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20 April 2026

Cam Penner-Ash, LG
Cleanup Project Manager
Ecology's Toxics Cleanup Program
Southwest Regional Office
Department of Ecology
PO Box 47775
Olympia, WA 98504-7775

Subject: Eleventh Compliance Groundwater Monitoring Report-Revised
Agreed Order No. DE 9514
Frederickson Industrial Park Site, Pierce County, WA
Geosyntec Project: PNR0861

Dear Mr. Penner-Ash:

Geosyntec Consultants has prepared this letter on behalf of Olin Corporation and Mallinckrodt US Holdings LLC (the Companies) to present the results from compliance monitoring completed in November 2025 at what is now the former footprint of the Frederickson Industrial Park Site (Site) in Pierce County, Washington (Figure 1). This compliance monitoring is being performed in accordance with the Washington Department of Ecology's (Ecology's) Agreed Order (AO) No. DE 9514 (Order). In addition to required compliance monitoring, Ecology requested sampling of two monitoring wells (P1-S and P1-I) scheduled for decommissioning.

Background

The Site is referred to as the Frederickson Industrial Park and is located south of 176th Street East and east of Canyon Road East in the Fredrickson area of Pierce County, Washington. The Site is situated approximately 10 miles south of Tacoma and 8 miles southwest of Puyallup in unincorporated Pierce County area surrounded by a mixture of industrial, residential and commercial properties. Boeing and Panattoni Development Company (Panattoni) are the current owners of the Frederickson Industrial Center; Olin and Mallinckrodt are the successors of former owners. Panattoni purchased two parcels (Parcels B and C) from Boeing with the property sale close date of September 16, 2021. Figure 1 shows the current property outlines. One active compliance monitoring well (MW-4) is located on the Panattoni property.

The Compliance Monitoring Work Plan (CMWP) outlines the requirements for monitored natural attenuation (MNA) compliance monitoring. As described in the CMWP, compliance monitoring for the Site consists of performance monitoring to track MNA, followed by confirmational monitoring to confirm compliance with applicable cleanup standards. In accordance with procedures outlined in the CMWP, and as defined in WAC 173-340-720(9)(iv), the performance monitoring well network was reduced from the original eleven wells identified in the CMWP to the current six wells[1] (Table 1) and includes hydrogeologic monitoring and groundwater sampling for carbon tetrachloride (CTC) analysis. Ecology approved the use of passive diffusion bags (PDBs) based on the sampling comparison evaluation results in an email dated 6 April 2018.

Performance Monitoring Groundwater Results

Hydrogeologic Monitoring

Water level data collected during the 2025 groundwater monitoring event are presented in Table 1. Water level contours for Aquifer A are shown in Figure 2 for the November 2025 monitoring event. The groundwater gradient in Aquifer A is to the north-northwest towards Clover Creek, and is consistent with past monitoring events.

Carbon Tetrachloride

As part of the performance monitoring six wells were sampled using passive diffusion bags during the November 2025 monitoring event. Two additional wells were sampled as requested by Ecology in an approval letter, dated 17 January 2025, for monitoring well decommissioning. All samples were analyzed for CTC by ALS laboratory. The CTC data are summarized in Table 2, and the analytical reports are provided in Attachment A. Figure 3 presents the performance monitoring well locations and updated CTC contour based on the 2025 CTC results. Concentration trends for CTC are plotted for the performance monitoring wells in Figures 4a-4c.

Consistent with previous monitoring results, monitoring wells BMW-18, HLA-1, and 11-CL continue to have the highest CTC concentrations ranging between 2.2 µg/L and 3.2 µg/L (Figure 4a). Monitoring wells MW-1 and MW-13 had CTC concentrations of 0.79 µg/L and 1.6 µg/L, respectively (Figure 4b). The peripheral monitoring well, MW-4 on the east, had a CTC concentration of 0.52 µg/L (Figure 4c). The trends plotted in Figures 4a-4c illustrate declining, low CTC concentrations; the data plotted in Figures 4a-4c are provided in Table 3.

[1] Tables 1 and 2 include results for two additional monitoring wells (P1-S, and P1-I) sampled at the request of Ecology.

Concentration of CTC remained consistent for all wells, and an evaluation of the monitoring data indicates that MNA continues to be effective based on the following observations:

- Declining trends continue to be observed at all monitoring wells;
- MW-4 remains below the regulatory cleanup limit; and
- Concentrations at MW-1 and MW-13, which bound the upgradient and downgradient extents of the plume, are continuing to trend downward.

Additional Monitoring

Ecology requested that monitoring wells P1-S and P1-I be sampled prior to decommissioning. Consistent with performance monitoring sampling protocols, P1-S and P1-I monitoring wells were sampled using passive diffusion bags. Water levels and analytical results are provided in Tables 1 and 2 respectively, with analytical laboratory reports provided in Attachment A.

Both P1-S and P1-I CTC results were below the laboratory detection limit of 0.096 µg/L.

Future Monitoring Schedule

In 2022 Ecology approved a change in monitoring schedule from annual to every 18 months. This November 2025 event was the second to occur on the 18-month schedule. The next monitoring event is scheduled for the 2nd quarter of 2027.

Conclusions and Recommendations

The 2025 MNA compliance monitoring event confirmed that CTC concentrations continue to be low and are declining. The results of the 2025 sampling event demonstrate that MNA is reducing CTC concentrations at the Site.

Please contact Dane Grimshaw (408-599-4030) if you have questions regarding the information presented herein.

