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Ms. Katie Daugherty
Oregon Department of Environmental Quality
Northwest Region 28
700 NE Multnomah St, Suite 600
Portland, OR 97232

DATE
15 January 2025

SUBJECT
Quarter 4, 2024, Progress Report
(October through December 2024)
Arkema Inc. Portland Plant

REFERENCE
0732436.103

Dear Ms. Daugherty:

Environmental Resources Management, Inc. (ERM) is submitting this Quarterly Progress Report (QPR) on behalf of Legacy Site Services LLC (LSS) agent for Arkema Inc. (Arkema) to summarize Quarter 4, 2024, activities at the Arkema facility located at 6400 NW Front Avenue in Portland, Oregon.

Paragraph 8(G) of the Order on Consent Requiring Source Control Measures and Feasibility Study between the Oregon Department of Environmental Quality (ODEQ) and LSS, dated 31 October 2008, requires submittal of QPRs. The following progress report summarizes activities for Quarter 4, 2024 (October through December).

Weekly progress summaries for implementation of the stormwater and groundwater source control measures (SCM) have been developed over the duration of the project. The reports for Quarter 4, 2024, are included as Attachment 1 to this QPR for reference, and activities documented in the reports are not duplicated in this letter.

Actions Taken Quarter 4, 2024 (October through December)

- 1 October 2024: The ODEQ provided a response to the Trespass Contamination Determination memorandum.
- 7 October 2024: ERM and Cascade Drilling, on behalf of LSS, began drilling for phase two of the In Situ Stabilization (ISS) Pre-Design Investigation (PDI).
- 11 October 2024: A representative from ERM had a phone call with a representative from the ODEQ to discuss a proposed change to the Interim Remedial Action Measure (IRAM) #1 PDI Work Plan.
- 13 October 2024: ERM sent the ODEQ a summary of the call on 11 October 2024.
- 15 October 2024: ERM, on behalf of LSS, submitted the September 2024 monthly Discharge Monitoring Report (DMR) for the performance monitoring of the stormwater SCM, including supplemental Copper Biotic Ligand Model (BLM) data.

- 16 October 2024: ERM, on behalf of LSS, submitted the Quarter 3, 2024, QPR to the ODEQ.
- 16 October 2024: ERM, on behalf of LSS, submitted the August 2024 monthly DMR for National Pollutant Discharge Elimination System (NPDES) permit compliance monitoring of the groundwater extraction and treatment (GWET) system.
- 16 October 2024: Representatives from ERM and LSS had a biweekly progress call with the ODEQ regarding IRAM #1.
- 17 October 2024: ERM, on behalf of LSS, submitted the August 2024 Monthly Progress Report (MPR) to the ODEQ.
- 28 October 2024: ERM, on behalf of LSS, shut down the well-field for 25 hours to de-energize it for the PDI drilling.
- 30 October 2024: Representatives from ERM and LSS had a biweekly progress call with the ODEQ regarding IRAM #1.
- 31 October 2024: ERM, on behalf of LSS, completed phase two of the ISS PDI.
- 13 November 2024: Representatives from ERM and LSS had a biweekly progress call with the ODEQ regarding IRAM #1.
- 15 November 2024: ERM, on behalf of LSS, submitted the September 2024 monthly DMR for NPDES permit compliance monitoring of the GWET system.
- 15 November 2024: ERM, on behalf of LSS, submitted the October 2024 monthly DMR for the performance monitoring of the stormwater SCM, including supplemental Copper BLM data.
- 19 November 2024: ERM, on behalf of LSS, submitted the September 2024 MPR to the ODEQ.
- 21 November 2024: The ODEQ sent comments on the Quarter 2, 2024, Groundwater Monitoring Report.
- 27 November 2024: Representatives from ERM and LSS had a biweekly progress call with the ODEQ regarding IRAM #1.
- 9 December 2024: ERM, on behalf of LSS, began the Quarter 4, 2024, groundwater monitoring event. The event was completed on 12 December 2024.
- 9 December 2024: ERM, on behalf of LSS, submitted the PDI Report to the ODEQ.
- 11 December 2024: Representatives from ERM and LSS had a biweekly progress call with the ODEQ regarding IRAM #1.
- 16 December 2024: ERM, on behalf of LSS, submitted the November 2024 monthly DMR for the performance monitoring of the stormwater SCM, including supplemental Copper BLM data.
- 16 December 2024: ERM, on behalf of LSS, submitted the October 2024 monthly DMR for NPDES permit compliance monitoring of the GWET system.

- 18 December 2024: ERM, on behalf of LSS, submitted the Quarter 3, 2024, Groundwater Monitoring Report, to the ODEQ.
- 19 December 2024: ERM, on behalf of LSS, submitted the October 2024 MPR to the ODEQ.

Actions Scheduled for Quarter 1, 2025 (January through March)

- The QPR for Quarter 4, 2024, will be prepared and submitted.
- LSS will continue to monitor discharges from the stormwater SCM and submit monthly monitoring reports as well as Copper BLM data to the ODEQ.
- LSS will continue to monitor discharges from the groundwater SCM and submit monthly DMRs to the ODEQ.
- LSS will continue optimization of the GWET system as part of the implementation of the groundwater SCM and in accordance with the GWET System Corrective Action Plan and associated updates.
- LSS will conduct routine maintenance on the stormwater SCM.
- LSS will submit monthly status reports consistent with the Performance Monitoring Plan and per the ODEQ letter DEQ Review "Draft GWET System Effectiveness Evaluation Report" (SEE) received on 31 May 2019.
- LSS will conduct groundwater monitoring for Quarter 1, 2025.
- LSS will submit the Quarter 4, 2024, Groundwater Monitoring Report.
- LSS will submit the 2024 GWET SEE Report.

Summary of Validated Data

- Weekly compliance and quarterly characterization sampling of the GWET system data were received and validated. These data were presented in the respective monthly DMRs.
- Quarter 3, 2024, groundwater monitoring data were reviewed and validated during Quarter 4, 2024. These data are included in Attachment 2 and are presented in the Quarterly Groundwater Monitoring Report for Quarter 3, 2024.
- Quarter 4, 2024, groundwater monitoring event data were collected. These data will be reviewed, validated, and presented in the Quarterly Groundwater Monitoring Report for Quarter 4, 2024.

Problems Experienced During Quarter

Specific problems experienced during the GWET system optimization and operation are documented in the attached weekly progress reports. No other problems were experienced during Quarter 4, 2024.

Closing

If you have questions or comments pertaining to this progress report, please contact us at (503) 488-5282.

Sincerely,

Brendan Robinson
Partner

Avery Soplata
Project Manager

Attachments

cc: Todd Slater, LSS
Laura Hanna, USEPA
Matt Stock, Joyce Ziker Parkinson
Lance Peterson, CDM
Karen Traeger, LSS
David Livermore, Integral

ATTACHMENT 1 QUARTER 4, 2024, WEEKLY PROGRESS REPORTS

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Groundwater Extraction and Treatment (GWET) System Weekly Progress Report
Week from: 27 September 2024 to 3 October 2024
Former Arkema Facility, Portland, Oregon

Plant Operations

Groundwater extraction at select recovery/extraction wells, treatment, and discharge proceeded continuously except for a planned 25.5-hour wellfield shutdown. MCC Room 1 was locked out / tagged out (LOTO) to conduct air knifing in the area for the upcoming PDI work. Uptime for the reporting period was 85 percent. The average system influent flow rate for the week was 27.7 gpm. Recovery/Extraction Wells RW-23, RW-25, EW-01, EW-03, EW-05, EW-08, EW-09, EW-10, EW-11, EW-13, and EW-14 were in operation during the reporting period. The total influent volume for the week was 214,280 gallons or 35 percent of the target capture objective of 60 gpm at 100 percent uptime.

- Friday, 27 September 2024: Operators performed general O&M and cycled the filter press. Replaced malfunction transducer and fuse at PA-17iR and recalibrated. Backwashed carbon vessel CT-1. Repaired plumbing at Extraction Well EW-09, installed hose and camlock fitting at wellhead. Recalibrated transducer PA-10i and checked PA-16i.
- Saturday, 28 September 2024: Operator performed general O&M and cycled the filter press. Lowered and calibrated transducer PA-16i.
- Sunday, 29 September 2024: Operator performed general O&M and cycled the filter press.
- Monday, 30 September 2024: Operators performed general O&M. Cochran onsite for Admin building lighting and electrical work. MCC Room 1 was LOTO to conduct air knifing in the area for the upcoming PDI work. This shut down the wellfield at 0800. Cleaned the plate separator (PS-1). Collected LGAC check samples and sent to ALS. Installed recirculation line for the polymer makedown pump. Replaced filters on the filter press plates.
- Tuesday, 1 October 2024: Operators performed general O&M and cycled the filter press. Cochran onsite for Admin building lighting and electrical. Removed LOTO at MCC-1 at 0930 and restarted the wellfield. Discharge to the river at 1030. Replaced filters on filter press plates 2 through 8. Mobilized to Front Avenue to assess Eco-block placement.
- Wednesday, 2 October 2024: Operators performed general O&M and cycled the filter press. Cochran onsite for Admin building lighting and electrical work. Operator started the auto-sampler for collection of the quarterly NPDES compliance

samples. Mobilized to Front Avenue to assess Eco-block placement. Repaired polymer makedown tubing. Assembled mockup piping for the Hydropuls tool.

- Thursday, 3 October 2024: Operators performed general O&M. Collected quarterly compliance samples and sent to Eurofins. Tested Hydropuls tool in mockup piping with success. Transferred hydrant water in totes to fill up 3,000-gallon flat bottom tank to prepare for Hydropuls work. Tidewater Environmental Services picked up two iron sludge boxes (4 and rental 320-20) for transportation to the Roosevelt Landfill Disposal facility.

Recovery/Extraction Well Status

- The current influent flow rate is **20 to 30 gpm**, with Recovery/Extraction Wells EW-1, EW-3, EW-6, EW-8, EW-09, EW-11, EW-14, RW-14, RW-23, and RW-25 in operation.
- EW-02: Off since 7/1, totalizer malfunctioning, operators to troubleshoot.
- EW-04: Off since 7/10, low water table.
- EW-05: Faulting, operators to change out fouled 1-hp pump.
- EW-06: Started 10/3.
- EW-07: Off since 7/31, low water table.
- EW-09: Started 9/27, repaired plumbing.
- EW-10: Off since 9/26, operators to troubleshoot.
- EW-12: Off since 6/7, shipped to QSP.
- EW-13: Started 9/26.
- EW-14: Off since 9/26, operators to change out fouled 1-hp pump.
- RW-22: Off, ground fault, operators to swap out cable leads.

Transducer Status

- PA-17iR: Replaced malfunctioning transducer and fuse, recalibrated and back in service.
- PA-23d: Transducer malfunctioning, investigation required.
- PA-09: Transducer malfunctioning, investigation required.
- PA-16i: Transducer lowered and recalibrated.

Sampling

- LGAC check samples were collected 30 September 2024 and sent to ALS.
- Weekly compliance samples were collected 3 October 2024 and sent to Eurofins.

Stormwater

- Weekly ISCO sampler and stormwater pond inspection conducted.

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Groundwater Extraction and Treatment (GWET) System Weekly Progress Report
Week from: 4 October 2024 to 10 October 2024
Former Arkema Facility, Portland, Oregon

Plant Operations

Groundwater extraction at select recovery/extraction wells, treatment, and discharge proceeded continuously except for an unplanned shutdown due to pump P-1 faulting, leading to a wellfield shutdown for 0.5 hour. Uptime for the reporting period was 99 percent. The average system influent flow rate for the week was 27.1 gpm. Recovery/Extraction Wells RW-23, RW-25, EW-01, EW-03, EW-06, EW-08, EW-09, EW-11, and EW-13 were in operation during the reporting period. The total influent volume for the week was 239,800 gallons or 40 percent of the target capture objective of 60 gpm at 100 percent uptime.

- Friday, 4 October 2024: Operators performed general O&M and cycled the filter press. Cochran onsite for Admin building lighting. Backwashed carbon vessel CT-1. Modified MCR bypass piping to transfer water from FBR-EFF to MCR pump back to FBR. Performed bag filter test on the FBR-EFF.
- Saturday, 5 October 2024: Operator performed general O&M and cycled the filter press.
- Sunday, 6 October 2024: Operator performed general O&M and cycled the filter press.
- Monday, 7 October 2024: Operators performed general O&M. Cochran onsite to install lighting in the Admin building. Cascade Drilling onsite for PDI work. Pump P-1 faulted leading to a wellfield shutdown for 0.5 hour, switched to P-2. Performed monthly eyewash inspection. Replaced the PID internal filter and calibrated. Replace malfunctioning hydraulic pump on the filter press.
- Tuesday, 8 October 2024: Operators performed general O&M and cycled the filter press. Cochran onsite to install lighting in the Admin building. Cascade Drilling onsite for PDI work. Corrected addressing issue in PLC for piezometer PA-23d, it was obtaining water column data from PA-24d. Transducer lowered and recalibrated. Replaced malfunctioning transducer at Recovery Well RW-25 and recalibrated. Updated alarm list on the EWON server. Performed sludge experiments with hydrogen peroxide. Operator worked on installing new tags for equipment throughout the GWET plant.
- Wednesday, 9 October 2024: Operators performed general O&M and cycled the filter press. Operator started the auto-sampler for collection of the weekly NPDES

compliance samples. Cascade Drilling onsite for PDI work. Operator performed on filter press maintenance.

- Thursday, 10 October 2024: Operators performed general O&M. Cascade Drilling and GPRS onsite for PDI work. Collected weekly compliance samples and sent to Eurofins. Replaced filters on filter press from plates 9 through 16. Operator worked on installing new tags for equipment throughout the GWET plant.

Recovery/Extraction Well Status

- The current influent flow rate is **25 gpm**, with Recovery/Extraction Wells EW-1, EW-3, EW-6, EW-8, EW-09, EW-11, EW-14, RW-14, RW-23, and RW-25 in operation.
- EW-02: Off since 7/1, totalizer malfunctioning, operators to troubleshoot.
- EW-04: Off since 7/10, low water table.
- EW-05: Faulting, operators to change out fouled 1-hp pump.
- EW-07: Off since 7/31, low water table.
- EW-10: Off since 9/26, operators to troubleshoot.
- EW-12: Off since 6/7, shipped to QSP.
- EW-14: Off since 9/26, operators to change out fouled 1-hp pump.
- RW-22: Off, ground fault, operators to swap out cable leads.

Transducer Status

- PA-23d: Fixed addressing issue in PLC, piezometer was obtaining water column data from PA-24d. Transducer lowered and recalibrated.
- RW-25: Replaced malfunctioning transducer and recalibrated.

Sampling

- LGAC check samples were not collected this week.
- Weekly compliance samples were collected 10 October 2024 and sent to Eurofins.

Stormwater

- Weekly ISCO sampler and stormwater pond inspection conducted.

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Groundwater Extraction and Treatment (GWET) System Weekly Progress Report
Week from: 11 October 2024 to 17 October 2024
Former Arkema Facility, Portland, Oregon

Plant Operations

Groundwater extraction at select recovery/extraction wells, treatment, and discharge proceeded continuously. Uptime for the reporting period was 100 percent. The average system influent flow rate for the week was 24.9 gpm. Recovery/Extraction Wells RW-23, RW-25, EW-01, EW-03, EW-06, EW-08, EW-09, EW-11, and EW-13 were in operation during the reporting period. The total influent volume for the week was 240,370 gallons or 40 percent of the target capture objective of 60 gpm at 100 percent uptime.

- Friday, 11 October 2024: Operators performed general O&M and cycled the filter press. Cochran onsite for Admin building lighting and electrical. Backwashed carbon vessel CT-1. Conducted October water level event and calibrated the following transducers: MWA-19, PA-20d, PA-27d, PA-30d, PA-14i, PA-24d, and MWA-69. Collected pressure readings from intermediate/shallow conveyance line clean outs, pressures ranged from 0 psi to 14 psi. Replaced fabric and gaskets on filter press plates 17 through 21.
- Saturday, 12 October 2024: Operator performed general O&M and cycled the filter press.
- Sunday, 13 October 2024: Operator performed general O&M and cycled the filter press. Added oil to air compressor, leaking at drain valve.
- Monday, 14 October 2024: Operators performed general O&M. Cochran onsite for Admin building lighting and electrical. Cascade Drilling onsite for PDI work. Telluric onsite to set Eco-blocks on Front Avenue.
- Tuesday, 15 October 2024: Operators performed general O&M and cycled the filter press. Cochran onsite for Admin building lighting and electrical. Cascade Drilling onsite for PDI work. Telluric onsite to set Eco-blocks on Front Avenue.
- Wednesday, 16 October 2024: Operators performed general O&M and cycled the filter press. Cochran onsite for Admin building lighting and electrical. Cascade Drilling onsite for PDI work. Operator started the auto-sampler for collection of the weekly NPDES compliance samples. Set up hoses to transfer from FBR-EFF to MCR pump back to FBR.
- Thursday, 17 October 2024: Operators performed general O&M. Cochran onsite for Admin building lighting and electrical. Cascade Drilling onsite for PDI work. Collected weekly compliance samples and sent to Eurofins. Telluric onsite to set

Eco-blocks on Front Avenue. Carbon polishing pump P-10 faulted, operator able to restart. Sister pump P-9 still out for maintenance. Operator observed the Hach handheld turbidimeter malfunctioned, rental unit will arrive 10/18.

Recovery/Extraction Well Status

- The current influent flow rate is approximately **25 gpm**, with Recovery/Extraction Wells EW-1, EW-3, EW-6, EW-8, EW-09, EW-11, EW-14, RW-14, RW-23, and RW-25 in operation.
- EW-02: Off since 7/1, totalizer malfunctioning, operators to troubleshoot.
- EW-04: Off since 7/10, low water table.
- EW-05: Faulting, operators to change out fouled 1-hp pump.
- EW-07: Off since 7/31, low water table.
- EW-10: Off since 9/26, operators to troubleshoot.
- EW-12: Off since 6/7, shipped to QSP.
- EW-14: Off since 9/26, operators to change out fouled 1-hp pump.
- RW-22: Off, ground fault, operators to swap out cable leads.

Transducer Status

- Recalibrated transducers MWA-19, PA-20d, PA-27d, PA-30d, PA-14i, PA-24d, and MWA-69.

