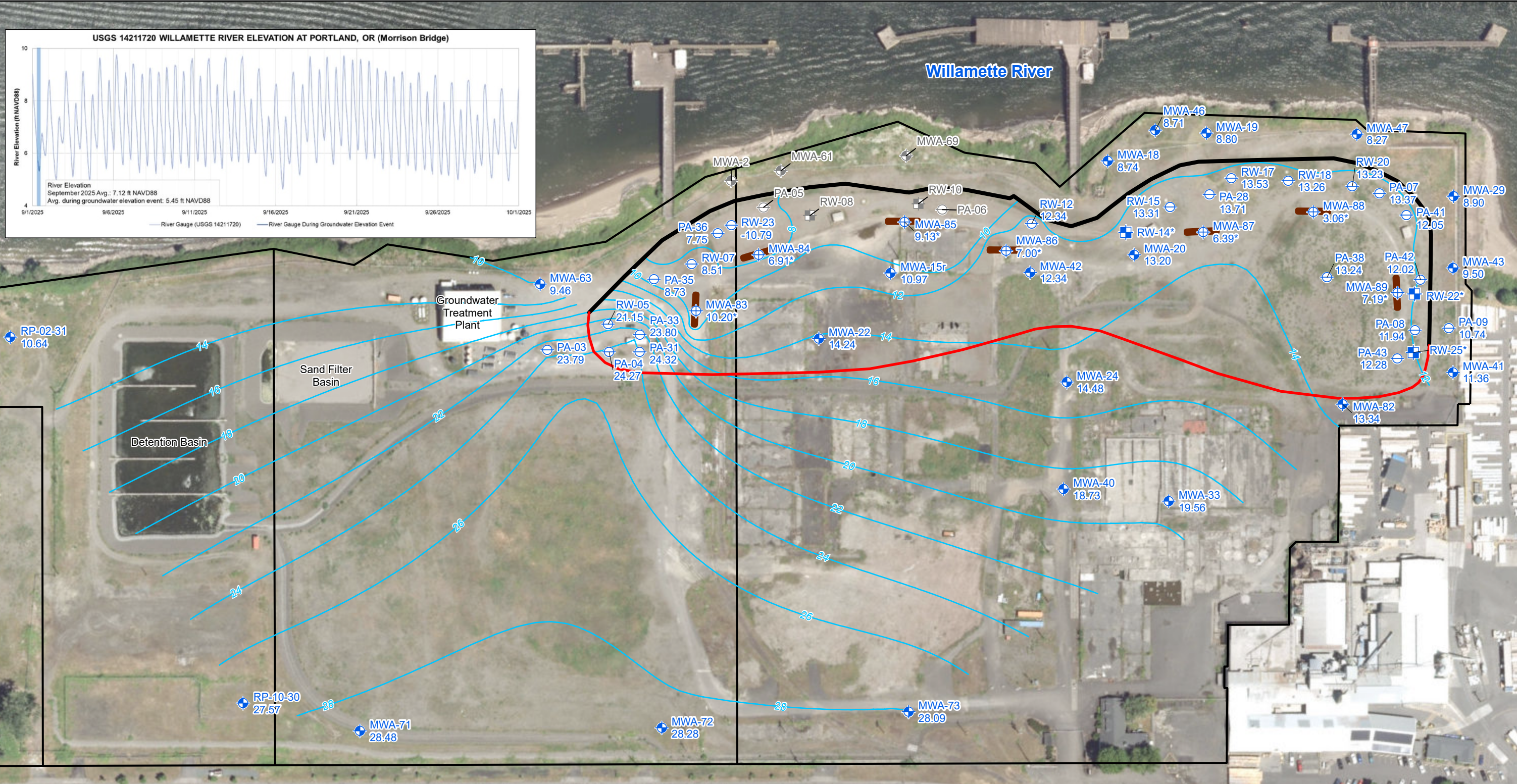
Notes:  
 GCC = Gradient Control Cluster.  
 GWBW = Ground water barrier wall.



**Figure 1**  
**Site Layout**  
 Quarter 3, 2025  
 Groundwater Monitoring Report  
 Arkema Inc.  
 Portland, Oregon

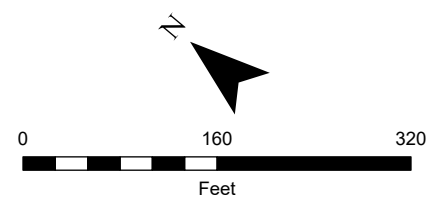
Source: City of Portland Aerial Imagery, flown Summer 2021 NAD 1983 HARN StatePlane Oregon North FIPS 3601 Feet Intl

DRAWN BY: GIS  
M:\US\Projects\S-U\Total\Arkema - Portland\Groundwater Monitoring\Report\Map\Scripts\Arkema Working\Map\Map12025.aprx. REVISED: 11/05/2025. SCALE: 1:1,900 when printed at 11x17  
NAD 1983 StatePlane Oregon North FIPS 3601 Feet Intl



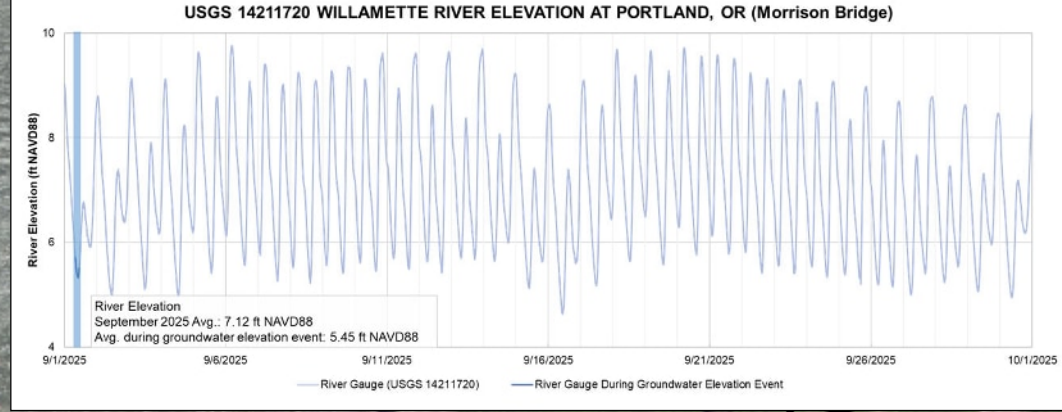
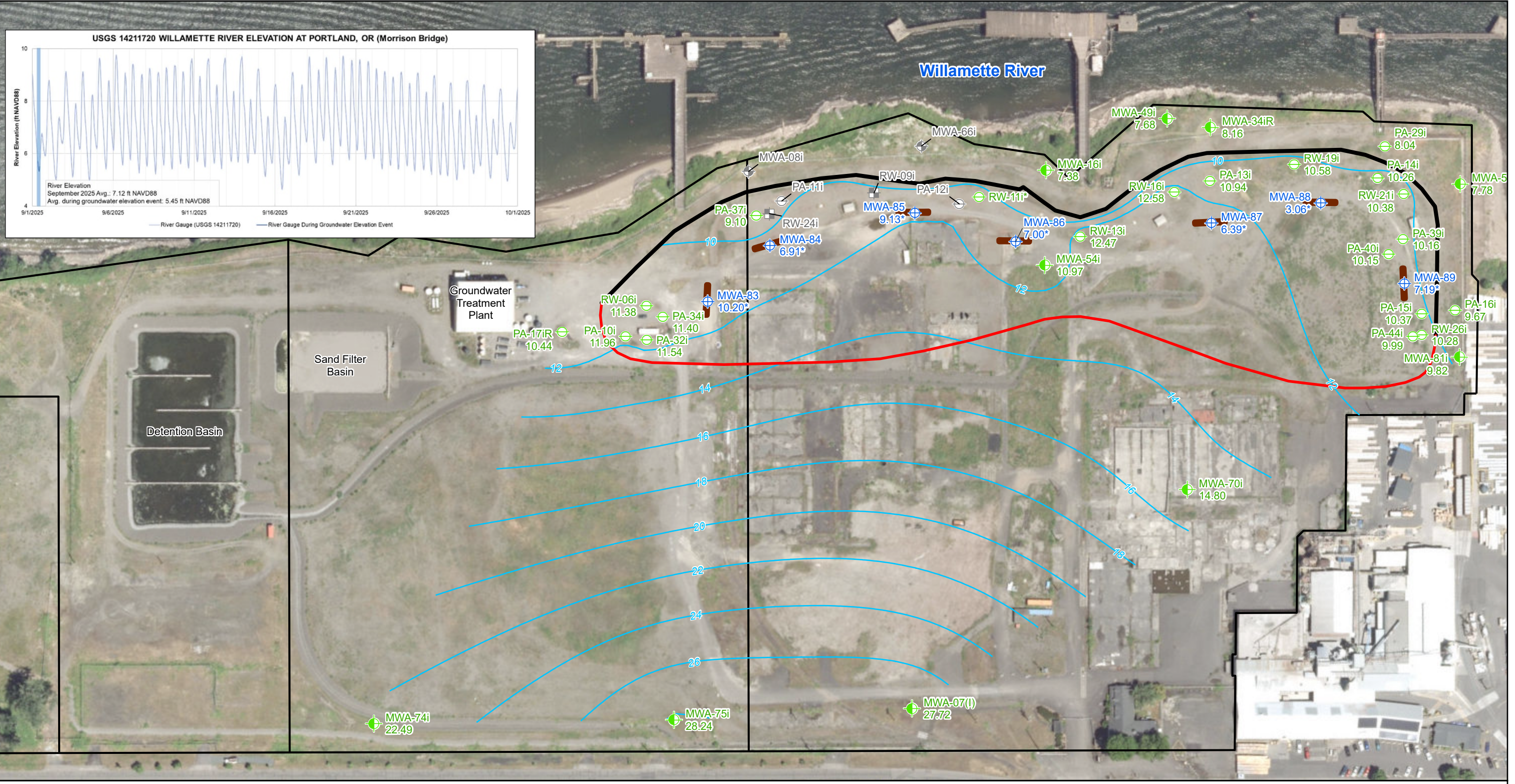
- Legend**
- ⊕ Shallow Zone Piezometer
  - ⊕ Shallow Zone Monitoring Well
  - ⊕ Active Recovery Well; Not Used During Contouring
  - ⊕ Shallow-Intermediate Zone Monitoring Well
  - 27.70 Groundwater Elevation (ft NAVD88)
  - ⊕ Abandoned Monitoring Well
  - ⊖ Abandoned Piezometer
  - ⊖ Abandoned Recovery 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 September 1, 2025.  
 ft NAVD88: feet North American Vertical Datum of 1988.  
 Aerial Photo: City of Portland, Summer 2017.



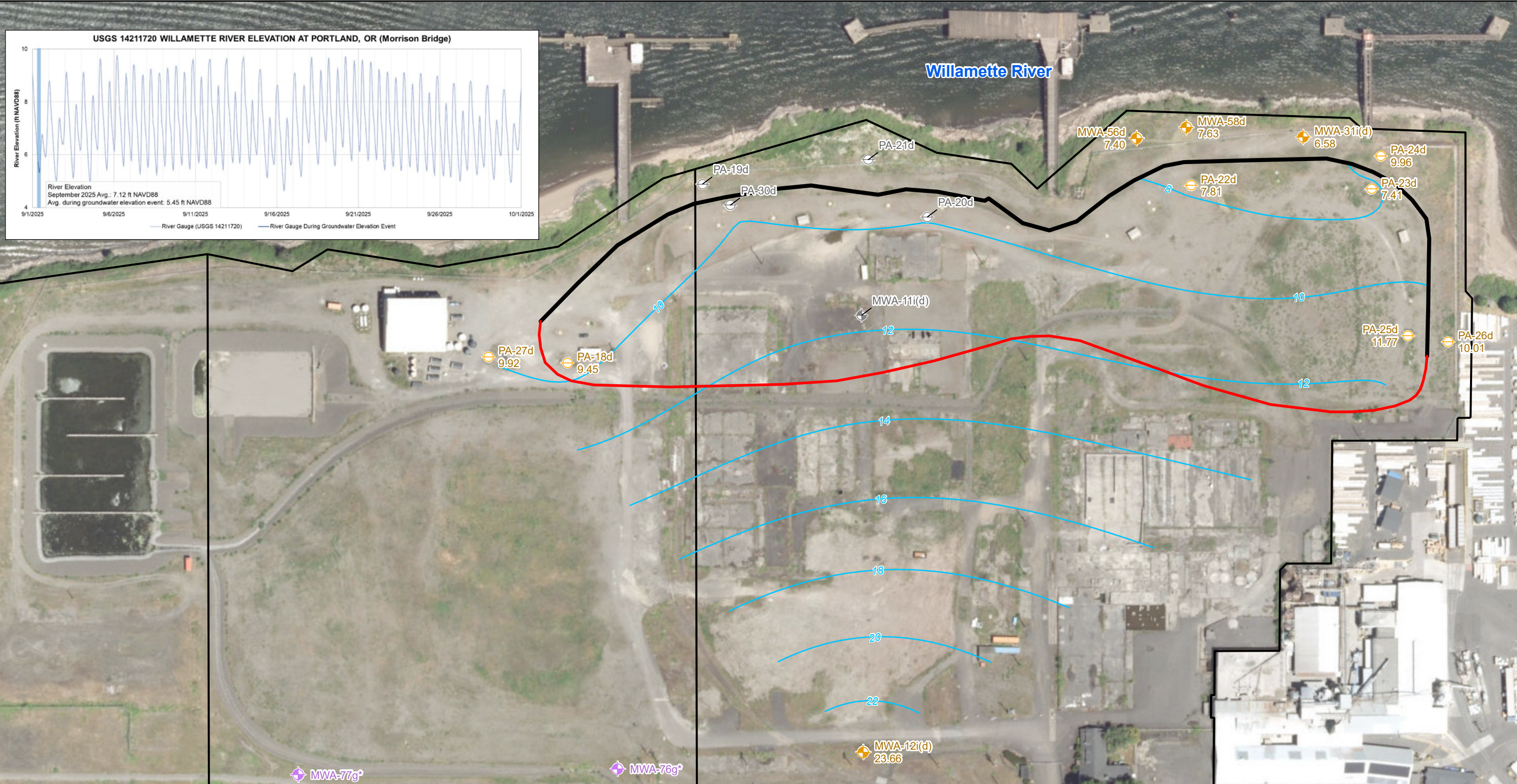
**Figure 2**  
**September 2025 Shallow Zone Groundwater Contours**  
 Quarter 3, 2025  
 Groundwater Monitoring Report  
 Arkema Inc.  
 Portland, Oregon

DRAWN BY: GIS  
M:\US\Projects\S-U\Total\Arkema - Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working\Maps\2025 Q3\Arkema GWM Q32025.aprx. REVISED: 11/05/2025. SCALE: 1:1,900 when printed at 11x17  
NAD 1983 StatePlane Oregon North FIPS 3601 Feet Intl



<b>Legend</b>		<b>Notes:</b> * Value not used for contouring. Water levels collected September 1, 2025. ft NAVD88: feet North American Vertical Datum of 1988. Aerial Photo: City of Portland, Summer 2017.		<b>Figure 3</b> <b>September 2025 Intermediate Zone Groundwater Contours</b> Quarter 3, 2025 Groundwater Monitoring Report Arkema Inc. Portland, Oregon
<ul style="list-style-type: none"> <li> Intermediate Zone Piezometer</li> <li> Intermediate Zone Monitoring Well</li> <li> Shallow-Intermediate Zone Monitoring Well</li> <li><b>27.70</b> Groundwater Elevation (ft NAVD88)</li> <li> Abandoned Monitoring Well</li> <li> Abandoned Piezometer</li> </ul>	<ul style="list-style-type: none"> <li> Abandoned Recovery Well</li> <li> Intermediate Zone Groundwater Contours (ft NAVD88) Dashed where Inferred</li> <li> Target Capture Zone</li> <li> Barrier Wall Alignment</li> <li> Extraction Trench (Not To Scale)</li> </ul>			

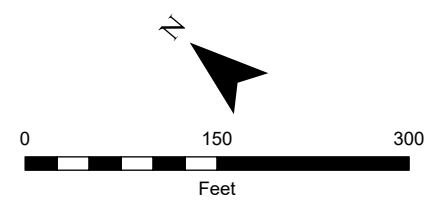
DRAWN BY: GIS  
M:\US\Projects\S-U\Total\Arkema - Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working\Maps\2025 Q3\Arkema GMM Q32025.aprx. REVISED: 11/05/2025. SCALE: 1:1,800 when printed at 11x17



**Legend**

- ⊕ Deep Zone Piezometer
- ⊕ Deep Zone Monitoring Well
- ⊕ Gravel Zone Monitoring Well
- 27.70 Groundwater Elevation (ft NAVD88)
- ⊕ Abandoned Monitoring Well
- ⊖ Abandoned Piezometer
- 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 September 1, 2025.  
 ft NAVD88: feet North American Vertical Datum of 1988.  
 Aerial Photo: City of Portland, Summer 2017.



**Figure 4**  
**September 2025 Deep Zone Groundwater Contours**  
 Quarter 3, 2025  
 Groundwater Monitoring Report  
 Arkema Inc.  
 Portland, Oregon

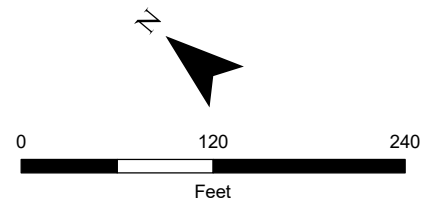
NAD 1983 StatePlane Oregon North FIPS 3601 Feet Intl

M:\US\Projects\S-U\Total\Arkema - Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working\Maps\2025 Q3\Figure 5 Chlorobenzene Shallow.mxd, REVISED: 10/22/2025, SCALE: 1:1,440 when printed at 11x17 INCH, DATE: 10/22/2025



- Legend**
- > 6,400 ug/L
  - >= 640 - 6,400 ug/L
  - >= 64 - < 640 ug/L
  - < 64 ug/L
  - Not Detected
  - ⊕ Not Sampled
  - Target Capture Zone
  - Barrier Wall Alignment
  - Parcel and Property Boundaries
  - Shallow Zone Groundwater Contours (ft NAVD88) September 2025

**Notes:**  
 Samples collected September 02-04, 2025.  
 All results in micrograms per liter (µg/L).  
 Results in **red** exceed screening criteria.  
 Screening criteria for Chlorobenzene = 64 µg/L  
 See Table 4 for definition of qualifiers.  
 ND: Non-Detect  
 NS: Not Sampled



**Figure 5**  
**Chlorobenzene Groundwater Concentrations**  
**Shallow Zone**  
 Quarter 3, 2025  
 Groundwater Monitoring Report  
 Arkema Inc.  
 Portland, Oregon



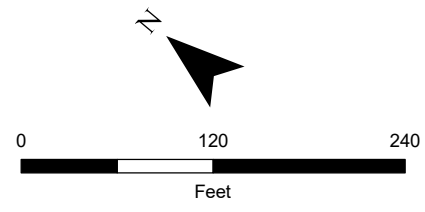
Source: City of Portland Aerial Imagery, flown Summer 2017; NAD 1983 HARN StatePlane Oregon North FIPS 3601 Feet Intl

M:\US\Projects\S-U\Total\Arkema - Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working\Maps\2025 Q3\Figure 6 Chlorobenzene Intermediate Zone.mxd, REVISED: 10/22/2025, SCALE: 1:1,440 when printed aDRAWN BY: Jake Sullivan DATE: 10/22/2025



- Legend**
- > 6,400 ug/L
  - ≥ 640 - 6,400 ug/L
  - ≥ 64 - < 640 ug/L
  - < 64 ug/L
  - Not Detected
  - ⊕ Not Sampled
  - Target Capture Zone
  - Barrier Wall Alignment
  - Parcel and Property Boundaries
  - Intermediate Zone Groundwater Contours (ft NAVD88) September 2025

**Notes:**  
 Samples collected September 02-04, 2025.  
 All results in micrograms per liter (µg/L).  
 Results in **red** exceed screening criteria.  
 Screening criteria for Chlorobenzene = 64 µg/L  
 See Table 4 for definition of qualifiers.  
 ND: Non-Detect  
 NS: Not Sampled



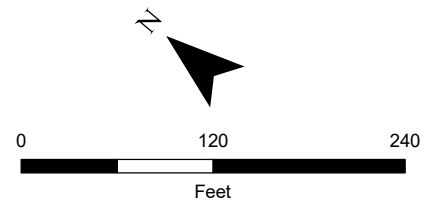
**Figure 6**  
**Chlorobenzene Groundwater Concentrations**  
**Intermediate Zone**  
 Quarter 3, 2025  
 Groundwater Monitoring Report  
 Arkema Inc.  
 Portland, Oregon





- Legend**
- > 6,400 ug/L
  - ≥ 640 - 6,400 ug/L
  - ≥ 64 - < 640 ug/L
  - < 64 ug/L
  - Not Detected
  - ⊕ Not Sampled
  - Target Capture Zone
  - Barrier Wall Alignment
  - Parcel and Property Boundaries
  - Deep Zone Groundwater Contours (ft NAVD88) September 2025

**Notes:**  
 Samples collected September 02-04, 2025.  
 All results in micrograms per liter (µg/L).  
 Results in **red** exceed screening criteria.  
 Screening criteria for Chlorobenzene = 64 µg/L  
 See Table 4 for definition of qualifiers.  
 ND: Non-Detect  
 NS: Not Sampled



**Figure 7**  
**Chlorobenzene Groundwater Concentrations**  
**Deep Zone**  
 Quarter 3, 2025  
 Groundwater Monitoring Report  
 Arkema Inc.  
 Portland, Oregon

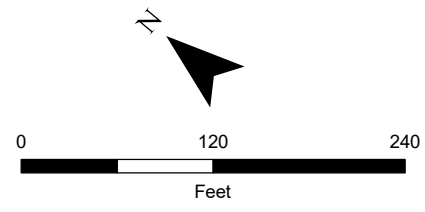


M:\US\Projects\S-U\Total\Arkema - Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working\Maps\2025 Q3\Figure 8 - 1,2-Dichlorobenzene Shallow.mxd, REVISED: 10/22/2025, SCALE: 1:1,440 when printed, DRAWN BY: Jake Sullivan, DATE: 10/22/2025



- Legend**
- > 1,400 ug/L
  - ≥ 140 - 1,400 ug/L
  - ≥ 14 - < 140 ug/L
  - < 14 ug/L
  - Not Detected
  - ⊕ Not Sampled
  - Target Capture Zone
  - Barrier Wall Alignment
  - Parcel and Property Boundaries
  - Shallow Zone Groundwater Contours (ft NAVD88) September 2025

**Notes:**  
 Samples collected September 02-04, 2025.  
 All results in micrograms per liter (µg/L).  
 Results in red exceed screening criteria.  
 Screening criteria for 1,2-Dichlorobenzene = 14 µg/L  
 See Table 4 for definition of qualifiers.  
 ND: Non-Detect  
 NS: Not Sampled



**Figure 8**  
**1,2-Dichlorobenzene Groundwater Concentrations**  
**Shallow Zone**  
 Quarter 3, 2025  
 Groundwater Monitoring Report  
 Arkema Inc.  
 Portland, Oregon



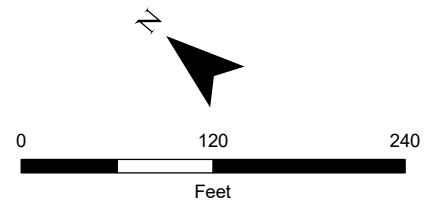
Source: City of Portland Aerial Imagery, flown Summer 2017; NAD 1983 HARN StatePlane Oregon North FIPS 3601 Feet Intl

M:\US\Projects\S-U\Total\Arkema Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working\Maps\2025 Q3\Figure 9 1,2-Dichlorobenzene Intermediate Zone.mxd REVISED: 10/22/2025 SCALE: 1:1,440 when printed DATE: 10/22/2025



- Legend**
- > 1,400 ug/L
  - ≥ 140 - 1,400 ug/L
  - ≥ 14 - < 140 ug/L
  - < 14 ug/L
  - Not Detected
  - ⊕ Not Sampled
  - Target Capture Zone
  - Barrier Wall Alignment
  - Parcel and Property Boundaries
  - Intermediate Zone Groundwater Contours (ft NAVD88) September 2025

**Notes:**  
 Samples collected September 02-04, 2025.  
 All results in micrograms per liter (µg/L).  
 Results in **red** exceed screening criteria.  
 Screening criteria for 1,2-Dichlorobenzene = 14 µg/L  
 See Table 4 for definition of qualifiers.  
 ND: Non-Detect  
 NS: Not Sampled



**Figure 9**  
**1,2-Dichlorobenzene Groundwater Concentrations**  
**Intermediate Zone**  
 Quarter 3, 2025  
 Groundwater Monitoring Report  
 Arkema Inc.  
 Portland, Oregon

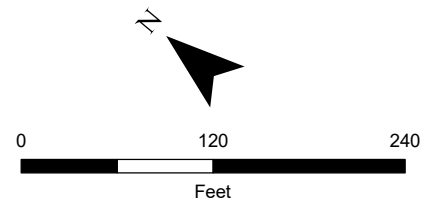


M:\US\Projects\S-U\Total\Arkema Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working\Maps\2025 Q3\Figure 10 1,2-Dichlorobenzene Deep Zone.mxd. REVISED: 10/22/2025. SCALE: 1:1,440 when printed at 11x17. DATE: 10/22/2025



- Legend**
- > 1,400 ug/L
  - ≥ 140 - 1,400 ug/L
  - ≥ 14 - < 140 ug/L
  - < 14 ug/L
  - Not Detected
  - ⊕ Not Sampled
  - Target Capture Zone
  - Barrier Wall Alignment
  - Parcel and Property Boundaries
  - Deep Zone Groundwater Contours (ft NAVD88) September 2025

**Notes:**  
 Samples collected September 02-04, 2025.  
 All results in micrograms per liter (µg/L).  
 Results in red exceed screening criteria.  
 Screening criteria for 1,2-Dichlorobenzene = 14 µg/L  
 See Table 4 for definition of qualifiers.  
 ND: Non-Detect  
 NS: Not Sampled



**Figure 10**  
**1,2-Dichlorobenzene Groundwater Concentrations**  
**Deep Zone**  
 Quarter 3, 2025  
 Groundwater Monitoring Report  
 Arkema Inc.  
 Portland, Oregon





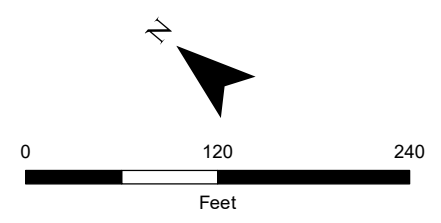
**Legend**

**Molar Ratio**

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

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

**Notes:**  
 Samples collected September 02-04, 2025.  
 All results in micrograms per liter (µg/L).  
 Results in **red** exceed screening criteria.  
 Screening criteria for tetrachloroethene (PCE) = 0.33 µg/L  
 Screening criteria for trichloroethene (TCE) = 3 µg/L  
 Screening criteria for cis-1,2-dichloroethene (Cis-1,2) = 590 µg/L  
 Screening criteria for vinyl chloride (VC) = 0.24 µg/L.  
 ND: Non-Detect  
 NS: Not Sampled



**Figure 11**  
**PCE, TCE, cis-1,2-DCE and Vinyl Chloride Groundwater Concentrations Shallow Zone**  
 Quarter 3, 2025  
 Groundwater Monitoring Report  
 Arkema Inc.  
 Portland, Oregon

M:\US\Projects\S-U\Total\Arkema - Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working\Maps\2025 Q3\Figure 12 VOCs PieChart Intermediate.mxd REVISED: 10/23/2025. SCALE: 1:1,440 when printed. ADP/AMN BY: Tyler Harris DATE: 10/23/2025



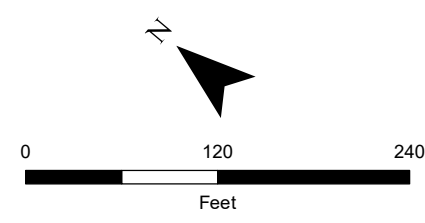
**Legend**

**Molar Ratio**


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

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

**Notes:**  
 Samples collected September 02-04, 2025.  
 All results in micrograms per liter (µg/L).  
 Results in **red** exceed screening criteria.  
 Screening criteria for tetrachloroethene (PCE) = 0.33 µg/L  
 Screening criteria for trichloroethene (TCE) = 3 µg/L  
 Screening criteria for cis-1,2-dichloroethene (Cis-1,2) = 590 µg/L  
 Screening criteria for vinyl chloride (VC) = 0.24 µg/L  
 ND: Non-Detect  
 NS: Not Sampled



**Figure 12**  
**PCE, TCE, cis-1,2-DCE and**  
**Vinyl Chloride Groundwater Concentrations**  
**Intermediate Zone**  
 Quarter 3, 2025  
 Groundwater Monitoring Report  
 Arkema Inc.  
 Portland, Oregon



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



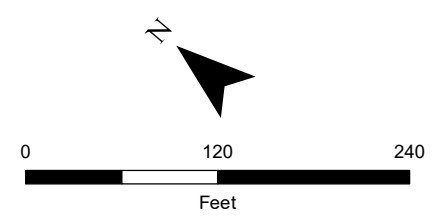
**Legend**

**Molar Ratio**


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

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

**Notes:**  
 Samples collected September 02-04, 2025.  
 All results in micrograms per liter (µg/L).  
 Results in **red** exceed screening criteria.  
 Screening criteria for tetrachloroethene (PCE) = 0.33 µg/L  
 Screening criteria for trichloroethene (TCE) = 3 µg/L  
 Screening criteria for cis-1,2-dichloroethene (Cis-1,2) = 590 µg/L  
 Screening criteria for vinyl chloride (VC) = 0.24 µg/L  
 ND: Non-Detect  
 NS: Not Sampled



**Figure 13**  
**PCE, TCE, cis-1,2-DCE and Vinyl Chloride Groundwater Concentrations Deep Zone**  
 Quarter 3, 2025  
 Groundwater Monitoring Report  
 Arkema Inc.  
 Portland, Oregon



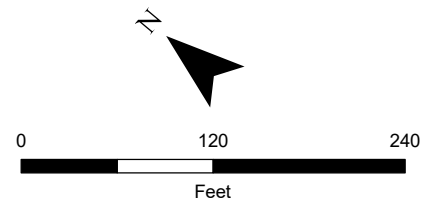
M:\US\Projects\S-U\Total\Arkema Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working\Maps\2025 Q3\Figure 14 Perchlorate Shallow.mxd, REVISED: 10/23/2025, SCALE: 1:1,440 when printed at 11x17\DRAWN BY: Jake Sullivan DATE: 10/23/2025



**Legend**

- > 180,000 ug/L
- ≥ 18,000 - 180,000 ug/L
- ≥ 1,800 - < 18,000 ug/L
- < 1,800 ug/L
- Not Detected
- ⊕ Not Sampled
- Target Capture Zone
- Barrier Wall Alignment
- Parcel and Property Boundaries
- Shallow Zone Groundwater Contours (ft NAVD88) September 2025

**Notes:**  
 Samples collected September 02-04, 2025  
 All results in micrograms per liter (µg/L).  
 Results in red exceed screening criteria.  
 Screening criteria for Perchlorate = 1,800 µg/L  
 See Table 5 for definition of qualifiers.  
 ND: Non-Detect  
 NS: Not Sampled



**Figure 14**  
**Perchlorate Groundwater Concentrations**  
**Shallow Zone**  
 Quarter 3, 2025  
 Groundwater Monitoring Report  
 Arkema Inc.  
 Portland, Oregon



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

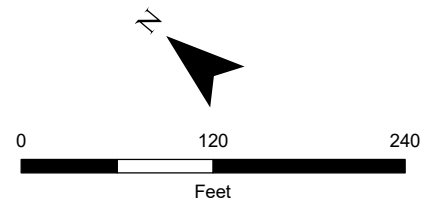
M:\US\Projects\S-U\Total\Arkema - Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working\Maps\2025 Q3\Figure 15 - Perchlorate Intermediate Zone.mxd. REVISED: 10/23/2025. SCALE: 1:1,440 when printed at 10/23/2025. DATE: 10/23/2025



**Legend**

- > 180,000 ug/L
- ≥ 18,000 - 180,000 ug/L
- ≥ 1,800 - < 18,000 ug/L
- < 1,800 ug/L
- Not Detected
- ⊕ Not Sampled
- Target Capture Zone
- Barrier Wall Alignment
- Parcel and Property Boundaries
- Intermediate Zone Groundwater Contours (ft NAVD88) September 2025

Notes:  
 Samples collected September 02-04, 2025  
 All results in micrograms per liter (µg/L).  
 Results in **red** exceed screening criteria.  
 Screening criteria for Perchlorate = 1,800 µg/L  
 See Table 5 for definition of qualifiers.  
 ND: Non-Detect  
 NS: Not Sampled



**Figure 15**  
**Perchlorate Groundwater Concentrations**  
**Intermediate Zone**  
 Quarter 3, 2025  
 Groundwater Monitoring Report  
 Arkema Inc.  
 Portland, Oregon



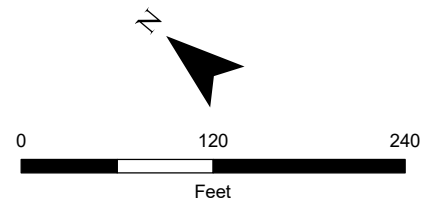
M:\US\Projects\S-U\Total\Arkema Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working\Maps\2025 Q3\Figure 16 Perchlorate Deep Zone.mxd. REVISED: 10/23/2025. SCALE: 1:1,440 when printed at 11x17 DRAWN BY: Jake Sullivan DATE: 10/23/2025



**Legend**

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

Notes:  
 Samples collected September 02-04, 2025  
 All results in micrograms per liter (µg/L).  
 Results in **red** exceed screening criteria.  
 Screening criteria for Perchlorate = 1,800 µg/L  
 See Table 5 for definition of qualifiers.  
 ND: Non-Detect  
 NS: Not Sampled



**Figure 16**  
**Perchlorate Groundwater Concentrations**  
**Deep Zone**  
 Quarter 3, 2025  
 Groundwater Monitoring Report  
 Arkema Inc.  
 Portland, Oregon



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

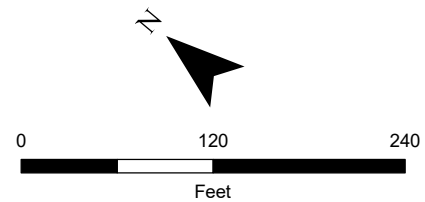
M:\US\Projects\S-U\Total\Arkema Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working\Maps\2025 Q3\Figure 17 Chloride Shallow.mxd. REVISED: 10/23/2025. SCALE: 1:1,440 when printed at 11x17. DRAWN BY: Jake Sullivan. DATE: 10/23/2025



**Legend**

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

Notes:  
 Samples collected September 02-04, 2025.  
 All results in milligrams per liter (mg/L).  
 Results in **red** exceed screening criteria.  
 Screening criteria for Chloride = 230 mg/L  
 See Table 5 for definition of qualifiers.  
 ND: Non-Detect  
 NS: Not Sampled



**Figure 17**  
**Chloride Groundwater Concentrations**  
**Shallow Zone**  
 Quarter 3, 2025  
 Groundwater Monitoring Report  
 Arkema Inc.  
 Portland, Oregon



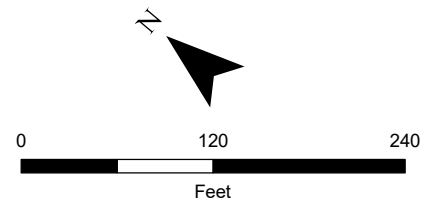
M:\US\Projects\S-U\Total\Arkema - Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working\Maps\2025 Q3\Figure 18 Chloride Intermediate Zone.mxd, REVISED: 10/23/2025, SCALE: 1:1,440 when printed at 11x17 DRAWN BY: Jake Sullivan DATE: 10/23/2025



**Legend**

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

**Notes:**  
 Samples collected September 02-04, 2025.  
 All results in milligrams per liter (mg/L).  
 Results in red exceed screening criteria.  
 Screening criteria for Chloride = 230 mg/L  
 See Table 5 for definition of qualifiers.  
 ND: Non-Detect  
 NS: Not Sampled



**Figure 18**  
**Chloride Groundwater Concentrations**  
**Intermediate Zone**  
 Quarter 3, 2025  
 Groundwater Monitoring Report  
 Arkema Inc.  
 Portland, Oregon



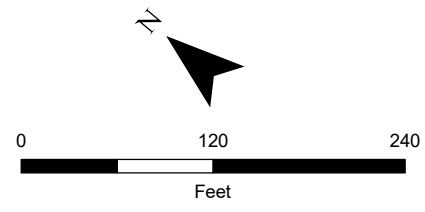
Source: City of Portland Aerial Imagery, flown Summer 2017; NAD 1983 HARN StatePlane Oregon North FIPS 3601 Feet Intl

M:\US\Projects\S-U\Total\Arkema - Portland\Groundwater Monitoring Report\Data\Scripts\Arkema Working\Maps\2025 Q3\Figure 19 Chloride Deep.mxd, REVISED: 10/23/2025, SCALE: 1:1,440 when printed at 11x17, DRAWN BY: Jake Sullivan, DATE: 10/23/2025



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

**Notes:**  
 Samples collected September 02-04, 2025.  
 All results in milligrams per liter (mg/L).  
 Results in **red** exceed screening criteria.  
 Screening criteria for Chloride = 230 mg/L  
 See Table 5 for definition of qualifiers.  
 ND: Non-Detect  
 NS: Not Sampled



**Figure 19**  
**Chloride Groundwater Concentrations**  
**Deep Zone**  
 Quarter 3, 2025  
 Groundwater Monitoring Report  
 Arkema Inc.  
 Portland, Oregon





## APPENDIX A    FIELD FORMS



# Low Flow Groundwater Sampling Field Data Form

**Well ID: MWA-41**  
**Well Permit No:**


**Date: 2024/09/03**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> Low_Flow / 37.5 (ft)	<b>Reference Elevation</b> 45.14 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> 33.81 (ft) / None
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> (ft)
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> 117.2 (mL/min)	<b>Well Diameter / Well Screen Interval</b> 2 (in) / 32.629 - 41.379 ( )
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / 1.8 (l)	<b>Well Construction</b>

### Well Head Vapor Measurements

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
08:00	33.81		0.36	19	6.62	282.4	NM	2.05	104	9.06	NM	
08:03	33.81	113.8	0.72	18.8	6.59	270.1	NM	1.06	102.3	7.9	NM	
08:06	33.81	127.3	1.08	18.8	6.59	265.2	NM	0.84	103	6.65	NM	
08:09	33.81	113.8	1.44	18.7	6.58	263.4	NM	0.74	103.6	6.83	NM	
08:12	33.81	113.8	1.8	18.8	6.58	261.6	NM	0.68	104.7	6.37	NM	

<b>Sample ID(s):</b> DUP-01-090325,MWA-41-090325	<b>Additional Comments</b>	<b>SAMPLER NAME AND SIGNATURE</b>  Julia Metzler 	<b>Date Time</b>  10/10/2025 16:39
<b>Analysis:</b>			



# Low Flow Groundwater Sampling Field Data Form


**Well ID: MWA-811**  
**Well Permit No:**

**Date: 2025/09/03**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> Low_Flow / 48 (ft)	<b>Reference Elevation</b> 44.62 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> 34.65 (ft) / None
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> (ft)
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> 135 (mL/min)	<b>Well Diameter / Well Screen Interval</b> 2 (in) / 45.694 - 50.694 ( )
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / 2.44 (l)	<b>Well Construction</b>

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
07:02	34.65		0.49	17.4	6.72	472.3	NM	3.41	2.7	7.85	NM	
07:05	34.65	137.9	0.88	17	6.62	478.1	NM	1.56	2.7	5.81	NM	
07:08	34.65	137.9	1.27	17	6.57	520	NM	1.04	2.7	5.06	NM	
07:11	34.65	123.3	1.66	17.1	6.56	551	NM	0.82	5.5	4.87	NM	
07:14	34.65	137.9	2.05	17.1	6.55	569	NM	0.7	6.1	4.36	NM	
07:17	34.65	137.9	2.44	17	6.55	578	NM	0.6	4	4.32	NM	
07:20	34.65		2.83	17	6.55	582	NM	0.55	1.4	4.42	NM	

<b>Sample ID(s):</b> MWA-811-090325	<b>Additional Comments</b>	<b>SAMPLER NAME AND SIGNATURE</b>  Julia Metzler 	<b>Date Time</b>  10/09/2025 23:59
<b>Analysis:</b>			



# Low Flow Groundwater Sampling Field Data Form

**Well ID: MWA-82**  
**Well Permit No:**


**Date: 2025/09/02**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> Low_Flow / 28 (ft)	<b>Reference Elevation</b> 37.74 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> 24.4 (ft) / None
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> (ft)
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> 120 (mL/min)	<b>Well Diameter / Well Screen Interval</b> 2 (in) / 21.343 - 31.343 ( )
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / 1.8 (l)	<b>Well Construction</b>

**Well Head Vapor Measurements**

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
06:47	24.42	120	0.36	16.4	9.6	574	NM	1.25	37	27.1	NM	
06:50	24.42	127.3	0.72	16.2	9.76	505	NM	0.68	29.9	28.56	NM	
06:53	24.42	113.8	1.08	16.2	9.8	473	NM	0.47	26.5	29.34	NM	
06:56	24.42	127.3	1.44	16.1	9.79	462.9	NM	0.37	26.5	29.92	NM	
06:59	24.42	127.3	1.8	16.2	9.78	454.5	NM	0.31	24.8	29.53	NM	

<b>Sample ID(s):</b> MWA-82-090225	<b>Additional Comments</b>	<b>SAMPLER NAME AND SIGNATURE</b>  Julia Metzler 	<b>Date Time</b>  10/08/2025 20:32
<b>Analysis:</b>			



# Low Flow Groundwater Sampling Field Data Form

**Well ID: PA-23D**  
**Well Permit No:**


**Date: 2025/09/03**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> Low_Flow / 80 (ft)	<b>Reference Elevation</b> 39.31 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> 32.35 (ft) / None
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> (ft)
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> 98.4 (mL/min)	<b>Well Diameter / Well Screen Interval</b> 1 (in) / 77.66 - 82.66 ( )
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / 1.8 (l)	<b>Well Construction</b>

### Well Head Vapor Measurements

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
12:28	33.65		0.6	23.8	6.72	69177	NM	2.19	-83.5	45.06	NM	
12:31	33.7	106.1	0.9	23.6	6.78	69574	NM	1.5	-92.9	57.77	NM	
12:34	33.67	86.6	1.2	23.4	6.82	69729	NM	1.1	-97	66.32	NM	
12:37	33.68	94.9	1.5	23.4	6.83	69688	NM	1.03	-100.7	71.6	NM	
12:40	33.68	106.1	1.8	23.5	6.85	69656	NM	0.94	-104.1	70.59	NM	

<b>Sample ID(s):</b> PA-23D-090325	<b>Additional Comments</b>	<b>SAMPLER NAME AND SIGNATURE</b>  Julia Metzler 	<b>Date Time</b>  10/10/2025 18:24
<b>Analysis:</b>			



## Low Flow Groundwater Sampling Field Data Form

**Well ID: PA-25D**  
**Well Permit No:**

**Date: 2025/09/03**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> Low_Flow / 80 (ft)	<b>Reference Elevation</b> 40.44 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> 29.9 (ft) / None
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> (ft)
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> 96.1 (mL/min)	<b>Well Diameter / Well Screen Interval</b> 1 (in) / 77.58 - 82.58 ( )
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / 2.1 (l)	<b>Well Construction</b>

**Well Head Vapor Measurements**

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
09:19	30.9		0.6	19.6	7.01	655	NM	3.17	-90.6	13.22	NM	
09:22	30.9	106.1	0.9	19.4	7.03	672	NM	2.2	-101.4	12.65	NM	
09:25	30.95	86.6	1.2	19.4	7.04	677	NM	1.32	-106.9	12.49	NM	
09:28	30.93	94.9	1.5	19.3	7.05	683	NM	1.13	-109.6	11.81	NM	
09:31	30.95	106.1	1.8	19.3	7.07	688	NM	1.08	-112.6	11.59	NM	
09:34	30.95	86.6	2.1	19.2	7.07	693	NM	1.01	-115.6	12.05	NM	

<b>Sample ID(s):</b> PA-25D-090325	<b>Additional Comments</b>	<b>SAMPLER NAME AND SIGNATURE</b>	<b>Date Time</b>
<b>Analysis:</b>		Julia Metzler <div style="text-align: right; margin-top: 10px;"> </div>	10/10/2025 17:01



# Low Flow Groundwater Sampling Field Data Form


**Well ID: PA-26D**  
**Well Permit No:**

**Date: 2025/09/03**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> Low_Flow / 80 (ft)	<b>Reference Elevation</b> 40.33 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> 30.21 (ft) / None
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> (ft)
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> 95.6 (mL/min)	<b>Well Diameter / Well Screen Interval</b> 1 (in) / 77.51 - 82.51 ( )
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / 1.8 (l)	<b>Well Construction</b>

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
11:04	31.35		0.6	22.2	6.51	352.4	NM	3.27	-30.2	23.28	NM	clear
11:07	31.38	94.9	0.9	22.1	6.58	402.8	NM	2.15	-58.6	30.03	NM	clear
11:10	31.34	106.1	1.2	22.1	6.67	507	NM	1.21	-71.4	37.49	NM	clear
11:13	31.39	86.6	1.5	22.1	6.74	587	NM	1.05	-85.8	45.95	NM	slightly cloudy
11:16	31.35	94.9	1.8	22.1	6.81	604	NM	0.94	-94.3	56.22	NM	slightly cloudy
11:19	31.38	106.1	2.1	22	6.85	633	NM	0.89	-96.9	57.67	NM	slightly cloudy
11:22	31.34	86.6	2.4	22	6.9	649	NM	0.8	-99.1	57.95	NM	slightly cloudy

<b>Sample ID(s):</b> Default Value	<b>Additional Comments</b>	<b>SAMPLER NAME AND SIGNATURE</b>  Julia Metzler 	<b>Date Time</b>  10/10/2025 17:54
<b>Analysis:</b>			



# Low Flow Groundwater Sampling Field Data Form

**Well ID: PA-03**  
**Well Permit No:**

**Date: 2025/09/02**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> Low_Flow / 24 (ft)	<b>Reference Elevation</b> 37.1 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> 12.6 (ft) / None
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> (ft)
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> 102.9 (mL/min)	<b>Well Diameter / Well Screen Interval</b> (in) / 21.58 - 26.58 ( )
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / 2.4 (l)	<b>Well Construction</b>

**Well Head Vapor Measurements**

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
09:29	13.4		0.3	18.1	10.34	651	NM	1.35	-134.1	30.38	NM	
09:32	13.5	106.1	0.6	17.9	10.35	677	NM	0.61	-159.3	42.99	NM	
09:35	13.55	94.9	0.9	17.9	10.33	686	NM	0.47	-175.8	50.14	NM	
09:38	13.6	106.1	1.2	17.9	10.31	707	NM	0.3	-189.5	52.45	NM	
09:41	13.63	106.1	1.5	17.8	10.3	713	NM	0.28	-197.5	48.61	NM	
09:44	13.66	94.9	1.8	17.9	10.29	717	NM	0.25	-205.6	47.38	NM	
09:47	13.68	106.1	2.1	17.9	10.28	722	NM	0.23	-208.5	43.49	NM	
09:50	13.7	106.1	2.4	18	10.28	726	NM	0.2	-212.1	41.48	NM	

<b>Sample ID(s):</b> PA-03-090225	<b>Additional Comments</b>	<b>SAMPLER NAME AND SIGNATURE</b>  Julia Metzler 	<b>Date Time</b>  10/08/2025 23:23
<b>Analysis:</b>			



# Low Flow Groundwater Sampling Field Data Form

**Well ID: PA-08**  
**Well Permit No:**


**Date: 2025/09/02**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> Low_Flow / 30.5 (ft)	<b>Reference Elevation</b> 40.47 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> 28.6 (ft) / None
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> (ft)
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> 95.6 (mL/min)	<b>Well Diameter / Well Screen Interval</b> 1 (in) / 26.61 - 31.61 ( )
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / 1.5 (l)	<b>Well Construction</b>

### Well Head Vapor Measurements

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
07:28	28.68		0.3	16.9	6.86	2150	NM	1.84	53.3	25.21	NM	
07:31	28.7	94.9	0.6	16.8	6.81	2173	NM	1.05	10.2	24.76	NM	
07:34	28.7	106.1	0.9	16.8	6.78	2174	NM	0.67	-18.7	24.17	NM	
07:37	28.7	86.6	1.2	16.9	6.77	2168	NM	0.58	-21.4	24.21	NM	
07:40	28.7	94.9	1.5	16.9	6.78	2165	NM	0.51	-23.9	24.38	NM	

<b>Sample ID(s):</b> PA-08-090225	<b>Additional Comments</b>	<b>SAMPLER NAME AND SIGNATURE</b>  Julia Metzler 	<b>Date Time</b>  10/08/2025 21:14
<b>Analysis:</b>			



# Low Flow Groundwater Sampling Field Data Form

**Well ID: PA-09**  
**Well Permit No:**

**Date: 2025/09/02**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> Low_Flow / 30.5 (ft)	<b>Reference Elevation</b> 40.24 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> 29.5 (ft) / None
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> (ft)
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> 98.4 (mL/min)	<b>Well Diameter / Well Screen Interval</b> 1 (in) / 26.51 - 31.51 ( )
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / 1.5 (l)	<b>Well Construction</b>

**Well Head Vapor Measurements**

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
08:16	29.6		0.3	17.8	7.08	511	NM	2.07	90.1	28.45	NM	
08:19	29.6	106.1	0.6	17.6	7.01	487.5	NM	1.02	95	29.77	NM	
08:22	29.6	86.6	0.9	17.5	6.98	484.5	NM	0.68	92.7	32.28	NM	
08:25	29.62	94.9	1.2	17.5	6.96	492.1	NM	0.65	91.3	36.05	NM	
08:28	29.62	106.1	1.5	17.6	6.94	498.4	NM	0.58	90.2	35.87	NM	

<b>Sample ID(s):</b> PA-09-090225	<b>Additional Comments</b>	<b>SAMPLER NAME AND SIGNATURE</b>  Julia Metzler 	<b>Date Time</b>  10/08/2025 22:15
<b>Analysis:</b>			



# Low Flow Groundwater Sampling Field Data Form

**Well ID: PA-15I**  
**Well Permit No:**

**Date: 2025/09/03**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> Low_Flow / 42.5 (ft)	<b>Reference Elevation</b> 40.62 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> 30.35 (ft) / None
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> (ft)
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> 99.4 (mL/min)	<b>Well Diameter / Well Screen Interval</b> 1 (in) / 40.19 - 45.19 ( )
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / 1.88 (l)	<b>Well Construction</b>

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
10:09	30.6		0.38	19.9	7.26	436.6	NM	1.85	-62.5	26.74	NM	
10:12	30.55	106.1	0.68	19.9	7.32	529	NM	0.71	-89.6	33.3	NM	
10:15	30.58	94.9	0.98	19.6	7.36	631	NM	0.46	-96.4	46.9	NM	
10:18	30.55	94.9	1.28	19.6	7.37	642	NM	0.4	-98.6	50.7	NM	
10:21	30.6	106.1	1.58	19.8	7.37	655	NM	0.33	-104.9	57.18	NM	
10:24	30.57	94.9	1.88	19.8	7.38	661	NM	0.29	-107.3	67.89	NM	

<b>Sample ID(s):</b> PA-15I-090325	<b>Additional Comments</b>	<b>SAMPLER NAME AND SIGNATURE</b>  Julia Metzler 	<b>Date Time</b>  10/10/2025 17:20
<b>Analysis:</b>			



# Low Flow Groundwater Sampling Field Data Form


**Well ID: PA-16I**  
**Well Permit No:**

**Date: 2025/09/03**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> / ( )	<b>Reference Elevation</b> 40.3 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> ( ) / DNAPL: ( )
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> ( )
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> ( )	<b>Well Diameter / Well Screen Interval</b> ( ) / 40.74 - 45.74 ( )
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / ( )	<b>Well Construction</b>

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments

Sample ID(s):	Additional Comments	SAMPLER NAME AND SIGNATURE	Date Time
<b>Analysis:</b>		Julia Metzler 	10/10/2025 17:57



## Low Flow Groundwater Sampling Field Data Form

**Well ID: PA-17IR**  
**Well Permit No:**

**Date: 2025/09/02**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> Low_Flow / 40 (ft)	<b>Reference Elevation</b> 37.59 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> 27.58 (ft) / None
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> (ft)
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> 97.7 (mL/min)	<b>Well Diameter / Well Screen Interval</b> 2 (in) / 37.774 - 42.774 (ft)
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / 1.65 (l)	<b>Well Construction</b>

**Well Head Vapor Measurements**

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
10:24	28.4		0.45	20.2	9.28	1238	NM	1.4	-143.9	5.94	NM	
10:27	28.5	94.9	0.75	20.1	9.27	1267	NM	0.67	-155.1	5.01	NM	
10:30	28.56	106.1	1.05	20.2	9.24	1286	NM	0.39	-160.5	4.68	NM	
10:33	28.59	94.9	1.35	20.4	9.24	1286	NM	0.36	-163	4.6	NM	
10:36	28.62	94.9	1.65	20.4	9.22	1278	NM	0.3	-165.9	4.77	NM	

<b>Sample ID(s):</b> PA-17IR-090225	<b>Additional Comments</b>	<b>SAMPLER NAME AND SIGNATURE</b>	<b>Date Time</b>
<b>Analysis:</b>		Julia Metzler <div style="text-align: right; margin-top: 5px;"> </div>	10/08/2025 23:50



## Low Flow Groundwater Sampling Field Data Form

**Well ID: PA-27D**  
**Well Permit No:**

**Date: 2025/09/02**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> Low_Flow / 46.5 (ft)	<b>Reference Elevation</b> 37.1 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> 27.6 (ft) / None
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> (ft)
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> 93.6 (mL/min)	<b>Well Diameter / Well Screen Interval</b> 1 (in) / 45.24 - 47.24 ( )
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / 1.65 (l)	<b>Well Construction</b>

**Well Head Vapor Measurements**

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
11:19	28.75		0.45	21.2	6.92	3670	NM	1.96	-87.6	7.91	NM	
11:22	28.82	86.6	0.75	21.5	6.89	4025	NM	1.08	-84.7	6.15	NM	
11:25	28.88	94.9	1.05	21.6	6.89	4170	NM	1.06	-81.4	5.53	NM	
11:28	28.9	106.1	1.35	21.6	6.88	4258	NM	0.97	-78.3	4.94	NM	
11:31	28.92	86.6	1.65	21.8	6.88	4351	NM	0.95	-74.2	4.59	NM	

<b>Sample ID(s):</b> PA-27D-090225	<b>Additional Comments</b>	<b>SAMPLER NAME AND SIGNATURE</b>	<b>Date Time</b>
<b>Analysis:</b>		Julia Metzler <div style="text-align: right; margin-top: 10px;"> </div>	10/09/2025 17:21



# Low Flow Groundwater Sampling Field Data Form


**Well ID: PA-44I**  
**Well Permit No:**

**Date: 2025/09/03**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> Low_Flow / 43.5 (ft)	<b>Reference Elevation</b> 40.36 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> 30.2 (ft) / None
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> (ft)
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> 123.2 (mL/min)	<b>Well Diameter / Well Screen Interval</b> 2 (in) / 40.892 - 45.892 ( )
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / 2.26 (l)	<b>Well Construction</b>

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±3%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
06:08	30.25		0.48	17.8	6.75	1012	NM	1.82	-18.5	41.03	NM	
06:11	30.25	127.3	0.84	17.3	6.69	1090	NM	1.01	-25.7	35.83	NM	
06:14	30.25	127.3	1.2	16.9	6.67	1236	NM	0.74	-22.6	30.72	NM	
06:17	30.25	113.8	1.56	16.9	6.65	1310	NM	0.57	-20.1	28.95	NM	
06:20	30.25	127.3	1.92	16.7	6.64	1362	NM	0.5	-16.9	29.34	NM	
06:23	30.25	120.2	2.26	16.7	6.64	1390	NM	0.44	-15.5	31.65	NM	

<b>Sample ID(s):</b> PA-44i-090325	<b>Additional Comments</b>	<b>SAMPLER NAME AND SIGNATURE</b>  Julia Metzler 	<b>Date Time</b>  10/09/2025 18:12
<b>Analysis:</b>			



# Low Flow Groundwater Sampling Field Data Form

**Well ID: MWA-56D**  
**Well Permit No:**


**Date: 2025/09/04**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> Low_Flow / 57 (ft)	<b>Reference Elevation</b> 36.68 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> 29 (ft) / None
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> (ft)
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> 130 (mL/min)	<b>Well Diameter / Well Screen Interval</b> 2 (in) / 55.358 - 60.108 ( )
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / 2.13 (l)	<b>Well Construction</b>

**Well Head Vapor Measurements**

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±10%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
09:55	29.24	130	0	18.2	6.61	31891	NM	3.51	143.2	21.93	NM	
09:58	29.24	130	0.39	18	6.59	34591	NM	1.75	144.7	18.47	NM	
10:01	29.24	130	0.78	18	6.58	35569	NM	0.98	142.7	14.14	NM	
10:04	29.24	130	1.17	17.9	6.58	35854	NM	0.8	140.6	10.75	NM	
10:07	29.24	130	1.56	17.9	6.58	35930	NM	0.75	138.9	12.47	NM	

<b>Sample ID(s):</b> MWA-56d-090425	<b>Additional Comments</b>	<b>SAMPLER NAME AND SIGNATURE</b>	<b>Date Time</b>
	2" bladder pump used	Olivia Jacobs 	09/29/2025 08:38
<b>Analysis:</b>			



## Low Flow Groundwater Sampling Field Data Form

**Well ID: MWA-58D**  
**Well Permit No:**

**Date: 2025/09/04**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> Low_Flow / 57 (ft)	<b>Reference Elevation</b> 37.97 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> 30.65 (ft) / None
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> (ft)
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> 130 (mL/min)	<b>Well Diameter / Well Screen Interval</b> 2 (in) / 55.978 - 60.728 ( )
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / 2.91 (l)	<b>Well Construction</b>

**Well Head Vapor Measurements**

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±10%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
08:57	30.8	130	0	17.7	6.56	43674	NM	2.53	132.4	14.22	NM	
09:00	30.8	130	0.39	17.6	6.55	46623	NM	1.44	128.4	11.18	NM	
09:03	30.8	130	0.78	17.6	6.55	47563	NM	1.02	123.9	8.83	NM	
09:06	30.8	130	1.17	17.6	6.55	47861	NM	0.9	121.4	9.06	NM	
09:09	30.8	130	1.56	17.6	6.55	48156	NM	0.76	118.7	8.72	NM	
09:12	30.8	130	1.95	17.6	6.55	48273	NM	0.72	117	7.54	NM	
09:15	30.8	130	2.34	17.7	6.55	48371	NM	0.68	115.6	7.5	NM	

<b>Sample ID(s):</b> DUP-02-090425,MWA-58d-090425	<b>Additional Comments</b> 2" bladder pump used.	<b>SAMPLER NAME AND SIGNATURE</b> Olivia Jacobs	<b>Date Time</b> 09/29/2025 08:59
<b>Analysis:</b>			



# Low Flow Groundwater Sampling Field Data Form


**Well ID: PA-22D**  
**Well Permit No:**

**Date: 2025/09/04**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> Low_Flow / 60 (ft)	<b>Reference Elevation</b> 38.75 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> 29.2 (ft) / None
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> (ft)
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> 100 (mL/min)	<b>Well Diameter / Well Screen Interval</b> 1 (in) / 57.39 - 62.39 ( )
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / 2 (l)	<b>Well Construction</b>

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±10%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
08:03	29.4	100	0	18.1	7.1	15675	NM	1.67	-20.1	19.2	NM	
08:06	29.4	100	0.3	18.1	7.09	14633	NM	1.14	-10.3	17.78	NM	
08:09	29.4	100	0.6	18	7.1	14400	NM	0.98	-2.9	22.14	NM	
08:12	29.4	100	0.9	17.9	7.1	14537	NM	0.91	5.4	29.63	NM	
08:15	29.4	100	1.2	17.8	7.1	14819	NM	0.87	10.1	31.5	NM	
08:18	29.4	100	1.5	17.8	7.1	15240	NM	0.85	12.9	30.45	NM	

<b>Sample ID(s):</b> PA-22d-090425	<b>Additional Comments</b> 1" bladder pump used	<b>SAMPLER NAME AND SIGNATURE</b> Olivia Jacobs 	<b>Date Time</b> 09/29/2025 08:49
<b>Analysis:</b>			



# Low Flow Groundwater Sampling Field Data Form

**Well ID: PA-32I**  
**Well Permit No:**


**Date: 2025/09/04**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> Low_Flow / 37.5 (ft)	<b>Reference Elevation</b> 36.28 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> 25 (ft) / None
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> (ft)
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> 120 (mL/min)	<b>Well Diameter / Well Screen Interval</b> 2 (in) / 35.135 - 40.135 ( )
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / 1.88 (l)	<b>Well Construction</b>

**Well Head Vapor Measurements**

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±10%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
14:36	25.1	120	0	22.9	7.86	2020	NM	0.91	-22.1	19.13	NM	
14:39	25.1	120	0.36	22.9	7.83	1720	NM	0.36	-84.4	25.89	NM	
14:42	25.1	120	0.72	22.7	7.86	1459	NM	0.29	-99.8	41.74	NM	
14:45	25.1	120	1.08	22.6	7.91	1430	NM	0.26	-102.5	64.3	NM	
14:48	25.1	120	1.44	22.6	7.93	1418	NM	0.24	-106.1	80.42	NM	

<b>Sample ID(s):</b> PA-32i-090425	<b>Additional Comments</b>	<b>SAMPLER NAME AND SIGNATURE</b>	<b>Date Time</b>
	2" bladder pump used.	Olivia Jacobs 	09/29/2025 08:55
<b>Analysis:</b>			



## Low Flow Groundwater Sampling Field Data Form

**Well ID: PA-04**  
**Well Permit No:**

**Date: 2025/09/04**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> Low_Flow / 25.5 (ft)	<b>Reference Elevation</b> 36.67 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> 12.1 (ft) / None
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> (ft)
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> 100 (mL/min)	<b>Well Diameter / Well Screen Interval</b> 1 (in) / 22.75 - 27.75 ( )
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / 1.8 (l)	<b>Well Construction</b>

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±10%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
11:53	12.22	100	0	21	10.02	708	NM	1.78	29.2	99.4	NM	
11:56	12.22	100	0.3	20.5	10.06	706	NM	1.05	19	99.22	NM	
11:59	12.22	100	0.6	20.6	10.04	712	NM	0.73	10.6	100.87	NM	
12:02	12.22	100	0.9	20.7	10.02	715	NM	0.59	4.3	95.75	NM	
12:05	12.22	100	1.2	20.7	10.01	718	NM	0.5	0.3	99.64	NM	
12:08	12.22	100	1.5	20.8	10	720	NM	0.45	-2.5	97.21	NM	

<b>Sample ID(s):</b> PA-04-090425	<b>Additional Comments</b>	<b>SAMPLER NAME AND SIGNATURE</b>	<b>Date Time</b>
<b>Analysis:</b>	Peri pump used	Olivia Jacobs	09/29/2025 08:43



## Low Flow Groundwater Sampling Field Data Form

**Well ID: PA-18D**  
**Well Permit No:**

**Date: 2025/09/04**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> Low_Flow / 42 (ft)	<b>Reference Elevation</b> 36.55 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> 26.45 (ft) / None
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> (ft)
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> 100 (mL/min)	<b>Well Diameter / Well Screen Interval</b> 1 (in) / 41.57 - 43.57 ( )
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / 1.9 (l)	<b>Well Construction</b>

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±10%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
13:19	27.82	100	0	24.2	8.59	1199	NM	1.48	29.7	30.57	NM	
13:22	27.82	100	0.3	24.2	8.57	1245	NM	1.08	11.6	37.59	NM	
13:25	27.84	100	0.6	24.5	8.55	1265	NM	0.72	-35.1	60.25	NM	
13:28	27.84	100	0.9	24.6	8.52	1301	NM	0.5	-58.5	80.97	NM	
13:31	27.84	100	1.2	24.7	8.51	1310	NM	0.42	-61.8	90.59	NM	
13:34	27.86	100	1.5	24.7	8.51	1313	NM	0.38	-65.4	98.23	NM	

<b>Sample ID(s):</b> PA-18d-090425	<b>Additional Comments</b>	<b>SAMPLER NAME AND SIGNATURE</b>	<b>Date Time</b>
<b>Analysis:</b>	Peri pump used.	Olivia Jacobs	09/29/2025 08:47



# Low Flow Groundwater Sampling Field Data Form

**Well ID: PA-31**  
**Well Permit No:**


**Date: 2025/09/04**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> Low_Flow / 22 (ft)	<b>Reference Elevation</b> 36.25 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> 11.85 (ft) / None
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> (ft)
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> 120 (mL/min)	<b>Well Diameter / Well Screen Interval</b> 2 (in) / 19.395 - 24.395 ( )
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / 1.88 (l)	<b>Well Construction</b>

### Well Head Vapor Measurements

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±10%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
14:05	12.1	120	0	21.9	9.57	1444	NM	1.6	5.1	21.36	NM	
14:08	12.15	120	0.36	22	9.62	925	NM	0.7	-15.8	36.31	NM	
14:11	12.17	120	0.72	21.7	9.62	805	NM	0.5	-18.5	78.11	NM	
14:14	12.19	120	1.08	21.7	9.62	775	NM	0.45	-19.9	91.34	NM	
14:17	12.21	120	1.44	21.8	9.6	769	NM	0.39	-21	99.84	NM	

<b>Sample ID(s):</b> PA-31-090425	<b>Additional Comments</b>	<b>SAMPLER NAME AND SIGNATURE</b>	<b>Date Time</b>
	2" bladder pump used.	Olivia Jacobs 	09/29/2025 08:53
<b>Analysis:</b>			



## Low Flow Groundwater Sampling Field Data Form

**Well ID: PA-24D**  
**Well Permit No:**

**Date: 2025/09/04**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> Low_Flow / 79 (ft)	<b>Reference Elevation</b> 39.06 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> 31.1 (ft) / None
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> (ft)
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> 100 (mL/min)	<b>Well Diameter / Well Screen Interval</b> 1 (in) / 78.26 - 83.26 ( )
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / 2.1 (l)	<b>Well Construction</b>

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±10%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
06:12	32.1	100	0	17.7	6.55	72434	NM	2.02	-74.3	34.12	NM	
06:15	32.15	100	0.3	17.7	6.58	72687	NM	1.53	-75.8	45.17	NM	
06:18	32.18	100	0.6	17.5	6.6	73108	NM	1.21	-79.3	67.78	NM	
06:21	32.2	100	0.9	17.4	6.61	73375	NM	0.98	-81.9	89.65	NM	
06:24	32.22	100	1.2	17.2	6.62	73496	NM	0.85	-82.8	93.89	NM	
06:27	32.25	100	1.5	17.3	6.63	73642	NM	0.84	-83.5	99.34	NM	

<b>Sample ID(s):</b> PA-24d-090425	<b>Additional Comments</b>	<b>SAMPLER NAME AND SIGNATURE</b>	<b>Date Time</b>
<b>Analysis:</b>	1" bladder pump used	Olivia Jacobs	09/29/2025 08:51



# Low Flow Groundwater Sampling Field Data Form

**Well ID: MWA-63**  
**Well Permit No:**


**Date: 2025/09/04**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> Low_Flow / 28 (ft)	<b>Reference Elevation</b> 36.29 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> 26.95 (ft) / None
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> (ft)
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> 100 (mL/min)	<b>Well Diameter / Well Screen Interval</b> 2 (in) / 19.713 - 29.513 ( )
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / 1.5 (l)	<b>Well Construction</b>

### Well Head Vapor Measurements

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±10%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
11:12	27.05	100	0	21.7	6.96	2962	NM	5.88	117.4	11.3	NM	
11:15	27.1	100	0.3	21.2	6.97	2193	NM	5.79	121.2	9.14	NM	
11:18	27.12	100	0.6	20.5	6.96	845	NM	5.76	124.9	8.33	NM	
11:21	22.14	100	0.9	20.3	6.99	838	NM	5.72	121.9	7.22	NM	
11:24	22.16	100	1.2	20.4	6.99	824	NM	5.68	123.7	7.16	NM	

<b>Sample ID(s):</b> MWA-63-090425	<b>Additional Comments</b>	<b>SAMPLER NAME AND SIGNATURE</b>	<b>Date Time</b>
	1" bladder pump used	Olivia Jacobs 	09/29/2025 08:41
<b>Analysis:</b>			



## Low Flow Groundwater Sampling Field Data Form

**Well ID: PA-10I**  
**Well Permit No:**

**Date: 2025/09/04**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> Low_Flow / 35 (ft)	<b>Reference Elevation</b> 36.67 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> 25.1 (ft) / None
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> (ft)
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> 110 (mL/min)	<b>Well Diameter / Well Screen Interval</b> 1 (in) / 32.65 - 37.65 ( )
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / 1.98 (l)	<b>Well Construction</b>

**Well Head Vapor Measurements**

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±10%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
12:27	25.18	110	0	20.8	8.01	700	NM	1.64	50.7	17.18	NM	
12:30	25.22	110	0.33	20.8	7.83	692	NM	0.6	-35.9	12.31	NM	
12:33	25.25	110	0.66	20.8	7.77	691	NM	0.42	-98.2	9.5	NM	
12:36	25.25	110	0.99	20.9	7.75	688	NM	0.3	-107.2	9.12	NM	
12:39	25.25	110	1.32	20.9	7.74	686	NM	0.26	-112.3	9.05	NM	
12:42	25.25	110	1.65	21	7.74	685	NM	0.22	-116.4	9.28	NM	

<b>Sample ID(s):</b> PA-10i-090425	<b>Additional Comments</b>	<b>SAMPLER NAME AND SIGNATURE</b>	<b>Date Time</b>
<b>Analysis:</b>	Peri pump used. Void around well.	Olivia Jacobs	09/29/2025 08:45



# Low Flow Groundwater Sampling Field Data Form


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

**Date: 2025/09/04**

<b>Site ID</b> ARKEMA-PORTLAND	<b>Purge Method / Pump Intake Depth</b> Low_Flow / 57 (ft)	<b>Reference Elevation</b> 38.36 (ft)
<b>Site Address</b> , Portland, US-OR	<b>Purge Equipment</b> NA	<b>Depth to Water / Free Product</b> 30.9 (ft) / None
<b>Project Number</b> 0773823	<b>Sample Equipment</b> NA	<b>Total Well Depth</b> (ft)
<b>Project Name</b> 20250902-GWMonitor	<b>Average Purge Rate</b> 130 (mL/min)	<b>Well Diameter / Well Screen Interval</b> 2 (in) / 54.42 - 59.42 ( )
<b>Sampler</b> Scott Terranova	<b>Volume of Water in Well / Total Volume Purged</b> ( ) / 2.52 (l)	<b>Well Construction</b>

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

Time	DTW (ft)	Flow Rate (mL/min)	Purge Volume (l)	Temperature (C) ±3%	pH ±0.2pH units	Specific Conductivity (uS/cm) ±10%	Total Conductivity (uS/cm) ±10%	Dissolved Oxygen (mg/L) ±10%	ORP (mV) ±10 mV	Turbidity (NTU) ±10%	Total Dissolved Solids(ppm) ±10%	Comments
07:06	31	130	0	17.9	6.52	49287	NM	2.19	26.2	37.85	NM	
07:09	31	130	0.39	17.8	6.51	54057	NM	1.12	53.7	19.18	NM	
07:12	31	130	0.78	17.8	6.51	56927	NM	0.91	64.7	15.73	NM	
07:15	31	130	1.17	17.7	6.5	57950	NM	0.75	78.1	10.5	NM	
07:18	31	130	1.56	17.7	6.5	58311	NM	0.7	80.9	9.58	NM	
07:21	31	130	1.95	17.8	6.5	58468	NM	0.66	84.3	9.45	NM	

<b>Sample ID(s):</b> MWA-31i(d)-090425	<b>Additional Comments</b>	<b>SAMPLER NAME AND SIGNATURE</b>	<b>Date Time</b>
	2" bladder pump used	Olivia Jacobs 	09/29/2025 08:36
<b>Analysis:</b>			



## APPENDIX B      LABORATORY ANALYTICAL REPORTS

 **ANALYTICAL REPORT****PREPARED FOR**

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

Generated 9/30/2025 10:40:40 AM Revision 1

**JOB DESCRIPTION**

Arkema - Q3 2025 Groundwater Event

**JOB NUMBER**

580-153790-1

# Eurofins Seattle

## Job Notes

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

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

## Authorization



Authorized for release by  
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# Case Narrative

Client: ERM-West  
Project: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

Job ID: 580-153790-1

Eurofins Seattle

## Job Narrative 580-153790-1

### REVISION

The report being provided is a revision of the original report sent on 9/15/2025. The report (revision 1) is being revised due to Correction on sampling time for samples 580-153790-9 through 580-153790-16..