Sincerely,

James J. Deitsch, PhD., P.E. (GA)
Senior Principal

David L. Parkinson, PhD., P.G. (WA)
Principal

PNR0861

Cc: Julie Peoples, Olin Corporation
Dane Grimshaw, Olin Corporation
Karen Kampwerth, Mallinckrodt
William Cherry, The Boeing Company

Attachments:
Tables
Figures
Attachment: Analytical Laboratory Report

engineers | scientists | innovators

Tables

Table 1.
Performance Monitoring for 2025 Groundwater Sampling Event Water Level Data
Brazier Site, Frederickson, Washington

Well	Ground Elevation (ft MSL)	Top of Casing Elevation (MSL)	Top of Screen (MSL)	Bottom of Screen (MSL)	Aquifer	Sample Date	Depth to Water (ft)	Water Level (MSL)
11-CL	403.69	404.55	329.7	319.7	Lower - Aquifer A	11/20/25	49.45	355.10
P1-S[1]	335.01	337.84	320.0	310.0	Upper - Aquifer A	11/20/25	12.66	325.18
P1-I[1]	335.67	337.44	272.7	267.7	Upper - Aquifer A	11/20/25	11.13	326.31
BMW-18	409.74	412.09	375.7	345.7	Upper - Aquifer A	11/20/25	50.12	361.97
HLA-1	403.86	405.81	320.9	310.9	Lower - Aquifer A	11/20/25	50.79	355.02
MW-1	413.27	415.79	324.8	314.8	Lower - Aquifer A	11/20/25	50.26	365.53
MW-4	465.50	467.72	317.9	307.9	Aquifer A	11/20/25	121.92	345.80
MW-13	394.50	394.1	284.5	274.5	Aquifer A	11/20/25	55.91	338.19

Note: The Performance Monitoring Network was revised in accordance with the criteria established in the Compliance Monitoring Work Plan and per Ecology approval dated 27 March 2018 and 15 May 2025; BMW-3, MW-7, P2-I, 11-BL, P1-S, and P1-I were removed from the network and are no longer sampled as part of compliance monitoring.

1: One time monitoring of P1-S and P1-I were requested by Ecology in correspondence dated 17 January 2025.

Table 2.
Carbon Tetrachloride Results for 2025
Brazier Site, Frederickson, Washington

Well	PDB Deployment Date	Sample Date	Result (µg/L)	Lab MRL	Lab MDL	Qualifiers	Depth to Water (ft)	Water Level (MSL)
11-CL	11/04/25	11/20/25	**3.2**	0.50	0.096		49.45	355.10
P1-S[1]	11/04/25	11/20/25	<0.096	0.50	0.096		12.66	325.18
P1-I[1]	11/04/25	11/20/25	<0.096	0.50	0.096		11.13	326.31
BMW-18	11/04/25	11/20/25	**2.2**	0.50	0.096		50.12	361.97
HLA-1	11/04/25	11/20/25	**3.1**	0.50	0.096		50.79	355.02
MW-1	11/04/25	11/20/25	**0.79**	0.50	0.096		50.26	365.53
MW-4	11/04/25	11/20/25	0.52	0.50	0.096		121.92	345.80
MW-13	11/04/25	11/20/25	**1.6**	0.50	0.096		55.91	338.19

Notes:

BOLD = CTC value above groundwater cleanup level of 0.63 µg/L

µg/L = micrograms per liter;

MRL = Method Reporting Limit

MDL = Method Detection Limit

1: One time monitoring of P1-S and P1-I were requested by Ecology in correspondence dated 17 January 2025.

Table 3.
2014-2025 Carbon Tetrachloride Groundwater Performance Monitoring Data
Brazier Site, Frederickson, Washington

Wells	11-BL	11-CL	HLA-1	BMW-3	BMW-18	MW-1	MW-4	MW-7	P2-S	P2-I	MW-13
May-14	**0.97**	**5.4**	**5.0**	*0.28*	**5.5**	**1.8**	**0.82**	**2.3**	**0.76**	**0.72**	**2.3**
Oct-14	**0.95**	**4.4**	**4.6**	*0.39*	**4.8**	**1.4**	**0.66**	ND	ND	ND	**1.9**
Mar-15	**0.64**	**4.3**	**4.4**	*0.19*	**4.2**	**1.5**	0.62	*0.22*	*0.29*	ND	**1.9**
Oct-15	**0.72**	**3.8**	**3.9**	0.51	**3.8**	**1.2**	0.53	*0.24*	*0.45*	ND	**1.7**
May-16	0.50	**2.9**	**3.6**	*0.27*	**3.7**	**1.5**	0.51	ND	*0.28*	ND	**1.3**
Jun-17	**0.74**	**3.7**	**4.4**	*0.43*	**4.7**	**1.8**	**0.67**	ND	*0.27*	ND	**1.6**
May-18[1]	0.51	**4.1**	**4.5**	--	**3.4**	**2.1**	**0.67**	--	*0.36*	--	**1.8**
May-19[1]	**0.89**	**4.4**	**4.6**	--	**3.5**	**1.7**	**0.67**	--	*0.37*	--	**2.0**
May-20[1]	*0.38*	**3.2**	**3.8**	--	**2.5**	**1.3**	0.58	--	*0.36*	--	**1.7**
April-21[1]	*0.33*	**4.1**	**4.0**	--	**2.9**	**1.3**	**0.65**	--	*0.35*	--	**1.5**
Nov-22[1]	*0.31*	**3.0**	**3.0**	--	**2.4**	**0.99**	*0.46*	--	*0.17*	--	**1.3**
Jun-24[1]	0.59	**3.3**	**3.3**	--	**2.9**	**1.1**	0.52	--	ND (0.096)	--	**1.4**
Nov-25[1]	--	**3.2**	**3.1**	--	**2.2**	**0.79**	0.52	--	--	--	**1.6**
95% UCL[2]	--	**4.1**	**4.0**	--	**2.9**	**1.3**	**0.65**	--	--	--	**1.6**

Notes:

1 - Groundwater sampling prior to 2018 was performed by low-flow method; use of passive diffusion bags for sampling began in 2018.

2 - 95% Upper Confidence Limit on true mean, using Ecology's Statistical Guidance for sample sets less than 20 (Example #15, page 97-98)
https://fortress.wa.gov/ecy/publications/documents/9254.pdf

WAC 173-340-720 (9)(e)(iv) **If more than fifty percent of the measurements are below the practical quantitation limit, the largest value in the data set shall be used in place of an upper confidence limit on the true mean groundwater calculation.