Sampling

- LGAC check samples were not collected this week.
- Weekly compliance samples were collected 17 October 2024 and sent to Eurofins.

Stormwater

- Weekly ISCO sampler and stormwater pond inspection conducted.

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Groundwater Extraction and Treatment (GWET) System Weekly Progress Report
Week from: 18 October 2024 to 24 October 2024
Former Arkema Facility, Portland, Oregon

Plant Operations

Groundwater extraction at select recovery/extraction wells, treatment, and discharge proceeded continuously except for a 1-hour shutdown due to a PLC download. Uptime for the reporting period was 99 percent. The average system influent flow rate for the week was 22.8 gpm. Recovery/Extraction Wells RW-23, RW-25, EW-01, EW-03, EW-06, EW-08, EW-09, EW-11, and EW-13 were in operation during the reporting period. The total influent volume for the week was 233,240 gallons or 39 percent of the target capture objective of 60 gpm at 100 percent uptime.

- Friday, 18 October 2024: Operators performed general O&M and cycled the filter press. Cochran onsite for Admin building lighting and electrical. Backwashed carbon vessel CT-1. Replaced fabric and gaskets on filter press plates 22 through 26.
- Saturday, 19 October 2024: Operator performed general O&M.
- Sunday, 20 October 2024: Operator performed general O&M.
- Monday, 21 October 2024: Operators performed general O&M. Cochran onsite for Admin building lighting and electrical. Cascade Drilling onsite for PDI work. Hach handheld turbidimeter sent in for repair. Replaced fabric and gaskets on filter press plate 27.
- Tuesday, 22 October 2024: Operators performed general O&M and cycled the filter press. Cochran onsite for Admin building lighting and electrical. Cascade Drilling onsite for PDI work. Replaced fabric and gaskets on filter press plates 28 through 32. Cochran onsite at GWET plant to install ethernet/overload module for pump P-5. S. Lucas performed a PLC program download, which caused the plant and wellfield to shut down for 1 hour. Pulled EW-09, EW-10, and EW-11 to prepare for Hydropuls event next week.
- Wednesday, 23 October 2024: Operators performed general O&M and cycled the filter press. Cochran onsite for Admin building lighting and electrical. Cascade Drilling onsite for PDI work. Operator started the auto-sampler for collection of the weekly NPDES compliance samples. S. Lucas performed another PLC program download. Carbon polishing pump P-10 faulted at least once per hour, operator able to restart each time, parallel pump P-9 still out for maintenance.
- Thursday, 24 October 2024: Operators performed general O&M. Cochran onsite for Admin building lighting and electrical. Cascade Drilling onsite for PDI work.

Collected weekly compliance samples and sent to Eurofins. Carbon polishing pump P-10 faulted throughout the night, operator able to restart and will investigate. Prepared AP4 pumps and equipment in the wellfield for the Hydropuls event.

Recovery/Extraction Well Status

- The current influent flow rate is approximately **20 gpm**, with Recovery/Extraction Wells EW-1, EW-3, EW-6, EW-14, RW-14, RW-23, and RW-25 in operation.
- EW-01: Off since 10/22, operators to change out fouled pump ½-hp pump.
- EW-02: Off since 7/1, totalizer malfunctioning, operators to troubleshoot.
- EW-04: Off since 7/10, low water table.
- EW-05: Faulting, operators to change out fouled 1-hp pump.
- EW-07: Off since 7/31, low water table.
- EW-08: Off since 10/22, unable to clear high vault alarm.
- EW-09: Off since 10/22, pulled for Hydropuls event.
- EW-10: Off since 9/26, operators to troubleshoot, pulled for Hydropuls event.
- EW-11: Off since 10/22, pulled for Hydropuls event.
- EW-12: Off since 6/7, shipped to QSP.
- EW-14: Off since 9/26, operators to change out fouled 1-hp pump.
- RW-22: Off, ground fault, operators to swap out cable leads.

Transducer Status

- None

Sampling

- LGAC check samples were not collected this week.
- Weekly compliance samples were collected 24 October 2024 and sent to Eurofins.

Stormwater

- Weekly ISCO sampler and stormwater pond inspection conducted.

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Groundwater Extraction and Treatment (GWET) System Weekly Progress Report
Week from: 25 October 2024 to 31 October 2024
Former Arkema Facility, Portland, Oregon

Plant Operations

Groundwater extraction at select recovery/extraction wells, treatment, and discharge proceeded continuously except for a 25-hour shutdown due to drilling for the ongoing PDI work and PLC troubleshooting. Uptime for the reporting period was 85 percent. The average system influent flow rate for the week was 21.2 gpm. Recovery/ Extraction Wells RW-23, RW-25, EW-03, EW-06, EW-08, EW-09, EW-11, and EW-13 were in operation during the reporting period. The total influent volume for the week was 205,520 gallons or 34 percent of the target capture objective of 60 gpm at 100 percent uptime.

- Friday, 25 October 2024: Operators performed general O&M and cycled the filter press. Cochran onsite for Admin building lighting and electrical. Cascade Drilling onsite for PDI work. PDI team requested part of fence be taken down for drilling near GCC-2. Operator procured supplies for fence to be taken down. Backwashed carbon vessel CT-1. Carbon polishing pump P-10 faulting every 12 hours, operator able to restart. Telluric onsite for site walk at MCC-1.
- Saturday, 26 October 2024: Operators performed general O&M. Carbon polishing pump P-10 faulting every 12 hours, operator able to restart. Underflow pump PS-1 failed as the diaphragms need replacing. Operators switched out the 2-inch AODD pump with a 1-inch AODD pump.
- Sunday, 27 October 2024: Operators performed general O&M. Carbon polishing pump P-10 faulting every 12 hours, operator able to restart. At piezometer PA-05, lowered transducer and recalibrated.
- Monday, 28 October 2024: Operators performed general O&M. Cochran onsite for Admin building lighting and electrical. S. Lucas performed PLC firmware update with Rockwell representative for pump P-5 overload module. Cascade Drilling onsite for PDI work. Operator LOTO MCC-1 and de-energized the wellfield for PDI drilling efforts at 0700. Placed bio side in recirculation loop. Operator recycled power to pump P-10 VFD and it removed the alarm and faults. Removed part of fence for PDI team.
- Tuesday, 29 October 2024: Operators performed general O&M and cycled the filter press. Cochran onsite for Admin building lighting and electrical. Cascade Drilling onsite for PDI work. Restarted the wellfield at 0800. Univar onsite to batch caustic

mini-bulk. Redeployed clean pumps and recalibrated transducers at extraction wells EW-09 and EW-11. Installed new diaphragms in 2-inch AODD pump.

- Wednesday, 30 October 2024: Operators performed general O&M and cycled the filter press. Cochran onsite for Admin building lighting and electrical. Cascade Drilling onsite for PDI work. Operator started the auto-sampler for collection of the weekly NPDES compliance samples. S. Lucas adjusted network traffic speed and shutdown/restarted the wellfield. Operator powered down MCC-2 to try and clear high level vault alarms at extraction wells EW-07, EW-08, EW-09, and EW-10. S. Lucas disable alarms until a new 1734-IB8/C input module is installed.
- Thursday, 31 October 2024: Operators performed general O&M. Cascade Drilling onsite for PDI work. Collected weekly compliance samples and sent to Eurofins. Operator LOTO MCC-3 and de-energized the south end of the wellfield for PDI drilling efforts at extraction well EW-11.

Recovery/Extraction Well Status

- The current influent flow rate is approximately **20 gpm**, with Recovery/Extraction Wells EW-3, EW-6, EW-08, EW-09, EW-11, EW-13, RW-14, RW-23, and RW-25 in operation.
- EW-01: Off since 10/22, operators to change out fouled pump ½-hp pump.
- EW-02: Off since 7/1, totalizer malfunctioning, operators to troubleshoot.
- EW-03: Operators to change out fouled 1-hp pump.
- EW-04: Off since 7/10, low water table.
- EW-05: Faulting, operators to change out fouled 1-hp pump.
- EW-07: Off since 7/31, low water table.
- EW-08: Started 10/29, operators to change out fouled ½-hp pump.
- EW-09: Redeployed and started 10/30.
- EW-10: Off since 9/26, operators to change-out pump.
- EW-11: Redeployed and started 10/29.
- EW-12: Off since 6/7, shipped to QSP for packer install.
- EW-14: Off since 9/26, operators to change out fouled 1-hp pump.
- RW-22: Off, ground fault, operators to swap out cable leads.

Transducer Status

- PA-05: Lowered transducer and recalibrated.
- EW-09: Recalibrated transducer.
- EW-11: Recalibrated transducer.

Sampling

- LGAC check samples were not collected this week.
- Weekly compliance samples were collected 31 October 2024 and sent to Eurofins.

Stormwater

- Weekly ISCO sampler and stormwater pond inspection conducted.

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Groundwater Extraction and Treatment (GWET) System Weekly Progress Report
Week from: 1 November 2024 to 7 November 2024
Former Arkema Facility, Portland, Oregon

Plant Operations

Groundwater extraction at select recovery/extraction wells, treatment, and discharge proceeded continuously. Uptime for the reporting period was 100 percent. The average system influent flow rate for the week was 26.3 gpm. Recovery/Extraction Wells RW-23, RW-25, EW-01, EW-03, EW-06, EW-08, EW-09, EW-11, and EW-13 were in operation during the reporting period. The total influent volume for the week was 238,630 gallons or 39 percent of the target capture objective of 60 gpm at 100 percent uptime.

- Friday, 1 November 2024: Operators performed general O&M and cycled the filter press. Backwashed carbon vessel CT-1. Observed the tru-union fittings on the pneumatic valve for the pressure filter influent are leaking and loose due to vibration, repaired the leak.
- Saturday, 2 November 2024: Operators performed general O&M. Increased CFP-13 urea pump stroke rate to 3 percent.
- Sunday, 3 November 2024: Operators performed general O&M, housekeeping, and cycled the filter press.
- Monday, 4 November 2024: Operators performed general O&M and cycled the filter press. Collected LGAC check samples and sent to ALS. Calibrated YSI meter, ORP probe at FBR-REC, and pH probe at FBR-REC. Changed out fouled pump at Extraction Well EW-09. Deployed clean pump at EW-10 but will not operate, removed motor to troubleshoot. Added hydrant water from flat bottom tank to Trench 6 monitoring well MWA-88, observed improved flow rate.
- Tuesday, 5 November 2024: Operators performed general O&M and cycled the filter press. Changed out fouled pump at EW-03.
- Wednesday, 6 November 2024: Operators performed general O&M and cycled the filter press. Operator started the auto-sampler for collection of the weekly NPDES compliance samples. Cochran onsite to rewire pump P-5 E300 module. S. Lucas performed PLC download and worked with Rockwell representative for additional troubleshooting. Replaced the control cable and adjusted the trip and overload settings to 5.0A from 2.5A on the E300 module. Changed out pump at EW-01, lowered transducer and recalibrated.

- Thursday, 7 November 2024: Operators performed general O&M and cycled the filter press. Collected weekly compliance samples and sent to Eurofins. Prep packer assembly to be installed at Extraction Well EW-12.

Recovery/Extraction Well Status

- The current influent flow rate is approximately **27 gpm**, with Recovery/Extraction Wells EW-01, EW-3, EW-6, EW-08, EW-09, EW-11, EW-13, RW-14, RW-23, and RW-25 in operation.
- EW-01: Change out fouled pump 11/6.
- EW-02: Off since 7/1, totalizer malfunctioning, operators to troubleshoot.
- EW-03: Change out fouled pump 11/5.
- EW-04: Off since 7/10, low water table.
- EW-05: Faulting, operators to change out fouled 1-hp pump.
- EW-07: Off since 7/31, low water table.
- EW-09: Change out fouled pump 11/5.
- EW-10: Off since 9/26, operator to troubleshoot motor.
- EW-12: Off since 6/7, received packers from QSP.
- EW-14: Off since 9/26, operators to change out fouled 1-hp pump.
- RW-22: Off, ground fault, operators to swap out cable leads.

Transducer Status

- EW-01: Lowered and recalibrated transducer.

Sampling

- LGAC check samples were collected 4 November 2024 and sent to ALS.
- Weekly compliance samples were collected 7 November 2024 and sent to Eurofins.

Stormwater

- Weekly ISCO sampler and stormwater pond inspection conducted.

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Groundwater Extraction and Treatment (GWET) System Weekly Progress Report
Week from: 8 November 2024 to 14 November 2024
Former Arkema Facility, Portland, Oregon

Plant Operations

Groundwater extraction at select recovery/extraction wells, treatment, and discharge proceeded continuously. Uptime for the reporting period was 100 percent. The average system influent flow rate for the week was 24.2 gpm. Recovery/Extraction Wells RW-23, RW-25, EW-01, EW-03, EW-06, EW-08, EW-09, EW-11, and EW-13 were in operation during the reporting period. The total influent volume for the week was 238,900 gallons or 40 percent of the target capture objective of 60 gpm at 100 percent uptime.

- Friday, 8 November 2024: Operators performed general O&M and cycled the filter press. Performed November water level event. ERM staff placed cones at PDI drilling locations for survey.
- Saturday, 9 November 2024: Operators performed general O&M.
- Sunday, 10 November 2024: Operators performed general O&M. Manually backwashed pressure filter vessel PF-2, inlet valve stays open and will not close.
- Monday, 11 November 2024: Operators performed general O&M and cycled the filter press. Installed a pass-through packer in Extraction Well EW-12 and redeveloped EW-11 with surge block and forklift. Observed the stainless-steel maintenance wire in Trench 6 snapped due to corrosion. Removed pass-through packer from EW-12 and reinstalled in EW-11. Operators observed underflow pump P-PS-1 solenoid valve beginning to fail and not activated. Tidewater Environmental Services picked up two iron sludge boxes (4 and 2) for transportation to the Roosevelt Landfill Disposal facility.
- Tuesday, 12 November 2024: Operators performed general O&M. Cochran onsite for site walk of emergency alarm system upgrades. Operators redeveloped Extraction Well EW-12 with surge block and forklift. Surge block tool was lost down well during redevelopment effort. During recovery, 20-foot section of PVC pipe was also lost down well. Both were recovered with no signs of damage to equipment.
- Wednesday, 13 November 2024: Operators performed general O&M and cycled the filter press. Operator started the auto-sampler for collection of the weekly NPDES compliance samples. Pumped approximately 100 gallons of water into EW-11 and pumped out approximately 80 gallons out of EW-12 with AP4 pump. Installed pump and pass-through packer assembly at Extraction Well EW-12. Pumped

approximately 750 gallons of sediment water with AP4 pump out of Trench 6. Bump tested EW-12 with flow rate 14 gpm.

- Thursday, 14 November 2024: Operators performed general O&M and cycled the filter press. Collected weekly compliance samples and sent to Eurofins. Changed out the underflow pump P-PS-1 solenoid valve with a shelf spare. Manually backwashed pressure filter vessel PF-2. Placed EW-12 in service and started with flow rate 17 gpm and dropping. Operators removed MCR vessel with a rental 5k offroad forklift from the GWET plant. Dewatered EW-01 vault as it filled with water due to improper grouting method from Odin.

Recovery/Extraction Well Status

- The current influent flow rate is approximately **27 gpm**, with Recovery/Extraction Wells EW-01, EW-3, EW-6, EW-08, EW-09, EW-12, EW-13, RW-14, RW-23, and RW-25 in operation.
- EW-02: Off since 7/1, totalizer malfunctioning, operators to troubleshoot.
- EW-04: Off since 7/10, low water table.
- EW-05: Faulting, operators to change out fouled 1-hp pump.
- EW-07: Off since 7/31, low water table.
- EW-10: Off since 9/26, operator to troubleshoot motor.
- EW-11: Off since 11/8, removed pump and installed pass-through packer 11/12.
- EW-12: Started 11/14, installed pump and pass-through packer assembly.
- EW-14: Off since 9/26, operators to change out fouled 1-hp pump.
- RW-22: Off, ground fault, operators to swap out cable leads.

Transducer Status

- EW-12: Reinstalled transducer and recalibrated.

Sampling

- LGAC check samples were not collected this week.
- Weekly compliance samples were collected 14 November 2024 and sent to Eurofins.

Stormwater

- Weekly ISCO sampler and stormwater pond inspection conducted.

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Groundwater Extraction and Treatment (GWET) System Weekly Progress Report
Week from: 15 November 2024 to 21 November 2024
Former Arkema Facility, Portland, Oregon

Plant Operations

Groundwater extraction at select recovery/extraction wells, treatment, and discharge proceeded continuously. Uptime for the reporting period was 100 percent. The average system influent flow rate for the week was 28.5 gpm. Recovery/Extraction Wells RW-23, RW-25, EW-01, EW-03, EW-06, EW-08, EW-09, EW-12, and EW-13 were in operation during the reporting period. The total influent volume for the week was 242,330 gallons or 40 percent of the target capture objective of 60 gpm at 100 percent uptime.

- Friday, 15 November 2024: Operators performed general O&M and cycled the filter press. Recalibrated the repaired Hach turbidimeter. Replaced UPS battery in Local Control Panel 2 (LCP-2). Increased CFP-6 phosphoric acid pump stroke rate to 60 percent from 50 percent. Backwashed carbon vessel CT-1. At Trench 6, added CO2 to pass-through packer (90 psi). With pass-through packers installed at Trench 6, observed monitoring well (MWA-88) was dry. Added hydrant water to Trench 6 monitoring well (MWA-88) and observed increased flowrate at Extraction Well EW-12. Operator started building platforms for vaults with lumber.
- Saturday, 16 November 2024: Operators performed general O&M. Manually backwashed pressure filter vessel PF-2.
- Sunday, 17 November 2024: Operators performed general O&M and cycled the filter press. Added oil to leaking air compressor, maintenance to be scheduled.
- Monday, 18 November 2024: Operators performed general O&M. Manually backwashed pressure filter vessel PF-2. Operator preparing equipment to re-pipe backwash cone bottom tanks (CBT).
- Tuesday, 19 November 2024: Operators performed general O&M. Continued building platforms for vaults with lumber and preparing equipment to re-pipe the CBT.
- Wednesday, 20 November 2024: Operators performed general O&M and cycled the filter press. Operator started the auto-sampler for collection of the weekly NPDES compliance samples. Drained Tank T-7c into outside flat bottom tank. Rotated T-7c using the 5k offload forklift. Installed perforated piping in T-7c and T-7a CBTs. Manually backwashed pressure filter vessel PF-2.
- Thursday, 21 November 2024: Operators performed general O&M and general housekeeping. Collected weekly compliance samples and sent to Eurofins.