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

### **Receipt**

The samples were received on 9/4/2025 12:07 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 continuing calibration verification (CCV) associated with batch 580-502659 recovered above the upper control limit for Methyl tert-butyl ether, 1,2-Dichloroethane, Dichlorobromomethane and 1,1,2,2-Tetrachloroethane. The samples associated with this CCV were non-detects above the RL for the affected analytes; therefore, the data have been reported. The associated samples are: TB-090225A (580-153790-1), MWA-82-090225 (580-153790-2), PA-08-090225 (580-153790-3), PA-09-090225 (580-153790-4), PA-03-090225 (580-153790-5), PA-17iR-090225 (580-153790-6), PA-27d-090225 (580-153790-7) and (CCVIS 580-502659/3).

Method 8260D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 580-502659 recovered outside control limits for the following analytes: 1,1-Dichloroethane, cis-1,2-Dichloroethene and Chloroform. These analytes were biased high in the LCS and were not detected above the RL in the associated samples; therefore, the data have been reported.

Method 8260D: Surrogate recovery for the following sample and QC was outside the upper control limit: TB-090225A (580-153790-1), MWA-82-090225 (580-153790-2), PA-08-090225 (580-153790-3), PA-09-090225 (580-153790-4), PA-03-090225 (580-153790-5), PA-17iR-090225 (580-153790-6), PA-27d-090225 (580-153790-7) and (MB 580-502659/7). This QC and associated samples did not contain any target analytes above the RL; therefore, re-extraction and/or re-analysis was not performed.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-502934 recovered outside acceptance criteria, low biased, for Carbon disulfide, 1,1-Dichloroethene, 1,1,1-Trichloroethane, Carbon tetrachloride, 1,1-Dichloropropene, Tetrachloroethene, Isopropylbenzene and Hexachlorobutadiene. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8260D: The [QC] associated with 580-502934 is compliant under 8260D\_LL criteria for N-Propylbenzene. The software does not display the data to the whole number as is listed in the method (i.e. limit of 20%). When applying the evaluation to a whole number, the QC passes the criteria.

Method 8260D: 1,2-Dichloroethane-d4 (Surr) recovery for the following sample was outside the upper control limit: PA-23d-090325 (580-153790-16). This sample did not contain any target analytes above the RL; therefore, re-extraction and/or re-analysis was not performed.

Method 8260D: The continuing calibration verification (CCV) associated with batch 580-502934 recovered above the upper control limit for Methylene Chloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data

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# Case Narrative

Client: ERM-West  
Project: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

## Job ID: 580-153790-1 (Continued)

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have been reported. The associated samples are: MWA-82-090225 (580-153790-2), PA-08-090225 (580-153790-3), RB-01-090325 (580-153790-8), PA-44i-090325 (580-153790-9), MWA-81i-090325 (580-153790-10), MWA-41-090325 (580-153790-11), Dup-01-090325 (580-153790-12), PA-23d-090325 (580-153790-16) and (CCVIS 580-502934/3).

Method 8260D: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 580-502934 recovered outside control limits for the following analytes: Methylene Chloride. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8260D\_LL: The continuing calibration verification (CCV) associated with batch 580-502659 recovered above the upper control limit for Methyl tert-butyl ether, 1,2-Dichloroethane, Dichlorobromomethane and 1,1,2,2-Tetrachloroethane. The samples associated with this CCV were non-detects above the RL for the affected analytes; therefore, the data have been reported. The associated samples are: TB-090225A (580-153790-1), MWA-82-090225 (580-153790-2), PA-08-090225 (580-153790-3), PA-09-090225 (580-153790-4), PA-03-090225 (580-153790-5), PA-17iR-090225 (580-153790-6), PA-27d-090225 (580-153790-7) and (CCVIS 580-502659/3).

Method 8260D\_LL: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 580-502659 recovered outside control limits for the following analytes: 1,1-Dichloroethane, cis-1,2-Dichloroethene and Chloroform. These analytes were biased high in the LCS and were not detected above the RL in the associated samples; therefore, the data have been reported.

Method 8260D\_LL: Surrogate recovery for the following sample and QC was outside the upper control limit: TB-090225A (580-153790-1), MWA-82-090225 (580-153790-2), PA-08-090225 (580-153790-3), PA-09-090225 (580-153790-4), PA-03-090225 (580-153790-5), PA-17iR-090225 (580-153790-6), PA-27d-090225 (580-153790-7) and (MB 580-502659/7). This QC and associated samples did not contain any target analytes above the RL; therefore, re-extraction and/or re-analysis was not performed.

Method 8260D\_LL: Surrogate recovery for the following LCS was outside the upper control limit: (LCS 580-502659/4). The associated samples did not contain any target analytes above the RL; therefore, re-extraction and/or re-analysis was not performed.

Method 8260D\_LL: The continuing calibration verification (CCV) associated with batch 580-502771 recovered above the upper control limit for Trichlorofluoromethane, Methyl tert-butyl ether, 2,2-Dichloropropane, Chloroform, 1,1,1-Trichloroethane, Carbon tetrachloride, 1,1-Dichloropropene, 1,2-Dichloroethane, Dichlorobromomethane, trans-1,3-Dichloropropene and 1,1,1,2-Tetrachloroethane. The samples associated with this CCV were non-detects above the RL for the affected analytes; therefore, the data have been reported. The associated samples are: PA-25d-090325 (580-153790-13), PA-15i-090325 (580-153790-14), PA-26d-090325 (580-153790-15) and (CCVIS 580-502771/3).

Method 8260D\_LL: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 580-502771 recovered outside control limits for the following analytes: 2,2-Dichloropropane, 1,1,1-Trichloroethane and 1,1-Dichloropropene. These analytes were biased high in the LCS and were not detected above the RL in the associated samples; therefore, the data have been reported.

Method 8260D\_LL: The continuing calibration verification (CCV) associated with batch 580-502934 recovered outside acceptance criteria, low biased, for Carbon disulfide, 1,1-Dichloroethene, 1,1,1-Trichloroethane, Carbon tetrachloride, 1,1-Dichloropropene, Tetrachloroethene, Isopropylbenzene and Hexachlorobutadiene. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported.

Method 8260D\_LL: The [QC] associated with 580-502934 is compliant under 8260D\_LL criteria for N-Propylbenzene. The software does not display the data to the whole number as is listed in the method (i.e. limit of 20%). When applying the evaluation to a whole number, the QC passes the criteria.

Method 8260D\_LL: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 580-502934 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\_LL: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for analytical batch 580-502934 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8260D\_LL: The continuing calibration verification (CCV) associated with batch 580-502934 recovered above the upper control limit for Methylene Chloride. The samples associated with this CCV were non-detects for the affected analytes; therefore,

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# Case Narrative

Client: ERM-West  
Project: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

## Job ID: 580-153790-1 (Continued)

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the data have been reported. The associated samples are: MWA-82-090225 (580-153790-2), PA-08-090225 (580-153790-3), RB-01-090325 (580-153790-8), PA-44i-090325 (580-153790-9), MWA-81i-090325 (580-153790-10), MWA-41-090325 (580-153790-11), Dup-01-090325 (580-153790-12), PA-23d-090325 (580-153790-16) and (CCVIS 580-502934/3).

Method 8260D\_LL: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 580-502934 recovered outside control limits for the following analytes: Methylene Chloride. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

### HPLC/IC

Method 314.0: The following samples were diluted due to the nature of the sample matrix: PA-08-090225 (580-153790-3), PA-03-090225 (580-153790-5), PA-17iR-090225 (580-153790-6), PA-27d-090225 (580-153790-7) and PA-44i-090325 (580-153790-9). Elevated reporting limits (RLs) are provided.

Method 314.0: The following samples were diluted due to the nature of the sample matrix: PA-15i-090325 (580-153790-14) and PA-23d-090325 (580-153790-16). Elevated reporting limits (RLs) are provided.

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

### General Chemistry

Method 300.0\_28D: The matrix spike duplicate (MSD) recoveries for analytical batch 580-503131 were outside control limits. Non-homogeneity is suspected because the associated laboratory control sample (LCS) recovery was 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

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.

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

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: TB-090225A**

**Lab Sample ID: 580-153790-1**

**Date Collected: 09/02/25 06:30**

**Matrix: Water**

**Date Received: 09/04/25 12:07**

**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			09/09/25 00:54	1
Chloromethane	ND		0.50	0.14	ug/L			09/09/25 00:54	1
Vinyl chloride	ND		0.10	0.040	ug/L			09/09/25 00:54	1
Bromomethane	ND		0.50	0.13	ug/L			09/09/25 00:54	1
Chloroethane	ND		0.50	0.24	ug/L			09/09/25 00:54	1
Carbon disulfide	ND		0.40	0.20	ug/L			09/09/25 00:54	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			09/09/25 00:54	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			09/09/25 00:54	1
Acetone	ND		10	3.1	ug/L			09/09/25 00:54	1
Methylene Chloride	ND		5.0	1.2	ug/L			09/09/25 00:54	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			09/09/25 00:54	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/09/25 00:54	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			09/09/25 00:54	1
1,1-Dichloroethane	ND	*+	0.20	0.064	ug/L			09/09/25 00:54	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			09/09/25 00:54	1
cis-1,2-Dichloroethene	ND	*+	0.20	0.055	ug/L			09/09/25 00:54	1
Chlorobromomethane	ND		0.20	0.050	ug/L			09/09/25 00:54	1
Chloroform	ND	*+	0.20	0.030	ug/L			09/09/25 00:54	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			09/09/25 00:54	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			09/09/25 00:54	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			09/09/25 00:54	1
Benzene	ND		0.20	0.030	ug/L			09/09/25 00:54	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			09/09/25 00:54	1
Trichloroethene	ND		0.20	0.066	ug/L			09/09/25 00:54	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			09/09/25 00:54	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			09/09/25 00:54	1
Dibromomethane	ND		0.20	0.062	ug/L			09/09/25 00:54	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			09/09/25 00:54	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			09/09/25 00:54	1
Toluene	ND		0.20	0.050	ug/L			09/09/25 00:54	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			09/09/25 00:54	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			09/09/25 00:54	1
Tetrachloroethene	ND		0.50	0.084	ug/L			09/09/25 00:54	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			09/09/25 00:54	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			09/09/25 00:54	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			09/09/25 00:54	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/09/25 00:54	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			09/09/25 00:54	1
Ethylbenzene	ND		0.20	0.082	ug/L			09/09/25 00:54	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			09/09/25 00:54	1
o-Xylene	ND		0.50	0.23	ug/L			09/09/25 00:54	1
Styrene	ND		1.0	0.33	ug/L			09/09/25 00:54	1
Bromoform	ND		0.50	0.16	ug/L			09/09/25 00:54	1
Isopropylbenzene	ND		1.0	0.27	ug/L			09/09/25 00:54	1
Bromobenzene	ND		0.20	0.038	ug/L			09/09/25 00:54	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			09/09/25 00:54	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			09/09/25 00:54	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/09/25 00:54	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			09/09/25 00:54	1

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# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: TB-090225A**

**Lab Sample ID: 580-153790-1**

**Date Collected: 09/02/25 06:30**

**Matrix: Water**

**Date Received: 09/04/25 12:07**

**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			09/09/25 00:54	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			09/09/25 00:54	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/09/25 00:54	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			09/09/25 00:54	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/09/25 00:54	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			09/09/25 00:54	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			09/09/25 00:54	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/09/25 00:54	1
n-Butylbenzene	ND		1.0	0.35	ug/L			09/09/25 00:54	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			09/09/25 00:54	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			09/09/25 00:54	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			09/09/25 00:54	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			09/09/25 00:54	1
Naphthalene	ND		1.5	0.52	ug/L			09/09/25 00:54	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			09/09/25 00:54	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
<i>Toluene-d8 (Surr)</i>	95		80 - 120					09/09/25 00:54	1
<i>Dibromofluoromethane (Surr)</i>	120		80 - 120					09/09/25 00:54	1
<i>4-Bromofluorobenzene (Surr)</i>	96		80 - 120					09/09/25 00:54	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	119		80 - 120					09/09/25 00:54	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: MWA-82-090225**

**Lab Sample ID: 580-153790-2**

Date Collected: 09/02/25 07:00

Matrix: Water

Date Received: 09/04/25 12:07

**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			09/09/25 04:17	1
Chloromethane	ND		0.50	0.14	ug/L			09/09/25 04:17	1
Vinyl chloride	ND		0.10	0.040	ug/L			09/09/25 04:17	1
Bromomethane	ND		0.50	0.13	ug/L			09/09/25 04:17	1
Chloroethane	ND		0.50	0.24	ug/L			09/09/25 04:17	1
Carbon disulfide	ND		0.40	0.20	ug/L			09/09/25 04:17	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			09/09/25 04:17	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			09/09/25 04:17	1
Acetone	ND		10	3.1	ug/L			09/09/25 04:17	1
Methylene Chloride	ND		5.0	1.2	ug/L			09/09/25 04:17	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			09/09/25 04:17	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/09/25 04:17	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			09/09/25 04:17	1
1,1-Dichloroethane	ND	*+	0.20	0.064	ug/L			09/09/25 04:17	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			09/09/25 04:17	1
cis-1,2-Dichloroethene	ND	*+	0.20	0.055	ug/L			09/09/25 04:17	1
Chlorobromomethane	ND		0.20	0.050	ug/L			09/09/25 04:17	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			09/09/25 04:17	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			09/09/25 04:17	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			09/09/25 04:17	1
Benzene	ND		0.20	0.030	ug/L			09/09/25 04:17	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			09/09/25 04:17	1
Trichloroethene	ND		0.20	0.066	ug/L			09/09/25 04:17	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			09/09/25 04:17	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			09/09/25 04:17	1
Dibromomethane	ND		0.20	0.062	ug/L			09/09/25 04:17	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			09/09/25 04:17	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			09/09/25 04:17	1
Toluene	ND		0.20	0.050	ug/L			09/09/25 04:17	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			09/09/25 04:17	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			09/09/25 04:17	1
<b>Tetrachloroethene</b>	<b>0.31</b>	<b>J</b>	0.50	0.084	ug/L			09/09/25 04:17	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			09/09/25 04:17	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			09/09/25 04:17	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			09/09/25 04:17	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/09/25 04:17	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			09/09/25 04:17	1
Ethylbenzene	ND		0.20	0.082	ug/L			09/09/25 04:17	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			09/09/25 04:17	1
o-Xylene	ND		0.50	0.23	ug/L			09/09/25 04:17	1
Styrene	ND		1.0	0.33	ug/L			09/09/25 04:17	1
Bromoform	ND		0.50	0.16	ug/L			09/09/25 04:17	1
Isopropylbenzene	ND		1.0	0.27	ug/L			09/09/25 04:17	1
Bromobenzene	ND		0.20	0.038	ug/L			09/09/25 04:17	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			09/09/25 04:17	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			09/09/25 04:17	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/09/25 04:17	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			09/09/25 04:17	1
4-Chlorotoluene	ND		0.30	0.12	ug/L			09/09/25 04:17	1

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# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: MWA-82-090225**

**Lab Sample ID: 580-153790-2**

Date Collected: 09/02/25 07:00

Matrix: Water

Date Received: 09/04/25 12:07

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			09/09/25 04:17	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/09/25 04:17	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			09/09/25 04:17	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/09/25 04:17	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			09/09/25 04:17	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			09/09/25 04:17	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/09/25 04:17	1
n-Butylbenzene	ND		1.0	0.35	ug/L			09/09/25 04:17	1
<b>1,2-Dichlorobenzene</b>	<b>0.053</b>	<b>J</b>	0.30	0.038	ug/L			09/09/25 04:17	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			09/09/25 04:17	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			09/09/25 04:17	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			09/09/25 04:17	1
Naphthalene	ND		1.5	0.52	ug/L			09/09/25 04:17	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			09/09/25 04:17	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Toluene-d8 (Surr)	95		80 - 120					09/09/25 04:17	1
Dibromofluoromethane (Surr)	116		80 - 120					09/09/25 04:17	1
4-Bromofluorobenzene (Surr)	92		80 - 120					09/09/25 04:17	1
1,2-Dichloroethane-d4 (Surr)	126	S1+	80 - 120					09/09/25 04:17	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloroform</b>	<b>1.3</b>		0.20	0.030	ug/L			09/11/25 02:26	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Toluene-d8 (Surr)	97		80 - 120					09/11/25 02:26	1
Dibromofluoromethane (Surr)	113		80 - 120					09/11/25 02:26	1
4-Bromofluorobenzene (Surr)	99		80 - 120					09/11/25 02:26	1
1,2-Dichloroethane-d4 (Surr)	115		80 - 120					09/11/25 02:26	1

**Method: EPA 314.0 - Perchlorate (IC) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Perchlorate</b>	<b>150</b>		10	4.5	ug/L			09/09/25 19:26	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride (EPA 300.0)</b>	<b>8.8</b>		1.5	0.43	mg/L			09/11/25 16:43	1

# Client Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: PA-08-090225**

**Lab Sample ID: 580-153790-3**

Date Collected: 09/02/25 07:41

Matrix: Water

Date Received: 09/04/25 12:07

**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			09/09/25 04:40	1
Chloromethane	ND		0.50	0.14	ug/L			09/09/25 04:40	1
Vinyl chloride	ND		0.10	0.040	ug/L			09/09/25 04:40	1
Bromomethane	ND		0.50	0.13	ug/L			09/09/25 04:40	1
Chloroethane	ND		0.50	0.24	ug/L			09/09/25 04:40	1
Carbon disulfide	ND		0.40	0.20	ug/L			09/09/25 04:40	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			09/09/25 04:40	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			09/09/25 04:40	1
Acetone	ND		10	3.1	ug/L			09/09/25 04:40	1
Methylene Chloride	ND		5.0	1.2	ug/L			09/09/25 04:40	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			09/09/25 04:40	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/09/25 04:40	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			09/09/25 04:40	1
1,1-Dichloroethane	ND	*+	0.20	0.064	ug/L			09/09/25 04:40	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			09/09/25 04:40	1
cis-1,2-Dichloroethene	ND	*+	0.20	0.055	ug/L			09/09/25 04:40	1
Chlorobromomethane	ND		0.20	0.050	ug/L			09/09/25 04:40	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			09/09/25 04:40	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			09/09/25 04:40	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			09/09/25 04:40	1
Benzene	ND		0.20	0.030	ug/L			09/09/25 04:40	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			09/09/25 04:40	1
Trichloroethene	ND		0.20	0.066	ug/L			09/09/25 04:40	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			09/09/25 04:40	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			09/09/25 04:40	1
Dibromomethane	ND		0.20	0.062	ug/L			09/09/25 04:40	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			09/09/25 04:40	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			09/09/25 04:40	1
Toluene	ND		0.20	0.050	ug/L			09/09/25 04:40	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			09/09/25 04:40	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			09/09/25 04:40	1
<b>Tetrachloroethene</b>	<b>0.13</b>	<b>J</b>	0.50	0.084	ug/L			09/09/25 04:40	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			09/09/25 04:40	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			09/09/25 04:40	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			09/09/25 04:40	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/09/25 04:40	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			09/09/25 04:40	1
Ethylbenzene	ND		0.20	0.082	ug/L			09/09/25 04:40	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			09/09/25 04:40	1
o-Xylene	ND		0.50	0.23	ug/L			09/09/25 04:40	1
Styrene	ND		1.0	0.33	ug/L			09/09/25 04:40	1
Bromoform	ND		0.50	0.16	ug/L			09/09/25 04:40	1
Isopropylbenzene	ND		1.0	0.27	ug/L			09/09/25 04:40	1
Bromobenzene	ND		0.20	0.038	ug/L			09/09/25 04:40	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			09/09/25 04:40	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			09/09/25 04:40	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/09/25 04:40	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			09/09/25 04:40	1
4-Chlorotoluene	ND		0.30	0.12	ug/L			09/09/25 04:40	1

Eurolins Seattle

# Client Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: PA-08-090225**

**Lab Sample ID: 580-153790-3**

Date Collected: 09/02/25 07:41

Matrix: Water

Date Received: 09/04/25 12:07

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			09/09/25 04:40	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/09/25 04:40	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			09/09/25 04:40	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/09/25 04:40	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			09/09/25 04:40	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			09/09/25 04:40	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/09/25 04:40	1
n-Butylbenzene	ND		1.0	0.35	ug/L			09/09/25 04:40	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			09/09/25 04:40	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			09/09/25 04:40	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			09/09/25 04:40	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			09/09/25 04:40	1
Naphthalene	ND		1.5	0.52	ug/L			09/09/25 04:40	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			09/09/25 04:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	93		80 - 120					09/09/25 04:40	1
Dibromofluoromethane (Surr)	118		80 - 120					09/09/25 04:40	1
4-Bromofluorobenzene (Surr)	95		80 - 120					09/09/25 04:40	1
1,2-Dichloroethane-d4 (Surr)	110		80 - 120					09/09/25 04:40	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	0.24		0.20	0.030	ug/L			09/11/25 02:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120					09/11/25 02:48	1
Dibromofluoromethane (Surr)	105		80 - 120					09/11/25 02:48	1
4-Bromofluorobenzene (Surr)	100		80 - 120					09/11/25 02:48	1
1,2-Dichloroethane-d4 (Surr)	97		80 - 120					09/11/25 02:48	1

**Method: EPA 314.0 - Perchlorate (IC) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		10	4.5	ug/L			09/09/25 20:08	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	430		7.5	2.2	mg/L			09/11/25 17:19	5

# Client Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: PA-09-090225**

**Lab Sample ID: 580-153790-4**

Date Collected: 09/02/25 08:29

Matrix: Water

Date Received: 09/04/25 12:07

**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			09/09/25 05:02	1
Chloromethane	ND		0.50	0.14	ug/L			09/09/25 05:02	1
Vinyl chloride	ND		0.10	0.040	ug/L			09/09/25 05:02	1
Bromomethane	ND		0.50	0.13	ug/L			09/09/25 05:02	1
Chloroethane	ND		0.50	0.24	ug/L			09/09/25 05:02	1
Carbon disulfide	ND		0.40	0.20	ug/L			09/09/25 05:02	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			09/09/25 05:02	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			09/09/25 05:02	1
Acetone	ND		10	3.1	ug/L			09/09/25 05:02	1
Methylene Chloride	ND		5.0	1.2	ug/L			09/09/25 05:02	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			09/09/25 05:02	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/09/25 05:02	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			09/09/25 05:02	1
1,1-Dichloroethane	ND	*+	0.20	0.064	ug/L			09/09/25 05:02	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			09/09/25 05:02	1
cis-1,2-Dichloroethene	ND	*+	0.20	0.055	ug/L			09/09/25 05:02	1
Chlorobromomethane	ND		0.20	0.050	ug/L			09/09/25 05:02	1
<b>Chloroform</b>	<b>0.10</b>	<b>J*+</b>	0.20	0.030	ug/L			09/09/25 05:02	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			09/09/25 05:02	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			09/09/25 05:02	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			09/09/25 05:02	1
Benzene	ND		0.20	0.030	ug/L			09/09/25 05:02	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			09/09/25 05:02	1
Trichloroethene	ND		0.20	0.066	ug/L			09/09/25 05:02	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			09/09/25 05:02	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			09/09/25 05:02	1
Dibromomethane	ND		0.20	0.062	ug/L			09/09/25 05:02	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			09/09/25 05:02	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			09/09/25 05:02	1
Toluene	ND		0.20	0.050	ug/L			09/09/25 05:02	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			09/09/25 05:02	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			09/09/25 05:02	1
<b>Tetrachloroethene</b>	<b>0.19</b>	<b>J</b>	0.50	0.084	ug/L			09/09/25 05:02	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			09/09/25 05:02	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			09/09/25 05:02	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			09/09/25 05:02	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/09/25 05:02	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			09/09/25 05:02	1
Ethylbenzene	ND		0.20	0.082	ug/L			09/09/25 05:02	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			09/09/25 05:02	1
o-Xylene	ND		0.50	0.23	ug/L			09/09/25 05:02	1
Styrene	ND		1.0	0.33	ug/L			09/09/25 05:02	1
Bromoform	ND		0.50	0.16	ug/L			09/09/25 05:02	1
Isopropylbenzene	ND		1.0	0.27	ug/L			09/09/25 05:02	1
Bromobenzene	ND		0.20	0.038	ug/L			09/09/25 05:02	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			09/09/25 05:02	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			09/09/25 05:02	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/09/25 05:02	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			09/09/25 05:02	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: PA-09-090225**

**Lab Sample ID: 580-153790-4**

Date Collected: 09/02/25 08:29

Matrix: Water

Date Received: 09/04/25 12:07

**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			09/09/25 05:02	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			09/09/25 05:02	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/09/25 05:02	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			09/09/25 05:02	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/09/25 05:02	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			09/09/25 05:02	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			09/09/25 05:02	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/09/25 05:02	1
n-Butylbenzene	ND		1.0	0.35	ug/L			09/09/25 05:02	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			09/09/25 05:02	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			09/09/25 05:02	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			09/09/25 05:02	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			09/09/25 05:02	1
Naphthalene	ND		1.5	0.52	ug/L			09/09/25 05:02	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			09/09/25 05:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		80 - 120		09/09/25 05:02	1
Dibromofluoromethane (Surr)	120		80 - 120		09/09/25 05:02	1
4-Bromofluorobenzene (Surr)	92		80 - 120		09/09/25 05:02	1
1,2-Dichloroethane-d4 (Surr)	126	S1+	80 - 120		09/09/25 05:02	1

**Method: EPA 314.0 - Perchlorate (IC) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	4.8	J	10	4.5	ug/L			09/09/25 20:49	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	32		1.5	0.43	mg/L			09/11/25 17:31	1

# Client Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: PA-03-090225**

**Lab Sample ID: 580-153790-5**

Date Collected: 09/02/25 09:51

Matrix: Water

Date Received: 09/04/25 12:07

**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			09/09/25 05:25	1
Chloromethane	ND		0.50	0.14	ug/L			09/09/25 05:25	1
Vinyl chloride	ND		0.10	0.040	ug/L			09/09/25 05:25	1
Bromomethane	ND		0.50	0.13	ug/L			09/09/25 05:25	1
Chloroethane	ND		0.50	0.24	ug/L			09/09/25 05:25	1
Carbon disulfide	ND		0.40	0.20	ug/L			09/09/25 05:25	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			09/09/25 05:25	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			09/09/25 05:25	1
Acetone	ND		10	3.1	ug/L			09/09/25 05:25	1
Methylene Chloride	ND		5.0	1.2	ug/L			09/09/25 05:25	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			09/09/25 05:25	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/09/25 05:25	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			09/09/25 05:25	1
<b>1,1-Dichloroethane</b>	<b>0.18</b>	<b>J**</b>	0.20	0.064	ug/L			09/09/25 05:25	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			09/09/25 05:25	1
cis-1,2-Dichloroethene	ND	*+	0.20	0.055	ug/L			09/09/25 05:25	1
Chlorobromomethane	ND		0.20	0.050	ug/L			09/09/25 05:25	1
Chloroform	ND	*+	0.20	0.030	ug/L			09/09/25 05:25	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			09/09/25 05:25	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			09/09/25 05:25	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			09/09/25 05:25	1
<b>Benzene</b>	<b>0.061</b>	<b>J</b>	0.20	0.030	ug/L			09/09/25 05:25	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			09/09/25 05:25	1
Trichloroethene	ND		0.20	0.066	ug/L			09/09/25 05:25	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			09/09/25 05:25	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			09/09/25 05:25	1
Dibromomethane	ND		0.20	0.062	ug/L			09/09/25 05:25	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			09/09/25 05:25	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			09/09/25 05:25	1
<b>Toluene</b>	<b>0.15</b>	<b>J</b>	0.20	0.050	ug/L			09/09/25 05:25	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			09/09/25 05:25	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			09/09/25 05:25	1
Tetrachloroethene	ND		0.50	0.084	ug/L			09/09/25 05:25	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			09/09/25 05:25	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			09/09/25 05:25	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			09/09/25 05:25	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/09/25 05:25	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			09/09/25 05:25	1
Ethylbenzene	ND		0.20	0.082	ug/L			09/09/25 05:25	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			09/09/25 05:25	1
o-Xylene	ND		0.50	0.23	ug/L			09/09/25 05:25	1
Styrene	ND		1.0	0.33	ug/L			09/09/25 05:25	1
Bromoform	ND		0.50	0.16	ug/L			09/09/25 05:25	1
Isopropylbenzene	ND		1.0	0.27	ug/L			09/09/25 05:25	1
Bromobenzene	ND		0.20	0.038	ug/L			09/09/25 05:25	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			09/09/25 05:25	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			09/09/25 05:25	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/09/25 05:25	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			09/09/25 05:25	1

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# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: PA-03-090225**

**Lab Sample ID: 580-153790-5**

Date Collected: 09/02/25 09:51

Matrix: Water

Date Received: 09/04/25 12:07

**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			09/09/25 05:25	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			09/09/25 05:25	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/09/25 05:25	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			09/09/25 05:25	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/09/25 05:25	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			09/09/25 05:25	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			09/09/25 05:25	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/09/25 05:25	1
n-Butylbenzene	ND		1.0	0.35	ug/L			09/09/25 05:25	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			09/09/25 05:25	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			09/09/25 05:25	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			09/09/25 05:25	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			09/09/25 05:25	1
Naphthalene	ND		1.5	0.52	ug/L			09/09/25 05:25	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			09/09/25 05:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120		09/09/25 05:25	1
Dibromofluoromethane (Surr)	118		80 - 120		09/09/25 05:25	1
4-Bromofluorobenzene (Surr)	90		80 - 120		09/09/25 05:25	1
1,2-Dichloroethane-d4 (Surr)	125	S1+	80 - 120		09/09/25 05:25	1

**Method: EPA 314.0 - Perchlorate (IC) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		10	4.5	ug/L			09/09/25 21:31	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	3.6		1.5	0.43	mg/L			09/11/25 18:19	1

# Client Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: PA-17iR-090225**

**Lab Sample ID: 580-153790-6**

Date Collected: 09/02/25 10:38

Matrix: Water

Date Received: 09/04/25 12:07

**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			09/09/25 05:48	1
Chloromethane	ND		0.50	0.14	ug/L			09/09/25 05:48	1
Vinyl chloride	ND		0.10	0.040	ug/L			09/09/25 05:48	1
Bromomethane	ND		0.50	0.13	ug/L			09/09/25 05:48	1
Chloroethane	ND		0.50	0.24	ug/L			09/09/25 05:48	1
<b>Carbon disulfide</b>	<b>0.21</b>	<b>J</b>	0.40	0.20	ug/L			09/09/25 05:48	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			09/09/25 05:48	1
<b>1,1-Dichloroethene</b>	<b>0.12</b>	<b>J</b>	0.20	0.035	ug/L			09/09/25 05:48	1
Acetone	ND		10	3.1	ug/L			09/09/25 05:48	1
Methylene Chloride	ND		5.0	1.2	ug/L			09/09/25 05:48	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			09/09/25 05:48	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/09/25 05:48	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			09/09/25 05:48	1
1,1-Dichloroethane	ND	*+	0.20	0.064	ug/L			09/09/25 05:48	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			09/09/25 05:48	1
<b>cis-1,2-Dichloroethene</b>	<b>0.078</b>	<b>J**</b>	0.20	0.055	ug/L			09/09/25 05:48	1
Chlorobromomethane	ND		0.20	0.050	ug/L			09/09/25 05:48	1
Chloroform	ND	*+	0.20	0.030	ug/L			09/09/25 05:48	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			09/09/25 05:48	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			09/09/25 05:48	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			09/09/25 05:48	1
<b>Benzene</b>	<b>0.097</b>	<b>J</b>	0.20	0.030	ug/L			09/09/25 05:48	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			09/09/25 05:48	1
Trichloroethene	ND		0.20	0.066	ug/L			09/09/25 05:48	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			09/09/25 05:48	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			09/09/25 05:48	1
Dibromomethane	ND		0.20	0.062	ug/L			09/09/25 05:48	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			09/09/25 05:48	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			09/09/25 05:48	1
Toluene	ND		0.20	0.050	ug/L			09/09/25 05:48	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			09/09/25 05:48	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			09/09/25 05:48	1
Tetrachloroethene	ND		0.50	0.084	ug/L			09/09/25 05:48	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			09/09/25 05:48	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			09/09/25 05:48	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			09/09/25 05:48	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/09/25 05:48	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			09/09/25 05:48	1
Ethylbenzene	ND		0.20	0.082	ug/L			09/09/25 05:48	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			09/09/25 05:48	1
o-Xylene	ND		0.50	0.23	ug/L			09/09/25 05:48	1
Styrene	ND		1.0	0.33	ug/L			09/09/25 05:48	1
Bromoform	ND		0.50	0.16	ug/L			09/09/25 05:48	1
Isopropylbenzene	ND		1.0	0.27	ug/L			09/09/25 05:48	1
Bromobenzene	ND		0.20	0.038	ug/L			09/09/25 05:48	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			09/09/25 05:48	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			09/09/25 05:48	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/09/25 05:48	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			09/09/25 05:48	1

Euromins Seattle

# Client Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: PA-17iR-090225**

**Lab Sample ID: 580-153790-6**

Date Collected: 09/02/25 10:38

Matrix: Water

Date Received: 09/04/25 12:07

**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			09/09/25 05:48	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			09/09/25 05:48	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/09/25 05:48	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			09/09/25 05:48	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/09/25 05:48	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			09/09/25 05:48	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			09/09/25 05:48	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/09/25 05:48	1
n-Butylbenzene	ND		1.0	0.35	ug/L			09/09/25 05:48	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			09/09/25 05:48	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			09/09/25 05:48	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			09/09/25 05:48	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			09/09/25 05:48	1
Naphthalene	ND		1.5	0.52	ug/L			09/09/25 05:48	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			09/09/25 05:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		80 - 120		09/09/25 05:48	1
Dibromofluoromethane (Surr)	129	S1+	80 - 120		09/09/25 05:48	1
4-Bromofluorobenzene (Surr)	94		80 - 120		09/09/25 05:48	1
1,2-Dichloroethane-d4 (Surr)	135	S1+	80 - 120		09/09/25 05:48	1

**Method: EPA 314.0 - Perchlorate (IC) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		10	4.5	ug/L			09/09/25 22:13	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	41		1.5	0.43	mg/L			09/11/25 18:43	1

# Client Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: PA-27d-090225**

**Lab Sample ID: 580-153790-7**

Date Collected: 09/02/25 11:32

Matrix: Water

Date Received: 09/04/25 12:07

**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			09/09/25 06:10	1
Chloromethane	ND		1.0	0.28	ug/L			09/09/25 06:10	1
Vinyl chloride	ND		1.0	0.22	ug/L			09/09/25 06:10	1
Bromomethane	ND		1.0	0.21	ug/L			09/09/25 06:10	1
Chloroethane	ND		1.0	0.35	ug/L			09/09/25 06:10	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			09/09/25 06:10	1
Carbon disulfide	ND		1.0	0.53	ug/L			09/09/25 06:10	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			09/09/25 06:10	1
Acetone	ND		15	3.2	ug/L			09/09/25 06:10	1
Methylene Chloride	ND		5.0	1.4	ug/L			09/09/25 06:10	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			09/09/25 06:10	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			09/09/25 06:10	1
<b>1,1-Dichloroethane</b>	<b>0.43</b>	<b>J**</b>	1.0	0.22	ug/L			09/09/25 06:10	1
2-Butanone (MEK)	ND		15	4.7	ug/L			09/09/25 06:10	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			09/09/25 06:10	1
<b>cis-1,2-Dichloroethene</b>	<b>0.86</b>	<b>J**</b>	1.0	0.35	ug/L			09/09/25 06:10	1
Chlorobromomethane	ND		1.0	0.29	ug/L			09/09/25 06:10	1
Chloroform	ND	*+	1.0	0.26	ug/L			09/09/25 06:10	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			09/09/25 06:10	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			09/09/25 06:10	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			09/09/25 06:10	1
Benzene	ND		1.0	0.24	ug/L			09/09/25 06:10	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			09/09/25 06:10	1
Trichloroethene	ND		1.0	0.26	ug/L			09/09/25 06:10	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			09/09/25 06:10	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/09/25 06:10	1
Dibromomethane	ND		1.0	0.34	ug/L			09/09/25 06:10	1
Dichlorobromomethane	ND		1.0	0.29	ug/L			09/09/25 06:10	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			09/09/25 06:10	1
Toluene	ND		1.0	0.39	ug/L			09/09/25 06:10	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			09/09/25 06:10	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			09/09/25 06:10	1
Tetrachloroethene	ND		1.0	0.41	ug/L			09/09/25 06:10	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			09/09/25 06:10	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			09/09/25 06:10	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			09/09/25 06:10	1
Chlorobenzene	ND		1.0	0.44	ug/L			09/09/25 06:10	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			09/09/25 06:10	1
Ethylbenzene	ND		1.0	0.50	ug/L			09/09/25 06:10	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			09/09/25 06:10	1
o-Xylene	ND		1.0	0.39	ug/L			09/09/25 06:10	1
Styrene	ND		1.0	0.53	ug/L			09/09/25 06:10	1
Bromoform	ND		1.0	0.51	ug/L			09/09/25 06:10	1
Isopropylbenzene	ND		1.0	0.44	ug/L			09/09/25 06:10	1
Bromobenzene	ND		1.0	0.43	ug/L			09/09/25 06:10	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			09/09/25 06:10	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			09/09/25 06:10	1
N-Propylbenzene	ND		1.0	0.50	ug/L			09/09/25 06:10	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			09/09/25 06:10	1

Euromins Seattle

# Client Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: PA-27d-090225**

**Lab Sample ID: 580-153790-7**

Date Collected: 09/02/25 11:32

Matrix: Water

Date Received: 09/04/25 12:07

**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			09/09/25 06:10	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			09/09/25 06:10	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			09/09/25 06:10	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			09/09/25 06:10	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			09/09/25 06:10	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			09/09/25 06:10	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			09/09/25 06:10	1
n-Butylbenzene	ND		1.0	0.44	ug/L			09/09/25 06:10	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			09/09/25 06:10	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			09/09/25 06:10	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			09/09/25 06:10	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			09/09/25 06:10	1
Naphthalene	ND		3.0	0.93	ug/L			09/09/25 06:10	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			09/09/25 06:10	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			09/09/25 06:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		80 - 120		09/09/25 06:10	1
1,2-Dichloroethane-d4 (Surr)	112		80 - 120		09/09/25 06:10	1
4-Bromofluorobenzene (Surr)	93		80 - 120		09/09/25 06:10	1
Dibromofluoromethane (Surr)	119		80 - 120		09/09/25 06:10	1

**Method: EPA 314.0 - Perchlorate (IC) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		10	4.5	ug/L			09/09/25 22:54	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	860		38	11	mg/L			09/12/25 10:20	25

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: RB-01-090325**

**Lab Sample ID: 580-153790-8**

Date Collected: 09/03/25 05:45

Matrix: Water

Date Received: 09/04/25 12:07

**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			09/11/25 03:11	1
Chloromethane	ND		0.50	0.14	ug/L			09/11/25 03:11	1
Vinyl chloride	ND		0.10	0.040	ug/L			09/11/25 03:11	1
Bromomethane	ND		0.50	0.13	ug/L			09/11/25 03:11	1
Chloroethane	ND		0.50	0.24	ug/L			09/11/25 03:11	1
Carbon disulfide	ND		0.40	0.20	ug/L			09/11/25 03:11	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			09/11/25 03:11	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			09/11/25 03:11	1
Acetone	ND		10	3.1	ug/L			09/11/25 03:11	1
Methylene Chloride	ND	*+	5.0	1.2	ug/L			09/11/25 03:11	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			09/11/25 03:11	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/11/25 03:11	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			09/11/25 03:11	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			09/11/25 03:11	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			09/11/25 03:11	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			09/11/25 03:11	1
Chlorobromomethane	ND		0.20	0.050	ug/L			09/11/25 03:11	1
Chloroform	ND		0.20	0.030	ug/L			09/11/25 03:11	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			09/11/25 03:11	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			09/11/25 03:11	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			09/11/25 03:11	1
Benzene	ND		0.20	0.030	ug/L			09/11/25 03:11	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			09/11/25 03:11	1
Trichloroethene	ND		0.20	0.066	ug/L			09/11/25 03:11	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			09/11/25 03:11	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			09/11/25 03:11	1
Dibromomethane	ND		0.20	0.062	ug/L			09/11/25 03:11	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			09/11/25 03:11	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			09/11/25 03:11	1
Toluene	ND		0.20	0.050	ug/L			09/11/25 03:11	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			09/11/25 03:11	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			09/11/25 03:11	1
Tetrachloroethene	ND		0.50	0.084	ug/L			09/11/25 03:11	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			09/11/25 03:11	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			09/11/25 03:11	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			09/11/25 03:11	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/11/25 03:11	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			09/11/25 03:11	1
Ethylbenzene	ND		0.20	0.082	ug/L			09/11/25 03:11	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			09/11/25 03:11	1
o-Xylene	ND		0.50	0.23	ug/L			09/11/25 03:11	1
Styrene	ND		1.0	0.33	ug/L			09/11/25 03:11	1
Bromoform	ND		0.50	0.16	ug/L			09/11/25 03:11	1
Isopropylbenzene	ND		1.0	0.27	ug/L			09/11/25 03:11	1
Bromobenzene	ND		0.20	0.038	ug/L			09/11/25 03:11	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			09/11/25 03:11	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			09/11/25 03:11	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/11/25 03:11	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			09/11/25 03:11	1

# Client Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: RB-01-090325**

**Lab Sample ID: 580-153790-8**

Date Collected: 09/03/25 05:45

Matrix: Water

Date Received: 09/04/25 12:07

**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			09/11/25 03:11	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			09/11/25 03:11	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/11/25 03:11	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			09/11/25 03:11	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/11/25 03:11	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			09/11/25 03:11	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			09/11/25 03:11	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/11/25 03:11	1
n-Butylbenzene	ND		1.0	0.35	ug/L			09/11/25 03:11	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			09/11/25 03:11	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			09/11/25 03:11	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			09/11/25 03:11	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			09/11/25 03:11	1
Naphthalene	ND		1.5	0.52	ug/L			09/11/25 03:11	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			09/11/25 03:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120		09/11/25 03:11	1
Dibromofluoromethane (Surr)	116		80 - 120		09/11/25 03:11	1
4-Bromofluorobenzene (Surr)	99		80 - 120		09/11/25 03:11	1
1,2-Dichloroethane-d4 (Surr)	117		80 - 120		09/11/25 03:11	1

**Method: EPA 314.0 - Perchlorate (IC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		2.0	0.91	ug/L			09/09/25 23:36	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	0.66	J	1.5	0.43	mg/L			09/11/25 19:30	1

# Client Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: PA-44i-090325**

**Lab Sample ID: 580-153790-9**

Date Collected: 09/03/25 06:24

Matrix: Water

Date Received: 09/04/25 12:07

**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			09/11/25 02:03	1
Chloromethane	ND		0.50	0.14	ug/L			09/11/25 02:03	1
Vinyl chloride	ND		0.10	0.040	ug/L			09/11/25 02:03	1
Bromomethane	ND		0.50	0.13	ug/L			09/11/25 02:03	1
Chloroethane	ND		0.50	0.24	ug/L			09/11/25 02:03	1
Carbon disulfide	ND		0.40	0.20	ug/L			09/11/25 02:03	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			09/11/25 02:03	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			09/11/25 02:03	1
Acetone	ND		10	3.1	ug/L			09/11/25 02:03	1
Methylene Chloride	ND	*+	5.0	1.2	ug/L			09/11/25 02:03	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			09/11/25 02:03	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/11/25 02:03	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			09/11/25 02:03	1
<b>1,1-Dichloroethane</b>	<b>0.34</b>		0.20	0.064	ug/L			09/11/25 02:03	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			09/11/25 02:03	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			09/11/25 02:03	1
Chlorobromomethane	ND		0.20	0.050	ug/L			09/11/25 02:03	1
Chloroform	ND		0.20	0.030	ug/L			09/11/25 02:03	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			09/11/25 02:03	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			09/11/25 02:03	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			09/11/25 02:03	1
Benzene	ND		0.20	0.030	ug/L			09/11/25 02:03	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			09/11/25 02:03	1
Trichloroethene	ND		0.20	0.066	ug/L			09/11/25 02:03	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			09/11/25 02:03	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			09/11/25 02:03	1
Dibromomethane	ND		0.20	0.062	ug/L			09/11/25 02:03	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			09/11/25 02:03	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			09/11/25 02:03	1
Toluene	ND		0.20	0.050	ug/L			09/11/25 02:03	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			09/11/25 02:03	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			09/11/25 02:03	1
Tetrachloroethene	ND		0.50	0.084	ug/L			09/11/25 02:03	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			09/11/25 02:03	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			09/11/25 02:03	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			09/11/25 02:03	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/11/25 02:03	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			09/11/25 02:03	1
Ethylbenzene	ND		0.20	0.082	ug/L			09/11/25 02:03	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			09/11/25 02:03	1
o-Xylene	ND		0.50	0.23	ug/L			09/11/25 02:03	1
Styrene	ND		1.0	0.33	ug/L			09/11/25 02:03	1
Bromoform	ND		0.50	0.16	ug/L			09/11/25 02:03	1
Isopropylbenzene	ND		1.0	0.27	ug/L			09/11/25 02:03	1
Bromobenzene	ND		0.20	0.038	ug/L			09/11/25 02:03	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			09/11/25 02:03	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			09/11/25 02:03	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/11/25 02:03	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			09/11/25 02:03	1

# Client Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: PA-44i-090325**

**Lab Sample ID: 580-153790-9**

Date Collected: 09/03/25 06:24

Matrix: Water

Date Received: 09/04/25 12:07

**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			09/11/25 02:03	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			09/11/25 02:03	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/11/25 02:03	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			09/11/25 02:03	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/11/25 02:03	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			09/11/25 02:03	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			09/11/25 02:03	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/11/25 02:03	1
n-Butylbenzene	ND		1.0	0.35	ug/L			09/11/25 02:03	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			09/11/25 02:03	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			09/11/25 02:03	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			09/11/25 02:03	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			09/11/25 02:03	1
Naphthalene	ND		1.5	0.52	ug/L			09/11/25 02:03	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			09/11/25 02:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120		09/11/25 02:03	1
Dibromofluoromethane (Surr)	115		80 - 120		09/11/25 02:03	1
4-Bromofluorobenzene (Surr)	100		80 - 120		09/11/25 02:03	1
1,2-Dichloroethane-d4 (Surr)	108		80 - 120		09/11/25 02:03	1

**Method: EPA 314.0 - Perchlorate (IC) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		10	4.5	ug/L			09/10/25 00:19	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	190		7.5	2.2	mg/L			09/11/25 20:30	5

# Client Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: MWA-81i-090325**

**Lab Sample ID: 580-153790-10**

Date Collected: 09/03/25 07:21

Matrix: Water

Date Received: 09/04/25 12:07

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND	F1	0.40	0.13	ug/L			09/11/25 05:49	1
Chloromethane	ND		0.50	0.14	ug/L			09/11/25 05:49	1
Vinyl chloride	ND	F1	0.10	0.040	ug/L			09/11/25 05:49	1
Bromomethane	ND		0.50	0.13	ug/L			09/11/25 05:49	1
Chloroethane	ND	F1	0.50	0.24	ug/L			09/11/25 05:49	1
Carbon disulfide	ND	F1	0.40	0.20	ug/L			09/11/25 05:49	1
Trichlorofluoromethane	ND	F1	0.50	0.12	ug/L			09/11/25 05:49	1
1,1-Dichloroethene	ND	F1	0.20	0.035	ug/L			09/11/25 05:49	1
Acetone	ND		10	3.1	ug/L			09/11/25 05:49	1
Methylene Chloride	ND	*+ F2	5.0	1.2	ug/L			09/11/25 05:49	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			09/11/25 05:49	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/11/25 05:49	1
trans-1,2-Dichloroethene	ND	F1	0.20	0.033	ug/L			09/11/25 05:49	1
1,1-Dichloroethane	ND	F1	0.20	0.064	ug/L			09/11/25 05:49	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			09/11/25 05:49	1
cis-1,2-Dichloroethene	ND	F1	0.20	0.055	ug/L			09/11/25 05:49	1
Chlorobromomethane	ND	F1	0.20	0.050	ug/L			09/11/25 05:49	1
Chloroform	ND	F1	0.20	0.030	ug/L			09/11/25 05:49	1
1,1,1-Trichloroethane	ND	F1	0.20	0.025	ug/L			09/11/25 05:49	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			09/11/25 05:49	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			09/11/25 05:49	1
Benzene	ND	F1	0.20	0.030	ug/L			09/11/25 05:49	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			09/11/25 05:49	1
Trichloroethene	ND		0.20	0.066	ug/L			09/11/25 05:49	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			09/11/25 05:49	1
4-Methyl-2-pentanone (MIBK)	ND	F1	10	2.7	ug/L			09/11/25 05:49	1
Dibromomethane	ND		0.20	0.062	ug/L			09/11/25 05:49	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			09/11/25 05:49	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			09/11/25 05:49	1
Toluene	ND	F1	0.20	0.050	ug/L			09/11/25 05:49	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			09/11/25 05:49	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			09/11/25 05:49	1
Tetrachloroethene	ND		0.50	0.084	ug/L			09/11/25 05:49	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			09/11/25 05:49	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			09/11/25 05:49	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			09/11/25 05:49	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/11/25 05:49	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			09/11/25 05:49	1
Ethylbenzene	ND	F1	0.20	0.082	ug/L			09/11/25 05:49	1
m-Xylene & p-Xylene	ND	F1	0.50	0.12	ug/L			09/11/25 05:49	1
o-Xylene	ND	F1	0.50	0.23	ug/L			09/11/25 05:49	1
Styrene	ND		1.0	0.33	ug/L			09/11/25 05:49	1
Bromoform	ND	F1	0.50	0.16	ug/L			09/11/25 05:49	1
Isopropylbenzene	ND	F1	1.0	0.27	ug/L			09/11/25 05:49	1
Bromobenzene	ND		0.20	0.038	ug/L			09/11/25 05:49	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			09/11/25 05:49	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			09/11/25 05:49	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/11/25 05:49	1
2-Chlorotoluene	ND	F1	0.50	0.12	ug/L			09/11/25 05:49	1

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# Client Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: MWA-81i-090325**

**Lab Sample ID: 580-153790-10**

Date Collected: 09/03/25 07:21

Matrix: Water

Date Received: 09/04/25 12:07

**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			09/11/25 05:49	1
1,3,5-Trimethylbenzene	ND	F1	0.50	0.19	ug/L			09/11/25 05:49	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/11/25 05:49	1
1,2,4-Trimethylbenzene	ND	F1	0.55	0.23	ug/L			09/11/25 05:49	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/11/25 05:49	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			09/11/25 05:49	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			09/11/25 05:49	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/11/25 05:49	1
n-Butylbenzene	ND		1.0	0.35	ug/L			09/11/25 05:49	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			09/11/25 05:49	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			09/11/25 05:49	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			09/11/25 05:49	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			09/11/25 05:49	1
Naphthalene	ND		1.5	0.52	ug/L			09/11/25 05:49	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			09/11/25 05:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		09/11/25 05:49	1
Dibromofluoromethane (Surr)	105		80 - 120		09/11/25 05:49	1
4-Bromofluorobenzene (Surr)	97		80 - 120		09/11/25 05:49	1
1,2-Dichloroethane-d4 (Surr)	118		80 - 120		09/11/25 05:49	1

**Method: EPA 314.0 - Perchlorate (IC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		2.0	0.91	ug/L			09/10/25 01:43	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	38	F1	1.5	0.43	mg/L			09/11/25 20:42	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: MWA-41-090325**

**Lab Sample ID: 580-153790-11**

Date Collected: 09/03/25 08:13

Matrix: Water

Date Received: 09/04/25 12:07

**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			09/11/25 04:19	1
Chloromethane	ND		0.50	0.14	ug/L			09/11/25 04:19	1
Vinyl chloride	ND		0.10	0.040	ug/L			09/11/25 04:19	1
Bromomethane	ND		0.50	0.13	ug/L			09/11/25 04:19	1
Chloroethane	ND		0.50	0.24	ug/L			09/11/25 04:19	1
Carbon disulfide	ND		0.40	0.20	ug/L			09/11/25 04:19	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			09/11/25 04:19	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			09/11/25 04:19	1
Acetone	ND		10	3.1	ug/L			09/11/25 04:19	1
Methylene Chloride	ND	*+	5.0	1.2	ug/L			09/11/25 04:19	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			09/11/25 04:19	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/11/25 04:19	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			09/11/25 04:19	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			09/11/25 04:19	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			09/11/25 04:19	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			09/11/25 04:19	1
Chlorobromomethane	ND		0.20	0.050	ug/L			09/11/25 04:19	1
Chloroform	ND		0.20	0.030	ug/L			09/11/25 04:19	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			09/11/25 04:19	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			09/11/25 04:19	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			09/11/25 04:19	1
Benzene	ND		0.20	0.030	ug/L			09/11/25 04:19	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			09/11/25 04:19	1
Trichloroethene	ND		0.20	0.066	ug/L			09/11/25 04:19	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			09/11/25 04:19	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			09/11/25 04:19	1
Dibromomethane	ND		0.20	0.062	ug/L			09/11/25 04:19	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			09/11/25 04:19	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			09/11/25 04:19	1
Toluene	ND		0.20	0.050	ug/L			09/11/25 04:19	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			09/11/25 04:19	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			09/11/25 04:19	1
Tetrachloroethene	ND		0.50	0.084	ug/L			09/11/25 04:19	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			09/11/25 04:19	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			09/11/25 04:19	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			09/11/25 04:19	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/11/25 04:19	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			09/11/25 04:19	1
Ethylbenzene	ND		0.20	0.082	ug/L			09/11/25 04:19	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			09/11/25 04:19	1
o-Xylene	ND		0.50	0.23	ug/L			09/11/25 04:19	1
Styrene	ND		1.0	0.33	ug/L			09/11/25 04:19	1
Bromoform	ND		0.50	0.16	ug/L			09/11/25 04:19	1
Isopropylbenzene	ND		1.0	0.27	ug/L			09/11/25 04:19	1
Bromobenzene	ND		0.20	0.038	ug/L			09/11/25 04:19	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			09/11/25 04:19	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			09/11/25 04:19	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/11/25 04:19	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			09/11/25 04:19	1

# Client Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: MWA-41-090325**

**Lab Sample ID: 580-153790-11**

Date Collected: 09/03/25 08:13

Matrix: Water

Date Received: 09/04/25 12:07

**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			09/11/25 04:19	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			09/11/25 04:19	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/11/25 04:19	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			09/11/25 04:19	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/11/25 04:19	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			09/11/25 04:19	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			09/11/25 04:19	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/11/25 04:19	1
n-Butylbenzene	ND		1.0	0.35	ug/L			09/11/25 04:19	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			09/11/25 04:19	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			09/11/25 04:19	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			09/11/25 04:19	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			09/11/25 04:19	1
Naphthalene	ND		1.5	0.52	ug/L			09/11/25 04:19	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			09/11/25 04:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120		09/11/25 04:19	1
Dibromofluoromethane (Surr)	116		80 - 120		09/11/25 04:19	1
4-Bromofluorobenzene (Surr)	100		80 - 120		09/11/25 04:19	1
1,2-Dichloroethane-d4 (Surr)	115		80 - 120		09/11/25 04:19	1

**Method: EPA 314.0 - Perchlorate (IC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		2.0	0.91	ug/L			09/10/25 03:48	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	4.2		1.5	0.43	mg/L			09/11/25 21:53	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: Dup-01-090325**

**Lab Sample ID: 580-153790-12**

**Date Collected: 09/03/25 08:14**

**Matrix: Water**

**Date Received: 09/04/25 12:07**

**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			09/11/25 04:41	1
Chloromethane	ND		0.50	0.14	ug/L			09/11/25 04:41	1
Vinyl chloride	ND		0.10	0.040	ug/L			09/11/25 04:41	1
Bromomethane	ND		0.50	0.13	ug/L			09/11/25 04:41	1
Chloroethane	ND		0.50	0.24	ug/L			09/11/25 04:41	1
Carbon disulfide	ND		0.40	0.20	ug/L			09/11/25 04:41	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			09/11/25 04:41	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			09/11/25 04:41	1
Acetone	ND		10	3.1	ug/L			09/11/25 04:41	1
Methylene Chloride	ND	*+	5.0	1.2	ug/L			09/11/25 04:41	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			09/11/25 04:41	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/11/25 04:41	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			09/11/25 04:41	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			09/11/25 04:41	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			09/11/25 04:41	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			09/11/25 04:41	1
Chlorobromomethane	ND		0.20	0.050	ug/L			09/11/25 04:41	1
Chloroform	ND		0.20	0.030	ug/L			09/11/25 04:41	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			09/11/25 04:41	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			09/11/25 04:41	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			09/11/25 04:41	1
Benzene	ND		0.20	0.030	ug/L			09/11/25 04:41	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			09/11/25 04:41	1
Trichloroethene	ND		0.20	0.066	ug/L			09/11/25 04:41	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			09/11/25 04:41	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			09/11/25 04:41	1
Dibromomethane	ND		0.20	0.062	ug/L			09/11/25 04:41	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			09/11/25 04:41	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			09/11/25 04:41	1
Toluene	ND		0.20	0.050	ug/L			09/11/25 04:41	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			09/11/25 04:41	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			09/11/25 04:41	1
Tetrachloroethene	ND		0.50	0.084	ug/L			09/11/25 04:41	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			09/11/25 04:41	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			09/11/25 04:41	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			09/11/25 04:41	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/11/25 04:41	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			09/11/25 04:41	1
Ethylbenzene	ND		0.20	0.082	ug/L			09/11/25 04:41	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			09/11/25 04:41	1
o-Xylene	ND		0.50	0.23	ug/L			09/11/25 04:41	1
Styrene	ND		1.0	0.33	ug/L			09/11/25 04:41	1
Bromoform	ND		0.50	0.16	ug/L			09/11/25 04:41	1
Isopropylbenzene	ND		1.0	0.27	ug/L			09/11/25 04:41	1
Bromobenzene	ND		0.20	0.038	ug/L			09/11/25 04:41	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			09/11/25 04:41	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			09/11/25 04:41	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/11/25 04:41	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			09/11/25 04:41	1

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# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: Dup-01-090325**

**Lab Sample ID: 580-153790-12**

**Date Collected: 09/03/25 08:14**

**Matrix: Water**

**Date Received: 09/04/25 12:07**

**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			09/11/25 04:41	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			09/11/25 04:41	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/11/25 04:41	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			09/11/25 04:41	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/11/25 04:41	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			09/11/25 04:41	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			09/11/25 04:41	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/11/25 04:41	1
n-Butylbenzene	ND		1.0	0.35	ug/L			09/11/25 04:41	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			09/11/25 04:41	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			09/11/25 04:41	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			09/11/25 04:41	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			09/11/25 04:41	1
Naphthalene	ND		1.5	0.52	ug/L			09/11/25 04:41	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			09/11/25 04:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		09/11/25 04:41	1
Dibromofluoromethane (Surr)	106		80 - 120		09/11/25 04:41	1
4-Bromofluorobenzene (Surr)	96		80 - 120		09/11/25 04:41	1
1,2-Dichloroethane-d4 (Surr)	120		80 - 120		09/11/25 04:41	1

**Method: EPA 314.0 - Perchlorate (IC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		2.0	0.91	ug/L			09/10/25 04:30	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	4.3		1.5	0.43	mg/L			09/11/25 22:17	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: PA-25d-090325**

**Lab Sample ID: 580-153790-13**

Date Collected: 09/03/25 09:35

Matrix: Water

Date Received: 09/04/25 12:07

**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			09/10/25 08:56	1
Chloromethane	ND		0.50	0.14	ug/L			09/10/25 08:56	1
Vinyl chloride	ND		0.10	0.040	ug/L			09/10/25 08:56	1
Bromomethane	ND		0.50	0.13	ug/L			09/10/25 08:56	1
Chloroethane	ND		0.50	0.24	ug/L			09/10/25 08:56	1
Carbon disulfide	ND		0.40	0.20	ug/L			09/10/25 08:56	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			09/10/25 08:56	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			09/10/25 08:56	1
Acetone	ND		10	3.1	ug/L			09/10/25 08:56	1
Methylene Chloride	ND		5.0	1.2	ug/L			09/10/25 08:56	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			09/10/25 08:56	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/10/25 08:56	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			09/10/25 08:56	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			09/10/25 08:56	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			09/10/25 08:56	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			09/10/25 08:56	1
Chlorobromomethane	ND		0.20	0.050	ug/L			09/10/25 08:56	1
Chloroform	ND		0.20	0.030	ug/L			09/10/25 08:56	1
1,1,1-Trichloroethane	ND	*+	0.20	0.025	ug/L			09/10/25 08:56	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			09/10/25 08:56	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			09/10/25 08:56	1
Benzene	ND		0.20	0.030	ug/L			09/10/25 08:56	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			09/10/25 08:56	1
Trichloroethene	ND		0.20	0.066	ug/L			09/10/25 08:56	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			09/10/25 08:56	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			09/10/25 08:56	1
Dibromomethane	ND		0.20	0.062	ug/L			09/10/25 08:56	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			09/10/25 08:56	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			09/10/25 08:56	1
Toluene	ND		0.20	0.050	ug/L			09/10/25 08:56	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			09/10/25 08:56	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			09/10/25 08:56	1
Tetrachloroethene	ND		0.50	0.084	ug/L			09/10/25 08:56	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			09/10/25 08:56	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			09/10/25 08:56	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			09/10/25 08:56	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/10/25 08:56	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			09/10/25 08:56	1
Ethylbenzene	ND		0.20	0.082	ug/L			09/10/25 08:56	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			09/10/25 08:56	1
o-Xylene	ND		0.50	0.23	ug/L			09/10/25 08:56	1
Styrene	ND		1.0	0.33	ug/L			09/10/25 08:56	1
Bromoform	ND		0.50	0.16	ug/L			09/10/25 08:56	1
Isopropylbenzene	ND		1.0	0.27	ug/L			09/10/25 08:56	1
Bromobenzene	ND		0.20	0.038	ug/L			09/10/25 08:56	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			09/10/25 08:56	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			09/10/25 08:56	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/10/25 08:56	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			09/10/25 08:56	1