1.5	Bold values are above the CTC cleanup level of 0.63 µg/L
0.5	Estimated Value (i.e., concentration greater than method detection limit but less than method reporting limit)
ND	Non-Detected (Method Detection = 0.096)
--	Monitoring well no longer requires Performance Monitoring

The Performance Monitoring Network was revised following the 2017 Annual Sampling Event in accordance with the criteria established in the Compliance Monitoring Work Plan and per Ecology approval dated 27 March 2018; BMW-3, MW-7, and P2-I were removed from the network and are no longer sampled as part of performance monitoring.

Figures



Property Location

Frederickson Industrial Park
Frederickson, WA

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Figure 1

P:\Projects\Olin Frederickson\800 GIS and CAD\920 GIS\GIS\November 2022\MXDs\Figure 01_Property Location.mxd kkhman 2/27/2023

N

MW-7

325

P-1S (325.18)
P-1I (326.31)

Clover Creek

P-2I

330

335

340

MW-13 (338.19)

345

350

MW-4 (345.80)

355

360

63rd Ave

11-BL

180th Street

11-CL (355.10)
HLA-1 (355.02)

365

BMW-18 (361.97)

MW-1 (365.53)

BMW-3

P:\Projects\Olin Corporation\FNR0861 Brazier GW Frederickson WA\800 GIS and CAD\920 GIS\GIS\GIS\December2025\Figure_02_Olin_GW_Elev_Dec2025.mxd kMinnon 1/19/2026

Legend

- November 2025 Water Level Contours (ft masl)
- Aquifer A Compliance Monitoring Network Well (November 2025 Water Level (ft masl))
- Monitoring Wells
- Boeing Property
- Panattoni Property

750 375 0 750 Feet

Aquifer A Groundwater Levels
November 2025
Frederickson Industrial Park
Frederickson, WA

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Figure
2

N

MW-7

P-1S (ND)
P-1I (ND)

P-2I

Clover Creek

0.63 µg/L

MW-13 (1.6)

MW-4 (0.52)

63rd Ave

11-BL

180th Street

HLA-1 (3.1)
11-CL (3.2)

BMW-18 (2.2)

MW-1 (0.79)

BMW-3

Legend

- Aquifer A Monitoring Well (CTC Concentration (µg/L))
- Monitoring Wells
- CTC Contour for November 2025 data set
- Boeing Property
- Panattoni Property

750 375 0 750 Feet

Aquifer A Carbon Tetrachloride Groundwater Results November 2025

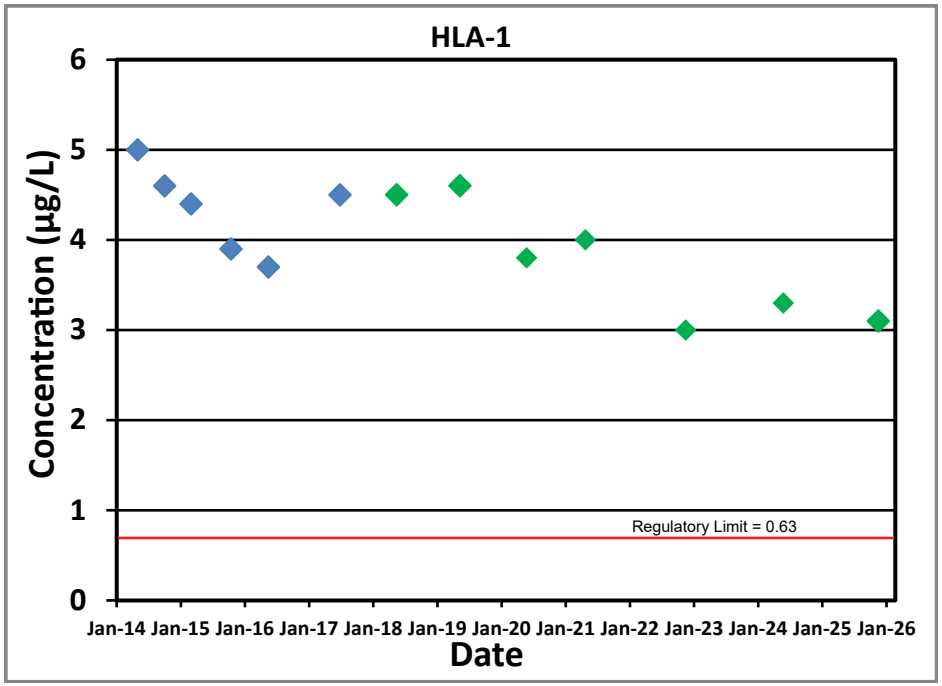
Frederickson Industrial Park
Frederickson, WA