Continued re-piping the CBTs, installed perforated piping in T-7b. Replaced 1-inch pipe from T-7b to tank T-8 with 2-inch pipe. Mobilized to Platt Electric to procure additional parts for CBTs.

Recovery/Extraction Well Status

- The current influent flow rate is approximately **30 gpm**, with Recovery/Extraction Wells EW-01, EW-3, EW-6, EW-08, EW-09, EW-12, EW-13, RW-14, RW-23, and RW-25 in operation.
- EW-02: Off since 7/1, low water table.
- EW-04: Off since 7/10, low water table.
- EW-05: Off since 10/2, operators to change out fouled 1-hp pump.
- EW-07: Off since 7/31, low water table.
- EW-10: Off since 9/26, operators to clean piping.
- EW-11: Off, pass-through packer installed 11/12.
- EW-14: Off since 9/26, operators to change out fouled 1-hp pump.
- RW-22: Off, ground fault, operators to swap out cable leads.
- RW-25: Vault high water alarm, operators to dewater vault, started on manual.

Transducer Status

- EW-11: Transducer removed due to installed packer.

Sampling

- LGAC check samples were not collected this week.
- Weekly compliance samples were collected 21 November 2024 and sent to Eurofins.

Stormwater

- Weekly ISCO sampler and stormwater pond inspection conducted.

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Groundwater Extraction and Treatment (GWET) System Weekly Progress Report
Week from: 22 November 2024 to 28 November 2024
Former Arkema Facility, Portland, Oregon

Plant Operations

Groundwater extraction at select recovery/extraction wells, treatment, and discharge proceeded continuously. Uptime for the reporting period was 100 percent. The average system influent flow rate for the week was 30.9 gpm. Recovery/Extraction Wells RW-14, RW-23, RW-25, EW-01, EW-02, EW-03, EW-06, EW-08, EW-09, EW-12, and EW-13 were in operation during the reporting period. The total influent volume for the week was 240,390 gallons or 40 percent of the target capture objective of 60 gpm at 100 percent uptime.

- Friday, 22 November 2024: Operators performed general O&M. Manually backwashed pressure filter vessel PF-2. Backwashed carbon vessel CT-1. Operator built pipe rack for the cone bottom tank (CBT) re-piping.
- Saturday, 23 November 2024: Operators performed general O&M and cycled the filter press. Increased polymer pump CFP-7 stroke rate 230 spm to 240 spm.
- Sunday, 24 November 2024: Operators performed general O&M and housekeeping. Manually backwashed pressure filter vessel PF-2. Increased phosphoric acid pump stroke length from 60 percent to 80 percent.
- Monday, 25 November 2024: Operators performed general O&M. Manually backwashed pressure filter vessel PF-2. Operator started the auto-sampler for collection of the weekly NPDES compliance samples. Adjusted P-PS-1 underflow timer from 400 sec to 350 sec. Operators continued to re-pipe the CBTs.
- Tuesday, 26 November 2024: Operators performed general O&M. Collected weekly compliance samples and sent to Eurofins. Cochran Electric and Portland General Electric (PGE) were onsite to install a new service disconnect for the Admin building. Completed re-piping the CBTs. Extraction Well EW-01 faulted due to fouled pump, turned on EW-02. EW-02 flowmeter not communicating with PLC, operator to troubleshoot ethernet cable. Started EW-14 on level control.
- Wednesday, 27 November 2024: Operators performed general O&M, housekeeping, and cycled the filter press.
- Thursday, 28 November 2024: Operators performed general O&M. Started Extraction Well EW-04. Manually backwashed pressure filter vessel PF-2.

Recovery/Extraction Well Status

- The current influent flow rate is approximately **30 gpm**, with Recovery/Extraction Wells EW-02, EW-03, EW-04, EW-6, EW-08, EW-09, EW-12, EW-13, RW-14, RW-23, and RW-25 in operation.
- EW-01: Off since 11/26, operators to change out fouled ½-hp pump.
- EW-02: Started 11/26, flowmeter not communicating to PLC, operator to check ethernet cable.
- EW-04: Started 11/28.
- EW-05: Off since 10/2, operators to change out fouled 1-hp pump.
- EW-07: Off since 7/31, low water table.
- EW-10: Off since 9/26, operators to check for fouled piping.
- EW-11: Off since 11/12, pass-through packer installed.
- EW-14: Started 11/26, operators to change out fouled 1-hp pump.
- RW-22: Off, ground fault, operators to swap out cable leads.
- RW-25: Vault high water alarm, operators to dewater vault, started on manual.

Transducer Status

- EW-11: Transducer removed due to installed packer.

Sampling

- LGAC check samples were not collected this week.
- Weekly compliance samples were collected 26 November 2024 and sent to Eurofins.

Stormwater

- Weekly ISCO sampler and stormwater pond inspection conducted.

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Groundwater Extraction and Treatment (GWET) System Weekly Progress Report
Week from: 29 November 2024 to 5 December 2024
Former Arkema Facility, Portland, Oregon

Plant Operations

Groundwater extraction at select recovery/extraction wells, treatment, and discharge proceeded continuously except for a 1-hour planned shutdown to repair the pressure filter vessel (PF-2) valves. Uptime for the reporting period was 99 percent. The average system influent flow rate for the week was 28.2 gpm. Recovery/Extraction Wells RW-14, RW-23, RW-25, EW-02, EW-03, EW-04, EW-06, EW-08, EW-09, EW-12, EW-13, and EW-14 were in operation during the reporting period. The total influent volume for the week was 242,010 gallons or 40 percent of the target capture objective of 60 gpm at 100 percent uptime.

- Friday, 29 November 2024: Operators performed general O&M and housekeeping. Backwashed carbon vessel CT-1. Mobilized to Extraction Well EW-02 and confirmed the ethernet cable tested good.
- Saturday, 30 November 2024: Operators performed general O&M and cycled the filter press. Manually backwashed pressure filter vessel PF-2.
- Sunday, 1 December 2024: Operators performed general O&M.
- Monday, 2 December 2024: Operators performed general O&M and cycled the filter press. Manually backwashed pressure filter vessel PF-2. Cochran Electric onsite for Admin building lighting. Repaired PF-2 valves 2 and 3, they were stuck open. Collected LGAC check samples and sent to ALS. Replaced malfunctioning pH probe and salt bridge on FBR recirc line. Monthly calibration of the YSI meter and ORP probe at FBR-REC. Cleaned out the gutters on Admin building outside of fence.
- Tuesday, 3 December 2024: Operators performed general O&M and cycled the filter press. Cochran Electric onsite for Admin building lighting. Completed cleaning gutters on the Admin building. Installed tanks T-5 to T-3 flowmeter wiring to LCP-5. Collected quarterly process check samples and sent to Eurofins. Operator replaced failed KPSI transducer at PA-09 with Mercoid transducer, adjusted pressure range on the PLC and recalibrated.
- Wednesday, 4 December 2024: Operators performed general O&M, housekeeping, and cycled the filter press. Operator started the auto-sampler for collection of the weekly NPDES compliance samples. Replaced fabric and gaskets on filter press plates 33 through 40. Installed heat trace cable and wrap on the new cone bottom tank piping. Installed heat trace cable on the bio dewatering box.

- Thursday, 5 December 2024: Operators performed general O&M. Collected weekly compliance samples and sent to Eurofins. Cochran Electric onsite for Admin building lighting. Worked on prepping wooden well vault platforms to install steel rope rings for lifting.

Recovery/Extraction Well Status

- The current influent flow rate is approximately **27 gpm**, with Recovery/Extraction Wells EW-02, EW-03, EW-04, EW-6, EW-08, EW-09, EW-12, EW-13, EW-14, RW-14, RW-23, and RW-25 in operation.
- EW-01: Off since 11/26, operators to change out fouled ½-hp pump.
- EW-02: Flowmeter not communicating to PLC, ethernet cable good, more troubleshooting required.
- EW-03: Operators to change out fouled 1-hp pump.
- EW-05: Off since 10/2, operators to change out fouled 1-hp pump.
- EW-07: Off since 7/31, low water table.
- EW-10: Off since 9/26, operators to check for fouled piping.
- EW-11: Off since 11/12, pass-through packer installed.
- EW-14: Operators to change out fouled 1-hp pump.
- RW-22: Off, ground fault, operators to swap out cable leads.

Transducer Status

- EW-11: Transducer removed due to installed packer.
- PA-09: New Mercoid transducer installed and recalibrated, 12/3.

Sampling

- LGAC check samples collected 2 December 2024 and sent to ALS.
- Quarterly process check samples collected 3 December 2024 and sent to Eurofins.
- Weekly compliance samples were collected 5 December 2024 and sent to Eurofins.

Stormwater

- Weekly ISCO sampler and stormwater pond inspection conducted.

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Groundwater Extraction and Treatment (GWET) System Weekly Progress Report
Week from: 6 December 2024 to 12 December 2024
Former Arkema Facility, Portland, Oregon

Plant Operations

Groundwater extraction at select recovery/extraction wells, treatment, and discharge proceeded continuously. Uptime for the reporting period was 100 percent. The average system influent flow rate for the week was 27.5 gpm. Recovery/Extraction Wells RW-14, RW-23, RW-25, EW-01, EW-03 through EW-06, EW-08, EW-09, EW-12, EW-13, and EW-14 were in operation during the reporting period. The total influent volume for the week was 231,520 gallons or 38 percent of the target capture objective of 60 gpm at 100 percent uptime.

- Friday, 6 December 2024: Operators performed general O&M and housekeeping. Backwashed carbon vessel CT-1. Conducted December water level event. Observed dry monitoring wells at Trenches 2 and 4. Readjusted pass-through packer at Extraction Well EW-12 and removed the stuck water level meter. Changed out pumps at Extraction Wells EW-01, EW-3, EW-13, and EW-14. Set up the ISCO stormwater autosampler.
- Saturday, 7 December 2024: Operators performed general O&M and cycled the filter press.
- Sunday, 8 December 2024: Operators performed general O&M and cycled the filter press.
- Monday, 9 December 2024: Operators performed general O&M. Groundwater sampling event. Staff started Q4 groundwater sampling event. Changed out pump at Extraction Well EW-05 and started, stopped EW-06. Plumbed recirculation pump P-7 and placed in service, P-8 to be removed for maintenance.
- Tuesday, 10 December 2024: Operators performed general O&M. Staff continued with Q4 groundwater sampling event. Changed hydraulic oil for the filter press. Started EW-12 pump and installed the vibration motor on well. Ran for 20 min and observed silt at 10 min, no silt after 20 min. Cleaned downhole pumps using the ultrasonic cleaner.
- Wednesday, 11 December 2024: Operators performed general O&M and cycled the filter press. Operator started the auto-sampler for collection of the quarterly NPDES compliance samples. Staff continued with Q4 groundwater sampling event. Cleaned downhole pumps using the ultrasonic cleaner.
- Thursday, 12 December 2024: Operators performed general O&M. Collected quarterly compliance samples and sent to Eurofins. Started ISCO autosampler for

stormwater collection. Staff completed Q4 groundwater sampling event. Operators utilized the handheld vibrating motor tool to help knock off carbon in the MCR vessel side walls prior to welding. Subcontractor WD Nelson picked up the MCR vessel to make repairs. Cleaned downhole pumps using the ultrasonic cleaner.

Recovery/Extraction Well Status

- The current influent flow rate is approximately **28 gpm**, with Recovery/Extraction Wells EW-01, EW-03, EW-05, EW-08, EW-09, EW-12, EW-13, RW-14, RW-23, and RW-25 in operation.
- EW-01: Changed out fouled ½-hp pump, 12/6.
- EW-02: Flowmeter not communicating to PLC, more troubleshooting required.
- EW-03: Changed out fouled 1-hp pump, 12/6.
- EW-04: Off since 12/6.
- EW-05: Changed out fouled 1-hp pump and started, 12/9.
- EW-06: Off since 12/9.
- EW-07: Off since 7/31, low water table.
- EW-10: Off since 9/26. Pump and motor removed.
- EW-11: Off since 11/12, pass-through packer installed.
- EW-12: Readjusted the pass-through packer, 12/6.
- EW-13: Changed out fouled 1-hp pump, 12/6.
- EW-14: Changed out fouled 1-hp pump, 12/6.
- RW-22: Off, ground fault, operators to swap out motor.

Transducer Status

- EW-11: Transducer removed due to installed packer.

Sampling

- LGAC check samples not collected this week.
- Quarterly compliance samples were collected 12 December 2024 and sent to Eurofins.

Stormwater

- Weekly ISCO sampler and stormwater pond inspection conducted.
- Removed plugs from weirs at the stormwater pond.
- Started ISCO autosampler for stormwater collection on 12/12.

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Groundwater Extraction and Treatment (GWET) System Weekly Progress Report
Week from: 13 December 2024 to 19 December 2024
Former Arkema Facility, Portland, Oregon

Plant Operations

Groundwater extraction at select recovery/extraction wells, treatment, and discharge proceeded continuously. Uptime for the reporting period was 100 percent. The average system influent flow rate for the week was 28.1 gpm. Recovery/Extraction Wells RW-14, RW-23, RW-25, EW-01, EW-03, EW-05, EW-08, EW-09, EW-11, EW-12, and EW-13 were in operation during the reporting period. The total influent volume for the week was 240,320 gallons or 40 percent of the target capture objective of 60 gpm at 100 percent uptime.

- Friday, 13 December 2024: Operators performed general O&M and housekeeping. Backwashed carbon vessel CT-1. Tested Hydropuls mockup in PVC mockup successfully. Extraction pump EW-09 was pulled to test the Hydropuls tool in Trench 5. Observed stainless steel wire through trench snapped and will be replaced. EW-07 and EW-08 were pulled and changed out; EW-07 check valve repaired. Operators successfully tested the Hydropuls tool in Trench 4.
- Saturday, 14 December 2024: Operators performed general O&M and cleaned pumps. Observed the 1-hp pump pulled from EW-07 on Friday had broken impellers.
- Sunday, 15 December 2024: Operators performed general O&M and cycled the filter press. Dewatered outside poly flat bottom tank to dewatering box #7.
- Monday, 16 December 2024: Operators performed general O&M and cycled the filter press. Observed stormwater effluent pipe Fernco coupling has warped and water bypassing the weir. Operators removed the Fernco coupling and resecured the pipe. Installed sump pump in Admin building basement.
- Tuesday, 17 December 2024: Operators performed general O&M. Observed stormwater ISCO sampler working. Observed the plate separator (PS-1) iron @ 2.0 mg/L and pH @ 6.2. PS-1 should be around 0 mg/L Fe and pH 7.5. The caustic pump CFP-1 failed. Replaced the 1.6 gph CFP-1 pump with a larger 4.3 gph pump and adjusted settings to 100 spm and 80 percent stroke length. Collected river samples for stormwater event. Fe @ PS-1= 0.05 mg/L at end of day.
- Wednesday, 18 December 2024: Operators performed general O&M and cycled the filter press. Operator started the auto-sampler for collection of the weekly NPDES compliance samples. Mobilized to Trench 5 and utilized the surge block on EW-09

and EW-10. Removed packers from Trench 6 (EW-11 and EW-12). Installed packer at EW-10. Deployed clean ½-hp pump at EW-11 and started.

- Thursday, 19 December 2024: Operators performed general O&M. Collected weekly compliance samples and sent to Eurofins. Installed pass-through packer and clean pump at EW-09. Installed and recalibrated transducer at EW-12. Changed out pumps at EW-04 and EW-6.

Recovery/Extraction Well Status

- The current influent flow rate is approximately **32 gpm**, with Recovery/Extraction Wells EW-01, EW-03, EW-05, EW-08, EW-09, EW-12, EW-13, RW-14, RW-23, and RW-25 in operation.
- EW-02: Flowmeter not communicating to PLC, more troubleshooting required.
- EW-04: Off since 12/6, changed out fouled 1/2-hp pump, 12/19.
- EW-06: Off since 12/9, changed out fouled 1/2-hp pump, 12/19.
- EW-07: Off since 7/31, changed out 1-hp pump, 12/13.
- EW-08: Changed out 1/2-hp pump and started, 12/13.
- EW-09: Installed pass-through packer and pump, 12/19.
- EW-10: Off since 9/26, installed packer, 12/18.
- EW-11: Changed out 1/2-hp pump and started, packer removed, 12/18.
- EW-12: Removed the pass-through packer, 12/18.
- RW-22: Off, ground fault, operators to swap out motor.

Transducer Status

- EW-10: Transducer removed due to installed packer.
- PA-22: Operator to check transducer signal wires 12/20.
- PA-25: Operator to check transducer signal wires 12/20.
- PA-21: Repair stuck transducer 12/20.

Sampling

- LGAC check samples not collected this week.
- Weekly compliance samples were collected 19 December 2024 and sent to Eurofins.

Stormwater

- Weekly ISCO sampler and stormwater pond inspection conducted.

- Repaired stormwater weir pipe.
- Stormwater and river samples collected and to be sent to Eurofins 20 December 2024.

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Groundwater Extraction and Treatment (GWET) System Weekly Progress Report
Week from: 20 December 2024 to 26 December 2024
Former Arkema Facility, Portland, Oregon

Plant Operations

Groundwater extraction at select recovery/extraction wells, treatment, and discharge proceeded continuously. Uptime for the reporting period was 100 percent. The average system influent flow rate for the week was 31.9 gpm. Recovery/Extraction Wells RW-14, RW-23, RW-25, EW-01, EW-03, EW-05, EW-08, EW-09, EW-11, EW-12, and EW-13 were in operation during the reporting period. The total influent volume for the week was 247,061 gallons or 41 percent of the target capture objective of 60 gpm at 100 percent uptime.