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# Client Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: PA-25d-090325**

**Lab Sample ID: 580-153790-13**

Date Collected: 09/03/25 09:35

Matrix: Water

Date Received: 09/04/25 12:07

**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			09/10/25 08:56	1
<b>1,3,5-Trimethylbenzene</b>	<b>0.19</b>	<b>J</b>	0.50	0.19	ug/L			09/10/25 08:56	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/10/25 08:56	1
<b>1,2,4-Trimethylbenzene</b>	<b>0.29</b>	<b>J</b>	0.55	0.23	ug/L			09/10/25 08:56	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/10/25 08:56	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			09/10/25 08:56	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			09/10/25 08:56	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/10/25 08:56	1
n-Butylbenzene	ND		1.0	0.35	ug/L			09/10/25 08:56	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			09/10/25 08:56	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			09/10/25 08:56	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			09/10/25 08:56	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			09/10/25 08:56	1
Naphthalene	ND		1.5	0.52	ug/L			09/10/25 08:56	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			09/10/25 08:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		09/10/25 08:56	1
Dibromofluoromethane (Surr)	104		80 - 120		09/10/25 08:56	1
4-Bromofluorobenzene (Surr)	103		80 - 120		09/10/25 08:56	1
1,2-Dichloroethane-d4 (Surr)	108		80 - 120		09/10/25 08:56	1

**Method: EPA 314.0 - Perchlorate (IC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		2.0	0.91	ug/L			09/10/25 05:11	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride (EPA 300.0)</b>	<b>22</b>		1.5	0.43	mg/L			09/11/25 23:05	1

# Client Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: PA-15i-090325**

**Lab Sample ID: 580-153790-14**

Date Collected: 09/03/25 10:25

Matrix: Water

Date Received: 09/04/25 12:07

**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			09/10/25 09:43	1
Chloromethane	ND		0.50	0.14	ug/L			09/10/25 09:43	1
Vinyl chloride	ND		0.10	0.040	ug/L			09/10/25 09:43	1
Bromomethane	ND		0.50	0.13	ug/L			09/10/25 09:43	1
Chloroethane	ND		0.50	0.24	ug/L			09/10/25 09:43	1
Carbon disulfide	ND		0.40	0.20	ug/L			09/10/25 09:43	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			09/10/25 09:43	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			09/10/25 09:43	1
Acetone	ND		10	3.1	ug/L			09/10/25 09:43	1
Methylene Chloride	ND		5.0	1.2	ug/L			09/10/25 09:43	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			09/10/25 09:43	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/10/25 09:43	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			09/10/25 09:43	1
<b>1,1-Dichloroethane</b>	<b>0.25</b>		0.20	0.064	ug/L			09/10/25 09:43	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			09/10/25 09:43	1
<b>cis-1,2-Dichloroethene</b>	<b>0.068</b>	<b>J</b>	0.20	0.055	ug/L			09/10/25 09:43	1
Chlorobromomethane	ND		0.20	0.050	ug/L			09/10/25 09:43	1
Chloroform	ND		0.20	0.030	ug/L			09/10/25 09:43	1
1,1,1-Trichloroethane	ND	*+	0.20	0.025	ug/L			09/10/25 09:43	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			09/10/25 09:43	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			09/10/25 09:43	1
Benzene	ND		0.20	0.030	ug/L			09/10/25 09:43	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			09/10/25 09:43	1
Trichloroethene	ND		0.20	0.066	ug/L			09/10/25 09:43	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			09/10/25 09:43	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			09/10/25 09:43	1
Dibromomethane	ND		0.20	0.062	ug/L			09/10/25 09:43	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			09/10/25 09:43	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			09/10/25 09:43	1
Toluene	ND		0.20	0.050	ug/L			09/10/25 09:43	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			09/10/25 09:43	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			09/10/25 09:43	1
Tetrachloroethene	ND		0.50	0.084	ug/L			09/10/25 09:43	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			09/10/25 09:43	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			09/10/25 09:43	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			09/10/25 09:43	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/10/25 09:43	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			09/10/25 09:43	1
Ethylbenzene	ND		0.20	0.082	ug/L			09/10/25 09:43	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			09/10/25 09:43	1
o-Xylene	ND		0.50	0.23	ug/L			09/10/25 09:43	1
Styrene	ND		1.0	0.33	ug/L			09/10/25 09:43	1
Bromoform	ND		0.50	0.16	ug/L			09/10/25 09:43	1
Isopropylbenzene	ND		1.0	0.27	ug/L			09/10/25 09:43	1
Bromobenzene	ND		0.20	0.038	ug/L			09/10/25 09:43	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			09/10/25 09:43	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			09/10/25 09:43	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/10/25 09:43	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			09/10/25 09:43	1

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# Client Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: PA-15i-090325**

**Lab Sample ID: 580-153790-14**

Date Collected: 09/03/25 10:25

Matrix: Water

Date Received: 09/04/25 12:07

**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			09/10/25 09:43	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			09/10/25 09:43	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/10/25 09:43	1
<b>1,2,4-Trimethylbenzene</b>	<b>0.23</b>	<b>J</b>	0.55	0.23	ug/L			09/10/25 09:43	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/10/25 09:43	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			09/10/25 09:43	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			09/10/25 09:43	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/10/25 09:43	1
n-Butylbenzene	ND		1.0	0.35	ug/L			09/10/25 09:43	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			09/10/25 09:43	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			09/10/25 09:43	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			09/10/25 09:43	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			09/10/25 09:43	1
Naphthalene	ND		1.5	0.52	ug/L			09/10/25 09:43	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			09/10/25 09:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 120		09/10/25 09:43	1
Dibromofluoromethane (Surr)	107		80 - 120		09/10/25 09:43	1
4-Bromofluorobenzene (Surr)	103		80 - 120		09/10/25 09:43	1
1,2-Dichloroethane-d4 (Surr)	113		80 - 120		09/10/25 09:43	1

**Method: EPA 314.0 - Perchlorate (IC) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		10	4.5	ug/L			09/10/25 05:53	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	42		1.5	0.43	mg/L			09/11/25 23:28	1

# Client Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: PA-26d-090325**

**Lab Sample ID: 580-153790-15**

Date Collected: 09/03/25 11:23

Matrix: Water

Date Received: 09/04/25 12:07

**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			09/10/25 09:20	1
<b>Chloromethane</b>	<b>0.20</b>	<b>J</b>	0.50	0.14	ug/L			09/10/25 09:20	1
Vinyl chloride	ND		0.10	0.040	ug/L			09/10/25 09:20	1
Bromomethane	ND		0.50	0.13	ug/L			09/10/25 09:20	1
Chloroethane	ND		0.50	0.24	ug/L			09/10/25 09:20	1
Carbon disulfide	ND		0.40	0.20	ug/L			09/10/25 09:20	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			09/10/25 09:20	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			09/10/25 09:20	1
Acetone	ND		10	3.1	ug/L			09/10/25 09:20	1
Methylene Chloride	ND		5.0	1.2	ug/L			09/10/25 09:20	1
<b>Methyl tert-butyl ether</b>	<b>0.18</b>	<b>J</b>	0.30	0.070	ug/L			09/10/25 09:20	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/10/25 09:20	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			09/10/25 09:20	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			09/10/25 09:20	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			09/10/25 09:20	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			09/10/25 09:20	1
Chlorobromomethane	ND		0.20	0.050	ug/L			09/10/25 09:20	1
Chloroform	ND		0.20	0.030	ug/L			09/10/25 09:20	1
1,1,1-Trichloroethane	ND	*+	0.20	0.025	ug/L			09/10/25 09:20	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			09/10/25 09:20	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			09/10/25 09:20	1
Benzene	ND		0.20	0.030	ug/L			09/10/25 09:20	1
Trichloroethene	ND		0.20	0.066	ug/L			09/10/25 09:20	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			09/10/25 09:20	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			09/10/25 09:20	1
Dibromomethane	ND		0.20	0.062	ug/L			09/10/25 09:20	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			09/10/25 09:20	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			09/10/25 09:20	1
Toluene	ND		0.20	0.050	ug/L			09/10/25 09:20	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			09/10/25 09:20	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			09/10/25 09:20	1
Tetrachloroethene	ND		0.50	0.084	ug/L			09/10/25 09:20	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			09/10/25 09:20	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			09/10/25 09:20	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			09/10/25 09:20	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/10/25 09:20	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			09/10/25 09:20	1
Ethylbenzene	ND		0.20	0.082	ug/L			09/10/25 09:20	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			09/10/25 09:20	1
o-Xylene	ND		0.50	0.23	ug/L			09/10/25 09:20	1
Styrene	ND		1.0	0.33	ug/L			09/10/25 09:20	1
Bromoform	ND		0.50	0.16	ug/L			09/10/25 09:20	1
Isopropylbenzene	ND		1.0	0.27	ug/L			09/10/25 09:20	1
Bromobenzene	ND		0.20	0.038	ug/L			09/10/25 09:20	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			09/10/25 09:20	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			09/10/25 09:20	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/10/25 09:20	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			09/10/25 09:20	1
4-Chlorotoluene	ND		0.30	0.12	ug/L			09/10/25 09:20	1

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# Client Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: PA-26d-090325**

**Lab Sample ID: 580-153790-15**

Date Collected: 09/03/25 11:23

Matrix: Water

Date Received: 09/04/25 12:07

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			09/10/25 09:20	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/10/25 09:20	1
<b>1,2,4-Trimethylbenzene</b>	<b>0.25</b>	<b>J</b>	0.55	0.23	ug/L			09/10/25 09:20	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/10/25 09:20	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			09/10/25 09:20	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			09/10/25 09:20	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/10/25 09:20	1
n-Butylbenzene	ND		1.0	0.35	ug/L			09/10/25 09:20	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			09/10/25 09:20	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			09/10/25 09:20	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			09/10/25 09:20	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			09/10/25 09:20	1
Naphthalene	ND		1.5	0.52	ug/L			09/10/25 09:20	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			09/10/25 09:20	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Toluene-d8 (Surr)	100		80 - 120					09/10/25 09:20	1
Dibromofluoromethane (Surr)	104		80 - 120					09/10/25 09:20	1
4-Bromofluorobenzene (Surr)	103		80 - 120					09/10/25 09:20	1
1,2-Dichloroethane-d4 (Surr)	109		80 - 120					09/10/25 09:20	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>1,2-Dichloroethane</b>	<b>0.63</b>		0.25	0.12	ug/L			09/11/25 15:13	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Toluene-d8 (Surr)	100		80 - 120					09/11/25 15:13	1
Dibromofluoromethane (Surr)	105		80 - 120					09/11/25 15:13	1
4-Bromofluorobenzene (Surr)	98		80 - 120					09/11/25 15:13	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 120					09/11/25 15:13	1

**Method: EPA 314.0 - Perchlorate (IC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		2.0	0.91	ug/L			09/10/25 06:35	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride (EPA 300.0)</b>	<b>87</b>		1.5	0.43	mg/L			09/11/25 23:52	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: PA-23d-090325**

**Lab Sample ID: 580-153790-16**

Date Collected: 09/03/25 12:41

Matrix: Water

Date Received: 09/04/25 12:07

**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			09/11/25 05:26	1
Chloromethane	ND		1.0	0.28	ug/L			09/11/25 05:26	1
Vinyl chloride	ND		1.0	0.22	ug/L			09/11/25 05:26	1
Bromomethane	ND		1.0	0.21	ug/L			09/11/25 05:26	1
Chloroethane	ND		1.0	0.35	ug/L			09/11/25 05:26	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			09/11/25 05:26	1
Carbon disulfide	ND		1.0	0.53	ug/L			09/11/25 05:26	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			09/11/25 05:26	1
Acetone	ND		15	3.2	ug/L			09/11/25 05:26	1
Methylene Chloride	ND	*+	5.0	1.4	ug/L			09/11/25 05:26	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			09/11/25 05:26	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			09/11/25 05:26	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			09/11/25 05:26	1
2-Butanone (MEK)	ND		15	4.7	ug/L			09/11/25 05:26	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			09/11/25 05:26	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			09/11/25 05:26	1
Chlorobromomethane	ND		1.0	0.29	ug/L			09/11/25 05:26	1
<b>Chloroform</b>	<b>0.37</b>	<b>J</b>	1.0	0.26	ug/L			09/11/25 05:26	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			09/11/25 05:26	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			09/11/25 05:26	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			09/11/25 05:26	1
Benzene	ND		1.0	0.24	ug/L			09/11/25 05:26	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			09/11/25 05:26	1
Trichloroethene	ND		1.0	0.26	ug/L			09/11/25 05:26	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			09/11/25 05:26	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/11/25 05:26	1
Dibromomethane	ND		1.0	0.34	ug/L			09/11/25 05:26	1
Dichlorobromomethane	ND		1.0	0.29	ug/L			09/11/25 05:26	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			09/11/25 05:26	1
Toluene	ND		1.0	0.39	ug/L			09/11/25 05:26	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			09/11/25 05:26	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			09/11/25 05:26	1
Tetrachloroethene	ND		1.0	0.41	ug/L			09/11/25 05:26	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			09/11/25 05:26	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			09/11/25 05:26	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			09/11/25 05:26	1
Chlorobenzene	ND		1.0	0.44	ug/L			09/11/25 05:26	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			09/11/25 05:26	1
Ethylbenzene	ND		1.0	0.50	ug/L			09/11/25 05:26	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			09/11/25 05:26	1
o-Xylene	ND		1.0	0.39	ug/L			09/11/25 05:26	1
Styrene	ND		1.0	0.53	ug/L			09/11/25 05:26	1
Bromoform	ND		1.0	0.51	ug/L			09/11/25 05:26	1
Isopropylbenzene	ND		1.0	0.44	ug/L			09/11/25 05:26	1
Bromobenzene	ND		1.0	0.43	ug/L			09/11/25 05:26	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			09/11/25 05:26	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			09/11/25 05:26	1
N-Propylbenzene	ND		1.0	0.50	ug/L			09/11/25 05:26	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			09/11/25 05:26	1

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# Client Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: PA-23d-090325**

**Lab Sample ID: 580-153790-16**

Date Collected: 09/03/25 12:41

Matrix: Water

Date Received: 09/04/25 12:07

**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			09/11/25 05:26	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			09/11/25 05:26	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			09/11/25 05:26	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			09/11/25 05:26	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			09/11/25 05:26	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			09/11/25 05:26	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			09/11/25 05:26	1
n-Butylbenzene	ND		1.0	0.44	ug/L			09/11/25 05:26	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			09/11/25 05:26	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			09/11/25 05:26	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			09/11/25 05:26	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			09/11/25 05:26	1
Naphthalene	ND		3.0	0.93	ug/L			09/11/25 05:26	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			09/11/25 05:26	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			09/11/25 05:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	95		80 - 120		09/11/25 05:26	1
1,2-Dichloroethane-d4 (Surr)	122	S1+	80 - 120		09/11/25 05:26	1
4-Bromofluorobenzene (Surr)	98		80 - 120		09/11/25 05:26	1
Dibromofluoromethane (Surr)	112		80 - 120		09/11/25 05:26	1

**Method: EPA 314.0 - Perchlorate (IC) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		200	91	ug/L			09/10/25 07:16	100

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	110000		3800	1100	mg/L			09/12/25 12:07	2500

# QC Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

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

**Lab Sample ID: MB 580-502659/7**  
**Matrix: Water**  
**Analysis Batch: 502659**

**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			09/09/25 00:31	1
Chloromethane	ND		0.50	0.14	ug/L			09/09/25 00:31	1
Vinyl chloride	ND		0.10	0.040	ug/L			09/09/25 00:31	1
Bromomethane	ND		0.50	0.13	ug/L			09/09/25 00:31	1
Chloroethane	ND		0.50	0.24	ug/L			09/09/25 00:31	1
Carbon disulfide	ND		0.40	0.20	ug/L			09/09/25 00:31	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			09/09/25 00:31	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			09/09/25 00:31	1
Acetone	ND		10	3.1	ug/L			09/09/25 00:31	1
Methylene Chloride	ND		5.0	1.2	ug/L			09/09/25 00:31	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			09/09/25 00:31	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/09/25 00:31	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			09/09/25 00:31	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			09/09/25 00:31	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			09/09/25 00:31	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			09/09/25 00:31	1
Chlorobromomethane	ND		0.20	0.050	ug/L			09/09/25 00:31	1
Chloroform	ND		0.20	0.030	ug/L			09/09/25 00:31	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			09/09/25 00:31	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			09/09/25 00:31	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			09/09/25 00:31	1
Benzene	ND		0.20	0.030	ug/L			09/09/25 00:31	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			09/09/25 00:31	1
Trichloroethene	ND		0.20	0.066	ug/L			09/09/25 00:31	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			09/09/25 00:31	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			09/09/25 00:31	1
Dibromomethane	ND		0.20	0.062	ug/L			09/09/25 00:31	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			09/09/25 00:31	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			09/09/25 00:31	1
Toluene	ND		0.20	0.050	ug/L			09/09/25 00:31	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			09/09/25 00:31	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			09/09/25 00:31	1
Tetrachloroethene	ND		0.50	0.084	ug/L			09/09/25 00:31	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			09/09/25 00:31	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			09/09/25 00:31	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			09/09/25 00:31	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/09/25 00:31	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			09/09/25 00:31	1
Ethylbenzene	ND		0.20	0.082	ug/L			09/09/25 00:31	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			09/09/25 00:31	1
o-Xylene	ND		0.50	0.23	ug/L			09/09/25 00:31	1
Styrene	ND		1.0	0.33	ug/L			09/09/25 00:31	1
Bromoform	ND		0.50	0.16	ug/L			09/09/25 00:31	1
Isopropylbenzene	ND		1.0	0.27	ug/L			09/09/25 00:31	1
Bromobenzene	ND		0.20	0.038	ug/L			09/09/25 00:31	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			09/09/25 00:31	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			09/09/25 00:31	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/09/25 00:31	1

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# QC Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

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

**Lab Sample ID: MB 580-502659/7**  
**Matrix: Water**  
**Analysis Batch: 502659**

**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			09/09/25 00:31	1
4-Chlorotoluene	ND		0.30	0.12	ug/L			09/09/25 00:31	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			09/09/25 00:31	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/09/25 00:31	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			09/09/25 00:31	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/09/25 00:31	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			09/09/25 00:31	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			09/09/25 00:31	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/09/25 00:31	1
n-Butylbenzene	ND		1.0	0.35	ug/L			09/09/25 00:31	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			09/09/25 00:31	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			09/09/25 00:31	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			09/09/25 00:31	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			09/09/25 00:31	1
Naphthalene	ND		1.5	0.52	ug/L			09/09/25 00:31	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			09/09/25 00:31	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		09/09/25 00:31	1
Dibromofluoromethane (Surr)	117		80 - 120		09/09/25 00:31	1
4-Bromofluorobenzene (Surr)	93		80 - 120		09/09/25 00:31	1
1,2-Dichloroethane-d4 (Surr)	121	S1+	80 - 120		09/09/25 00:31	1

**Lab Sample ID: LCS 580-502659/4**  
**Matrix: Water**  
**Analysis Batch: 502659**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dichlorodifluoromethane	5.00	5.48		ug/L		110	20 - 150
Chloromethane	5.00	5.47		ug/L		109	32 - 150
Vinyl chloride	5.00	5.33		ug/L		107	41 - 150
Bromomethane	5.00	5.98		ug/L		120	51 - 148
Chloroethane	5.00	5.97		ug/L		119	54 - 140
Carbon disulfide	5.00	5.48		ug/L		110	54 - 142
Trichlorofluoromethane	5.00	5.65		ug/L		113	60 - 132
1,1-Dichloroethene	5.00	5.98		ug/L		120	60 - 129
Acetone	25.0	34.7		ug/L		139	49 - 150
Methylene Chloride	5.00	6.63		ug/L		133	40 - 142
Methyl tert-butyl ether	5.00	5.77		ug/L		115	61 - 131
2-Butanone (MEK)	25.0	27.7		ug/L		111	37 - 150
trans-1,2-Dichloroethene	5.00	6.06		ug/L		121	69 - 121
1,1-Dichloroethane	5.00	6.14	*+	ug/L		123	74 - 120
2,2-Dichloropropane	5.00	5.64		ug/L		113	55 - 140
cis-1,2-Dichloroethene	5.00	6.09	*+	ug/L		122	72 - 120
Chlorobromomethane	5.00	5.70		ug/L		114	79 - 121
Chloroform	5.00	6.18	*+	ug/L		124	75 - 120
1,1,1-Trichloroethane	5.00	5.51		ug/L		110	70 - 121
Carbon tetrachloride	5.00	5.97		ug/L		119	66 - 130

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# QC Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

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

**Lab Sample ID: LCS 580-502659/4**  
**Matrix: Water**  
**Analysis Batch: 502659**

**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	5.25		ug/L		105	72 - 125
Benzene	5.00	5.34		ug/L		107	80 - 120
1,2-Dichloroethane	5.00	5.88		ug/L		118	74 - 127
Trichloroethene	5.00	4.99		ug/L		100	72 - 120
1,2-Dichloropropane	5.00	5.47		ug/L		109	69 - 130
4-Methyl-2-pentanone (MIBK)	25.00	26.6		ug/L		106	63 - 137
Dibromomethane	5.00	4.36		ug/L		87	65 - 141
Dichlorobromomethane	5.00	5.88		ug/L		118	74 - 131
cis-1,3-Dichloropropene	5.00	5.42		ug/L		108	77 - 131
Toluene	5.00	4.60		ug/L		92	80 - 126
trans-1,3-Dichloropropene	5.00	5.43		ug/L		109	71 - 138
1,1,2-Trichloroethane	5.00	4.50		ug/L		90	73 - 127
Tetrachloroethane	5.00	4.07		ug/L		81	75 - 124
1,3-Dichloropropane	5.00	5.48		ug/L		110	69 - 138
Chlorodibromomethane	5.00	5.04		ug/L		101	62 - 141
Ethylene Dibromide	5.00	4.60		ug/L		92	61 - 143
Chlorobenzene	5.00	4.98		ug/L		100	74 - 123
1,1,1,2-Tetrachloroethane	5.00	5.08		ug/L		102	69 - 127
Ethylbenzene	5.00	4.65		ug/L		93	80 - 124
m-Xylene & p-Xylene	5.00	4.50		ug/L		90	75 - 124
o-Xylene	5.00	4.85		ug/L		97	71 - 124
Styrene	5.00	4.90		ug/L		98	74 - 127
Bromoform	5.00	4.16		ug/L		83	48 - 127
Isopropylbenzene	5.00	4.98		ug/L		100	71 - 123
Bromobenzene	5.00	4.64		ug/L		93	74 - 130
1,1,2,2-Tetrachloroethane	5.00	5.82		ug/L		116	67 - 136
1,2,3-Trichloropropane	5.00	5.51		ug/L		110	67 - 135
N-Propylbenzene	5.00	5.11		ug/L		102	72 - 126
2-Chlorotoluene	5.00	5.36		ug/L		107	73 - 120
4-Chlorotoluene	5.00	5.34		ug/L		107	75 - 124
1,3,5-Trimethylbenzene	5.00	5.24		ug/L		105	75 - 123
tert-Butylbenzene	5.00	5.48		ug/L		110	70 - 129
1,2,4-Trimethylbenzene	5.00	5.14		ug/L		103	71 - 127
sec-Butylbenzene	5.00	4.94		ug/L		99	75 - 126
4-Isopropyltoluene	5.00	4.91		ug/L		98	78 - 125
1,3-Dichlorobenzene	5.00	5.01		ug/L		100	72 - 125
1,4-Dichlorobenzene	5.00	4.94		ug/L		99	71 - 129
n-Butylbenzene	5.00	5.05		ug/L		101	69 - 127
1,2-Dichlorobenzene	5.00	5.08		ug/L		102	72 - 129
1,2-Dibromo-3-Chloropropane	5.00	4.66		ug/L		93	55 - 135
1,2,4-Trichlorobenzene	5.00	4.22		ug/L		84	60 - 130
Hexachlorobutadiene	5.00	4.37		ug/L		87	63 - 130
Naphthalene	5.00	4.74		ug/L		95	54 - 137
1,2,3-Trichlorobenzene	5.00	4.29		ug/L		86	60 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	112		80 - 120

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# QC Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

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

**Lab Sample ID: LCS 580-502659/4**  
**Matrix: Water**  
**Analysis Batch: 502659**

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

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	91		80 - 120
1,2-Dichloroethane-d4 (Surr)	127	S1+	80 - 120

**Lab Sample ID: LCSD 580-502659/5**  
**Matrix: Water**  
**Analysis Batch: 502659**

**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	5.87		ug/L		117	20 - 150	7	30
Chloromethane	5.00	5.89		ug/L		118	32 - 150	7	33
Vinyl chloride	5.00	5.85		ug/L		117	41 - 150	9	32
Bromomethane	5.00	6.53		ug/L		131	51 - 148	9	35
Chloroethane	5.00	6.39		ug/L		128	54 - 140	7	33
Carbon disulfide	5.00	5.87		ug/L		117	54 - 142	7	34
Trichlorofluoromethane	5.00	5.90		ug/L		118	60 - 132	4	32
1,1-Dichloroethene	5.00	6.04		ug/L		121	60 - 129	1	29
Acetone	25.0	33.8		ug/L		135	49 - 150	3	24
Methylene Chloride	5.00	6.99		ug/L		140	40 - 142	5	25
Methyl tert-butyl ether	5.00	5.60		ug/L		112	61 - 131	3	27
2-Butanone (MEK)	25.0	26.4		ug/L		106	37 - 150	5	35
trans-1,2-Dichloroethene	5.00	6.06		ug/L		121	69 - 121	0	27
1,1-Dichloroethane	5.00	6.35	*+	ug/L		127	74 - 120	3	26
2,2-Dichloropropane	5.00	5.68		ug/L		114	55 - 140	1	31
cis-1,2-Dichloroethene	5.00	6.11	*+	ug/L		122	72 - 120	0	22
Chlorobromomethane	5.00	5.85		ug/L		117	79 - 121	3	20
Chloroform	5.00	6.22	*+	ug/L		124	75 - 120	1	21
1,1,1-Trichloroethane	5.00	5.60		ug/L		112	70 - 121	2	24
Carbon tetrachloride	5.00	6.08		ug/L		122	66 - 130	2	24
1,1-Dichloropropene	5.00	5.42		ug/L		108	72 - 125	3	23
Benzene	5.00	5.61		ug/L		112	80 - 120	5	22
1,2-Dichloroethane	5.00	5.89		ug/L		118	74 - 127	0	21
Trichloroethene	5.00	5.17		ug/L		103	72 - 120	3	22
1,2-Dichloropropane	5.00	5.56		ug/L		111	69 - 130	2	22
4-Methyl-2-pentanone (MIBK)	25.0	27.1		ug/L		109	63 - 137	2	26
Dibromomethane	5.00	4.43		ug/L		89	65 - 141	2	22
Dichlorobromomethane	5.00	5.90		ug/L		118	74 - 131	0	21
cis-1,3-Dichloropropene	5.00	5.50		ug/L		110	77 - 131	1	24
Toluene	5.00	4.80		ug/L		96	80 - 126	4	20
trans-1,3-Dichloropropene	5.00	5.55		ug/L		111	71 - 138	2	26
1,1,2-Trichloroethane	5.00	4.51		ug/L		90	73 - 127	0	22
Tetrachloroethene	5.00	4.24		ug/L		85	75 - 124	4	20
1,3-Dichloropropane	5.00	5.53		ug/L		111	69 - 138	1	19
Chlorodibromomethane	5.00	5.09		ug/L		102	62 - 141	1	22
Ethylene Dibromide	5.00	4.73		ug/L		95	61 - 143	3	22
Chlorobenzene	5.00	5.34		ug/L		107	74 - 123	7	21
1,1,1,2-Tetrachloroethane	5.00	5.22		ug/L		104	69 - 127	3	22
Ethylbenzene	5.00	5.00		ug/L		100	80 - 124	7	22
m-Xylene & p-Xylene	5.00	4.82		ug/L		96	75 - 124	7	22

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# QC Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

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

**Lab Sample ID: LCSD 580-502659/5**  
**Matrix: Water**  
**Analysis Batch: 502659**

**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	5.22		ug/L		104	71 - 124	7	23
Styrene	5.00	5.39		ug/L		108	74 - 127	9	22
Bromoform	5.00	4.20		ug/L		84	48 - 127	1	23
Isopropylbenzene	5.00	5.54		ug/L		111	71 - 123	11	23
Bromobenzene	5.00	4.73		ug/L		95	74 - 130	2	23
1,1,2,2-Tetrachloroethane	5.00	5.82		ug/L		116	67 - 136	0	24
1,2,3-Trichloropropane	5.00	5.57		ug/L		111	67 - 135	1	25
N-Propylbenzene	5.00	5.36		ug/L		107	72 - 126	5	20
2-Chlorotoluene	5.00	5.68		ug/L		114	73 - 120	6	22
4-Chlorotoluene	5.00	5.61		ug/L		112	75 - 124	5	23
1,3,5-Trimethylbenzene	5.00	5.47		ug/L		109	75 - 123	4	23
tert-Butylbenzene	5.00	6.30		ug/L		126	70 - 129	14	24
1,2,4-Trimethylbenzene	5.00	5.43		ug/L		109	71 - 127	6	23
sec-Butylbenzene	5.00	5.26		ug/L		105	75 - 126	6	23
4-Isopropyltoluene	5.00	5.12		ug/L		102	78 - 125	4	24
1,3-Dichlorobenzene	5.00	5.17		ug/L		103	72 - 125	3	22
1,4-Dichlorobenzene	5.00	5.19		ug/L		104	71 - 129	5	22
n-Butylbenzene	5.00	5.20		ug/L		104	69 - 127	3	24
1,2-Dichlorobenzene	5.00	5.18		ug/L		104	72 - 129	2	22
1,2-Dibromo-3-Chloropropane	5.00	4.69		ug/L		94	55 - 135	1	29
1,2,4-Trichlorobenzene	5.00	4.40		ug/L		88	60 - 130	4	26
Hexachlorobutadiene	5.00	4.52		ug/L		90	63 - 130	3	26
Naphthalene	5.00	4.62		ug/L		92	54 - 137	2	28
1,2,3-Trichlorobenzene	5.00	4.35		ug/L		87	60 - 136	1	28

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
Toluene-d8 (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	109		80 - 120
4-Bromofluorobenzene (Surr)	93		80 - 120
1,2-Dichloroethane-d4 (Surr)	114		80 - 120

**Lab Sample ID: MB 580-502771/10**  
**Matrix: Water**  
**Analysis Batch: 502771**

**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			09/10/25 04:40	1
Chloromethane	ND		0.50	0.14	ug/L			09/10/25 04:40	1
Vinyl chloride	ND		0.10	0.040	ug/L			09/10/25 04:40	1
Bromomethane	ND		0.50	0.13	ug/L			09/10/25 04:40	1
Chloroethane	ND		0.50	0.24	ug/L			09/10/25 04:40	1
Carbon disulfide	ND		0.40	0.20	ug/L			09/10/25 04:40	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			09/10/25 04:40	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			09/10/25 04:40	1
Acetone	ND		10	3.1	ug/L			09/10/25 04:40	1
Methylene Chloride	ND		5.0	1.2	ug/L			09/10/25 04:40	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			09/10/25 04:40	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/10/25 04:40	1

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# QC Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

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

**Lab Sample ID: MB 580-502771/10**  
**Matrix: Water**  
**Analysis Batch: 502771**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			09/10/25 04:40	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			09/10/25 04:40	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			09/10/25 04:40	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			09/10/25 04:40	1
Chlorobromomethane	ND		0.20	0.050	ug/L			09/10/25 04:40	1
Chloroform	ND		0.20	0.030	ug/L			09/10/25 04:40	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			09/10/25 04:40	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			09/10/25 04:40	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			09/10/25 04:40	1
Benzene	ND		0.20	0.030	ug/L			09/10/25 04:40	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			09/10/25 04:40	1
Trichloroethene	ND		0.20	0.066	ug/L			09/10/25 04:40	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			09/10/25 04:40	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			09/10/25 04:40	1
Dibromomethane	ND		0.20	0.062	ug/L			09/10/25 04:40	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			09/10/25 04:40	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			09/10/25 04:40	1
Toluene	ND		0.20	0.050	ug/L			09/10/25 04:40	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			09/10/25 04:40	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			09/10/25 04:40	1
Tetrachloroethene	ND		0.50	0.084	ug/L			09/10/25 04:40	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			09/10/25 04:40	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			09/10/25 04:40	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			09/10/25 04:40	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/10/25 04:40	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			09/10/25 04:40	1
Ethylbenzene	ND		0.20	0.082	ug/L			09/10/25 04:40	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			09/10/25 04:40	1
o-Xylene	ND		0.50	0.23	ug/L			09/10/25 04:40	1
Styrene	ND		1.0	0.33	ug/L			09/10/25 04:40	1
Bromoform	ND		0.50	0.16	ug/L			09/10/25 04:40	1
Isopropylbenzene	ND		1.0	0.27	ug/L			09/10/25 04:40	1
Bromobenzene	ND		0.20	0.038	ug/L			09/10/25 04:40	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			09/10/25 04:40	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			09/10/25 04:40	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/10/25 04:40	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			09/10/25 04:40	1
4-Chlorotoluene	ND		0.30	0.12	ug/L			09/10/25 04:40	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			09/10/25 04:40	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/10/25 04:40	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			09/10/25 04:40	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/10/25 04:40	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			09/10/25 04:40	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			09/10/25 04:40	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/10/25 04:40	1
n-Butylbenzene	ND		1.0	0.35	ug/L			09/10/25 04:40	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			09/10/25 04:40	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			09/10/25 04:40	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			09/10/25 04:40	1

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# QC Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

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

**Lab Sample ID: MB 580-502771/10**  
**Matrix: Water**  
**Analysis Batch: 502771**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	ND		0.50	0.16	ug/L			09/10/25 04:40	1
Naphthalene	ND		1.5	0.52	ug/L			09/10/25 04:40	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			09/10/25 04:40	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	99		80 - 120					09/10/25 04:40	1
<i>Dibromofluoromethane (Surr)</i>	106		80 - 120					09/10/25 04:40	1
<i>4-Bromofluorobenzene (Surr)</i>	103		80 - 120					09/10/25 04:40	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	118		80 - 120					09/10/25 04:40	1

**Lab Sample ID: LCS 580-502771/5**  
**Matrix: Water**  
**Analysis Batch: 502771**

**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	4.27		ug/L		85	20 - 150
Chloromethane	5.00	4.10		ug/L		82	32 - 150
Vinyl chloride	5.00	4.95		ug/L		99	41 - 150
Bromomethane	5.00	5.61		ug/L		112	51 - 148
Chloroethane	5.00	4.84		ug/L		97	54 - 140
Carbon disulfide	5.00	5.07		ug/L		101	54 - 142
Trichlorofluoromethane	5.00	5.72		ug/L		114	60 - 132
1,1-Dichloroethene	5.00	5.43		ug/L		109	60 - 129
Acetone	25.0	26.1		ug/L		104	49 - 150
Methylene Chloride	5.00	4.82	J	ug/L		96	40 - 142
Methyl tert-butyl ether	5.00	5.87		ug/L		117	61 - 131
2-Butanone (MEK)	25.0	25.3		ug/L		101	37 - 150
trans-1,2-Dichloroethene	5.00	5.21		ug/L		104	69 - 121
1,1-Dichloroethane	5.00	5.61		ug/L		112	74 - 120
2,2-Dichloropropane	5.00	6.70		ug/L		134	55 - 140
cis-1,2-Dichloroethene	5.00	5.48		ug/L		110	72 - 120
Chlorobromomethane	5.00	5.49		ug/L		110	79 - 121
Chloroform	5.00	5.95		ug/L		119	75 - 120
1,1,1-Trichloroethane	5.00	6.61	*+	ug/L		132	70 - 121
Carbon tetrachloride	5.00	6.23		ug/L		125	66 - 130
1,1-Dichloropropene	5.00	6.18		ug/L		124	72 - 125
Benzene	5.00	5.49		ug/L		110	80 - 120
1,2-Dichloroethane	5.00	6.01		ug/L		120	74 - 127
Trichloroethene	5.00	5.68		ug/L		114	72 - 120
1,2-Dichloropropane	5.00	5.41		ug/L		108	69 - 130
4-Methyl-2-pentanone (MIBK)	25.0	22.7		ug/L		91	63 - 137
Dibromomethane	5.00	5.78		ug/L		116	65 - 141
Dichlorobromomethane	5.00	5.76		ug/L		115	74 - 131
cis-1,3-Dichloropropene	5.00	5.31		ug/L		106	77 - 131
Toluene	5.00	5.45		ug/L		109	80 - 126
trans-1,3-Dichloropropene	5.00	5.86		ug/L		117	71 - 138
1,1,2-Trichloroethane	5.00	5.32		ug/L		106	73 - 127
Tetrachloroethene	5.00	5.50		ug/L		110	75 - 124

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# QC Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

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

**Lab Sample ID: LCS 580-502771/5**  
**Matrix: Water**  
**Analysis Batch: 502771**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,3-Dichloropropane	5.00	5.20		ug/L		104	69 - 138
Chlorodibromomethane	5.00	5.32		ug/L		106	62 - 141
Ethylene Dibromide	5.00	5.58		ug/L		112	61 - 143
Chlorobenzene	5.00	5.49		ug/L		110	74 - 123
1,1,1,2-Tetrachloroethane	5.00	5.93		ug/L		119	69 - 127
Ethylbenzene	5.00	5.58		ug/L		112	80 - 124
m-Xylene & p-Xylene	5.00	5.68		ug/L		114	75 - 124
o-Xylene	5.00	5.53		ug/L		111	71 - 124
Styrene	5.00	5.21		ug/L		104	74 - 127
Bromoform	5.00	5.52		ug/L		110	48 - 127
Isopropylbenzene	5.00	5.82		ug/L		116	71 - 123
Bromobenzene	5.00	5.43		ug/L		109	74 - 130
1,1,2,2-Tetrachloroethane	5.00	4.96		ug/L		99	67 - 136
1,2,3-Trichloropropane	5.00	5.56		ug/L		111	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	5.28		ug/L		106	75 - 124
1,3,5-Trimethylbenzene	5.00	5.29		ug/L		106	75 - 123
tert-Butylbenzene	5.00	5.48		ug/L		110	70 - 129
1,2,4-Trimethylbenzene	5.00	5.28		ug/L		106	71 - 127
sec-Butylbenzene	5.00	5.25		ug/L		105	75 - 126
4-Isopropyltoluene	5.00	5.00		ug/L		100	78 - 125
1,3-Dichlorobenzene	5.00	5.24		ug/L		105	72 - 125
1,4-Dichlorobenzene	5.00	5.30		ug/L		106	71 - 129
n-Butylbenzene	5.00	4.83		ug/L		97	69 - 127
1,2-Dichlorobenzene	5.00	5.23		ug/L		105	72 - 129
1,2-Dibromo-3-Chloropropane	5.00	4.85		ug/L		97	55 - 135
1,2,4-Trichlorobenzene	5.00	4.68		ug/L		94	60 - 130
Hexachlorobutadiene	5.00	5.77		ug/L		115	63 - 130
Naphthalene	5.00	4.25		ug/L		85	54 - 137
1,2,3-Trichlorobenzene	5.00	4.62		ug/L		92	60 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	108		80 - 120
4-Bromofluorobenzene (Surr)	106		80 - 120
1,2-Dichloroethane-d4 (Surr)	116		80 - 120

**Lab Sample ID: LCSD 580-502771/6**  
**Matrix: Water**  
**Analysis Batch: 502771**

**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	4.11		ug/L		82	20 - 150	4	30
Chloromethane	5.00	4.06		ug/L		81	32 - 150	1	33
Vinyl chloride	5.00	4.91		ug/L		98	41 - 150	1	32
Bromomethane	5.00	5.38		ug/L		108	51 - 148	4	35
Chloroethane	5.00	5.02		ug/L		100	54 - 140	4	33

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# QC Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

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

**Lab Sample ID: LCSD 580-502771/6**  
**Matrix: Water**  
**Analysis Batch: 502771**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Carbon disulfide	5.00	4.91		ug/L		98	54 - 142	3	34
Trichlorofluoromethane	5.00	5.41		ug/L		108	60 - 132	6	32
1,1-Dichloroethene	5.00	5.32		ug/L		106	60 - 129	2	29
Acetone	25.0	26.6		ug/L		107	49 - 150	2	24
Methylene Chloride	5.00	4.87	J	ug/L		97	40 - 142	1	25
Methyl tert-butyl ether	5.00	5.49		ug/L		110	61 - 131	7	27
2-Butanone (MEK)	25.0	25.3		ug/L		101	37 - 150	0	35
trans-1,2-Dichloroethene	5.00	5.14		ug/L		103	69 - 121	1	27
1,1-Dichloroethane	5.00	5.43		ug/L		109	74 - 120	3	26
2,2-Dichloropropane	5.00	6.75		ug/L		135	55 - 140	1	31
cis-1,2-Dichloroethene	5.00	5.38		ug/L		108	72 - 120	2	22
Chlorobromomethane	5.00	5.48		ug/L		110	79 - 121	0	20
Chloroform	5.00	5.79		ug/L		116	75 - 120	3	21
1,1,1-Trichloroethane	5.00	6.61	*+	ug/L		132	70 - 121	0	24
Carbon tetrachloride	5.00	6.24		ug/L		125	66 - 130	0	24
1,1-Dichloropropene	5.00	5.68		ug/L		114	72 - 125	8	23
Benzene	5.00	5.30		ug/L		106	80 - 120	3	22
1,2-Dichloroethane	5.00	5.87		ug/L		117	74 - 127	2	21
Trichloroethene	5.00	5.33		ug/L		107	72 - 120	6	22
1,2-Dichloropropane	5.00	5.22		ug/L		104	69 - 130	4	22
4-Methyl-2-pentanone (MIBK)	25.0	23.0		ug/L		92	63 - 137	1	26
Dibromomethane	5.00	5.63		ug/L		113	65 - 141	3	22
Dichlorobromomethane	5.00	5.77		ug/L		115	74 - 131	0	21
cis-1,3-Dichloropropene	5.00	5.29		ug/L		106	77 - 131	0	24
Toluene	5.00	5.12		ug/L		102	80 - 126	6	20
trans-1,3-Dichloropropene	5.00	5.82		ug/L		116	71 - 138	1	26
1,1,2-Trichloroethane	5.00	5.27		ug/L		105	73 - 127	1	22
Tetrachloroethene	5.00	5.30		ug/L		106	75 - 124	4	20
1,3-Dichloropropane	5.00	5.22		ug/L		104	69 - 138	0	19
Chlorodibromomethane	5.00	5.28		ug/L		106	62 - 141	1	22
Ethylene Dibromide	5.00	5.50		ug/L		110	61 - 143	1	22
Chlorobenzene	5.00	5.21		ug/L		104	74 - 123	5	21
1,1,1,2-Tetrachloroethane	5.00	5.93		ug/L		119	69 - 127	0	22
Ethylbenzene	5.00	5.47		ug/L		109	80 - 124	2	22
m-Xylene & p-Xylene	5.00	5.49		ug/L		110	75 - 124	3	22
o-Xylene	5.00	5.28		ug/L		106	71 - 124	5	23
Styrene	5.00	5.01		ug/L		100	74 - 127	4	22
Bromoform	5.00	5.31		ug/L		106	48 - 127	4	23
Isopropylbenzene	5.00	5.58		ug/L		112	71 - 123	4	23
Bromobenzene	5.00	5.08		ug/L		102	74 - 130	7	23
1,1,2,2-Tetrachloroethane	5.00	4.91		ug/L		98	67 - 136	1	24
1,2,3-Trichloropropane	5.00	5.42		ug/L		108	67 - 135	3	25
N-Propylbenzene	5.00	5.30		ug/L		106	72 - 126	4	20
2-Chlorotoluene	5.00	5.20		ug/L		104	73 - 120	4	22
4-Chlorotoluene	5.00	5.17		ug/L		103	75 - 124	2	23
1,3,5-Trimethylbenzene	5.00	5.17		ug/L		103	75 - 123	2	23
tert-Butylbenzene	5.00	5.37		ug/L		107	70 - 129	2	24
1,2,4-Trimethylbenzene	5.00	5.12		ug/L		102	71 - 127	3	23
sec-Butylbenzene	5.00	5.06		ug/L		101	75 - 126	4	23

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# QC Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

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

**Lab Sample ID: LCSD 580-502771/6**  
**Matrix: Water**  
**Analysis Batch: 502771**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4-Isopropyltoluene	5.00	4.97		ug/L		99	78 - 125	0	24
1,3-Dichlorobenzene	5.00	5.20		ug/L		104	72 - 125	1	22
1,4-Dichlorobenzene	5.00	5.12		ug/L		102	71 - 129	4	22
n-Butylbenzene	5.00	4.77		ug/L		95	69 - 127	1	24
1,2-Dichlorobenzene	5.00	5.26		ug/L		105	72 - 129	1	22
1,2-Dibromo-3-Chloropropane	5.00	4.95		ug/L		99	55 - 135	2	29
1,2,4-Trichlorobenzene	5.00	4.59		ug/L		92	60 - 130	2	26
Hexachlorobutadiene	5.00	5.51		ug/L		110	63 - 130	5	26
Naphthalene	5.00	4.46		ug/L		89	54 - 137	5	28
1,2,3-Trichlorobenzene	5.00	4.56		ug/L		91	60 - 136	1	28

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	107		80 - 120
4-Bromofluorobenzene (Surr)	106		80 - 120
1,2-Dichloroethane-d4 (Surr)	117		80 - 120

**Lab Sample ID: MB 580-502934/10**  
**Matrix: Water**  
**Analysis Batch: 502934**

**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			09/10/25 23:47	1
Chloromethane	ND		0.50	0.14	ug/L			09/10/25 23:47	1
Vinyl chloride	ND		0.10	0.040	ug/L			09/10/25 23:47	1
Bromomethane	ND		0.50	0.13	ug/L			09/10/25 23:47	1
Chloroethane	ND		0.50	0.24	ug/L			09/10/25 23:47	1
Carbon disulfide	ND		0.40	0.20	ug/L			09/10/25 23:47	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			09/10/25 23:47	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			09/10/25 23:47	1
Acetone	ND		10	3.1	ug/L			09/10/25 23:47	1
Methylene Chloride	ND		5.0	1.2	ug/L			09/10/25 23:47	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			09/10/25 23:47	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/10/25 23:47	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			09/10/25 23:47	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			09/10/25 23:47	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			09/10/25 23:47	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			09/10/25 23:47	1
Chlorobromomethane	ND		0.20	0.050	ug/L			09/10/25 23:47	1
Chloroform	ND		0.20	0.030	ug/L			09/10/25 23:47	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			09/10/25 23:47	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			09/10/25 23:47	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			09/10/25 23:47	1
Benzene	ND		0.20	0.030	ug/L			09/10/25 23:47	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			09/10/25 23:47	1
Trichloroethene	ND		0.20	0.066	ug/L			09/10/25 23:47	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			09/10/25 23:47	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			09/10/25 23:47	1

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# QC Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

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

**Lab Sample ID: MB 580-502934/10**  
**Matrix: Water**  
**Analysis Batch: 502934**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	ND		0.20	0.062	ug/L			09/10/25 23:47	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			09/10/25 23:47	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			09/10/25 23:47	1
Toluene	ND		0.20	0.050	ug/L			09/10/25 23:47	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			09/10/25 23:47	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			09/10/25 23:47	1
Tetrachloroethene	ND		0.50	0.084	ug/L			09/10/25 23:47	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			09/10/25 23:47	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			09/10/25 23:47	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			09/10/25 23:47	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/10/25 23:47	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			09/10/25 23:47	1
Ethylbenzene	ND		0.20	0.082	ug/L			09/10/25 23:47	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			09/10/25 23:47	1
o-Xylene	ND		0.50	0.23	ug/L			09/10/25 23:47	1
Styrene	ND		1.0	0.33	ug/L			09/10/25 23:47	1
Bromoform	ND		0.50	0.16	ug/L			09/10/25 23:47	1
Isopropylbenzene	ND		1.0	0.27	ug/L			09/10/25 23:47	1
Bromobenzene	ND		0.20	0.038	ug/L			09/10/25 23:47	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			09/10/25 23:47	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			09/10/25 23:47	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/10/25 23:47	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			09/10/25 23:47	1
4-Chlorotoluene	ND		0.30	0.12	ug/L			09/10/25 23:47	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			09/10/25 23:47	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/10/25 23:47	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			09/10/25 23:47	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/10/25 23:47	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			09/10/25 23:47	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			09/10/25 23:47	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/10/25 23:47	1
n-Butylbenzene	ND		1.0	0.35	ug/L			09/10/25 23:47	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			09/10/25 23:47	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			09/10/25 23:47	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			09/10/25 23:47	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			09/10/25 23:47	1
Naphthalene	ND		1.5	0.52	ug/L			09/10/25 23:47	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			09/10/25 23:47	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		09/10/25 23:47	1
Dibromofluoromethane (Surr)	111		80 - 120		09/10/25 23:47	1
4-Bromofluorobenzene (Surr)	99		80 - 120		09/10/25 23:47	1
1,2-Dichloroethane-d4 (Surr)	108		80 - 120		09/10/25 23:47	1

# QC Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

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

**Lab Sample ID: LCS 580-502934/5**  
**Matrix: Water**  
**Analysis Batch: 502934**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dichlorodifluoromethane	5.00	5.19		ug/L		104	20 - 150
Chloromethane	5.00	5.09		ug/L		102	32 - 150
Vinyl chloride	5.00	6.12		ug/L		122	41 - 150
Bromomethane	5.00	5.05		ug/L		101	51 - 148
Chloroethane	5.00	5.86		ug/L		117	54 - 140
Carbon disulfide	5.00	5.58		ug/L		112	54 - 142
Trichlorofluoromethane	5.00	5.69		ug/L		114	60 - 132
1,1-Dichloroethene	5.00	5.44		ug/L		109	60 - 129
Acetone	25.0	28.0		ug/L		112	49 - 150
Methylene Chloride	5.00	22.9	*+	ug/L		458	40 - 142
Methyl tert-butyl ether	5.00	5.71		ug/L		114	61 - 131
2-Butanone (MEK)	25.0	29.5		ug/L		118	37 - 150
trans-1,2-Dichloroethene	5.00	5.34		ug/L		107	69 - 121
1,1-Dichloroethane	5.00	5.69		ug/L		114	74 - 120
2,2-Dichloropropane	5.00	5.28		ug/L		106	55 - 140
cis-1,2-Dichloroethene	5.00	5.45		ug/L		109	72 - 120
Chlorobromomethane	5.00	6.03		ug/L		121	79 - 121
Chloroform	5.00	5.76		ug/L		115	75 - 120
1,1,1-Trichloroethane	5.00	5.27		ug/L		105	70 - 121
Carbon tetrachloride	5.00	5.19		ug/L		104	66 - 130
1,1-Dichloropropene	5.00	5.19		ug/L		104	72 - 125
Benzene	5.00	5.38		ug/L		108	80 - 120
1,2-Dichloroethane	5.00	5.48		ug/L		110	74 - 127
Trichloroethene	5.00	5.18		ug/L		104	72 - 120
1,2-Dichloropropane	5.00	5.11		ug/L		102	69 - 130
4-Methyl-2-pentanone (MIBK)	25.0	31.4		ug/L		126	63 - 137
Dibromomethane	5.00	5.69		ug/L		114	65 - 141
Dichlorobromomethane	5.00	5.12		ug/L		102	74 - 131
cis-1,3-Dichloropropene	5.00	5.46		ug/L		109	77 - 131
Toluene	5.00	5.62		ug/L		112	80 - 126
trans-1,3-Dichloropropene	5.00	5.72		ug/L		114	71 - 138
1,1,2-Trichloroethane	5.00	5.33		ug/L		107	73 - 127
Tetrachloroethene	5.00	5.10		ug/L		102	75 - 124
1,3-Dichloropropane	5.00	5.44		ug/L		109	69 - 138
Chlorodibromomethane	5.00	5.17		ug/L		103	62 - 141
Ethylene Dibromide	5.00	6.30		ug/L		126	61 - 143
Chlorobenzene	5.00	5.31		ug/L		106	74 - 123
1,1,1,2-Tetrachloroethane	5.00	5.43		ug/L		109	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	5.44		ug/L		109	71 - 124
Styrene	5.00	5.27		ug/L		105	74 - 127
Bromoform	5.00	5.48		ug/L		110	48 - 127
Isopropylbenzene	5.00	5.60		ug/L		112	71 - 123
Bromobenzene	5.00	5.35		ug/L		107	74 - 130
1,1,2,2-Tetrachloroethane	5.00	5.98		ug/L		120	67 - 136
1,2,3-Trichloropropane	5.00	5.62		ug/L		112	67 - 135
N-Propylbenzene	5.00	5.52		ug/L		110	72 - 126

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# QC Sample Results

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Job ID: 580-153790-1

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

**Lab Sample ID: LCS 580-502934/5**  
**Matrix: Water**  
**Analysis Batch: 502934**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Chlorotoluene	5.00	5.58		ug/L		112	73 - 120
4-Chlorotoluene	5.00	5.56		ug/L		111	75 - 124
1,3,5-Trimethylbenzene	5.00	5.33		ug/L		107	75 - 123
tert-Butylbenzene	5.00	5.74		ug/L		115	70 - 129
1,2,4-Trimethylbenzene	5.00	5.61		ug/L		112	71 - 127
sec-Butylbenzene	5.00	5.68		ug/L		114	75 - 126
4-Isopropyltoluene	5.00	5.11		ug/L		102	78 - 125
1,3-Dichlorobenzene	5.00	5.54		ug/L		111	72 - 125
1,4-Dichlorobenzene	5.00	5.43		ug/L		109	71 - 129
n-Butylbenzene	5.00	5.33		ug/L		107	69 - 127
1,2-Dichlorobenzene	5.00	5.61		ug/L		112	72 - 129
1,2-Dibromo-3-Chloropropane	5.00	5.88		ug/L		118	55 - 135
1,2,4-Trichlorobenzene	5.00	5.47		ug/L		109	60 - 130
Hexachlorobutadiene	5.00	4.97		ug/L		99	63 - 130
Naphthalene	5.00	5.58		ug/L		112	54 - 137
1,2,3-Trichlorobenzene	5.00	5.31		ug/L		106	60 - 136

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	107		80 - 120
4-Bromofluorobenzene (Surr)	98		80 - 120
1,2-Dichloroethane-d4 (Surr)	104		80 - 120

**Lab Sample ID: LCSD 580-502934/6**  
**Matrix: Water**  
**Analysis Batch: 502934**

**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	5.09		ug/L		102	20 - 150	2	30
Chloromethane	5.00	4.81		ug/L		96	32 - 150	6	33
Vinyl chloride	5.00	5.76		ug/L		115	41 - 150	6	32
Bromomethane	5.00	4.75		ug/L		95	51 - 148	6	35
Chloroethane	5.00	5.59		ug/L		112	54 - 140	5	33
Carbon disulfide	5.00	5.25		ug/L		105	54 - 142	6	34
Trichlorofluoromethane	5.00	5.63		ug/L		113	60 - 132	1	32
1,1-Dichloroethene	5.00	5.59		ug/L		112	60 - 129	3	29
Acetone	25.0	28.4		ug/L		114	49 - 150	2	24
Methylene Chloride	5.00	21.2	*+	ug/L		424	40 - 142	8	25
Methyl tert-butyl ether	5.00	6.04		ug/L		121	61 - 131	6	27
2-Butanone (MEK)	25.0	30.6		ug/L		122	37 - 150	4	35
trans-1,2-Dichloroethene	5.00	5.66		ug/L		113	69 - 121	6	27
1,1-Dichloroethane	5.00	5.78		ug/L		116	74 - 120	2	26
2,2-Dichloropropane	5.00	5.60		ug/L		112	55 - 140	6	31
cis-1,2-Dichloroethene	5.00	5.70		ug/L		114	72 - 120	4	22
Chlorobromomethane	5.00	5.73		ug/L		115	79 - 121	5	20
Chloroform	5.00	6.01		ug/L		120	75 - 120	4	21
1,1,1-Trichloroethane	5.00	5.62		ug/L		112	70 - 121	7	24
Carbon tetrachloride	5.00	5.39		ug/L		108	66 - 130	4	24

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# QC Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

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

**Lab Sample ID: LCSD 580-502934/6**  
**Matrix: Water**  
**Analysis Batch: 502934**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1-Dichloropropene	5.00	5.54		ug/L		111	72 - 125	6	23
Benzene	5.00	5.61		ug/L		112	80 - 120	4	22
1,2-Dichloroethane	5.00	5.78		ug/L		116	74 - 127	5	21
Trichloroethene	5.00	5.41		ug/L		108	72 - 120	4	22
1,2-Dichloropropane	5.00	5.43		ug/L		109	69 - 130	6	22
4-Methyl-2-pentanone (MIBK)	25.00	32.1		ug/L		128	63 - 137	2	26
Dibromomethane	5.00	5.82		ug/L		116	65 - 141	2	22
Dichlorobromomethane	5.00	5.35		ug/L		107	74 - 131	4	21
cis-1,3-Dichloropropene	5.00	5.85		ug/L		117	77 - 131	7	24
Toluene	5.00	5.78		ug/L		116	80 - 126	3	20
trans-1,3-Dichloropropene	5.00	6.04		ug/L		121	71 - 138	5	26
1,1,2-Trichloroethane	5.00	5.81		ug/L		116	73 - 127	9	22
Tetrachloroethane	5.00	5.33		ug/L		107	75 - 124	5	20
1,3-Dichloropropane	5.00	5.77		ug/L		115	69 - 138	6	19
Chlorodibromomethane	5.00	5.57		ug/L		111	62 - 141	7	22
Ethylene Dibromide	5.00	5.79		ug/L		116	61 - 143	8	22
Chlorobenzene	5.00	5.43		ug/L		109	74 - 123	2	21
1,1,1,2-Tetrachloroethane	5.00	5.73		ug/L		115	69 - 127	5	22
Ethylbenzene	5.00	5.43		ug/L		109	80 - 124	2	22
m-Xylene & p-Xylene	5.00	5.36		ug/L		107	75 - 124	1	22
o-Xylene	5.00	5.45		ug/L		109	71 - 124	0	23
Styrene	5.00	5.22		ug/L		104	74 - 127	1	22
Bromoform	5.00	5.80		ug/L		116	48 - 127	6	23
Isopropylbenzene	5.00	5.65		ug/L		113	71 - 123	1	23
Bromobenzene	5.00	5.46		ug/L		109	74 - 130	2	23
1,1,2,2-Tetrachloroethane	5.00	6.16		ug/L		123	67 - 136	3	24
1,2,3-Trichloropropane	5.00	5.75		ug/L		115	67 - 135	2	25
N-Propylbenzene	5.00	5.65		ug/L		113	72 - 126	2	20
2-Chlorotoluene	5.00	5.67		ug/L		113	73 - 120	2	22
4-Chlorotoluene	5.00	5.63		ug/L		113	75 - 124	1	23
1,3,5-Trimethylbenzene	5.00	5.48		ug/L		110	75 - 123	3	23
tert-Butylbenzene	5.00	5.83		ug/L		117	70 - 129	2	24
1,2,4-Trimethylbenzene	5.00	5.71		ug/L		114	71 - 127	2	23
sec-Butylbenzene	5.00	5.78		ug/L		116	75 - 126	2	23
4-Isopropyltoluene	5.00	5.22		ug/L		104	78 - 125	2	24
1,3-Dichlorobenzene	5.00	5.60		ug/L		112	72 - 125	1	22
1,4-Dichlorobenzene	5.00	5.54		ug/L		111	71 - 129	2	22
n-Butylbenzene	5.00	5.46		ug/L		109	69 - 127	2	24
1,2-Dichlorobenzene	5.00	5.73		ug/L		115	72 - 129	2	22
1,2-Dibromo-3-Chloropropane	5.00	5.82		ug/L		116	55 - 135	1	29
1,2,4-Trichlorobenzene	5.00	5.58		ug/L		112	60 - 130	2	26
Hexachlorobutadiene	5.00	5.08		ug/L		102	63 - 130	2	26
Naphthalene	5.00	5.60		ug/L		112	54 - 137	0	28
1,2,3-Trichlorobenzene	5.00	5.34		ug/L		107	60 - 136	0	28

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	104		80 - 120

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# QC Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

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

**Lab Sample ID: LCSD 580-502934/6**  
**Matrix: Water**  
**Analysis Batch: 502934**

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

<i>Surrogate</i>	<i>%Recovery</i>	<i>LCSD Qualifier</i>	<i>LCSD Limits</i>
4-Bromofluorobenzene (Surr)	96		80 - 120
1,2-Dichloroethane-d4 (Surr)	106		80 - 120

**Lab Sample ID: 580-153790-10 MS**  
**Matrix: Water**  
**Analysis Batch: 502934**

**Client Sample ID: MWA-81i-090325**  
**Prep Type: Total/NA**

<b>Analyte</b>	<b>Sample Result</b>	<b>Sample Qualifier</b>	<b>Spike Added</b>	<b>MS Result</b>	<b>MS Qualifier</b>	<b>Unit</b>	<b>D</b>	<b>%Rec</b>	<b>%Rec Limits</b>
Dichlorodifluoromethane	ND	F1	5.00	6.43		ug/L		129	20 - 150
Chloromethane	ND		5.00	5.08		ug/L		102	32 - 150
Vinyl chloride	ND	F1	5.00	6.66		ug/L		133	41 - 150
Bromomethane	ND		5.00	4.15		ug/L		83	51 - 148
Chloroethane	ND	F1	5.00	6.63		ug/L		133	54 - 140
Carbon disulfide	ND	F1	5.00	6.43		ug/L		129	54 - 142
Trichlorofluoromethane	ND	F1	5.00	7.29	F1	ug/L		146	60 - 132
1,1-Dichloroethene	ND	F1	5.00	6.90	F1	ug/L		138	60 - 129
Acetone	ND		25.0	28.5		ug/L		114	49 - 150
Methylene Chloride	ND	*+ F2	5.00	3.90	J	ug/L		78	40 - 142
Methyl tert-butyl ether	ND		5.00	6.09		ug/L		122	61 - 131
2-Butanone (MEK)	ND		25.0	28.7		ug/L		115	37 - 150
trans-1,2-Dichloroethene	ND	F1	5.00	6.35	F1	ug/L		127	69 - 121
1,1-Dichloroethane	ND	F1	5.00	6.68	F1	ug/L		134	74 - 120
2,2-Dichloropropane	ND		5.00	5.38		ug/L		108	55 - 140
cis-1,2-Dichloroethene	ND	F1	5.00	6.21	F1	ug/L		124	72 - 120
Chlorobromomethane	ND	F1	5.00	6.50	F1	ug/L		130	79 - 121
Chloroform	ND	F1	5.00	6.64	F1	ug/L		133	75 - 120
1,1,1-Trichloroethane	ND	F1	5.00	6.36	F1	ug/L		127	70 - 121
Carbon tetrachloride	ND		5.00	6.39		ug/L		128	66 - 130
1,1-Dichloropropene	ND		5.00	6.10		ug/L		122	72 - 125
Benzene	ND	F1	5.00	6.17	F1	ug/L		123	80 - 120
1,2-Dichloroethane	ND		5.00	6.26		ug/L		125	74 - 127
Trichloroethene	ND		5.00	5.71		ug/L		114	72 - 120
1,2-Dichloropropane	ND		5.00	5.66		ug/L		113	69 - 130
4-Methyl-2-pentanone (MIBK)	ND	F1	25.0	34.8	F1	ug/L		139	63 - 137
Dibromomethane	ND		5.00	6.69		ug/L		134	65 - 141
Dichlorobromomethane	ND		5.00	5.69		ug/L		114	74 - 131
cis-1,3-Dichloropropene	ND		5.00	5.94		ug/L		119	77 - 131
Toluene	ND	F1	5.00	6.09		ug/L		122	80 - 126
trans-1,3-Dichloropropene	ND		5.00	6.27		ug/L		125	71 - 138
1,1,2-Trichloroethane	ND		5.00	6.07		ug/L		121	73 - 127
Tetrachloroethene	ND		5.00	5.72		ug/L		114	75 - 124
1,3-Dichloropropane	ND		5.00	6.26		ug/L		125	69 - 138
Chlorodibromomethane	ND		5.00	5.85		ug/L		117	62 - 141
Ethylene Dibromide	ND		5.00	5.93		ug/L		119	61 - 143
Chlorobenzene	ND		5.00	5.98		ug/L		120	74 - 123
1,1,1,2-Tetrachloroethane	ND		5.00	6.25		ug/L		125	69 - 127
Ethylbenzene	ND	F1	5.00	6.09		ug/L		122	80 - 124
m-Xylene & p-Xylene	ND	F1	5.00	5.96		ug/L		119	75 - 124

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# QC Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

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

**Lab Sample ID: 580-153790-10 MS**

**Client Sample ID: MWA-81i-090325**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 502934**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
o-Xylene	ND	F1	5.00	5.87		ug/L		117	71 - 124
Styrene	ND		5.00	5.80		ug/L		116	74 - 127
Bromoform	ND	F1	5.00	6.42	F1	ug/L		128	48 - 127
Isopropylbenzene	ND	F1	5.00	6.23	F1	ug/L		125	71 - 123
Bromobenzene	ND		5.00	5.79		ug/L		116	74 - 130
1,1,2,2-Tetrachloroethane	ND		5.00	6.45		ug/L		129	67 - 136
1,2,3-Trichloropropane	ND		5.00	6.01		ug/L		120	67 - 135
N-Propylbenzene	ND		5.00	6.12		ug/L		122	72 - 126
2-Chlorotoluene	ND	F1	5.00	6.03	F1	ug/L		121	73 - 120
4-Chlorotoluene	ND		5.00	6.04		ug/L		121	75 - 124
1,3,5-Trimethylbenzene	ND	F1	5.00	6.34	F1	ug/L		127	75 - 123
tert-Butylbenzene	ND		5.00	6.23		ug/L		125	70 - 129
1,2,4-Trimethylbenzene	ND	F1	5.00	6.62	F1	ug/L		132	71 - 127
sec-Butylbenzene	ND		5.00	6.22		ug/L		124	75 - 126
4-Isopropyltoluene	ND		5.00	5.77		ug/L		115	78 - 125
1,3-Dichlorobenzene	ND		5.00	6.00		ug/L		120	72 - 125
1,4-Dichlorobenzene	ND		5.00	6.05		ug/L		121	71 - 129
n-Butylbenzene	ND		5.00	6.01		ug/L		120	69 - 127
1,2-Dichlorobenzene	ND		5.00	6.06		ug/L		121	72 - 129
1,2-Dibromo-3-Chloropropane	ND		5.00	6.15		ug/L		123	55 - 135
1,2,4-Trichlorobenzene	ND		5.00	5.67		ug/L		113	60 - 130
Hexachlorobutadiene	ND		5.00	5.23		ug/L		105	63 - 130
Naphthalene	ND		5.00	5.47		ug/L		109	54 - 137
1,2,3-Trichlorobenzene	ND		5.00	5.59		ug/L		112	60 - 136