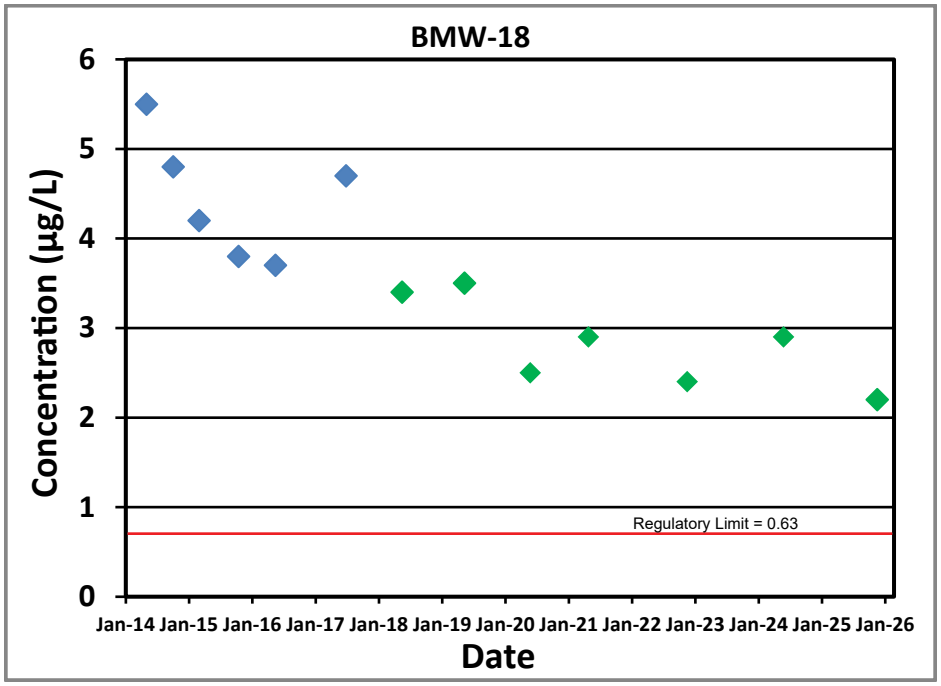
Geosyntec consultants

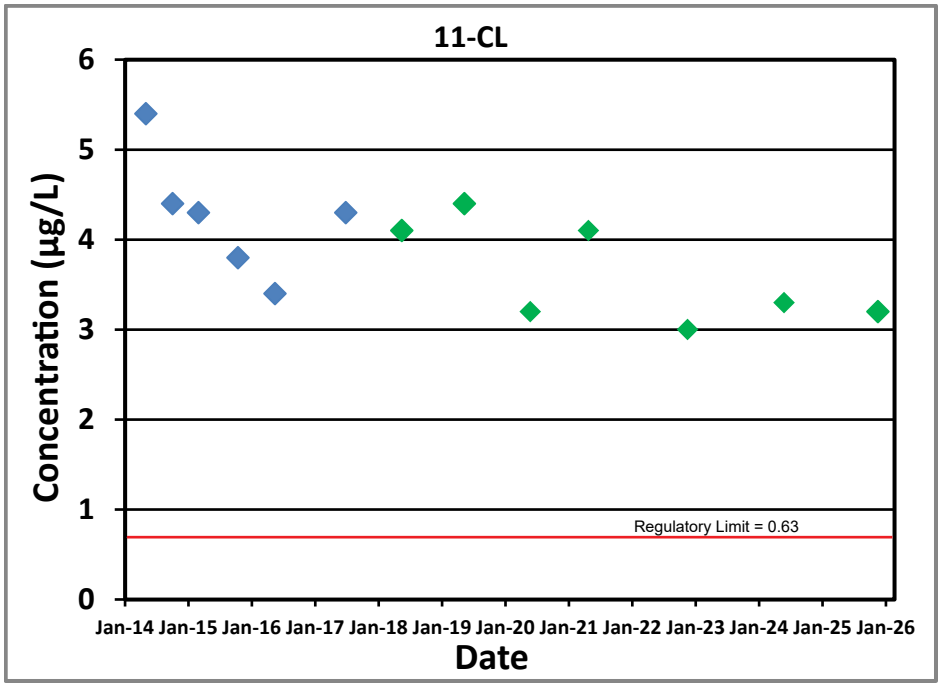
Seattle, WA | December 2025

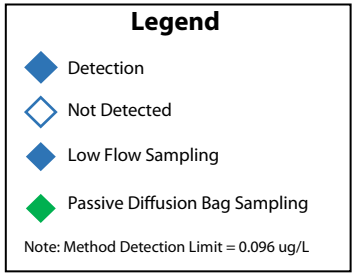
Figure 3

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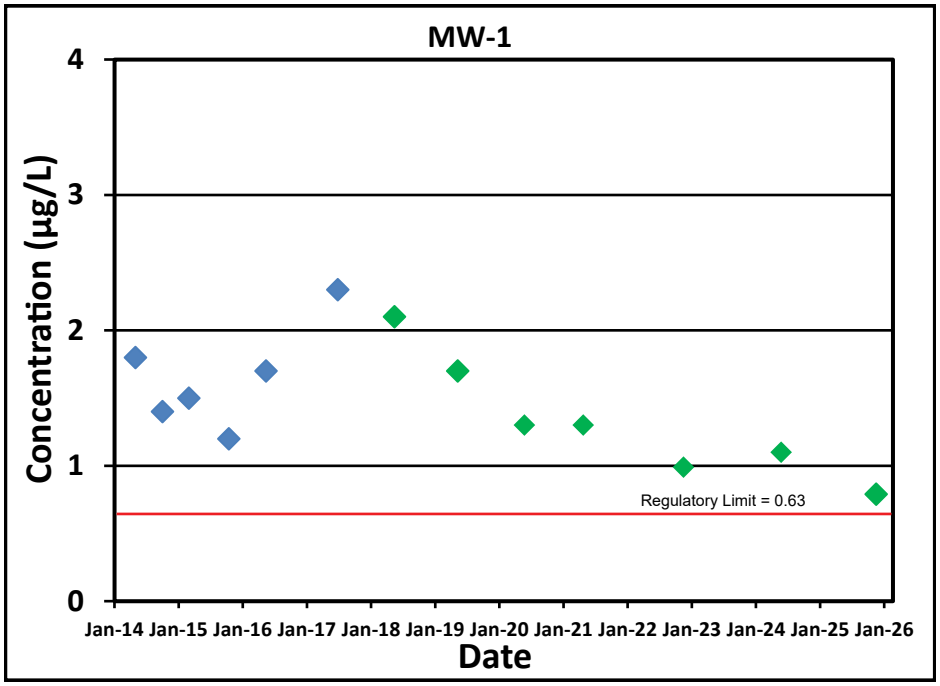