- Friday, 20 December 2024: Operators performed general O&M and cleaned downhole pumps. Backwashed carbon vessel CT-1. S. Lucas updated Windows server on Historian computer, renewed Acronis backup subscription, and performed a PLC download. A brief shutdown occurred, operator restarted the wellfield and GWET plant. Collected stormwater samples and sent to Eurofins. Collected a filter blank with GoPro filter from Pine Environmental to test for copper. Operator mobilized to the wellfield and collected pressure reading at the cleanouts and recalibrated PA-22d and PA-25d.
- Saturday, 21 December 2024: Operators performed general O&M and cycled the filter press.
- Sunday, 22 December 2024: Operators performed general O&M and housekeeping. Adjusted the underflow pump P-PS-1 timer to 100/300 sec from 100/350 sec.
- Monday, 23 December 2024: Operators performed general O&M and cycled the filter press. Transferred water from the nine PDI waste drums onsite to a dewatering box. Dumped soil cuttings from PDI waste drum in the rental roll-off box. Used the vibration tool to loosen the stuck transducer at PA-21d and recalibrated.
- Tuesday, 24 December 2024: Operators performed general O&M and cycled the filter press. Extraction Well EW-01 faulting, fouled pump to be changed out. Completed wooden vault platforms and staged outside.
- Wednesday, 25 December 2024: Operator performed general O&M. Operator started the auto-sampler for collection of the weekly NPDES compliance samples. Calibrated turbidimeter and performed sludge experiments.

- Thursday, 26 December 2024: Operators performed general O&M. Collected weekly compliance samples and sent to Eurofins. Dewatered flooded vault at recovery well RW-25. Batched acetic acid and urea drums.

Recovery/Extraction Well Status

- The current influent flow rate is approximately **32 gpm**, with Recovery/Extraction Wells EW-01, EW-03, EW-05, EW-08, EW-09, EW-12, EW-13, RW-14, RW-23, and RW-25 in operation.
- EW-01: Faulting, to be changed out week of 12/30.
- EW-02: Flowmeter not communicating to PLC, more troubleshooting required.
- EW-04: Off since 12/6, changed out fouled 1/2-hp pump 12/19.
- EW-06: Off since 12/9, changed out fouled 1/2-hp pump 12/19.
- EW-07: Off since 7/31, changed out 1-hp pump 12/13.
- EW-10: Off since 9/26, installed packer 12/18.
- EW-12: Off since 12/18, pump not installed.
- RW-22: Off, ground fault, operators to swap out motor.

Transducer Status

- EW-10: Transducer removed due to installed packer.
- PA-22: Recalibrated 12/20, operator to repair signal wire damaged by field mice.
- PA-25: Recalibrated 12/20.
- PA-21: Removed stuck transducer and recalibrated.

Sampling

- LGAC check samples not collected this week.
- Weekly compliance samples were collected 26 December 2024 and sent to Eurofins.

Stormwater

- Weekly ISCO sampler and stormwater pond inspection conducted.

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Groundwater Extraction and Treatment (GWET) System Weekly Progress Report
Week from: 27 December 2024 to 2 January 2025
Former Arkema Facility, Portland, Oregon

Plant Operations

Groundwater extraction at select recovery/extraction wells, treatment, and discharge proceeded continuously. Uptime for the reporting period was 100 percent. The average system influent flow rate for the week was 36.8 gpm. Recovery/Extraction Wells RW-14, RW-23, RW-25, EW-01, EW-03, EW-05, EW-08, EW-09, EW-11, EW-12, and EW-13 were in operation during the reporting period. The total influent volume for the week was 294,530 gallons or 49 percent of the target capture objective of 60 gpm at 100 percent uptime.

- Friday, 27 December 2024: Operators performed general O&M and cycled the filter press. Dewatered Box #7 into Tank T-7.
- Saturday, 28 December 2024: Operators performed general O&M. Added oil to air compressor.
- Sunday, 29 December 2024: Operators performed general O&M and cycled the filter press. Monthly shower and fire extinguisher inspections.
- Monday, 30 December 2024: Operators performed general O&M and cycled the filter press. Changed out fouled pumps at extraction wells EW-01, EW-03, and EW-13. Conducted vibration motor tests at Trenches 2 and 4, no additional silt observed during test.
- Tuesday, 31 December 2024: Operators performed general O&M and cycled the filter press. Increased the underflow timer for pump P-PS-1 to 150/350 sec from 100/350 sec. Conducted flow rate stress test on the GWET system. Observed a potential pinch point around the pressure filters. The pressure filters went through six backwashes in 8 hours. Operators suspect an issue with the diaphragm valve at PF-1 and will investigate changing it out. Operators reduced the pressure of the backwash water return pump (P-PS-4) at tank T-8 from 40 psi to 35 psi, the flow rate was causing an upset in the plate separator. There were no issues with the outside cone bottom tanks; prior to the plumbing improvements, if more than one backwash occurs every 2 hours it would cause an overflow.
- Wednesday, 1 January 2025: Operator performed general O&M. Operator started the auto-sampler for collection of the weekly NPDES compliance samples. Performed sludge experiments.
- Thursday, 2 January 2025: Operators performed general O&M and cleaned downhole pumps. Collected weekly compliance and Tank T-8 influent samples and

sent to Eurofins. Operator observed 2 feet of standing water in the Admin building basement as the new sump pump did not activate. The operator readjusted the pump, float, and hose and the pump was able to operate.

Recovery/Extraction Well Status

- The current influent flow rate is approximately **37 gpm**, with Recovery/Extraction Wells EW-01, EW-03, EW-05, EW-08, EW-09, EW-11, EW-13, RW-14, RW-23, and RW-25 in operation.
- EW-01: Changed out fouled pump 12/30.
- EW-02: Flowmeter not communicating to PLC, more troubleshooting required.
- EW-03: Changed out fouled pump 12/30.
- EW-04: Off since 12/6.
- EW-06: Off since 12/9.
- EW-07: Off since 7/31.
- EW-10: Off since 9/26, installed packer 12/18.
- EW-12: Off since 12/18, pump not installed.
- EW-13: Changed out fouled pump 12/30.
- EW-14: Off since 12/6.
- RW-22: Off, ground fault, operators to swap out motor.

Transducer Status

- EW-10: Transducer removed due to installed packer.
- PA-22: Operator to repair signal wire damaged by field mice.

Sampling

- LGAC check samples not collected this week.
- Weekly compliance and Tank T-8 influent samples were collected 2 January 2025 and sent to Eurofins.

Stormwater

- Weekly ISCO sampler and stormwater pond inspection conducted.

ATTACHMENT 2 QUARTER 3, 2024, GROUNDWATER MONITORING DATA

Table 2-1
Volatile Organic Compounds Results
Arkema Quarter 3, 2024, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Analyte					1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,1-Dichloropropene	1,2,3-Trichlorobenzene	1,2,3-Trichloropropane	1,2,4-Trichlorobenzene	1,2,4-Trimethylbenzene
Unit					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
FSWP SHSC (shaded values indicate results above the value shown)					NE	11	0.4	1.6	47	710	NE	NE	NE	0.076	NE
Location ID	**Sample Date**	**Sample Type**	**Aquifer Classification**	**Sample ID**											
MWA-41	9/10/2024	N	Shallow	MWA-41-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.084 U*	*< 0.47 U*	*< 0.050 U*	*< 0.36 U*	*< 0.23 U*
MWA-63	9/10/2024	N	Shallow	MWA-63-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.29 U*	*< 0.43 U*	*< 0.41 U*	*< 0.33 U*	*< 0.61 U*
MWA-82	9/9/2024	N	Shallow	MWA-82-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.084 U*	*< 0.47 U*	*< 0.050 U*	*< 0.36 U*	*< 0.23 U*
PA-03	9/9/2024	N	Shallow	PA-03-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.16 j**	*< 0.035 U*	*< 0.084 U*	*< 0.47 U*	*< 0.050 U*	*< 0.36 U*	*< 0.23 U*
PA-04	9/10/2024	N	Shallow	PA-04-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.29**	**0.25**	*< 0.084 U*	*< 0.47 U*	*< 0.050 U*	*< 0.36 U*	*< 0.23 U*
PA-08	9/9/2024	N	Shallow	PA-08-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.11 j**	*< 0.035 U*	*< 0.084 U*	*< 0.47 U*	*< 0.050 U*	*< 0.36 U*	*< 0.23 U*
PA-09	9/9/2024	N	Shallow	PA-09-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.084 U*	*< 0.47 U*	*< 0.050 U*	*< 0.36 U*	*< 0.23 U*
PA-31	9/11/2024	N	Shallow	PA-31-091124	*< 0.11 U*	**0.22**	*< 0.056 U*	*< 0.070 U*	**0.21**	**0.80 J+**	*< 0.084 U*	*< 0.47 U*	*< 0.050 U*	*< 0.36 U*	*< 0.23 U*
MWA-81i	9/10/2024	N	Intermediate	MWA-81i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.084 U*	*< 0.47 U*	*< 0.050 U*	*< 0.36 U*	*< 0.23 U*
PA-10i	9/10/2024	N	Intermediate	PA-10i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	**0.11 j**	*< 0.084 U*	*< 0.47 U*	*< 0.050 U*	*< 0.36 U*	*< 0.23 U*
PA-10i	9/10/2024	FD	Intermediate	DUP-01-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	**0.11 j**	*< 0.084 U*	*< 0.47 U*	*< 0.050 U*	*< 0.36 U*	*< 0.23 U*
PA-15i	9/9/2024	N	Intermediate	PA-15i-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.19 j**	*< 0.035 U*	*< 0.084 U*	*< 0.47 U*	*< 0.050 U*	*< 0.36 U*	*< 0.23 U*
PA-17iR	9/9/2024	N	Intermediate	PA-17iR-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.097 j**	**0.14 j**	*< 0.084 U*	*< 0.47 U*	*< 0.050 U*	*< 0.36 U*	*< 0.23 U*
PA-32i	9/11/2024	N	Intermediate	PA-32i-091124	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.084 j**	**0.065 J+**	*< 0.084 U*	*< 0.47 U*	*< 0.050 U*	*< 0.36 U*	*< 0.23 U*
PA-44i	9/10/2024	N	Intermediate	PA-44i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.26**	*< 0.035 U*	*< 0.084 U*	*< 0.47 U*	*< 0.050 U*	*< 0.36 U*	*< 0.23 U*
MWA-11i(d)	9/11/2024	N	Deep	MWA-11d(d)-091124	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.084 U*	*< 0.47 U*	*< 0.050 U*	*< 0.36 U*	*< 0.23 U*
MWA-31i(d)	9/10/2024	N	Deep	MWA-31i(d)-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.43 j**	*< 0.28 U*	*< 0.29 U*	*< 0.43 U*	*< 0.41 U*	*< 0.33 U*	*< 0.61 U*
MWA-56d	9/11/2024	N	Deep	MWA-56d-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 2.9 U*	*< 4.3 U*	*< 4.1 U*	*< 3.3 U*	*< 6.1 U*
MWA-56d	9/11/2024	FD	Deep	DUP-02-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 2.9 U*	*< 4.3 U*	*< 4.1 U*	*< 3.3 U*	*< 6.1 U*
MWA-58d	9/11/2024	N	Deep	MWA-58d-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 2.9 U*	*< 4.3 U*	*< 4.1 U*	*< 3.3 U*	*< 6.1 U*
PA-18d	9/9/2024	N	Deep	PA-18d-090924	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.29 U*	*< 0.43 U*	*< 0.41 U*	*< 0.33 U*	*< 0.61 U*
PA-19d	9/11/2024	N	Deep	PA-19d-091124	*< 90 U*	*< 200 U*	*< 260 U*	*< 120 U*	*< 110 U*	*< 140 U*	*< 150 U*	*< 220 U*	*< 210 U*	*< 170 U*	*< 310 U*
PA-20d	9/11/2024	N	Deep	PA-20d-091124	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.53 j**	*< 0.28 U*	*< 0.29 U*	*< 0.43 U*	*< 0.41 U*	*< 0.33 U*	*< 0.61 U*
PA-22d	9/11/2024	N	Deep	PA-22d-091124	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.29 U*	*< 0.43 U*	*< 0.41 U*	*< 0.33 U*	*< 0.61 U*
PA-23d	9/10/2024	N	Deep	PA-23d-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.29 U*	*< 0.43 U*	*< 0.41 U*	*< 0.33 U*	*< 0.61 U*
PA-24d	9/10/2024	N	Deep	PA-24d-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.29 U*	*< 0.43 U*	*< 0.41 U*	*< 0.33 U*	*< 0.61 U*
PA-25d	9/9/2024	N	Deep	PA-25d-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.084 U*	*< 0.47 U*	*< 0.050 U*	*< 0.36 U*	*< 0.23 U*
PA-26d	9/9/2024	N	Deep	PA-26d-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.084 U*	*< 0.47 U*	*< 0.050 U*	*< 0.36 U*	*< 0.23 U*
PA-27d	9/9/2024	N	Deep	PA-27d-090924	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.28 j**	*< 0.28 U*	*< 0.29 U*	*< 0.43 U*	*< 0.41 U*	*< 0.33 U*	*< 0.61 U*
PA-30d	9/11/2024	N	Deep	PA-30d-091124	*< 180 U*	*< 390 U*	*< 520 U*	*< 240 U*	*< 220 U*	*< 280 U*	*< 290 U*	*< 430 U*	*< 410 U*	*< 330 U*	*< 610 U*

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

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

Table 2-1
Volatile Organic Compounds Results
Arkema Quarter 3, 2024, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Analyte					1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dibromo-3-chloropropane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3,5-Trimethylbenzene
Unit					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
FSWP SHSC (shaded values indicate results above the value shown)					NE	11	0.4	1.6	47	710	NE	14	3.7	1.5	NE
Location ID	**Sample Date**	**Sample Type**	**Aquifer Classification**	**Sample ID**											
MWA-41	9/10/2024	N	Shallow	MWA-41-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.48 U*	*< 0.038 U*	*< 0.12 U*	*< 0.060 U*	*< 0.19 U*
MWA-63	9/10/2024	N	Shallow	MWA-63-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.57 U*	*< 0.46 U*	*< 0.42 U*	*< 0.18 U*	*< 0.55 U*
MWA-82	9/9/2024	N	Shallow	MWA-82-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.48 U*	*< 0.038 U*	*< 0.12 U*	*< 0.060 U*	*< 0.19 U*
PA-03	9/9/2024	N	Shallow	PA-03-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.16 j**	*< 0.035 U*	*< 0.48 U*	*< 0.038 U*	*< 0.12 U*	*< 0.060 U*	*< 0.19 U*
PA-04	9/10/2024	N	Shallow	PA-04-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.29**	**0.25**	*< 0.48 U*	*< 0.038 U*	*< 0.12 U*	*< 0.060 U*	*< 0.19 U*
PA-08	9/9/2024	N	Shallow	PA-08-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.11 j**	*< 0.035 U*	*< 0.48 U*	*< 0.038 U*	*< 0.12 U*	*< 0.060 U*	*< 0.19 U*
PA-09	9/9/2024	N	Shallow	PA-09-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.48 U*	*< 0.038 U*	*< 0.12 U*	*< 0.060 U*	*< 0.19 U*
PA-31	9/11/2024	N	Shallow	PA-31-091124	*< 0.11 U*	**0.22**	*< 0.056 U*	*< 0.070 U*	**0.21**	**0.80 J+**	*< 0.48 U*	*< 0.038 U*	*< 0.12 U*	*< 0.060 U*	*< 0.19 U*
MWA-81i	9/10/2024	N	Intermediate	MWA-81i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.48 U*	*< 0.038 U*	*< 0.12 U*	*< 0.060 U*	*< 0.19 U*
PA-10i	9/10/2024	N	Intermediate	PA-10i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	**0.11 j**	*< 0.48 U*	**0.14 j**	*< 0.12 U*	*< 0.060 U*	*< 0.19 U*
PA-10i	9/10/2024	FD	Intermediate	DUP-01-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	**0.11 j**	*< 0.48 U*	**0.17 j**	*< 0.12 U*	*< 0.060 U*	*< 0.19 U*
PA-15i	9/9/2024	N	Intermediate	PA-15i-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.19 j**	*< 0.035 U*	*< 0.48 U*	*< 0.038 U*	*< 0.12 U*	*< 0.060 U*	*< 0.19 U*
PA-17iR	9/9/2024	N	Intermediate	PA-17iR-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.097 j**	**0.14 j**	*< 0.48 U*	*< 0.038 U*	*< 0.12 U*	*< 0.060 U*	*< 0.19 U*
PA-32i	9/11/2024	N	Intermediate	PA-32i-091124	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.084 j**	**0.065 J+**	*< 0.48 U*	**0.20 j**	*< 0.12 U*	*< 0.060 U*	*< 0.19 U*
PA-44i	9/10/2024	N	Intermediate	PA-44i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.26**	*< 0.035 U*	*< 0.48 U*	*< 0.038 U*	*< 0.12 U*	*< 0.060 U*	*< 0.19 U*
MWA-11i(d)	9/11/2024	N	Deep	MWA-11d(d)-091124	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.48 U*	*< 0.038 U*	*< 0.12 U*	*< 0.060 U*	*< 0.19 U*
MWA-31i(d)	9/10/2024	N	Deep	MWA-31i(d)-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.43 j**	*< 0.28 U*	*< 0.57 U*	*< 0.46 U*	*< 0.42 U*	*< 0.18 U*	*< 0.55 U*
MWA-56d	9/11/2024	N	Deep	MWA-56d-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 5.7 U*	*< 4.6 U*	*< 4.2 U*	*< 1.8 U*	*< 5.5 U*
MWA-56d	9/11/2024	FD	Deep	DUP-02-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 5.7 U*	*< 4.6 U*	*< 4.2 U*	*< 1.8 U*	*< 5.5 U*
MWA-58d	9/11/2024	N	Deep	MWA-58d-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 5.7 U*	*< 4.6 U*	*< 4.2 U*	*< 1.8 U*	*< 5.5 U*
PA-18d	9/9/2024	N	Deep	PA-18d-090924	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.57 U*	*< 0.46 U*	*< 0.42 U*	*< 0.18 U*	*< 0.55 U*
PA-19d	9/11/2024	N	Deep	PA-19d-091124	*< 90 U*	*< 200 U*	*< 260 U*	*< 120 U*	*< 110 U*	*< 140 U*	*< 290 U*	*< 230 U*	*< 210 U*	*< 90 U*	*< 280 U*
PA-20d	9/11/2024	N	Deep	PA-20d-091124	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.53 j**	*< 0.28 U*	*< 0.57 U*	*< 0.46 U*	*< 0.42 U*	*< 0.18 U*	*< 0.55 U*
PA-22d	9/11/2024	N	Deep	PA-22d-091124	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.57 U*	*< 0.46 U*	*< 0.42 U*	*< 0.18 U*	*< 0.55 U*
PA-23d	9/10/2024	N	Deep	PA-23d-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.57 U*	*< 0.46 U*	*< 0.42 U*	*< 0.18 U*	*< 0.55 U*
PA-24d	9/10/2024	N	Deep	PA-24d-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.57 U*	*< 0.46 U*	**0.77 j**	*< 0.18 U*	*< 0.55 U*
PA-25d	9/9/2024	N	Deep	PA-25d-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.48 U*	*< 0.038 U*	*< 0.12 U*	*< 0.060 U*	*< 0.19 U*
PA-26d	9/9/2024	N	Deep	PA-26d-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.48 U*	*< 0.038 U*	**0.29**	*< 0.060 U*	*< 0.19 U*
PA-27d	9/9/2024	N	Deep	PA-27d-090924	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.28 j**	*< 0.28 U*	*< 0.57 U*	*< 0.46 U*	*< 0.42 U*	*< 0.18 U*	*< 0.55 U*
PA-30d	9/11/2024	N	Deep	PA-30d-091124	*< 180 U*	*< 390 U*	*< 520 U*	*< 240 U*	*< 220 U*	*< 280 U*	*< 570 U*	*< 460 U*	*< 420 U*	*< 180 U*	*< 550 U*

