GREENACRES LANDFILL ANNUAL PROGRESS REPORT
May 2024

Spokane County
WASHINGTON

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1. INTRODUCTION

GREENACRES LANDFILL INFORMATION SUMMARY

SITE:	Greenacres Landfill Section 16, T 25N, R 45E in Spokane County, WA
REPORTING PERIOD:	June 1, 2023, through May 31, 2024.
REGULATORY AUTHORITY:	Washington State Department of Ecology, EPA Scope of work as stated in Consent Decree No. DE98TC-E105.
TECHNOLOGY:	Construction of landfill cover with negative pressure gas collection system to granular activated carbon (GAC) filtration treatment.
CRITERIA:	Criteria were established as stated in the Consent Decree. See Table 1-1.
SAMPLING PROGRAMS:	The Annual groundwater sampling program was performed in accordance with the Greenacres Landfill SAP and the Final Cleanup Action Plan (CAP). Due to a variance between Spokane County and Ecology, the sampling schedule was switched from November to May. Annual sampling was performed in May 2024. See Figure 1-1 for well locations, Table 1-2 for well summary, and Table 1-3 for sampling schedule.

Greenacres Landfill Clean-up Criteria

Table 1-1 Greenacres Landfill Groundwater Clean-up Criteria Summary

ANALYTE	ANALYTE ABBREVIATION	CLEAN-UP CRITERIA	UNITS
Volatile Organic Compounds			
1,2 Dichloroethane	1,2-DCA	5	ug/L
1,2-Dichloroethene (total)	1,2-DCE (total)	50	ug/L
Tetrachloroethene	PCE	5	ug/L
Trichloroethene	TCE	5	ug/L
Vinyl Chloride	VC	1	ug/L
Semi-Volatile Organics			
Bis(2-ethylhexyl)phtalate	BEHP	4	ug/L
Pentachlorophenol	PCP	1	ug/L
Metals			
Antimony	Sb	0.005	mg/L
Arsenic	As	0.005	mg/L
Lead	Pb	0.05	mg/L
Manganese	Mn	0.05	mg/L
Chromium	Cr	0.08	mg/L