Surrogate	%Recovery	MS MS Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	107		80 - 120
4-Bromofluorobenzene (Surr)	97		80 - 120
1,2-Dichloroethane-d4 (Surr)	110		80 - 120

**Lab Sample ID: 580-153790-10 MSD**

**Client Sample ID: MWA-81i-090325**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 502934**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dichlorodifluoromethane	ND	F1	5.00	7.84	F1	ug/L		157	20 - 150	20	30
Chloromethane	ND		5.00	6.36		ug/L		127	32 - 150	22	33
Vinyl chloride	ND	F1	5.00	8.11	F1	ug/L		162	41 - 150	20	32
Bromomethane	ND		5.00	5.71		ug/L		114	51 - 148	32	35
Chloroethane	ND	F1	5.00	8.22	F1	ug/L		164	54 - 140	21	33
Carbon disulfide	ND	F1	5.00	7.54	F1	ug/L		151	54 - 142	16	34
Trichlorofluoromethane	ND	F1	5.00	8.60	F1	ug/L		172	60 - 132	16	32
1,1-Dichloroethene	ND	F1	5.00	7.62	F1	ug/L		152	60 - 129	10	29
Acetone	ND		25.0	28.2		ug/L		113	49 - 150	1	24
Methylene Chloride	ND	*+ F2	5.00	5.27	F2	ug/L		105	40 - 142	30	25
Methyl tert-butyl ether	ND		5.00	5.49		ug/L		110	61 - 131	10	27
2-Butanone (MEK)	ND		25.0	26.2		ug/L		105	37 - 150	9	35

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# QC Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

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

**Lab Sample ID: 580-153790-10 MSD**

**Matrix: Water**

**Analysis Batch: 502934**

**Client Sample ID: MWA-81i-090325**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier		Result	Qualifier				Limits		Limit
trans-1,2-Dichloroethene	ND	F1	5.00	6.12	F1	ug/L		122	69 - 121	4	27
1,1-Dichloroethane	ND	F1	5.00	6.93	F1	ug/L		139	74 - 120	4	26
2,2-Dichloropropane	ND		5.00	4.85		ug/L		97	55 - 140	10	31
cis-1,2-Dichloroethene	ND	F1	5.00	6.12	F1	ug/L		122	72 - 120	1	22
Chlorobromomethane	ND	F1	5.00	7.26	F1	ug/L		145	79 - 121	11	20
Chloroform	ND	F1	5.00	6.54	F1	ug/L		131	75 - 120	2	21
1,1,1-Trichloroethane	ND	F1	5.00	5.92		ug/L		118	70 - 121	7	24
Carbon tetrachloride	ND		5.00	5.86		ug/L		117	66 - 130	9	24
1,1-Dichloropropene	ND		5.00	5.79		ug/L		116	72 - 125	5	23
Benzene	ND	F1	5.00	6.09	F1	ug/L		122	80 - 120	1	22
1,2-Dichloroethane	ND		5.00	5.94		ug/L		119	74 - 127	5	21
Trichloroethene	ND		5.00	5.50		ug/L		110	72 - 120	4	22
1,2-Dichloropropane	ND		5.00	5.34		ug/L		107	69 - 130	6	22
4-Methyl-2-pentanone (MIBK)	ND	F1	25.0	29.4		ug/L		118	63 - 137	17	26
Dibromomethane	ND		5.00	6.60		ug/L		132	65 - 141	1	22
Dichlorobromomethane	ND		5.00	5.20		ug/L		104	74 - 131	9	21
cis-1,3-Dichloropropene	ND		5.00	4.89		ug/L		98	77 - 131	19	24
Toluene	ND	F1	5.00	6.42	F1	ug/L		128	80 - 126	5	20
trans-1,3-Dichloropropene	ND		5.00	5.23		ug/L		105	71 - 138	18	26
1,1,2-Trichloroethane	ND		5.00	5.45		ug/L		109	73 - 127	11	22
Tetrachloroethene	ND		5.00	5.68		ug/L		114	75 - 124	1	20
1,3-Dichloropropane	ND		5.00	5.18		ug/L		104	69 - 138	19	19
Chlorodibromomethane	ND		5.00	4.89		ug/L		98	62 - 141	18	22
Ethylene Dibromide	ND		5.00	5.31		ug/L		106	61 - 143	11	22
Chlorobenzene	ND		5.00	5.83		ug/L		117	74 - 123	3	21
1,1,1,2-Tetrachloroethane	ND		5.00	5.38		ug/L		108	69 - 127	15	22
Ethylbenzene	ND	F1	5.00	6.26	F1	ug/L		125	80 - 124	3	22
m-Xylene & p-Xylene	ND	F1	5.00	6.30	F1	ug/L		126	75 - 124	6	22
o-Xylene	ND	F1	5.00	6.24	F1	ug/L		125	71 - 124	6	23
Styrene	ND		5.00	5.91		ug/L		118	74 - 127	2	22
Bromoform	ND	F1	5.00	5.63		ug/L		113	48 - 127	13	23
Isopropylbenzene	ND	F1	5.00	6.41	F1	ug/L		128	71 - 123	3	23
Bromobenzene	ND		5.00	5.48		ug/L		110	74 - 130	5	23
1,1,1,2,2-Tetrachloroethane	ND		5.00	5.44		ug/L		109	67 - 136	17	24
1,2,3-Trichloropropane	ND		5.00	5.21		ug/L		104	67 - 135	14	25
N-Propylbenzene	ND		5.00	6.14		ug/L		123	72 - 126	0	20
2-Chlorotoluene	ND	F1	5.00	5.94		ug/L		119	73 - 120	2	22
4-Chlorotoluene	ND		5.00	5.90		ug/L		118	75 - 124	2	23
1,3,5-Trimethylbenzene	ND	F1	5.00	6.25	F1	ug/L		125	75 - 123	1	23
tert-Butylbenzene	ND		5.00	6.16		ug/L		123	70 - 129	1	24
1,2,4-Trimethylbenzene	ND	F1	5.00	6.50	F1	ug/L		130	71 - 127	2	23
sec-Butylbenzene	ND		5.00	6.16		ug/L		123	75 - 126	1	23
4-Isopropyltoluene	ND		5.00	5.69		ug/L		114	78 - 125	1	24
1,3-Dichlorobenzene	ND		5.00	5.87		ug/L		117	72 - 125	2	22
1,4-Dichlorobenzene	ND		5.00	5.96		ug/L		119	71 - 129	2	22
n-Butylbenzene	ND		5.00	5.88		ug/L		118	69 - 127	2	24
1,2-Dichlorobenzene	ND		5.00	5.91		ug/L		118	72 - 129	2	22
1,2-Dibromo-3-Chloropropane	ND		5.00	5.54		ug/L		111	55 - 135	10	29
1,2,4-Trichlorobenzene	ND		5.00	5.56		ug/L		111	60 - 130	2	26

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# QC Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

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

**Lab Sample ID: 580-153790-10 MSD**  
**Matrix: Water**  
**Analysis Batch: 502934**

**Client Sample ID: MWA-81i-090325**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexachlorobutadiene	ND		5.00	5.09		ug/L		102	63 - 130	3	26
Naphthalene	ND		5.00	5.10		ug/L		102	54 - 137	7	28
1,2,3-Trichlorobenzene	ND		5.00	5.44		ug/L		109	60 - 136	3	28
<b>MSD MSD</b>											
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>								
Toluene-d8 (Surr)	97		80 - 120								
Dibromofluoromethane (Surr)	111		80 - 120								
4-Bromofluorobenzene (Surr)	100		80 - 120								
1,2-Dichloroethane-d4 (Surr)	107		80 - 120								

**Lab Sample ID: MB 580-502959/10**  
**Matrix: Water**  
**Analysis Batch: 502959**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		0.25	0.12	ug/L			09/11/25 13:56	1
<b>MB MB</b>									
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Toluene-d8 (Surr)	98		80 - 120					09/11/25 13:56	1
Dibromofluoromethane (Surr)	104		80 - 120					09/11/25 13:56	1
4-Bromofluorobenzene (Surr)	96		80 - 120					09/11/25 13:56	1
1,2-Dichloroethane-d4 (Surr)	107		80 - 120					09/11/25 13:56	1

**Lab Sample ID: LCS 580-502959/5**  
**Matrix: Water**  
**Analysis Batch: 502959**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dichloroethane	5.00	5.94		ug/L		119	74 - 127
<b>LCS LCS</b>							
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				
Toluene-d8 (Surr)	100		80 - 120				
Dibromofluoromethane (Surr)	103		80 - 120				
4-Bromofluorobenzene (Surr)	95		80 - 120				
1,2-Dichloroethane-d4 (Surr)	110		80 - 120				

**Lab Sample ID: LCSD 580-502959/6**  
**Matrix: Water**  
**Analysis Batch: 502959**

**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-Dichloroethane	5.00	5.77		ug/L		115	74 - 127	3	21
<b>LCSD LCSD</b>									
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
Toluene-d8 (Surr)	100		80 - 120						
Dibromofluoromethane (Surr)	103		80 - 120						
4-Bromofluorobenzene (Surr)	95		80 - 120						

# QC Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

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

Lab Sample ID: LCSD 580-502959/6  
Matrix: Water  
Analysis Batch: 502959

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

Surrogate	LCS D %Recovery	LCS D Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	107		80 - 120

## Method: 314.0 - Perchlorate (IC)

Lab Sample ID: MB 570-622858/8  
Matrix: Water  
Analysis Batch: 622858

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		2.0	0.91	ug/L			09/09/25 13:04	1

Lab Sample ID: LCS 570-622858/9  
Matrix: Water  
Analysis Batch: 622858

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	25.0	24.7		ug/L		99	85 - 115

Lab Sample ID: LCSD 570-622858/10  
Matrix: Water  
Analysis Batch: 622858

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perchlorate	25.0	24.0		ug/L		96	85 - 115	3	15

Lab Sample ID: 580-153790-10 MS  
Matrix: Water  
Analysis Batch: 622858

Client Sample ID: MWA-81i-090325  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	ND		25.0	23.5		ug/L		94	80 - 120

Lab Sample ID: 580-153790-10 MSD  
Matrix: Water  
Analysis Batch: 622858

Client Sample ID: MWA-81i-090325  
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		25.0	23.4		ug/L		94	80 - 120	0	15

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-503131/4  
Matrix: Water  
Analysis Batch: 503131

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			09/11/25 15:44	1

# QC Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: MB 580-503131/55**  
**Matrix: Water**  
**Analysis Batch: 503131**

**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			09/12/25 01:52	1

**Lab Sample ID: LCS 580-503131/5**  
**Matrix: Water**  
**Analysis Batch: 503131**

**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	49.3		mg/L		99	90 - 110

**Lab Sample ID: LCS 580-503131/56**  
**Matrix: Water**  
**Analysis Batch: 503131**

**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	49.9		mg/L		100	90 - 110

**Lab Sample ID: LCSD 580-503131/57**  
**Matrix: Water**  
**Analysis Batch: 503131**

**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	49.8		mg/L		100	90 - 110	0	15

**Lab Sample ID: LCSD 580-503131/6**  
**Matrix: Water**  
**Analysis Batch: 503131**

**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	49.0		mg/L		98	90 - 110	1	15

**Lab Sample ID: 580-153790-10 MS**  
**Matrix: Water**  
**Analysis Batch: 503131**

**Client Sample ID: MWA-81i-090325**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	38	F1	50.0	83.2		mg/L		91	90 - 110

**Lab Sample ID: 580-153790-10 MSD**  
**Matrix: Water**  
**Analysis Batch: 503131**

**Client Sample ID: MWA-81i-090325**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	38	F1	50.0	79.1	F1	mg/L		83	90 - 110	5	15

# QC Association Summary

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

## GC/MS VOA

### Analysis Batch: 502659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-153790-1	TB-090225A	Total/NA	Water	8260D	
580-153790-2	MWA-82-090225	Total/NA	Water	8260D	
580-153790-3	PA-08-090225	Total/NA	Water	8260D	
580-153790-4	PA-09-090225	Total/NA	Water	8260D	
580-153790-5	PA-03-090225	Total/NA	Water	8260D	
580-153790-6	PA-17iR-090225	Total/NA	Water	8260D	
580-153790-7	PA-27d-090225	Total/NA	Water	8260D	
MB 580-502659/7	Method Blank	Total/NA	Water	8260D	
LCS 580-502659/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 580-502659/5	Lab Control Sample Dup	Total/NA	Water	8260D	

### Analysis Batch: 502771

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-153790-13	PA-25d-090325	Total/NA	Water	8260D	
580-153790-14	PA-15i-090325	Total/NA	Water	8260D	
580-153790-15	PA-26d-090325	Total/NA	Water	8260D	
MB 580-502771/10	Method Blank	Total/NA	Water	8260D	
LCS 580-502771/5	Lab Control Sample	Total/NA	Water	8260D	
LCSD 580-502771/6	Lab Control Sample Dup	Total/NA	Water	8260D	

### Analysis Batch: 502934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-153790-2 - RA	MWA-82-090225	Total/NA	Water	8260D	
580-153790-3 - RA	PA-08-090225	Total/NA	Water	8260D	
580-153790-8	RB-01-090325	Total/NA	Water	8260D	
580-153790-9	PA-44i-090325	Total/NA	Water	8260D	
580-153790-10	MWA-81i-090325	Total/NA	Water	8260D	
580-153790-11	MWA-41-090325	Total/NA	Water	8260D	
580-153790-12	Dup-01-090325	Total/NA	Water	8260D	
580-153790-16	PA-23d-090325	Total/NA	Water	8260D	
MB 580-502934/10	Method Blank	Total/NA	Water	8260D	
LCS 580-502934/5	Lab Control Sample	Total/NA	Water	8260D	
LCSD 580-502934/6	Lab Control Sample Dup	Total/NA	Water	8260D	
580-153790-10 MS	MWA-81i-090325	Total/NA	Water	8260D	
580-153790-10 MSD	MWA-81i-090325	Total/NA	Water	8260D	

### Analysis Batch: 502959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-153790-15 - RA	PA-26d-090325	Total/NA	Water	8260D	
MB 580-502959/10	Method Blank	Total/NA	Water	8260D	
LCS 580-502959/5	Lab Control Sample	Total/NA	Water	8260D	
LCSD 580-502959/6	Lab Control Sample Dup	Total/NA	Water	8260D	

## HPLC/IC

### Analysis Batch: 622858

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-153790-2 - DL	MWA-82-090225	Total/NA	Water	314.0	
580-153790-3 - DL	PA-08-090225	Total/NA	Water	314.0	
580-153790-4 - DL	PA-09-090225	Total/NA	Water	314.0	
580-153790-5 - DL	PA-03-090225	Total/NA	Water	314.0	

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# QC Association Summary

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

## HPLC/IC (Continued)

### Analysis Batch: 622858 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-153790-6 - DL	PA-17iR-090225	Total/NA	Water	314.0	
580-153790-7 - DL	PA-27d-090225	Total/NA	Water	314.0	
580-153790-8	RB-01-090325	Total/NA	Water	314.0	
580-153790-9 - DL	PA-44i-090325	Total/NA	Water	314.0	
580-153790-10	MWA-81i-090325	Total/NA	Water	314.0	
580-153790-11	MWA-41-090325	Total/NA	Water	314.0	
580-153790-12	Dup-01-090325	Total/NA	Water	314.0	
580-153790-13	PA-25d-090325	Total/NA	Water	314.0	
580-153790-14 - DL	PA-15i-090325	Total/NA	Water	314.0	
580-153790-15	PA-26d-090325	Total/NA	Water	314.0	
580-153790-16 - DL	PA-23d-090325	Total/NA	Water	314.0	
MB 570-622858/8	Method Blank	Total/NA	Water	314.0	
LCS 570-622858/9	Lab Control Sample	Total/NA	Water	314.0	
LCSD 570-622858/10	Lab Control Sample Dup	Total/NA	Water	314.0	
580-153790-10 MS	MWA-81i-090325	Total/NA	Water	314.0	
580-153790-10 MSD	MWA-81i-090325	Total/NA	Water	314.0	

## General Chemistry

### Analysis Batch: 503131

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-153790-2	MWA-82-090225	Total/NA	Water	300.0	
580-153790-3	PA-08-090225	Total/NA	Water	300.0	
580-153790-4	PA-09-090225	Total/NA	Water	300.0	
580-153790-5	PA-03-090225	Total/NA	Water	300.0	
580-153790-6	PA-17iR-090225	Total/NA	Water	300.0	
580-153790-7	PA-27d-090225	Total/NA	Water	300.0	
580-153790-8	RB-01-090325	Total/NA	Water	300.0	
580-153790-9	PA-44i-090325	Total/NA	Water	300.0	
580-153790-10	MWA-81i-090325	Total/NA	Water	300.0	
580-153790-11	MWA-41-090325	Total/NA	Water	300.0	
580-153790-12	Dup-01-090325	Total/NA	Water	300.0	
580-153790-13	PA-25d-090325	Total/NA	Water	300.0	
580-153790-14	PA-15i-090325	Total/NA	Water	300.0	
580-153790-15	PA-26d-090325	Total/NA	Water	300.0	
580-153790-16	PA-23d-090325	Total/NA	Water	300.0	
MB 580-503131/4	Method Blank	Total/NA	Water	300.0	
MB 580-503131/55	Method Blank	Total/NA	Water	300.0	
LCS 580-503131/5	Lab Control Sample	Total/NA	Water	300.0	
LCS 580-503131/56	Lab Control Sample	Total/NA	Water	300.0	
LCSD 580-503131/57	Lab Control Sample Dup	Total/NA	Water	300.0	
LCSD 580-503131/6	Lab Control Sample Dup	Total/NA	Water	300.0	
580-153790-10 MS	MWA-81i-090325	Total/NA	Water	300.0	
580-153790-10 MSD	MWA-81i-090325	Total/NA	Water	300.0	

# Lab Chronicle

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

## Client Sample ID: TB-090225A

Date Collected: 09/02/25 06:30

Date Received: 09/04/25 12:07

## Lab Sample ID: 580-153790-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502659	JBT	EET SEA	09/09/25 00:54

## Client Sample ID: MWA-82-090225

Date Collected: 09/02/25 07:00

Date Received: 09/04/25 12:07

## Lab Sample ID: 580-153790-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502659	JBT	EET SEA	09/09/25 04:17
Total/NA	Analysis	8260D	RA	1	502934	K1K	EET SEA	09/11/25 02:26
Total/NA	Analysis	314.0	DL	5	622858	M5Z3	EET CAL 4	09/09/25 19:26
Total/NA	Analysis	300.0		1	503131	MLT	EET SEA	09/11/25 16:43

## Client Sample ID: PA-08-090225

Date Collected: 09/02/25 07:41

Date Received: 09/04/25 12:07

## Lab Sample ID: 580-153790-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502659	JBT	EET SEA	09/09/25 04:40
Total/NA	Analysis	8260D	RA	1	502934	K1K	EET SEA	09/11/25 02:48
Total/NA	Analysis	314.0	DL	5	622858	M5Z3	EET CAL 4	09/09/25 20:08
Total/NA	Analysis	300.0		5	503131	MLT	EET SEA	09/11/25 17:19

## Client Sample ID: PA-09-090225

Date Collected: 09/02/25 08:29

Date Received: 09/04/25 12:07

## Lab Sample ID: 580-153790-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502659	JBT	EET SEA	09/09/25 05:02
Total/NA	Analysis	314.0	DL	5	622858	M5Z3	EET CAL 4	09/09/25 20:49
Total/NA	Analysis	300.0		1	503131	MLT	EET SEA	09/11/25 17:31

## Client Sample ID: PA-03-090225

Date Collected: 09/02/25 09:51

Date Received: 09/04/25 12:07

## Lab Sample ID: 580-153790-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502659	JBT	EET SEA	09/09/25 05:25
Total/NA	Analysis	314.0	DL	5	622858	M5Z3	EET CAL 4	09/09/25 21:31
Total/NA	Analysis	300.0		1	503131	MLT	EET SEA	09/11/25 18:19

# Lab Chronicle

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

## Client Sample ID: PA-17iR-090225

## Lab Sample ID: 580-153790-6

Date Collected: 09/02/25 10:38

Matrix: Water

Date Received: 09/04/25 12:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502659	JBT	EET SEA	09/09/25 05:48
Total/NA	Analysis	314.0	DL	5	622858	M5Z3	EET CAL 4	09/09/25 22:13
Total/NA	Analysis	300.0		1	503131	MLT	EET SEA	09/11/25 18:43

## Client Sample ID: PA-27d-090225

## Lab Sample ID: 580-153790-7

Date Collected: 09/02/25 11:32

Matrix: Water

Date Received: 09/04/25 12:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502659	JBT	EET SEA	09/09/25 06:10
Total/NA	Analysis	314.0	DL	5	622858	M5Z3	EET CAL 4	09/09/25 22:54
Total/NA	Analysis	300.0		25	503131	MLT	EET SEA	09/12/25 10:20

## Client Sample ID: RB-01-090325

## Lab Sample ID: 580-153790-8

Date Collected: 09/03/25 05:45

Matrix: Water

Date Received: 09/04/25 12:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502934	K1K	EET SEA	09/11/25 03:11
Total/NA	Analysis	314.0		1	622858	M5Z3	EET CAL 4	09/09/25 23:36
Total/NA	Analysis	300.0		1	503131	MLT	EET SEA	09/11/25 19:30

## Client Sample ID: PA-44i-090325

## Lab Sample ID: 580-153790-9

Date Collected: 09/03/25 06:24

Matrix: Water

Date Received: 09/04/25 12:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502934	K1K	EET SEA	09/11/25 02:03
Total/NA	Analysis	314.0	DL	5	622858	M5Z3	EET CAL 4	09/10/25 00:19
Total/NA	Analysis	300.0		5	503131	MLT	EET SEA	09/11/25 20:30

## Client Sample ID: MWA-81i-090325

## Lab Sample ID: 580-153790-10

Date Collected: 09/03/25 07:21

Matrix: Water

Date Received: 09/04/25 12:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502934	K1K	EET SEA	09/11/25 05:49
Total/NA	Analysis	314.0		1	622858	M5Z3	EET CAL 4	09/10/25 01:43
Total/NA	Analysis	300.0		1	503131	MLT	EET SEA	09/11/25 20:42

# Lab Chronicle

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

## Client Sample ID: MWA-41-090325

## Lab Sample ID: 580-153790-11

Date Collected: 09/03/25 08:13

Matrix: Water

Date Received: 09/04/25 12:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502934	K1K	EET SEA	09/11/25 04:19
Total/NA	Analysis	314.0		1	622858	M5Z3	EET CAL 4	09/10/25 03:48
Total/NA	Analysis	300.0		1	503131	MLT	EET SEA	09/11/25 21:53

## Client Sample ID: Dup-01-090325

## Lab Sample ID: 580-153790-12

Date Collected: 09/03/25 08:14

Matrix: Water

Date Received: 09/04/25 12:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502934	K1K	EET SEA	09/11/25 04:41
Total/NA	Analysis	314.0		1	622858	M5Z3	EET CAL 4	09/10/25 04:30
Total/NA	Analysis	300.0		1	503131	MLT	EET SEA	09/11/25 22:17

## Client Sample ID: PA-25d-090325

## Lab Sample ID: 580-153790-13

Date Collected: 09/03/25 09:35

Matrix: Water

Date Received: 09/04/25 12:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502771	AA	EET SEA	09/10/25 08:56
Total/NA	Analysis	314.0		1	622858	M5Z3	EET CAL 4	09/10/25 05:11
Total/NA	Analysis	300.0		1	503131	MLT	EET SEA	09/11/25 23:05

## Client Sample ID: PA-15i-090325

## Lab Sample ID: 580-153790-14

Date Collected: 09/03/25 10:25

Matrix: Water

Date Received: 09/04/25 12:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502771	AA	EET SEA	09/10/25 09:43
Total/NA	Analysis	314.0	DL	5	622858	M5Z3	EET CAL 4	09/10/25 05:53
Total/NA	Analysis	300.0		1	503131	MLT	EET SEA	09/11/25 23:28

## Client Sample ID: PA-26d-090325

## Lab Sample ID: 580-153790-15

Date Collected: 09/03/25 11:23

Matrix: Water

Date Received: 09/04/25 12:07

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D	RA	1	502959	AA	EET SEA	09/11/25 15:13
Total/NA	Analysis	8260D		1	502771	AA	EET SEA	09/10/25 09:20
Total/NA	Analysis	314.0		1	622858	M5Z3	EET CAL 4	09/10/25 06:35
Total/NA	Analysis	300.0		1	503131	MLT	EET SEA	09/11/25 23:52

# Lab Chronicle

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

**Client Sample ID: PA-23d-090325**

**Lab Sample ID: 580-153790-16**

**Date Collected: 09/03/25 12:41**

**Matrix: Water**

**Date Received: 09/04/25 12:07**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502934	K1K	EET SEA	09/11/25 05:26
Total/NA	Analysis	314.0	DL	100	622858	M5Z3	EET CAL 4	09/10/25 07:16
Total/NA	Analysis	300.0		2500	503131	MLT	EET SEA	09/12/25 12:07

**Laboratory References:**

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

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



# Accreditation/Certification Summary

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

## Laboratory: Eurofins Seattle

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

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4167	07-07-26

## Laboratory: Eurofins Calscience

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	7296.01	11-30-26
A2LA	ISO/IEC 17025	7296.01	11-30-26
Alaska (UST)	State	25-005	03-02-26
Arizona	State	AZ0830	11-16-25
California	Los Angeles County Sanitation Districts	9257304	07-31-26
California	SCAQMD LAP	17LA0919	11-30-25
California	State	3082	07-31-26
Kansas	NELAP	E-10420	07-31-26
Nevada	State	CA00111	09-10-25
Oregon	NELAP	4175	09-18-25
USDA	US Federal Programs	525-23-159-97150	06-08-26
Utah	NELAP	CA00111	02-28-26
Washington	State	C916	10-11-25

# Sample Summary

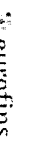
Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153790-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
580-153790-1	TB-090225A	Water	09/02/25 06:30	09/04/25 12:07	Oregon
580-153790-2	MWA-82-090225	Water	09/02/25 07:00	09/04/25 12:07	Oregon
580-153790-3	PA-08-090225	Water	09/02/25 07:41	09/04/25 12:07	Oregon
580-153790-4	PA-09-090225	Water	09/02/25 08:29	09/04/25 12:07	Oregon
580-153790-5	PA-03-090225	Water	09/02/25 09:51	09/04/25 12:07	Oregon
580-153790-6	PA-17iR-090225	Water	09/02/25 10:38	09/04/25 12:07	Oregon
580-153790-7	PA-27d-090225	Water	09/02/25 11:32	09/04/25 12:07	Oregon
580-153790-8	RB-01-090325	Water	09/03/25 05:45	09/04/25 12:07	Oregon
580-153790-9	PA-44i-090325	Water	09/03/25 06:24	09/04/25 12:07	Oregon
580-153790-10	MWA-81i-090325	Water	09/03/25 07:21	09/04/25 12:07	Oregon
580-153790-11	MWA-41-090325	Water	09/03/25 08:13	09/04/25 12:07	Oregon
580-153790-12	Dup-01-090325	Water	09/03/25 08:14	09/04/25 12:07	Oregon
580-153790-13	PA-25d-090325	Water	09/03/25 09:35	09/04/25 12:07	Oregon
580-153790-14	PA-15i-090325	Water	09/03/25 10:25	09/04/25 12:07	Oregon
580-153790-15	PA-26d-090325	Water	09/03/25 11:23	09/04/25 12:07	Oregon
580-153790-16	PA-23d-090325	Water	09/03/25 12:41	09/04/25 12:07	Oregon

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


**Chain of Custody Record**



Environmental Testing

**Client Information**  
 Client Contact: **Paul Van Nevel**  
 Phone: \_\_\_\_\_  
 Sampler: **SLOTT TERRAVORA**  
 Lab Pk#: \_\_\_\_\_  
 Caparas, Cristelda  
 E-Mail: **Cristelda.Caparas@eurofins.com**  
 Carrier Tracking No(s): \_\_\_\_\_  
 State of Origin: \_\_\_\_\_

**Company:** ERM-West  
 Address: 1050 SW 6th Avenue Suite 1650  
 City: Portland  
 State/Zip: OR, 97204  
 Compliance Project: J Yes A No  
 PO #: 0732445207  
 WOC #: \_\_\_\_\_  
 Email: paul.vannevel@erm.com  
 Project Name: 3  
 Project #: 58016290  
 SSON#: \_\_\_\_\_

**Due Date Requested:** \_\_\_\_\_  
**TAT Requested (days):** \_\_\_\_\_  
**Analysis Requested**  
 Field Filtered Sample (Yes or No) \_\_\_\_\_  
 Perform MS/MSD (Yes or No) \_\_\_\_\_  
 8250D - (MOD) Volatiles, standard list  
 8260D\_LL - (MOD) Volatiles, standard list, low leve  
 314.0 - Perchlorate  
 300.0\_28D - (MOD) Local Method  
 MS/MSD  
 Preservation Codes:  
 A - HCL  
 N - None  
 Other: 580-153790 COC  


Sample Identification	Sample Date	Sample Time	Sample Type (G=Comp, I=In situ, A=Air)	Matrix (Water, Soil, Compost, Oil)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers	Special Instructions/Note
TB-090225A	9/2/25	0630	G	Water	X	X	2	
MWA-82-090225		0700		Water	X	X	5	
PA-08-090225		0741		Water	X	X	5	
PA-09-090225		0839		Water	X	X	5	
PA-03-090225		0951		Water	X	X	5	
PA-17IR-090225		1038		Water	X	X	5	
PA-27d-090225		1132		Water	X	X	5	
RB-01-090325	9/3/25	0545	G	Water	X	X	5	
PA-44i-090325		0624		Water	X	X	5	
MWA-81i-090325		0721		Water	X	X	15	
MWA-41-090325		0813		Water	X	X	5	

**Possible Hazard Identification**  
 Non-Hazard  Flammable  Skin Irritant  Poison B  Unknown  Radiological  
 Deliverable Requested: I, II, III, IV, Other (Specify) \_\_\_\_\_  
 Special Instructions/COC Requirements: \_\_\_\_\_  
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return To Client  Disposal By Lab  Archive For \_\_\_\_\_ Months

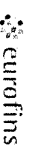
**Empty Kit Relinquished by:** \_\_\_\_\_  
 Relinquished by: **[Signature]** Date/Time: **9/4/25** Company: **ERM**  
 Relinquished by: **[Signature]** Date/Time: **9/4/25** Company: **M.E.**  
 Relinquished by: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Company: \_\_\_\_\_

Custody Seal Intact: \_\_\_\_\_ Custody Seal No.: \_\_\_\_\_  
 Cooler Temperature(s) °C and Other Remarks: **0.3/6.5 PDX CLR**  
 Ver: 10/10/2024

**Eurofins Seattle**

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

**Chain of Custody Record**



Prepared by: [Signature]

**Client Information**

Client Contact: Paul Van Nevel  
Company: ERM-West  
Address: 1050 SW 6th Avenue Suite 1650  
City: Portland  
State Zip: OR, 97204  
Phone: PO # 0732445.207  
W/O #:  
Email: paul.vannevel@erm.com  
Project Name: Arkema - Q1 2025 Groundwater Event  
Site: SSONW#:

Sample ID: **Scoti Terranova**

Lab P/N: Caparas, Criseida  
E-Mail: Criseida.Caparas@el.eurofins.com

Carrier Tracking No(s):

COC No: 580-6763-20873.6

Page: 2 of 2  
Page 6 of 14

Due Date Requested:

TAT Requested (days):

Compliance Project:  Yes  No

Project #:

SSONW#:

Project #:  
58016290

**Analysis Requested**

Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8260D - (MOD) Volatiles, standard list	<input checked="" type="checkbox"/>
8260D_LL - (MOD) Volatiles, standard list, low leve	<input checked="" type="checkbox"/>
314.0 - Perchlorate	<input checked="" type="checkbox"/>
300.0_28D - (MOD) Local Method	<input checked="" type="checkbox"/>

Total Number of containers

Special Instructions/Note:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Soil, Overstich, Britisue, AAMI)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers	Special Instructions/Note:
<del>PA-25D-090325</del>	<del>9/3/25</del>	<del>0814</del>	<del>G</del>	<del>Water</del>	<del></del>	<del>X</del>	<del>X</del>	<del>5</del>	<del></del>
PA-25D-090325	9/3/25	0935	G	Water		X	X	5	
PA-15I-090325		1025		Water		X	X	5	
PA-26D-090325		1123		Water		X	X	5	
PA-23d-090325		1241		Water		X	X	5	
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					

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:

Method of Shipment:

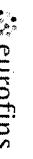
Reinquired by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
[Signature]	9/4/25	ERM	[Signature]	9/4/25	ERM
[Signature]	9/4/25	M/E	[Signature]	9/4/25	M/E





Custody Seals Intact:  Yes  No

Custody Seal NO.:

Cooler Temperature(s) °C and Other Remarks:

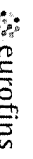
Chain of Custody Record



Client Information		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:						
Client Contact: Paul Van Nevel		SLOTT Tervermore	Caparas, Criseida		580-6763-20873.5						
Company: ERM-West		Phone:	Criseida.Caparas@eurofins.com	State of Origin:	Page: 6 of 14 Page: 6 of 14 1 of 2						
Address: 1050 SW 6th Avenue Suite 1650		Due Date Requested:	Analysis Requested								
City: Portland		TAT Requested (days):	MS/MSD								
State Zip: OR, 97204		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No	Preservation Codes: A - HCL N - None								
Project Name: 3 Arkema - Q7 2025 Groundwater Event		PO #: 0732445.207	Total Number of containers								
Site: SSOW#:		WO #: Project #: 58016290	Special Instructions/Note:  580-153790 COC								
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (W=Water, S=Soil, O=Wastefoil, BT=Issue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Preservation Code	Total Number of containers	Special Instructions/Note
TB-080225 A		9/2/25	0630	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			2	
MWA-82-090225			0700		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			5	
PA-08-090225			0741		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			5	
PA-09-090225			0839		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			5	
PA-03-090225			0951		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			5	
PA-17IR-090225			1038		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			5	
PA-27d-090225			1132		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			5	
RB-01-090325		9/3/25	0545		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			5	
PA-44i-090325			0624		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			5	
MWA-81i-090325			0721		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			15	
MWA-41-090325			0813		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			5	
Possible Hazard Identification											
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological											
Deliverable Requested: I, II, III, IV, Other (specify)											
Empty Kit Relinquished by: _____ Date: _____ Time: _____ Method of Shipment: _____											
Relinquished by:  Date/Time: 9/11/25 Company: ERM											
Relinquished by:  Date/Time: 9/14/25 Company: M.E.											
Relinquished by:  Date/Time: 9/15/25 Company: ERM											
Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No    Chain of Custody Seal No.: _____											
Cooler Temperature(s) °C and Other Remarks: 0.3/6.5 PDX SCR											

1R11 4,7/14/15

Chain of Custody Record



<b>Client Information</b>		Sampler: <b>Scott Terranova</b>	Lab P#: <b>Caparas, Criselda</b>	Carrier Tracking No(s):	COC No: <b>580-6763-208736</b>
Client Contact: <b>Paul Van Nevel</b>		Phone:	E-Mail: <b>Criselda.Caparas@et.eurofins.com</b>	State of Origin:	Page: <b>6444</b> Page <b>2 of 2</b>
Company: <b>ERN-West</b>		PWSID:	<b>Analysis Requested</b>		
Address: <b>1050 SW 6th Avenue Suite 1650</b>		Due Date Requested:			
City: <b>Portland</b>		TAT Requested (days):	Preservation Codes: A - HCL N - None		
State, Zip: <b>OR, 97204</b>		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Job #:		
Phone: <b>58016290</b>		PO #: <b>0732445.207</b>	Other:		
Email: <b>paul.vannevel@erm.com</b>		WO #:	Special Instructions/Note:		
Project Name: <b>Arkema - Q1 2025 Groundwater Event</b>		Project #: <b>58016290</b>	Total Number of containers		
Site: <b>SSCW#:</b>		SSCW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Overstool, BT=Issue, A=All)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers	Special Instructions/Note
Dwp-01-090325	9/3/25	0814	G	Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5	
PA-25D-090325		0935		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5	
PA-15I-090325		1025		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5	
PA-26D-090325		1123		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5	
PA-23d-090325		1241		Water	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	5	
				Water				
				Water				
				Water				
				Water				
				Water				
				Water				

<b>Possible Hazard Identification</b>		<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>	
<input type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Return To Client
<input type="checkbox"/> Poison B	<input type="checkbox"/> Unknown	<input type="checkbox"/> Radiological	<input type="checkbox"/> Disposal By Lab
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Date:	Method of Shipment:
Relinquished by: <i>[Signature]</i>	Date/Time: <b>9/11/25</b>	Received by: <i>[Signature]</i>	Date/Time: <b>9/14/25 1100</b>
Relinquished by: <i>[Signature]</i>	Date/Time: <b>9/14/25</b>	Received by: <i>[Signature]</i>	Date/Time: <b>9/16/25 1030</b>
Relinquished by: <i>[Signature]</i>	Date/Time: <b>9/17/25 1443</b>	Received by: <i>[Signature]</i>	Date/Time:
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:	Company: <b>ERM</b>
			Company: <b>HE</b>
			Company: <b>HE</b>

**Eurofins Seattle**

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

**Chain of Custody Record**



Loc: 580  
**153790**

<b>Client Information (Sub Contract Lab)</b>		Sampler: N/A		Lab PM: Caparas, Criseida		Carrier Tracking No(s): N/A		COC No: 580-149435.1			
Client Contact: Shipping/Receiving		Phone: N/A		E-Mail: Criseida.Caparas@et.eurofinsus.com		State of Origin: Oregon		Page: Page 1 of 2			
Company: Eurofins Environment Testing Southwest,				Accreditations Required (See note): NELAP - Oregon				Job #: 580-153790-1			
Address: 2841 Dow Avenue, Suite 100,		Due Date Requested: 9/24/2025		<b>Analysis Requested</b>						Preservation Codes:	
City: Tustin		TAT Requested (days): N/A								Other: N/A	
State, Zip: CA, 92780		PO #: N/A		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 314.00Perchlorate		Total Number of containers		Special			
Phone: 714-895-5494(Tel)		WO #: N/A									
Email: N/A		Project #: 58016290		Preservation Code:							
Project Name: Arkema - Q1 2025 Groundwater Event		SSOW#: N/A									
Site: N/A											
<b>Sample Identification - Client ID (Lab ID)</b>		<b>Sample Date</b>	<b>Sample Time</b>	<b>Sample Type</b> (C=Comp, G=grab)	<b>Matrix</b> (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				
MWA-82-090225 (580-153790-2)		9/2/25	07:00 Pacific	G	Water		X		1		
PA-08-090225 (580-153790-3)		9/2/25	07:41 Pacific	G	Water		X		1		
PA-09-090225 (580-153790-4)		9/2/25	08:29 Pacific	G	Water		X		1		
PA-03-090225 (580-153790-5)		9/2/25	09:51 Pacific	G	Water		X		1		
PA-17iR-090225 (580-153790-6)		9/2/25	10:38 Pacific	G	Water		X		1		
PA-27d-090225 (580-153790-7)		9/2/25	11:32 Pacific	G	Water		X		1		
RB-01-090325 (580-153790-8)		9/3/25	05:45 Pacific	G	Water		X		1		
PA-44i-090325 (580-153790-9)		9/3/25	Pacific	G	Water		X		1		
MWA-81i-090325 (580-153790-10)		9/3/25	Pacific	G	Water		X		1		
<p>Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northwest, LLC places the ownership of method, analyte &amp; accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northwest, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northwest, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northwest, LLC.</p>											
<b>Possible Hazard Identification</b>					<b>Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)</b>						
Unconfirmed					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months						
Deliverable Requested: I, II, III, IV, Other (specify)			Primary Deliverable Rank: 2		Special Instructions/QC Requirements:						
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:					
Relinquished by:		Date/Time: 9/4/25 1515		Company: ECT		Received by:		Date/Time: Company:			
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time: Company:			
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time: 9/15/25 10:10 Company:			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 2.1/2.1 5792							



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**Eurofins Seattle**

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

**Chain of Custody Record**

<b>Client Information (Sub Contract Lab)</b>		Sampler: N/A		Lab PM: Caparas, Criselda		Carrier Tracking No(s): N/A		COC No: 580-149435.2							
Client Contact: Shipping/Receiving		Phone: N/A		E-Mail: Criselda.Caparas@et.eurofinsus.com		State of Origin: Oregon		Page: Page 2 of 2							
Company: Eurofins Environment Testing Southwest,				Accreditations Required (See note): NELAP - Oregon				Job #: 580-153790-1							
Address: 2841 Dow Avenue, Suite 100,		Due Date Requested: 9/24/2025		<b>Analysis Requested</b>						Preservation Codes: -					
City: Tustin		TAT Requested (days): N/A								Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Total Number of containers	
State, Zip: CA, 92780		PO #: N/A													
Phone: 714-895-5494(Tel)		WO #: N/A													
Email: N/A		Project #: 58016290													
Project Name: Arkema - Q1 2025 Groundwater Event		SSOW#: N/A		Site: N/A		Other: N/A		<b>Special Instructions/Note:</b>							
<b>Sample Identification - Client ID (Lab ID)</b>		<b>Sample Date</b>	<b>Sample Time</b>	<b>Sample Type (C=comp, G=grab)</b>	<b>Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)</b>	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)			Total Number of containers					
				Preservation Code:											
MWA-81i-090325 (580-153790-10MS)		9/3/25	Pacific	G	Water		X			1					
MWA-81i-090325 (580-153790-10MSD)		9/3/25	Pacific	G	Water		X			1					
MWA-41-090325 (580-153790-11)		9/3/25	Pacific	G	Water		X			1					
Dup-01-090325 (580-153790-12)		9/3/25	Pacific	G	Water		X			1					
PA-25d-090325 (580-153790-13)		9/3/25	Pacific	G	Water		X			1					
PA-15i-090325 (580-153790-14)		9/3/25	Pacific	G	Water		X			1					
PA-26d-090325 (580-153790-15)		9/3/25	Pacific	G	Water		X			1					
PA-23d-090325 (580-153790-16)		9/3/25	Pacific	G	Water		X	1							
<p>Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northwest, LLC places the ownership of method, analyte &amp; accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northwest, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northwest, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northwest, LLC.</p>															
<b>Possible Hazard Identification</b>					<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b>										
Unconfirmed					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months										
Deliverable Requested: I, II, III, IV, Other (specify)			Primary Deliverable Rank: 2		Special Instructions/QC Requirements:										
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:									
Relinquished by:		Date/Time: 9/14/25 1518		Company: EET		Received by:		Date/Time:							
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:							
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time: 9/10/25 10:10							
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:			Cooler Temperature(s) °C and Other Remarks:										



# Login Sample Receipt Checklist

Client: ERM-West

Job Number: 580-153790-1

**Login Number: 153790**

**List Number: 1**

**Creator: O'Connell, Jason I**

**List Source: Eurofins Seattle**

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

# Login Sample Receipt Checklist

Client: ERM-West

Job Number: 580-153790-1

**Login Number: 153790**  
**List Number: 2**  
**Creator: Ferreira, Bruno**

**List Source: Eurofins Calscience**  
**List Creation: 09/05/25 02:21 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	2721475
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Avery Soplata  
ERM-West  
1050 SW 6th Avenue  
Suite 1650  
Portland, Oregon 97204  
Generated 9/16/2025 6:43:24 PM

**JOB DESCRIPTION**

Arkema - Q3 2025 Groundwater Event

**JOB NUMBER**

580-153827-1

# Eurofins Seattle

## Job Notes

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

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

## Authorization



Generated  
9/16/2025 6:43:24 PM

Authorized for release by  
Criselda Caparas, Project Manager I  
[Criselda.Caparas@et.eurofinsus.com](mailto:Criselda.Caparas@et.eurofinsus.com)  
(510)600-4414



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# Case Narrative

Client: ERM-West  
Project: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

Job ID: 580-153827-1

Eurofins Seattle

## Job Narrative 580-153827-1

The analytical test results presented in this report meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page, unless otherwise noted. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable. Regulated compliance samples (e.g. SDWA, NPDES) must comply with associated agency requirements/permits.

- Matrix-specific batch QC (e.g., MS, MSD, SD) may not be reported when insufficient sample volume is available or when site-specific QC samples are not submitted. In such cases, a Laboratory Control Sample Duplicate (LCSD) may be analyzed to provide precision data for the batch.
- For samples analyzed using surrogate and/or isotope dilution analytes, any recoveries falling outside of established acceptance criteria are re-prepared and/or re-analyzed to confirm results, unless the deviation is due to sample dilution or otherwise explained in the case narrative.

### Receipt

The samples were received on 9/5/2025 11:55 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.8°C.

### GC/MS VOA

Method 8260D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 580-502959 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 continuing calibration verification (CCV) associated with batch 580-502959 recovered above the upper control limit for Dichlorodifluoromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are: TB-090425 (580-153827-1), PA-24d-090425 (580-153827-2), MWA-31i(d)-090425 (580-153827-3), PA-22d-090425 (580-153827-4), MWA-58d-090425 (580-153827-5), Dup-02-090425 (580-153827-6), MWA-56d-090425 (580-153827-7), RB-02-090425 (580-153827-8), MWA-63-090425 (580-153827-9), PA-04-090425 (580-153827-10) and (CCVIS 580-502959/3).

Method 8260D: Surrogate recovery for the following samples were outside the upper control limit: PA-24d-090425 (580-153827-2), MWA-31i(d)-090425 (580-153827-3), MWA-58d-090425 (580-153827-5), Dup-02-090425 (580-153827-6) and MWA-56d-090425 (580-153827-7). This sample did not contain any chemically associated target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8260D: The matrix spike / matrix spike duplicate (MS/MSD) precision for analytical batch 580-502959 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8260D: The following analyte(s) recovered outside control limits for the LCS associated with analytical batch 580-502959: Chloroform. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Method 8260D: The matrix spike / matrix spike duplicate / sample duplicate (MS/MSD/DUP) precision for analytical batch 580-503304 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) precision was within acceptance limits.

Method 8260D\_LL: The continuing calibration verification (CCV) associated with batch 580-502959 recovered above the upper control limit for Dichlorodifluoromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are: TB-090425 (580-153827-1), PA-24d-090425 (580-153827-2), MWA-31i(d)-090425 (580-153827-3), PA-22d-090425 (580-153827-4), MWA-58d-090425 (580-153827-5), Dup-02-090425 (580-153827-6), MWA-56d-090425 (580-153827-7), RB-02-090425 (580-153827-8), MWA-63-090425 (580-153827-9), PA-04-090425 (580-153827-10) and (CCVIS 580-502959/3).

Method 8260D\_LL: The following analyte(s) recovered outside control limits for the LCS associated with analytical batch 580-502959: Chloroform. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Eurofins Seattle

## Case Narrative

Client: ERM-West  
Project: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

### Job ID: 580-153827-1 (Continued)

Eurofins Seattle

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

#### HPLC/IC

Method 314.0: Due to the high concentration of Perchlorate, the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 570-624140 could not be evaluated for accuracy and precision. The associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) met acceptance criteria.

Method 314.0: The native sample, matrix spike, and matrix spike duplicate (MS/MSD) associated with analytical batch 570-624140 were performed at the same dilution. Due to the additional level of analyte present in the spiked samples, the concentration of Perchlorate in the MS/MSD was above the instrument calibration range. The data have been reported and qualified.

Method 314.0: The following samples were diluted due to the nature of the sample matrix: RB-02-090425 (580-153827-8), PA-04-090425 (580-153827-10), PA-10i-090425 (580-153827-11), PA-18d-090425 (580-153827-12), PA-31-090425 (580-153827-13) and PA-32i-090425 (580-153827-14). Elevated reporting limits (RLs) are provided.

Method 314.0: The following sample was diluted due to the nature of the sample matrix: PA-24d-090425 (580-153827-2). Elevated reporting limits (RLs) are provided.

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

#### General Chemistry

Method 300.0\_28D: Due to the high concentration of chloride, the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 580-503352 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method 300.0\_28D: Due to the high concentration of chloride, the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 580-503360 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

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

Eurofins Seattle

# Definitions/Glossary

Client: ERM-West

Job ID: 580-153827-1

Project/Site: Arkema - Q3 2025 Groundwater Event

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.

### HPLC/IC

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.
E	Result exceeded calibration range.

### General Chemistry

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.

## 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 - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: TB-090425**

**Lab Sample ID: 580-153827-1**

Date Collected: 09/04/25 05:45

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/11/25 16:53	1
Chloromethane	ND		0.50	0.14	ug/L			09/11/25 16:53	1
Vinyl chloride	ND		0.10	0.040	ug/L			09/11/25 16:53	1
Bromomethane	ND		0.50	0.13	ug/L			09/11/25 16:53	1
Chloroethane	ND		0.50	0.24	ug/L			09/11/25 16:53	1
Carbon disulfide	ND		0.40	0.20	ug/L			09/11/25 16:53	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			09/11/25 16:53	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			09/11/25 16:53	1
Acetone	ND		10	3.1	ug/L			09/11/25 16:53	1
Methylene Chloride	ND		5.0	1.2	ug/L			09/11/25 16:53	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			09/11/25 16:53	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/11/25 16:53	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			09/11/25 16:53	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			09/11/25 16:53	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			09/11/25 16:53	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			09/11/25 16:53	1
Chlorobromomethane	ND		0.20	0.050	ug/L			09/11/25 16:53	1
Chloroform	ND	*+	0.20	0.030	ug/L			09/11/25 16:53	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			09/11/25 16:53	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			09/11/25 16:53	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			09/11/25 16:53	1
Benzene	ND		0.20	0.030	ug/L			09/11/25 16:53	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			09/11/25 16:53	1
Trichloroethene	ND		0.20	0.066	ug/L			09/11/25 16:53	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			09/11/25 16:53	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			09/11/25 16:53	1
Dibromomethane	ND		0.20	0.062	ug/L			09/11/25 16:53	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			09/11/25 16:53	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			09/11/25 16:53	1
Toluene	ND		0.20	0.050	ug/L			09/11/25 16:53	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			09/11/25 16:53	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			09/11/25 16:53	1
Tetrachloroethene	ND		0.50	0.084	ug/L			09/11/25 16:53	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			09/11/25 16:53	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			09/11/25 16:53	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			09/11/25 16:53	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/11/25 16:53	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			09/11/25 16:53	1
Ethylbenzene	ND		0.20	0.082	ug/L			09/11/25 16:53	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			09/11/25 16:53	1
o-Xylene	ND		0.50	0.23	ug/L			09/11/25 16:53	1
Styrene	ND		1.0	0.33	ug/L			09/11/25 16:53	1
Bromoform	ND		0.50	0.16	ug/L			09/11/25 16:53	1
Isopropylbenzene	ND		1.0	0.27	ug/L			09/11/25 16:53	1
Bromobenzene	ND		0.20	0.038	ug/L			09/11/25 16:53	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			09/11/25 16:53	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			09/11/25 16:53	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/11/25 16:53	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			09/11/25 16:53	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: TB-090425**

**Lab Sample ID: 580-153827-1**

Date Collected: 09/04/25 05:45

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/11/25 16:53	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			09/11/25 16:53	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/11/25 16:53	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			09/11/25 16:53	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/11/25 16:53	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			09/11/25 16:53	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			09/11/25 16:53	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/11/25 16:53	1
n-Butylbenzene	ND		1.0	0.35	ug/L			09/11/25 16:53	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			09/11/25 16:53	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			09/11/25 16:53	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			09/11/25 16:53	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			09/11/25 16:53	1
Naphthalene	ND		1.5	0.52	ug/L			09/11/25 16:53	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			09/11/25 16:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		09/11/25 16:53	1
Dibromofluoromethane (Surr)	101		80 - 120		09/11/25 16:53	1
4-Bromofluorobenzene (Surr)	95		80 - 120		09/11/25 16:53	1
1,2-Dichloroethane-d4 (Surr)	105		80 - 120		09/11/25 16:53	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: PA-24d-090425**

**Lab Sample ID: 580-153827-2**

Date Collected: 09/04/25 06:28

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/11/25 17:16	1
Chloromethane	ND		1.0	0.28	ug/L			09/11/25 17:16	1
Vinyl chloride	ND		1.0	0.22	ug/L			09/11/25 17:16	1
Bromomethane	ND		1.0	0.21	ug/L			09/11/25 17:16	1
Chloroethane	ND		1.0	0.35	ug/L			09/11/25 17:16	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			09/11/25 17:16	1
Carbon disulfide	ND		1.0	0.53	ug/L			09/11/25 17:16	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			09/11/25 17:16	1
<b>Acetone</b>	<b>4.0</b>	<b>J</b>	15	3.2	ug/L			09/11/25 17:16	1
Methylene Chloride	ND		5.0	1.4	ug/L			09/11/25 17:16	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			09/11/25 17:16	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			09/11/25 17:16	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			09/11/25 17:16	1
2-Butanone (MEK)	ND		15	4.7	ug/L			09/11/25 17:16	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			09/11/25 17:16	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			09/11/25 17:16	1
Chlorobromomethane	ND		1.0	0.29	ug/L			09/11/25 17:16	1
Chloroform	ND	*+	1.0	0.26	ug/L			09/11/25 17:16	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			09/11/25 17:16	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			09/11/25 17:16	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			09/11/25 17:16	1
Benzene	ND		1.0	0.24	ug/L			09/11/25 17:16	1
<b>1,2-Dichloroethane</b>	<b>0.75</b>	<b>J</b>	1.0	0.42	ug/L			09/11/25 17:16	1
Trichloroethene	ND		1.0	0.26	ug/L			09/11/25 17:16	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			09/11/25 17:16	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/11/25 17:16	1
Dibromomethane	ND		1.0	0.34	ug/L			09/11/25 17:16	1
Dichlorobromomethane	ND		1.0	0.29	ug/L			09/11/25 17:16	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			09/11/25 17:16	1
Toluene	ND		1.0	0.39	ug/L			09/11/25 17:16	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			09/11/25 17:16	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			09/11/25 17:16	1
Tetrachloroethene	ND		1.0	0.41	ug/L			09/11/25 17:16	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			09/11/25 17:16	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			09/11/25 17:16	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			09/11/25 17:16	1
Chlorobenzene	ND		1.0	0.44	ug/L			09/11/25 17:16	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			09/11/25 17:16	1
Ethylbenzene	ND		1.0	0.50	ug/L			09/11/25 17:16	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			09/11/25 17:16	1
o-Xylene	ND		1.0	0.39	ug/L			09/11/25 17:16	1
Styrene	ND		1.0	0.53	ug/L			09/11/25 17:16	1
Bromoform	ND		1.0	0.51	ug/L			09/11/25 17:16	1
Isopropylbenzene	ND		1.0	0.44	ug/L			09/11/25 17:16	1
Bromobenzene	ND		1.0	0.43	ug/L			09/11/25 17:16	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			09/11/25 17:16	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			09/11/25 17:16	1
N-Propylbenzene	ND		1.0	0.50	ug/L			09/11/25 17:16	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			09/11/25 17:16	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: PA-24d-090425**

**Lab Sample ID: 580-153827-2**

Date Collected: 09/04/25 06:28

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/11/25 17:16	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			09/11/25 17:16	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			09/11/25 17:16	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			09/11/25 17:16	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			09/11/25 17:16	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			09/11/25 17:16	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			09/11/25 17:16	1
n-Butylbenzene	ND		1.0	0.44	ug/L			09/11/25 17:16	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			09/11/25 17:16	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			09/11/25 17:16	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			09/11/25 17:16	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			09/11/25 17:16	1
Naphthalene	ND		3.0	0.93	ug/L			09/11/25 17:16	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			09/11/25 17:16	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			09/11/25 17:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		09/11/25 17:16	1
1,2-Dichloroethane-d4 (Surr)	122	S1+	80 - 120		09/11/25 17:16	1
4-Bromofluorobenzene (Surr)	99		80 - 120		09/11/25 17:16	1
Dibromofluoromethane (Surr)	112		80 - 120		09/11/25 17:16	1

**Method: EPA 314.0 - Perchlorate (IC) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		80	36	ug/L			09/11/25 14:54	40

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	29000		750	220	mg/L			09/15/25 21:58	500

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: MWA-31i(d)-090425**

**Lab Sample ID: 580-153827-3**

Date Collected: 09/04/25 07:22

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/11/25 17:39	1
Chloromethane	ND		1.0	0.28	ug/L			09/11/25 17:39	1
Vinyl chloride	ND		1.0	0.22	ug/L			09/11/25 17:39	1
Bromomethane	ND		1.0	0.21	ug/L			09/11/25 17:39	1
Chloroethane	ND		1.0	0.35	ug/L			09/11/25 17:39	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			09/11/25 17:39	1
Carbon disulfide	ND		1.0	0.53	ug/L			09/11/25 17:39	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			09/11/25 17:39	1
<b>Acetone</b>	<b>3.2</b>	<b>J</b>	15	3.2	ug/L			09/11/25 17:39	1
Methylene Chloride	ND		5.0	1.4	ug/L			09/11/25 17:39	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			09/11/25 17:39	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			09/11/25 17:39	1
<b>1,1-Dichloroethane</b>	<b>0.57</b>	<b>J</b>	1.0	0.22	ug/L			09/11/25 17:39	1
2-Butanone (MEK)	ND		15	4.7	ug/L			09/11/25 17:39	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			09/11/25 17:39	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			09/11/25 17:39	1
Chlorobromomethane	ND		1.0	0.29	ug/L			09/11/25 17:39	1
<b>Chloroform</b>	<b>89</b>	<b>*+</b>	1.0	0.26	ug/L			09/11/25 17:39	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			09/11/25 17:39	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			09/11/25 17:39	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			09/11/25 17:39	1
Benzene	ND		1.0	0.24	ug/L			09/11/25 17:39	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			09/11/25 17:39	1
Trichloroethene	ND		1.0	0.26	ug/L			09/11/25 17:39	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			09/11/25 17:39	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/11/25 17:39	1
Dibromomethane	ND		1.0	0.34	ug/L			09/11/25 17:39	1
Dichlorobromomethane	ND		1.0	0.29	ug/L			09/11/25 17:39	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			09/11/25 17:39	1
Toluene	ND		1.0	0.39	ug/L			09/11/25 17:39	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			09/11/25 17:39	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			09/11/25 17:39	1
<b>Tetrachloroethene</b>	<b>0.47</b>	<b>J</b>	1.0	0.41	ug/L			09/11/25 17:39	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			09/11/25 17:39	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			09/11/25 17:39	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			09/11/25 17:39	1
Chlorobenzene	ND		1.0	0.44	ug/L			09/11/25 17:39	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			09/11/25 17:39	1
Ethylbenzene	ND		1.0	0.50	ug/L			09/11/25 17:39	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			09/11/25 17:39	1
o-Xylene	ND		1.0	0.39	ug/L			09/11/25 17:39	1
Styrene	ND		1.0	0.53	ug/L			09/11/25 17:39	1
Bromoform	ND		1.0	0.51	ug/L			09/11/25 17:39	1
Isopropylbenzene	ND		1.0	0.44	ug/L			09/11/25 17:39	1
Bromobenzene	ND		1.0	0.43	ug/L			09/11/25 17:39	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			09/11/25 17:39	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			09/11/25 17:39	1
N-Propylbenzene	ND		1.0	0.50	ug/L			09/11/25 17:39	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			09/11/25 17:39	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: MWA-31i(d)-090425**

**Lab Sample ID: 580-153827-3**

Date Collected: 09/04/25 07:22

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/11/25 17:39	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			09/11/25 17:39	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			09/11/25 17:39	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			09/11/25 17:39	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			09/11/25 17:39	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			09/11/25 17:39	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			09/11/25 17:39	1
n-Butylbenzene	ND		1.0	0.44	ug/L			09/11/25 17:39	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			09/11/25 17:39	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			09/11/25 17:39	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			09/11/25 17:39	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			09/11/25 17:39	1
Naphthalene	ND		3.0	0.93	ug/L			09/11/25 17:39	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			09/11/25 17:39	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			09/11/25 17:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120		09/11/25 17:39	1
1,2-Dichloroethane-d4 (Surr)	123	S1+	80 - 120		09/11/25 17:39	1
4-Bromofluorobenzene (Surr)	97		80 - 120		09/11/25 17:39	1
Dibromofluoromethane (Surr)	115		80 - 120		09/11/25 17:39	1

**Method: EPA 314.0 - Perchlorate (IC) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	110000		8000	3600	ug/L			09/12/25 15:02	4000

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	22000		750	220	mg/L			09/15/25 22:22	500

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: PA-22d-090425**

**Lab Sample ID: 580-153827-4**

Date Collected: 09/04/25 08:19

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/11/25 18:01	1
Chloromethane	ND		1.0	0.28	ug/L			09/11/25 18:01	1
Vinyl chloride	ND		1.0	0.22	ug/L			09/11/25 18:01	1
Bromomethane	ND		1.0	0.21	ug/L			09/11/25 18:01	1
Chloroethane	ND		1.0	0.35	ug/L			09/11/25 18:01	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			09/11/25 18:01	1
Carbon disulfide	ND		1.0	0.53	ug/L			09/11/25 18:01	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			09/11/25 18:01	1
Acetone	ND		15	3.2	ug/L			09/11/25 18:01	1
Methylene Chloride	ND		5.0	1.4	ug/L			09/11/25 18:01	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			09/11/25 18:01	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			09/11/25 18:01	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			09/11/25 18:01	1
2-Butanone (MEK)	ND		15	4.7	ug/L			09/11/25 18:01	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			09/11/25 18:01	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			09/11/25 18:01	1
Chlorobromomethane	ND		1.0	0.29	ug/L			09/11/25 18:01	1
<b>Chloroform</b>	<b>21</b>	<b>*+</b>	1.0	0.26	ug/L			09/11/25 18:01	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			09/11/25 18:01	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			09/11/25 18:01	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			09/11/25 18:01	1
Benzene	ND		1.0	0.24	ug/L			09/11/25 18:01	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			09/11/25 18:01	1
Trichloroethene	ND		1.0	0.26	ug/L			09/11/25 18:01	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			09/11/25 18:01	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/11/25 18:01	1
Dibromomethane	ND		1.0	0.34	ug/L			09/11/25 18:01	1
Dichlorobromomethane	ND		1.0	0.29	ug/L			09/11/25 18:01	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			09/11/25 18:01	1
Toluene	ND		1.0	0.39	ug/L			09/11/25 18:01	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			09/11/25 18:01	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			09/11/25 18:01	1
Tetrachloroethene	ND		1.0	0.41	ug/L			09/11/25 18:01	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			09/11/25 18:01	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			09/11/25 18:01	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			09/11/25 18:01	1
Chlorobenzene	ND		1.0	0.44	ug/L			09/11/25 18:01	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			09/11/25 18:01	1
Ethylbenzene	ND		1.0	0.50	ug/L			09/11/25 18:01	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			09/11/25 18:01	1
o-Xylene	ND		1.0	0.39	ug/L			09/11/25 18:01	1
Styrene	ND		1.0	0.53	ug/L			09/11/25 18:01	1
Bromoform	ND		1.0	0.51	ug/L			09/11/25 18:01	1
Isopropylbenzene	ND		1.0	0.44	ug/L			09/11/25 18:01	1
Bromobenzene	ND		1.0	0.43	ug/L			09/11/25 18:01	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			09/11/25 18:01	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			09/11/25 18:01	1
N-Propylbenzene	ND		1.0	0.50	ug/L			09/11/25 18:01	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			09/11/25 18:01	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: PA-22d-090425**

**Lab Sample ID: 580-153827-4**

Date Collected: 09/04/25 08:19

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/11/25 18:01	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			09/11/25 18:01	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			09/11/25 18:01	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			09/11/25 18:01	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			09/11/25 18:01	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			09/11/25 18:01	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			09/11/25 18:01	1
n-Butylbenzene	ND		1.0	0.44	ug/L			09/11/25 18:01	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			09/11/25 18:01	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			09/11/25 18:01	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			09/11/25 18:01	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			09/11/25 18:01	1
Naphthalene	ND		3.0	0.93	ug/L			09/11/25 18:01	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			09/11/25 18:01	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			09/11/25 18:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		09/11/25 18:01	1
1,2-Dichloroethane-d4 (Surr)	120		80 - 120		09/11/25 18:01	1
4-Bromofluorobenzene (Surr)	97		80 - 120		09/11/25 18:01	1
Dibromofluoromethane (Surr)	109		80 - 120		09/11/25 18:01	1

**Method: EPA 314.0 - Perchlorate (IC) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	12000		800	360	ug/L			09/12/25 15:18	400

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	7700		150	43	mg/L			09/13/25 16:40	100

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: MWA-58d-090425**

**Lab Sample ID: 580-153827-5**

Date Collected: 09/04/25 09:16

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/11/25 18:24	1
Chloromethane	ND		1.0	0.28	ug/L			09/11/25 18:24	1
Vinyl chloride	ND		1.0	0.22	ug/L			09/11/25 18:24	1
Bromomethane	ND		1.0	0.21	ug/L			09/11/25 18:24	1
Chloroethane	ND		1.0	0.35	ug/L			09/11/25 18:24	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			09/11/25 18:24	1
Carbon disulfide	ND		1.0	0.53	ug/L			09/11/25 18:24	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			09/11/25 18:24	1
Acetone	ND		15	3.2	ug/L			09/11/25 18:24	1
Methylene Chloride	ND		5.0	1.4	ug/L			09/11/25 18:24	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			09/11/25 18:24	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			09/11/25 18:24	1
<b>1,1-Dichloroethane</b>	<b>0.31</b>	<b>J</b>	1.0	0.22	ug/L			09/11/25 18:24	1
2-Butanone (MEK)	ND		15	4.7	ug/L			09/11/25 18:24	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			09/11/25 18:24	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			09/11/25 18:24	1
Chlorobromomethane	ND		1.0	0.29	ug/L			09/11/25 18:24	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			09/11/25 18:24	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			09/11/25 18:24	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			09/11/25 18:24	1
Benzene	ND		1.0	0.24	ug/L			09/11/25 18:24	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			09/11/25 18:24	1
Trichloroethene	ND		1.0	0.26	ug/L			09/11/25 18:24	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			09/11/25 18:24	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/11/25 18:24	1
Dibromomethane	ND		1.0	0.34	ug/L			09/11/25 18:24	1
<b>Dichlorobromomethane</b>	<b>0.86</b>	<b>J</b>	1.0	0.29	ug/L			09/11/25 18:24	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			09/11/25 18:24	1
Toluene	ND		1.0	0.39	ug/L			09/11/25 18:24	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			09/11/25 18:24	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			09/11/25 18:24	1
Tetrachloroethene	ND		1.0	0.41	ug/L			09/11/25 18:24	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			09/11/25 18:24	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			09/11/25 18:24	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			09/11/25 18:24	1
Chlorobenzene	ND		1.0	0.44	ug/L			09/11/25 18:24	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			09/11/25 18:24	1
Ethylbenzene	ND		1.0	0.50	ug/L			09/11/25 18:24	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			09/11/25 18:24	1
o-Xylene	ND		1.0	0.39	ug/L			09/11/25 18:24	1
Styrene	ND		1.0	0.53	ug/L			09/11/25 18:24	1
Bromoform	ND		1.0	0.51	ug/L			09/11/25 18:24	1
Isopropylbenzene	ND		1.0	0.44	ug/L			09/11/25 18:24	1
Bromobenzene	ND		1.0	0.43	ug/L			09/11/25 18:24	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			09/11/25 18:24	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			09/11/25 18:24	1
N-Propylbenzene	ND		1.0	0.50	ug/L			09/11/25 18:24	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			09/11/25 18:24	1
4-Chlorotoluene	ND		1.0	0.38	ug/L			09/11/25 18:24	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: MWA-58d-090425**