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

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

Table 2-1
Volatile Organic Compounds Results
Arkema Quarter 3, 2024, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Analyte					1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,3-Dichlorobenzene	1,3-Dichloropropane	1,4-Dichlorobenzene	2,2-Dichloropropane	2-Butanone (Methyl ethyl ketone)
Unit					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
FSWP SHSC (shaded values indicate results above the value shown)					NE	11	0.4	1.6	47	710	10	NE	15	NE	14000
Location ID	**Sample Date**	**Sample Type**	**Aquifer Classification**	**Sample ID**											
MWA-41	9/10/2024	N	Shallow	MWA-41-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.050 U*	*< 0.056 U*	*< 0.050 U*	*< 0.060 U*	*< 2.5 U*
MWA-63	9/10/2024	N	Shallow	MWA-63-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.48 U*	*< 0.35 U*	*< 0.46 U*	*< 0.32 U*	*< 4.7 U*
MWA-82	9/9/2024	N	Shallow	MWA-82-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.050 U*	*< 0.056 U*	*< 0.050 U*	*< 0.060 U*	*< 2.5 UJ*
PA-03	9/9/2024	N	Shallow	PA-03-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.16 j**	*< 0.035 U*	*< 0.050 U*	*< 0.056 U*	*< 0.050 U*	*< 0.060 U*	*< 2.5 UJ*
PA-04	9/10/2024	N	Shallow	PA-04-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.29**	**0.25**	*< 0.050 U*	*< 0.056 U*	*< 0.050 U*	*< 0.060 U*	*< 2.5 U*
PA-08	9/9/2024	N	Shallow	PA-08-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.11 j**	*< 0.035 U*	*< 0.050 U*	*< 0.056 U*	*< 0.050 U*	*< 0.060 U*	*< 2.5 UJ*
PA-09	9/9/2024	N	Shallow	PA-09-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.050 U*	*< 0.056 U*	*< 0.050 U*	*< 0.060 U*	*< 2.5 UJ*
PA-31	9/11/2024	N	Shallow	PA-31-091124	*< 0.11 U*	**0.22**	*< 0.056 U*	*< 0.070 U*	**0.21**	**0.80 J+**	*< 0.050 U*	*< 0.056 U*	*< 0.050 U*	*< 0.060 U*	*< 2.5 U*
MWA-81i	9/10/2024	N	Intermediate	MWA-81i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.050 U*	*< 0.056 U*	*< 0.050 U*	*< 0.060 U*	*< 2.5 U*
PA-10i	9/10/2024	N	Intermediate	PA-10i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	**0.11 j**	*< 0.050 U*	*< 0.056 U*	*< 0.050 U*	*< 0.060 U*	*< 2.5 U*
PA-10i	9/10/2024	FD	Intermediate	DUP-01-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	**0.11 j**	*< 0.050 U*	*< 0.056 U*	*< 0.050 U*	*< 0.060 U*	*< 2.5 U*
PA-15i	9/9/2024	N	Intermediate	PA-15i-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.19 j**	*< 0.035 U*	*< 0.050 U*	*< 0.056 U*	*< 0.050 U*	*< 0.060 U*	*< 2.5 UJ*
PA-17iR	9/9/2024	N	Intermediate	PA-17iR-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.097 j**	**0.14 j**	*< 0.050 U*	*< 0.056 U*	*< 0.050 U*	*< 0.060 U*	*< 2.5 UJ*
PA-32i	9/11/2024	N	Intermediate	PA-32i-091124	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.084 j**	**0.065 J+**	*< 0.050 U*	*< 0.056 U*	*< 0.050 U*	*< 0.060 U*	*< 2.5 U*
PA-44i	9/10/2024	N	Intermediate	PA-44i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.26**	*< 0.035 U*	*< 0.050 U*	*< 0.056 U*	*< 0.050 U*	*< 0.060 U*	*< 2.5 U*
MWA-11i(d)	9/11/2024	N	Deep	MWA-11d(d)-091124	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.050 U*	*< 0.056 U*	*< 0.050 U*	*< 0.060 U*	*< 2.5 U*
MWA-31i(d)	9/10/2024	N	Deep	MWA-31i(d)-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.43 j**	*< 0.28 U*	*< 0.48 U*	*< 0.35 U*	*< 0.46 U*	*< 0.32 U*	*< 4.7 U*
MWA-56d	9/11/2024	N	Deep	MWA-56d-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 4.8 U*	*< 3.5 U*	*< 4.6 U*	*< 3.2 U*	*< 47 U*
MWA-56d	9/11/2024	FD	Deep	DUP-02-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 4.8 U*	*< 3.5 U*	*< 4.6 U*	*< 3.2 U*	*< 47 U*
MWA-58d	9/11/2024	N	Deep	MWA-58d-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 4.8 U*	*< 3.5 U*	*< 4.6 U*	*< 3.2 U*	*< 47 U*
PA-18d	9/9/2024	N	Deep	PA-18d-090924	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.48 U*	*< 0.35 U*	*< 0.46 U*	*< 0.32 U*	*< 4.7 UJ*
PA-19d	9/11/2024	N	Deep	PA-19d-091124	*< 90 U*	*< 200 U*	*< 260 U*	*< 120 U*	*< 110 U*	*< 140 U*	*< 240 U*	*< 180 U*	*< 230 U*	*< 160 U*	*< 2,400 U*
PA-20d	9/11/2024	N	Deep	PA-20d-091124	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.53 j**	*< 0.28 U*	*< 0.48 U*	*< 0.35 U*	*< 0.46 U*	*< 0.32 U*	*< 4.7 U*
PA-22d	9/11/2024	N	Deep	PA-22d-091124	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.48 U*	*< 0.35 U*	*< 0.46 U*	*< 0.32 U*	*< 4.7 U*
PA-23d	9/10/2024	N	Deep	PA-23d-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.48 U*	*< 0.35 U*	*< 0.46 U*	*< 0.32 U*	*< 4.7 U*
PA-24d	9/10/2024	N	Deep	PA-24d-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.48 U*	*< 0.35 U*	*< 0.46 U*	*< 0.32 U*	*< 4.7 U*
PA-25d	9/9/2024	N	Deep	PA-25d-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.050 U*	*< 0.056 U*	*< 0.050 U*	*< 0.060 U*	*< 2.5 UJ*
PA-26d	9/9/2024	N	Deep	PA-26d-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.050 U*	*< 0.056 U*	*< 0.050 U*	*< 0.060 U*	*< 2.5 UJ*
PA-27d	9/9/2024	N	Deep	PA-27d-090924	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.28 j**	*< 0.28 U*	*< 0.48 U*	*< 0.35 U*	*< 0.46 U*	*< 0.32 U*	*< 4.7 UJ*
PA-30d	9/11/2024	N	Deep	PA-30d-091124	*< 180 U*	*< 390 U*	*< 520 U*	*< 240 U*	*< 220 U*	*< 280 U*	*< 480 U*	*< 350 U*	*< 460 U*	*< 320 U*	*< 4,700 U*

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

Qualifiers - Organic:
j = The analyte was positively identified below the RDL; associated numerical value is the approximate concentration of the analyte in the sample.
J- = The concentration of the sample is considered to be biased low, as the associated QC results are outside the lower control limits.
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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 2-1
Volatile Organic Compounds Results
Arkema Quarter 3, 2024, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Analyte					1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	4-Chlorotoluene	4-Isopropyltoluene	4-Methyl-2-pentanone	Acetone	Benzene
Unit					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
FSWP SHSC (shaded values indicate results above the value shown)					NE	11	0.4	1.6	47	710	NE	NE	NE	1500	1.4
Location ID	**Sample Date**	**Sample Type**	**Aquifer Classification**	**Sample ID**											
MWA-41	9/10/2024	N	Shallow	MWA-41-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.12 U*	*< 0.25 U*	*< 2.7 U*	*< 3.1 U*	*< 0.030 U*
MWA-63	9/10/2024	N	Shallow	MWA-63-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.38 U*	*< 0.28 U*	*< 2.5 U*	*< 3.2 U*	*< 0.24 U*
MWA-82	9/9/2024	N	Shallow	MWA-82-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.12 U*	*< 0.25 U*	*< 2.7 U*	*< 3.1 U*	*< 0.030 U*
PA-03	9/9/2024	N	Shallow	PA-03-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.16 j**	*< 0.035 U*	*< 0.12 U*	*< 0.25 U*	*< 2.7 U*	*< 3.1 U*	**0.059 j**
PA-04	9/10/2024	N	Shallow	PA-04-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.29**	**0.25**	*< 0.12 U*	*< 0.25 U*	*< 2.7 U*	*< 3.1 U*	*< 0.030 U*
PA-08	9/9/2024	N	Shallow	PA-08-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.11 j**	*< 0.035 U*	*< 0.12 U*	*< 0.25 U*	*< 2.7 U*	*< 3.1 U*	*< 0.030 U*
PA-09	9/9/2024	N	Shallow	PA-09-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.12 U*	*< 0.25 U*	*< 2.7 U*	*< 3.1 U*	*< 0.030 U*
PA-31	9/11/2024	N	Shallow	PA-31-091124	*< 0.11 U*	**0.22**	*< 0.056 U*	*< 0.070 U*	**0.21**	**0.80 J+**	*< 0.12 U*	*< 0.25 U*	*< 2.7 U*	*< 3.1 U*	*< 0.20 U*
MWA-81i	9/10/2024	N	Intermediate	MWA-81i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.12 U*	*< 0.25 U*	*< 2.7 U*	*< 3.1 U*	*< 0.030 U*
PA-10i	9/10/2024	N	Intermediate	PA-10i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	**0.11 j**	*< 0.12 U*	*< 0.25 U*	*< 2.7 U*	*< 3.1 U*	*< 0.030 U*
PA-10i	9/10/2024	FD	Intermediate	DUP-01-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	**0.11 j**	*< 0.12 U*	*< 0.25 U*	*< 2.7 U*	*< 3.1 U*	*< 0.030 U*
PA-15i	9/9/2024	N	Intermediate	PA-15i-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.19 j**	*< 0.035 U*	*< 0.12 U*	*< 0.25 U*	*< 2.7 U*	*< 3.1 U*	*< 0.030 U*
PA-17iR	9/9/2024	N	Intermediate	PA-17iR-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.097 j**	**0.14 j**	*< 0.12 U*	*< 0.25 U*	*< 2.7 U*	*< 3.1 U*	**0.078 j**
PA-32i	9/11/2024	N	Intermediate	PA-32i-091124	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.084 j**	**0.065 J+**	*< 0.12 U*	*< 0.25 U*	*< 2.7 U*	*< 3.1 U*	*< 0.20 U*
PA-44i	9/10/2024	N	Intermediate	PA-44i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.26**	*< 0.035 U*	*< 0.12 U*	*< 0.25 U*	*< 2.7 U*	*< 3.1 U*	*< 0.030 U*
MWA-11i(d)	9/11/2024	N	Deep	MWA-11d(d)-091124	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.12 U*	*< 0.25 U*	*< 2.7 U*	*< 3.1 U*	*< 0.030 U*
MWA-31i(d)	9/10/2024	N	Deep	MWA-31i(d)-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.43 j**	*< 0.28 U*	*< 0.38 U*	*< 0.28 U*	*< 2.5 U*	*< 3.2 U*	*< 0.24 U*
MWA-56d	9/11/2024	N	Deep	MWA-56d-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 3.8 U*	*< 2.8 U*	*< 25 U*	**32 j**	*< 2.4 U*
MWA-56d	9/11/2024	FD	Deep	DUP-02-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 3.8 U*	*< 2.8 U*	*< 25 U*	*< 32 U*	*< 2.4 U*
MWA-58d	9/11/2024	N	Deep	MWA-58d-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 3.8 U*	*< 2.8 U*	*< 25 U*	**39 j**	*< 2.4 U*
PA-18d	9/9/2024	N	Deep	PA-18d-090924	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.38 U*	*< 0.28 U*	*< 2.5 U*	*< 3.2 U*	*< 0.24 U*
PA-19d	9/11/2024	N	Deep	PA-19d-091124	*< 90 U*	*< 200 U*	*< 260 U*	*< 120 U*	*< 110 U*	*< 140 U*	*< 190 U*	*< 140 U*	*< 1,300 U*	*< 1,600 U*	*< 120 U*
PA-20d	9/11/2024	N	Deep	PA-20d-091124	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.53 j**	*< 0.28 U*	*< 0.38 U*	*< 0.28 U*	*< 2.5 U*	*< 3.2 U*	*< 0.24 U*
PA-22d	9/11/2024	N	Deep	PA-22d-091124	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.38 U*	*< 0.28 U*	*< 2.5 U*	*< 3.2 U*	*< 0.24 U*
PA-23d	9/10/2024	N	Deep	PA-23d-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.38 U*	*< 0.28 U*	*< 2.5 U*	*< 3.2 U*	*< 0.24 U*
PA-24d	9/10/2024	N	Deep	PA-24d-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.38 U*	*< 0.28 U*	*< 2.5 U*	*< 3.2 U*	*< 0.24 U*
PA-25d	9/9/2024	N	Deep	PA-25d-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.12 U*	*< 0.25 U*	*< 2.7 U*	*< 3.1 U*	*< 0.030 U*
PA-26d	9/9/2024	N	Deep	PA-26d-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.12 U*	*< 0.25 U*	*< 2.7 U*	*< 3.1 U*	*< 0.030 U*
PA-27d	9/9/2024	N	Deep	PA-27d-090924	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.28 j**	*< 0.28 U*	*< 0.38 U*	*< 0.28 U*	*< 2.5 U*	*< 3.2 U*	*< 0.24 U*
PA-30d	9/11/2024	N	Deep	PA-30d-091124	*< 180 U*	*< 390 U*	*< 520 U*	*< 240 U*	*< 220 U*	*< 280 U*	*< 380 U*	*< 280 U*	*< 2,500 U*	*< 3,200 U*	*< 240 U*