Greenacres Landfill Site Location

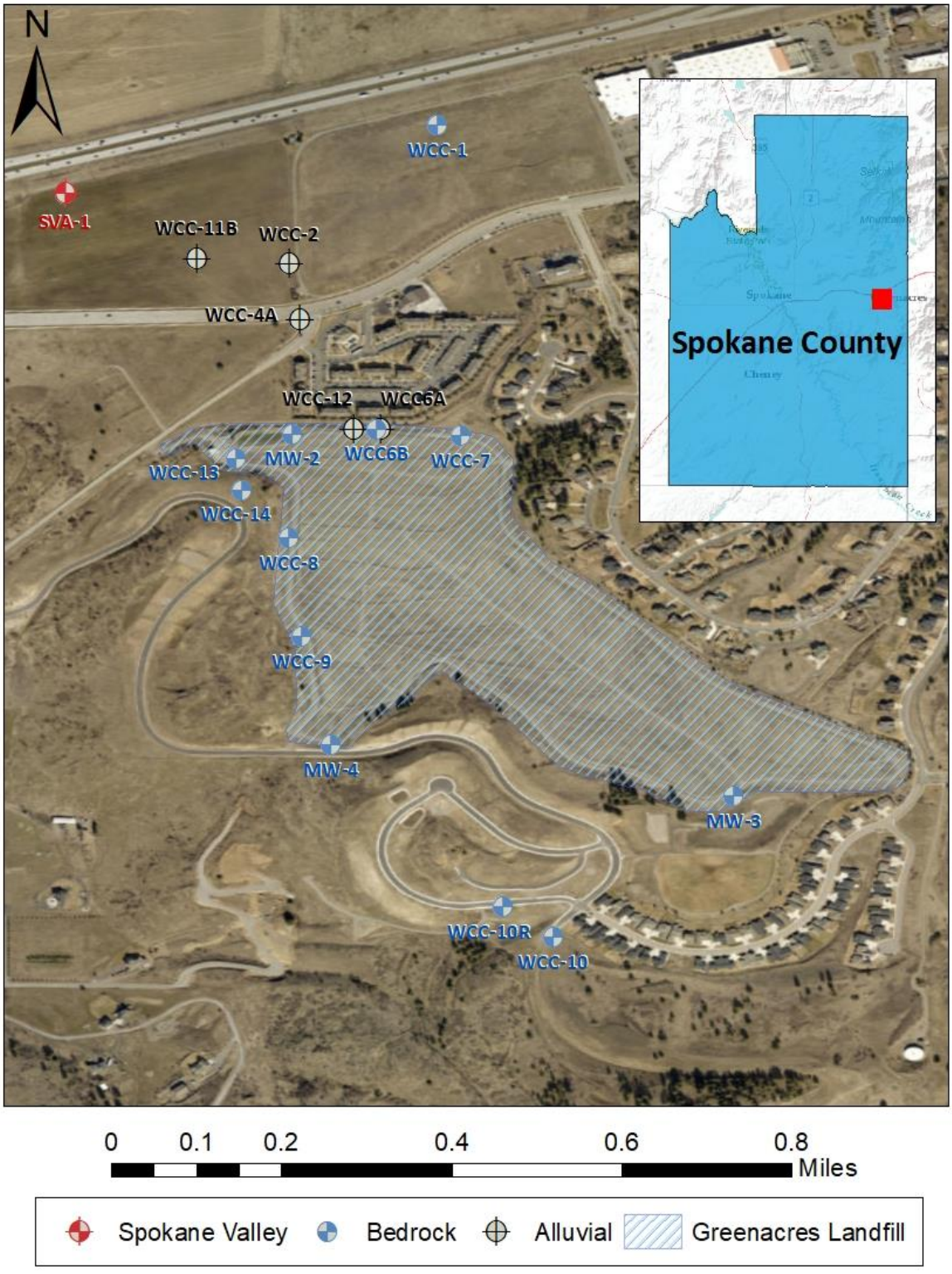


Figure 1-1: Greenacres Landfill Site Map

Greenacres Landfill Monitoring Well Information

Table 1-2: Greenacres Landfill Groundwater Monitoring Well Summary

Monitoring Well Number	Well Diameter (inches)	Well Head Elevation: Top PVC (ft MSL)	Total Boring Depth (ft)	Screened Interval Depth (ft)
Alluvial Aquifer				
SVA1	2	2054.47	127	114-124
WCC11A	2	2054.7	161	112-117
WCC11B	2	2055	161	129-139
WCC12	2	2093.2	106	90-100
WCC2	2	2059.3	123	113-123
WCC4A	2	2068.3	138	125-135
WCC6A	2	2093.9	99	85-95
Bedrock Aquifer				
MW2	4	2091.8	120	110-115
MW3	4	2305.64	57	49-54
MW4	2	2250.62	42	30-40
WCC1	2	2054.5	124	114-124
WCC10	2	2352.8	43	33-43
WCC13	2	2097.6	107	51-61
WCC14	2	2131.8	109	99-109
WCC3	2	2058.46	135	125-135
WCC5	2	2065.5	165	155-165
WCC6B	2	2093	136	126-136
WCC7	2	2105.4	86	76-86
WCC8	2	2162.5	111	100-110
WCC9	2	2204.8	45	35-45

Greenacres Landfill Sampling Schedule

Table 1-3: Greenacres Landfill Sampling Schedule

WELL NUMBER	FIELD PARAMETERS	VOC'S	PCP	BEHP	Metals I	Metals II	STATIC WATER LEVEL
SVA1	Annually	Annually	Annually	Annually	Annually	Annually	Annually
WCC-2	Annually	Annually	Annually	Annually	Annually	Annually	Annually
WCC-4A	Annually	Annually	Annually	Annually	Annually	Annually	Annually
WCC-11B	Annually	Annually	Annually	Annually	Annually	Annually	Annually
WCC-12	Annually	Annually	Annually	Annually	Annually	Annually	Annually
WCC-1	Annually	Annually	Annually	Annually	Annually	Annually	Annually
WCC-7	Annually	Annually	Annually	Annually	Annually	Annually	Annually
WCC-8	Annually	Annually	Annually	Annually	Annually	Annually	Annually
WCC-9	Annually	Annually	Annually	Annually	Annually	Annually	Annually
WCC-10R	Annually	Annually	Annually	Annually	Annually	Annually	Annually