**Lab Sample ID: 580-153827-5**

Date Collected: 09/04/25 09:16

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/11/25 18:24	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			09/11/25 18:24	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			09/11/25 18:24	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			09/11/25 18:24	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			09/11/25 18:24	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			09/11/25 18:24	1
n-Butylbenzene	ND		1.0	0.44	ug/L			09/11/25 18:24	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			09/11/25 18:24	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			09/11/25 18:24	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			09/11/25 18:24	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			09/11/25 18:24	1
Naphthalene	ND		3.0	0.93	ug/L			09/11/25 18:24	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			09/11/25 18:24	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			09/11/25 18:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	96		80 - 120		09/11/25 18:24	1
Toluene-d8 (Surr)	101		80 - 120		09/15/25 16:05	10
1,2-Dichloroethane-d4 (Surr)	131	S1+	80 - 120		09/11/25 18:24	1
1,2-Dichloroethane-d4 (Surr)	112		80 - 120		09/15/25 16:05	10
4-Bromofluorobenzene (Surr)	100		80 - 120		09/11/25 18:24	1
4-Bromofluorobenzene (Surr)	98		80 - 120		09/15/25 16:05	10
Dibromofluoromethane (Surr)	123	S1+	80 - 120		09/11/25 18:24	1
Dibromofluoromethane (Surr)	103		80 - 120		09/15/25 16:05	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloroform</b>	<b>180</b>		10	2.6	ug/L			09/15/25 14:32	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		80 - 120		09/15/25 14:32	10
1,2-Dichloroethane-d4 (Surr)	114		80 - 120		09/15/25 14:32	10
4-Bromofluorobenzene (Surr)	97		80 - 120		09/15/25 14:32	10
Dibromofluoromethane (Surr)	103		80 - 120		09/15/25 14:32	10

**Method: EPA 314.0 - Perchlorate (IC) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Perchlorate</b>	<b>53000</b>		4000	1800	ug/L			09/12/25 15:35	2000

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride (EPA 300.0)</b>	<b>18000</b>		750	220	mg/L			09/15/25 22:46	500

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: Dup-02-090425**

**Lab Sample ID: 580-153827-6**

Date Collected: 09/04/25 09:17

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/11/25 18:46	1
Chloromethane	ND		1.0	0.28	ug/L			09/11/25 18:46	1
Vinyl chloride	ND		1.0	0.22	ug/L			09/11/25 18:46	1
Bromomethane	ND		1.0	0.21	ug/L			09/11/25 18:46	1
Chloroethane	ND		1.0	0.35	ug/L			09/11/25 18:46	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			09/11/25 18:46	1
Carbon disulfide	ND		1.0	0.53	ug/L			09/11/25 18:46	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			09/11/25 18:46	1
Acetone	ND		15	3.2	ug/L			09/11/25 18:46	1
Methylene Chloride	ND		5.0	1.4	ug/L			09/11/25 18:46	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			09/11/25 18:46	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			09/11/25 18:46	1
<b>1,1-Dichloroethane</b>	<b>0.31</b>	<b>J</b>	1.0	0.22	ug/L			09/11/25 18:46	1
2-Butanone (MEK)	ND		15	4.7	ug/L			09/11/25 18:46	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			09/11/25 18:46	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			09/11/25 18:46	1
Chlorobromomethane	ND		1.0	0.29	ug/L			09/11/25 18:46	1
<b>Chloroform</b>	<b>180</b>		10	2.6	ug/L			09/15/25 16:28	10
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			09/11/25 18:46	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			09/11/25 18:46	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			09/11/25 18:46	1
Benzene	ND		1.0	0.24	ug/L			09/11/25 18:46	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			09/11/25 18:46	1
Trichloroethene	ND		1.0	0.26	ug/L			09/11/25 18:46	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			09/11/25 18:46	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/11/25 18:46	1
Dibromomethane	ND		1.0	0.34	ug/L			09/11/25 18:46	1
<b>Dichlorobromomethane</b>	<b>0.88</b>	<b>J</b>	1.0	0.29	ug/L			09/11/25 18:46	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			09/11/25 18:46	1
Toluene	ND		1.0	0.39	ug/L			09/11/25 18:46	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			09/11/25 18:46	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			09/11/25 18:46	1
Tetrachloroethene	ND		1.0	0.41	ug/L			09/11/25 18:46	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			09/11/25 18:46	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			09/11/25 18:46	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			09/11/25 18:46	1
Chlorobenzene	ND		1.0	0.44	ug/L			09/11/25 18:46	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			09/11/25 18:46	1
Ethylbenzene	ND		1.0	0.50	ug/L			09/11/25 18:46	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			09/11/25 18:46	1
o-Xylene	ND		1.0	0.39	ug/L			09/11/25 18:46	1
Styrene	ND		1.0	0.53	ug/L			09/11/25 18:46	1
Bromoform	ND		1.0	0.51	ug/L			09/11/25 18:46	1
Isopropylbenzene	ND		1.0	0.44	ug/L			09/11/25 18:46	1
Bromobenzene	ND		1.0	0.43	ug/L			09/11/25 18:46	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			09/11/25 18:46	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			09/11/25 18:46	1
N-Propylbenzene	ND		1.0	0.50	ug/L			09/11/25 18:46	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			09/11/25 18:46	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: Dup-02-090425**

**Lab Sample ID: 580-153827-6**

Date Collected: 09/04/25 09:17

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/11/25 18:46	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			09/11/25 18:46	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			09/11/25 18:46	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			09/11/25 18:46	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			09/11/25 18:46	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			09/11/25 18:46	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			09/11/25 18:46	1
n-Butylbenzene	ND		1.0	0.44	ug/L			09/11/25 18:46	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			09/11/25 18:46	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			09/11/25 18:46	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			09/11/25 18:46	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			09/11/25 18:46	1
Naphthalene	ND		3.0	0.93	ug/L			09/11/25 18:46	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			09/11/25 18:46	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			09/11/25 18:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		80 - 120		09/11/25 18:46	1
Toluene-d8 (Surr)	100		80 - 120		09/15/25 16:28	10
1,2-Dichloroethane-d4 (Surr)	131	S1+	80 - 120		09/11/25 18:46	1
1,2-Dichloroethane-d4 (Surr)	114		80 - 120		09/15/25 16:28	10
4-Bromofluorobenzene (Surr)	98		80 - 120		09/11/25 18:46	1
4-Bromofluorobenzene (Surr)	96		80 - 120		09/15/25 16:28	10
Dibromofluoromethane (Surr)	120		80 - 120		09/11/25 18:46	1
Dibromofluoromethane (Surr)	104		80 - 120		09/15/25 16:28	10

**Method: EPA 314.0 - Perchlorate (IC) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	52000		4000	1800	ug/L			09/12/25 15:52	2000

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	18000		750	220	mg/L			09/15/25 23:09	500

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: MWA-56d-090425**

**Lab Sample ID: 580-153827-7**

Date Collected: 09/04/25 10:08

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/11/25 19:09	1
Chloromethane	ND		1.0	0.28	ug/L			09/11/25 19:09	1
Vinyl chloride	ND		1.0	0.22	ug/L			09/11/25 19:09	1
Bromomethane	ND		1.0	0.21	ug/L			09/11/25 19:09	1
Chloroethane	ND		1.0	0.35	ug/L			09/11/25 19:09	1
Trichlorofluoromethane	ND	F1	1.0	0.36	ug/L			09/11/25 19:09	1
Carbon disulfide	ND		1.0	0.53	ug/L			09/11/25 19:09	1
1,1-Dichloroethene	ND	F1	1.0	0.28	ug/L			09/11/25 19:09	1
<b>Acetone</b>	<b>3.2</b>	<b>J</b>	15	3.2	ug/L			09/11/25 19:09	1
Methylene Chloride	ND		5.0	1.4	ug/L			09/11/25 19:09	1
Methyl tert-butyl ether	ND	F1	1.0	0.44	ug/L			09/11/25 19:09	1
trans-1,2-Dichloroethene	ND	F1	1.0	0.39	ug/L			09/11/25 19:09	1
1,1-Dichloroethane	ND	F1	1.0	0.22	ug/L			09/11/25 19:09	1
2-Butanone (MEK)	ND		15	4.7	ug/L			09/11/25 19:09	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			09/11/25 19:09	1
cis-1,2-Dichloroethene	ND	F1	1.0	0.35	ug/L			09/11/25 19:09	1
Chlorobromomethane	ND	F1	1.0	0.29	ug/L			09/11/25 19:09	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			09/11/25 19:09	1
Tetrachloroethene	ND		1.0	0.41	ug/L			09/11/25 19:09	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			09/11/25 19:09	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			09/11/25 19:09	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			09/11/25 19:09	1
Chlorobenzene	ND		1.0	0.44	ug/L			09/11/25 19:09	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			09/11/25 19:09	1
Ethylbenzene	ND		1.0	0.50	ug/L			09/11/25 19:09	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			09/11/25 19:09	1
o-Xylene	ND		1.0	0.39	ug/L			09/11/25 19:09	1
Styrene	ND	F2 F1	1.0	0.53	ug/L			09/11/25 19:09	1
Bromoform	ND		1.0	0.51	ug/L			09/11/25 19:09	1
Isopropylbenzene	ND		1.0	0.44	ug/L			09/11/25 19:09	1
Bromobenzene	ND		1.0	0.43	ug/L			09/11/25 19:09	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			09/11/25 19:09	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			09/11/25 19:09	1
N-Propylbenzene	ND		1.0	0.50	ug/L			09/11/25 19:09	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			09/11/25 19:09	1
4-Chlorotoluene	ND		1.0	0.38	ug/L			09/11/25 19:09	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			09/11/25 19:09	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			09/11/25 19:09	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			09/11/25 19:09	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			09/11/25 19:09	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			09/11/25 19:09	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			09/11/25 19:09	1
n-Butylbenzene	ND		1.0	0.44	ug/L			09/11/25 19:09	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			09/11/25 19:09	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			09/11/25 19:09	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			09/11/25 19:09	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			09/11/25 19:09	1
Naphthalene	ND		3.0	0.93	ug/L			09/11/25 19:09	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			09/11/25 19:09	1

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# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: MWA-56d-090425**

**Lab Sample ID: 580-153827-7**

Date Collected: 09/04/25 10:08

Matrix: Water

Date Received: 09/05/25 11:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			09/11/25 19:09	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Toluene-d8 (Surr)	98		80 - 120					09/11/25 19:09	1
1,2-Dichloroethane-d4 (Surr)	127	S1+	80 - 120					09/11/25 19:09	1
4-Bromofluorobenzene (Surr)	96		80 - 120					09/11/25 19:09	1
Dibromofluoromethane (Surr)	112		80 - 120					09/11/25 19:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloroform</b>	<b>150</b>		10	2.6	ug/L			09/15/25 14:55	10
Carbon tetrachloride	ND		10	3.0	ug/L			09/15/25 14:55	10
1,1-Dichloropropene	ND		10	2.9	ug/L			09/15/25 14:55	10
Benzene	ND		10	2.4	ug/L			09/15/25 14:55	10
1,2-Dichloroethane	ND		10	4.2	ug/L			09/15/25 14:55	10
Trichloroethene	ND		10	2.6	ug/L			09/15/25 14:55	10
1,2-Dichloropropane	ND		10	1.8	ug/L			09/15/25 14:55	10
4-Methyl-2-pentanone (MIBK)	ND		50	25	ug/L			09/15/25 14:55	10
Dibromomethane	ND		10	3.4	ug/L			09/15/25 14:55	10
Dichlorobromomethane	ND	F2	10	2.9	ug/L			09/15/25 14:55	10
cis-1,3-Dichloropropene	ND		10	4.2	ug/L			09/15/25 14:55	10
Toluene	ND		10	3.9	ug/L			09/15/25 14:55	10
trans-1,3-Dichloropropene	ND		10	4.1	ug/L			09/15/25 14:55	10
1,1,2-Trichloroethane	ND		10	2.4	ug/L			09/15/25 14:55	10
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Toluene-d8 (Surr)	101		80 - 120					09/15/25 14:55	10
1,2-Dichloroethane-d4 (Surr)	112		80 - 120					09/15/25 14:55	10
4-Bromofluorobenzene (Surr)	99		80 - 120					09/15/25 14:55	10
Dibromofluoromethane (Surr)	103		80 - 120					09/15/25 14:55	10

**Method: EPA 314.0 - Perchlorate (IC) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Perchlorate</b>	<b>15000</b>	<b>E</b>	40	18	ug/L			09/11/25 18:16	20
<b>Perchlorate</b>	<b>14000</b>		800	360	ug/L			09/12/25 16:09	400

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride (EPA 300.0)</b>	<b>12000</b>		150	43	mg/L			09/13/25 00:37	100

**General Chemistry - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride (EPA 300.0)</b>	<b>12000</b>		750	220	mg/L			09/13/25 17:16	500

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: RB-02-090425**

**Lab Sample ID: 580-153827-8**

Date Collected: 09/04/25 10:35

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/11/25 20:17	1
Chloromethane	ND		1.0	0.28	ug/L			09/11/25 20:17	1
Vinyl chloride	ND		1.0	0.22	ug/L			09/11/25 20:17	1
Bromomethane	ND		1.0	0.21	ug/L			09/11/25 20:17	1
Chloroethane	ND		1.0	0.35	ug/L			09/11/25 20:17	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			09/11/25 20:17	1
Carbon disulfide	ND		1.0	0.53	ug/L			09/11/25 20:17	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			09/11/25 20:17	1
<b>Acetone</b>	<b>4.3</b>	<b>J</b>	15	3.2	ug/L			09/11/25 20:17	1
Methylene Chloride	ND		5.0	1.4	ug/L			09/11/25 20:17	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			09/11/25 20:17	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			09/11/25 20:17	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			09/11/25 20:17	1
2-Butanone (MEK)	ND		15	4.7	ug/L			09/11/25 20:17	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			09/11/25 20:17	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			09/11/25 20:17	1
Chlorobromomethane	ND		1.0	0.29	ug/L			09/11/25 20:17	1
Chloroform	ND	*+	1.0	0.26	ug/L			09/11/25 20:17	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			09/11/25 20:17	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			09/11/25 20:17	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			09/11/25 20:17	1
Benzene	ND		1.0	0.24	ug/L			09/11/25 20:17	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			09/11/25 20:17	1
Trichloroethene	ND		1.0	0.26	ug/L			09/11/25 20:17	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			09/11/25 20:17	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/11/25 20:17	1
Dibromomethane	ND		1.0	0.34	ug/L			09/11/25 20:17	1
Dichlorobromomethane	ND		1.0	0.29	ug/L			09/11/25 20:17	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			09/11/25 20:17	1
Toluene	ND		1.0	0.39	ug/L			09/11/25 20:17	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			09/11/25 20:17	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			09/11/25 20:17	1
Tetrachloroethene	ND		1.0	0.41	ug/L			09/11/25 20:17	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			09/11/25 20:17	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			09/11/25 20:17	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			09/11/25 20:17	1
Chlorobenzene	ND		1.0	0.44	ug/L			09/11/25 20:17	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			09/11/25 20:17	1
Ethylbenzene	ND		1.0	0.50	ug/L			09/11/25 20:17	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			09/11/25 20:17	1
o-Xylene	ND		1.0	0.39	ug/L			09/11/25 20:17	1
Styrene	ND		1.0	0.53	ug/L			09/11/25 20:17	1
Bromoform	ND		1.0	0.51	ug/L			09/11/25 20:17	1
Isopropylbenzene	ND		1.0	0.44	ug/L			09/11/25 20:17	1
Bromobenzene	ND		1.0	0.43	ug/L			09/11/25 20:17	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			09/11/25 20:17	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			09/11/25 20:17	1
N-Propylbenzene	ND		1.0	0.50	ug/L			09/11/25 20:17	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			09/11/25 20:17	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: RB-02-090425**

**Lab Sample ID: 580-153827-8**

Date Collected: 09/04/25 10:35

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/11/25 20:17	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			09/11/25 20:17	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			09/11/25 20:17	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			09/11/25 20:17	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			09/11/25 20:17	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			09/11/25 20:17	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			09/11/25 20:17	1
n-Butylbenzene	ND		1.0	0.44	ug/L			09/11/25 20:17	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			09/11/25 20:17	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			09/11/25 20:17	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			09/11/25 20:17	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			09/11/25 20:17	1
Naphthalene	ND		3.0	0.93	ug/L			09/11/25 20:17	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			09/11/25 20:17	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			09/11/25 20:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		80 - 120		09/11/25 20:17	1
1,2-Dichloroethane-d4 (Surr)	110		80 - 120		09/11/25 20:17	1
4-Bromofluorobenzene (Surr)	95		80 - 120		09/11/25 20:17	1
Dibromofluoromethane (Surr)	101		80 - 120		09/11/25 20:17	1

**Method: EPA 314.0 - Perchlorate (IC) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		10	4.5	ug/L			09/11/25 19:57	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	ND		1.5	0.43	mg/L			09/13/25 01:13	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: MWA-63-090425**

**Lab Sample ID: 580-153827-9**

Date Collected: 09/04/25 11:25

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/11/25 20:39	1
Chloromethane	ND		1.0	0.28	ug/L			09/11/25 20:39	1
Vinyl chloride	ND		1.0	0.22	ug/L			09/11/25 20:39	1
Bromomethane	ND		1.0	0.21	ug/L			09/11/25 20:39	1
Chloroethane	ND		1.0	0.35	ug/L			09/11/25 20:39	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			09/11/25 20:39	1
Carbon disulfide	ND		1.0	0.53	ug/L			09/11/25 20:39	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			09/11/25 20:39	1
<b>Acetone</b>	<b>3.5</b>	<b>J</b>	15	3.2	ug/L			09/11/25 20:39	1
Methylene Chloride	ND		5.0	1.4	ug/L			09/11/25 20:39	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			09/11/25 20:39	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			09/11/25 20:39	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			09/11/25 20:39	1
2-Butanone (MEK)	ND		15	4.7	ug/L			09/11/25 20:39	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			09/11/25 20:39	1
<b>cis-1,2-Dichloroethene</b>	<b>4.2</b>		1.0	0.35	ug/L			09/11/25 20:39	1
Chlorobromomethane	ND		1.0	0.29	ug/L			09/11/25 20:39	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			09/11/25 20:39	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			09/11/25 20:39	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			09/11/25 20:39	1
Benzene	ND		1.0	0.24	ug/L			09/11/25 20:39	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			09/11/25 20:39	1
<b>Trichloroethene</b>	<b>2.8</b>		1.0	0.26	ug/L			09/11/25 20:39	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			09/11/25 20:39	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/11/25 20:39	1
Dibromomethane	ND		1.0	0.34	ug/L			09/11/25 20:39	1
Dichlorobromomethane	ND		1.0	0.29	ug/L			09/11/25 20:39	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			09/11/25 20:39	1
Toluene	ND		1.0	0.39	ug/L			09/11/25 20:39	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			09/11/25 20:39	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			09/11/25 20:39	1
<b>Tetrachloroethene</b>	<b>13</b>		1.0	0.41	ug/L			09/11/25 20:39	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			09/11/25 20:39	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			09/11/25 20:39	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			09/11/25 20:39	1
Chlorobenzene	ND		1.0	0.44	ug/L			09/11/25 20:39	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			09/11/25 20:39	1
Ethylbenzene	ND		1.0	0.50	ug/L			09/11/25 20:39	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			09/11/25 20:39	1
o-Xylene	ND		1.0	0.39	ug/L			09/11/25 20:39	1
Styrene	ND		1.0	0.53	ug/L			09/11/25 20:39	1
Bromoform	ND		1.0	0.51	ug/L			09/11/25 20:39	1
Isopropylbenzene	ND		1.0	0.44	ug/L			09/11/25 20:39	1
Bromobenzene	ND		1.0	0.43	ug/L			09/11/25 20:39	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			09/11/25 20:39	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			09/11/25 20:39	1
N-Propylbenzene	ND		1.0	0.50	ug/L			09/11/25 20:39	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			09/11/25 20:39	1
4-Chlorotoluene	ND		1.0	0.38	ug/L			09/11/25 20:39	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: MWA-63-090425**

**Lab Sample ID: 580-153827-9**

Date Collected: 09/04/25 11:25

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/11/25 20:39	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			09/11/25 20:39	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			09/11/25 20:39	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			09/11/25 20:39	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			09/11/25 20:39	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			09/11/25 20:39	1
n-Butylbenzene	ND		1.0	0.44	ug/L			09/11/25 20:39	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			09/11/25 20:39	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			09/11/25 20:39	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			09/11/25 20:39	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			09/11/25 20:39	1
Naphthalene	ND		3.0	0.93	ug/L			09/11/25 20:39	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			09/11/25 20:39	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			09/11/25 20:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		09/11/25 20:39	1
1,2-Dichloroethane-d4 (Surr)	118		80 - 120		09/11/25 20:39	1
4-Bromofluorobenzene (Surr)	98		80 - 120		09/11/25 20:39	1
Dibromofluoromethane (Surr)	111		80 - 120		09/11/25 20:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	110		10	2.6	ug/L			09/15/25 18:50	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 120		09/15/25 18:50	10
1,2-Dichloroethane-d4 (Surr)	114		80 - 120		09/15/25 18:50	10
4-Bromofluorobenzene (Surr)	99		80 - 120		09/15/25 18:50	10
Dibromofluoromethane (Surr)	104		80 - 120		09/15/25 18:50	10

**Method: EPA 314.0 - Perchlorate (IC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		2.0	0.91	ug/L			09/11/25 21:04	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	20		1.5	0.43	mg/L			09/13/25 01:37	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: PA-04-090425**

**Lab Sample ID: 580-153827-10**

Date Collected: 09/04/25 12:09

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/11/25 21:02	1
Chloromethane	ND		0.50	0.14	ug/L			09/11/25 21:02	1
Vinyl chloride	ND		0.10	0.040	ug/L			09/11/25 21:02	1
Bromomethane	ND		0.50	0.13	ug/L			09/11/25 21:02	1
Chloroethane	ND		0.50	0.24	ug/L			09/11/25 21:02	1
Carbon disulfide	ND		0.40	0.20	ug/L			09/11/25 21:02	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			09/11/25 21:02	1
<b>1,1-Dichloroethene</b>	<b>0.33</b>		0.20	0.035	ug/L			09/11/25 21:02	1
Acetone	ND		10	3.1	ug/L			09/11/25 21:02	1
Methylene Chloride	ND		5.0	1.2	ug/L			09/11/25 21:02	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			09/11/25 21:02	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/11/25 21:02	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			09/11/25 21:02	1
<b>1,1-Dichloroethane</b>	<b>0.36</b>		0.20	0.064	ug/L			09/11/25 21:02	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			09/11/25 21:02	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			09/11/25 21:02	1
Chlorobromomethane	ND		0.20	0.050	ug/L			09/11/25 21:02	1
<b>Chloroform</b>	<b>0.13</b>	<b>J**</b>	0.20	0.030	ug/L			09/11/25 21:02	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			09/11/25 21:02	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			09/11/25 21:02	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			09/11/25 21:02	1
Benzene	ND		0.20	0.030	ug/L			09/11/25 21:02	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			09/11/25 21:02	1
Trichloroethene	ND		0.20	0.066	ug/L			09/11/25 21:02	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			09/11/25 21:02	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			09/11/25 21:02	1
Dibromomethane	ND		0.20	0.062	ug/L			09/11/25 21:02	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			09/11/25 21:02	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			09/11/25 21:02	1
Toluene	ND		0.20	0.050	ug/L			09/11/25 21:02	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			09/11/25 21:02	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			09/11/25 21:02	1
<b>Tetrachloroethene</b>	<b>0.14</b>	<b>J</b>	0.50	0.084	ug/L			09/11/25 21:02	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			09/11/25 21:02	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			09/11/25 21:02	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			09/11/25 21:02	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/11/25 21:02	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			09/11/25 21:02	1
Ethylbenzene	ND		0.20	0.082	ug/L			09/11/25 21:02	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			09/11/25 21:02	1
o-Xylene	ND		0.50	0.23	ug/L			09/11/25 21:02	1
Styrene	ND		1.0	0.33	ug/L			09/11/25 21:02	1
Bromoform	ND		0.50	0.16	ug/L			09/11/25 21:02	1
Isopropylbenzene	ND		1.0	0.27	ug/L			09/11/25 21:02	1
Bromobenzene	ND		0.20	0.038	ug/L			09/11/25 21:02	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			09/11/25 21:02	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			09/11/25 21:02	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/11/25 21:02	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			09/11/25 21:02	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: PA-04-090425**

**Lab Sample ID: 580-153827-10**

Date Collected: 09/04/25 12:09

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/11/25 21:02	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			09/11/25 21:02	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/11/25 21:02	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			09/11/25 21:02	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/11/25 21:02	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			09/11/25 21:02	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			09/11/25 21:02	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/11/25 21:02	1
n-Butylbenzene	ND		1.0	0.35	ug/L			09/11/25 21:02	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			09/11/25 21:02	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			09/11/25 21:02	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			09/11/25 21:02	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			09/11/25 21:02	1
Naphthalene	ND		1.5	0.52	ug/L			09/11/25 21:02	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			09/11/25 21:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120		09/11/25 21:02	1
Dibromofluoromethane (Surr)	106		80 - 120		09/11/25 21:02	1
4-Bromofluorobenzene (Surr)	98		80 - 120		09/11/25 21:02	1
1,2-Dichloroethane-d4 (Surr)	108		80 - 120		09/11/25 21:02	1

**Method: EPA 314.0 - Perchlorate (IC) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		10	4.5	ug/L			09/11/25 21:38	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	5.0		1.5	0.43	mg/L			09/13/25 02:25	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: PA-10i-090425**

**Lab Sample ID: 580-153827-11**

Date Collected: 09/04/25 12:43

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/15/25 18:01	1
Chloromethane	ND		0.50	0.14	ug/L			09/15/25 18:01	1
<b>Vinyl chloride</b>	<b>0.66</b>		0.10	0.040	ug/L			09/15/25 18:01	1
Bromomethane	ND		0.50	0.13	ug/L			09/15/25 18:01	1
Chloroethane	ND		0.50	0.24	ug/L			09/15/25 18:01	1
Carbon disulfide	ND		0.40	0.20	ug/L			09/15/25 18:01	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			09/15/25 18:01	1
<b>1,1-Dichloroethene</b>	<b>0.18 J</b>		0.20	0.035	ug/L			09/15/25 18:01	1
Acetone	ND		10	3.1	ug/L			09/15/25 18:01	1
Methylene Chloride	ND		5.0	1.2	ug/L			09/15/25 18:01	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			09/15/25 18:01	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/15/25 18:01	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			09/15/25 18:01	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			09/15/25 18:01	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			09/15/25 18:01	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			09/15/25 18:01	1
Chlorobromomethane	ND		0.20	0.050	ug/L			09/15/25 18:01	1
Chloroform	ND		0.20	0.030	ug/L			09/15/25 18:01	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			09/15/25 18:01	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			09/15/25 18:01	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			09/15/25 18:01	1
Benzene	ND		0.20	0.030	ug/L			09/15/25 18:01	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			09/15/25 18:01	1
Trichloroethene	ND		0.20	0.066	ug/L			09/15/25 18:01	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			09/15/25 18:01	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			09/15/25 18:01	1
Dibromomethane	ND		0.20	0.062	ug/L			09/15/25 18:01	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			09/15/25 18:01	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			09/15/25 18:01	1
Toluene	ND		0.20	0.050	ug/L			09/15/25 18:01	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			09/15/25 18:01	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			09/15/25 18:01	1
Tetrachloroethene	ND		0.50	0.084	ug/L			09/15/25 18:01	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			09/15/25 18:01	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			09/15/25 18:01	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			09/15/25 18:01	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/15/25 18:01	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			09/15/25 18:01	1
Ethylbenzene	ND		0.20	0.082	ug/L			09/15/25 18:01	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			09/15/25 18:01	1
o-Xylene	ND		0.50	0.23	ug/L			09/15/25 18:01	1
Styrene	ND		1.0	0.33	ug/L			09/15/25 18:01	1
Bromoform	ND		0.50	0.16	ug/L			09/15/25 18:01	1
Isopropylbenzene	ND		1.0	0.27	ug/L			09/15/25 18:01	1
Bromobenzene	ND		0.20	0.038	ug/L			09/15/25 18:01	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			09/15/25 18:01	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			09/15/25 18:01	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/15/25 18:01	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			09/15/25 18:01	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: PA-10i-090425**

**Lab Sample ID: 580-153827-11**

Date Collected: 09/04/25 12:43

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/15/25 18:01	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			09/15/25 18:01	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/15/25 18:01	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			09/15/25 18:01	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/15/25 18:01	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			09/15/25 18:01	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			09/15/25 18:01	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/15/25 18:01	1
n-Butylbenzene	ND		1.0	0.35	ug/L			09/15/25 18:01	1
<b>1,2-Dichlorobenzene</b>	<b>0.15</b>	<b>J</b>	0.30	0.038	ug/L			09/15/25 18:01	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			09/15/25 18:01	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			09/15/25 18:01	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			09/15/25 18:01	1
Naphthalene	ND		1.5	0.52	ug/L			09/15/25 18:01	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			09/15/25 18:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 120		09/15/25 18:01	1
Dibromofluoromethane (Surr)	103		80 - 120		09/15/25 18:01	1
4-Bromofluorobenzene (Surr)	99		80 - 120		09/15/25 18:01	1
1,2-Dichloroethane-d4 (Surr)	114		80 - 120		09/15/25 18:01	1

**Method: EPA 314.0 - Perchlorate (IC) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		10	4.5	ug/L			09/11/25 22:12	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	5.0		1.5	0.43	mg/L			09/13/25 02:48	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: PA-18d-090425**

**Lab Sample ID: 580-153827-12**

Date Collected: 09/04/25 13:35

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/15/25 17:38	1
Chloromethane	ND		1.0	0.28	ug/L			09/15/25 17:38	1
<b>Vinyl chloride</b>	<b>0.23</b>	<b>J</b>	1.0	0.22	ug/L			09/15/25 17:38	1
Bromomethane	ND		1.0	0.21	ug/L			09/15/25 17:38	1
Chloroethane	ND		1.0	0.35	ug/L			09/15/25 17:38	1
Trichlorofluoromethane	ND		1.0	0.36	ug/L			09/15/25 17:38	1
Carbon disulfide	ND		1.0	0.53	ug/L			09/15/25 17:38	1
1,1-Dichloroethene	ND		1.0	0.28	ug/L			09/15/25 17:38	1
Acetone	ND		15	3.2	ug/L			09/15/25 17:38	1
Methylene Chloride	ND		5.0	1.4	ug/L			09/15/25 17:38	1
Methyl tert-butyl ether	ND		1.0	0.44	ug/L			09/15/25 17:38	1
trans-1,2-Dichloroethene	ND		1.0	0.39	ug/L			09/15/25 17:38	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			09/15/25 17:38	1
2-Butanone (MEK)	ND		15	4.7	ug/L			09/15/25 17:38	1
2,2-Dichloropropane	ND		1.0	0.32	ug/L			09/15/25 17:38	1
cis-1,2-Dichloroethene	ND		1.0	0.35	ug/L			09/15/25 17:38	1
Chlorobromomethane	ND		1.0	0.29	ug/L			09/15/25 17:38	1
Chloroform	ND		1.0	0.26	ug/L			09/15/25 17:38	1
1,1,1-Trichloroethane	ND		1.0	0.39	ug/L			09/15/25 17:38	1
Carbon tetrachloride	ND		1.0	0.30	ug/L			09/15/25 17:38	1
1,1-Dichloropropene	ND		1.0	0.29	ug/L			09/15/25 17:38	1
Benzene	ND		1.0	0.24	ug/L			09/15/25 17:38	1
1,2-Dichloroethane	ND		1.0	0.42	ug/L			09/15/25 17:38	1
Trichloroethene	ND		1.0	0.26	ug/L			09/15/25 17:38	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			09/15/25 17:38	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/15/25 17:38	1
Dibromomethane	ND		1.0	0.34	ug/L			09/15/25 17:38	1
Dichlorobromomethane	ND		1.0	0.29	ug/L			09/15/25 17:38	1
cis-1,3-Dichloropropene	ND		1.0	0.42	ug/L			09/15/25 17:38	1
Toluene	ND		1.0	0.39	ug/L			09/15/25 17:38	1
trans-1,3-Dichloropropene	ND		1.0	0.41	ug/L			09/15/25 17:38	1
1,1,2-Trichloroethane	ND		1.0	0.24	ug/L			09/15/25 17:38	1
Tetrachloroethene	ND		1.0	0.41	ug/L			09/15/25 17:38	1
1,3-Dichloropropane	ND		1.0	0.35	ug/L			09/15/25 17:38	1
Chlorodibromomethane	ND		1.0	0.43	ug/L			09/15/25 17:38	1
Ethylene Dibromide	ND		1.0	0.40	ug/L			09/15/25 17:38	1
Chlorobenzene	ND		1.0	0.44	ug/L			09/15/25 17:38	1
1,1,1,2-Tetrachloroethane	ND		1.0	0.18	ug/L			09/15/25 17:38	1
Ethylbenzene	ND		1.0	0.50	ug/L			09/15/25 17:38	1
m-Xylene & p-Xylene	ND		2.0	0.53	ug/L			09/15/25 17:38	1
o-Xylene	ND		1.0	0.39	ug/L			09/15/25 17:38	1
Styrene	ND		1.0	0.53	ug/L			09/15/25 17:38	1
Bromoform	ND		1.0	0.51	ug/L			09/15/25 17:38	1
Isopropylbenzene	ND		1.0	0.44	ug/L			09/15/25 17:38	1
Bromobenzene	ND		1.0	0.43	ug/L			09/15/25 17:38	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.52	ug/L			09/15/25 17:38	1
1,2,3-Trichloropropane	ND		1.0	0.41	ug/L			09/15/25 17:38	1
N-Propylbenzene	ND		1.0	0.50	ug/L			09/15/25 17:38	1
2-Chlorotoluene	ND		1.0	0.51	ug/L			09/15/25 17:38	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: PA-18d-090425**

**Lab Sample ID: 580-153827-12**

Date Collected: 09/04/25 13:35

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/15/25 17:38	1
tert-Butylbenzene	ND		2.0	0.58	ug/L			09/15/25 17:38	1
1,2,4-Trimethylbenzene	ND		3.0	0.61	ug/L			09/15/25 17:38	1
sec-Butylbenzene	ND		1.0	0.49	ug/L			09/15/25 17:38	1
4-Isopropyltoluene	ND		1.0	0.28	ug/L			09/15/25 17:38	1
1,3-Dichlorobenzene	ND		1.0	0.48	ug/L			09/15/25 17:38	1
1,4-Dichlorobenzene	ND		1.0	0.46	ug/L			09/15/25 17:38	1
n-Butylbenzene	ND		1.0	0.44	ug/L			09/15/25 17:38	1
1,2-Dichlorobenzene	ND		1.0	0.46	ug/L			09/15/25 17:38	1
1,2-Dibromo-3-Chloropropane	ND		3.0	0.57	ug/L			09/15/25 17:38	1
1,2,4-Trichlorobenzene	ND		1.0	0.33	ug/L			09/15/25 17:38	1
Hexachlorobutadiene	ND		3.0	0.79	ug/L			09/15/25 17:38	1
Naphthalene	ND		3.0	0.93	ug/L			09/15/25 17:38	1
1,2,3-Trichlorobenzene	ND		2.0	0.43	ug/L			09/15/25 17:38	1
1,3,5-Trimethylbenzene	ND		1.0	0.55	ug/L			09/15/25 17:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		80 - 120		09/15/25 17:38	1
1,2-Dichloroethane-d4 (Surr)	113		80 - 120		09/15/25 17:38	1
4-Bromofluorobenzene (Surr)	99		80 - 120		09/15/25 17:38	1
Dibromofluoromethane (Surr)	103		80 - 120		09/15/25 17:38	1

**Method: EPA 314.0 - Perchlorate (IC) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		10	4.5	ug/L			09/11/25 22:45	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	72		1.5	0.43	mg/L			09/13/25 03:12	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: PA-31-090425**

**Lab Sample ID: 580-153827-13**

Date Collected: 09/04/25 14:18

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/15/25 17:15	1
Chloromethane	ND		0.50	0.14	ug/L			09/15/25 17:15	1
Vinyl chloride	ND		0.10	0.040	ug/L			09/15/25 17:15	1
Bromomethane	ND		0.50	0.13	ug/L			09/15/25 17:15	1
Chloroethane	ND		0.50	0.24	ug/L			09/15/25 17:15	1
Carbon disulfide	ND		0.40	0.20	ug/L			09/15/25 17:15	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			09/15/25 17:15	1
<b>1,1-Dichloroethene</b>	<b>0.47</b>		0.20	0.035	ug/L			09/15/25 17:15	1
Acetone	ND		10	3.1	ug/L			09/15/25 17:15	1
Methylene Chloride	ND		5.0	1.2	ug/L			09/15/25 17:15	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			09/15/25 17:15	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/15/25 17:15	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			09/15/25 17:15	1
<b>1,1-Dichloroethane</b>	<b>0.11</b>	<b>J</b>	0.20	0.064	ug/L			09/15/25 17:15	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			09/15/25 17:15	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			09/15/25 17:15	1
Chlorobromomethane	ND		0.20	0.050	ug/L			09/15/25 17:15	1
<b>Chloroform</b>	<b>0.047</b>	<b>J</b>	0.20	0.030	ug/L			09/15/25 17:15	1
<b>1,1,1-Trichloroethane</b>	<b>0.20</b>		0.20	0.025	ug/L			09/15/25 17:15	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			09/15/25 17:15	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			09/15/25 17:15	1
Benzene	ND		0.20	0.030	ug/L			09/15/25 17:15	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			09/15/25 17:15	1
Trichloroethene	ND		0.20	0.066	ug/L			09/15/25 17:15	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			09/15/25 17:15	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			09/15/25 17:15	1
Dibromomethane	ND		0.20	0.062	ug/L			09/15/25 17:15	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			09/15/25 17:15	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			09/15/25 17:15	1
Toluene	ND		0.20	0.050	ug/L			09/15/25 17:15	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			09/15/25 17:15	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			09/15/25 17:15	1
<b>Tetrachloroethene</b>	<b>0.18</b>	<b>J</b>	0.50	0.084	ug/L			09/15/25 17:15	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			09/15/25 17:15	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			09/15/25 17:15	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			09/15/25 17:15	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/15/25 17:15	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			09/15/25 17:15	1
Ethylbenzene	ND		0.20	0.082	ug/L			09/15/25 17:15	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			09/15/25 17:15	1
o-Xylene	ND		0.50	0.23	ug/L			09/15/25 17:15	1
Styrene	ND		1.0	0.33	ug/L			09/15/25 17:15	1
Bromoform	ND		0.50	0.16	ug/L			09/15/25 17:15	1
Isopropylbenzene	ND		1.0	0.27	ug/L			09/15/25 17:15	1
Bromobenzene	ND		0.20	0.038	ug/L			09/15/25 17:15	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			09/15/25 17:15	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			09/15/25 17:15	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/15/25 17:15	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			09/15/25 17:15	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: PA-31-090425**

**Lab Sample ID: 580-153827-13**

Date Collected: 09/04/25 14:18

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/15/25 17:15	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			09/15/25 17:15	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/15/25 17:15	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			09/15/25 17:15	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/15/25 17:15	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			09/15/25 17:15	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			09/15/25 17:15	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/15/25 17:15	1
n-Butylbenzene	ND		1.0	0.35	ug/L			09/15/25 17:15	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			09/15/25 17:15	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			09/15/25 17:15	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			09/15/25 17:15	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			09/15/25 17:15	1
Naphthalene	ND		1.5	0.52	ug/L			09/15/25 17:15	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			09/15/25 17:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		80 - 120		09/15/25 17:15	1
Dibromofluoromethane (Surr)	103		80 - 120		09/15/25 17:15	1
4-Bromofluorobenzene (Surr)	98		80 - 120		09/15/25 17:15	1
1,2-Dichloroethane-d4 (Surr)	115		80 - 120		09/15/25 17:15	1

**Method: EPA 314.0 - Perchlorate (IC) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		10	4.5	ug/L			09/11/25 23:19	5

**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			09/13/25 03:36	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: PA-32i-090425**

**Lab Sample ID: 580-153827-14**

Date Collected: 09/04/25 14:49

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/15/25 16:52	1
Chloromethane	ND		0.50	0.14	ug/L			09/15/25 16:52	1
<b>Vinyl chloride</b>	<b>0.15</b>		0.10	0.040	ug/L			09/15/25 16:52	1
Bromomethane	ND		0.50	0.13	ug/L			09/15/25 16:52	1
<b>Chloroethane</b>	<b>0.30</b>	<b>J</b>	0.50	0.24	ug/L			09/15/25 16:52	1
Carbon disulfide	ND		0.40	0.20	ug/L			09/15/25 16:52	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			09/15/25 16:52	1
<b>1,1-Dichloroethene</b>	<b>0.044</b>	<b>J</b>	0.20	0.035	ug/L			09/15/25 16:52	1
<b>Acetone</b>	<b>5.9</b>	<b>J</b>	10	3.1	ug/L			09/15/25 16:52	1
Methylene Chloride	ND		5.0	1.2	ug/L			09/15/25 16:52	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			09/15/25 16:52	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/15/25 16:52	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			09/15/25 16:52	1
<b>1,1-Dichloroethane</b>	<b>0.18</b>	<b>J</b>	0.20	0.064	ug/L			09/15/25 16:52	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			09/15/25 16:52	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			09/15/25 16:52	1
Chlorobromomethane	ND		0.20	0.050	ug/L			09/15/25 16:52	1
Chloroform	ND		0.20	0.030	ug/L			09/15/25 16:52	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			09/15/25 16:52	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			09/15/25 16:52	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			09/15/25 16:52	1
<b>Benzene</b>	<b>0.077</b>	<b>J</b>	0.20	0.030	ug/L			09/15/25 16:52	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			09/15/25 16:52	1
Trichloroethene	ND		0.20	0.066	ug/L			09/15/25 16:52	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			09/15/25 16:52	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			09/15/25 16:52	1
Dibromomethane	ND		0.20	0.062	ug/L			09/15/25 16:52	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			09/15/25 16:52	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			09/15/25 16:52	1
<b>Toluene</b>	<b>0.074</b>	<b>J</b>	0.20	0.050	ug/L			09/15/25 16:52	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			09/15/25 16:52	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			09/15/25 16:52	1
Tetrachloroethene	ND		0.50	0.084	ug/L			09/15/25 16:52	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			09/15/25 16:52	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			09/15/25 16:52	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			09/15/25 16:52	1
<b>Chlorobenzene</b>	<b>0.19</b>	<b>J</b>	0.20	0.060	ug/L			09/15/25 16:52	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			09/15/25 16:52	1
Ethylbenzene	ND		0.20	0.082	ug/L			09/15/25 16:52	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			09/15/25 16:52	1
o-Xylene	ND		0.50	0.23	ug/L			09/15/25 16:52	1
Styrene	ND		1.0	0.33	ug/L			09/15/25 16:52	1
Bromoform	ND		0.50	0.16	ug/L			09/15/25 16:52	1
Isopropylbenzene	ND		1.0	0.27	ug/L			09/15/25 16:52	1
Bromobenzene	ND		0.20	0.038	ug/L			09/15/25 16:52	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			09/15/25 16:52	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			09/15/25 16:52	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/15/25 16:52	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			09/15/25 16:52	1

# Client Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: PA-32i-090425**

**Lab Sample ID: 580-153827-14**

Date Collected: 09/04/25 14:49

Matrix: Water

Date Received: 09/05/25 11:55

**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			09/15/25 16:52	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			09/15/25 16:52	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/15/25 16:52	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			09/15/25 16:52	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/15/25 16:52	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			09/15/25 16:52	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			09/15/25 16:52	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/15/25 16:52	1
n-Butylbenzene	ND		1.0	0.35	ug/L			09/15/25 16:52	1
<b>1,2-Dichlorobenzene</b>	<b>0.25</b>	<b>J</b>	0.30	0.038	ug/L			09/15/25 16:52	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			09/15/25 16:52	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			09/15/25 16:52	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			09/15/25 16:52	1
Naphthalene	ND		1.5	0.52	ug/L			09/15/25 16:52	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			09/15/25 16:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		80 - 120		09/15/25 16:52	1
Dibromofluoromethane (Surr)	101		80 - 120		09/15/25 16:52	1
4-Bromofluorobenzene (Surr)	99		80 - 120		09/15/25 16:52	1
1,2-Dichloroethane-d4 (Surr)	112		80 - 120		09/15/25 16:52	1

**Method: EPA 314.0 - Perchlorate (IC) - DL**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		10	4.5	ug/L			09/11/25 23:53	5

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (EPA 300.0)	67		1.5	0.43	mg/L			09/13/25 04:00	1

# QC Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

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

Lab Sample ID: MB 580-502959/10

Matrix: Water

Analysis Batch: 502959

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			09/11/25 13:56	1
Chloromethane	ND		0.50	0.14	ug/L			09/11/25 13:56	1
Vinyl chloride	ND		0.10	0.040	ug/L			09/11/25 13:56	1
Bromomethane	ND		0.50	0.13	ug/L			09/11/25 13:56	1
Chloroethane	ND		0.50	0.24	ug/L			09/11/25 13:56	1
Carbon disulfide	ND		0.40	0.20	ug/L			09/11/25 13:56	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			09/11/25 13:56	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			09/11/25 13:56	1
Acetone	ND		10	3.1	ug/L			09/11/25 13:56	1
Methylene Chloride	ND		5.0	1.2	ug/L			09/11/25 13:56	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			09/11/25 13:56	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/11/25 13:56	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			09/11/25 13:56	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			09/11/25 13:56	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			09/11/25 13:56	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			09/11/25 13:56	1
Chlorobromomethane	ND		0.20	0.050	ug/L			09/11/25 13:56	1
Chloroform	ND		0.20	0.030	ug/L			09/11/25 13:56	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			09/11/25 13:56	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			09/11/25 13:56	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			09/11/25 13:56	1
Benzene	ND		0.20	0.030	ug/L			09/11/25 13:56	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			09/11/25 13:56	1
Trichloroethene	ND		0.20	0.066	ug/L			09/11/25 13:56	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			09/11/25 13:56	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			09/11/25 13:56	1
Dibromomethane	ND		0.20	0.062	ug/L			09/11/25 13:56	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			09/11/25 13:56	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			09/11/25 13:56	1
Toluene	ND		0.20	0.050	ug/L			09/11/25 13:56	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			09/11/25 13:56	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			09/11/25 13:56	1
Tetrachloroethene	ND		0.50	0.084	ug/L			09/11/25 13:56	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			09/11/25 13:56	1
Chlorodibromomethane	ND		0.20	0.055	ug/L			09/11/25 13:56	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			09/11/25 13:56	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/11/25 13:56	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			09/11/25 13:56	1
Ethylbenzene	ND		0.20	0.082	ug/L			09/11/25 13:56	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			09/11/25 13:56	1
o-Xylene	ND		0.50	0.23	ug/L			09/11/25 13:56	1
Styrene	ND		1.0	0.33	ug/L			09/11/25 13:56	1
Bromoform	ND		0.50	0.16	ug/L			09/11/25 13:56	1
Isopropylbenzene	ND		1.0	0.27	ug/L			09/11/25 13:56	1
Bromobenzene	ND		0.20	0.038	ug/L			09/11/25 13:56	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			09/11/25 13:56	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			09/11/25 13:56	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/11/25 13:56	1

# QC Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

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

Lab Sample ID: MB 580-502959/10

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 502959

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2-Chlorotoluene	ND		0.50	0.12	ug/L			09/11/25 13:56	1
4-Chlorotoluene	ND		0.30	0.12	ug/L			09/11/25 13:56	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			09/11/25 13:56	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/11/25 13:56	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			09/11/25 13:56	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/11/25 13:56	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			09/11/25 13:56	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			09/11/25 13:56	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/11/25 13:56	1
n-Butylbenzene	ND		1.0	0.35	ug/L			09/11/25 13:56	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			09/11/25 13:56	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			09/11/25 13:56	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			09/11/25 13:56	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			09/11/25 13:56	1
Naphthalene	ND		1.5	0.52	ug/L			09/11/25 13:56	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			09/11/25 13:56	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Toluene-d8 (Surr)	98		80 - 120		09/11/25 13:56	1
Dibromofluoromethane (Surr)	104		80 - 120		09/11/25 13:56	1
4-Bromofluorobenzene (Surr)	96		80 - 120		09/11/25 13:56	1
1,2-Dichloroethane-d4 (Surr)	107		80 - 120		09/11/25 13:56	1

Lab Sample ID: LCS 580-502959/5

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 502959

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloromethane	5.00	4.59		ug/L		92	32 - 150
Vinyl chloride	5.00	6.03		ug/L		121	41 - 150
Bromomethane	5.00	4.66		ug/L		93	51 - 148
Chloroethane	5.00	5.74		ug/L		115	54 - 140
Carbon disulfide	5.00	5.67		ug/L		113	54 - 142
Trichlorofluoromethane	5.00	6.19		ug/L		124	60 - 132
1,1-Dichloroethene	5.00	5.94		ug/L		119	60 - 129
Acetone	25.0	29.5		ug/L		118	49 - 150
Methylene Chloride	5.00	4.28	J	ug/L		86	40 - 142
Methyl tert-butyl ether	5.00	6.13		ug/L		123	61 - 131
2-Butanone (MEK)	25.0	31.0		ug/L		124	37 - 150
trans-1,2-Dichloroethene	5.00	5.85		ug/L		117	69 - 121
1,1-Dichloroethane	5.00	5.83		ug/L		117	74 - 120
2,2-Dichloropropane	5.00	5.78		ug/L		116	55 - 140
cis-1,2-Dichloroethene	5.00	5.75		ug/L		115	72 - 120
Chlorobromomethane	5.00	5.84		ug/L		117	79 - 121
Chloroform	5.00	6.09	*+	ug/L		122	75 - 120
1,1,1-Trichloroethane	5.00	5.75		ug/L		115	70 - 121
Carbon tetrachloride	5.00	5.44		ug/L		109	66 - 130

# QC Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

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

Lab Sample ID: LCS 580-502959/5

Matrix: Water

Analysis Batch: 502959

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
1,1-Dichloropropene	5.00	5.71		ug/L		114	72 - 125
Benzene	5.00	5.78		ug/L		116	80 - 120
1,2-Dichloroethane	5.00	5.94		ug/L		119	74 - 127
Trichloroethene	5.00	5.39		ug/L		108	72 - 120
1,2-Dichloropropane	5.00	5.30		ug/L		106	69 - 130
4-Methyl-2-pentanone (MIBK)	25.00	33.7		ug/L		135	63 - 137
Dibromomethane	5.00	6.33		ug/L		127	65 - 141
Dichlorobromomethane	5.00	5.30		ug/L		106	74 - 131
cis-1,3-Dichloropropene	5.00	5.92		ug/L		118	77 - 131
Toluene	5.00	6.28		ug/L		126	80 - 126
trans-1,3-Dichloropropene	5.00	6.11		ug/L		122	71 - 138
1,1,2-Trichloroethane	5.00	6.08		ug/L		122	73 - 127
Tetrachloroethene	5.00	5.61		ug/L		112	75 - 124
1,3-Dichloropropane	5.00	5.81		ug/L		116	69 - 138
Chlorodibromomethane	5.00	5.40		ug/L		108	62 - 141
Ethylene Dibromide	5.00	5.87		ug/L		117	61 - 143
Chlorobenzene	5.00	5.47		ug/L		109	74 - 123
1,1,1,2-Tetrachloroethane	5.00	5.76		ug/L		115	69 - 127
Ethylbenzene	5.00	5.83		ug/L		117	80 - 124
m-Xylene & p-Xylene	5.00	5.89		ug/L		118	75 - 124
o-Xylene	5.00	5.75		ug/L		115	71 - 124
Styrene	5.00	5.33		ug/L		107	74 - 127
Bromoform	5.00	6.15		ug/L		123	48 - 127
Isopropylbenzene	5.00	5.74		ug/L		115	71 - 123
Bromobenzene	5.00	5.54		ug/L		111	74 - 130
1,1,2,2-Tetrachloroethane	5.00	6.14		ug/L		123	67 - 136
1,2,3-Trichloropropane	5.00	5.92		ug/L		118	67 - 135
N-Propylbenzene	5.00	6.01		ug/L		120	72 - 126
2-Chlorotoluene	5.00	5.72		ug/L		114	73 - 120
4-Chlorotoluene	5.00	5.66		ug/L		113	75 - 124
1,3,5-Trimethylbenzene	5.00	5.40		ug/L		108	75 - 123
tert-Butylbenzene	5.00	5.74		ug/L		115	70 - 129
1,2,4-Trimethylbenzene	5.00	5.58		ug/L		112	71 - 127
sec-Butylbenzene	5.00	5.79		ug/L		116	75 - 126
4-Isopropyltoluene	5.00	5.16		ug/L		103	78 - 125
1,3-Dichlorobenzene	5.00	5.74		ug/L		115	72 - 125
1,4-Dichlorobenzene	5.00	5.74		ug/L		115	71 - 129
n-Butylbenzene	5.00	5.46		ug/L		109	69 - 127
1,2-Dichlorobenzene	5.00	5.71		ug/L		114	72 - 129
1,2-Dibromo-3-Chloropropane	5.00	5.97		ug/L		119	55 - 135
1,2,4-Trichlorobenzene	5.00	5.66		ug/L		113	60 - 130
Hexachlorobutadiene	5.00	4.92		ug/L		98	63 - 130
Naphthalene	5.00	5.33		ug/L		107	54 - 137
1,2,3-Trichlorobenzene	5.00	5.44		ug/L		109	60 - 136

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	103		80 - 120

# QC Sample Results

Client: ERM-West

Job ID: 580-153827-1

Project/Site: Arkema - Q3 2025 Groundwater Event

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

Lab Sample ID: LCS 580-502959/5

Client Sample ID: Lab Control Sample

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 502959

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	95		80 - 120
1,2-Dichloroethane-d4 (Surr)	110		80 - 120

Lab Sample ID: LCSD 580-502959/6

Client Sample ID: Lab Control Sample Dup

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 502959

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dichlorodifluoromethane	5.00	5.97		ug/L		119	20 - 150	10	30
Chloromethane	5.00	4.98		ug/L		100	32 - 150	8	33
Vinyl chloride	5.00	6.27		ug/L		125	41 - 150	4	32
Bromomethane	5.00	4.90		ug/L		98	51 - 148	5	35
Chloroethane	5.00	6.05		ug/L		121	54 - 140	5	33
Carbon disulfide	5.00	5.93		ug/L		119	54 - 142	5	34
Trichlorofluoromethane	5.00	6.42		ug/L		128	60 - 132	4	32
1,1-Dichloroethene	5.00	6.07		ug/L		121	60 - 129	2	29
Acetone	25.0	29.0		ug/L		116	49 - 150	2	24
Methylene Chloride	5.00	4.53	J	ug/L		91	40 - 142	6	25
Methyl tert-butyl ether	5.00	5.70		ug/L		114	61 - 131	7	27
2-Butanone (MEK)	25.0	28.8		ug/L		115	37 - 150	7	35
trans-1,2-Dichloroethene	5.00	5.83		ug/L		117	69 - 121	0	27
1,1-Dichloroethane	5.00	5.84		ug/L		117	74 - 120	0	26
2,2-Dichloropropane	5.00	5.57		ug/L		111	55 - 140	4	31
cis-1,2-Dichloroethene	5.00	5.70		ug/L		114	72 - 120	1	22
Chlorobromomethane	5.00	5.90		ug/L		118	79 - 121	1	20
Chloroform	5.00	5.95		ug/L		119	75 - 120	2	21
1,1,1-Trichloroethane	5.00	5.60		ug/L		112	70 - 121	3	24
Carbon tetrachloride	5.00	5.25		ug/L		105	66 - 130	3	24
1,1-Dichloropropene	5.00	5.65		ug/L		113	72 - 125	1	23
Benzene	5.00	5.71		ug/L		114	80 - 120	1	22
1,2-Dichloroethane	5.00	5.77		ug/L		115	74 - 127	3	21
Trichloroethene	5.00	5.22		ug/L		104	72 - 120	3	22
1,2-Dichloropropane	5.00	5.16		ug/L		103	69 - 130	3	22
4-Methyl-2-pentanone (MIBK)	25.0	31.0		ug/L		124	63 - 137	8	26
Dibromomethane	5.00	6.13		ug/L		123	65 - 141	3	22
Dichlorobromomethane	5.00	5.06		ug/L		101	74 - 131	5	21
cis-1,3-Dichloropropene	5.00	5.64		ug/L		113	77 - 131	5	24
Toluene	5.00	6.21		ug/L		124	80 - 126	1	20
trans-1,3-Dichloropropene	5.00	5.82		ug/L		116	71 - 138	5	26
1,1,2-Trichloroethane	5.00	5.70		ug/L		114	73 - 127	7	22
Tetrachloroethene	5.00	5.63		ug/L		113	75 - 124	0	20
1,3-Dichloropropane	5.00	5.53		ug/L		111	69 - 138	5	19
Chlorodibromomethane	5.00	5.02		ug/L		100	62 - 141	7	22
Ethylene Dibromide	5.00	5.54		ug/L		111	61 - 143	6	22
Chlorobenzene	5.00	5.43		ug/L		109	74 - 123	1	21
1,1,1,2-Tetrachloroethane	5.00	5.49		ug/L		110	69 - 127	5	22
Ethylbenzene	5.00	5.93		ug/L		119	80 - 124	2	22
m-Xylene & p-Xylene	5.00	5.89		ug/L		118	75 - 124	0	22

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# QC Sample Results

Client: ERM-West

Job ID: 580-153827-1

Project/Site: Arkema - Q3 2025 Groundwater Event

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

**Lab Sample ID: LCSD 580-502959/6**

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

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 502959**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
o-Xylene	5.00	5.80		ug/L		116	71 - 124	1	23
Styrene	5.00	5.32		ug/L		106	74 - 127	0	22
Bromoform	5.00	5.81		ug/L		116	48 - 127	6	23
Isopropylbenzene	5.00	5.78		ug/L		116	71 - 123	1	23
Bromobenzene	5.00	5.51		ug/L		110	74 - 130	1	23
1,1,2,2-Tetrachloroethane	5.00	5.86		ug/L		117	67 - 136	5	24
1,2,3-Trichloropropane	5.00	5.61		ug/L		112	67 - 135	5	25
N-Propylbenzene	5.00	6.15		ug/L		123	72 - 126	2	20
2-Chlorotoluene	5.00	5.72		ug/L		114	73 - 120	0	22
4-Chlorotoluene	5.00	5.73		ug/L		115	75 - 124	1	23
1,3,5-Trimethylbenzene	5.00	5.43		ug/L		109	75 - 123	1	23
tert-Butylbenzene	5.00	5.86		ug/L		117	70 - 129	2	24
1,2,4-Trimethylbenzene	5.00	5.66		ug/L		113	71 - 127	1	23
sec-Butylbenzene	5.00	5.86		ug/L		117	75 - 126	1	23
4-Isopropyltoluene	5.00	5.25		ug/L		105	78 - 125	2	24
1,3-Dichlorobenzene	5.00	5.79		ug/L		116	72 - 125	1	22
1,4-Dichlorobenzene	5.00	5.72		ug/L		114	71 - 129	0	22
n-Butylbenzene	5.00	5.53		ug/L		111	69 - 127	1	24
1,2-Dichlorobenzene	5.00	5.68		ug/L		114	72 - 129	1	22
1,2-Dibromo-3-Chloropropane	5.00	5.76		ug/L		115	55 - 135	4	29
1,2,4-Trichlorobenzene	5.00	5.64		ug/L		113	60 - 130	0	26
Hexachlorobutadiene	5.00	5.06		ug/L		101	63 - 130	3	26
Naphthalene	5.00	5.04		ug/L		101	54 - 137	6	28
1,2,3-Trichlorobenzene	5.00	5.43		ug/L		109	60 - 136	0	28

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	103		80 - 120
4-Bromofluorobenzene (Surr)	95		80 - 120
1,2-Dichloroethane-d4 (Surr)	107		80 - 120

**Lab Sample ID: 580-153827-7 MS**

**Client Sample ID: MWA-56d-090425**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 502959**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec Limits
				Result	Qualifier				
Dichlorodifluoromethane	ND		5.00	7.51		ug/L		150	20 - 150
Chloromethane	ND		5.00	5.55		ug/L		111	25 - 150
Vinyl chloride	ND		5.00	7.16		ug/L		143	31 - 150
Bromomethane	ND		5.00	5.32		ug/L		106	36 - 150
Chloroethane	ND		5.00	6.71		ug/L		134	38 - 150
Trichlorofluoromethane	ND	F1	5.00	8.23	F1	ug/L		165	45 - 148
Carbon disulfide	ND		5.00	6.38		ug/L		128	63 - 134
1,1-Dichloroethene	ND	F1	5.00	7.00	F1	ug/L		140	70 - 129
Acetone	3.2	J	25.0	29.6		ug/L		118	44 - 150
Methylene Chloride	ND		5.00	4.57	J	ug/L		91	77 - 125
Methyl tert-butyl ether	ND	F1	5.00	6.31	F1	ug/L		126	72 - 120
trans-1,2-Dichloroethene	ND	F1	5.00	6.58	F1	ug/L		132	75 - 120

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# QC Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

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

Lab Sample ID: 580-153827-7 MS

Client Sample ID: MWA-56d-090425

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 502959

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
1,1-Dichloroethane	ND	F1	5.00	6.46	F1	ug/L		129	80 - 120
2-Butanone (MEK)	ND		25.0	31.5		ug/L		126	65 - 137
2,2-Dichloropropane	ND		5.00	6.25		ug/L		125	66 - 126
cis-1,2-Dichloroethane	ND	F1	5.00	6.82	F1	ug/L		136	76 - 120
Chlorobromomethane	ND	F1	5.00	6.74	F1	ug/L		135	78 - 120
1,1,1-Trichloroethane	ND		5.00	6.24		ug/L		125	74 - 130
Tetrachloroethene	ND		5.00	5.37		ug/L		107	76 - 125
1,3-Dichloropropane	ND		5.00	5.74		ug/L		115	79 - 120
Chlorodibromomethane	ND		5.00	5.15		ug/L		103	73 - 125
Ethylene Dibromide	ND		5.00	5.88		ug/L		118	79 - 126
Chlorobenzene	ND		5.00	5.34		ug/L		107	80 - 120
1,1,1,2-Tetrachloroethane	ND		5.00	5.46		ug/L		109	79 - 120
Ethylbenzene	ND		5.00	5.79		ug/L		116	80 - 120
m-Xylene & p-Xylene	ND		5.00	5.86		ug/L		117	80 - 120
o-Xylene	ND		5.00	5.95		ug/L		119	80 - 120
Styrene	ND	F2 F1	5.00	2.19	F1	ug/L		44	76 - 122
Bromoform	ND		5.00	6.11		ug/L		122	56 - 139
Isopropylbenzene	ND		5.00	5.48		ug/L		110	80 - 123
Bromobenzene	ND		5.00	5.05		ug/L		101	80 - 120
1,1,2,2-Tetrachloroethane	ND		5.00	5.66		ug/L		113	74 - 124
1,2,3-Trichloropropane	ND		5.00	5.55		ug/L		111	76 - 124
N-Propylbenzene	ND		5.00	5.66		ug/L		113	80 - 122
2-Chlorotoluene	ND		5.00	5.21		ug/L		104	80 - 120
4-Chlorotoluene	ND		5.00	5.17		ug/L		103	73 - 129
tert-Butylbenzene	ND		5.00	5.31		ug/L		106	75 - 123
1,2,4-Trimethylbenzene	ND		5.00	5.67		ug/L		113	80 - 120
sec-Butylbenzene	ND		5.00	5.33		ug/L		107	78 - 122
4-Isopropyltoluene	ND		5.00	4.90		ug/L		98	77 - 126
1,3-Dichlorobenzene	ND		5.00	5.33		ug/L		107	77 - 127
1,4-Dichlorobenzene	ND		5.00	5.35		ug/L		107	80 - 120
n-Butylbenzene	ND		5.00	5.19		ug/L		104	57 - 133
1,2-Dichlorobenzene	ND		5.00	5.43		ug/L		109	80 - 120
1,2-Dibromo-3-Chloropropane	ND		5.00	5.93		ug/L		119	65 - 133
1,2,4-Trichlorobenzene	ND		5.00	5.34		ug/L		107	61 - 148
Hexachlorobutadiene	ND		5.00	4.30		ug/L		86	74 - 131
Naphthalene	ND		5.00	5.12		ug/L		102	63 - 150
1,2,3-Trichlorobenzene	ND		5.00	5.31		ug/L		106	65 - 150
1,3,5-Trimethylbenzene	ND		5.00	5.13		ug/L		103	80 - 122

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	97		80 - 120
1,2-Dichloroethane-d4 (Surr)	127	S1+	80 - 120
4-Bromofluorobenzene (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	116		80 - 120