Notes:
Bolded values indicate concentrations above the Method Detection Limit.
Shaded values indicate concentrations above the FSWP SHSC.
< = Compound not detected. Method Detection Limit shown.
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 2-1
Volatile Organic Compounds Results
Arkema Quarter 3, 2024, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Analyte					1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	Bromobenzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide
Unit					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
FSWP SHSC (shaded values indicate results above the value shown)					NE	11	0.4	1.6	47	710	NE	1.7	14	150	0.92
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID											
MWA-41	9/10/2024	N	Shallow	MWA-41-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.038 U*	*< 0.060 U*	*< 0.16 U*	*< 0.13 U*	*< 0.20 U*
MWA-63	9/10/2024	N	Shallow	MWA-63-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.43 U*	*< 0.29 U*	*< 0.51 U*	*< 0.21 U*	*< 0.53 U*
MWA-82	9/9/2024	N	Shallow	MWA-82-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.038 U*	*< 0.060 U*	*< 0.16 U*	*< 0.13 U*	*< 0.20 U*
PA-03	9/9/2024	N	Shallow	PA-03-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.16 j**	*< 0.035 U*	*< 0.038 U*	*< 0.060 U*	*< 0.16 U*	*< 0.13 U*	*< 0.20 U*
PA-04	9/10/2024	N	Shallow	PA-04-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.29**	**0.25**	*< 0.038 U*	*< 0.060 U*	*< 0.16 U*	*< 0.13 U*	*< 0.20 U*
PA-08	9/9/2024	N	Shallow	PA-08-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.11 j**	*< 0.035 U*	*< 0.038 U*	*< 0.060 U*	*< 0.16 U*	*< 0.13 U*	*< 0.20 U*
PA-09	9/9/2024	N	Shallow	PA-09-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.038 U*	*< 0.060 U*	*< 0.16 U*	*< 0.13 U*	*< 0.20 U*
PA-31	9/11/2024	N	Shallow	PA-31-091124	*< 0.11 U*	**0.22**	*< 0.056 U*	*< 0.070 U*	**0.21**	**0.80 J+**	*< 0.038 U*	*< 0.060 U*	*< 0.16 U*	*< 0.13 U*	*< 0.20 U*
MWA-81i	9/10/2024	N	Intermediate	MWA-81i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.038 U*	*< 0.060 U*	*< 0.16 U*	*< 0.13 U*	*< 0.20 U*
PA-10i	9/10/2024	N	Intermediate	PA-10i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	**0.11 j**	*< 0.038 U*	*< 0.060 U*	*< 0.16 U*	*< 0.13 U*	*< 0.20 U*
PA-10i	9/10/2024	FD	Intermediate	DUP-01-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	**0.11 j**	*< 0.038 U*	*< 0.060 U*	*< 0.16 U*	*< 0.13 U*	*< 0.20 U*
PA-15i	9/9/2024	N	Intermediate	PA-15i-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.19 j**	*< 0.035 U*	*< 0.038 U*	*< 0.060 U*	*< 0.16 U*	*< 0.13 U*	*< 0.20 U*
PA-17iR	9/9/2024	N	Intermediate	PA-17iR-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.097 j**	**0.14 j**	*< 0.038 U*	*< 0.060 U*	*< 0.16 U*	*< 0.13 U*	**0.23 j**
PA-32i	9/11/2024	N	Intermediate	PA-32i-091124	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.084 j**	**0.065 J+**	*< 0.038 U*	*< 0.060 U*	*< 0.16 U*	*< 0.13 U*	*< 0.20 U*
PA-44i	9/10/2024	N	Intermediate	PA-44i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.26**	*< 0.035 U*	*< 0.038 U*	*< 0.060 U*	*< 0.16 U*	*< 0.13 U*	*< 0.20 U*
MWA-11i(d)	9/11/2024	N	Deep	MWA-11d(d)-091124	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.038 U*	*< 0.060 U*	*< 0.16 U*	*< 0.13 U*	*< 0.20 U*
MWA-31i(d)	9/10/2024	N	Deep	MWA-31i(d)-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.43 j**	*< 0.28 U*	*< 0.43 U*	*< 0.29 U*	*< 0.51 U*	*< 0.21 U*	*< 0.53 U*
MWA-56d	9/11/2024	N	Deep	MWA-56d-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 4.3 U*	*< 2.9 U*	*< 5.1 U*	*< 2.1 U*	*< 5.3 U*
MWA-56d	9/11/2024	FD	Deep	DUP-02-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 4.3 U*	*< 2.9 U*	*< 5.1 U*	*< 2.1 U*	*< 5.3 U*
MWA-58d	9/11/2024	N	Deep	MWA-58d-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 4.3 U*	*< 2.9 U*	*< 5.1 U*	*< 2.1 U*	*< 5.3 U*
PA-18d	9/9/2024	N	Deep	PA-18d-090924	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.43 U*	*< 0.29 U*	*< 0.51 U*	*< 0.21 U*	*< 0.53 U*
PA-19d	9/11/2024	N	Deep	PA-19d-091124	*< 90 U*	*< 200 U*	*< 260 U*	*< 120 U*	*< 110 U*	*< 140 U*	*< 220 U*	*< 150 U*	*< 260 U*	*< 110 U*	*< 270 U*
PA-20d	9/11/2024	N	Deep	PA-20d-091124	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.53 j**	*< 0.28 U*	*< 0.43 U*	*< 0.29 U*	*< 0.51 U*	*< 0.21 U*	*< 0.53 U*
PA-22d	9/11/2024	N	Deep	PA-22d-091124	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.43 U*	*< 0.29 U*	*< 0.51 U*	*< 0.21 U*	*< 0.53 U*
PA-23d	9/10/2024	N	Deep	PA-23d-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.43 U*	*< 0.29 U*	*< 0.51 U*	*< 0.21 U*	*< 0.53 U*
PA-24d	9/10/2024	N	Deep	PA-24d-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.43 U*	*< 0.29 U*	*< 0.51 U*	*< 0.21 U*	*< 0.53 U*
PA-25d	9/9/2024	N	Deep	PA-25d-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.038 U*	*< 0.060 U*	*< 0.16 U*	*< 0.13 U*	*< 0.20 U*
PA-26d	9/9/2024	N	Deep	PA-26d-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.038 U*	*< 0.060 U*	*< 0.16 U*	*< 0.13 U*	*< 0.20 U*
PA-27d	9/9/2024	N	Deep	PA-27d-090924	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.28 j**	*< 0.28 U*	*< 0.43 U*	*< 0.29 U*	*< 0.51 U*	*< 0.21 U*	*< 0.53 U*
PA-30d	9/11/2024	N	Deep	PA-30d-091124	*< 180 U*	*< 390 U*	*< 520 U*	*< 240 U*	*< 220 U*	*< 280 U*	*< 430 U*	*< 290 U*	*< 510 U*	*< 210 U*	*< 530 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:
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J+ = The concentration of the sample is considered to be biased high, as the associated QC results exceed the upper control limits.
U = Analyte was analyzed for, but not detected above, the limit displayed.
UJ = Analyte was analyzed for, but not detected. The detection limit is a quantitative estimate.

Table 2-1
Volatile Organic Compounds Results
Arkema Quarter 3, 2024, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

				Analyte	1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	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
				FSWP SHSC (shaded values indicate results above the value shown)	NE	11	0.4	1.6	47	710	0.16	64	NE	NE	28
Location ID	**Sample Date**	**Sample Type**	**Aquifer Classification**	**Sample ID**											
MWA-41	9/10/2024	N	Shallow	MWA-41-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.025 U*	*< 0.060 U*	*< 0.050 U*	*< 0.24 U*	*< 0.030 U*
MWA-63	9/10/2024	N	Shallow	MWA-63-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.30 U*	*< 0.44 U*	*< 0.29 U*	*< 0.35 U*	**100**
MWA-82	9/9/2024	N	Shallow	MWA-82-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.025 U*	*< 0.060 U*	*< 0.050 U*	*< 0.24 U*	**1.6**
PA-03	9/9/2024	N	Shallow	PA-03-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.16 j**	*< 0.035 U*	*< 0.025 U*	*< 0.060 U*	*< 0.050 U*	*< 0.24 U*	*< 0.030 U*
PA-04	9/10/2024	N	Shallow	PA-04-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.29**	**0.25**	*< 0.025 U*	*< 0.060 U*	*< 0.050 U*	*< 0.24 U*	**0.033 j**
PA-08	9/9/2024	N	Shallow	PA-08-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.11 j**	*< 0.035 U*	*< 0.025 U*	*< 0.060 U*	*< 0.050 U*	*< 0.24 U*	**0.061 j**
PA-09	9/9/2024	N	Shallow	PA-09-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.025 U*	*< 0.060 U*	*< 0.050 U*	*< 0.24 U*	**0.18 j**
PA-31	9/11/2024	N	Shallow	PA-31-091124	*< 0.11 U*	**0.22**	*< 0.056 U*	*< 0.070 U*	**0.21**	**0.80 J+**	*< 0.025 U*	*< 0.060 U*	*< 0.050 U*	*< 0.24 U*	**0.045 j**
MWA-81i	9/10/2024	N	Intermediate	MWA-81i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.025 U*	*< 0.060 U*	*< 0.050 U*	*< 0.24 U*	*< 0.030 U*
PA-10i	9/10/2024	N	Intermediate	PA-10i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	**0.11 j**	*< 0.025 U*	*< 0.060 U*	*< 0.050 U*	*< 0.24 U*	*< 0.030 U*
PA-10i	9/10/2024	FD	Intermediate	DUP-01-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	**0.11 j**	*< 0.025 U*	*< 0.060 U*	*< 0.050 U*	*< 0.24 U*	*< 0.030 U*
PA-15i	9/9/2024	N	Intermediate	PA-15i-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.19 j**	*< 0.035 U*	*< 0.025 U*	*< 0.060 U*	*< 0.050 U*	*< 0.24 U*	*< 0.030 U*
PA-17iR	9/9/2024	N	Intermediate	PA-17iR-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.097 j**	**0.14 j**	*< 0.025 U*	*< 0.060 U*	*< 0.050 U*	*< 0.24 U*	*< 0.030 U*
PA-32i	9/11/2024	N	Intermediate	PA-32i-091124	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.084 j**	**0.065 J+**	*< 0.025 U*	**0.21**	*< 0.050 U*	**0.42 j**	*< 0.030 U*
PA-44i	9/10/2024	N	Intermediate	PA-44i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.26**	*< 0.035 U*	*< 0.025 U*	*< 0.060 U*	*< 0.050 U*	*< 0.24 U*	*< 0.030 U*
MWA-11i(d)	9/11/2024	N	Deep	MWA-11d(d)-091124	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.025 U*	*< 0.060 U*	*< 0.050 U*	*< 0.24 U*	*< 0.030 U*
MWA-31i(d)	9/10/2024	N	Deep	MWA-31i(d)-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.43 j**	*< 0.28 U*	*< 0.30 U*	*< 0.44 U*	*< 0.29 U*	*< 0.35 U*	**63**
MWA-56d	9/11/2024	N	Deep	MWA-56d-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 3.0 U*	*< 4.4 U*	*< 2.9 U*	*< 3.5 U*	**150**
MWA-56d	9/11/2024	FD	Deep	DUP-02-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 3.0 U*	*< 4.4 U*	*< 2.9 U*	*< 3.5 U*	**160**
MWA-58d	9/11/2024	N	Deep	MWA-58d-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 3.0 U*	*< 4.4 U*	*< 2.9 U*	*< 3.5 U*	**200**
PA-18d	9/9/2024	N	Deep	PA-18d-090924	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.30 U*	*< 0.44 U*	*< 0.29 U*	*< 0.35 U*	*< 0.26 U*
PA-19d	9/11/2024	N	Deep	PA-19d-091124	*< 90 U*	*< 200 U*	*< 260 U*	*< 120 U*	*< 110 U*	*< 140 U*	*< 150 U*	**6,300**	*< 150 U*	*< 180 U*	*< 130 U*
PA-20d	9/11/2024	N	Deep	PA-20d-091124	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.53 j**	*< 0.28 U*	*< 0.30 U*	**2.7**	*< 0.29 U*	*< 0.35 U*	*< 0.26 U*
PA-22d	9/11/2024	N	Deep	PA-22d-091124	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.30 U*	*< 0.44 U*	*< 0.29 U*	*< 0.35 U*	**14**
PA-23d	9/10/2024	N	Deep	PA-23d-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.30 U*	*< 0.44 U*	*< 0.29 U*	*< 0.35 U*	*< 0.26 U*
PA-24d	9/10/2024	N	Deep	PA-24d-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.30 U*	*< 0.44 U*	*< 0.29 U*	*< 0.35 U*	*< 0.26 U*
PA-25d	9/9/2024	N	Deep	PA-25d-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.025 U*	*< 0.060 U*	*< 0.050 U*	*< 0.24 U*	*< 0.030 U*
PA-26d	9/9/2024	N	Deep	PA-26d-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.025 U*	*< 0.060 U*	*< 0.050 U*	*< 0.24 U*	*< 0.030 U*
PA-27d	9/9/2024	N	Deep	PA-27d-090924	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.28 j**	*< 0.28 U*	*< 0.30 U*	*< 0.44 U*	*< 0.29 U*	*< 0.35 U*	*< 0.26 U*
PA-30d	9/11/2024	N	Deep	PA-30d-091124	*< 180 U*	*< 390 U*	*< 520 U*	*< 240 U*	*< 220 U*	*< 280 U*	*< 300 U*	**8,200**	*< 290 U*	*< 350 U*	*< 260 U*

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

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

Table 2-1
Volatile Organic Compounds Results
Arkema Quarter 3, 2024, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Analyte					1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Dibromochloromethane	Dibromomethane
Unit					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
FSWP SHSC (shaded values indicate results above the value shown)					NE	11	0.4	1.6	47	710	NE	590	NE	1.3	NE
Location ID	**Sample Date**	**Sample Type**	**Aquifer Classification**	**Sample ID**											
MWA-41	9/10/2024	N	Shallow	MWA-41-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.14 U*	*< 0.055 U*	*< 0.090 U*	*< 0.055 U*	*< 0.062 U*
MWA-63	9/10/2024	N	Shallow	MWA-63-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.28 U*	**3.6**	*< 0.42 U*	*< 0.43 U*	*< 0.34 U*
MWA-82	9/9/2024	N	Shallow	MWA-82-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.14 U*	*< 0.055 U*	*< 0.090 U*	*< 0.055 U*	*< 0.062 U*
PA-03	9/9/2024	N	Shallow	PA-03-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.16 j**	*< 0.035 U*	**0.29 j**	*< 0.055 U*	*< 0.090 U*	*< 0.055 U*	*< 0.062 U*
PA-04	9/10/2024	N	Shallow	PA-04-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.29**	**0.25**	**0.20 j**	*< 0.055 U*	*< 0.090 U*	*< 0.055 U*	*< 0.062 U*
PA-08	9/9/2024	N	Shallow	PA-08-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.11 j**	*< 0.035 U*	*< 0.14 U*	**0.15 j**	*< 0.090 U*	*< 0.055 U*	*< 0.062 U*
PA-09	9/9/2024	N	Shallow	PA-09-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.14 U*	*< 0.055 U*	*< 0.090 U*	*< 0.055 U*	*< 0.062 U*
PA-31	9/11/2024	N	Shallow	PA-31-091124	*< 0.11 U*	**0.22**	*< 0.056 U*	*< 0.070 U*	**0.21**	**0.80 J+**	**0.30 j**	*< 0.055 U*	*< 0.090 U*	*< 0.055 U*	*< 0.062 U*
MWA-81i	9/10/2024	N	Intermediate	MWA-81i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.14 U*	*< 0.055 U*	*< 0.090 U*	*< 0.055 U*	*< 0.062 U*
PA-10i	9/10/2024	N	Intermediate	PA-10i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	**0.11 j**	*< 0.14 U*	**0.17 j**	*< 0.090 U*	*< 0.055 U*	*< 0.062 U*
PA-10i	9/10/2024	FD	Intermediate	DUP-01-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	**0.11 j**	*< 0.14 U*	**0.14 j**	*< 0.090 U*	*< 0.055 U*	*< 0.062 U*
PA-15i	9/9/2024	N	Intermediate	PA-15i-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.19 j**	*< 0.035 U*	*< 0.14 U*	**0.077 j**	*< 0.090 U*	*< 0.055 U*	*< 0.062 U*
PA-17iR	9/9/2024	N	Intermediate	PA-17iR-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.097 j**	**0.14 j**	*< 0.14 U*	**0.10 j**	*< 0.090 U*	*< 0.055 U*	*< 0.062 U*
PA-32i	9/11/2024	N	Intermediate	PA-32i-091124	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.084 j**	**0.065 J+**	**0.28 j**	**0.094 j**	*< 0.090 U*	*< 0.055 U*	*< 0.062 U*
PA-44i	9/10/2024	N	Intermediate	PA-44i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.26**	*< 0.035 U*	*< 0.14 U*	*< 0.055 U*	*< 0.090 U*	*< 0.055 U*	*< 0.062 U*
MWA-11i(d)	9/11/2024	N	Deep	MWA-11d(d)-091124	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.14 U*	**0.12 j**	*< 0.090 U*	*< 0.055 U*	*< 0.062 U*
MWA-31i(d)	9/10/2024	N	Deep	MWA-31i(d)-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.43 j**	*< 0.28 U*	*< 0.28 U*	*< 0.35 U*	*< 0.42 U*	*< 0.43 U*	*< 0.34 U*
MWA-56d	9/11/2024	N	Deep	MWA-56d-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 2.8 U*	*< 3.5 U*	*< 4.2 U*	*< 4.3 U*	*< 3.4 U*
MWA-56d	9/11/2024	FD	Deep	DUP-02-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 2.8 U*	*< 3.5 U*	*< 4.2 U*	*< 4.3 U*	*< 3.4 U*
MWA-58d	9/11/2024	N	Deep	MWA-58d-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 2.8 U*	*< 3.5 U*	*< 4.2 U*	*< 4.3 U*	*< 3.4 U*
PA-18d	9/9/2024	N	Deep	PA-18d-090924	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.28 U*	*< 0.35 U*	*< 0.42 U*	*< 0.43 U*	*< 0.34 U*
PA-19d	9/11/2024	N	Deep	PA-19d-091124	*< 90 U*	*< 200 U*	*< 260 U*	*< 120 U*	*< 110 U*	*< 140 U*	*< 140 U*	*< 180 U*	*< 210 U*	*< 220 U*	*< 170 U*
PA-20d	9/11/2024	N	Deep	PA-20d-091124	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.53 j**	*< 0.28 U*	*< 0.28 U*	*< 0.35 U*	*< 0.42 U*	*< 0.43 U*	*< 0.34 U*
PA-22d	9/11/2024	N	Deep	PA-22d-091124	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.28 U*	*< 0.35 U*	*< 0.42 U*	*< 0.43 U*	*< 0.34 U*
PA-23d	9/10/2024	N	Deep	PA-23d-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.28 U*	*< 0.35 U*	*< 0.42 U*	*< 0.43 U*	*< 0.34 U*
PA-24d	9/10/2024	N	Deep	PA-24d-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.28 U*	*< 0.35 U*	*< 0.42 U*	*< 0.43 U*	*< 0.34 U*
PA-25d	9/9/2024	N	Deep	PA-25d-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.14 U*	*< 0.055 U*	*< 0.090 U*	*< 0.055 U*	*< 0.062 U*
PA-26d	9/9/2024	N	Deep	PA-26d-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.14 U*	*< 0.055 U*	*< 0.090 U*	*< 0.055 U*	*< 0.062 U*
PA-27d	9/9/2024	N	Deep	PA-27d-090924	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.28 j**	*< 0.28 U*	*< 0.28 U*	**0.67 j**	*< 0.42 U*	*< 0.43 U*	*< 0.34 U*
PA-30d	9/11/2024	N	Deep	PA-30d-091124	*< 180 U*	*< 390 U*	*< 520 U*	*< 240 U*	*< 220 U*	*< 280 U*	*< 280 U*	*< 350 U*	*< 420 U*	*< 430 U*	*< 340 U*