Note: VOC's are PCE, 1,2-DCA, 1,2-DCE, TCE, and Vinyl Chloride

Metals I are arsenic and manganese

Metals II are antimony, chromium, and lead

Static water levels will be taken quarterly at all groundwater-monitoring wells on-site where possible

2. GROUNDWATER

PROBLEMS/DEVIATIONS

Alluvial monitoring well WCC-12 was purged to the intakes and allowed to recharge before obtaining groundwater samples. The turbidity value for WCC-2 decreased to a value more consistent with the values observed prior to the heavy road construction that occurred near alluvial monitoring wells WCC-2 and WCC-11B. County personnel continued to observe high conductivity and turbidity values in WCC-10R.

FIELD DATA

Groundwater elevation measurements for this annual reporting period are presented in Table 2-1. Field parameters are shown in Table 2-2. Field sheets for the May 2024 sampling event are presented in *Appendix A: Groundwater Sampling Field Sheets*. The highest turbidity values were seen in wells WCC-10R (bedrock) and WCC-12 (alluvial). The highest conductivities found were present in WCC-12 (alluvial) and WCC-7 (bedrock).

CRITERIA EXCEEDANCE

All sample results exceeding the clean-up criteria are presented in Table 2-3. Concentrations exceeding clean-up criteria were found in 2 alluvial wells during this reporting period. Alluvial well WCC-11B continued to exceed the criteria for PCE, and alluvial well WCC-12 continued to exceed the criteria for arsenic, manganese, and Vinyl chloride. Manganese concentrations for Bedrock well WCC-10R and alluvial well WCC-2 continued to remain below the cleanup criteria after exceeding the criteria in 2021. Detection/exceedance geospatial maps for analytes that exceeded the criteria are presented in Figure 2-5 through Figure 2-8.

TREND ANALYSIS

Statistical trend analysis was performed on chemical data from 1994 to present date using Sen's non-parametric trend test (99% confidence). Statistically significant trends are included in Table 2-8. There were no statistically significant increasing trends during this reporting period. Most of the statistically significant decreasing trends are found in the alluvial monitoring wells.

Alluvial:

Alluvial well WCC-11B continues to show decreasing trends for PCE. WCC-12 continues to exhibit decreasing trends for 1,2-DCA, cis-1,2-DCE, VC, and Manganese. WCC-2 has statistically significant decreasing trends for cis-1,2-DCE, PCE, and Manganese. WCC-4A contains the highest number of statistically significant decreasing trends, including 1,2-DCA, cis-1,2-DCE, PCE, TCE, VC, and manganese. Out of the 4 analytes that exceeded the cleanup criteria during this reporting period, 3 of them (PCE, VC, and Manganese) continue to show statistically significant decreasing trends.

Bedrock:

Bedrock wells WCC-1, WCC-7, and WCC-9 all exhibited statistically significant decreasing trends for PCE. WCC-8 showed a decreasing trend for cis-1,2-DCE. cis-1,2-DCE concentrations for WCC-8 have been non-detectable since November 2015.

CHEMICAL DATA

Table 2-4 presents volatile organic compound analytical results for the annual reporting period. Semi-volatile organic results are shown in Table 2-5, conventionals results are presented in Table 2-6, and metals analytical results are shown in Table 2-7. Figure 2-9 through Figure 2-13 presents time-series plots for alluvial aquifer well analyte concentrations. Time-series plots for bedrock well analyte concentrations are shown in Figure 2-19 through Figure 2-23. Laboratory analytical results are presented in *Appendix B: Laboratory Results*.