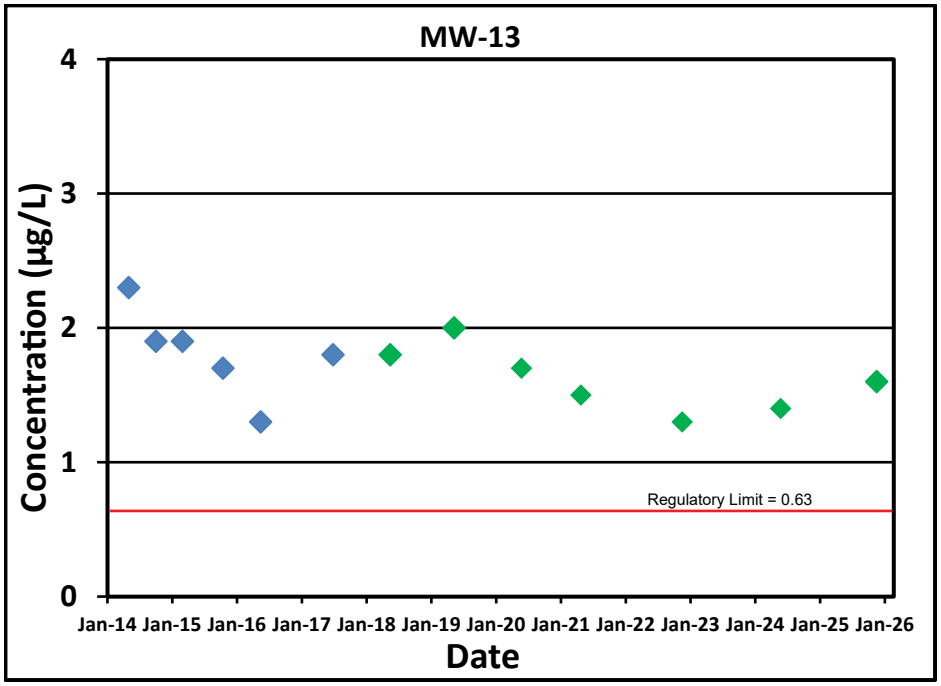
Carbon Tetrachloride
Groundwater Monitoring Well Data
Frederickson Industrial Park, Frederickson, WA

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Figure **4a**





Legend

- Detection
- Not Detected
- Low Flow Sampling
- Passive Diffusion Bag Sampling

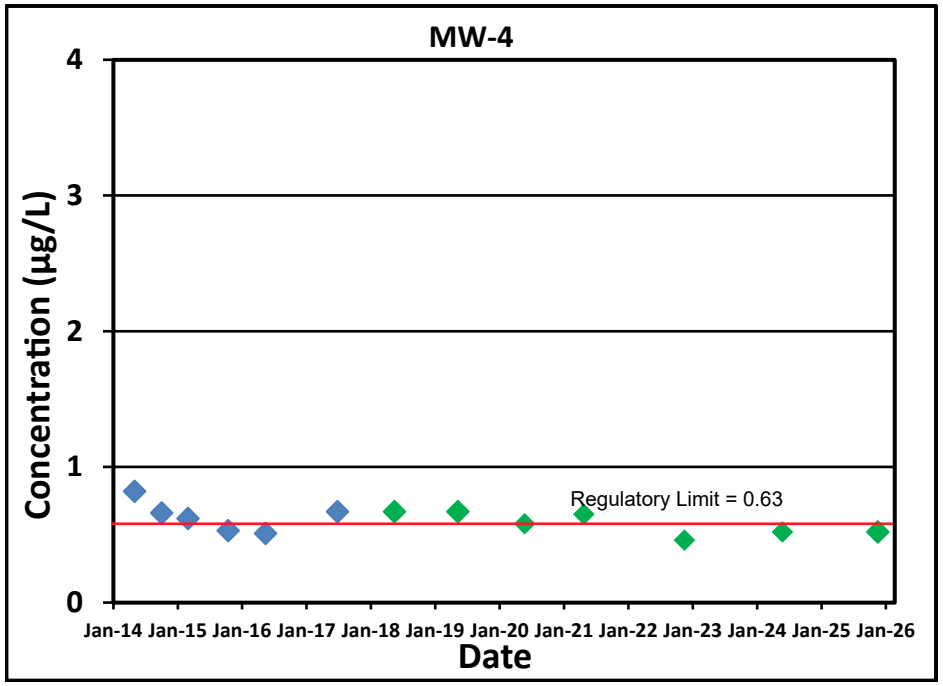
Note: Method Detection Limit = 0.096 ug/L

Carbon Tetrachloride
Groundwater Monitoring Well Data
Frederickson Industrial Park, Frederickson, WA

Geosyntec consultants

Seattle, WA | December 2025

Figure **4b**



Legend

- Detection
- Not Detected
- Low Flow Sampling
- Passive Diffusion Bag Sampling

Note: Method Detection Limit = 0.096 ug/L

Carbon Tetrachloride
Groundwater Monitoring Well Data
Frederickson Industrial Park, Frederickson, WA

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Seattle, WA | December 2025

Figure **4c**

Attachment

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

April 20, 2026

Analytical Report for Service Request No: K2511724

Dave Parkinson
Geosyntec Consultants
520 Pike Street, Suite 2600
Seattle, WA 98101

RE: Olin Fredrickson / PNR0861

Dear Dave,

Enclosed are the results of the sample(s) submitted to our laboratory November 21, 2025
For your reference, these analyses have been assigned our service request number **K2511724.**

This report has been revised to report 8260D.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3301. You may also contact me via email at Naomi.Pedersen@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Naomi Pedersen
Project Manager

REVISED
8:31 am, Apr 20, 2026

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Acronyms
Qualifiers
State Certifications, Accreditations, And Licenses
Chain of Custody
Volatile Organic Compounds by GCMS
Volatile Organic Compounds by GCMS