Notes:
Bolded values indicate concentrations above the Method Detection Limit.
Shaded values indicate concentrations above the FSWP SHSC.
< = Compound not detected. Method Detection Limit shown.
µg/L = micrograms per liter
FD = Field Duplicate Sample
FSWP SHSC = Feasibility Study Work Plan Indirect Exposure Pathway Selected Hot Spot Criteria
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.
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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 2-1
Volatile Organic Compounds Results
Arkema Quarter 3, 2024, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Analyte					1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	Dichlorodifluoromethane (Freon 12)	Ethylbenzene	Ethylene dibromide	Hexachlorobutadiene	Isopropylbenzene (Cumene)
Unit					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
FSWP SHSC (shaded values indicate results above the value shown)					NE	11	0.4	1.6	47	710	NE	7.3	NE	0.01	NE
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID											
MWA-41	9/10/2024	N	Shallow	MWA-41-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.13 U*	*< 0.082 U*	*< 0.067 U*	*< 0.16 U*	*< 0.27 U*
MWA-63	9/10/2024	N	Shallow	MWA-63-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.53 U*	*< 0.50 U*	*< 0.40 U*	*< 0.79 U*	*< 0.44 U*
MWA-82	9/9/2024	N	Shallow	MWA-82-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.13 U*	*< 0.082 U*	*< 0.067 U*	*< 0.16 U*	*< 0.27 U*
PA-03	9/9/2024	N	Shallow	PA-03-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.16 j**	*< 0.035 U*	*< 0.13 U*	*< 0.082 U*	*< 0.067 U*	*< 0.16 U*	*< 0.27 U*
PA-04	9/10/2024	N	Shallow	PA-04-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.29**	**0.25**	*< 0.13 U*	*< 0.082 U*	*< 0.067 U*	*< 0.16 U*	*< 0.27 U*
PA-08	9/9/2024	N	Shallow	PA-08-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.11 j**	*< 0.035 U*	*< 0.13 U*	*< 0.082 U*	*< 0.067 U*	*< 0.16 U*	*< 0.27 U*
PA-09	9/9/2024	N	Shallow	PA-09-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.13 U*	*< 0.082 U*	*< 0.067 U*	*< 0.16 U*	*< 0.27 U*
PA-31	9/11/2024	N	Shallow	PA-31-091124	*< 0.11 U*	**0.22**	*< 0.056 U*	*< 0.070 U*	**0.21**	**0.80 J+**	*< 0.13 U*	*< 0.082 U*	*< 0.067 U*	*< 0.16 UJ*	*< 0.27 U*
MWA-81i	9/10/2024	N	Intermediate	MWA-81i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.13 U*	*< 0.082 U*	*< 0.067 U*	*< 0.16 U*	*< 0.27 UF1*
PA-10i	9/10/2024	N	Intermediate	PA-10i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	**0.11 j**	*< 0.13 U*	*< 0.082 U*	*< 0.067 U*	*< 0.16 U*	*< 0.27 U*
PA-10i	9/10/2024	FD	Intermediate	DUP-01-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	**0.11 j**	*< 0.13 U*	*< 0.082 U*	*< 0.067 U*	*< 0.16 U*	*< 0.27 U*
PA-15i	9/9/2024	N	Intermediate	PA-15i-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.19 j**	*< 0.035 U*	*< 0.13 U*	*< 0.082 U*	*< 0.067 U*	*< 0.16 U*	*< 0.27 U*
PA-17iR	9/9/2024	N	Intermediate	PA-17iR-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.097 j**	**0.14 j**	*< 0.13 U*	*< 0.082 U*	*< 0.067 U*	*< 0.16 U*	*< 0.27 U*
PA-32i	9/11/2024	N	Intermediate	PA-32i-091124	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.084 j**	**0.065 J+**	*< 0.13 U*	*< 0.082 U*	*< 0.067 U*	*< 0.16 UJ*	*< 0.27 U*
PA-44i	9/10/2024	N	Intermediate	PA-44i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.26**	*< 0.035 U*	*< 0.13 U*	*< 0.082 U*	*< 0.067 U*	*< 0.16 U*	*< 0.27 U*
MWA-11i(d)	9/11/2024	N	Deep	MWA-11d(d)-091124	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.13 U*	*< 0.082 U*	*< 0.067 U*	*< 0.16 U*	*< 0.27 U*
MWA-31i(d)	9/10/2024	N	Deep	MWA-31i(d)-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.43 j**	*< 0.28 U*	*< 0.53 U*	*< 0.50 U*	*< 0.40 U*	*< 0.79 U*	*< 0.44 U*
MWA-56d	9/11/2024	N	Deep	MWA-56d-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 5.3 U*	*< 5.0 U*	*< 4.0 U*	*< 7.9 U*	*< 4.4 U*
MWA-56d	9/11/2024	FD	Deep	DUP-02-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 5.3 U*	*< 5.0 U*	*< 4.0 U*	*< 7.9 U*	*< 4.4 U*
MWA-58d	9/11/2024	N	Deep	MWA-58d-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 5.3 U*	*< 5.0 U*	*< 4.0 U*	*< 7.9 U*	*< 4.4 UF1*
PA-18d	9/9/2024	N	Deep	PA-18d-090924	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.53 U*	*< 0.50 U*	*< 0.40 U*	*< 0.79 U*	*< 0.44 U*
PA-19d	9/11/2024	N	Deep	PA-19d-091124	*< 90 U*	*< 200 U*	*< 260 U*	*< 120 U*	*< 110 U*	*< 140 U*	*< 270 U*	*< 250 U*	*< 200 U*	*< 400 U*	*< 220 U*
PA-20d	9/11/2024	N	Deep	PA-20d-091124	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.53 j**	*< 0.28 U*	*< 0.53 U*	*< 0.50 U*	*< 0.40 U*	*< 0.79 U*	*< 0.44 U*
PA-22d	9/11/2024	N	Deep	PA-22d-091124	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.53 U*	*< 0.50 U*	*< 0.40 U*	*< 0.79 U*	*< 0.44 U*
PA-23d	9/10/2024	N	Deep	PA-23d-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.53 U*	*< 0.50 U*	*< 0.40 U*	*< 0.79 U*	*< 0.44 U*
PA-24d	9/10/2024	N	Deep	PA-24d-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.53 U*	*< 0.50 U*	*< 0.40 U*	*< 0.79 U*	*< 0.44 U*
PA-25d	9/9/2024	N	Deep	PA-25d-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.13 U*	*< 0.082 U*	*< 0.067 U*	*< 0.16 U*	*< 0.27 U*
PA-26d	9/9/2024	N	Deep	PA-26d-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.13 U*	*< 0.082 U*	*< 0.067 U*	*< 0.16 U*	*< 0.27 U*
PA-27d	9/9/2024	N	Deep	PA-27d-090924	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.28 j**	*< 0.28 U*	*< 0.53 U*	*< 0.50 U*	*< 0.40 U*	*< 0.79 U*	*< 0.44 U*
PA-30d	9/11/2024	N	Deep	PA-30d-091124	*< 180 U*	*< 390 U*	*< 520 U*	*< 240 U*	*< 220 U*	*< 280 U*	*< 530 U*	*< 500 U*	*< 400 U*	*< 790 U*	*< 440 U*

Notes:
Bolded values indicate concentrations above the Method Detection Limit.
Shaded values indicate concentrations above the FSWP SHSC.
< = Compound not detected. Method Detection Limit shown.
µg/L = micrograms per liter
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 2-1
Volatile Organic Compounds Results
Arkema Quarter 3, 2024, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Analyte					1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	m,p-Xylenes	Methyl tert-butyl ether	Methylene chloride	Naphthalene	n-Butylbenzene
Unit					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
FSWP SHSC (shaded values indicate results above the value shown)					NE	11	0.4	1.6	47	710	1.8	NE	59	12	NE
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID											
MWA-41	9/10/2024	N	Shallow	MWA-41-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.12 U*	*< 0.070 U*	*< 1.2 U*	*< 0.52 U*	*< 0.35 U*
MWA-63	9/10/2024	N	Shallow	MWA-63-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.53 U*	*< 0.44 U*	*< 1.4 U*	*< 0.93 U*	*< 0.44 U*
MWA-82	9/9/2024	N	Shallow	MWA-82-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.12 U*	*< 0.070 U*	*< 1.2 U*	*< 0.52 U*	*< 0.35 U*
PA-03	9/9/2024	N	Shallow	PA-03-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.16 j**	*< 0.035 U*	*< 0.12 U*	*< 0.070 U*	*< 1.2 U*	*< 0.52 U*	*< 0.35 U*
PA-04	9/10/2024	N	Shallow	PA-04-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.29**	**0.25**	*< 0.12 U*	*< 0.070 U*	*< 1.2 U*	*< 0.52 U*	*< 0.35 U*
PA-08	9/9/2024	N	Shallow	PA-08-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.11 j**	*< 0.035 U*	*< 0.12 U*	*< 0.070 U*	*< 1.2 U*	*< 0.52 U*	*< 0.35 U*
PA-09	9/9/2024	N	Shallow	PA-09-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.12 U*	*< 0.070 U*	*< 1.2 U*	*< 0.52 U*	*< 0.35 U*
PA-31	9/11/2024	N	Shallow	PA-31-091124	*< 0.11 U*	**0.22**	*< 0.056 U*	*< 0.070 U*	**0.21**	**0.80 J+**	*< 0.12 U*	*< 0.070 U*	*< 1.2 U*	*< 0.52 U*	*< 0.35 U*
MWA-81i	9/10/2024	N	Intermediate	MWA-81i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.12 U*	*< 0.070 U*	*< 1.2 U*	*< 0.52 U*	*< 0.35 U*
PA-10i	9/10/2024	N	Intermediate	PA-10i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	**0.11 j**	*< 0.12 U*	*< 0.070 U*	*< 1.2 U*	*< 0.52 U*	*< 0.35 U*
PA-10i	9/10/2024	FD	Intermediate	DUP-01-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	**0.11 j**	*< 0.12 U*	*< 0.070 U*	*< 1.2 U*	*< 0.52 U*	*< 0.35 U*
PA-15i	9/9/2024	N	Intermediate	PA-15i-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.19 j**	*< 0.035 U*	*< 0.12 U*	*< 0.070 U*	*< 1.2 U*	*< 0.52 U*	*< 0.35 U*
PA-17iR	9/9/2024	N	Intermediate	PA-17iR-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.097 j**	**0.14 j**	*< 0.12 U*	*< 0.070 U*	*< 1.2 U*	*< 0.52 U*	*< 0.35 U*
PA-32i	9/11/2024	N	Intermediate	PA-32i-091124	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.084 j**	**0.065 J+**	*< 0.12 U*	*< 0.070 U*	*< 1.2 U*	*< 0.52 U*	*< 0.35 U*
PA-44i	9/10/2024	N	Intermediate	PA-44i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.26**	*< 0.035 U*	*< 0.12 U*	*< 0.070 U*	*< 1.2 U*	*< 0.52 U*	*< 0.35 U*
MWA-11i(d)	9/11/2024	N	Deep	MWA-11d(d)-091124	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.12 U*	*< 0.070 U*	*< 1.2 U*	*< 0.52 U*	*< 0.35 U*
MWA-31i(d)	9/10/2024	N	Deep	MWA-31i(d)-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.43 j**	*< 0.28 U*	*< 0.53 U*	*< 0.44 U*	**1.9 j**	*< 0.93 U*	*< 0.44 U*
MWA-56d	9/11/2024	N	Deep	MWA-56d-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 5.3 U*	*< 4.4 U*	*< 14 U*	*< 9.3 U*	*< 4.4 U*
MWA-58d	9/11/2024	FD	Deep	DUP-02-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 5.3 U*	*< 4.4 U*	*< 14 U*	*< 9.3 U*	*< 4.4 U*
MWA-58d	9/11/2024	N	Deep	MWA-58d-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 5.3 U*	*< 4.4 U*	*< 14 U*	*< 9.3 U*	*< 4.4 U*
PA-18d	9/9/2024	N	Deep	PA-18d-090924	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.53 U*	*< 0.44 U*	*< 1.4 U*	*< 0.93 U*	*< 0.44 U*
PA-19d	9/11/2024	N	Deep	PA-19d-091124	*< 90 U*	*< 200 U*	*< 260 U*	*< 120 U*	*< 110 U*	*< 140 U*	*< 270 U*	*< 220 U*	*< 720 U*	*< 470 U*	*< 220 U*
PA-20d	9/11/2024	N	Deep	PA-20d-091124	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.53 j**	*< 0.28 U*	*< 0.53 U*	*< 0.44 U*	*< 1.4 U*	*< 0.93 U*	*< 0.44 U*
PA-22d	9/11/2024	N	Deep	PA-22d-091124	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.53 U*	*< 0.44 U*	*< 1.4 U*	*< 0.93 U*	*< 0.44 U*
PA-23d	9/10/2024	N	Deep	PA-23d-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.53 U*	*< 0.44 U*	*< 1.4 U*	*< 0.93 U*	*< 0.44 U*
PA-24d	9/10/2024	N	Deep	PA-24d-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.53 U*	*< 0.44 U*	*< 1.4 U*	*< 0.93 U*	*< 0.44 U*
PA-25d	9/9/2024	N	Deep	PA-25d-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.12 U*	*< 0.070 U*	*< 1.2 U*	*< 0.52 U*	*< 0.35 U*
PA-26d	9/9/2024	N	Deep	PA-26d-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.12 U*	**0.14 j**	*< 1.2 U*	*< 0.52 U*	*< 0.35 U*
PA-27d	9/9/2024	N	Deep	PA-27d-090924	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.28 j**	*< 0.28 U*	*< 0.53 U*	*< 0.44 U*	*< 1.4 U*	*< 0.93 U*	*< 0.44 U*
PA-30d	9/11/2024	N	Deep	PA-30d-091124	*< 180 U*	*< 390 U*	*< 520 U*	*< 240 U*	*< 220 U*	*< 280 U*	*< 530 U*	*< 440 U*	*< 1,400 U*	*< 930 U*	*< 440 U*

Notes:
Bolded values indicate concentrations above the Method Detection Limit.
Shaded values indicate concentrations above the FSWP SHSC.
< = Compound not detected. Method Detection Limit shown.
µg/L = micrograms per liter
FD = Field Duplicate Sample
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SW8260C analyses performed by TestAmerica - Seattle, WA of Seattle.