# QC Sample Results

Client: ERM-West

Job ID: 580-153827-1

Project/Site: Arkema - Q3 2025 Groundwater Event

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

Lab Sample ID: 580-153827-7 MSD

Client Sample ID: MWA-56d-090425

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 502959

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier			Limits	Limit		
Dichlorodifluoromethane	ND		5.00	7.46		ug/L		149	20 - 150	1	33
Chloromethane	ND		5.00	5.84		ug/L		117	25 - 150	5	26
Vinyl chloride	ND		5.00	7.38		ug/L		148	31 - 150	3	26
Bromomethane	ND		5.00	5.63		ug/L		113	36 - 150	6	33
Chloroethane	ND		5.00	6.66		ug/L		133	38 - 150	1	28
Trichlorofluoromethane	ND	F1	5.00	8.17	F1	ug/L		163	45 - 148	1	35
Carbon disulfide	ND		5.00	6.37		ug/L		127	63 - 134	0	24
1,1-Dichloroethene	ND	F1	5.00	6.83	F1	ug/L		137	70 - 129	2	23
Acetone	3.2	J	25.0	30.9		ug/L		124	44 - 150	4	33
Methylene Chloride	ND		5.00	4.53	J	ug/L		91	77 - 125	1	18
Methyl tert-butyl ether	ND	F1	5.00	5.73		ug/L		115	72 - 120	10	18
trans-1,2-Dichloroethene	ND	F1	5.00	6.33	F1	ug/L		127	75 - 120	4	21
1,1-Dichloroethane	ND	F1	5.00	6.24	F1	ug/L		125	80 - 120	3	15
2-Butanone (MEK)	ND		25.0	29.0		ug/L		116	65 - 137	8	34
2,2-Dichloropropane	ND		5.00	5.48		ug/L		110	66 - 126	13	22
cis-1,2-Dichloroethene	ND	F1	5.00	6.09	F1	ug/L		122	76 - 120	11	20
Chlorobromomethane	ND	F1	5.00	6.22	F1	ug/L		124	78 - 120	8	13
1,1,1-Trichloroethane	ND		5.00	5.68		ug/L		114	74 - 130	9	19
Tetrachloroethene	ND		5.00	5.15		ug/L		103	76 - 125	4	13
1,3-Dichloropropane	ND		5.00	5.21		ug/L		104	79 - 120	10	19
Chlorodibromomethane	ND		5.00	4.90		ug/L		98	73 - 125	5	13
Ethylene Dibromide	ND		5.00	5.48		ug/L		110	79 - 126	7	12
Chlorobenzene	ND		5.00	5.21		ug/L		104	80 - 120	3	10
1,1,1,2-Tetrachloroethane	ND		5.00	5.09		ug/L		102	79 - 120	7	16
Ethylbenzene	ND		5.00	5.69		ug/L		114	80 - 120	2	14
m-Xylene & p-Xylene	ND		5.00	5.73		ug/L		115	80 - 120	2	14
o-Xylene	ND		5.00	5.78		ug/L		116	80 - 120	3	16
Styrene	ND	F2 F1	5.00	3.12	F2 F1	ug/L		62	76 - 122	35	16
Bromoform	ND		5.00	5.70		ug/L		114	56 - 139	7	21
Isopropylbenzene	ND		5.00	5.47		ug/L		109	80 - 123	0	19
Bromobenzene	ND		5.00	4.93		ug/L		99	80 - 120	2	24
1,1,2,2-Tetrachloroethane	ND		5.00	5.27		ug/L		105	74 - 124	7	25
1,2,3-Trichloropropane	ND		5.00	5.20		ug/L		104	76 - 124	7	26
N-Propylbenzene	ND		5.00	5.57		ug/L		111	80 - 122	2	22
2-Chlorotoluene	ND		5.00	5.10		ug/L		102	80 - 120	2	20
4-Chlorotoluene	ND		5.00	5.08		ug/L		102	73 - 129	2	29
tert-Butylbenzene	ND		5.00	5.16		ug/L		103	75 - 123	3	21
1,2,4-Trimethylbenzene	ND		5.00	5.51		ug/L		110	80 - 120	3	16
sec-Butylbenzene	ND		5.00	5.20		ug/L		104	78 - 122	2	15
4-Isopropyltoluene	ND		5.00	4.84		ug/L		97	77 - 126	1	20
1,3-Dichlorobenzene	ND		5.00	5.25		ug/L		105	77 - 127	2	35
1,4-Dichlorobenzene	ND		5.00	5.23		ug/L		105	80 - 120	2	17
n-Butylbenzene	ND		5.00	5.08		ug/L		102	57 - 133	2	14
1,2-Dichlorobenzene	ND		5.00	5.26		ug/L		105	80 - 120	3	15
1,2-Dibromo-3-Chloropropane	ND		5.00	5.68		ug/L		114	65 - 133	4	25
1,2,4-Trichlorobenzene	ND		5.00	5.23		ug/L		105	61 - 148	2	27
Hexachlorobutadiene	ND		5.00	4.28		ug/L		86	74 - 131	0	22
Naphthalene	ND		5.00	4.73		ug/L		95	63 - 150	8	33

# QC Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

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

Lab Sample ID: 580-153827-7 MSD

Client Sample ID: MWA-56d-090425

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 502959

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,3-Trichlorobenzene	ND		5.00	5.14		ug/L		103	65 - 150	3	33
1,3,5-Trimethylbenzene	ND		5.00	5.10		ug/L		102	80 - 122	0	21
<b>Surrogate</b>	<b>MSD %Recovery</b>	<b>MSD Qualifier</b>	<b>Limits</b>								
Toluene-d8 (Surr)	99		80 - 120								
1,2-Dichloroethane-d4 (Surr)	125	S1+	80 - 120								
4-Bromofluorobenzene (Surr)	97		80 - 120								
Dibromofluoromethane (Surr)	112		80 - 120								

Lab Sample ID: MB 580-503304/7

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 503304

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		0.40	0.13	ug/L			09/15/25 12:12	1
Chloromethane	ND		0.50	0.14	ug/L			09/15/25 12:12	1
Vinyl chloride	ND		0.10	0.040	ug/L			09/15/25 12:12	1
Bromomethane	ND		0.50	0.13	ug/L			09/15/25 12:12	1
Chloroethane	ND		0.50	0.24	ug/L			09/15/25 12:12	1
Carbon disulfide	ND		0.40	0.20	ug/L			09/15/25 12:12	1
Trichlorofluoromethane	ND		0.50	0.12	ug/L			09/15/25 12:12	1
1,1-Dichloroethene	ND		0.20	0.035	ug/L			09/15/25 12:12	1
Acetone	ND		10	3.1	ug/L			09/15/25 12:12	1
Methylene Chloride	ND		5.0	1.2	ug/L			09/15/25 12:12	1
Methyl tert-butyl ether	ND		0.30	0.070	ug/L			09/15/25 12:12	1
2-Butanone (MEK)	ND		10	2.5	ug/L			09/15/25 12:12	1
trans-1,2-Dichloroethene	ND		0.20	0.033	ug/L			09/15/25 12:12	1
1,1-Dichloroethane	ND		0.20	0.064	ug/L			09/15/25 12:12	1
2,2-Dichloropropane	ND		0.50	0.060	ug/L			09/15/25 12:12	1
cis-1,2-Dichloroethene	ND		0.20	0.055	ug/L			09/15/25 12:12	1
Chlorobromomethane	ND		0.20	0.050	ug/L			09/15/25 12:12	1
Chloroform	ND		0.20	0.030	ug/L			09/15/25 12:12	1
1,1,1-Trichloroethane	ND		0.20	0.025	ug/L			09/15/25 12:12	1
Carbon tetrachloride	ND		0.20	0.025	ug/L			09/15/25 12:12	1
1,1-Dichloropropene	ND		0.20	0.084	ug/L			09/15/25 12:12	1
Benzene	ND		0.20	0.030	ug/L			09/15/25 12:12	1
1,2-Dichloroethane	ND		0.25	0.12	ug/L			09/15/25 12:12	1
Trichloroethene	ND		0.20	0.066	ug/L			09/15/25 12:12	1
1,2-Dichloropropane	ND		0.20	0.060	ug/L			09/15/25 12:12	1
4-Methyl-2-pentanone (MIBK)	ND		10	2.7	ug/L			09/15/25 12:12	1
Dibromomethane	ND		0.20	0.062	ug/L			09/15/25 12:12	1
Dichlorobromomethane	ND		0.20	0.060	ug/L			09/15/25 12:12	1
cis-1,3-Dichloropropene	ND		0.20	0.090	ug/L			09/15/25 12:12	1
Toluene	ND		0.20	0.050	ug/L			09/15/25 12:12	1
trans-1,3-Dichloropropene	ND		0.20	0.092	ug/L			09/15/25 12:12	1
1,1,2-Trichloroethane	ND		0.20	0.070	ug/L			09/15/25 12:12	1
Tetrachloroethene	ND		0.50	0.084	ug/L			09/15/25 12:12	1
1,3-Dichloropropane	ND		0.20	0.056	ug/L			09/15/25 12:12	1

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# QC Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

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

Lab Sample ID: MB 580-503304/7  
Matrix: Water  
Analysis Batch: 503304

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chlorodibromomethane	ND		0.20	0.055	ug/L			09/15/25 12:12	1
Ethylene Dibromide	ND		0.15	0.067	ug/L			09/15/25 12:12	1
Chlorobenzene	ND		0.20	0.060	ug/L			09/15/25 12:12	1
1,1,1,2-Tetrachloroethane	ND		0.30	0.11	ug/L			09/15/25 12:12	1
Ethylbenzene	ND		0.20	0.082	ug/L			09/15/25 12:12	1
m-Xylene & p-Xylene	ND		0.50	0.12	ug/L			09/15/25 12:12	1
o-Xylene	ND		0.50	0.23	ug/L			09/15/25 12:12	1
Styrene	ND		1.0	0.33	ug/L			09/15/25 12:12	1
Bromoform	ND		0.50	0.16	ug/L			09/15/25 12:12	1
Isopropylbenzene	ND		1.0	0.27	ug/L			09/15/25 12:12	1
Bromobenzene	ND		0.20	0.038	ug/L			09/15/25 12:12	1
1,1,2,2-Tetrachloroethane	ND		0.20	0.056	ug/L			09/15/25 12:12	1
1,2,3-Trichloropropane	ND		0.20	0.050	ug/L			09/15/25 12:12	1
N-Propylbenzene	ND		0.30	0.091	ug/L			09/15/25 12:12	1
2-Chlorotoluene	ND		0.50	0.12	ug/L			09/15/25 12:12	1
4-Chlorotoluene	ND		0.30	0.12	ug/L			09/15/25 12:12	1
1,3,5-Trimethylbenzene	ND		0.50	0.19	ug/L			09/15/25 12:12	1
tert-Butylbenzene	ND		0.50	0.26	ug/L			09/15/25 12:12	1
1,2,4-Trimethylbenzene	ND		0.55	0.23	ug/L			09/15/25 12:12	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/15/25 12:12	1
4-Isopropyltoluene	ND		0.50	0.25	ug/L			09/15/25 12:12	1
1,3-Dichlorobenzene	ND		0.30	0.050	ug/L			09/15/25 12:12	1
1,4-Dichlorobenzene	ND		0.30	0.050	ug/L			09/15/25 12:12	1
n-Butylbenzene	ND		1.0	0.35	ug/L			09/15/25 12:12	1
1,2-Dichlorobenzene	ND		0.30	0.038	ug/L			09/15/25 12:12	1
1,2-Dibromo-3-Chloropropane	ND		2.0	0.48	ug/L			09/15/25 12:12	1
1,2,4-Trichlorobenzene	ND		1.5	0.36	ug/L			09/15/25 12:12	1
Hexachlorobutadiene	ND		0.50	0.16	ug/L			09/15/25 12:12	1
Naphthalene	ND		1.5	0.52	ug/L			09/15/25 12:12	1
1,2,3-Trichlorobenzene	ND		1.5	0.47	ug/L			09/15/25 12:12	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Toluene-d8 (Surr)	100		80 - 120		09/15/25 12:12	1
Dibromofluoromethane (Surr)	102		80 - 120		09/15/25 12:12	1
4-Bromofluorobenzene (Surr)	99		80 - 120		09/15/25 12:12	1
1,2-Dichloroethane-d4 (Surr)	110		80 - 120		09/15/25 12:12	1

Lab Sample ID: LCS 580-503304/4  
Matrix: Water  
Analysis Batch: 503304

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloromethane	5.00	4.23		ug/L		85	32 - 150
Vinyl chloride	5.00	4.76		ug/L		95	41 - 150
Bromomethane	5.00	4.57		ug/L		91	51 - 148
Chloroethane	5.00	4.79		ug/L		96	54 - 140
Carbon disulfide	5.00	4.90		ug/L		98	54 - 142

# QC Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

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

**Lab Sample ID: LCS 580-503304/4**

**Matrix: Water**

**Analysis Batch: 503304**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Trichlorofluoromethane	5.00	5.13		ug/L		103	60 - 132
1,1-Dichloroethene	5.00	4.93		ug/L		99	60 - 129
Acetone	25.0	26.3		ug/L		105	49 - 150
Methylene Chloride	5.00	4.63	J	ug/L		93	40 - 142
Methyl tert-butyl ether	5.00	4.71		ug/L		94	61 - 131
2-Butanone (MEK)	25.0	24.9		ug/L		100	37 - 150
trans-1,2-Dichloroethene	5.00	5.02		ug/L		100	69 - 121
1,1-Dichloroethane	5.00	5.07		ug/L		101	74 - 120
2,2-Dichloropropane	5.00	4.91		ug/L		98	55 - 140
cis-1,2-Dichloroethene	5.00	5.11		ug/L		102	72 - 120
Chlorobromomethane	5.00	5.05		ug/L		101	79 - 121
Chloroform	5.00	5.35		ug/L		107	75 - 120
1,1,1-Trichloroethane	5.00	5.04		ug/L		101	70 - 121
Carbon tetrachloride	5.00	5.27		ug/L		105	66 - 130
1,1-Dichloropropene	5.00	4.87		ug/L		97	72 - 125
Benzene	5.00	5.13		ug/L		103	80 - 120
1,2-Dichloroethane	5.00	5.21		ug/L		104	74 - 127
Trichloroethene	5.00	5.11		ug/L		102	72 - 120
1,2-Dichloropropane	5.00	5.01		ug/L		100	69 - 130
4-Methyl-2-pentanone (MIBK)	25.0	22.9		ug/L		92	63 - 137
Dibromomethane	5.00	4.86		ug/L		97	65 - 141
Dichlorobromomethane	5.00	5.41		ug/L		108	74 - 131
cis-1,3-Dichloropropene	5.00	4.84		ug/L		97	77 - 131
Toluene	5.00	5.03		ug/L		101	80 - 126
trans-1,3-Dichloropropene	5.00	5.04		ug/L		101	71 - 138
1,1,2-Trichloroethane	5.00	5.11		ug/L		102	73 - 127
Tetrachloroethene	5.00	4.89		ug/L		98	75 - 124
1,3-Dichloropropane	5.00	5.27		ug/L		105	69 - 138
Chlorodibromomethane	5.00	5.19		ug/L		104	62 - 141
Ethylene Dibromide	5.00	5.22		ug/L		104	61 - 143
Chlorobenzene	5.00	5.10		ug/L		102	74 - 123
1,1,1,2-Tetrachloroethane	5.00	5.04		ug/L		101	69 - 127
Ethylbenzene	5.00	5.18		ug/L		104	80 - 124
m-Xylene & p-Xylene	5.00	5.06		ug/L		101	75 - 124
o-Xylene	5.00	4.91		ug/L		98	71 - 124
Styrene	5.00	4.76		ug/L		95	74 - 127
Bromoform	5.00	4.74		ug/L		95	48 - 127
Isopropylbenzene	5.00	5.40		ug/L		108	71 - 123
Bromobenzene	5.00	5.00		ug/L		100	74 - 130
1,1,2,2-Tetrachloroethane	5.00	4.96		ug/L		99	67 - 136
1,2,3-Trichloropropane	5.00	4.96		ug/L		99	67 - 135
N-Propylbenzene	5.00	4.91		ug/L		98	72 - 126
2-Chlorotoluene	5.00	5.04		ug/L		101	73 - 120
4-Chlorotoluene	5.00	4.86		ug/L		97	75 - 124
1,3,5-Trimethylbenzene	5.00	4.91		ug/L		98	75 - 123
tert-Butylbenzene	5.00	4.79		ug/L		96	70 - 129
1,2,4-Trimethylbenzene	5.00	4.75		ug/L		95	71 - 127
sec-Butylbenzene	5.00	4.99		ug/L		100	75 - 126
4-Isopropyltoluene	5.00	4.70		ug/L		94	78 - 125

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# QC Sample Results

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

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

Lab Sample ID: LCS 580-503304/4

Matrix: Water

Analysis Batch: 503304

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,3-Dichlorobenzene	5.00	5.06		ug/L		101	72 - 125
1,4-Dichlorobenzene	5.00	5.09		ug/L		102	71 - 129
n-Butylbenzene	5.00	4.78		ug/L		96	69 - 127
1,2-Dichlorobenzene	5.00	5.08		ug/L		102	72 - 129
1,2-Dibromo-3-Chloropropane	5.00	4.26		ug/L		85	55 - 135
1,2,4-Trichlorobenzene	5.00	4.43		ug/L		89	60 - 130
Hexachlorobutadiene	5.00	5.51		ug/L		110	63 - 130
Naphthalene	5.00	4.30		ug/L		86	54 - 137
1,2,3-Trichlorobenzene	5.00	4.47		ug/L		89	60 - 136

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	103		80 - 120
4-Bromofluorobenzene (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	108		80 - 120

Lab Sample ID: LCSD 580-503304/5

Matrix: Water

Analysis Batch: 503304

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	4.64		ug/L		93	20 - 150	0	30
Chloromethane	5.00	4.21		ug/L		84	32 - 150	0	33
Vinyl chloride	5.00	5.00		ug/L		100	41 - 150	5	32
Bromomethane	5.00	4.80		ug/L		96	51 - 148	5	35
Chloroethane	5.00	4.84		ug/L		97	54 - 140	1	33
Carbon disulfide	5.00	4.92		ug/L		98	54 - 142	0	34
Trichlorofluoromethane	5.00	5.35		ug/L		107	60 - 132	4	32
1,1-Dichloroethene	5.00	4.94		ug/L		99	60 - 129	0	29
Acetone	25.0	22.7		ug/L		91	49 - 150	15	24
Methylene Chloride	5.00	4.52	J	ug/L		90	40 - 142	3	25
Methyl tert-butyl ether	5.00	4.92		ug/L		98	61 - 131	4	27
2-Butanone (MEK)	25.0	24.7		ug/L		99	37 - 150	1	35
trans-1,2-Dichloroethene	5.00	4.93		ug/L		99	69 - 121	2	27
1,1-Dichloroethane	5.00	5.11		ug/L		102	74 - 120	1	26
2,2-Dichloropropane	5.00	4.98		ug/L		100	55 - 140	1	31
cis-1,2-Dichloroethene	5.00	5.17		ug/L		103	72 - 120	1	22
Chlorobromomethane	5.00	5.05		ug/L		101	79 - 121	0	20
Chloroform	5.00	5.26		ug/L		105	75 - 120	2	21
1,1,1-Trichloroethane	5.00	5.06		ug/L		101	70 - 121	0	24
Carbon tetrachloride	5.00	5.42		ug/L		108	66 - 130	3	24
1,1-Dichloropropene	5.00	5.03		ug/L		101	72 - 125	3	23
Benzene	5.00	5.11		ug/L		102	80 - 120	0	22
1,2-Dichloroethane	5.00	5.30		ug/L		106	74 - 127	2	21
Trichloroethene	5.00	4.85		ug/L		97	72 - 120	5	22
1,2-Dichloropropane	5.00	5.05		ug/L		101	69 - 130	1	22
4-Methyl-2-pentanone (MIBK)	25.0	22.8		ug/L		91	63 - 137	1	26
Dibromomethane	5.00	4.99		ug/L		100	65 - 141	3	22

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# QC Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

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

Lab Sample ID: LCSD 580-503304/5

Matrix: Water

Analysis Batch: 503304

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD	LCSD	Unit	D	%Rec	%Rec	RPD	RPD
		Result	Qualifier				Limits		Limit
Dichlorobromomethane	5.00	5.34		ug/L		107	74 - 131	1	21
cis-1,3-Dichloropropene	5.00	4.72		ug/L		94	77 - 131	2	24
Toluene	5.00	4.94		ug/L		99	80 - 126	2	20
trans-1,3-Dichloropropene	5.00	5.03		ug/L		101	71 - 138	0	26
1,1,2-Trichloroethane	5.00	5.09		ug/L		102	73 - 127	0	22
Tetrachloroethene	5.00	4.89		ug/L		98	75 - 124	0	20
1,3-Dichloropropane	5.00	5.09		ug/L		102	69 - 138	3	19
Chlorodibromomethane	5.00	4.97		ug/L		99	62 - 141	4	22
Ethylene Dibromide	5.00	5.20		ug/L		104	61 - 143	0	22
Chlorobenzene	5.00	5.09		ug/L		102	74 - 123	0	21
1,1,1,2-Tetrachloroethane	5.00	5.02		ug/L		100	69 - 127	0	22
Ethylbenzene	5.00	5.14		ug/L		103	80 - 124	1	22
m-Xylene & p-Xylene	5.00	4.90		ug/L		98	75 - 124	3	22
o-Xylene	5.00	4.96		ug/L		99	71 - 124	1	23
Styrene	5.00	4.73		ug/L		95	74 - 127	1	22
Bromoform	5.00	4.77		ug/L		95	48 - 127	1	23
Isopropylbenzene	5.00	5.29		ug/L		106	71 - 123	2	23
Bromobenzene	5.00	4.99		ug/L		100	74 - 130	0	23
1,1,2,2-Tetrachloroethane	5.00	5.00		ug/L		100	67 - 136	1	24
1,2,3-Trichloropropane	5.00	4.91		ug/L		98	67 - 135	1	25
N-Propylbenzene	5.00	4.91		ug/L		98	72 - 126	0	20
2-Chlorotoluene	5.00	4.94		ug/L		99	73 - 120	2	22
4-Chlorotoluene	5.00	5.02		ug/L		100	75 - 124	3	23
1,3,5-Trimethylbenzene	5.00	4.81		ug/L		96	75 - 123	2	23
tert-Butylbenzene	5.00	4.81		ug/L		96	70 - 129	1	24
1,2,4-Trimethylbenzene	5.00	4.75		ug/L		95	71 - 127	0	23
sec-Butylbenzene	5.00	4.87		ug/L		97	75 - 126	2	23
4-Isopropyltoluene	5.00	4.60		ug/L		92	78 - 125	2	24
1,3-Dichlorobenzene	5.00	4.97		ug/L		99	72 - 125	2	22
1,4-Dichlorobenzene	5.00	5.06		ug/L		101	71 - 129	0	22
n-Butylbenzene	5.00	4.75		ug/L		95	69 - 127	1	24
1,2-Dichlorobenzene	5.00	4.85		ug/L		97	72 - 129	5	22
1,2-Dibromo-3-Chloropropane	5.00	4.23		ug/L		85	55 - 135	1	29
1,2,4-Trichlorobenzene	5.00	4.35		ug/L		87	60 - 130	2	26
Hexachlorobutadiene	5.00	5.31		ug/L		106	63 - 130	4	26
Naphthalene	5.00	4.39		ug/L		88	54 - 137	2	28
1,2,3-Trichlorobenzene	5.00	4.47		ug/L		89	60 - 136	0	28

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	104		80 - 120
4-Bromofluorobenzene (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	109		80 - 120

# QC Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

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

Lab Sample ID: 580-153827-7 MS

Client Sample ID: MWA-56d-090425

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 503304

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier					
Chloroform - DL	150		50.0	202		ug/L		110		78 - 127
Carbon tetrachloride - DL	ND		50.0	53.2		ug/L		106		72 - 129
1,1-Dichloropropene - DL	ND		50.0	49.5		ug/L		99		74 - 120
Benzene - DL	ND		50.0	48.1		ug/L		96		80 - 122
1,2-Dichloroethane - DL	ND		50.0	51.2		ug/L		102		69 - 126
Trichloroethene - DL	ND		50.0	47.4		ug/L		95		80 - 125
1,2-Dichloropropane - DL	ND		50.0	47.5		ug/L		95		80 - 120
4-Methyl-2-pentanone (MIBK) - DL	ND		250	231		ug/L		93		59 - 141
Dibromomethane - DL	ND		50.0	47.9		ug/L		96		80 - 120
Dichlorobromomethane - DL	ND	F2	50.0	51.4		ug/L		103		75 - 124
cis-1,3-Dichloropropene - DL	ND		50.0	45.4		ug/L		91		77 - 120
Toluene - DL	ND		50.0	48.9		ug/L		98		80 - 120
trans-1,3-Dichloropropene - DL	ND		50.0	50.1		ug/L		100		76 - 122
1,1,2-Trichloroethane - DL	ND		50.0	50.3		ug/L		101		80 - 121

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr) - DL	102		80 - 120
1,2-Dichloroethane-d4 (Surr) - DL	113		80 - 120
4-Bromofluorobenzene (Surr) - DL	102		80 - 120
Dibromofluoromethane (Surr) - DL	104		80 - 120

Lab Sample ID: 580-153827-7 MSD

Client Sample ID: MWA-56d-090425

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 503304

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	Limits	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier						Limit	
Chloroform - DL	150		50.0	208		ug/L		122		78 - 127	3	14
Carbon tetrachloride - DL	ND		50.0	60.4		ug/L		121		72 - 129	13	19
1,1-Dichloropropene - DL	ND		50.0	57.2		ug/L		114		74 - 120	14	14
Benzene - DL	ND		50.0	54.1		ug/L		108		80 - 122	12	14
1,2-Dichloroethane - DL	ND		50.0	56.7		ug/L		113		69 - 126	10	11
Trichloroethene - DL	ND		50.0	53.5		ug/L		107		80 - 125	12	13
1,2-Dichloropropane - DL	ND		50.0	53.7		ug/L		107		80 - 120	12	14
4-Methyl-2-pentanone (MIBK) - DL	ND		250	263		ug/L		105		59 - 141	13	22
Dibromomethane - DL	ND		50.0	53.4		ug/L		107		80 - 120	11	11
Dichlorobromomethane - DL	ND	F2	50.0	59.6	F2	ug/L		119		75 - 124	15	13
cis-1,3-Dichloropropene - DL	ND		50.0	51.0		ug/L		102		77 - 120	12	35
Toluene - DL	ND		50.0	53.7		ug/L		107		80 - 120	9	13
trans-1,3-Dichloropropene - DL	ND		50.0	54.7		ug/L		109		76 - 122	9	20
1,1,2-Trichloroethane - DL	ND		50.0	53.4		ug/L		107		80 - 121	6	14

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr) - DL	101		80 - 120

# QC Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

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

**Lab Sample ID: 580-153827-7 MSD**  
**Matrix: Water**  
**Analysis Batch: 503304**

**Client Sample ID: MWA-56d-090425**  
**Prep Type: Total/NA**

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr) - DL	114		80 - 120
4-Bromofluorobenzene (Surr) - DL	102		80 - 120
Dibromofluoromethane (Surr) - DL	103		80 - 120

## Method: 314.0 - Perchlorate (IC)

**Lab Sample ID: MB 570-624140/8**  
**Matrix: Water**  
**Analysis Batch: 624140**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		2.0	0.91	ug/L			09/11/25 12:43	1

**Lab Sample ID: LCS 570-624140/9**  
**Matrix: Water**  
**Analysis Batch: 624140**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	25.0	24.2		ug/L		97	85 - 115

**Lab Sample ID: LCSD 570-624140/10**  
**Matrix: Water**  
**Analysis Batch: 624140**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perchlorate	25.0	23.8		ug/L		95	85 - 115	2	15

**Lab Sample ID: MB 570-624688/8**  
**Matrix: Water**  
**Analysis Batch: 624688**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		2.0	0.91	ug/L			09/12/25 14:11	1

**Lab Sample ID: LCS 570-624688/9**  
**Matrix: Water**  
**Analysis Batch: 624688**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	25.0	24.1		ug/L		96	85 - 115

**Lab Sample ID: LCSD 570-624688/10**  
**Matrix: Water**  
**Analysis Batch: 624688**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perchlorate	25.0	24.2		ug/L		97	85 - 115	1	15

# QC Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

## Method: 314.0 - Perchlorate (IC) - DL

**Lab Sample ID: 580-153827-7 MS**  
**Matrix: Water**  
**Analysis Batch: 624140**

**Client Sample ID: MWA-56d-090425**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate - DL	15000	E	500	16200	E 4	ug/L		140	80 - 120

**Lab Sample ID: 580-153827-7 MSD**  
**Matrix: Water**  
**Analysis Batch: 624140**

**Client Sample ID: MWA-56d-090425**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perchlorate - DL	15000	E	500	16000	E 4	ug/L		111	80 - 120	1	15

**Lab Sample ID: 580-153827-7 MS**  
**Matrix: Water**  
**Analysis Batch: 624688**

**Client Sample ID: MWA-56d-090425**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate - DL	14000		10000	23800		ug/L		102	80 - 120

**Lab Sample ID: 580-153827-7 MSD**  
**Matrix: Water**  
**Analysis Batch: 624688**

**Client Sample ID: MWA-56d-090425**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perchlorate - DL	14000		10000	23300		ug/L		96	80 - 120	2	15

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 580-503352/8**  
**Matrix: Water**  
**Analysis Batch: 503352**

**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			09/12/25 19:04	1

**Lab Sample ID: LCS 580-503352/9**  
**Matrix: Water**  
**Analysis Batch: 503352**

**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	49.3		mg/L		99	90 - 110

**Lab Sample ID: LCSD 580-503352/10**  
**Matrix: Water**  
**Analysis Batch: 503352**

**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	49.3		mg/L		99	90 - 110	0	15

# QC Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 580-153827-7 MS**  
**Matrix: Water**  
**Analysis Batch: 503352**

**Client Sample ID: MWA-56d-090425**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	12000		50.0	11100	4	mg/L		-865	90 - 110

**Lab Sample ID: 580-153827-7 MSD**  
**Matrix: Water**  
**Analysis Batch: 503352**

**Client Sample ID: MWA-56d-090425**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride	12000		50.0	11300	4	mg/L		-457	90 - 110	2	15

**Lab Sample ID: MB 580-503360/4**  
**Matrix: Water**  
**Analysis Batch: 503360**

**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			09/13/25 15:40	1

**Lab Sample ID: LCS 580-503360/5**  
**Matrix: Water**  
**Analysis Batch: 503360**

**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	49.3		mg/L		99	90 - 110

**Lab Sample ID: LCSD 580-503360/6**  
**Matrix: Water**  
**Analysis Batch: 503360**

**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	49.2		mg/L		98	90 - 110	0	15

**Lab Sample ID: MB 580-503471/4**  
**Matrix: Water**  
**Analysis Batch: 503471**

**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			09/15/25 21:22	1

**Lab Sample ID: LCS 580-503471/5**  
**Matrix: Water**  
**Analysis Batch: 503471**

**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	48.9		mg/L		98	90 - 110

**Lab Sample ID: LCSD 580-503471/6**  
**Matrix: Water**  
**Analysis Batch: 503471**

**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	49.2		mg/L		98	90 - 110	0	15

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# QC Sample Results

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

## Method: 300.0 - Anions, Ion Chromatography - DL

Lab Sample ID: 580-153827-7 MS

Matrix: Water

Analysis Batch: 503360

Client Sample ID: MWA-56d-090425

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride - DL	12000		50.0	11800	4	mg/L		-976	90 - 110

Lab Sample ID: 580-153827-7 MSD

Matrix: Water

Analysis Batch: 503360

Client Sample ID: MWA-56d-090425

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chloride - DL	12000		50.0	12100	4	mg/L		-268	90 - 110	3	15

# QC Association Summary

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

## GC/MS VOA

### Analysis Batch: 502959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-153827-1	TB-090425	Total/NA	Water	8260D	
580-153827-2	PA-24d-090425	Total/NA	Water	8260D	
580-153827-3	MWA-31i(d)-090425	Total/NA	Water	8260D	
580-153827-4	PA-22d-090425	Total/NA	Water	8260D	
580-153827-5	MWA-58d-090425	Total/NA	Water	8260D	
580-153827-6	Dup-02-090425	Total/NA	Water	8260D	
580-153827-7	MWA-56d-090425	Total/NA	Water	8260D	
580-153827-8	RB-02-090425	Total/NA	Water	8260D	
580-153827-9	MWA-63-090425	Total/NA	Water	8260D	
580-153827-10	PA-04-090425	Total/NA	Water	8260D	
MB 580-502959/10	Method Blank	Total/NA	Water	8260D	
LCS 580-502959/5	Lab Control Sample	Total/NA	Water	8260D	
LCSD 580-502959/6	Lab Control Sample Dup	Total/NA	Water	8260D	
580-153827-7 MS	MWA-56d-090425	Total/NA	Water	8260D	
580-153827-7 MSD	MWA-56d-090425	Total/NA	Water	8260D	

### Analysis Batch: 503304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-153827-5 - DL	MWA-58d-090425	Total/NA	Water	8260D	
580-153827-5	MWA-58d-090425	Total/NA	Water	8260D	
580-153827-6	Dup-02-090425	Total/NA	Water	8260D	
580-153827-7 - DL	MWA-56d-090425	Total/NA	Water	8260D	
580-153827-9 - DL	MWA-63-090425	Total/NA	Water	8260D	
580-153827-11	PA-10i-090425	Total/NA	Water	8260D	
580-153827-12	PA-18d-090425	Total/NA	Water	8260D	
580-153827-13	PA-31-090425	Total/NA	Water	8260D	
580-153827-14	PA-32i-090425	Total/NA	Water	8260D	
MB 580-503304/7	Method Blank	Total/NA	Water	8260D	
LCS 580-503304/4	Lab Control Sample	Total/NA	Water	8260D	
LCSD 580-503304/5	Lab Control Sample Dup	Total/NA	Water	8260D	
580-153827-7 MS - DL	MWA-56d-090425	Total/NA	Water	8260D	
580-153827-7 MSD - DL	MWA-56d-090425	Total/NA	Water	8260D	

## HPLC/IC

### Analysis Batch: 624140

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-153827-2 - DL	PA-24d-090425	Total/NA	Water	314.0	
580-153827-7 - DL	MWA-56d-090425	Total/NA	Water	314.0	
580-153827-8 - DL	RB-02-090425	Total/NA	Water	314.0	
580-153827-9	MWA-63-090425	Total/NA	Water	314.0	
580-153827-10 - DL	PA-04-090425	Total/NA	Water	314.0	
580-153827-11 - DL	PA-10i-090425	Total/NA	Water	314.0	
580-153827-12 - DL	PA-18d-090425	Total/NA	Water	314.0	
580-153827-13 - DL	PA-31-090425	Total/NA	Water	314.0	
580-153827-14 - DL	PA-32i-090425	Total/NA	Water	314.0	
MB 570-624140/8	Method Blank	Total/NA	Water	314.0	
LCS 570-624140/9	Lab Control Sample	Total/NA	Water	314.0	
LCSD 570-624140/10	Lab Control Sample Dup	Total/NA	Water	314.0	
580-153827-7 MS - DL	MWA-56d-090425	Total/NA	Water	314.0	
580-153827-7 MSD - DL	MWA-56d-090425	Total/NA	Water	314.0	

# QC Association Summary

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

## HPLC/IC

### Analysis Batch: 624688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-153827-3 - DL	MWA-31i(d)-090425	Total/NA	Water	314.0	
580-153827-4 - DL	PA-22d-090425	Total/NA	Water	314.0	
580-153827-5 - DL	MWA-58d-090425	Total/NA	Water	314.0	
580-153827-6 - DL	Dup-02-090425	Total/NA	Water	314.0	
580-153827-7 - DL	MWA-56d-090425	Total/NA	Water	314.0	
MB 570-624688/8	Method Blank	Total/NA	Water	314.0	
LCS 570-624688/9	Lab Control Sample	Total/NA	Water	314.0	
LCSD 570-624688/10	Lab Control Sample Dup	Total/NA	Water	314.0	
580-153827-7 MS - DL	MWA-56d-090425	Total/NA	Water	314.0	
580-153827-7 MSD - DL	MWA-56d-090425	Total/NA	Water	314.0	

## General Chemistry

### Analysis Batch: 503352

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-153827-7	MWA-56d-090425	Total/NA	Water	300.0	
580-153827-8	RB-02-090425	Total/NA	Water	300.0	
580-153827-9	MWA-63-090425	Total/NA	Water	300.0	
580-153827-10	PA-04-090425	Total/NA	Water	300.0	
580-153827-11	PA-10i-090425	Total/NA	Water	300.0	
580-153827-12	PA-18d-090425	Total/NA	Water	300.0	
580-153827-13	PA-31-090425	Total/NA	Water	300.0	
580-153827-14	PA-32i-090425	Total/NA	Water	300.0	
MB 580-503352/8	Method Blank	Total/NA	Water	300.0	
LCS 580-503352/9	Lab Control Sample	Total/NA	Water	300.0	
LCSD 580-503352/10	Lab Control Sample Dup	Total/NA	Water	300.0	
580-153827-7 MS	MWA-56d-090425	Total/NA	Water	300.0	
580-153827-7 MSD	MWA-56d-090425	Total/NA	Water	300.0	

### Analysis Batch: 503360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-153827-4	PA-22d-090425	Total/NA	Water	300.0	
580-153827-7 - DL	MWA-56d-090425	Total/NA	Water	300.0	
MB 580-503360/4	Method Blank	Total/NA	Water	300.0	
LCS 580-503360/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 580-503360/6	Lab Control Sample Dup	Total/NA	Water	300.0	
580-153827-7 MS - DL	MWA-56d-090425	Total/NA	Water	300.0	
580-153827-7 MSD - DL	MWA-56d-090425	Total/NA	Water	300.0	

### Analysis Batch: 503471

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-153827-2	PA-24d-090425	Total/NA	Water	300.0	
580-153827-3	MWA-31i(d)-090425	Total/NA	Water	300.0	
580-153827-5	MWA-58d-090425	Total/NA	Water	300.0	
580-153827-6	Dup-02-090425	Total/NA	Water	300.0	
MB 580-503471/4	Method Blank	Total/NA	Water	300.0	
LCS 580-503471/5	Lab Control Sample	Total/NA	Water	300.0	
LCSD 580-503471/6	Lab Control Sample Dup	Total/NA	Water	300.0	

# Lab Chronicle

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

## Client Sample ID: TB-090425

Lab Sample ID: 580-153827-1

Date Collected: 09/04/25 05:45

Matrix: Water

Date Received: 09/05/25 11:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502959	AA	EET SEA	09/11/25 16:53

## Client Sample ID: PA-24d-090425

Lab Sample ID: 580-153827-2

Date Collected: 09/04/25 06:28

Matrix: Water

Date Received: 09/05/25 11:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502959	AA	EET SEA	09/11/25 17:16
Total/NA	Analysis	314.0	DL	40	624140	M5Z3	EET CAL 4	09/11/25 14:54
Total/NA	Analysis	300.0		500	503471	MLT	EET SEA	09/15/25 21:58

## Client Sample ID: MWA-31i(d)-090425

Lab Sample ID: 580-153827-3

Date Collected: 09/04/25 07:22

Matrix: Water

Date Received: 09/05/25 11:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502959	AA	EET SEA	09/11/25 17:39
Total/NA	Analysis	314.0	DL	4000	624688	M5Z3	EET CAL 4	09/12/25 15:02
Total/NA	Analysis	300.0		500	503471	MLT	EET SEA	09/15/25 22:22

## Client Sample ID: PA-22d-090425

Lab Sample ID: 580-153827-4

Date Collected: 09/04/25 08:19

Matrix: Water

Date Received: 09/05/25 11:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502959	AA	EET SEA	09/11/25 18:01
Total/NA	Analysis	314.0	DL	400	624688	M5Z3	EET CAL 4	09/12/25 15:18
Total/NA	Analysis	300.0		100	503360	SS	EET SEA	09/13/25 16:40

## Client Sample ID: MWA-58d-090425

Lab Sample ID: 580-153827-5

Date Collected: 09/04/25 09:16

Matrix: Water

Date Received: 09/05/25 11:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502959	AA	EET SEA	09/11/25 18:24
Total/NA	Analysis	8260D	DL	10	503304	JBT	EET SEA	09/15/25 14:32
Total/NA	Analysis	8260D		10	503304	JBT	EET SEA	09/15/25 16:05
Total/NA	Analysis	314.0	DL	2000	624688	M5Z3	EET CAL 4	09/12/25 15:35
Total/NA	Analysis	300.0		500	503471	MLT	EET SEA	09/15/25 22:46

# Lab Chronicle

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

**Client Sample ID: Dup-02-090425**

**Lab Sample ID: 580-153827-6**

Date Collected: 09/04/25 09:17

Matrix: Water

Date Received: 09/05/25 11:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502959	AA	EET SEA	09/11/25 18:46
Total/NA	Analysis	8260D		10	503304	JBT	EET SEA	09/15/25 16:28
Total/NA	Analysis	314.0	DL	2000	624688	M5Z3	EET CAL 4	09/12/25 15:52
Total/NA	Analysis	300.0		500	503471	MLT	EET SEA	09/15/25 23:09

**Client Sample ID: MWA-56d-090425**

**Lab Sample ID: 580-153827-7**

Date Collected: 09/04/25 10:08

Matrix: Water

Date Received: 09/05/25 11:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502959	AA	EET SEA	09/11/25 19:09
Total/NA	Analysis	8260D	DL	10	503304	JBT	EET SEA	09/15/25 14:55
Total/NA	Analysis	314.0	DL	400	624688	M5Z3	EET CAL 4	09/12/25 16:09
Total/NA	Analysis	314.0	DL	20	624140	M5Z3	EET CAL 4	09/11/25 18:16
Total/NA	Analysis	300.0		100	503352	MLT	EET SEA	09/13/25 00:37
Total/NA	Analysis	300.0	DL	500	503360	SS	EET SEA	09/13/25 17:16

**Client Sample ID: RB-02-090425**

**Lab Sample ID: 580-153827-8**

Date Collected: 09/04/25 10:35

Matrix: Water

Date Received: 09/05/25 11:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502959	AA	EET SEA	09/11/25 20:17
Total/NA	Analysis	314.0	DL	5	624140	M5Z3	EET CAL 4	09/11/25 19:57
Total/NA	Analysis	300.0		1	503352	MLT	EET SEA	09/13/25 01:13

**Client Sample ID: MWA-63-090425**

**Lab Sample ID: 580-153827-9**

Date Collected: 09/04/25 11:25

Matrix: Water

Date Received: 09/05/25 11:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502959	AA	EET SEA	09/11/25 20:39
Total/NA	Analysis	8260D	DL	10	503304	JBT	EET SEA	09/15/25 18:50
Total/NA	Analysis	314.0		1	624140	M5Z3	EET CAL 4	09/11/25 21:04
Total/NA	Analysis	300.0		1	503352	MLT	EET SEA	09/13/25 01:37

**Client Sample ID: PA-04-090425**

**Lab Sample ID: 580-153827-10**

Date Collected: 09/04/25 12:09

Matrix: Water

Date Received: 09/05/25 11:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	502959	AA	EET SEA	09/11/25 21:02
Total/NA	Analysis	314.0	DL	5	624140	M5Z3	EET CAL 4	09/11/25 21:38
Total/NA	Analysis	300.0		1	503352	MLT	EET SEA	09/13/25 02:25

# Lab Chronicle

Client: ERM-West  
 Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

## Client Sample ID: PA-10i-090425

Lab Sample ID: 580-153827-11

Date Collected: 09/04/25 12:43

Matrix: Water

Date Received: 09/05/25 11:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	503304	JBT	EET SEA	09/15/25 18:01
Total/NA	Analysis	314.0	DL	5	624140	M5Z3	EET CAL 4	09/11/25 22:12
Total/NA	Analysis	300.0		1	503352	MLT	EET SEA	09/13/25 02:48

## Client Sample ID: PA-18d-090425

Lab Sample ID: 580-153827-12

Date Collected: 09/04/25 13:35

Matrix: Water

Date Received: 09/05/25 11:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	503304	JBT	EET SEA	09/15/25 17:38
Total/NA	Analysis	314.0	DL	5	624140	M5Z3	EET CAL 4	09/11/25 22:45
Total/NA	Analysis	300.0		1	503352	MLT	EET SEA	09/13/25 03:12

## Client Sample ID: PA-31-090425

Lab Sample ID: 580-153827-13

Date Collected: 09/04/25 14:18

Matrix: Water

Date Received: 09/05/25 11:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	503304	JBT	EET SEA	09/15/25 17:15
Total/NA	Analysis	314.0	DL	5	624140	M5Z3	EET CAL 4	09/11/25 23:19
Total/NA	Analysis	300.0		1	503352	MLT	EET SEA	09/13/25 03:36

## Client Sample ID: PA-32i-090425

Lab Sample ID: 580-153827-14

Date Collected: 09/04/25 14:49

Matrix: Water

Date Received: 09/05/25 11:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	503304	JBT	EET SEA	09/15/25 16:52
Total/NA	Analysis	314.0	DL	5	624140	M5Z3	EET CAL 4	09/11/25 23:53
Total/NA	Analysis	300.0		1	503352	MLT	EET SEA	09/13/25 04:00

**Laboratory References:**

EET CAL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

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

# Accreditation/Certification Summary

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

## Laboratory: Eurofins Seattle

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

Authority	Program	Identification Number	Expiration Date
Oregon	NELAP	4167	07-07-26

## Laboratory: Eurofins Calscience

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	7296.01	11-30-26
A2LA	ISO/IEC 17025	7296.01	11-30-26
Alaska (UST)	State	25-005	03-02-26
Arizona	State	AZ0830	11-16-25
California	Los Angeles County Sanitation Districts	9257304	07-31-26
California	SCAQMD LAP	17LA0919	11-30-25
California	State	3082	07-31-26
Kansas	NELAP	E-10420	07-31-26
Nevada	State	CA00111	07-31-26
Oregon	NELAP	4175	02-02-26
USDA	US Federal Programs	525-23-159-97150	06-08-26
Utah	NELAP	CA00111	02-28-26
Washington	State	C916	10-11-25

# Sample Summary

Client: ERM-West  
Project/Site: Arkema - Q3 2025 Groundwater Event

Job ID: 580-153827-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Sample Origin
580-153827-1	TB-090425	Water	09/04/25 05:45	09/05/25 11:55	Oregon
580-153827-2	PA-24d-090425	Water	09/04/25 06:28	09/05/25 11:55	Oregon
580-153827-3	MWA-31i(d)-090425	Water	09/04/25 07:22	09/05/25 11:55	Oregon
580-153827-4	PA-22d-090425	Water	09/04/25 08:19	09/05/25 11:55	Oregon
580-153827-5	MWA-58d-090425	Water	09/04/25 09:16	09/05/25 11:55	Oregon
580-153827-6	Dup-02-090425	Water	09/04/25 09:17	09/05/25 11:55	Oregon
580-153827-7	MWA-56d-090425	Water	09/04/25 10:08	09/05/25 11:55	Oregon
580-153827-8	RB-02-090425	Water	09/04/25 10:35	09/05/25 11:55	Oregon
580-153827-9	MWA-63-090425	Water	09/04/25 11:25	09/05/25 11:55	Oregon
580-153827-10	PA-04-090425	Water	09/04/25 12:09	09/05/25 11:55	Oregon
580-153827-11	PA-10i-090425	Water	09/04/25 12:43	09/05/25 11:55	Oregon
580-153827-12	PA-18d-090425	Water	09/04/25 13:35	09/05/25 11:55	Oregon
580-153827-13	PA-31-090425	Water	09/04/25 14:18	09/05/25 11:55	Oregon
580-153827-14	PA-32i-090425	Water	09/04/25 14:49	09/05/25 11:55	Oregon

- 1
- 2
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## Criselda Caparas

---

**From:** Karis Polfer <karis.polfer@erm.com>  
**Sent:** Thursday, September 11, 2025 9:41 AM  
**To:** Criselda Caparas; Andrew Gardner; Avery Soplata; Dharmesh Mistry; Isaac Barraza; Lena Mollica; Mark Otto; Paul Van Nevel; Rachel James; Todd Slater  
**Subject:** RE: 580-153827 Arkema - Q3 2025 Groundwater Event Sample Confirmation files from Eurofins Northwest

**Unverified Sender:** The sender of this email has not been verified. Review the content of the message carefully and verify the identity of the sender before acting on this email: replying, opening attachments or clicking links.

Hi Criselda,

I have a few corrections for the sample login submitted. Will you please update “PA-18d-090425” to have regular standard list volatiles (not low level), and update “PA-31-090425” and “PA-32i-090425” volatiles to low level. Thank you!

Best,



Sustainability is our business

**Karis Polfer**  
Consulting Associate, Data Analytics & Visualization  
She/Her/Hers

---

Irvine **erm.com**  
(949) 444-6622

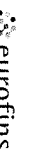
---

**From:** Criselda Caparas <TALS@reports.et.eurofinsus.com>  
**Sent:** Thursday, September 11, 2025 12:06 AM  
**To:** Andrew Gardner <Andrew.Gardner@erm.com>; Avery Soplata <avery.soplata@erm.com>; Dharmesh Mistry <dharmesh.mistry@erm.com>; Isaac Barraza <isaac.barraza@erm.com>; Karis Polfer <karis.polfer@erm.com>; Lena Mollica <lena.mollica@erm.com>; Mark Otto <Mark.Otto@erm.com>; Paul Van Nevel <paul.vannevel@erm.com>; Rachel James <rachel.james@erm.com>; Todd Slater <todd.slater@total.com>  
**Subject:** 580-153827 Arkema - Q3 2025 Groundwater Event Sample Confirmation files from Eurofins Northwest

**EXTERNAL MESSAGE**

5765 8th Street East  
Tacoma, WA 98424  
Phone: 253-922-2310

Chain of Custody Record



Environment Testing

Client Information

Client Contact:  
Paul Van Nevel

Company:  
ERM-West

Address:  
1050 SW 6th Avenue Suite 1650

City:  
Portland

State Zip:  
OR, 97204

Phone:

Email:  
paul.vannevel@erm.com

Project Name:  
Arkema - Q3 2025 Groundwater Event

Site:

Sampler:  
Scotts Texram

Phone:

Lab PM:  
Caparasa, Criselda  
E-Mail:  
Criselda.Caparasa@et.eurofins.com

PMSID:

Analysis Requested

Carrier Tracking No(s):

State of Origin:

COC No:  
580-6763-20873.7

Page:  
Page 2 of 4 1 of 2

Job #:

Preservation Codes:  
A - HCL  
N - None



Due Date Requested:	TAT Requested (days):	Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No	PO #:	WO #:	Project #:	SSCW#:
1050 SW 6th Avenue Suite 1650			0732445.207		58016290	

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=soil, G=grab)	Preservation Code:	Field Filtered Sample (Yes or No)				Perform MS/MSD (Yes or No)				Total Number of containers	Special Instructions/Note:	
						8260D - (MOD) Volatiles, standard list	8260D_LL - (MOD) Volatiles, standard list, low level	314.0 - Perchlorate	300.0_28D - (MOD) Local Method	A	A	N	N			
TR-090425	9/4/25	0545	G	Water		X										
PA-24d-090425		0628		Water		X										
MWA-31(d)-090425		0722		Water		X										
PA-22d-090425		0819		Water		X										
MWA-58d-090425		0916		Water		X										
DAD-02-090425		0917		Water		X										
MWA-56d-090425		1008		Water		X										
RB-02-090425		1035		Water		X										
MWA-63-090425		1125		Water		X										
PA-04-090425		1209		Water		X										
PA-10i-090425		1243		Water		X										

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

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Method of Shipment: \_\_\_\_\_

Relinquished by: *[Signature]* Date/Time: 9/5/25 1010 Company: ERM

Relinquished by: *[Signature]* Date/Time: 9/5/25 1155 Company: N-E

Relinquished by: *[Signature]* Date/Time: 9/5/15 1453 Company: EGT

Custody Seals Intact:  Yes  No  Seal No.: \_\_\_\_\_ Cooler Temperature: \_\_\_\_\_ °C and Other Remarks: 2.6/2.8 POX SKR

1811 4.7/10.5

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

Chain of Custody Record



Environment Testing

Client Information

Client Contact:  
Paul Van Nevel

Company:  
ERM-West

Address:  
1050 SW 6th Avenue Suite 1650

City:  
Portland

State, Zip:  
OR, 97204

Phone:

Email:  
paul.vannevel@erm.com

Project Name:  
Arkema - Q72025 Groundwater Event

Site:

Sampler:  
Scott Terranova

Phone:

Lab PM:  
Caparas, Criselda

PM/MSID:

Due Date Requested:

TAT Requested (days):

Compliance Project:  Yes  No

PO #:

WO #:

Project #:  
58016290

SSCOW#:

Carrier Tracking No(s):

State of Origin:

COC No:  
580-67763-20873.8

Page: 2 of 2

Page 2 of 2

Job #:

Preservation Codes:  
A - HCL  
N - None

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=water/oi, G=grab)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Total Number of containers	Special Instructions/Note
PA-18d-090425	9/4/25	1335	G	Water		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		5	
PA-31-090425		1418		Water		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		5	
PA-32i-090425		1449		Water		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		5	
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				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: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date/Time: 9/5/25 1010 Company: ERM

Relinquished by: \_\_\_\_\_ Date/Time: 9/5/25 1155 Company: M.E.

Relinquished by: \_\_\_\_\_ Date/Time: 9/5/25 1453 Company: EGT

Custody Seals Intact:  Yes  No Custody Seal No.:

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:

Received by: \_\_\_\_\_ Date/Time: 9/5/25 1010 Company: ERM

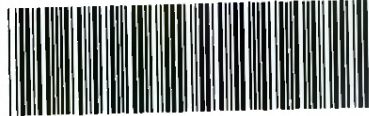
Received by: \_\_\_\_\_ Date/Time: 9/5/25 1155 Company: M.E.

Received by: \_\_\_\_\_ Date/Time: 9/5/25 1453 Company: EGT

Cooler Temperature(s) and Other Remarks:

Method of Shipment:

DO NOT HIT USING THIS TAG



580-153827 Waybill



Environment Testing  
TestAmerica

ORIGIN ID: BNOA (503) 906-9200  
COOLER RETURN  
EUROFINS PORTLAND  
9725 SW COMMERCE CIR  
SUITE A2  
WILSONVILLE, OR 97070  
UNITED STATES US

SHIP DATE: 05SEP25  
ACTWGT: 52.00 LB MAN  
CAD: 0893932/CAFE3855

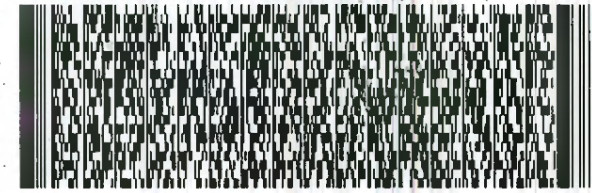
BILL SENDER

TO **SAMPLE CONTROL  
EUROFINS CALSCIENCE, LLC  
2841 DOW AVENUE  
SUITE 100  
TUSTIN CA 92780**

(714) 886-5494  
INU:  
PO:

REF:

DEPT:



FedEx  
Express



Part # 159469-434 MTW EXP 01/24  
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TRK# 4535 2346 9470  
0201

SATURDAY 12:00P  
PRIORITY OVERNIGHT

**XO DTHA**

92780  
CA-US SNA



**Eurofins Seattle**

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

**Chain of Custody Record**



Loc: 580  
**153827**

<b>Client Information (Sub Contract Lab)</b>		Sampler: N/A	Lab PM: Caparas, Criselda	Carrier Tracking No(s): N/A	COC No: 580-149472.1
Client Contact: Shipping/Receiving		Phone: N/A	E-Mail: Criselda.Caparas@et.eurofinsus.com	State of Origin: Oregon	Page: Page 1 of 2
Company: Eurofins Environment Testing Southwest,			Accreditations Required (See note): NELAP - Oregon		Job #: 580-153827-1
Address: 2841 Dow Avenue, Suite 100,		Due Date Requested: 9/25/2025	<b>Analysis Requested</b>		
City: Tustin		TAT Requested (days): N/A			
State, Zip: CA, 92780		PO #: N/A	Field Filtered Sample (Yes or No)		
Phone: 714-895-5494(Tel)		WO #: N/A			
Email: N/A		Project #: 58016290	Perform MS/MSD (Yes or No)		
Project Name: Arkema - Q1 2025 Groundwater Event		SSOW#: N/A			
Site: N/A		Total Number of containers			Other: N/A
<b>Sample Identification - Client ID (Lab ID)</b>		<b>Sample Date</b>	<b>Sample Time</b>	<b>Sample Type (C=Comp, G=grab)</b>	<b>Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)</b>
				Preservation Code:	
PA-24d-090425 (580-153827-2)		9/4/25	06:28 Pacific	G	Water
MWA-31i(d)-090425 (580-153827-3)		9/4/25	07:22 Pacific	G	Water
PA-22d-090425 (580-153827-4)		9/4/25	08:19 Pacific	G	Water
MWA-58d-090425 (580-153827-5)		9/4/25	09:16 Pacific	G	Water
Dup-02-090425 (580-153827-6)		9/4/25	09:17 Pacific	G	Water
MWA-56d-090425 (580-153827-7)		9/4/25	10:08 Pacific	G	Water
MWA-56d-090425 (580-153827-7MSD)		9/4/25	10:08 Pacific	G	Water
MWA-56d-090425 (580-153827-7MSD)		9/4/25	10:08 Pacific	G	Water
RB-02-090425 (580-153827-8)		9/4/25	10:35 Pacific	G	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/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northwest, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northwest, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northwest, LLC.

<b>Possible Hazard Identification</b>		<b>Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)</b>			
Unconfirmed		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Deliverable Requested: I, II, III, IV, Other (specify)		Primary Deliverable Rank: 2		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:	
Relinquished by:		Date/Time: 9/5/25 14:40	Company: EKF	Received by:	
Relinquished by:		Date/Time:	Company:	Received by:	
Relinquished by:		Date/Time:	Company:	Received by:	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 2.0 / 2.3 SWH	



580-153827 Chain of Custody



**Eurofins Seattle**

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

**Chain of Custody Record**

<b>Client Information (Sub Contract Lab)</b>		Sampler: N/A		Lab PM: Caparas, Criselda		Carrier Tracking No(s): N/A		COC No: 580-149472.2	
Client Contact: Shipping/Receiving		Phone: N/A		E-Mail: Criselda.Caparas@et.eurofinsus.com		State of Origin: Oregon		Page: Page 2 of 2	
Company: Eurofins Environment Testing Southwest				Accreditations Required (See note): NELAP - Oregon				Job #: 580-153827-1	
Address: 2841 Dow Avenue, Suite 100		Due Date Requested: 9/25/2025		<b>Analysis Requested</b>				Preservation Codes:	
City: Tustin		TAT Requested (days): N/A							
State, Zip: CA, 92780		PO #: N/A		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		Total Number of containers	
Phone: 714-895-5494(Tel)		WO #: N/A							
Email: N/A		Project #: 58016290		314.0Perchlorate				Other: N/A	
Project Name: Arkema - Q1 2025 Groundwater Event		SSOW#: N/A							
Site: N/A									
<b>Sample Identification - Client ID (Lab ID)</b>		<b>Sample Date</b>	<b>Sample Time</b>	<b>Sample Type (C=Comp, G=grab)</b>	<b>Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)</b>	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers	<b>Special Instructions/Note:</b>
				Preservation Code:		X	X	X	
MWA-63-090425 (580-153827-9)		9/4/25	11:25 Pacific	G	Water		X	1	
PA-04-090425 (580-153827-10)		9/4/25	12:09 Pacific	G	Water		X	1	
PA-10i-090425 (580-153827-11)		9/4/25	12:43 Pacific	G	Water		X	1	
PA-18d-090425 (580-153827-12)		9/4/25	13:35 Pacific	G	Water		X	1	
PA-31-090425 (580-153827-13)		9/4/25	14:18 Pacific	G	Water		X	1	
PA-32i-090425 (580-153827-14)		9/4/25	14:49 Pacific	G	Water		X	1	
<p>Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northwest, LLC places the ownership of method, analyte &amp; accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northwest, LLC Laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northwest, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Northwest, LLC.</p>									
<b>Possible Hazard Identification</b>					<b>Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)</b>				
Unconfirmed					<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
Deliverable Requested: I, II, III, IV, Other (specify)			Primary Deliverable Rank: 2		Special Instructions/QC Requirements:				
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:			
Relinquished by:		Date/Time: 9/15/25 1440		Company: EEF		Received by:		Date/Time: 9/16/25 10:00	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:			Cooler Temperature(s) °C and Other Remarks: 2.0/23 SCM				



## Login Sample Receipt Checklist

Client: ERM-West

Job Number: 580-153827-1

**Login Number: 153827**

**List Number: 1**

**Creator: O'Connell, Jason I**

**List Source: Eurofins Seattle**

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

## Login Sample Receipt Checklist

Client: ERM-West

Job Number: 580-153827-1

**Login Number: 153827**

**List Number: 2**

**Creator: Khana, Piyush**

**List Source: Eurofins Calscience**

**List Creation: 09/08/25 05:56 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	Seal present with no number.
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.3
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## APPENDIX C DATA VALIDATION MEMOS



## MEMO

TO	Sarah Seekins
FROM	Isaac Barraza
DATE	2025-10-07
REFERENCE	0732445
SUBJECT	Data Review of Arkema, Third Quarter 2025 Groundwater. Samples Collected September 2-4, 2025: Eurofins, Data Package(s) 580-153790-1 and 580-153827-1.

Environmental Resources Management, Inc. (ERM) assessed the data quality and applied any necessary qualifiers following the *USEPA National Functional Guidelines for Organic Superfund Methods Data Review*, November 2020 and *USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review*, November 2020. Field duplicates were assessed following *Environmental Data Review Supplement for Region 1 Data Review Elements and Superfund Specific Guidance/Procedures*, September 2020.

ERM performed a Stage 2A data validation on 100 percent of the laboratory data.

ERM reviewed the following items as part of the data validation.

- **Chain of Custody:** The chains of custody were reviewed for proper completion and that the laboratory performed the requested methods and reported the requested target analytes for each sample.
- **Dilutions and Reanalysis:** Dilutions, calibration ranges, and reanalyses were reviewed as applicable. The best result was chosen when more than one result was reported as final.
- **Case Narrative:** The case narrative was reviewed for comments and any necessary qualifiers added.
- **Sample Preservation:** The appropriate temperature and chemical preservation requirements were reviewed. Headspace for volatile sample analysis was reviewed, if applicable.
- **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: Samples with Non-Preferred Results

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Table 2: Case Narrative Evaluation

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Table 3: Field Blank Evaluation

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Table 4: Laboratory Control Spike Evaluation

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Table 5: Matrix Spike Evaluation

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Table 6: Surrogate Evaluation

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**List of Attached Tables**

Table 7: Field Duplicate Evaluation

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Table 8: Calibration Range Evaluation

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## 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

Samples referenced in Table 1 had more than one final result reported for a single analyte and method combination due to the following possible reasons.

- Result exceeded calibration range; in-calibration result preferred
- Reanalyzed at higher dilution, result with lower dilution preferred

Non-preferred results are considered not reportable and should not be used for reporting or for decision making purposes. Non-preferred results have been excluded from the subsequent outlier tables in this report.

## CASE NARRATIVE EVALUATION

The laboratory observed additional issues encountered during sample preparation or analysis as noted in Table 2.

## 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. The blank results indicate that contaminants were not introduced to the samples during processing or analysis in the laboratory.

## 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 less than the reporting limit were qualified as non-detect (U) at the sample reporting limit.
- Results within five times the blank concentration (ten times for inorganics or common laboratory contaminants), greater than the reporting limit, but less than the blank concentration were qualified as non-detect (U) at the sample concentration.
- Results within five times the blank concentration (ten times for inorganics or common laboratory contaminants), greater than the reporting limit, and greater than the blank concentration were qualified as estimates with a high bias (J+).
- Equipment and field blank results associated with method blank contamination were attributed to and qualified for laboratory introduced contamination. No additional qualifications were made to sample results based on the equipment and/or field blanks in these instances.

## LABORATORY CONTROL SPIKE EVALUATION

The laboratory control sample (LCS) recoveries and, if included, the laboratory control sample duplicate (LCSD) recoveries and relative percent differences (RPD) were within the laboratory's limits of acceptance, with the exceptions and any necessary qualifications noted in Table 4. Results were not qualified if the paired spiked sample recovery was acceptable, if high recoveries or RPDs were associated with non-detected results, or if the exception was not associated with reported results.

## MATRIX SPIKE EVALUATION

The matrix spike (MS) recoveries and, if included, the matrix spike duplicate (MSD) recoveries and RPDs were within the laboratory's limits of acceptance for target analytes for spiked project samples, with the exceptions and any necessary qualifications noted in Table 5. MS/MSDs performed on non-project parent samples, if

included, are not representative of the matrix for this project and were therefore not reviewed or presented. Results were not qualified if the paired spiked sample recovery was acceptable, if high recoveries or RPDs were associated with non-detected results, if the parent sample result was greater than four times that of the spike, if the spike was diluted out, or if the exception was not associated with reported results.

## SURROGATE EVALUATION

The surrogate recoveries were within the laboratory limits of acceptance, with the exceptions and any necessary qualifications noted in Table 6. Results were not qualified if the sample dilution factor was greater than or equal to 10, if high recoveries were associated with non-detected results, if only one acid or base/neutral surrogate for semivolatiles was out, if the affected surrogate was not associated with reported analytes, or if the affected sample was laboratory quality control.

Surrogate spike situations requiring additional professional judgement are detailed below.

- Surrogate recoveries in laboratory quality control samples do not impact sample results; therefore, they were not reviewed nor presented in the validation memorandum.

## 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 7.

## CALIBRATION RANGE EVALUATION

All results were reported within each instrument's calibration range, with the exceptions and any necessary qualifications noted in Table 8.