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Website	Number
Alaska DEC	https://dec.alaska.gov/spar/csp/lab-approval/	17-004
Arizona DHS	https://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php	AZ0339
Arkansas DEQ	https://www.adeq.state.ar.us/techsvs/lab_cert/	88-00637
California WB (ELAP)	https://www.waterboards.ca.gov/drinking_water/certlic/labs/index.html	2795
DOD ELAP	https://www.denix.osd.mil/edqw/accreditation/accreditedlabs/	65188
Florida DOH	https://www.floridahealth.gov/licensing-regulations/regulated-facilities/environmental-laboratories/	E87412
ISO 17025	https://www.pjlabs.com/	65188
Louisiana DEQ	https://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHHS	https://www.maine.gov/dhhs/mecdc/services/business-services/laboratory-accreditation	WA01276
Minnesota DOH	https://www.health.state.mn.us/communities/environment/mnelap	053-999-457
Nevada DEP	https://ndep.nv.gov/water/lab-certification	WA01276
New Jersey DEP	https://dep.nj.gov/dsr/oqa/certified-laboratories/	WA005
New York DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://www.deq.nc.gov/about/divisions/water-resources/water-sciences/chemistry-laboratory/laboratory-certification-branch/non-field-lab-certification	WA01276
Ohio EPA	https://epa.ohio.gov/divisions-and-offices/drinking-and-ground-waters	87776
Oregon DEQ (NELAP)	https://www.oregon.gov/oha/PH/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DES	https://des.sc.gov/permits-regulations/laws-regulations-regulatory-updates/environmental-regulations/environmental-laboratory-certification	61002
Texas CEQ	https://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html	T104704427
Washington DOE	https://ecology.wa.gov/regulations-permits/permits-certifications/laboratory-accreditation	C544
ALS Solutions	https://solutions.alsglobal.com/	NA

Analyses were performed in accordance with our laboratory's NELAP-approved Quality Assurance Program. A complete listing of NELAP and other certified analytes is available in ALS Solutions. For initial access to ALS Solutions, please contact your ALS Project Manager. If samples are submitted for compliance purposes, please consult the applicable certification and/or accreditation body's website. States highlighted above require that the specific method/analyte be included on the state certification when used for compliance purposes and when that method/analyte is offered by the state.

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Chain of Custody

L2511724

Laboratory 1317 South 13th Avenue, Kelso, WA 98626 USA | +1 360 577 7222

(If viewing electronically, this is a drop down list - click on the address above - a drop down arrow will appear to the right of the address)

Work Order No.:

Project Manager:	Dave Parkinson			**Bill to:**	Dave Parkinson		
Client Name:	Geusytnec			**Company:**	Geosyntec		
Address:	520 Pike St, Sutie 2600			**Address:**	520 Pike St, Suite 2600		
City, State ZIP:	Seattle, WA 98101			**City, State ZIP:**	Seattle ,WA 98101		
Email:	DParkinson@geosyntec.com	**Phone:**	(206) 618-0350	**Email:**	DParkeinson@geosyntec.com	**PO#**	
Project Site:	18001 Canyon Rd E, Puyallup	**State:**	WA				
Project Name:	Olin Fredrickson						
Project Number:	PNR0861						
P.O. Number:							
Sampler's Name:							

SAMPLE RECEIPT

Temperature (°C):		Temp Blank Present			
Received Intact:	Yes	No	N/A	Wet Ice / Blue Ice	
Cooler Custody Seals:	Yes	No	N/A	Total Containers:	
Sample Custody Seals:	Yes	No	N/A		

REQUESTED ANALYSIS

TAT

- [x] Routine 10 Day
- [ ] 24 hours * 100%
- [ ] 48 hours* 80%
- [ ] 3 Day* 60%
- [ ] 5 day* 50%

*** Please call for availability**

Due Date:

Sample Identification	Matrix	Date Sampled	Time Sampled	Lab ID	No. of Containers	CTC (Carbon Tetrachloride)	Comments
GW-112025-MW-1	GW	11/20/25	0845		3	X	
GW-112025-MW-4			0945		3	X	
GW-112025-MW-13			1030		3	X	
GW-112025-BMW-16			0810		9	X	MS/MSD
GW-112025-HLA-1			0908		3	X	
GW-112025-11-CL			0920		3	X	
GW-112025-P-1I			1145		3	X	
GW-112025-P-1S			1140		3	X	
GW-112025-DUP			1200		3	X	
GW-112025-Blank			1150		3	X	

Dissolved	Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Se, Si, Sn, Sr, Tl, V, Zn, Zr
Total	Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Se, Si, Sn, Sr, Tl, V, Zn, Zr

Additional Methods Available Upon Request

RELINQUISHED BY			RECEIVED BY		
Print Name	Signature	Date/Time	Print Name	Signature	Date/Time
Diana Ojeda		11/20/25 1400	Shipped via Fedex		11/21/25 1050

Cooler Receipt and Preservation Form

PM NP

Client GeoSyntec Service Request K25 11724

Received: 11/21/25 Opened: 11/21/25 By: VM Unloaded: 11/21/25 By: VM

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Cooler* *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (X) N If yes, how many and where? 1 Front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

Temp Blank	Sample Temp	IR Gun	Cooler #/COC ID / NA	Out of temp Indicate with "X"	PM Notified If out of temp	Tracking Number NA	Filed
	2.7	IR00				880248009629	

4. Was a Temperature Blank present in cooler? NA Y (N) If yes, notate the temperature in the appropriate column below:
   If no, take the temperature of a representative sample bottle contained within the cooler; notate in the column "Sample Temp":
5. Were samples received within the method specified temperature ranges? NA (Y) N
   If no, were they received on ice and same day as collected? If not, notate the cooler # below and notify the PM. (NA) Y N

If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*

6. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
7. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
8. Were samples received in good condition (unbroken) NA (Y) N
9. Were all sample labels complete (ie, analysis, preservation, etc.)? NA (Y) N
10. Did all sample labels and tags agree with custody papers? NA (Y) N
11. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
12. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
13. Were VOA vials received without headspace? *Indicate in the table below.* NA (Y) N
14. Was C12/Res negative? (NA) Y N
15. Were samples received within method specified time limit? If not, notate the error below and notify the PM. (NA) Y N
16. Were 100mL sterile microbiology bottles filled exactly to the 100mL mark? (NA) Y N Underfilled Overfilled