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j = The analyte was positively identified below the RDL; associated numerical value is the approximate concentration of the analyte in the sample.
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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 2-1
Volatile Organic Compounds Results
Arkema Quarter 3, 2024, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Analyte					1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	n-Propylbenzene	o-Chlorotoluene (2-chlorotoluene)	o-Xylene	sec-Butylbenzene	Styrene
Unit					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
FSWP SHSC (shaded values indicate results above the value shown)					NE	11	0.4	1.6	47	710	NE	NE	13	NE	NE
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID											
MWA-41	9/10/2024	N	Shallow	MWA-41-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.091 U*	*< 0.12 U*	*< 0.23 U*	*< 0.17 U*	*< 0.33 U*
MWA-63	9/10/2024	N	Shallow	MWA-63-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.50 U*	*< 0.51 U*	*< 0.39 U*	*< 0.49 U*	*< 0.53 U*
MWA-82	9/9/2024	N	Shallow	MWA-82-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.091 U*	*< 0.12 U*	*< 0.23 U*	*< 0.17 U*	*< 0.33 U*
PA-03	9/9/2024	N	Shallow	PA-03-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.16 j**	*< 0.035 U*	*< 0.091 U*	*< 0.12 U*	*< 0.23 U*	*< 0.17 U*	*< 0.33 U*
PA-04	9/10/2024	N	Shallow	PA-04-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.29**	**0.25**	*< 0.091 U*	*< 0.12 U*	*< 0.23 U*	*< 0.17 U*	*< 0.33 U*
PA-08	9/9/2024	N	Shallow	PA-08-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.11 j**	*< 0.035 U*	*< 0.091 U*	*< 0.12 U*	*< 0.23 U*	*< 0.17 U*	*< 0.33 U*
PA-09	9/9/2024	N	Shallow	PA-09-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.091 U*	*< 0.12 U*	*< 0.23 U*	*< 0.17 U*	*< 0.33 U*
PA-31	9/11/2024	N	Shallow	PA-31-091124	*< 0.11 U*	**0.22**	*< 0.056 U*	*< 0.070 U*	**0.21**	**0.80 J+**	*< 0.091 U*	*< 0.12 U*	*< 0.23 U*	*< 0.17 U*	*< 0.33 U*
MWA-81i	9/10/2024	N	Intermediate	MWA-81i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.091 U*	*< 0.12 U*	*< 0.23 U*	*< 0.17 U*	*< 0.33 U*
PA-10i	9/10/2024	N	Intermediate	PA-10i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	**0.11 j**	*< 0.091 U*	*< 0.12 U*	*< 0.23 U*	*< 0.17 U*	*< 0.33 U*
PA-10i	9/10/2024	FD	Intermediate	DUP-01-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	**0.11 j**	*< 0.091 U*	*< 0.12 U*	*< 0.23 U*	*< 0.17 U*	*< 0.33 U*
PA-15i	9/9/2024	N	Intermediate	PA-15i-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.19 j**	*< 0.035 U*	*< 0.091 U*	*< 0.12 U*	*< 0.23 U*	*< 0.17 U*	*< 0.33 U*
PA-17iR	9/9/2024	N	Intermediate	PA-17iR-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.097 j**	**0.14 j**	*< 0.091 U*	*< 0.12 U*	*< 0.23 U*	*< 0.17 U*	*< 0.33 U*
PA-32i	9/11/2024	N	Intermediate	PA-32i-091124	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.084 j**	**0.065 J+**	*< 0.091 U*	*< 0.12 U*	*< 0.23 U*	*< 0.17 U*	*< 0.33 U*
PA-44i	9/10/2024	N	Intermediate	PA-44i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.26**	*< 0.035 U*	*< 0.091 U*	*< 0.12 U*	*< 0.23 U*	*< 0.17 U*	*< 0.33 U*
MWA-11i(d)	9/11/2024	N	Deep	MWA-11d(d)-091124	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.091 U*	*< 0.12 U*	*< 0.23 U*	*< 0.17 U*	*< 0.33 U*
MWA-31i(d)	9/10/2024	N	Deep	MWA-31i(d)-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.43 j**	*< 0.28 U*	*< 0.50 U*	*< 0.51 U*	*< 0.39 U*	*< 0.49 U*	*< 0.53 U*
MWA-56d	9/11/2024	N	Deep	MWA-56d-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 5.0 U*	*< 5.1 U*	*< 3.9 U*	*< 4.9 U*	*< 5.3 U*
MWA-56d	9/11/2024	FD	Deep	DUP-02-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 5.0 U*	*< 5.1 U*	*< 3.9 U*	*< 4.9 U*	*< 5.3 U*
MWA-58d	9/11/2024	N	Deep	MWA-58d-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 5.0 U*	*< 5.1 U*	*< 3.9 U*	*< 4.9 U*	*< 5.3 U*
PA-18d	9/9/2024	N	Deep	PA-18d-090924	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.50 U*	*< 0.51 U*	*< 0.39 U*	*< 0.49 U*	*< 0.53 U*
PA-19d	9/11/2024	N	Deep	PA-19d-091124	*< 90 U*	*< 200 U*	*< 260 U*	*< 120 U*	*< 110 U*	*< 140 U*	*< 250 U*	*< 260 U*	*< 200 U*	*< 250 U*	*< 270 U*
PA-20d	9/11/2024	N	Deep	PA-20d-091124	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.53 j**	*< 0.28 U*	*< 0.50 U*	*< 0.51 U*	*< 0.39 U*	*< 0.49 U*	*< 0.53 U*
PA-22d	9/11/2024	N	Deep	PA-22d-091124	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.50 U*	*< 0.51 U*	*< 0.39 U*	*< 0.49 U*	*< 0.53 U*
PA-23d	9/10/2024	N	Deep	PA-23d-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.50 U*	*< 0.51 U*	*< 0.39 U*	*< 0.49 U*	*< 0.53 U*
PA-24d	9/10/2024	N	Deep	PA-24d-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.50 U*	*< 0.51 U*	*< 0.39 U*	*< 0.49 U*	*< 0.53 U*
PA-25d	9/9/2024	N	Deep	PA-25d-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.091 U*	*< 0.12 U*	*< 0.23 U*	*< 0.17 U*	*< 0.33 U*
PA-26d	9/9/2024	N	Deep	PA-26d-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.091 U*	*< 0.12 U*	*< 0.23 U*	*< 0.17 U*	*< 0.33 U*
PA-27d	9/9/2024	N	Deep	PA-27d-090924	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.28 j**	*< 0.28 U*	*< 0.50 U*	*< 0.51 U*	*< 0.39 U*	*< 0.49 U*	*< 0.53 U*
PA-30d	9/11/2024	N	Deep	PA-30d-091124	*< 180 U*	*< 390 U*	*< 520 U*	*< 240 U*	*< 220 U*	*< 280 U*	*< 500 U*	*< 510 U*	*< 390 U*	*< 490 U*	*< 530 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 2-1
Volatile Organic Compounds Results
Arkema Quarter 3, 2024, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Analyte					1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	tert-Butylbenzene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene
Unit					µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
FSWP SHSC (shaded values indicate results above the value shown)					NE	11	0.4	1.6	47	710	NE	0.33	9.8	1000	NE
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID											
MWA-41	9/10/2024	N	Shallow	MWA-41-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.26 U*	*< 0.084 U*	*< 0.050 U*	*< 0.033 U*	*< 0.092 U*
MWA-63	9/10/2024	N	Shallow	MWA-63-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.58 U*	**9.9**	*< 0.39 U*	*< 0.39 U*	*< 0.41 U*
MWA-82	9/9/2024	N	Shallow	MWA-82-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.26 U*	**0.34**	*< 0.050 U*	*< 0.033 U*	*< 0.092 U*
PA-03	9/9/2024	N	Shallow	PA-03-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.16 j**	*< 0.035 U*	*< 0.26 U*	*< 0.084 U*	**0.12 j**	*< 0.033 U*	*< 0.092 U*
PA-04	9/10/2024	N	Shallow	PA-04-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.29**	**0.25**	*< 0.26 U*	**0.14 j**	*< 0.050 U*	*< 0.033 U*	*< 0.092 U*
PA-08	9/9/2024	N	Shallow	PA-08-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.11 j**	*< 0.035 U*	*< 0.26 U*	**0.18 j**	*< 0.050 U*	*< 0.033 U*	*< 0.092 U*
PA-09	9/9/2024	N	Shallow	PA-09-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.26 U*	**0.29**	*< 0.050 U*	*< 0.033 U*	*< 0.092 U*
PA-31	9/11/2024	N	Shallow	PA-31-091124	*< 0.11 U*	**0.22**	*< 0.056 U*	*< 0.070 U*	**0.21**	**0.80 J+**	*< 0.26 U*	**0.16 j**	*< 0.050 U*	*< 0.033 U*	*< 0.092 U*
MWA-81i	9/10/2024	N	Intermediate	MWA-81i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.26 U*	*< 0.084 U*	*< 0.050 U*	*< 0.033 U*	*< 0.092 U*
PA-10i	9/10/2024	N	Intermediate	PA-10i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	**0.11 j**	*< 0.26 U*	*< 0.084 U*	*< 0.050 U*	*< 0.033 U*	*< 0.092 U*
PA-10i	9/10/2024	FD	Intermediate	DUP-01-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	**0.11 j**	*< 0.26 U*	*< 0.084 U*	*< 0.050 U*	*< 0.033 U*	*< 0.092 U*
PA-15i	9/9/2024	N	Intermediate	PA-15i-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.19 j**	*< 0.035 U*	*< 0.26 U*	*< 0.084 U*	*< 0.050 U*	*< 0.033 U*	*< 0.092 U*
PA-17iR	9/9/2024	N	Intermediate	PA-17iR-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.097 j**	**0.14 j**	*< 0.26 U*	*< 0.084 U*	*< 0.050 U*	*< 0.033 U*	*< 0.092 U*
PA-32i	9/11/2024	N	Intermediate	PA-32i-091124	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.084 j**	**0.065 J+**	*< 0.26 U*	*< 0.084 U*	*< 0.050 U*	*< 0.033 U*	*< 0.092 U*
PA-44i	9/10/2024	N	Intermediate	PA-44i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.26**	*< 0.035 U*	*< 0.26 U*	*< 0.084 U*	*< 0.050 U*	*< 0.033 U*	*< 0.092 U*
MWA-11i(d)	9/11/2024	N	Deep	MWA-11d(d)-091124	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.26 U*	*< 0.084 U*	*< 0.050 U*	*< 0.033 U*	*< 0.092 U*
MWA-31i(d)	9/10/2024	N	Deep	MWA-31i(d)-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.43 j**	*< 0.28 U*	*< 0.58 U*	**0.42 j**	*< 0.39 U*	*< 0.39 U*	*< 0.41 U*
MWA-56d	9/11/2024	N	Deep	MWA-56d-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 5.8 U*	*< 4.1 U*	*< 3.9 U*	*< 3.9 U*	*< 4.1 U*
MWA-56d	9/11/2024	FD	Deep	DUP-02-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 5.8 U*	*< 4.1 U*	*< 3.9 U*	*< 3.9 U*	*< 4.1 U*
MWA-58d	9/11/2024	N	Deep	MWA-58d-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 5.8 U*	*< 4.1 U*	*< 3.9 U*	*< 3.9 U*	*< 4.1 U*
PA-18d	9/9/2024	N	Deep	PA-18d-090924	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.58 U*	*< 0.41 U*	*< 0.39 U*	*< 0.39 U*	*< 0.41 U*
PA-19d	9/11/2024	N	Deep	PA-19d-091124	*< 90 U*	*< 200 U*	*< 260 U*	*< 120 U*	*< 110 U*	*< 140 U*	*< 290 U*	*< 210 U*	*< 200 U*	*< 200 U*	*< 210 U*
PA-20d	9/11/2024	N	Deep	PA-20d-091124	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.53 j**	*< 0.28 U*	*< 0.58 U*	*< 0.41 U*	*< 0.39 U*	*< 0.39 U*	*< 0.41 U*
PA-22d	9/11/2024	N	Deep	PA-22d-091124	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.58 U*	*< 0.41 U*	*< 0.39 U*	*< 0.39 U*	*< 0.41 U*
PA-23d	9/10/2024	N	Deep	PA-23d-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.58 U*	*< 0.41 U*	*< 0.39 U*	*< 0.39 U*	*< 0.41 U*
PA-24d	9/10/2024	N	Deep	PA-24d-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.58 U*	*< 0.41 U*	*< 0.39 U*	*< 0.39 U*	*< 0.41 U*
PA-25d	9/9/2024	N	Deep	PA-25d-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.26 U*	*< 0.084 U*	*< 0.050 U*	*< 0.033 U*	*< 0.092 U*
PA-26d	9/9/2024	N	Deep	PA-26d-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.26 U*	*< 0.084 U*	*< 0.050 U*	*< 0.033 U*	*< 0.092 U*
PA-27d	9/9/2024	N	Deep	PA-27d-090924	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.28 j**	*< 0.28 U*	*< 0.58 U*	*< 0.41 U*	*< 0.39 U*	*< 0.39 U*	*< 0.41 U*
PA-30d	9/11/2024	N	Deep	PA-30d-091124	*< 180 U*	*< 390 U*	*< 520 U*	*< 240 U*	*< 220 U*	*< 280 U*	*< 580 U*	*< 410 U*	*< 390 U*	*< 390 U*	*< 410 U*

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

Qualifiers - Organic:
j = The analyte was positively identified below the RDL; associated numerical value is the approximate concentration of the analyte in the sample.
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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 2-1
Volatile Organic Compounds Results
Arkema Quarter 3, 2024, Groundwater Monitoring Report
Arkema Inc. Facility
Portland, Oregon

Analyte					1,1,1,2-Tetrachloroethane	1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	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
FSWP SHSC (shaded values indicate results above the value shown)					NE	11	0.4	1.6	47	710	3	NE	0.24
Location ID	Sample Date	Sample Type	Aquifer Classification	Sample ID									
MWA-41	9/10/2024	N	Shallow	MWA-41-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.066 U*	*< 0.12 U*	*< 0.040 U*
MWA-63	9/10/2024	N	Shallow	MWA-63-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	**2.6**	*< 0.36 U*	*< 0.22 U*
MWA-82	9/9/2024	N	Shallow	MWA-82-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	**0.12 j**	*< 0.12 U*	*< 0.040 U*
PA-03	9/9/2024	N	Shallow	PA-03-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.16 j**	*< 0.035 U*	*< 0.066 U*	*< 0.12 U*	*< 0.040 U*
PA-04	9/10/2024	N	Shallow	PA-04-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.29**	**0.25**	*< 0.066 U*	*< 0.12 U*	*< 0.040 U*
PA-08	9/9/2024	N	Shallow	PA-08-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.11 j**	*< 0.035 U*	**0.12 j**	*< 0.12 U*	*< 0.040 U*
PA-09	9/9/2024	N	Shallow	PA-09-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	**0.17 j**	*< 0.12 U*	*< 0.040 U*
PA-31	9/11/2024	N	Shallow	PA-31-091124	*< 0.11 U*	**0.22**	*< 0.056 U*	*< 0.070 U*	**0.21**	**0.80 J+**	**0.069 j**	*< 0.12 U*	*< 0.040 U*
MWA-81i	9/10/2024	N	Intermediate	MWA-81i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.066 U*	*< 0.12 U*	*< 0.040 U*
PA-10i	9/10/2024	N	Intermediate	PA-10i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	**0.11 j**	*< 0.066 U*	*< 0.12 U*	*< 0.040 UJ*
PA-10i	9/10/2024	FD	Intermediate	DUP-01-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	**0.11 j**	*< 0.066 U*	*< 0.12 U*	**0.50 j**
PA-15i	9/9/2024	N	Intermediate	PA-15i-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.19 j**	*< 0.035 U*	*< 0.066 U*	*< 0.12 U*	*< 0.040 U*
PA-17iR	9/9/2024	N	Intermediate	PA-17iR-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.097 j**	**0.14 j**	*< 0.066 U*	*< 0.12 U*	*< 0.040 U*
PA-32i	9/11/2024	N	Intermediate	PA-32i-091124	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.084 j**	**0.065 J+**	*< 0.066 U*	*< 0.12 U*	**0.23**
PA-44i	9/10/2024	N	Intermediate	PA-44i-091024	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	**0.26**	*< 0.035 U*	*< 0.066 U*	*< 0.12 U*	*< 0.040 U*
MWA-11i(d)	9/11/2024	N	Deep	MWA-11d(d)-091124	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.066 U*	*< 0.12 U*	*< 0.040 U*
MWA-31i(d)	9/10/2024	N	Deep	MWA-31i(d)-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.43 j**	*< 0.28 U*	*< 0.26 U*	*< 0.36 U*	*< 0.22 U*
MWA-56d	9/11/2024	N	Deep	MWA-56d-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 2.6 U*	*< 3.6 U*	*< 2.2 U*
MWA-56d	9/11/2024	FD	Deep	DUP-02-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 2.6 U*	*< 3.6 U*	*< 2.2 U*
MWA-58d	9/11/2024	N	Deep	MWA-58d-091124	*< 1.8 U*	*< 3.9 U*	*< 5.2 U*	*< 2.4 U*	*< 2.2 U*	*< 2.8 U*	*< 2.6 U*	*< 3.6 U*	*< 2.2 U*
PA-18d	9/9/2024	N	Deep	PA-18d-090924	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.26 U*	*< 0.36 U*	**0.41 j**
PA-19d	9/11/2024	N	Deep	PA-19d-091124	*< 90 U*	*< 200 U*	*< 260 U*	*< 120 U*	*< 110 U*	*< 140 U*	*< 130 U*	*< 180 U*	*< 110 U*
PA-20d	9/11/2024	N	Deep	PA-20d-091124	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.53 j**	*< 0.28 U*	*< 0.26 U*	*< 0.36 U*	*< 0.22 U*
PA-22d	9/11/2024	N	Deep	PA-22d-091124	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.26 U*	*< 0.36 U*	*< 0.22 U*
PA-23d	9/10/2024	N	Deep	PA-23d-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.26 U*	*< 0.36 U*	*< 0.22 U*
PA-24d	9/10/2024	N	Deep	PA-24d-091024	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	*< 0.22 U*	*< 0.28 U*	*< 0.26 U*	*< 0.36 U*	*< 0.22 U*
PA-25d	9/9/2024	N	Deep	PA-25d-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.066 U*	*< 0.12 U*	*< 0.040 U*
PA-26d	9/9/2024	N	Deep	PA-26d-090924	*< 0.11 U*	*< 0.025 U*	*< 0.056 U*	*< 0.070 U*	*< 0.064 U*	*< 0.035 U*	*< 0.066 U*	*< 0.12 U*	*< 0.040 U*
PA-27d	9/9/2024	N	Deep	PA-27d-090924	*< 0.18 U*	*< 0.39 U*	*< 0.52 U*	*< 0.24 U*	**0.28 j**	*< 0.28 U*	*< 0.26 U*	*< 0.36 U*	*< 0.22 U*
PA-30d	9/11/2024	N	Deep	PA-30d-091124	*< 180 U*	*< 390 U*	*< 520 U*	*< 240 U*	*< 220 U*	*< 280 U*	*< 260 U*	*< 360 U*	*< 220 U*

Notes:
Bolded values indicate concentrations above the Method Detection Limit.
Shaded values indicate concentrations above the FSWP SHSC.
< = Compound not detected. Method Detection Limit shown.
µg/L = micrograms per liter
FD = Field Duplicate Sample
FSWP SHSC = Feasibility Study Work Plan Indirect Exposure Pathway Selected Hot Spot Criteria
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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 2-2
Additional Compounds Results
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Arkema Inc. Facility
Portland, Oregon

				Analyte	Chloride	Perchlorate
				Unit	mg/L	µg/L
				FSWP SHSC (shaded values indicate results above the value shown)	230	1800
Location ID	**Sample Date**	**Sample Type**	**Aquifer Classification**	**Sample ID**		
MWA-41	9/10/2024	N	Shallow	MWA-41-091024	**18**	*< 0.91 U*
MWA-63	9/10/2024	N	Shallow	MWA-63-091024	**23**	*< 0.91 U*
MWA-82	9/9/2024	N	Shallow	MWA-82-090924	**11**	**220**
PA-03	9/9/2024	N	Shallow	PA-03-090924	**3.8**	*< 9.1 U*
PA-04	9/10/2024	N	Shallow	PA-04-091024	**4.9**	*< 4.5 U*
PA-08	9/9/2024	N	Shallow	PA-08-090924	**280**	*< 9.1 U*
PA-09	9/9/2024	N	Shallow	PA-09-090924	**15**	**84**
PA-31	9/11/2024	N	Shallow	PA-31-091124	**8.3**	*< 4.5 U*
MWA-81i	9/10/2024	N	Intermediate	MWA-81i-091024	**8.4**	*< 0.91 U*
PA-10i	9/10/2024	N	Intermediate	PA-10i-091024	**30**	*< 9.1 U*
PA-10i	9/10/2024	FD	Intermediate	DUP-01-091024	**31**	*< 9.1 U*
PA-15i	9/9/2024	N	Intermediate	PA-15i-090924	**59**	*< 9.1 U*
PA-17iR	9/9/2024	N	Intermediate	PA-17iR-090924	**43**	*< 9.1 U*
PA-32i	9/11/2024	N	Intermediate	PA-32i-091124	**88**	*< 18 U*
PA-44i	9/10/2024	N	Intermediate	PA-44i-091024	**220**	*< 4.5 U*
MWA-11i(d)	9/11/2024	N	Deep	MWA-11i(d)-091124	**530**	*< 0.91 U*
MWA-31i(d)	9/10/2024	N	Deep	MWA-31i(d)-091024	**16,000**	**87,000**
MWA-56d	9/11/2024	N	Deep	MWA-56d-091124	**10,000**	**14,000 J**
MWA-56d	9/11/2024	FD	Deep	DUP-02-091124	**11,000**	**19,000 J**
MWA-58d	9/11/2024	N	Deep	MWA-58d-091124	**17,000**	**54,000**
PA-18d	9/9/2024	N	Deep	PA-18d-090924	**67**	*< 9.1 U*
PA-19d	9/11/2024	N	Deep	PA-19d-091124	**270**	*< 4.5 U*
PA-20d	9/11/2024	N	Deep	PA-20d-091124	**620**	**74**
PA-22d	9/11/2024	N	Deep	PA-22d-091124	**4,300**	**15,000**
PA-23d	9/10/2024	N	Deep	PA-23d-091024	**33,000**	*< 18 U*
PA-24d	9/10/2024	N	Deep	PA-24d-091024	**30,000**	*< 18 U*
PA-25d	9/9/2024	N	Deep	PA-25d-090924	**21**	*< 0.91 U*
PA-26d	9/9/2024	N	Deep	PA-26d-090924	**60**	*< 0.91 U*
PA-27d	9/9/2024	N	Deep	PA-27d-090924	**720**	*< 9.1 U*
PA-30d	9/11/2024	N	Deep	PA-30d-091124	**270**	*< 18 U*

Notes:
Bolded values indicate concentrations above the Method Detection Limit.
Shaded values indicate concentrations above the FSWP SHSC.
< = Compound not detected. Method Detection Limit shown.
µg/L = micrograms per liter
mg/L = milligrams per liter
FD = Field Duplicate Sample
FSWP SHSC = Feasibility Study Work Plan Indirect Exposure Pathway Selected Hot Spot Criteria
N = Normal Environmental Sample
E300 analyses performed by TestAmerica - Seattle, WA of Seattle.
E314.0 analyses performed by TestAmerica - Sacramento, CA of West Sacramento.
U = Analyte was analyzed for, but not detected above, the limit displayed.
J = The concentration of the sample is estimated.