VOC's:
The alluvial aquifer wells had detectable concentrations for 1,2-DCA, CFC-12, cis-1,2-DCE, PCE, TCE, VC, and chloroform during the May 2024 sampling event. Alluvial aquifer well WCC-11B continues to exhibit PCE concentrations above the criteria. While PCE concentrations for WCC-11B exhibited increases in concentrations during the November 2022 sampling event, concentrations continue to decrease overall. Low concentrations of PCE were detected in the bedrock aquifer well WCC-7 and alluvial aquifer well WCC-4A. Low concentrations of cis-1,2-Dichloroethene were detected in alluvial wells WCC-12, WCC-11B, and WCC-4A. Cis-1,2-DCE concentrations for WCC-12 have continued to increase since 2016. Vinyl chloride concentrations in WCC-12 continue to exceed the criteria – although concentrations have been decreasing since 1999, VC concentrations exhibited an increase for WCC-12 during the November 2024 sampling event. There were detections for TCE in alluvial wells WCC-11B and WCC-12, but the concentrations continue to remain under the criteria. The bedrock aquifer well WCC-7 exhibited detectable PCE concentrations during this reporting period. Most detectable VOC concentrations for all Greenacres monitoring wells exhibited decreases in concentrations over the last 6 years until November 2021, when several VOCs began to exhibit increases in concentrations (PCE for WCC-11B, TCE for WCC-12 and WCC-11B, and PCE for WCC-7). These detectable concentrations appear to be stabilizing/decreasing, and coincide with increases in groundwater elevations that are currently stabilizing/decreasing as well.

SVOC's:
There were no detections for any SVOCs during this reporting period. All detectable SVOCs within the past 6 years have shown a decrease in concentrations.

Conventionals:
Low concentrations of nitrate were found in alluvial well WCC-2 and bedrock wells WCC-8, WCC-9, and WCC-10R. Detectable concentrations for nitrate have decreased/plateaued for all alluvial and bedrock wells over the last 6 years, with the exception of alluvial well WCC-2 (currently increasing).

Metals:
Alluvial aquifer well WCC-12 exhibited detectable concentrations of arsenic and Manganese over the cleanup criteria for the May 2024 sampling event. Alluvial aquifer monitoring wells WCC-2 and WCC-4A had detectable concentrations of manganese and arsenic during this reporting period. Bedrock well WCC-10R exhibited detectable concentrations of manganese and arsenic. WCC-10R has had detectable manganese concentrations since the construction of residential homes began in the vicinity of the

well. Monitoring well SVA-1 exhibited detectable concentrations of arsenic during this reporting period. SVA-1 has not shown detectable concentrations of arsenic since 2003. Lead, antimony, and chromium were not found in any of the monitoring wells sampled during this reporting period.

SUMMARY

Although several detectable COC concentrations exhibited recent increases (PCE for WCC-11B, TCE for WCC-12 and WCC-11B, and PCE for WCC-7), most of these concentrations have recently started to stabilize, or even decrease. Both the COC concentration increases and stabilization/decreases appear to coincide with groundwater elevation increases beginning in 2021, followed by stabilizing/decreasing elevations beginning in 2023. Bedrock well WCC-10R has exhibited detections for manganese, and currently arsenic, that appears to coincide with the residential construction that has occurred in the vicinity of the well over the past few years. This monitoring well is considered an upgradient "background" well, and due to the recent detections of inorganic concentrations/impacts from the recent residential development, County personnel will need to evaluate whether to continue monitoring this well if concentrations are no longer representative of background conditions. Monitoring well SVA-1 also had detectable concentrations for arsenic, and this well has not exhibited detectable arsenic concentrations since 2003. In general, the alluvial unit monitoring wells had higher analyte concentrations and detections than the bedrock unit wells. The highest concentrations of analytes tend to be near the northern edge of the landfill.

DATA VALIDATION

Analytical data for the May 2024 sampling event was reviewed using quality control (QC) criteria established in the Greenacres Landfill Sampling and Analysis Plan (SAP). No laboratory analytical data was qualified during this reporting period.

Qualified Data:

StationID	SampleDate	Analyte	SampleID	RptLimit	Units	Result	Qualifier	Type

There were no qualified laboratory analytical data during this reporting period.