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, Resolutions: _____

Q:\ENVIRONMENTAL\1 SOP & Policy Statements\SMO\CRF Update 2025-05-06.docx Updated: NP 05/07/25

Volatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Report

Client:	Geosyntec Consultants	**Service Request:**	K2511724
Project:	Olin Fredrickson/PNR0861	**Date Collected:**	11/20/25 08:45
Sample Matrix:	Water	**Date Received:**	11/21/25 10:50
Sample Name:	GW-112025-MW-1	**Units:**	ug/L
Lab Code:	K2511724-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Carbon Tetrachloride	**0.79**	0.50	1	12/03/25 23:12	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	108	68 - 117	12/03/25 23:12	
Dibromofluoromethane	104	73 - 122	12/03/25 23:12	
Toluene-d8	101	65 - 144	12/03/25 23:12	

Analytical Report

Client:	Geosyntec Consultants	**Service Request:**	K2511724
Project:	Olin Fredrickson/PNR0861	**Date Collected:**	11/20/25 09:45
Sample Matrix:	Water	**Date Received:**	11/21/25 10:50
Sample Name:	GW-112025-MW-4	**Units:**	ug/L
Lab Code:	K2511724-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Carbon Tetrachloride	**0.52**	0.50	1	12/03/25 23:37	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	68 - 117	12/03/25 23:37	
Dibromofluoromethane	108	73 - 122	12/03/25 23:37	
Toluene-d8	103	65 - 144	12/03/25 23:37	

Analytical Report

Client:	Geosyntec Consultants	**Service Request:**	K2511724
Project:	Olin Fredrickson/PNR0861	**Date Collected:**	11/20/25 10:30
Sample Matrix:	Water	**Date Received:**	11/21/25 10:50
Sample Name:	GW-112025-MW-13	**Units:**	ug/L
Lab Code:	K2511724-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Carbon Tetrachloride	**1.6**	0.50	1	12/04/25 00:02	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	106	68 - 117	12/04/25 00:02	
Dibromofluoromethane	104	73 - 122	12/04/25 00:02	
Toluene-d8	100	65 - 144	12/04/25 00:02	

Analytical Report

Client:	Geosyntec Consultants	**Service Request:**	K2511724
Project:	Olin Fredrickson/PNR0861	**Date Collected:**	11/20/25 08:10
Sample Matrix:	Water	**Date Received:**	11/21/25 10:50
Sample Name:	GW-112025-BMW-18	**Units:**	ug/L
Lab Code:	K2511724-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Carbon Tetrachloride	**2.2**	0.50	1	12/04/25 00:26	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	110	68 - 117	12/04/25 00:26	
Dibromofluoromethane	108	73 - 122	12/04/25 00:26	
Toluene-d8	103	65 - 144	12/04/25 00:26	

Analytical Report

Client:	Geosyntec Consultants	**Service Request:**	K2511724
Project:	Olin Fredrickson/PNR0861	**Date Collected:**	11/20/25 09:08
Sample Matrix:	Water	**Date Received:**	11/21/25 10:50
Sample Name:	GW-112025-HLA-1	**Units:**	ug/L
Lab Code:	K2511724-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Carbon Tetrachloride	**3.1**	0.50	1	12/04/25 00:51	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	106	68 - 117	12/04/25 00:51	
Dibromofluoromethane	105	73 - 122	12/04/25 00:51	
Toluene-d8	100	65 - 144	12/04/25 00:51	

Analytical Report

Client:	Geosyntec Consultants	**Service Request:**	K2511724
Project:	Olin Fredrickson/PNR0861	**Date Collected:**	11/20/25 09:20
Sample Matrix:	Water	**Date Received:**	11/21/25 10:50
Sample Name:	GW-112025-11-CL	**Units:**	ug/L
Lab Code:	K2511724-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Carbon Tetrachloride	**3.2**	0.50	1	12/04/25 01:16	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	106	68 - 117	12/04/25 01:16	
Dibromofluoromethane	107	73 - 122	12/04/25 01:16	
Toluene-d8	106	65 - 144	12/04/25 01:16	

Analytical Report

Client:	Geosyntec Consultants	**Service Request:**	K2511724
Project:	Olin Fredrickson/PNR0861	**Date Collected:**	11/20/25 11:45
Sample Matrix:	Water	**Date Received:**	11/21/25 10:50
Sample Name:	GW-112025-P-1I	**Units:**	ug/L
Lab Code:	K2511724-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Carbon Tetrachloride	ND U	0.50	1	12/04/25 01:41	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	109	68 - 117	12/04/25 01:41	
Dibromofluoromethane	105	73 - 122	12/04/25 01:41	
Toluene-d8	102	65 - 144	12/04/25 01:41	

Analytical Report

Client:	Geosyntec Consultants	**Service Request:**	K2511724
Project:	Olin Fredrickson/PNR0861	**Date Collected:**	11/20/25 11:40
Sample Matrix:	Water	**Date Received:**	11/21/25 10:50
Sample Name:	GW-112025-P-IS	**Units:**	ug/L
Lab Code:	K2511724-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Carbon Tetrachloride	ND U	0.50	1	12/04/25 02:06	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	108	68 - 117	12/04/25 02:06	
Dibromofluoromethane	100	73 - 122	12/04/25 02:06	
Toluene-d8	101	65 - 144	12/04/25 02:06	

Analytical Report

Client:	Geosyntec Consultants	**Service Request:**	K2511724
Project:	Olin Fredrickson/PNR0861	**Date Collected:**	11/20/25 12:00
Sample Matrix:	Water	**Date Received:**	11/21/25 10:50
Sample Name:	GW-112025-DUP	**Units:**	ug/L
Lab Code:	K2511724-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Carbon Tetrachloride	**1.9**	0.50	1	12/04/25 02:30	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	108	68 - 117	12/04/25 02:30	
Dibromofluoromethane	107	73 - 122	12/04/25 02:30	
Toluene-d8	102	65 - 144	12/04/25 02:30	