## 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**  
**Samples with Non-Preferred Results**  
**Third Quarter 2025 Groundwater**  
**Arkema**  
**Portland, Oregon**

Lab Package	Sample ID	Method	Analysis Date/Time	Reason	Analyte	Result	Units
580-153827-1	MWA-56d-090425	8260D	09/11/2025 18:16	Result exceeded calibration range; in-calibration result preferred	Perchlorate	15000	µg/L
		300.0	09/13/2025 17:16	Reanalyzed at higher dilution, result with lower dilution preferred	Chloride	12000	mg/L

Notes:  
µg/L = micrograms per liter

**Table 2  
Case Narrative Evaluation  
Third Quarter 2025 Groundwater  
Arkema  
Portland, Oregon**

Lab Package	Sample ID	Method	Analyte	Reason	ERM Qualifier							
580-153790-1	None for qualification, samples ND	8260D 8260D LL	Methyl tert-butyl ether	Batch 580-502659 CCV high bias	--							
			1,2-Dichloroethane									
			Dichlorobromomethane									
			1,1,2,2-Tetrachloroethane									
	PA-23d-090325	8260D	Carbon disulfide	Batch 580-502934 CCV low bias	UJ							
			1,1-Dichloroethene									
			1,1,1-Trichloroethane									
			Carbon tetrachloride									
			1,1-Dichloropropene									
			Isopropylbenzene									
			Hexachlorobutadiene									
	RB-01-090325 PA-44i-090325 MWA-81i-090325 Dup-01-090325 MWA-41-090325	8260D LL	Carbon disulfide	Batch 580-502934 CCV low bias	UJ							
			1,1-Dichloroethene									
			1,1,1-Trichloroethane									
Carbon tetrachloride												
1,1-Dichloropropene												
Isopropylbenzene												
Hexachlorobutadiene												
RB-01-090325 PA-44i-090325 MWA-81i-090325 Dup-01-090325 MWA-41-090325			8260D LL			Tetrachloroethene	Batch 580-502934 CCV low bias	UJ				
						None for qualification, samples ND			8260D 8260D LL	Methylene Chloride	Batch 580-502934 CCV high bias	--
										None for qualification, samples ND		
	2,2-Dichloropropane											
Chloroform												

**Table 2  
Case Narrative Evaluation  
Third Quarter 2025 Groundwater  
Arkema  
Portland, Oregon**

Lab Package	Sample ID	Method	Analyte	Reason	ERM Qualifier
580-153790-1	None for qualification, samples ND	8260D LL	1,1,1-Trichloroethane	Batch 580-502771 CCV high bias	--
			Carbon tetrachloride		
			1,1-Dichloropropene		
			1,2-Dichloroethane		
			Dichlorobromomethane		
			trans-1,3-Dichloropropene		
	1,1,1,2-Tetrachloroethane				
PA-26d-090325		Methyl tert-butyl ether	J+		
580-153827-1	None for qualification, samples ND	8260D 8260D LL	Dichlorodifluoromethane	Batch 580-502959 CCV high bias	--

Notes:

-- = not applicable; associated data not affected

CCV = continuing calibration verification

J+ = detected results are estimated with a high bias

ND = not detected

**Table 3**  
**Field Blank Evaluation**  
**Third Quarter 2025 Groundwater**  
**Arkema**  
**Portland, Oregon**

Lab Package	Blank ID	Analyte	Reported Blank Conc.	Blank RL	Associated Sample	Assoc. Sample Result	Assoc. Sample RL	Units	ERM Qualifier
580-153790-1	RB-01-090325	Chloride	0.66	1.5	PA-03-090225	3.6	1.5	mg/L	J+
					MWA-41-090325	4.2	1.5	mg/L	J+
					Dup-01-090325	4.3	1.5	mg/L	J+
580-153827-1	RB-02-090425	Acetone	4.3	15	PA-24d-090425	4.0	15	µg/L	15 U
					MWA-31i(d)-090425	3.2	15	µg/L	15 U
					MWA-56d-090425	3.2	15	µg/L	15 U
					MWA-63-090425	3.5	15	µg/L	15 U
					PA-32i-090425	5.9	10	µg/L	10 U

Notes:

Conc. = concentration

J+ = detected results are estimated with a high bias

µg/L = micrograms per liter

mg/L = milligrams per liter

RB = rinse blank

RL = reporting limit

U = non-detected

**Table 4**  
**Laboratory Control Spike Evaluation**  
**Third Quarter 2025 Groundwater**  
**Arkema**  
**Portland, Oregon**

Lab Package	Spike Sample ID	Associated Sample	Analyte	Recovery (%)	Limit (%)	RPD	RPD Limit	Result	Units	ERM Qualifier
580-153790-1	LCS 580-502659/4 LCSD 580-502659/5	PA-03-090225	1,1-Dichloroethane	123/127	74-120	Pass	26	0.18	µg/L	J+
		PA-27d-090225						0.43	µg/L	J+
	LCS 580-502771/5 LCSD 580-502771/6	PA-17iR-090225	cis-1,2-Dichloroethene	122/122	72-120	Pass	22	0.078	µg/L	J+
		PA-27d-090225						0.86	µg/L	J+
		PA-09-090225	Chloroform	124/124	75-120	Pass	21	0.10	µg/L	J+
	LCS 580-502934/5 LCSD 580-502934/6	None for qualification, samples ND	1,1,1-Trichloroethane	132/132	70-121	Pass	24	--	--	--
Methylene Chloride			458/424	40-142	Pass	25	--	--	--	
580-153827-1	LCS 580-502959/5 LCSD 580-502959/6	None for qualification, one recovery passes	Chloroform	122/Pass	75-120	Pass	21	--	--	--

Notes:

- = not applicable; associated data not affected
- J+ = detected results are estimated with a high bias
- LCS = laboratory control sample
- LCSD = laboratory control sample duplicate
- µg/L = micrograms per liter
- ND = not detected
- RPD = relative percent difference

**Table 5**  
**Matrix Spike Evaluation**  
**Third Quarter 2025 Groundwater**  
**Arkema**  
**Portland, Oregon**

Lab Package	Spike Sample ID	Associated Sample	Analyte	Recovery (%)	Limit (%)	RPD	RPD Limit	Result	Units	ERM Qualifier
580-153790-1	MWA-81i-090325 MS/MSD	None for qualification, parent sample ND	Dichlorodifluoromethane	Pass/157	20-150	Pass	30	--	--	--
			Vinyl chloride	Pass/162	41-150	Pass	32			
			Chloroethane	Pass/164	54-140	Pass	33			
			Carbon disulfide	Pass/151	54-142	Pass	34			
			Trichlorofluoromethane	146/172	60-132	Pass	32			
			1,1-Dichloroethene	138/152	60-129	Pass	29			
			Methylene Chloride	Pass/Pass	40-142	30	25			
			trans-1,2-Dichloroethene	127/122	69-121	Pass	27			
			1,1-Dichloroethane	134/139	74-120	Pass	26			
			cis-1,2-Dichloroethene	124/122	72-120	Pass	22			
			Chlorobromomethane	130/145	79-121	Pass	20			
			Chloroform	133/131	75-120	Pass	21			
			1,1,1-Trichloroethane	127/Pass	70-121	Pass	24			
			Benzene	123/122	80-120	Pass	22			
			4-Methyl-2-pentanone	139/Pass	63-137	Pass	26			
			Toluene	Pass/128	80-126	Pass	20			
			Ethylbenzene	Pass/125	80-124	Pass	22			
			m-Xylene & p-Xylene	Pass/126	75-124	Pass	22			
			o-Xylene	Pass/125	71-124	Pass	23			
			Bromoform	128/Pass	48-127	Pass	23			
			Isopropylbenzene	125/128	71-123	Pass	23			
		2-Chlorotoluene	121/Pass	73-120	Pass	22				
1,3,5-Trimethylbenzene	127/125	75-123	Pass	23						
1,2,4-Trimethylbenzene	132/130	71-127	Pass	23						
		None for qualification, one recovery passes	Chloride	Pass/83	90-110	Pass	15			
580-153827-1	MWA-56d-090425 MS/MSD	None for qualification, parent sample ND	Trichlorofluoromethane	165/163	45-148	Pass	35	--	--	--
			1,1-Dichloroethene	140/137	70-129	Pass	23			
			Methyl tert-butyl ether	126/Pass	72-120	Pass	18			
			trans-1,2-Dichloroethene	132/127	75-120	Pass	21			
			1,1-Dichloroethane	129/125	80-120	Pass	15			
			cis-1,2-Dichloroethene	136/122	76-120	Pass	20			
			Chlorobromomethane	135/124	78-120	Pass	13			
Dichlorobromomethane	Pass/Pass	75-124	15	13						

**Table 5  
Matrix Spike Evaluation  
Third Quarter 2025 Groundwater  
Arkema  
Portland, Oregon**

Lab Package	Spike Sample ID	Associated Sample	Analyte	Recovery (%)	Limit (%)	RPD	RPD Limit	Result	Units	ERM Qualifier
580-153827-1	MWA-56d-090425 MS/MSD	MWA-56d-090425	Styrene	44/62	76-122	35	16	ND	µg/L	UJ
		None for qualification, parent sample > 4x spike concentration	Perchlorate	140/Pass	80-120	Pass	15	--	--	--
			Chloride	-865/-457	90-110	Pass	15	--	--	--
			Chloride	-976/-268	90-110	Pass	15	--	--	--

Notes:

-- = not applicable; associated data not affected

MS = matrix spike

MSD = matrix spike duplicate

µg/L = micrograms per liter

ND = not detected

RPD = relative percent difference

UJ = non-detected, estimated report limit

**Table 6  
Surrogate Evaluation  
Third Quarter 2025 Groundwater  
Arkema  
Portland, Oregon**

Lab Package	Sample ID	Method	Surrogate	Recovery (%)	Limit (%)	Affected Analyte	Dilution Factor	ERM Qualifier	
580-153790-1	MWA-82-090225	8260D	1,2-Dichloroethane-d4	126	80-120	None for qualification, associated analytes ND	--	--	
	PA-09-090225	8260D	1,2-Dichloroethane-d4	126	80-120	Chloroform	1	J+	
	PA-03-090225	8260D	1,2-Dichloroethane-d4	125	80-120	1,1-Dichloroethane	1	J+	
						Benzene	1	J+	
	PA-17iR-090225	8260D	1,2-Dichloroethane-d4	135	80-120	None for qualification, associated analytes ND	--	--	
						Carbon disulfide	1	J+	
						1,1-Dichloroethene	1	J+	
						cis-1,2-Dichloroethene	1	J+	
	580-153827-1	PA-23d-090325	8260D	1,2-Dichloroethane-d4	122	80-120	Chloroform	1	J+
		PA-24d-090425	8260D	1,2-Dichloroethane-d4	122	80-120	1,2-Dichloroethane	1	J+
MWA-31i(d)-090425		8260D	1,2-Dichloroethane-d4	123	80-120	1,1-Dichloroethane	1	J+	
						Chloroform	1	J+	
MWA-58d-090425		8260D	1,2-Dichloroethane-d4	131	80-120	1,1-Dichloroethane	1	J+	
			Dibromofluoromethane	123	80-120	Dichlorobromomethane	1	J+	
Dup-02-090425		8260D	1,2-Dichloroethane-d4	131	80-120	1,1-Dichloroethane	1	J+	
MWA-56d-090425	8260D	1,2-Dichloroethane-d4	127	80-120	None for qualification, associated analytes ND	--	--		

Notes:

-- = not applicable; associated data not affected

J+ = detected results are estimated with a high bias

ND = not detected

**Table 7**  
**Field Duplicate Evaluation**  
**Third Quarter 2025 Groundwater**  
**Arkema**  
**Portland, Oregon**

Lab Package	Primary/Duplicate Sample ID	Analyte	Concentration		Report Limit		Units	AbD	RPD	Limit	ERM Qualifier
			Sample	Duplicate	Sample	Duplicate					
580-153790-1	MWA-41-090325/ Dup-01-090325	Chloride	4.2	4.3	1.5	1.5	mg/L	0.1	--	3.0	--
580-153827-1	MWA-56d-090425/ Dup-02-090425	Acetone	3.2	ND	15	15	µg/L	--	--	NA	--
		Chloroform	150	180	10	10	µg/L	--	18	30	--
		Dichlorobromomethane	ND	0.88	10	1.0	µg/L	--	--	NA	--
		Perchlorate	14000	52000	800	4000	µg/L	--	115	30	J
		Chloride	12000	18000	150	750	mg/L	--	40	30	J

Notes:

-- = not applicable; associated data not affected

AbD = absolute Difference

µg/L = micrograms per liter

mg/L = milligrams per liter

NA = not applicable

RPD = relative percent difference

**Table 8  
 Calibration Range Evaluation  
 Third Quarter 2025 Groundwater  
 Arkema  
 Portland, Oregon**

Lab Package	Sample ID	Analyte	Reported Conc.	Units	ERM Qualifier
580-153827-1	MWA-56d-090425 MS	Perchlorate	16200	µg/L	No qualification for laboratory QC
	MWA-56d-090425 MSD	Perchlorate	16000	µg/L	No qualification for laboratory QC

Notes:  
 Conc. = concentration



APPENDIX D      PRIOR GROUNDWATER MONITORING  
PROGRAM DATA TABLES AND GRAPHS

**Appendix D  
 Prior Groundwater Monitoring Plan Data Table  
 Arkema Quarter 3, 2025, Groundwater Monitoring Report  
 Arkema Inc. Facility  
 Portland, Oregon**

Aquifer	Well ID	Cluster	Sample ID	Date	Chloride	Chlorobenzene	Perchlorate
					ug/L	ug/L	ug/L
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-102319	10/23/2019	5,900	< 0.44 U	< 0.95 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-021220	02/12/2020	10,900	0.16 j	< 0.95 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-051820	05/18/2020	14,000	< 0.025 U	< 0.95 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-081820	08/18/2020	16,000	< 0.025 U	< 0.95 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-102720	10/27/2020	5,800	< 0.025 U	< 0.95 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-031821	03/18/2021	18,000	< 0.025 U	< 2.0 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-092221	09/22/2021	10,000	< 0.025 U	< 2.0 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-121421	12/14/2021	5,300	< 0.025	< 2.0
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-031422	03/14/2022	14,000 J-	< 0.060 U	< 2.0 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-060622	06/06/2022	9,600	< 0.060 U	< 2.0 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-110722	11/07/2022	21,000	< 0.060 U	< 2.0 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-030623	03/06/2023	7,800	< 0.060 U	< 2.0 UJ
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-061323	06/13/2023	7,500	< 0.060	< 2.0
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-082123	08/21/2023	7,100	< 0.060 U	< 2.0 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-121023	12/10/2023	5,600	< 0.20 U	< 2.0 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-022624	02/26/2024	8,000	< 0.060 U	< 2.0 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-061024	06/10/2024	7,600	0.060 j	2.6 j
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-091024	09/10/2024	18,000	< 0.060 U	< 0.91 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-121124	12/11/2024	4,900 J+	< 0.060 U	< 0.91 U
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-021825	02/18/2025	5,400	< 0.060	< 0.91
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-051325	05/13/2025	8,600	< 0.070	< 0.91
Shallow	MWA-41	GCC6 & Proximal Wells	MWA-41-090325	09/03/2025	4,200 J+	< 0.060 U	< 0.91 U
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-63	GCC1 & Proximal Wells	MWA-63-091024	09/10/2024	23,000	< 0.44 U	< 0.91 U
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-121024	12/10/2024	15,000 J+	< 0.44 U	< 4.5 U
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-022125	02/21/2025	5,800	< 4.4	< 1.8
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-051425	05/14/2025	4,700	< 0.30 UJ	< 4.5
Shallow	MWA-63	GCC1 & Proximal Wells	MWA-63-090425	09/04/2025	20,000	< 0.44 U	< 0.91 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
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 i	270
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-090924	09/09/2024	11,000	< 0.060 U	220
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-121124	12/11/2024	9,200 J+	< 0.060 U	56
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-021825	02/18/2025	9,100	< 0.060	420
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-051325	05/13/2025	9,400	< 0.070	93
Shallow	MWA-82	GCC6 & Proximal Wells	MWA-82-090225	09/02/2025	8,800	< 0.060 U	150
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

**Appendix D  
 Prior Groundwater Monitoring Plan Data Table  
 Arkema Quarter 3, 2025, Groundwater Monitoring Report  
 Arkema Inc. Facility  
 Portland, Oregon**

Aquifer	Well ID	Cluster	Sample ID	Date	Chloride	Chlorobenzene	Perchlorate
					ug/L	ug/L	ug/L
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-061224	06/12/2024	3,700	< 0.060 U	< 10 U
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-090924	09/09/2024	3,800	< 0.060 U	< 9.1 U
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-120924	12/09/2024	4,300 J+	< 0.060 U	< 9.1 U
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-022025	02/20/2025	3,900	< 0.060	< 18
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-051325	05/13/2025	9,300	< 0.070	< 36
Shallow	PA-03	GCC1 & Proximal Wells	PA-03-090225	09/02/2025	3,600 J+	< 0.060 U	< 4.5 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
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-110922	11/09/2022	4,600	< 0.060 U	< 4.0 U
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-030823	03/08/2023	5,400	< 0.060 U	< 10 UJ
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-061523	06/15/2023	6,900 j	< 0.060	< 4.0
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-082223	08/22/2023	5,900	< 0.060 U	< 10 U
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-121223	12/12/2023	6,100	< 0.060 U	< 2.0 U
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-022724	02/27/2024	5,300	< 0.060 U	< 4.0 U
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-061224	06/12/2024	5,700	< 0.060 U	< 2.0 U
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-091024	09/10/2024	4,900	< 0.060 U	< 4.5 U
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-121024	12/10/2024	5,200 J+	< 0.060 U	< 9.1 U
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-022125	02/21/2025	4,000	< 0.060	< 9.1
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-051325	05/13/2025	60,000	< 0.35	< 9.1
Shallow	PA-04	GCC1 & Proximal Wells	PA-04-090425	09/04/2025	5,000	< 0.060 U	< 4.5 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-08	GCC6 & Proximal Wells	PA-08-090924	09/09/2024	280,000	< 0.060 U	< 9.1 U
Shallow	PA-08	GCC6 & Proximal Wells	PA-08-120924	12/09/2024	230,000	< 0.060 U	33
Shallow	PA-08	GCC6 & Proximal Wells	PA-08-022025	02/20/2025	460,000	< 0.060	28
Shallow	PA-08	GCC6 & Proximal Wells	PA-08-051225	05/12/2025	260,000	< 0.70	< 36
Shallow	PA-08	GCC6 & Proximal Wells	PA-08-090225	09/02/2025	430,000	< 0.060 U	< 4.5 U
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-110119	11/01/2019	23,600	< 0.44 U	< 48 U
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-021220	02/12/2020	199,000	0.16 j	< 0.95 U
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-051820	05/18/2020	14,000	< 0.025 U	< 19 U
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-081820	08/18/2020	160,000 J+	< 0.025 U	< 19 U
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-102820	10/28/2020	14,000 J+	< 0.20 U	40
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-031621	03/16/2021	19,000	< 0.025 U	36
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-092121	09/21/2021	61,000	< 0.25 U	< 20 U
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-121321	12/13/2021	13,000	< 0.25	< 20
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-031522	03/15/2022	24,000 J-	< 0.060 U	20
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-060722	06/07/2022	19,000	< 0.060 U	120
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-110822	11/08/2022	68,000	< 0.060 U	< 10 U
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-030723	03/07/2023	120,000 j	0.39	< 4.0 UJ
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-061323	06/13/2023	110,000	< 0.060	6.2
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-082123	08/21/2023	5,700	< 0.060 U	< 2.0 U
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-121123	12/11/2023	5,600	< 0.060 U	< 2.0 U
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-022624	02/26/2024	160,000	< 0.060 U	< 20 U
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-061024	06/10/2024	130,000	< 0.060 U	11 j
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-090924	09/09/2024	15,000	< 0.060 U	84
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-121024	12/10/2024	6,600 J+	< 0.060 U	< 4.5 U
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-022025	02/20/2025	180,000	< 0.060	< 9.1
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-051225	05/12/2025	69,000	< 0.070	< 4.5
Shallow	PA-09	GCC6 & Proximal Wells	PA-09-090225	09/02/2025	32,000	< 0.060 U	4.8 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

**Appendix D**  
**Prior Groundwater Monitoring Plan Data Table**  
**Arkema Quarter 3, 2025, Groundwater Monitoring Report**  
**Arkema Inc. Facility**  
**Portland, Oregon**

Aquifer	Well ID	Cluster	Sample ID	Date	Chloride	Chlorobenzene	Perchlorate
					ug/L	ug/L	ug/L
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-110822	11/08/2022	5,900	< 0.060 U	< 4.0 U
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-030723	03/07/2023	5,800 J+	< 0.060 U	< 2.0 UJ
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-061623	06/16/2023	2,500	< 0.060	< 40
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-082423	08/24/2023	4,600	< 0.060 U	< 4.0 U
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-121223	12/12/2023	6,400	< 0.060 U	< 2.0 U
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-022724	02/27/2024	3,500	< 0.060 U	< 2.0 U
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-061324	06/13/2024	3,800	< 0.060 U	< 10 U
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-091124	09/11/2024	8,300	< 0.060 U	< 4.5 U
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-121024	12/10/2024	4,200 J+	< 0.060 U	< 4.5 U
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-021925	02/19/2025	3,400 J+	< 0.060	< 9.1
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-051425	05/14/2025	3,400	< 0.070 UJ	< 9.1
Shallow	PA-31	GCC1 & Proximal Wells	PA-31-090425	09/04/2025	7,600	< 0.060 U	< 4.5 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	MWA-81i	GCC6 & Proximal Wells	MWA-81i-091024	09/10/2024	8,400	< 0.060 U	< 0.91 U
Intermediate	MWA-81i	GCC6 & Proximal Wells	MWA-81i-121124	12/11/2024	33,000 J+	< 0.060 U	< 0.91 U
Intermediate	MWA-81i	GCC6 & Proximal Wells	MWA-81i-021825	02/18/2025	12,000	< 0.060	< 0.91
Intermediate	MWA-81i	GCC6 & Proximal Wells	MWA-81i-051325	05/13/2025	28,000	< 0.070	< 0.91
Intermediate	MWA-81i	GCC6 & Proximal Wells	MWA-81i-090325	09/03/2025	38,000	< 0.060 U	< 0.91 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	< 4.8 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-052620	05/26/2020	82,000	0.51	< 4.8 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-081920	08/19/2020	67,000	0.52	< 9.5 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-102920	10/29/2020	82,000	0.70	< 4.8 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-032421	03/24/2021	1,300,000	< 0.44 U	< 20 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-092221	09/22/2021	76,000	0.67	< 20 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-121321	12/13/2021	72,000	0.65	< 20
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-031722	03/17/2022	90,000	< 0.060 U	< 20 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-060822	06/08/2022	84,000	0.37 j	< 2.0 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-110922	11/09/2022	45,000	1.5	< 10 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-030823	03/08/2023	41,000	5.7	< 10 UJ
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-061623	06/16/2023	35,000	1.3 J+	< 20
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-082223	08/22/2023	53,000	0.67	< 4.0 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-121223	12/12/2023	58,000	0.90	< 4.0 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-022724	02/27/2024	55,000	0.53	< 10 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-061224	06/12/2024	44,000	0.71	< 10 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-091024	09/10/2024	30,000	< 0.060 U	< 9.1 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-121024	12/10/2024	25,000 J+	0.64	< 9.1 U
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-022125	02/21/2025	27,000	1.0	< 36
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-051425	05/14/2025	36,000	0.82 J-	< 36
Intermediate	PA-10i	GCC1 & Proximal Wells	PA-10i-090425	09/04/2025	5,000	< 0.060 U	< 4.5 U
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-110519	11/05/2019	115,000	< 0.44 U	< 4.8 U
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-021820	02/18/2020	249,000	< 0.025 U	< 4.8 U
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-051820	05/18/2020	270,000	< 0.025 U	< 4.8 U
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-081720	08/17/2020	250,000	< 0.025 U	< 4.8 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 i	< 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-15i	GCC6 & Proximal Wells	PA-15i-090924	09/09/2024	59,000	< 0.060 U	< 9.1 U
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-121124	12/11/2024	64,000	< 0.060 U	< 9.1 U
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-021825	02/18/2025	44,000	< 0.060	< 18
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-051225	05/12/2025	34,000	< 0.70	< 36
Intermediate	PA-15i	GCC6 & Proximal Wells	PA-15i-090325	09/03/2025	42,000	< 0.060 U	< 4.5 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-110419	11/04/2019	319,000	< 0.44 U	< 4.8 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-021220	02/12/2020	186,000	0.22	< 4.8 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-051920	05/19/2020	150,000	0.073 j	< 4.8 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-081920	08/19/2020	95,000 J+	0.13 j	< 4.8 U

**Appendix D  
 Prior Groundwater Monitoring Plan Data Table  
 Arkema Quarter 3, 2025, Groundwater Monitoring Report  
 Arkema Inc. Facility  
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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-102720	10/27/2020	69,000	0.31	< 4.8 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-031721	03/17/2021	140,000	< 0.025 U	< 20 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-092121	09/21/2021	50,000	< 0.25 U	< 10 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-121421	12/14/2021	95,000	0.21	< 20
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-031522	03/15/2022	110,000 J-	< 0.060 U	< 10 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-060722	06/07/2022	110,000	< 0.30 U	< 20 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-110822	11/08/2022	270,000	< 0.060 U	< 4.0 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-030823	03/08/2023	530,000	< 0.060 U	< 20 UJ
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-061423	06/14/2023	120,000 J-	< 0.060	< 4.0
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-082223	08/22/2023	35,000	< 0.060 U	< 4.0 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-121123	12/11/2023	12,000	< 0.20 U	< 4.0 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-022724	02/27/2024	12,000	< 0.060 U	< 20 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-061024	06/10/2024	17,000	< 0.060 U	< 10 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-121024	12/10/2024	15,000 J+	0.15 j	< 9.1 U
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-022125	02/21/2025	32,000	< 0.060	< 36
Intermediate	PA-16i	GCC6 & Proximal Wells	PA-16i-051225	05/12/2025	11,000	< 0.35	< 9.1
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-102819	10/28/2019	73,600	0.57 j	< 48 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-021920	02/19/2020	65,400	24	< 190 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-052120	05/21/2020	60,000	0.16 j	< 48 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-082420	08/24/2020	62,000	< 0.025 U	< 95 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-102820	10/28/2020	50,000	< 0.20 U	< 4.8 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-032321	03/23/2021	43,000	0.15 J	< 20 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-092221	09/22/2021	35,000	< 0.025 U	< 20 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-121321	12/13/2021	30,000	< 0.025	< 20
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-031622	03/16/2022	23,000	0.072 j	< 20 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-060822	06/08/2022	26,000	< 0.70 U	< 10 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-110822	11/08/2022	13,000	< 0.60 U	< 10 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-030823	03/08/2023	25,000	< 0.060 U	< 10 UJ
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-061423	06/14/2023	15,000	0.073 j	< 4.0
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-082223	08/22/2023	8,800 J	< 0.060 U	< 2.0 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-121123	12/11/2023	20,000	< 0.20 U	< 4.0 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-022624	02/26/2024	32,000	< 0.060 U	< 2.0 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-061224	06/12/2024	35,000	0.16 j	< 10 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-090924	09/09/2024	43,000	< 0.060 U	< 9.1 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-120924	12/09/2024	49,000	0.12 j	< 91 U
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-022125	02/21/2025	58,000	< 0.44	< 91
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-051325	05/13/2025	57,000	< 0.70	< 91
Intermediate	PA-17iR	GCC1 & Proximal Wells	PA-17iR-090225	09/02/2025	41,000	< 0.060 U	< 4.5 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
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-082423	08/24/2023	71,000	0.13 j	< 20 U
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-121323	12/13/2023	32,000	0.15 j	< 4.0 U
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-022824	02/28/2024	7,600,000	0.29	< 20 U
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-061324	06/13/2024	85,000	0.36	< 20 U
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-091124	09/11/2024	88,000	0.21	< 18 U
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-121024	12/10/2024	79,000	0.29	< 91 U
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-022025	02/20/2025	44,000	< 0.060	< 91
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-051425	05/14/2025	47,000	< 0.35 UJ	< 91
Intermediate	PA-32i	GCC1 & Proximal Wells	PA-32i-090425	09/04/2025	67,000	0.19 j	< 4.5 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
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-091024	09/10/2024	220,000	< 0.060 U	< 4.5 U
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-121124	12/11/2024	55,000	< 0.060 U	< 9.1 U
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-021825	02/18/2025	< 1,500 U	< 0.060	< 0.91
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-051325	05/13/2025	62,000	< 0.35	< 36
Intermediate	PA-44i	GCC6 & Proximal Wells	PA-44i-090325	09/03/2025	190,000	< 0.060 U	< 4.5 U

**Appendix D**  
**Prior Groundwater Monitoring Plan Data Table**  
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**Arkema Inc. Facility**  
**Portland, Oregon**

Aquifer	Well ID	Cluster	Sample ID	Date	Chloride	Chlorobenzene	Perchlorate
					ug/L	ug/L	ug/L
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(d)-102419	10/24/2019	25,900,000	0.57 i	100,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-021320	02/13/2020	27,700,000	0.58 j	91,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-052020	05/20/2020	27,000,000	< 0.44 U	100,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-081920	08/19/2020	23,000,000	0.52 j	89,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(d)-103020	10/30/2020	30,000,000	< 0.44 U	91,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-032421	03/24/2021	27,000,000	< 0.44 U	91,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-092321	09/23/2021	29,000,000	< 0.44 U	91,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-121521	12/15/2021	18,000,000	< 0.44	99,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-031622	03/16/2022	20,000,000	< 0.44 U	97,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-060722	06/07/2022	28,000,000	0.32 j	100,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-111022	11/10/2022	19,000,000	0.55 J	97,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-030923	03/09/2023	25,000,000	0.58 j	97,000 J-
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-061523	06/15/2023	16,000,000	< 1.0 U	86,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-082323	08/23/2023	27,000,000	< 0.44 U	98,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-121123	12/11/2023	14,000,000	< 0.44 U	28,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-022824	02/28/2024	26,000,000	< 0.44 U	100,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-061224	06/12/2024	21,000,000	< 4.4 U	100,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-091024	09/10/2024	16,000,000	< 0.44 U	87,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-121224	12/12/2024	13,000,000	< 0.44 U	74,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-021925	02/19/2025	6,000,000	< 0.44	3,700
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-051325	05/13/2025	22,000,000	0.43 J-	100,000
Deep	MWA-31i(d)	GCC5 & Proximal Wells	MWA-31i(D)-090425	09/04/2025	22,000,000	< 0.44 U	110,000
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-56d	GCC4 & Proximal Wells	MWA-56D-091124	09/11/2024	10,000,000	< 4.4 U	14,000 J
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56D-121224	12/12/2024	12,000,000	< 4.4 U	13,000
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56D-021925	02/19/2025	13,000,000	< 4.4	13,000
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56D-051425	05/14/2025	14,000,000	< 0.30 UJ	12,000
Deep	MWA-56d	GCC4 & Proximal Wells	MWA-56D-090425	09/04/2025	12,000,000 J	< 0.44 U	14,000 J
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-102519	10/25/2019	18,900,000	< 0.44 U	61,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-021320	02/13/2020	21,100,000	< 0.44 U	49,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-052120	05/21/2020	19,000,000	< 0.44 U	46,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-082020	08/20/2020	20,000,000	< 0.44 U	45,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-102920	10/29/2020	20,000,000	< 0.44 U	44,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-032621	03/26/2021	29,000,000 J-	< 0.44 U	43,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-092421	09/24/2021	23,000,000	< 0.44 U	43,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-121621	12/16/2021	23,000,000	< 4.4	38,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-031722	03/17/2022	26,000,000	< 4.4 U	44,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-060822	06/08/2022	23,000,000	< 0.30 U	47,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-110922	11/09/2022	19,000,000	< 0.44 UJ	49,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-030923	03/09/2023	22,000,000	< 2.2 U	49,000 J-
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-061523	06/15/2023	19,000,000	< 2.2	50,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-082323	08/23/2023	20,000,000	< 2.2 U	50,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-121223	12/12/2023	19,000,000	< 2.2 U	50,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-022824	02/28/2024	19,000,000	< 4.4 U	50,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-061224	06/12/2024	19,000,000	< 4.4 U	47,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-091124	09/11/2024	17,000,000	< 4.4 U	54,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-121224	12/12/2024	17,000,000	< 4.4 U	51,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-021925	02/19/2025	18,000,000	< 4.4	53,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-051425	05/14/2025	18,000,000	< 0.30 UJ	48,000
Deep	MWA-58d	GCC4 & Proximal Wells	MWA-58D-090425	09/04/2025	18,000,000	< 0.44 U	53,000
Deep	PA-18d	GCC1 & Proximal Wells	PA-18D-032921	03/29/2021	110,000	81	< 20 U
Deep	PA-18d	GCC1 & Proximal Wells	PA-18D-030923	03/09/2023	50,000	< 0.44 U	< 20 UJ
Deep	PA-18d	GCC1 & Proximal Wells	PA-18D-061623	06/16/2023	27,000 J-	< 0.44	< 40
Deep	PA-18d	GCC1 & Proximal Wells	PA-18D-082123	08/21/2023	80,000	< 0.44 U	< 10 U
Deep	PA-18d	GCC1 & Proximal Wells	PA-18D-121223	12/12/2023	54,000	< 0.44 U	< 10 U
Deep	PA-18d	GCC1 & Proximal Wells	PA-18D-022724	02/27/2024	98,000	< 0.44 U	< 20 U
Deep	PA-18d	GCC1 & Proximal Wells	PA-18D-061224	06/12/2024	85,000	< 0.44 U	< 10 U
Deep	PA-18d	GCC1 & Proximal Wells	PA-18D-090924	09/09/2024	67,000	< 0.44 U	< 9.1 U
Deep	PA-18d	GCC1 & Proximal Wells	PA-18D-121024	12/10/2024	65,000	< 0.44 U	< 9.1 U
Deep	PA-18d	GCC1 & Proximal Wells	PA-18D-022125	02/21/2025	75,000	< 0.44	< 36
Deep	PA-18d	GCC1 & Proximal Wells	PA-18D-051425	05/14/2025	53,000	< 0.30 UJ	< 91
Deep	PA-18d	GCC1 & Proximal Wells	PA-18D-090425	09/04/2025	72,000	< 0.44 U	< 4.5 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

**Appendix D  
 Prior Groundwater Monitoring Plan Data Table  
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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-110320	11/03/2020	9,100,000	< 0.44 U	37,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-032421	03/24/2021	8,200,000	< 0.44 U	33,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-092221	09/22/2021	7,400,000	< 0.44 U	26,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-121521	12/15/2021	7,100,000	< 0.44	24,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-031622	03/16/2022	8,000,000	< 0.44 U	23,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-060822	06/08/2022	7,300,000	< 0.30 U	22,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-110922	11/09/2022	6,000,000	< 0.44 U	17,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-030823	03/08/2023	6,000,000	< 0.44 U	17,000 J-
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-061523	06/15/2023	5,600,000	< 0.44	15,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-082323	08/23/2023	4,800,000	< 0.44 U	13,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-121223	12/12/2023	5,300,000	< 0.44 U	13,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-022724	02/27/2024	5,300,000	< 0.44 U	14,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-061224	06/12/2024	5,100,000	< 0.44 U	14,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-091124	09/11/2024	4,300,000	< 0.44 U	15,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-121224	12/12/2024	5,000,000	< 0.44 U	14,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-022025	02/20/2025	5,200,000	< 0.44	13,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-051325	05/13/2025	5,100,000	< 0.30 UJ	13,000
Deep	PA-22d	GCC4 & Proximal Wells	PA-22D-090425	09/04/2025	7,700,000	< 0.44 U	12,000
Deep	PA-23d	GCC5 & Proximal Wells	PA-23d-110519	11/05/2019	12,500	2.8	< 0.95 U
Deep	PA-23d	GCC5 & Proximal Wells	Pa-23d-021920	02/19/2020	5,690,000	< 0.44 U	< 0.95 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23d-052020	05/20/2020	12,000,000	1.3 j	< 4.8 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-082020	08/20/2020	22,000,000	< 0.44 U	< 4.8 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23d-102920	10/29/2020	27,000,000	< 0.44 U	< 0.95 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-032521	03/25/2021	16,000,000	< 0.44 U	< 1,000 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-092321	09/23/2021	17,000,000	< 0.44 U	< 100 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-121421	12/14/2021	5,700,000	< 0.44	< 50
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-031622	03/16/2022	89,000	< 0.44 U	< 2.0 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-060722	06/07/2022	9,700,000	< 0.30 U	< 100 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-111022	11/10/2022	6,900,000	< 0.44 U	< 200 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-030823	03/08/2023	17,000,000	< 0.44 U	< 200 UJ
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-061523	06/15/2023	25,000,000	< 0.44	< 400
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-082223	08/22/2023	29,000,000	< 0.44 U	< 400 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-121123	12/11/2023	30,000,000	< 0.44 U	< 300 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-022724	02/27/2024	9,700,000	< 0.44 U	< 100 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-061124	06/11/2024	31,000,000	< 0.44 U	< 400 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-091024	09/10/2024	33,000,000	< 0.44 U	< 18 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-121124	12/11/2024	31,000,000	< 0.44 U	< 0.91 U
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-021925	02/19/2025	33,000,000	< 0.44	< 91
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-051325	05/13/2025	31,000,000	< 0.30 UJ	< 36
Deep	PA-23d	GCC5 & Proximal Wells	PA-23D-090325	09/03/2025	110,000,000	< 0.44 U	< 91 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
Deep	PA-24d	GCC5 & Proximal Wells	PA-24D-121123	12/11/2023	31,000,000	< 0.44 U	< 200 U
Deep	PA-24d	GCC5 & Proximal Wells	PA-24D-022724	02/27/2024	30,000,000	< 0.44 U	< 400 U
Deep	PA-24d	GCC5 & Proximal Wells	PA-24D-061224	06/12/2024	30,000,000	< 0.44 U	< 400 U
Deep	PA-24d	GCC5 & Proximal Wells	PA-24D-091024	09/10/2024	30,000,000	< 0.44 U	< 18 U
Deep	PA-24d	GCC5 & Proximal Wells	PA-24D-121124	12/11/2024	30,000,000	< 0.44 U	< 0.91 U
Deep	PA-24d	GCC5 & Proximal Wells	PA-24D-021925	02/19/2025	29,000,000	< 0.44	< 91
Deep	PA-24d	GCC5 & Proximal Wells	PA-24D-051225	05/12/2025	630,000	< 3.0 UJ	< 36
Deep	PA-24d	GCC5 & Proximal Wells	PA-24D-090425	09/04/2025	29,000,000	< 0.44 U	< 36 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-25d	GCC6 & Proximal Wells	PA-25D-090924	09/09/2024	21,000	< 0.060 U	< 0.91 U
Deep	PA-25d	GCC6 & Proximal Wells	PA-25D-121024	12/10/2024	30,000 J+	< 0.060 U	< 0.91 U
Deep	PA-25d	GCC6 & Proximal Wells	PA-25D-021825	02/18/2025	32,000	< 0.060	< 0.91

**Appendix D  
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Aquifer	Well ID	Cluster	Sample ID	Date	Chloride	Chlorobenzene	Perchlorate
					ug/L	ug/L	ug/L
Deep	PA-25d	GCC6 & Proximal Wells	PA-25D-051225	05/12/2025	<b>15,000</b>	< 0.070	< 0.91
Deep	PA-25d	GCC6 & Proximal Wells	PA-25D-090325	09/03/2025	<b>22,000</b>	< 0.060 U	< 0.91 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26d-110419	11/04/2019	<b>7,400</b>	< 0.44 U	< 0.95 U
Deep	PA-26d	GCC6 & Proximal Wells	Pa-26d-021320	02/13/2020	<b>46,000</b>	<b>0.71</b>	< 0.95 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-051820	05/18/2020	<b>48,000</b>	< 0.025 U	< 0.95 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-081920	08/19/2020	<b>48,000</b>	< 0.025 U	< 9.5 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26d-102820	10/28/2020	<b>52,000</b>	< 0.025 U	<b>1.1 i</b>
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-031621	03/16/2021	<b>37,000</b>	< 0.025 U	< 2.0 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-092321	09/23/2021	<b>60,000</b>	< 0.025 U	< 2.0 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-121321	12/13/2021	<b>62,000</b>	< 0.025	< 4.0
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-031522	03/15/2022	<b>72,000 J-</b>	< 0.060 U	< 2.0 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-060722	06/07/2022	<b>63,000</b>	< 0.060 U	< 2.0 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-110822	11/08/2022	<b>6,500</b>	< 0.060 U	< 2.0 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-030823	03/08/2023	<b>69,000</b>	< 0.060 U	< 2.0 UJ
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-061423	06/14/2023	<b>67,000 J</b>	< 0.060	< 2.0
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-082223	08/22/2023	<b>74,000</b>	< 0.060 U	< 2.0 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-121123	12/11/2023	<b>27,000</b>	< 0.060 U	< 2.0 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-022624	02/26/2024	<b>64,000</b>	< 0.060 U	< 2.0 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-061024	06/10/2024	<b>80,000</b>	< 0.060 U	< 2.0 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-090924	09/09/2024	<b>60,000</b>	< 0.060 U	< 0.91 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-121024	12/10/2024	<b>80,000</b>	< 0.060 U	< 0.91 U
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-022125	02/21/2025	<b>84,000</b>	< 0.060	< 0.91
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-051225	05/12/2025	<b>86,000</b>	< 0.070	< 0.91
Deep	PA-26d	GCC6 & Proximal Wells	PA-26D-090325	09/03/2025	<b>87,000</b>	< 0.060 U	< 0.91 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27d-102519	10/25/2019	<b>1,150,000</b>	< 0.44 U	< 4.8 U
Deep	PA-27d	GCC1 & Proximal Wells	Pa-27d-021420	02/14/2020	<b>824,000</b>	<b>0.84 i</b>	< 48 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-052120	05/21/2020	<b>870,000</b>	< 0.44 U	< 48 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-081820	08/18/2020	<b>810,000 J+</b>	<b>0.52 i</b>	< 95 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27d-110420	11/04/2020	<b>1,100,000</b>	<b>3.5 J</b>	< 19 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-032321	03/23/2021	<b>710,000 J-</b>	< 0.44 U	< 20 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-092221	09/22/2021	<b>840,000</b>	< 0.44 U	< 20 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-121321	12/13/2021	<b>930,000</b>	< 0.44	< 20
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-031622	03/16/2022	<b>1,000,000</b>	< 0.44 U	< 20 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-060822	06/08/2022	<b>890,000</b>	< 0.30 U	< 20 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-110822	11/08/2022	<b>960,000</b>	< 0.44 U	< 10 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-030823	03/08/2023	<b>670,000</b>	< 0.44 U	< 20 UJ
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-061423	06/14/2023	<b>690,000</b>	< 0.44	< 20
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-082223	08/22/2023	<b>660,000</b>	< 0.44 U	< 10 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-121223	12/12/2023	<b>450,000</b>	< 0.44 U	< 10 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-022724	02/27/2024	<b>460,000</b>	< 0.44 U	< 20 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-061224	06/12/2024	<b>540,000</b>	< 0.44 U	< 10 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-090924	09/09/2024	<b>720,000</b>	< 0.44 U	< 9.1 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-120924	12/09/2024	<b>590,000</b>	< 0.44 U	< 9.1 U
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-022125	02/21/2025	<b>600,000</b>	< 0.44	< 36
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-051325	05/13/2025	<b>600,000</b>	< 1.5 UJ	< 91
Deep	PA-27d	GCC1 & Proximal Wells	PA-27D-090225	09/02/2025	<b>860,000</b>	< 0.44 U	< 4.5 U

**Notes:**

Bolded values indicate concentrations above the Reportable Detection Limit.

< = Compound not detected. Reportable detection limit shown.

µg/L = micrograms per liter

**Qualifiers:**

j = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

J = The analyte was positively identified; associated numerical value is the approximate concentration of the analyte in the sample.

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

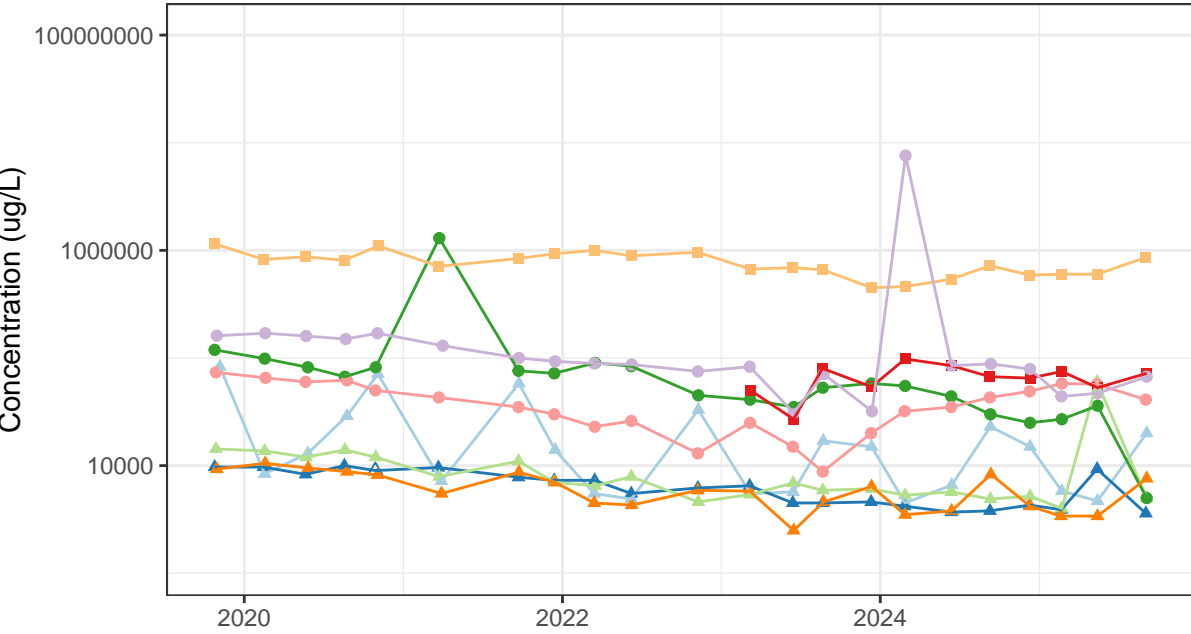
J- = The concentration of the sample is considered to be biased low, as the associated QC results are outside the lower control limits.

U = Compound not detected based on quality assurance review.

UJ = Analyte was analyzed for, but not detected. The detection limit is a quantitative estimate.

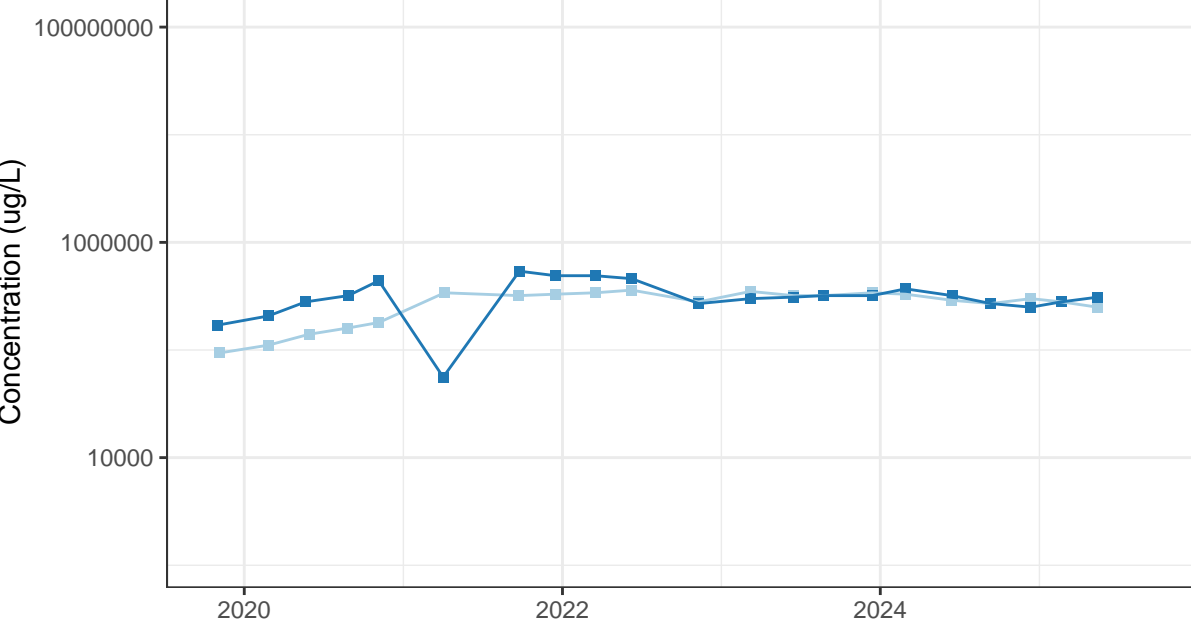
R = Rejected. Quality control indicates that the data are unusable (compound may or not be present).

### Chloride in GCC1 & Proximal Wells



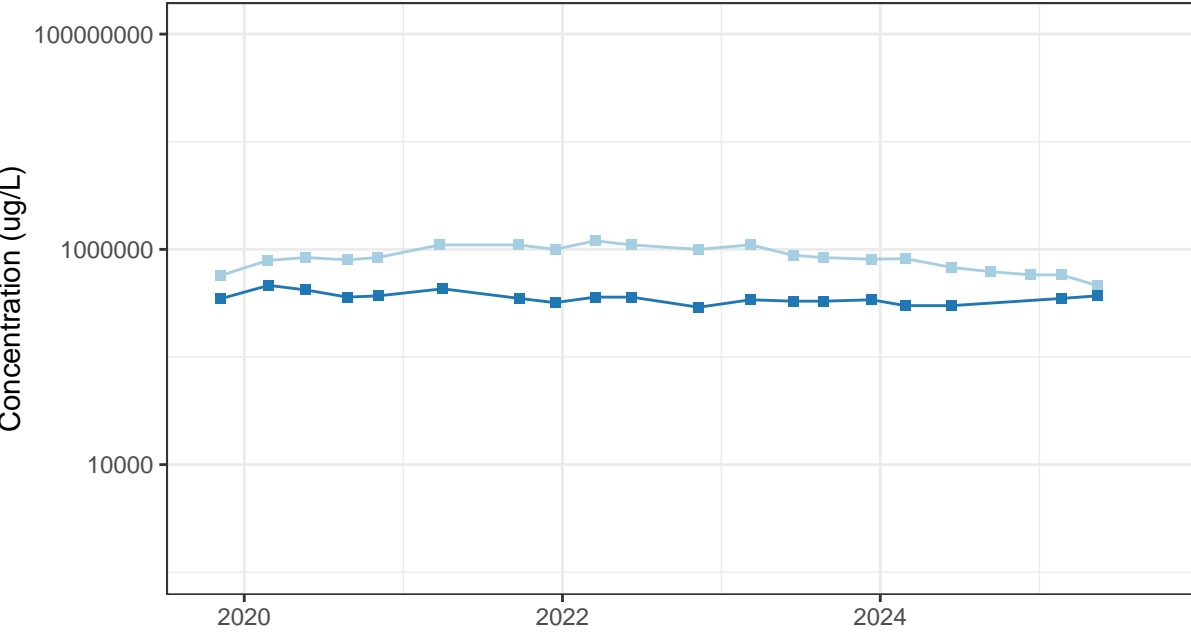
- Aquifer Depth**
- ▲ Shallow, Detect
  - △ Shallow, ND
  - Intermediate, Detect
  - Deep, Detect
- Well**
- MWA-63
  - PA-04
  - PA-17IR
  - PA-27D
  - PA-32I
  - PA-03
  - PA-10I
  - PA-18D
  - PA-31

### Chloride in GCC2



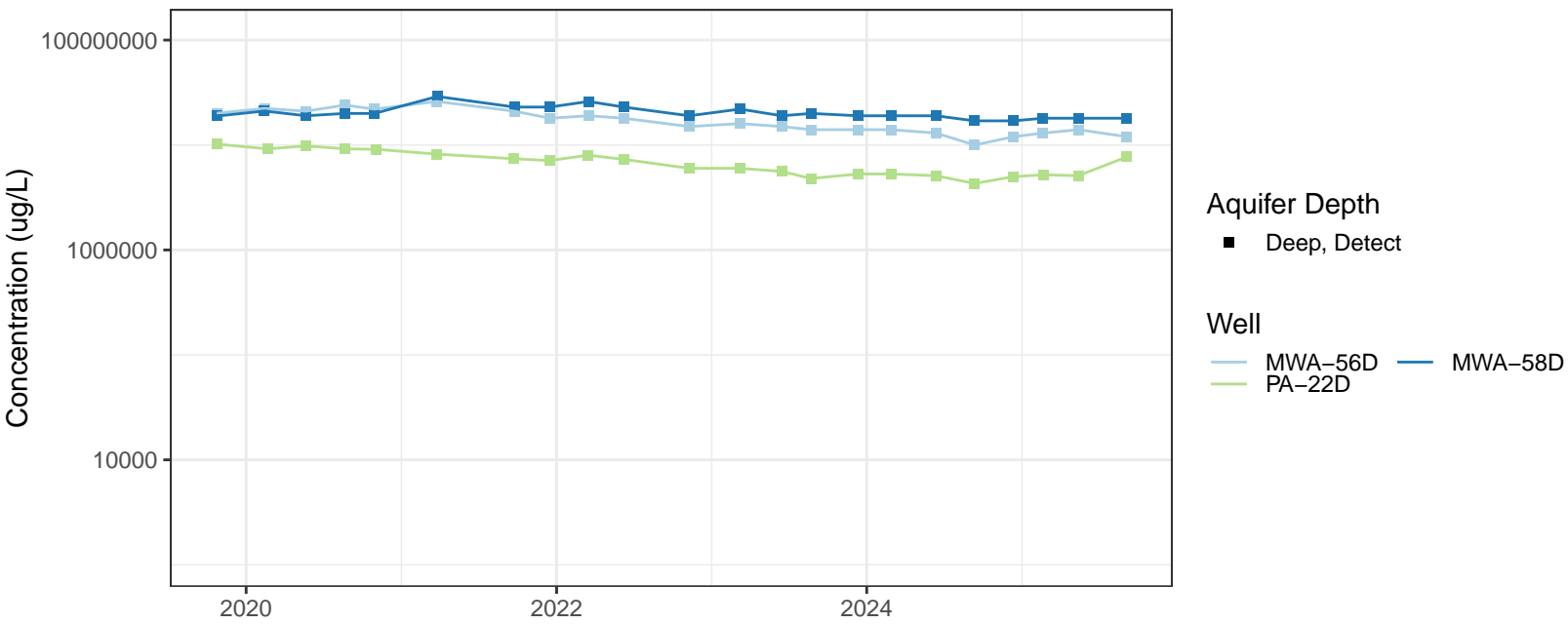
- Aquifer Depth**
- Deep, Detect
- Well**
- PA-19D
  - PA-30D

### Chloride in GCC3

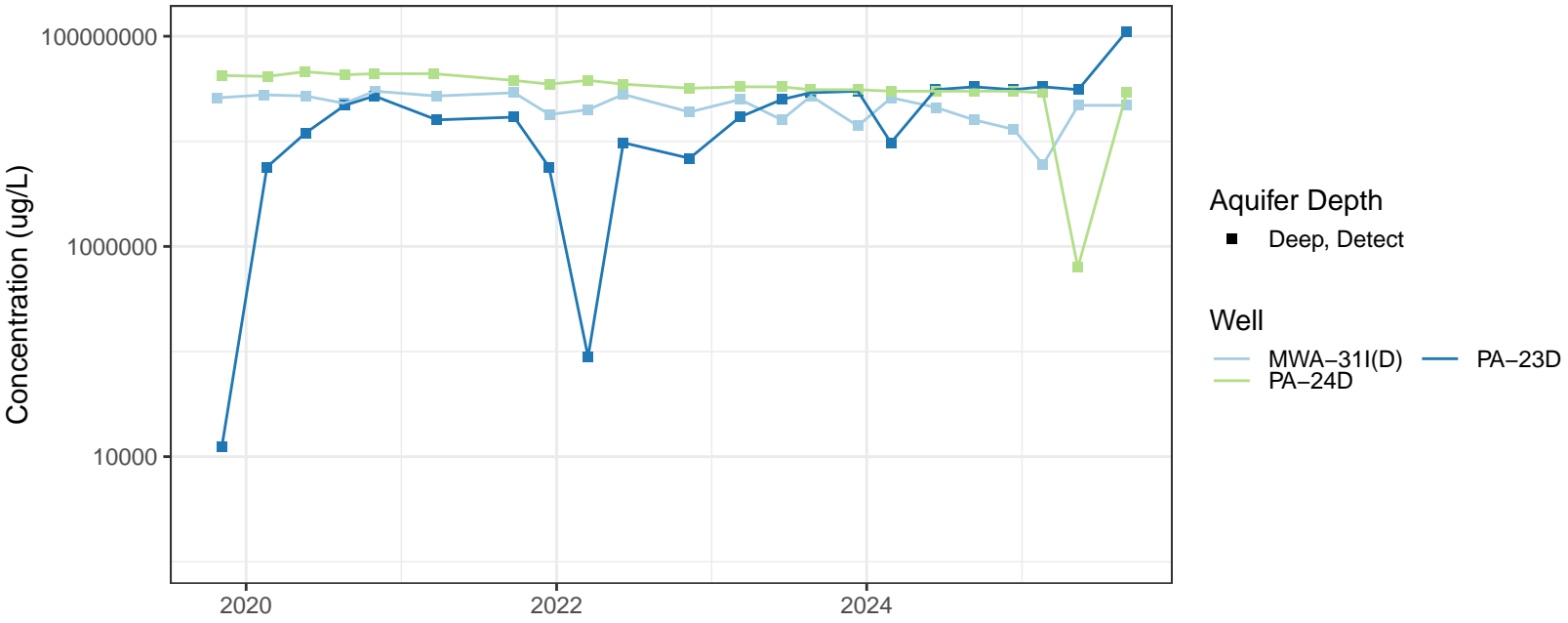


- Aquifer Depth**
- Deep, Detect
- Well**
- PA-20D
  - PA-21D

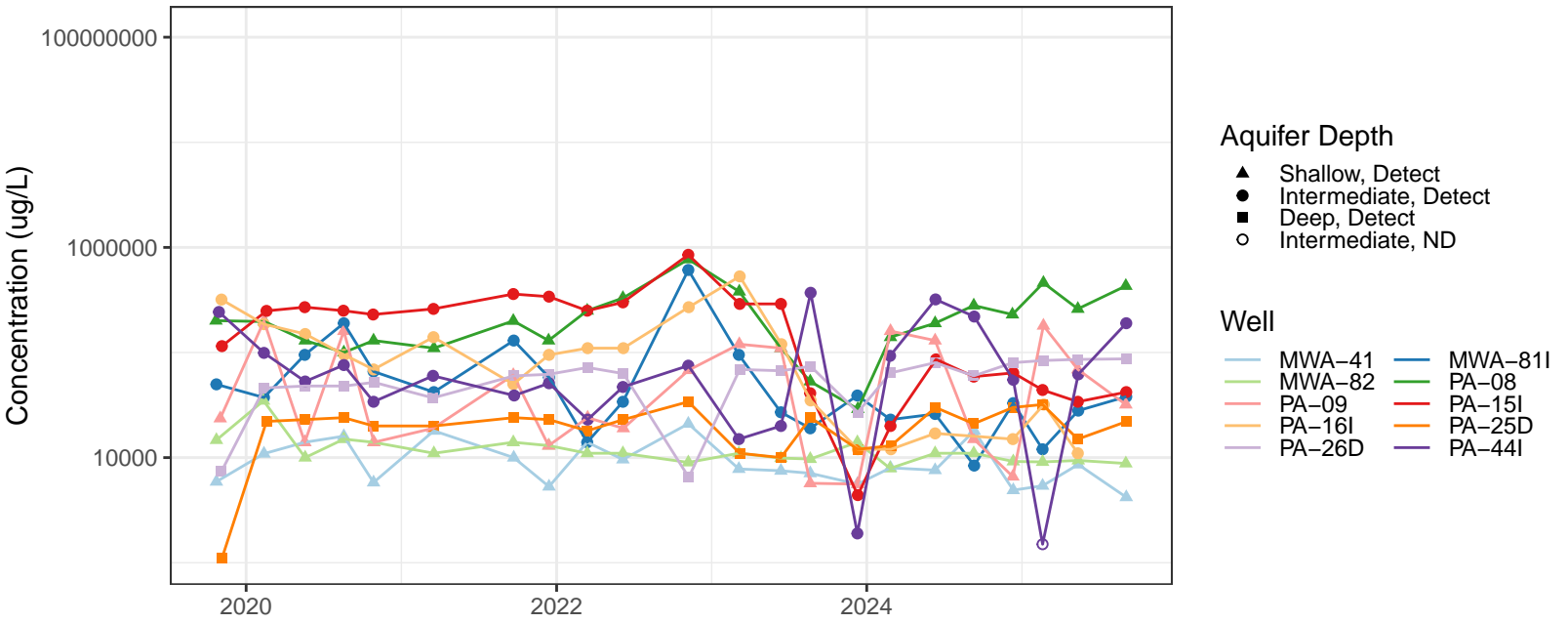
### Chloride in GCC4 & Proximal Wells



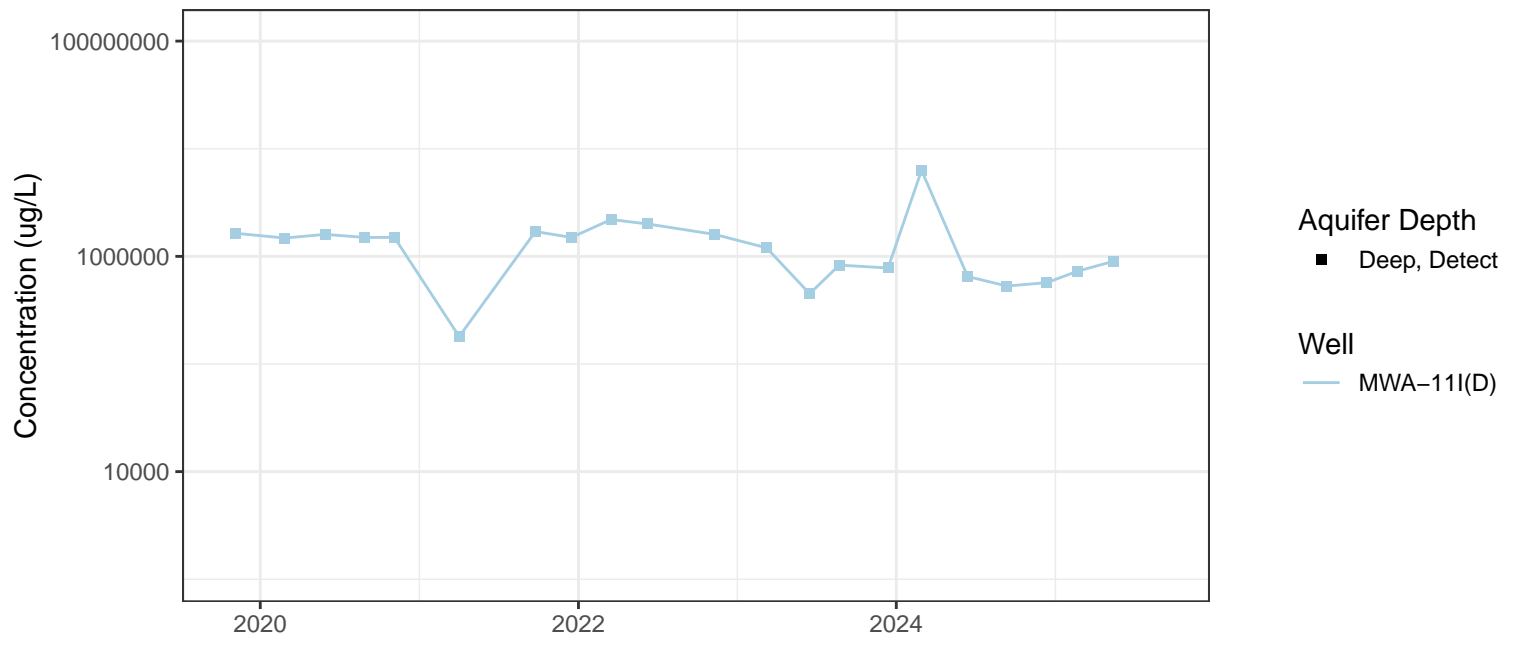
### Chloride in GCC5 & Proximal Wells



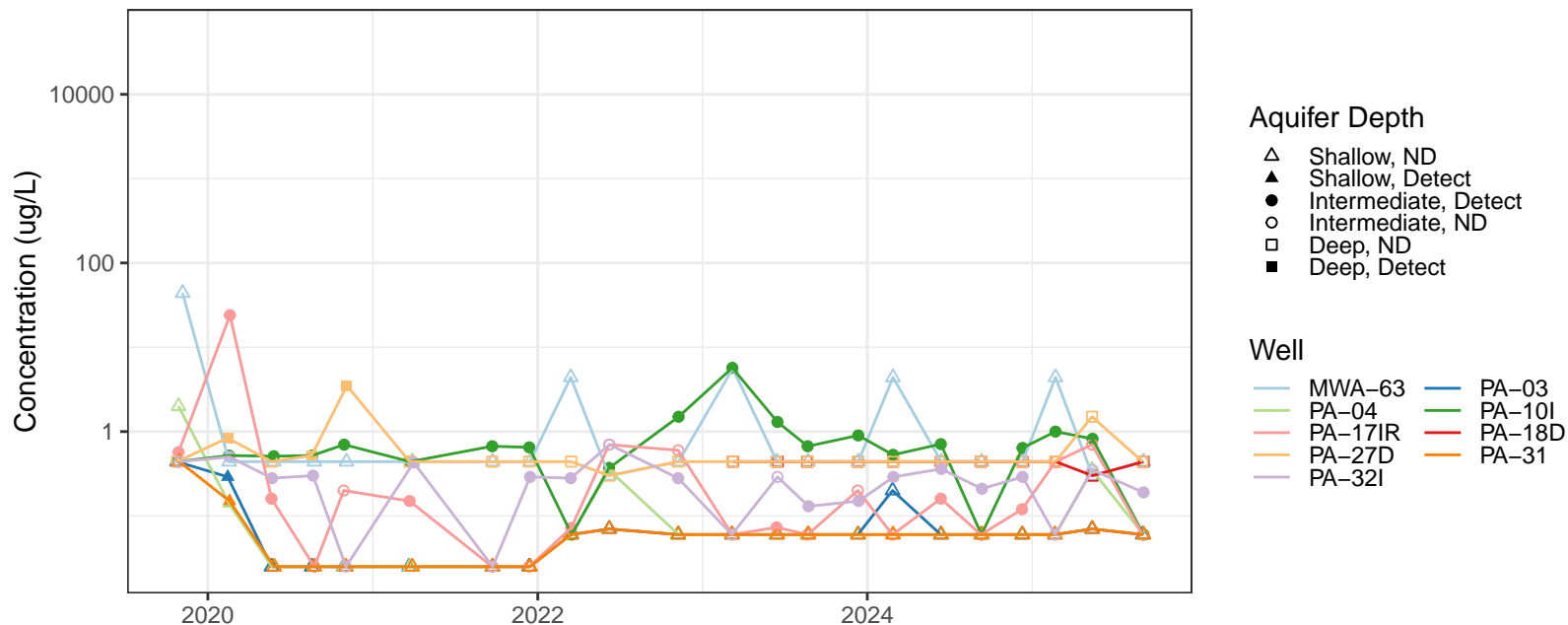
### Chloride in GCC6 & Proximal Wells



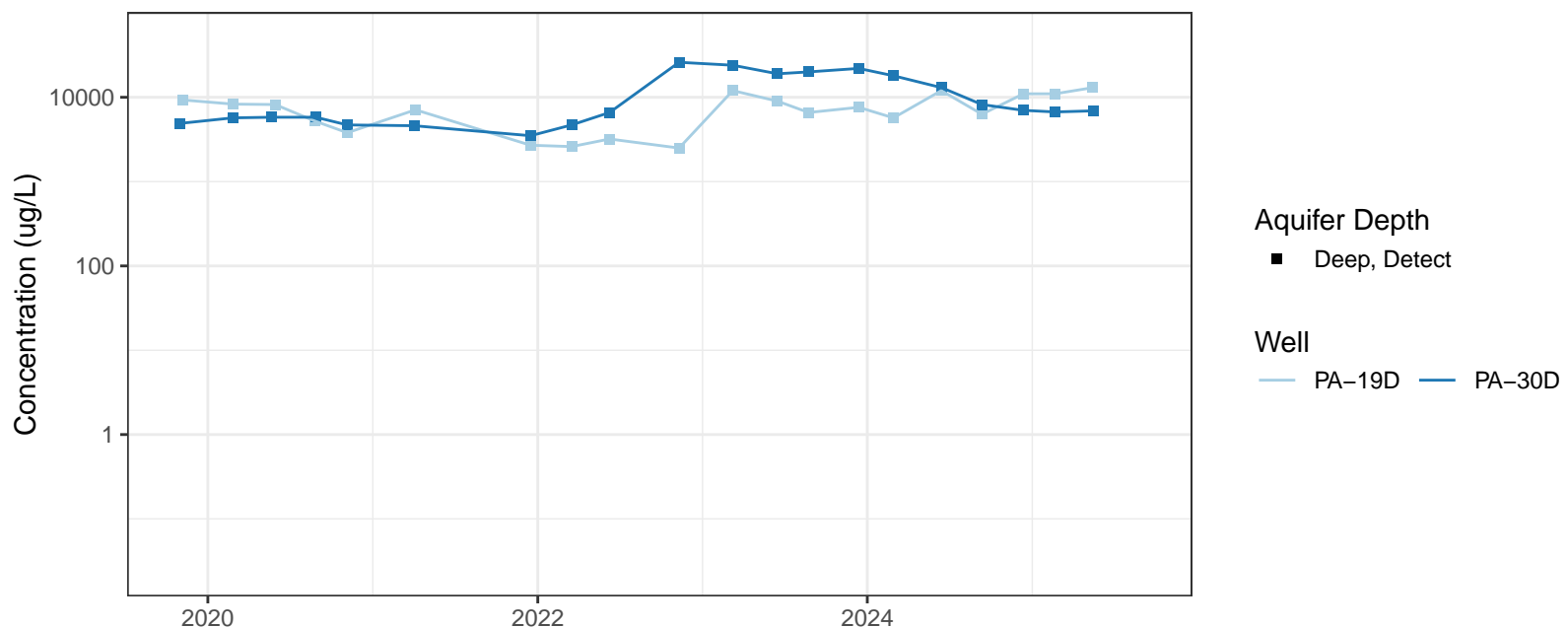
Chloride in Well Distal from BW and GCCs