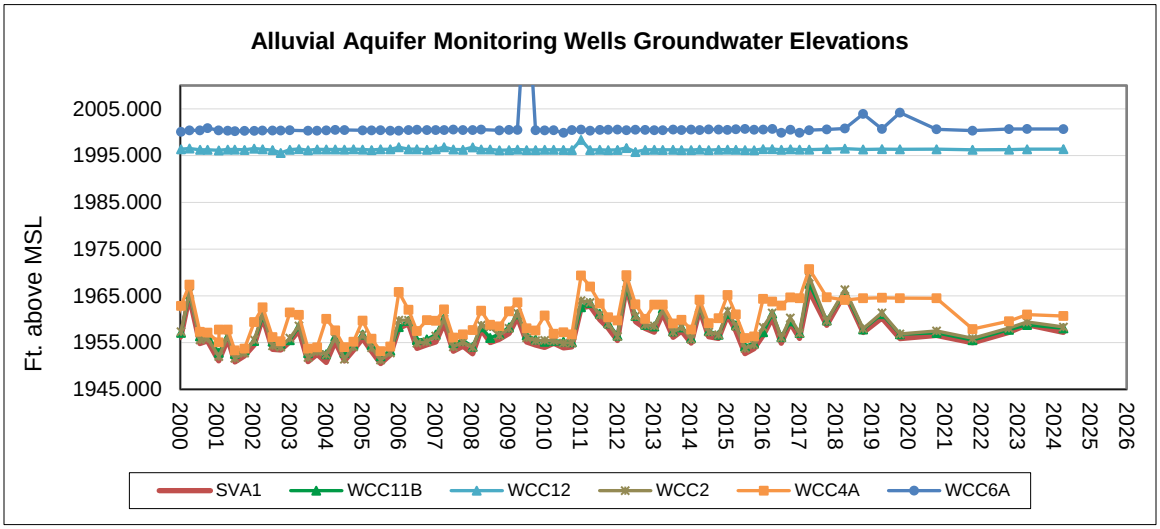
Greenacres Landfill Groundwater Elevations

Table 2-1 Greenacres Landfill Groundwater Elevation Data

StationID	Unit	5-2024*
SVA1	Alluvial Aquifer	1957.18
WCC11A	Alluvial Aquifer	1958.23
WCC11B	Alluvial Aquifer	1958.07
WCC12	Alluvial Aquifer	1996.39
WCC2	Alluvial Aquifer	1958.34
WCC4A	Alluvial Aquifer	1960.68
WCC6A	Alluvial Aquifer	2000.69
MW2	Bedrock Aquifer	2052.32
WCC1	Bedrock Aquifer	1958.69
WCC10R	Bedrock Aquifer	2336.90
WCC13	Bedrock Aquifer	2063.68
WCC6B	Bedrock Aquifer	2031.00
WCC7	Bedrock Aquifer	2034.22
WCC8	Bedrock Aquifer	2109.54
WCC9	Bedrock Aquifer	2179.65