Analytical Report

Client:	Geosyntec Consultants	**Service Request:**	K2511724
Project:	Olin Fredrickson/PNR0861	**Date Collected:**	11/20/25 11:50
Sample Matrix:	Water	**Date Received:**	11/21/25 10:50
Sample Name:	GW-112025-Blank	**Units:**	ug/L
Lab Code:	K2511724-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Prep Method: None

Analyte Name	Result	MRL	Dil.	Date Analyzed	Q
Carbon Tetrachloride	ND U	0.50	1	12/04/25 02:55	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	107	68 - 117	12/04/25 02:55	
Dibromofluoromethane	102	73 - 122	12/04/25 02:55	
Toluene-d8	99	65 - 144	12/04/25 02:55	

Client: Geosyntec Consultants **Service Request:** K2511724
Project: Olin Fredrickson/PNR0861
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260D
Extraction Method: None

Sample Name	Lab Code	4-Bromofluorobenzene 68 - 117	Dibromofluoromethane 73 - 122	Toluene-d8 65 - 144
GW-112025-MW-1	K2511724-001	108	104	101
GW-112025-MW-4	K2511724-002	105	108	103
GW-112025-MW-13	K2511724-003	106	104	100
GW-112025-BMW-18	K2511724-004	110	108	103
GW-112025-HLA-1	K2511724-005	106	105	100
GW-112025-11-CL	K2511724-006	106	107	106
GW-112025-P-1I	K2511724-007	109	105	102
GW-112025-P-IS	K2511724-008	108	100	101
GW-112025-DUP	K2511724-009	108	107	102
GW-112025-Blank	K2511724-010	107	102	99
GW-112025-BMW-18 MS	KQ2606228-01	109	107	105
GW-112025-BMW-18 DMS	KQ2606228-02	107	106	104
Lab Control Sample	KQ2606228-05	111	107	102
Duplicate Lab Control Sample	KQ2606228-06	111	104	101

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Geosyntec Consultants	**Service Request:**	K2511724
Project:	Olin Fredrickson/PNR0861	**Date Collected:**	11/20/25
Sample Matrix:	Water	**Date Received:**	11/21/25
		Date Analyzed:	12/3/25
		Date Extracted:	NA

Duplicate Matrix Spike Summary
Volatile Organic Compounds by GC/MS

Sample Name:	GW-112025-BMW-18	**Units:**	ug/L
Lab Code:	K2511724-004	**Basis:**	NA
Analysis Method:	8260D		
Prep Method:	None		

		Matrix Spike KQ2606228-01			Duplicate Matrix Spike KQ2606228-02					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Carbon Tetrachloride	2.2	12.6	10.0	104	12.1	10.0	99	53-161	4	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Matrix Spike and Matrix Spike Duplicate Data is presented for information purposes only. The matrix may or may not be relevant to samples reported in this report. The laboratory evaluates system performance based on the LCS and LCSD control limits.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Geosyntec Consultants	**Service Request:**	K2511724
Project:	Olin Fredrickson/PNR0861	**Date Analyzed:**	12/03/25
Sample Matrix:	Water	**Date Extracted:**	NA

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260D	**Units:**	ug/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	917069

	Lab Control Sample KQ2606228-05			Duplicate Lab Control Sample KQ2606228-06					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Carbon Tetrachloride	9.66	10.0	97	9.33	10.0	93	55-140	3	30

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	Geosyntec Consultants	**Service Request:**	K2511724
Project:	Olin Fredrickson/PNR0861	**Date Analyzed:**	12/03/25 17:25
Sample Matrix:	Water	**Date Extracted:**	

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Sample Name:	Lab Control Sample	**Instrument ID:**	K-MS-18
Lab Code:	KQ2606228-05	**File ID:**	J:\MS18\DATA\120325A\A1203F005.D\
Analysis Method:	8260D	**Analysis Lot:**	917069
Prep Method:	None		

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Duplicate Lab Control Sample	KQ2606228-06	J:\MS18\DATA\120325A\A1203F006.D\	12/03/25 17:50
GW-112025-BMW-18MS	KQ2606228-01	J:\MS18\DATA\120325A\A1203F007.D\	12/03/25 18:15
GW-112025-BMW-18DMS	KQ2606228-02	J:\MS18\DATA\120325A\A1203F008.D\	12/03/25 18:39
GW-112025-MW-1	K2511724-001	J:\MS18\DATA\120325A\A1203F019.D\	12/03/25 23:12
GW-112025-MW-4	K2511724-002	J:\MS18\DATA\120325A\A1203F020.D\	12/03/25 23:37
GW-112025-MW-13	K2511724-003	J:\MS18\DATA\120325A\A1203F021.D\	12/04/25 00:02
GW-112025-BMW-18	K2511724-004	J:\MS18\DATA\120325A\A1203F022.D\	12/04/25 00:26
GW-112025-HLA-1	K2511724-005	J:\MS18\DATA\120325A\A1203F023.D\	12/04/25 00:51
GW-112025-11-CL	K2511724-006	J:\MS18\DATA\120325A\A1203F024.D\	12/04/25 01:16
GW-112025-P-1I	K2511724-007	J:\MS18\DATA\120325A\A1203F025.D\	12/04/25 01:41
GW-112025-P-IS	K2511724-008	J:\MS18\DATA\120325A\A1203F026.D\	12/04/25 02:06
GW-112025-DUP	K2511724-009	J:\MS18\DATA\120325A\A1203F027.D\	12/04/25 02:30
GW-112025-Blank	K2511724-010	J:\MS18\DATA\120325A\A1203F028.D\	12/04/25 02:55