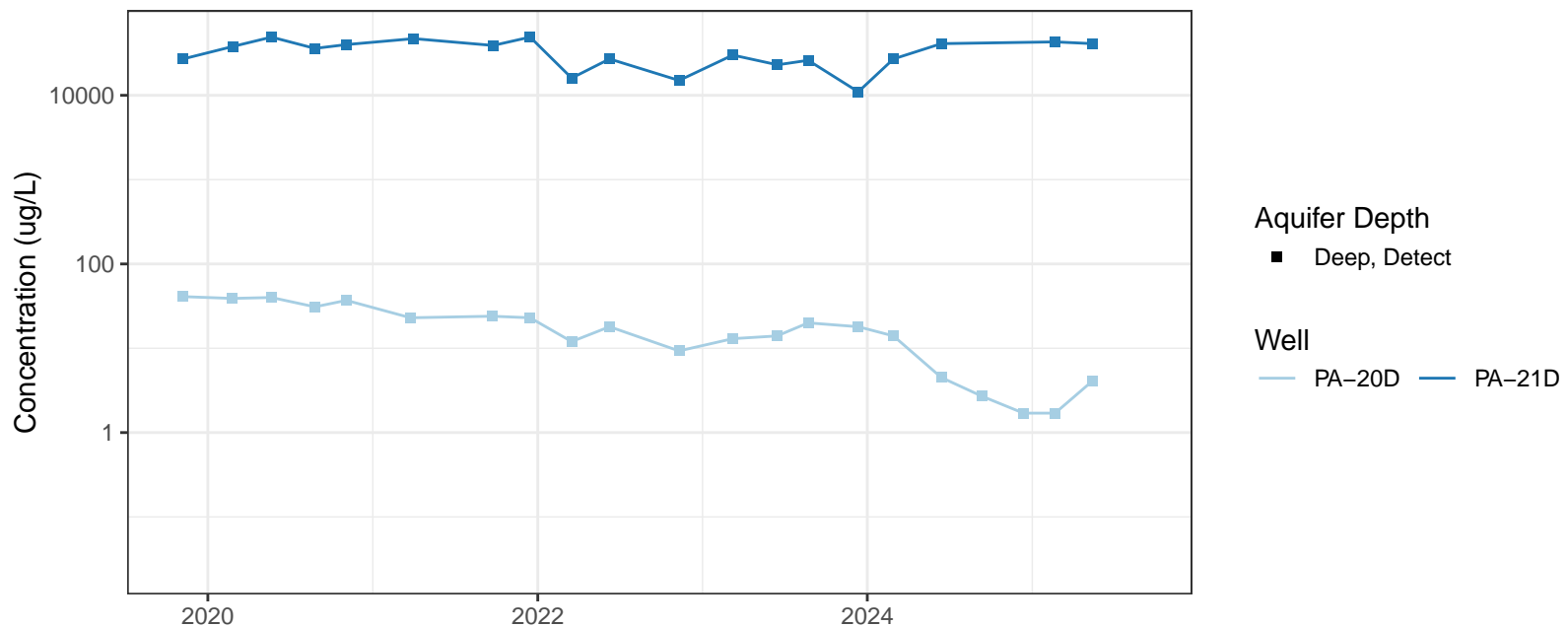
### Chlorobenzene in GCC1 & Proximal Wells



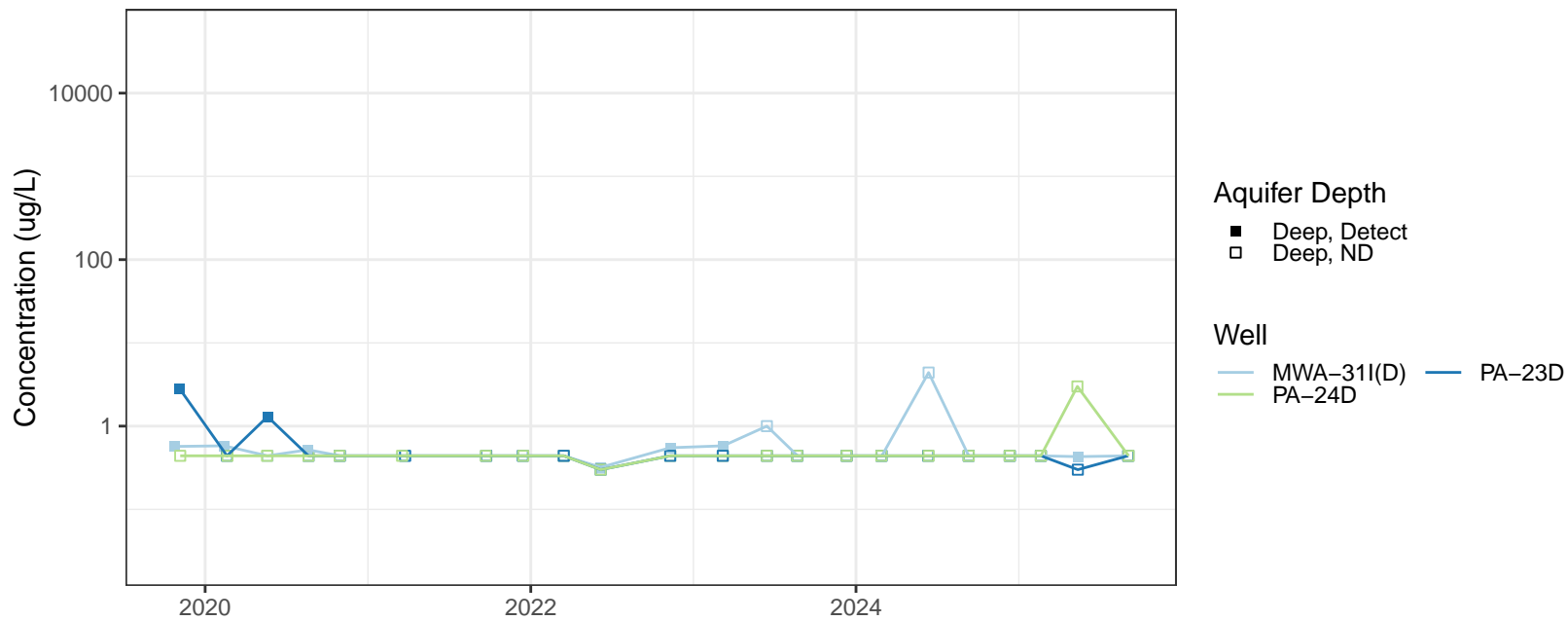
### Chlorobenzene in GCC2



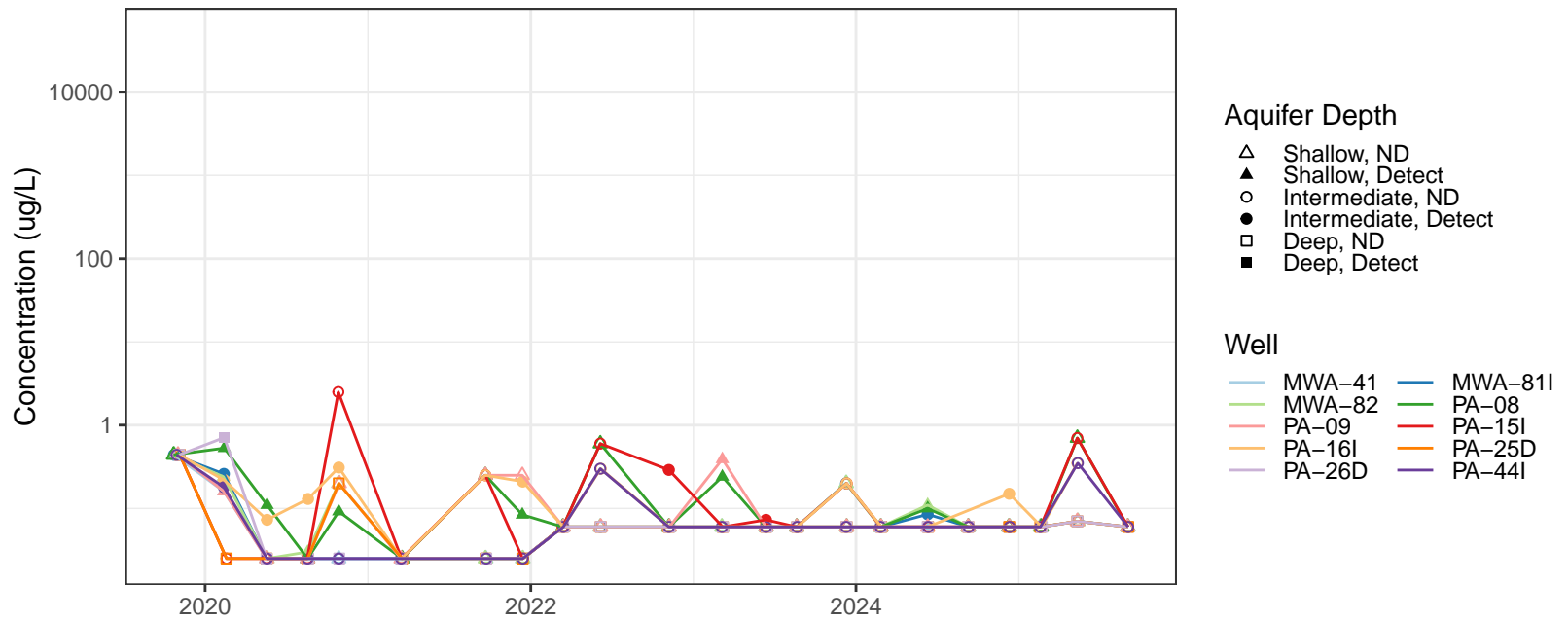
### Chlorobenzene in GCC3



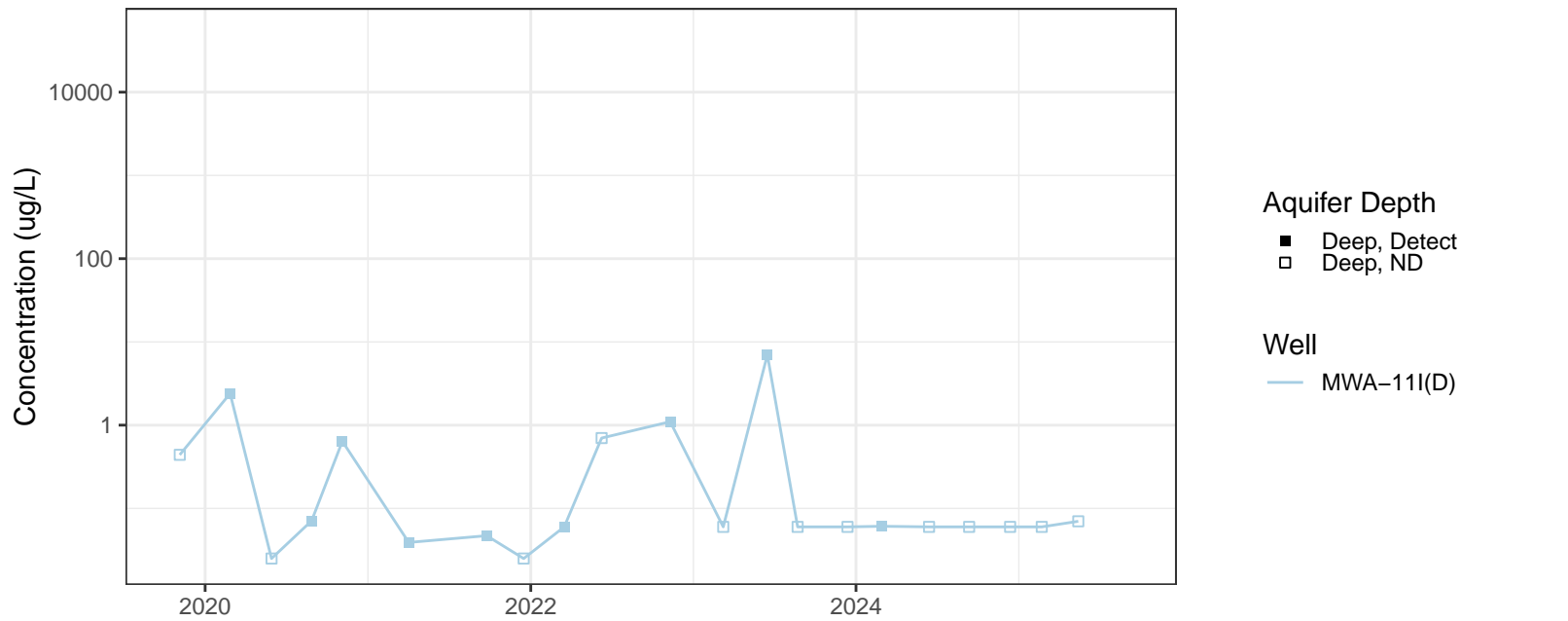
### Chlorobenzene in GCC5 & Proximal Wells



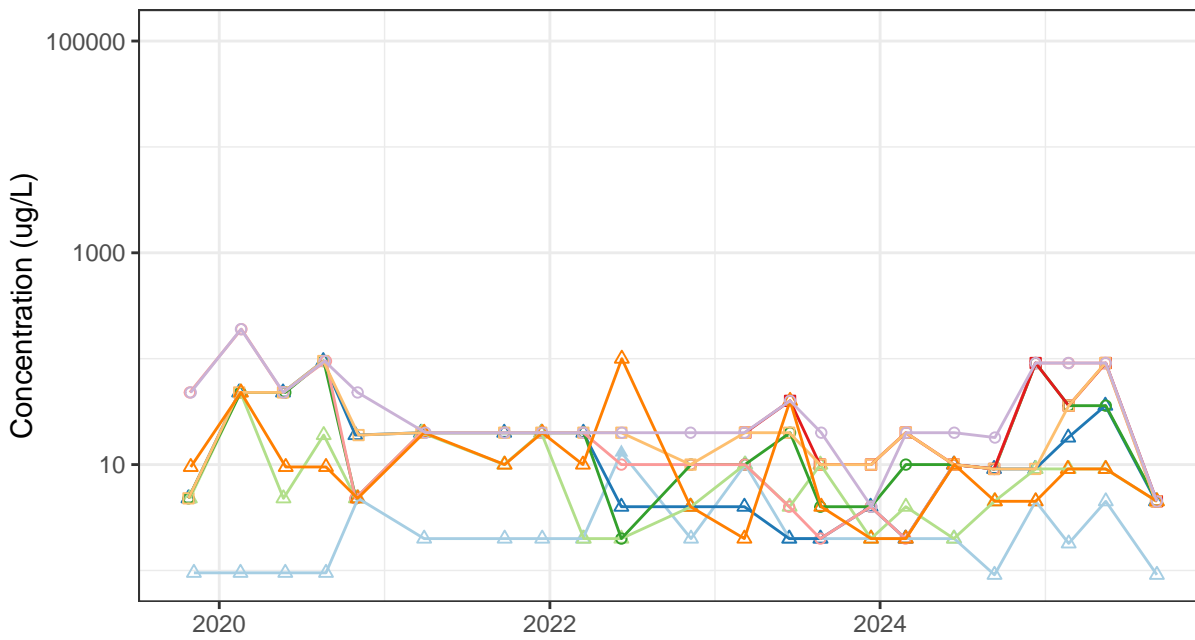
### Chlorobenzene in GCC6 & Proximal Wells



### Chlorobenzene in Well Distal from BW and GCCs



Perchlorate in GCC1 & Proximal Wells



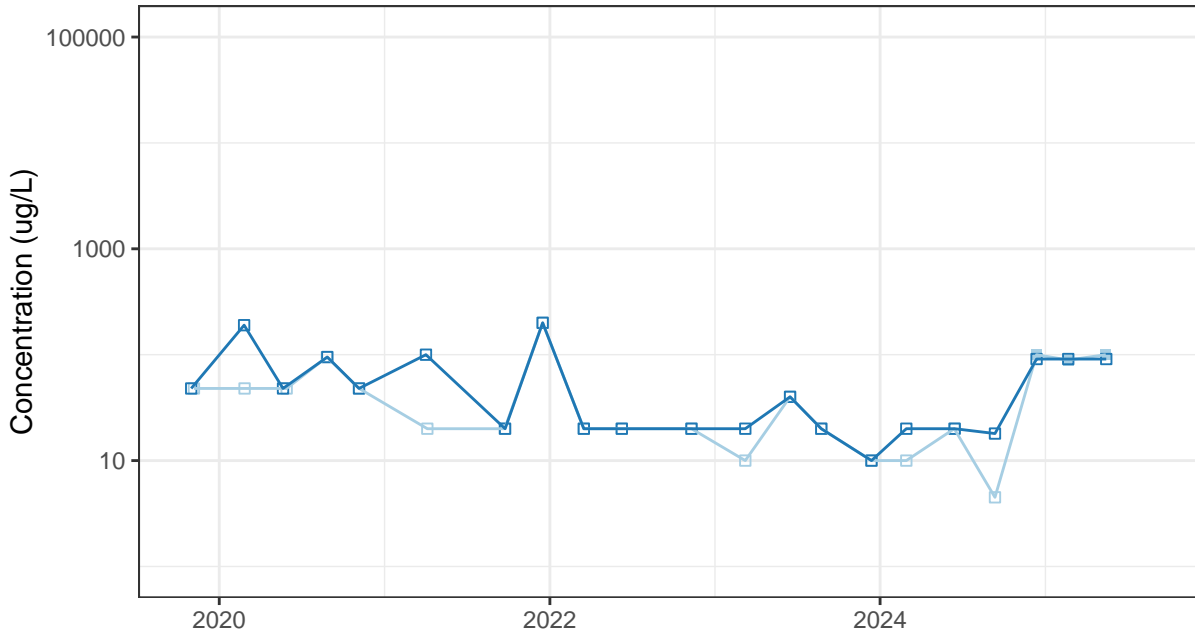
Aquifer Depth

- △ Shallow, ND
- ▲ Shallow, Detect
- Intermediate, ND
- Deep, ND

Well

- MWA-63
- PA-04
- PA-17IR
- PA-27D
- PA-32I
- PA-03
- PA-10I
- PA-18D
- PA-31

Perchlorate in GCC2



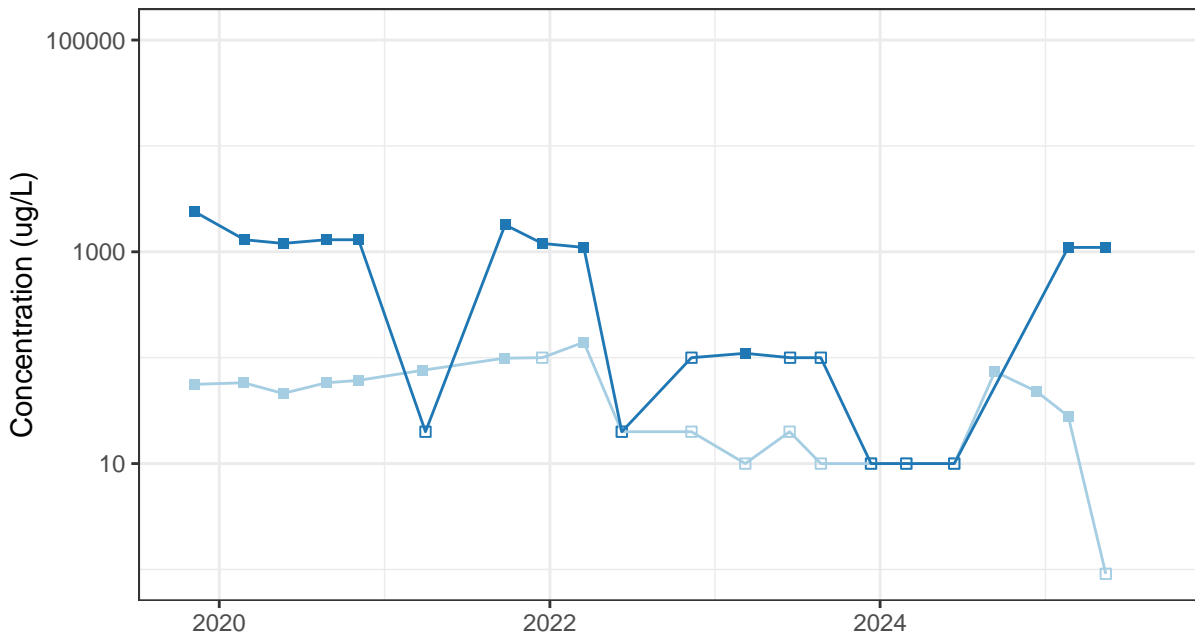
Aquifer Depth

- Deep, ND
- Deep, Detect

Well

- PA-19D
- PA-30D

Perchlorate in GCC3



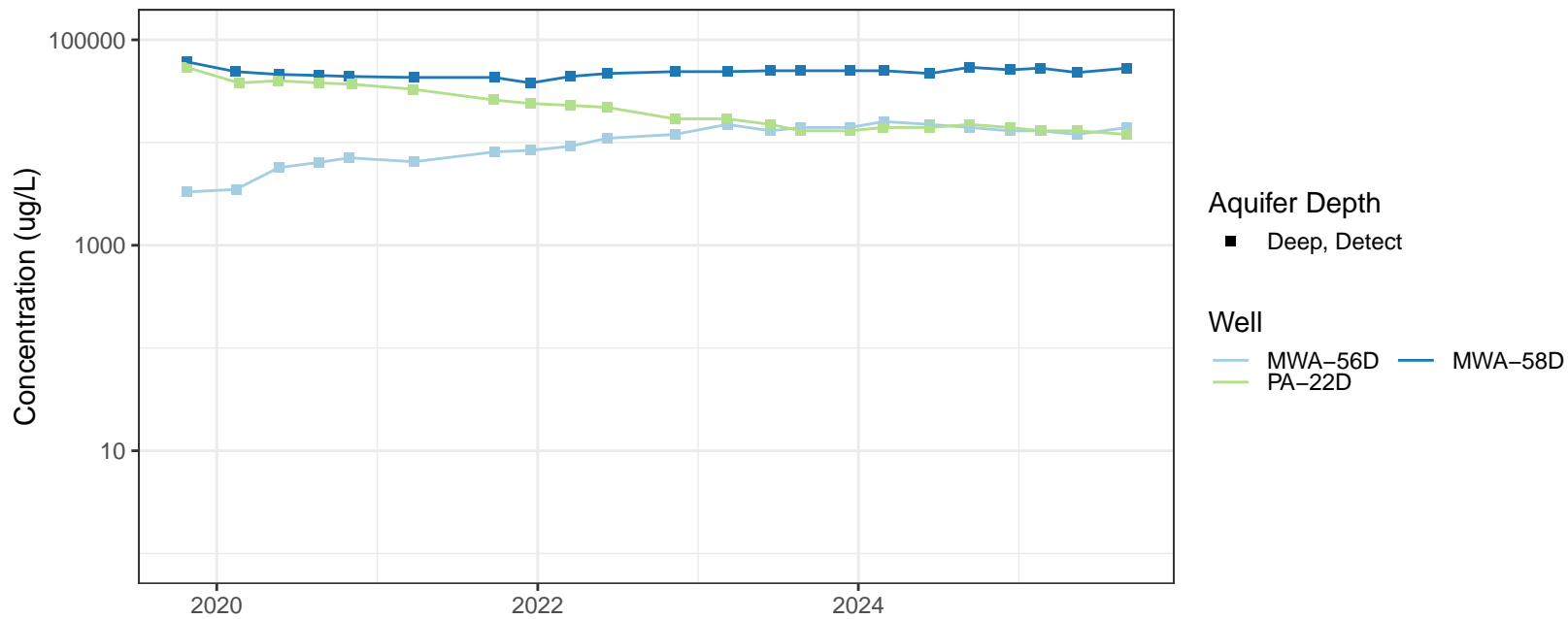
Aquifer Depth

- Deep, Detect
- Deep, ND

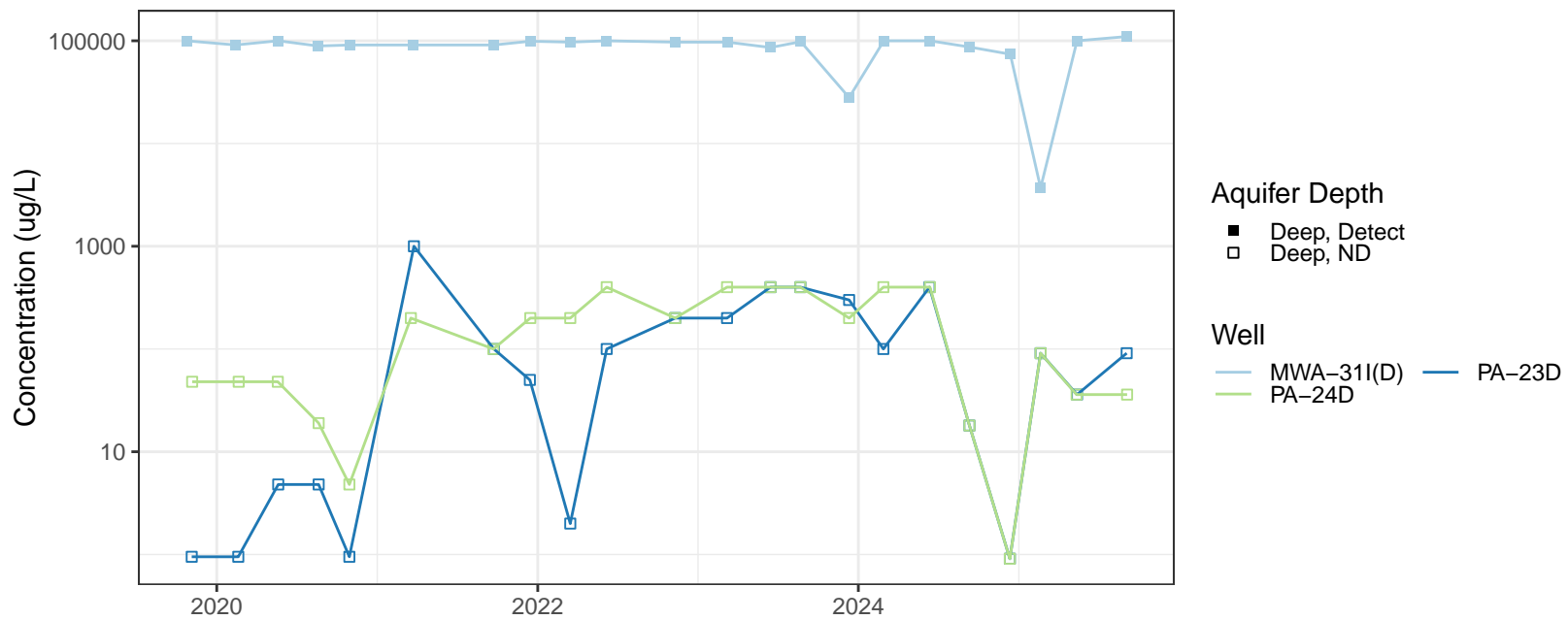
Well

- PA-20D
- PA-21D

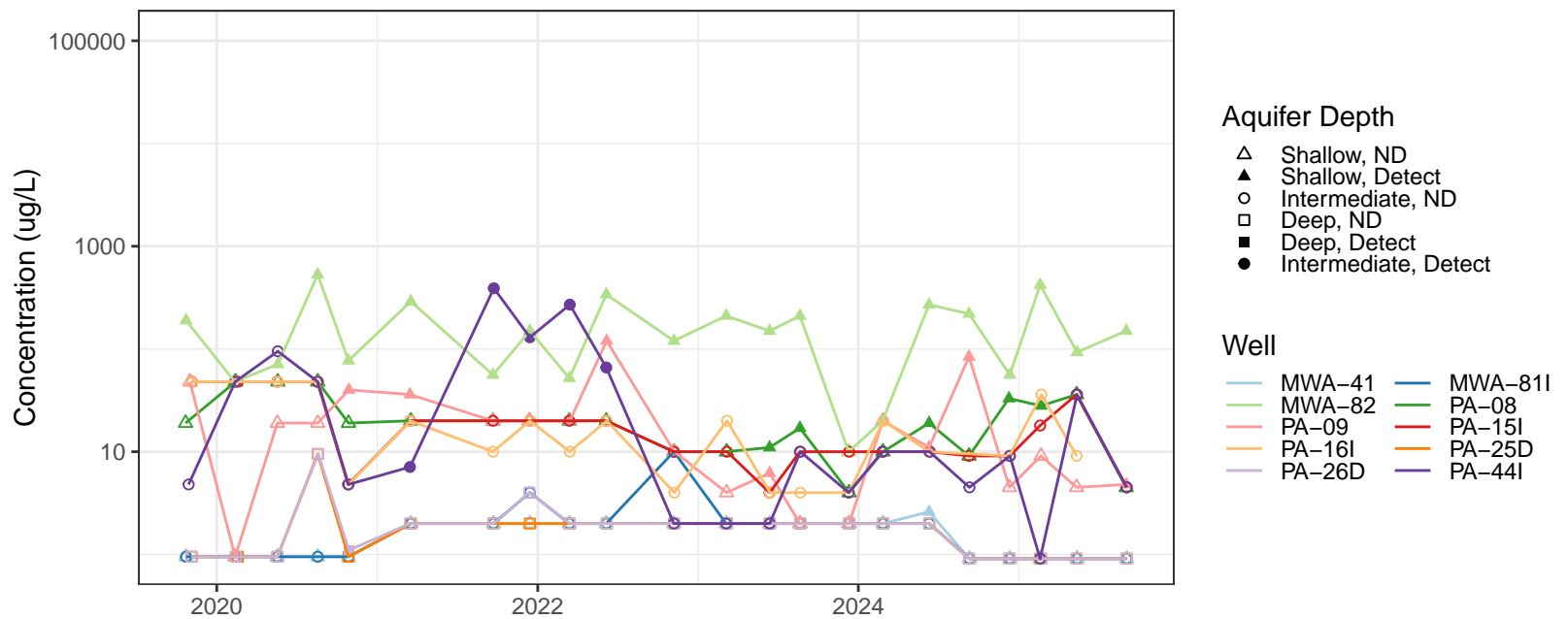
Perchlorate in GCC4 & Proximal Wells



Perchlorate in GCC5 & Proximal Wells



Perchlorate in GCC6 & Proximal Wells





## APPENDIX E HISTORICAL DATA TABLE

**Appendix E**  
**Historical Data Table**  
**Arkema Quarter 3, 2025, Groundwater Monitoring Report**  
**Arkema Inc. Facility**  
**Portland, Oregon**

Aquifer	Well ID	Sample ID	Date	2,4'-DDD	4,4'-DDD	2,4'-DDE	4,4'-DDE	2,4'-DDT	4,4'-DDT	Total of 2,4' and 4,4'-DDD, -DDE, -DDT	Chloride	Chlorobenzene	Chromium (VI)	Perchlorate
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Shallow	MWA-2	GAMWA210297	1/2/1997		< 0.1 U		< 0.1 U		<b>0.12</b>	<b>0.12 T</b>		< 5 U		
Shallow	MWA-2	GAMWA210397	3/12/1997		< 0.1 UJ		< 0.1 UJ		< 0.1 UJ	< 0.1 UJT		<b>7</b>		
Shallow	MWA-2	GAMWA210697	6/24/1997		< 0.1 UJ		< 0.1 UJ		< 0.1 UJ	< 0.1 UJT		<b>6,000</b>		
Shallow	MWA-2	GAMWA210997	9/30/1997		<b>0.17 J</b>		< 0.1 UJ		< 0.1 UJ	<b>0.17 JT</b>		<b>9,000</b>		
Shallow	MWA-2	GW059801	5/28/1998		<b>0.25 J</b>		< 0.04 U		<b>0.33 J</b>	<b>0.58 JT</b>	<b>10,400</b>	<b>4</b>		
Shallow	MWA-2	GW019907	1/27/1999		<b>0.32</b>		<b>0.04</b>		<b>0.18</b>	<b>0.54 T</b>	<b>41,100 T</b>	<b>94</b>		
Shallow	MWA-2	GW029906	4/27/1999		<b>0.8</b>		< 0.04 U		<b>0.6</b>	<b>1.4 T</b>	<b>16,800</b>	<b>970 J</b>		
Shallow	MWA-2	GW039907	8/24/1999		<b>0.7</b>		< 0.4 UJ		< 0.4 UJ	<b>0.7 T</b>	<b>33,800</b>	<b>4,400</b>		
Shallow	MWA-2	GW049905	11/16/1999		<b>0.39 J</b>		< 0.04 UJ		< 0.24 U	<b>0.39 JT</b>	<b>41,700</b>	<b>2,100</b>		
Shallow	MWA-2	GW010111	3/29/2001		<b>0.57</b>		< 0.1 U		< 0.1 U	<b>0.57 T</b>	<b>158,000 J</b>	<b>4,300</b>		
Shallow	MWA-2	GW020106	6/12/2001		<b>0.4</b>		<b>0.055</b>		< 0.05 UJ	<b>0.455 T</b>	<b>384,000</b>	<b>4,600</b>		
Shallow	MWA-2	GW04100205	4/10/2002		<b>0.41</b>		< 0.099 U		< 0.099 U	<b>0.41 T</b>	<b>1,400,000</b>	<b>27,000</b>		
Shallow	MWA-2	GW-060903-01	6/9/2003		< 1.70 U		< 1.70 U		< 2.80 U	< 2.8 UT	<b>981,000</b>	<b>13,700</b>		<b>1,400</b>
Shallow	MWA-2	MWA-2-111004	11/10/2004		< 0.500 UJ		< 0.500 UJ		< 0.500 UJ	< 0.5 UJT		<b>30,200</b>		
Shallow	MWA-2	MWA-2-031005	3/10/2005		< 2.50 UJ		< 2.50 UJ		< 2.50 UJ	< 2.5 UJT		<b>15,400</b>		
Shallow	MWA-2	MWA-2-062205	6/22/2005		<b>3.35</b>		< 0.500 UJ		< 0.500 UJ	<b>3.35 T</b>		<b>12,200</b>		
Shallow	MWA-2	MWA-2-091505	9/15/2005		<b>0.543 J</b>		< 0.184 U		<b>0.0789 J</b>	<b>0.8089 JT</b>		<b>21,900</b>		
Shallow	MWA-2	MWA-2-102705	10/27/2005		<b>0.477</b>		<b>0.0965</b>		< 0.236 UJ	<b>0.5735 T</b>		<b>23,500</b>		
Shallow	MWA-2	MWA-2-122005	12/20/2005		<b>0.312</b>		< 0.239 UJ		< 0.239 UJ	<b>0.312 T</b>		<b>16,200</b>		
Shallow	MWA-2	MWA-2-011306	1/13/2006		<b>0.510</b>		< 0.0971 UJ		< 0.0971 UJ	<b>0.51 T</b>		<b>4</b>		
Shallow	MWA-2	MWA-2-032906	3/29/2006		<b>0.240</b>		< 0.0952 UJ		<b>0.190</b>	<b>0.43 T</b>		<b>4,050</b>		
Shallow	MWA-2	MWA-2-040407	4/4/2007		<b>0.292</b>		< 0.287 U		< 0.191 U	<b>0.292 A</b>	<b>376,000</b>	<b>2,570</b>		<b>73.8</b>
Shallow	MWA-2	MWA-2-080609	8/6/2009		< 0.286 U		< 0.286 U		<b>0.191</b>	<b>0.191 A</b>	<b>340,000</b>	<b>18,200</b>		<b>3.9</b>
Shallow	MWA-15R	GW010117	3/30/2001		<b>37</b>		< 10 U		<b>450</b>	<b>487 T</b>	<b>1960,000 J</b>	<b>260,000</b>		
Shallow	MWA-15R	GW020121	6/15/2001		<b>7.4</b>		< 0.96 U		<b>73 J</b>	<b>80.4 JT</b>	<b>1,560,000</b>	<b>210,000</b>		
Shallow	MWA-15R	GW04160201	4/16/2002		<b>25</b>		<b>4.2 J</b>		<b>75 J</b>	<b>104 JT</b>	<b>407,000</b>	<b>48,000</b>		
Shallow	MWA-15R	GW-061003-04	6/10/2003		<b>28.4 J</b>		< 3.40 U		<b>113</b>	<b>141 JT</b>	<b>388,000</b>	<b>13,300</b>		<b>350</b>
Shallow	MWA-15R	MWA-15R-100203	10/2/2003									<b>27,200</b>		
Shallow	MWA-15R	MWA-15R-111403	11/14/2003									<b>163,000</b>		
Shallow	MWA-15R	MWA-15R-011304	1/13/2004									<b>64,400</b>		
Shallow	MWA-15R	MWA-15R-013004	1/30/2004									<b>24,600</b>		
Shallow	MWA-15R	MWA-15R-030204	3/2/2004									<b>2,450</b>		
Shallow	MWA-15R	MWA-15R-111004	11/10/2004		<b>27.7</b>		< 5.00 UJ		<b>86.2</b>	<b>113 T</b>		<b>154,000</b>		
Shallow	MWA-15R	MWA-15R-031005	3/10/2005		<b>79.7</b>		< 25.0 UJ		<b>534</b>	<b>613.7 T</b>		<b>97,000</b>		
Shallow	MWA-15R	MWA-15R-062205	6/22/2005		<b>40.9</b>		<b>9.88</b>		<b>193</b>	<b>243.78 T</b>		<b>87,700</b>		
Shallow	MWA-15R	MWA-15R-091605	9/16/2005		<b>73.2</b>		<b>11.2 J</b>		<b>619 J</b>	<b>703 JT</b>		<b>240,000</b>		
Shallow	MWA-15R	MWA-15R-122105	12/21/2005		<b>10.1</b>		<b>1.53</b>		<b>86.5</b>	<b>98.13 T</b>		<b>217,000</b>		
Shallow	MWA-15R	MWA-15R-033006	3/30/2006		<b>124</b>		<b>24</b>		<b>458</b>	<b>606 T</b>		<b>72,900</b>		
Shallow	MWA-15R	MWA-15R-041707	4/17/2007		<b>48.3 J</b>		<b>7.71</b>		<b>207</b>	<b>263 JA</b>	<b>129,000</b>	<b>34</b>		
Shallow	MWA-15R	MWA-15R-081909	8/19/2009		<b>111</b>		<b>21.9</b>		<b>702</b>	<b>835 A</b>	<b>156,000</b>	<b>23,500</b>	< 25 UJ	
Shallow	MWA-15R	MWA-15R-090309	9/3/2009		<b>377</b>		<b>52.1</b>		<b>5,210</b>	<b>5,640 A</b>				
Shallow	MWA-18	GW010105	3/27/2001						<b>0.046 J</b>	<b>0.046 JT</b>	<b>1,200,000</b>	<b>41</b>		
Shallow	MWA-18	GW020110	6/13/2001		<b>0.015 J</b>		< 0.0094 U		< 0.026 U	<b>0.015 JT</b>	<b>894,000 J</b>	<b>34</b>	< 50 UJ	
Shallow	MWA-18	GW04040203	4/4/2002		< 0.0096 U		< 0.0096 U		< 0.019 U	< 0.019 UT	<b>2,210,000</b>	<b>8</b>		
Shallow	MWA-18	GW-060603-03	6/6/2003		< 0.0170 U		< 0.0170 U		< 0.0280 U	< 0.028 UT	<b>1,410,000</b>	< 3.06 U		< 25 U
Shallow	MWA-18	MWA-18-050505	5/5/2005								<b>612,000</b>		<b>833</b>	
Shallow	MWA-18	MWA-18-071405	7/14/2005										<b>676</b>	
Shallow	MWA-18	MWA-18	8/3/2005		< 0.0500 U		< 0.0500 U		< 0.0500 U	< 0.05 UT		<b>0.580</b>		
Shallow	MWA-18	MWA-18-081605	8/16/2005										<b>248</b>	
Shallow	MWA-18	MWA-18-091205	9/12/2005								<b>410,000</b>		<b>1,180</b>	<b>3.4</b>
Shallow	MWA-18	MWA-18-120805	12/8/2005										<b>5.90 J</b>	
Shallow	MWA-18	MWA-18-011006	1/10/2006										<b>30.0</b>	
Shallow	MWA-18	MWA-18-021306	2/13/2006										< 4.55 U	
Shallow	MWA-18	MWA-18-072606	7/26/2006										<b>3.4</b>	
Shallow	MWA-18	MWA-18-041107	4/11/2007		< 0.0971 U		< 0.0971 U		< 0.0971 U	< 0.0971 UA	<b>233,000</b>	<b>1.33</b>	<b>2.2 J</b>	< 8.0 U

**Appendix E**  
**Historical Data Table**  
**Arkema Quarter 3, 2025, Groundwater Monitoring Report**  
**Arkema Inc. Facility**  
**Portland, Oregon**

Aquifer	Well ID	Sample ID	Date	2,4'-DDD	4,4'-DDD	2,4'-DDE	4,4'-DDE	2,4'-DDT	4,4'-DDT	Total of 2,4' and 4,4'-DDD, -DDE, -DDT	Chloride	Chlorobenzene	Chromium (VI)	Perchlorate
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Shallow	MWA-18	MWA-18-081009	8/10/2009		<b>0.0155</b>		<b>0.00671 J</b>		<b>0.00789 J</b>	<b>0.0301 JA</b>	<b>270,000</b>	<b>0.930 J</b>	<b>340 J</b>	< 4 U
Shallow	MWA-19	GW010104	3/27/2001		< 0.02 UJ		< 0.02 UJ		<b>0.095 J</b>	<b>0.095 JT</b>	<b>5,540,000</b>	< 0.5 U		
Shallow	MWA-19	GW020112	6/13/2001		< 0.0099 U		< 0.0099 U		< 0.016 U	< 0.016 UT	<b>12,700,000 J</b>	< 0.5 U	< 50 UJ	
Shallow	MWA-19	GW04040204	4/4/2002		< 0.0097 U		< 0.0097 U		<b>0.1</b>	<b>0.1 T</b>	<b>13,100,000</b>	< 0.5 U		
Shallow	MWA-19	GW-060603-04	6/6/2003		<b>0.0935</b>		< 0.0170 U		<b>0.23</b>	<b>0.324 T</b>	<b>5,180,000</b>	< 0.64 U		< 82 U
Shallow	MWA-19	MWA-19-050605	5/6/2005								<b>2,100,000</b>		<b>2,680</b>	
Shallow	MWA-19	MWA-19-071305	7/13/2005										<b>159</b>	
Shallow	MWA-19	MWA-19	8/3/2005		<b>0.114</b>		< 0.0500 U		<b>0.576</b>	<b>0.69 T</b>		<b>3.14</b>		
Shallow	MWA-19	MWA-19-081705	8/17/2005										<b>407</b>	
Shallow	MWA-19	MWA-19-091305	9/13/2005								<b>1,240,000</b>		<b>824</b>	< 1 U
Shallow	MWA-19	MWA-19-120805	12/8/2005										<b>101</b>	
Shallow	MWA-19	MWA-19-010906	1/9/2006										<b>33.2</b>	
Shallow	MWA-19	MWA-19-021006	2/10/2006										<b>12.1</b>	
Shallow	MWA-19	MWA-19-072606	7/26/2006										<b>56.8</b>	
Shallow	MWA-19	MWA-19-040907	4/9/2007		<b>0.0743 J</b>		< 0.0966 U		<b>0.242</b>	<b>0.316 JA</b>	<b>737,000</b>	<b>1.79</b>	<b>11.3</b>	< 80.0 U
Shallow	MWA-19	MWA-19-081009	8/10/2009		<b>0.183 J</b>		<b>0.175 J</b>		<b>1.14</b>	<b>1.5 JA</b>	<b>406,000</b>	<b>0.390 J</b>	<b>500 J</b>	< 40 U
Shallow	MWA-20	GW010103	3/27/2001						<b>0.088 J</b>	<b>0.088 JT</b>	<b>2,810,000 T</b>	<b>2,700</b>		
Shallow	MWA-20	GW020114	6/13/2001						<b>0.052 J</b>	<b>0.052 JT</b>	<b>1,780,000 J</b>	<b>1,100</b>	<b>59.5</b>	
Shallow	MWA-20	GW04090204	4/9/2002								<b>1,135,000 T</b>	<b>1,900</b>		
Shallow	MWA-20	GW-060503-03	6/5/2003		<b>0.0688 J</b>				<b>0.213 J</b>	<b>0.282 JT</b>	<b>1,500,000</b>	<b>215</b>		
Shallow	MWA-20	MWA-20-050905	5/9/2005										<b>436</b>	
Shallow	MWA-20	MWA-20-071305	7/13/2005										<b>74.1</b>	
Shallow	MWA-20	MWA-20	8/4/2005		< 0.0500 U		< 0.0500 U		< 0.0500 U	< 0.05 UT		<b>1,540</b>		
Shallow	MWA-20	MWA-20-081505	8/15/2005										<b>676</b>	
Shallow	MWA-20	MWA-20-090705	9/7/2005										<b>573</b>	
Shallow	MWA-20	MWA-20-121205	12/12/2005										<b>9.67 J</b>	
Shallow	MWA-20	MWA-20-011006	1/10/2006										<b>52.5</b>	
Shallow	MWA-20	MWA-20-020906	2/9/2006										<b>43.8</b>	
Shallow	MWA-20	MWA-20-072506	7/25/2006										<b>14.36 J</b>	
Shallow	MWA-20	MWA-20-041107	4/11/2007		< 0.0485 U		< 0.0485 U		<b>0.0692 J</b>	<b>0.0692 J</b>	<b>583,000</b>	<b>1,500 J</b>	<b>8.6</b>	< 33.9 U
Shallow	MWA-20	MWA-20-081709	8/17/2009		< 0.00952 U		< 0.00952 U		<b>0.00836 J</b>	<b>0.00836 JA</b>	<b>164,000</b>	<b>1,780</b>	<b>67 J</b>	< 40 U
Shallow	MWA-22	GW020122	6/15/2001		<b>0.83</b>		< 0.096 U		<b>0.15</b>	<b>0.98 T</b>	<b>4,870,000</b>	<b>38</b>		
Shallow	MWA-22	GW04110203	4/11/2002		< 0.099 U		< 0.099 U		< 0.099 U	< 0.099 UT	<b>5,430,000</b>	<b>310</b>		
Shallow	MWA-22	GW-061003-02	6/10/2003		< 0.13 U		< 0.0170 UJ		< 0.348 U	< 0.348 UT	<b>6,210,000</b>	<b>128</b>		
Shallow	MWA-22	MWA-22	8/1/2005		<b>0.115</b>		< 0.0500 U		<b>1.29</b>	<b>1.405 T</b>		<b>6,460</b>		
Shallow	MWA-22	MWA-22-041607	4/16/2007		<b>0.133</b>		< 0.0976 U		< 0.0976 U	<b>0.133 A</b>	<b>4,200,000</b>	<b>538</b>	<b>103</b>	
Shallow	MWA-22	MWA-22-081909	8/19/2009		< 0.144 U		< 0.0962 U		< 0.0962 U	< 0.144 UA	<b>2,870,000</b>	<b>123</b>	<b>48 J</b>	< 40 U
Shallow	MWA-22	MWA-22-022119	2/21/2019	< 0.10 UJ	<b>0.026 J-</b>	< 0.10 UJ	<b>0.0060 J-</b>	< 0.10 UJ	< 0.010 UJ	<b>0.032</b>		<b>3,400</b>	< 13 UJ	< 48
Shallow	MWA-24	GW11150102	11/15/2001									< 2.5 U		
Shallow	MWA-24	GW04080201	4/8/2002								<b>408,000</b>			
Shallow	MWA-24	GW-060503-04	6/5/2003		< 0.232 U		< 0.0340 U		< 0.0560 U	< 0.232 UT	<b>583,000</b>			
Shallow	MWA-24	MWA-24-050505	5/5/2005								<b>529,000</b>		<b>52.8 J</b>	
Shallow	MWA-24	MWA-24-071205	7/12/2005										<b>54.1 J</b>	
Shallow	MWA-24	MWA-24-081105	8/11/2005										<b>35.5</b>	
Shallow	MWA-24	MWA-24-090705	9/7/2005										<b>20.3</b>	
Shallow	MWA-24	MWA-24-091405	9/14/2005											<b>30</b>
Shallow	MWA-24	MWA-24-120705	12/7/2005										<b>63.5</b>	
Shallow	MWA-24	MWA-24-011106	1/11/2006										<b>31.9</b>	
Shallow	MWA-24	MWA-24-020806	2/8/2006										<b>30.6</b>	
Shallow	MWA-24	MWA-24-072506	7/25/2006										<b>24</b>	
Shallow	MWA-24	MWA-24-040307	4/3/2007								<b>274,000</b>	<b>1.90 J</b>	<b>76.2</b>	<b>258 J</b>
Shallow	MWA-24	MWA-24-080509	8/5/2009								<b>237,000</b>	< 0.500 U	<b>86 J</b>	<b>17.9</b>
Shallow	MWA-29	GW04080204	4/8/2002		< 0.0096 U		< 0.0096 U		< 0.0096 U	< 0.0096 UT	<b>21,900,000</b>	< 0.5 U		
Shallow	MWA-29	GW-060403-06	6/4/2003		< 0.0170 UJ		< 0.0170 UJ		< 0.0280 UJ	< 0.028 UJT	<b>11,700,000</b>			< 110 U
Shallow	MWA-29	MWA-29-050905	5/9/2005								<b>9,100,000</b>		<b>14.1</b>	

**Appendix E**  
**Historical Data Table**  
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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
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											
Shallow	MWA-29	MWA-29-120805	12/8/2005								12,600,000		107	4,800
Shallow	MWA-29	MWA-29-010606	1/6/2006										186	
Shallow	MWA-29	MWA-29-020806	2/8/2006										14.1	
Shallow	MWA-29	MWA-29-072406	7/24/2006										19.5	
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**  
**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-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		<b>94.0</b>		
Shallow	MWA-42	MWA-42-081505	8/15/2005										<b>11.9</b>	
Shallow	MWA-42	MWA-42-090805	9/8/2005								<b>913,000</b>			
Shallow	MWA-42	MWA-42-092305	9/23/2005										<b>46.7</b>	
Shallow	MWA-42	MWA-42-120705	12/7/2005										<b>27.7</b>	
Shallow	MWA-42	MWA-42-011106	1/11/2006										<b>5.77 J</b>	
Shallow	MWA-42	MWA-42-020906	2/9/2006										<b>6.26 J</b>	
Shallow	MWA-42	MWA-42-072506	7/25/2006										<b>8.6 J</b>	
Shallow	MWA-42	MWA-42-040307	4/3/2007		<b>0.101</b>		<b>0.197</b>		<b>0.111</b>	<b>0.409 A</b>	<b>45,000</b>	<b>3.35</b>	<b>7.4</b>	< 80.0 U
Shallow	MWA-42	MWA-42-081709	8/17/2009		<b>0.104</b>		<b>0.152</b>		< 0.0952 U	<b>0.256 A</b>	<b>816,000</b>	<b>129</b>	< 25 UJ	< 40 U
Shallow	MWA-46	MWA-46-050605	5/6/2005										<b>49.5 J</b>	
Shallow	MWA-46	MWA-46-071405	7/14/2005										<b>41.1</b>	
Shallow	MWA-46	MWA-46	8/4/2005		< 0.0500 U		< 0.0500 U		<b>0.611 J</b>	<b>0.611 JT</b>		<b>40.2</b>		
Shallow	MWA-46	MWA-46-081605	8/16/2005										<b>20.3</b>	
Shallow	MWA-46	MWA-46-091305	9/13/2005								<b>1,250,000</b>		<b>43.3</b>	< 1 U
Shallow	MWA-46	MWA-46-120905	12/9/2005										<b>16.7</b>	
Shallow	MWA-46	MWA-46-010906	1/9/2006										< 4.55 U	
Shallow	MWA-46	MWA-46-021306	2/13/2006										<b>5.14 J</b>	
Shallow	MWA-46	MWA-46-072606	7/26/2006										<b>35.4</b>	
Shallow	MWA-46	MWA-46-041107	4/11/2007		< 0.0980 U		< 0.0980 U		<b>0.323</b>	<b>0.323 A</b>	<b>1,820,000</b>	<b>938</b>	<b>22</b>	< 80.0 U
Shallow	MWA-46	MWA-46-081009	8/10/2009		<b>0.429</b>		<b>0.176 J</b>		<b>0.728</b>	<b>1.33 JA</b>	<b>651,000</b>	<b>1.54</b>	< 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										<b>4.63 J</b>	
Shallow	MWA-47	MWA-47-090905	9/9/2005								<b>9,690,000</b>		< 4.55 U	<b>66,000</b>
Shallow	MWA-47	MWA-47-121205	12/12/2005										< 4.55 U	
Shallow	MWA-47	MWA-47-010606	1/6/2006										<b>14.3</b>	
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		<b>0.265</b>		<b>0.0489 J</b>		<b>0.152</b>	<b>0.466 JA</b>	<b>3,690,000</b>	<b>0.540</b>	< 20 UJ	<b>82.3</b>
Shallow	MWA-47	MWA-47-080609	8/6/2009		<b>0.200</b>		<b>0.0353 J</b>		<b>0.0931 J</b>	<b>0.328 JA</b>	<b>2,110,000</b>	<b>0.880 J</b>	<b>110 J</b>	< 20 U
Shallow	MWA-47	MWA-47-022119	2/21/2019	<b>0.040 j</b>	<b>0.067</b>	< 0.10	< 0.0050	< 0.10	<b>0.041</b>	<b>0.148</b>			<b>33</b>	<b>3.9 j</b>
Shallow	MWA-61	MWA-61	8/1/2005		< 2.50 UJ		< 2.50 UJ		< 2.50 UJ	< 2.5 UJT			<b>5,800</b>	
Shallow	MWA-61	MWA-61-102605	10/26/2005		<b>0.109</b>		< 0.236 UJ		<b>0.129</b>	<b>0.238 T</b>			<b>2,100</b>	
Shallow	MWA-61	MWA-61-112105	11/21/2005		<b>0.11</b>		<b>0.0557 J</b>		<b>0.204</b>	<b>0.369 JT</b>			<b>133</b>	
Shallow	MWA-61	MWA-61-011306	1/13/2006		<b>0.545</b>		< 0.0472 U		<b>0.124</b>	<b>0.669 T</b>			<b>465</b>	
Shallow	MWA-61	MWA-61-040407	4/4/2007		<b>0.567</b>		< 0.0980 U		< 0.0980 U	<b>0.567 A</b>	<b>683,000</b>		<b>325</b>	<b>343</b>
Shallow	MWA-61	MWA-61-081009	8/10/2009		<b>0.356 J</b>		< 0.476 U		< 0.476 U	<b>0.356 JA</b>	<b>473,000</b>		<b>715 J</b>	<b>489</b>
Shallow	MWA-61	MWA-61-022119	2/21/2019	<b>0.27 J+</b>	<b>0.50 J+</b>	< 0.10	<b>0.016 J+</b>	< 0.10	<b>0.029 J+</b>	<b>0.815</b>			<b>690</b>	< 1.0
Shallow	MWA-63	MWA-63-102705	10/27/2005		< 0.0472 U		< 0.0472 U		< 0.0472 U	< 0.0472 UT			<b>7.60</b>	
Shallow	MWA-63	MWA-63-112105	11/21/2005		< 0.0495 U		< 0.0495 U		<b>0.0533 J</b>	<b>0.0533 JT</b>		< 0.272 U		
Shallow	MWA-63	MWA-63-040407	4/4/2007		< 0.00995 UJ		< 0.00995 UJ		<b>0.00603 J</b>	<b>0.00603 JA</b>	<b>358,000</b>		<b>0.180 J</b>	< 4.0 U
Shallow	MWA-63	MWA-63-080509	8/5/2009		< 0.00952 U		< 0.00952 U		<b>0.00574 J</b>	<b>0.00574 JA</b>	<b>690,000</b>		< 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			<b>5,800</b>	< 1.0 UJ
Shallow	MWA-69	MWA-69	8/2/2005		<b>17.3</b>		< 5.00 UJ		<b>51.1</b>	<b>68.4 T</b>			<b>9,010</b>	
Shallow	MWA-69	MWA-69-102505	10/25/2005		<b>3.93</b>		<b>0.289</b>		<b>6.84</b>	<b>11.059 T</b>			<b>2,690</b>	
Shallow	MWA-69	MWA-69-112205	11/22/2005		<b>4.36</b>		<b>0.425</b>		<b>9.33</b>	<b>14.115 T</b>			<b>3,640</b>	
Shallow	MWA-69	MWA-69-011606	1/16/2006		<b>8.64</b>		<b>0.838</b>		<b>29.5</b>	<b>38.978 T</b>			<b>166</b>	
Shallow	MWA-69	MWA-69-041707	4/17/2007		<b>15.6</b>		<b>1.05 J</b>		<b>46.4 J</b>	<b>62.9 JA</b>	<b>511,000</b>		<b>5,360</b>	<b>29.5 J</b>
Shallow	MWA-69	MWA-69-081109	8/11/2009		<b>50.0</b>		<b>4.16</b>		<b>57.9</b>	<b>112.06</b>	<b>297,000</b>		<b>6,930</b>	< 20 U
Shallow	MWA-69	MWA-69-090309	9/3/2009		<b>7.45</b>		<b>0.369</b>		<b>5.95</b>	<b>13.8 A</b>				
Intermediate	MWA-8I	GWG001	11/24/1998										<b>1,700</b>	
Intermediate	MWA-8I	GW019906	1/27/1999		<b>5.3 J</b>		<b>0.07 J</b>		<b>1 J</b>	<b>6.37 JT</b>	<b>2,660,000</b>		<b>4,800</b>	
Intermediate	MWA-8I	GW029908	4/27/1999		<b>0.16 J</b>		< 0.04 UJ		< 0.04 UJ	<b>0.16 JT</b>	<b>2,290,000</b>		<b>4,300 J</b>	

**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
Intermediate	MWA-8I	GW039905	8/24/1999		<b>0.05 J</b>		< 0.04 UJ		< 0.04 UJ	<b>0.05 JT</b>	<b>2,660,000</b>	<b>3,400</b>		
Intermediate	MWA-8I	GW049906	11/16/1999		<b>0.08 J</b>					<b>0.08 JT</b>	<b>2,530,000</b>	<b>2,800</b>		
Intermediate	MWA-8I	GW010112	3/29/2001		< 0.1 U		< 0.1 U		< 0.1 U	< 0.1 UT	<b>1,660,000 J</b>	<b>4,100</b>		
Intermediate	MWA-8I	GW020107	6/12/2001		<b>0.11 J</b>					<b>0.11 JT</b>	<b>1,420,000</b>	<b>1,400</b>		
Intermediate	MWA-8I	GW04100206	4/10/2002		<b>0.08</b>		< 0.0097 U		<b>0.012</b>	<b>0.092 T</b>	<b>2,110,000</b>	<b>940</b>		
Intermediate	MWA-8I	GW-060903-02	6/9/2003		< 0.0170 U		< 0.0170 U		< 0.0280 U	< 0.028 UT	<b>2,380,000</b>	<b>23</b>		< 20 U
Intermediate	MWA-8I	MWA-8I-111004	11/10/2004		< 0.0500 U		< 0.0500 U		<b>0.590</b>	<b>0.59 T</b>		<b>24</b>		
Intermediate	MWA-8I	MWA-8I-031005	3/10/2005		< 0.0500 U		< 0.0500 U		<b>0.138 J</b>	<b>0.138 JT</b>		<b>185</b>		
Intermediate	MWA-8I	MWA-8I-062105	6/21/2005		< 0.0500 U		< 0.0500 U		< 0.0500 U	< 0.05 UT		<b>27</b>		
Intermediate	MWA-8I	MWA-8I-091505	9/15/2005		< 0.00103 U		< 0.00367 U		<b>0.0243 J</b>	<b>0.0243 JT</b>		<b>122</b>		
Intermediate	MWA-8I	MWA-8I-102705	10/27/2005		< 0.0472 U		< 0.0472 U		< 0.0472 U	< 0.0472 UT		<b>215</b>		
Intermediate	MWA-8I	MWA-8I-112105	11/21/2005		< 0.0472 U		< 0.0472 U		<b>0.0678 J</b>	<b>0.0678 JT</b>		<b>46</b>		
Intermediate	MWA-8I	MWA-8I-122005	12/20/2005		< 0.0957 UJ		< 0.0957 UJ		< 0.0957 UJ	< 0.0957 UJT		<b>25</b>		
Intermediate	MWA-8I	MWA-8I-032906	3/29/2006		< 0.0490 U		< 0.0490 U		< 0.0490 U	< 0.049 UT		<b>18</b>		
Intermediate	MWA-8I	MWA-8I-040407	4/4/2007		< 0.0976 U		< 0.0976 U		< 0.0976 U	< 0.0976 UA	<b>1,420,000</b>	<b>4,910</b>		< 200 U
Intermediate	MWA-8I	MWA-8I-080609	8/6/2009		< 0.0190 U		< 0.0190 U		<b>0.0194</b>	<b>0.0194 A</b>	<b>1,020,000</b>	<b>746</b>		< 20 U
Intermediate	MWA-32I	GW-060403-10	6/4/2003		< 0.0170 UJ		< 0.0170 UJ		< 0.0280 UJ	< 0.028 UJT	<b>31,000,000</b>			<b>200,000</b>
Intermediate	MWA-32I	MWA-32I-050605	5/6/2005								<b>17,600,000</b>		<b>176</b>	
Intermediate	MWA-32I	MWA-32I-051005	5/10/2005										<b>119</b>	<b>158,000</b>
Intermediate	MWA-32I	MWA-32I-071805	7/18/2005											
Intermediate	MWA-32I	MWA-32I	8/3/2005		< 0.0500 U		< 0.0500 U		< 0.0500 U	< 0.05 UT		<b>1</b>		
Intermediate	MWA-32I	MWA-32I-081705	8/17/2005										<b>555</b>	
Intermediate	MWA-32I	MWA-32I-091405	9/14/2005								<b>13,700,000</b>		<b>386</b>	<b>160,000</b>
Intermediate	MWA-32I	MWA-32I-120905	12/9/2005										<b>14.4</b>	
Intermediate	MWA-32I	MWA-32I-010606	1/6/2006										<b>6.55 J</b>	
Intermediate	MWA-32I	MWA-32I-021006	2/10/2006										<b>6.72 J</b>	
Intermediate	MWA-32I	MWA-32I-072606	7/26/2006											< 2 U
Intermediate	MWA-32I	MWA-32I-040507	4/5/2007		<b>0.0818 J</b>		< 0.0952 U		< 0.0952 U	<b>0.0818 JA</b>	<b>33,800,000</b>	<b>0.470 J</b>	<b>8 J</b>	<b>131 J</b>
Intermediate	MWA-32I	MWA-32I-081009	8/10/2009		<b>0.0568 J</b>		< 0.0962 U		< 0.0962 U	<b>0.0568 JA</b>	<b>2,520,000</b>	<b>0.180 J</b>	<b>210 J</b>	<b>29,900</b>
Intermediate	MWA-34I	GW-060603-05	6/6/2003		<b>0.0892</b>		< 0.0170 U		<b>0.327</b>	<b>0.416 T</b>	<b>3,040,000</b>	<b>666</b>		<b>4,600</b>
Intermediate	MWA-34I	MWA-34I-050605	5/6/2005								<b>5,260,000</b>		<b>35.8</b>	
Intermediate	MWA-34I	MWA-34I-071805	7/18/2005										<b>17.6</b>	
Intermediate	MWA-34I	MWA-34I	8/3/2005		< 0.0500 U		< 0.0500 U		< 0.0500 U	< 0.05 UT		<b>1,540</b>		
Intermediate	MWA-34I	MWA-34I-081705	8/17/2005										<b>192</b>	
Intermediate	MWA-34I	MWA-34I-091305	9/13/2005								<b>4,580,000</b>		<b>26.9</b>	<b>5,900</b>
Intermediate	MWA-34I	MWA-34I-120905	12/9/2005										<b>30.2</b>	
Intermediate	MWA-34I	MWA-34I-010906	1/9/2006										<b>13.5</b>	
Intermediate	MWA-34I	MWA-34I-021006	2/10/2006										<b>12.3</b>	
Intermediate	MWA-34I	MWA-34I-072606	7/26/2006										<b>34.5</b>	
Intermediate	MWA-34I	MWA-34I-040907	4/9/2007		< 0.0971 U		< 0.0971 U		< 0.0971 U	< 0.0971 UA	<b>1,400,000</b>	<b>3,920</b>	<b>32.6</b>	< 80.0 U
Intermediate	MWA-34I	MWA-34I-081109	8/11/2009		< 0.0200 U		< 0.0200 U		< 0.0200 U	< 0.02 UA	<b>740,000</b>	<b>3,240</b>	< 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		<b>0.204</b>	<b>0.204 T</b>		<b>6</b>		
Intermediate	MWA-49I	MWA-49I-081605	8/16/2005										< 4.55 U	
Intermediate	MWA-49I	MWA-49I-091305	9/13/2005								<b>10,600,000</b>		< 4.55 U	<b>160,000</b>
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		<b>0.135</b>	<b>0.135 A</b>	<b>11,000,000</b>	<b>0.780 J</b>	<b>0.9 J</b>	<b>42,800</b>
Intermediate	MWA-49I	MWA-49I-081009	8/10/2009		<b>0.0402 J</b>		<b>0.0394 J</b>		<b>0.269</b>	<b>0.349 JA</b>	<b>7,560,000</b>	< 10.0 U	< 25 UJ	<b>58,900</b>
Intermediate	MWA-51I	MWA-51I-050505	5/5/2005										<b>48.5</b>	
Intermediate	MWA-51I	MWA-51I-071405	7/14/2005										<b>63.1</b>	
Intermediate	MWA-51I	MWA-51I	8/3/2005		< 0.0500 U		< 0.0500 U		<b>1.21</b>	<b>1.21 T</b>		<b>845</b>		

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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
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
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
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	54.6 J
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
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
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
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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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	µg/L
Deep	MWA-31I(D)	MWA-31I-120905	12/9/2005											<b>25.1</b>	
Deep	MWA-31I(D)	MWA-31I-010906	1/9/2006											<b>45.3</b>	
Deep	MWA-31I(D)	MWA-31I-021006	2/10/2006											<b>104</b>	
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	<b>53,700,000</b>	<b>0.640</b>		< 6 UJ	<b>5,730</b>
Deep	MWA-31I(D)	MWA-31I(D)-081009	8/10/2009		< 0.00952 U		< 0.00952 U		< 0.00952 U	< 0.00952 UA	<b>54,300,000</b>	< 2.50 UJ		<b>9,300 J</b>	<b>1,840</b>
Deep	MWA-56D	MWA-56D-050605	5/6/2005											< 4.55 U	
Deep	MWA-56D	MWA-56D-071405	7/14/2005											<b>22.3</b>	
Deep	MWA-56D	MWA-56D-081605	8/16/2005											< 4.55 U	
Deep	MWA-56D	MWA-56D-091305	9/13/2005								<b>30,800,000</b>			< 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	<b>27,900,000</b>	< 2.50 U		< 2 UJ	<b>2,430</b>
Deep	MWA-56D	MWA-56D-081009	8/10/2009		< 0.00976 U		< 0.00976 U		<b>0.00690 J</b>	<b>0.0069 JA</b>	<b>22,800,000</b>	< 5.00 U		< 25 UJ	<b>2,140</b>
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								<b>60,700,000</b>			< 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	<b>53,600,000</b>	< 2.50 U		<b>57.5</b>	<b>59,600</b>
Deep	MWA-58D	MWA-58D-081009	8/10/2009		< 0.00943 U		< 0.00943 U		<b>0.0286</b>	<b>0.0286 A</b>	<b>33,600,000</b>	<b>2.00 J</b>		< 25 UJ	<b>128,000</b>

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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