*Water Elevations: ft above MSL

Figure 2-1 Alluvial Aquifer Groundwater Elevations vs. Time



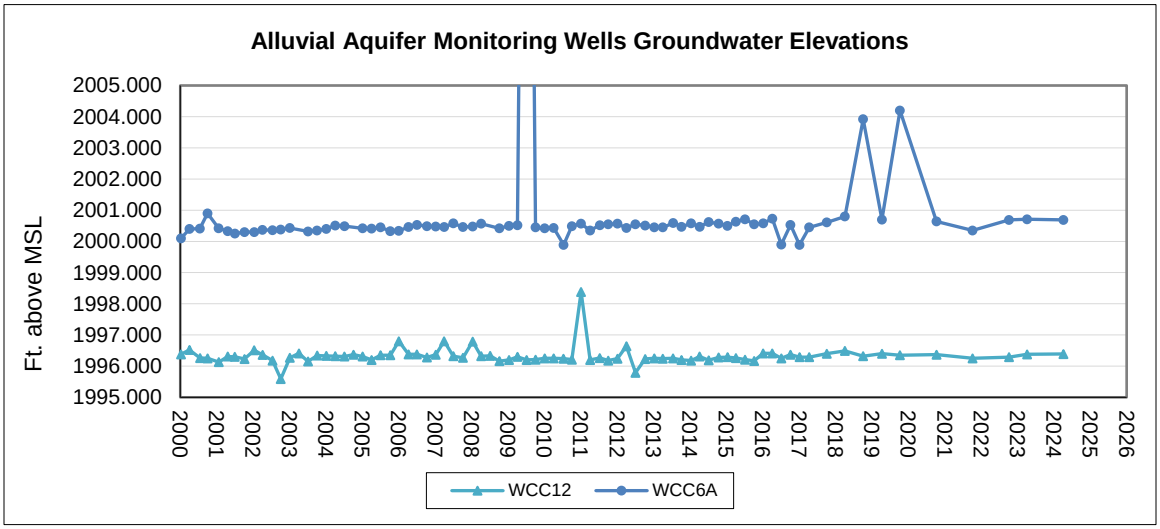
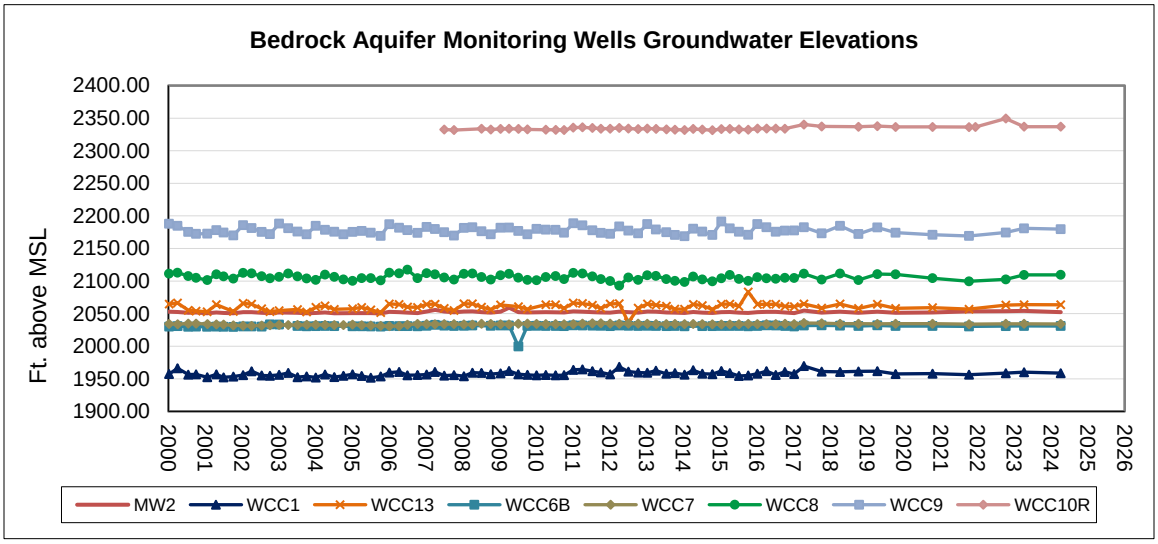
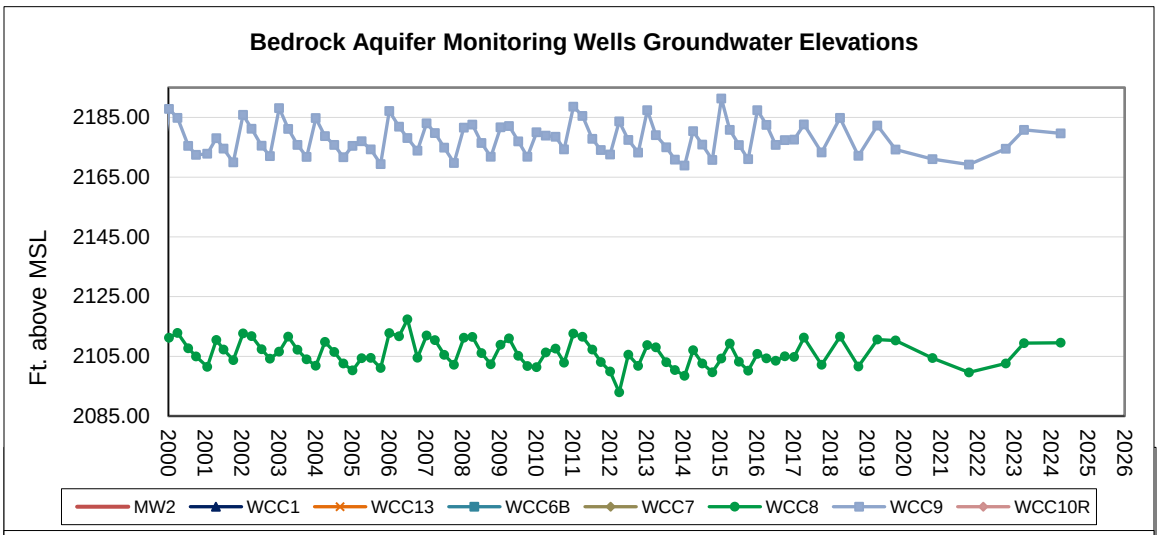
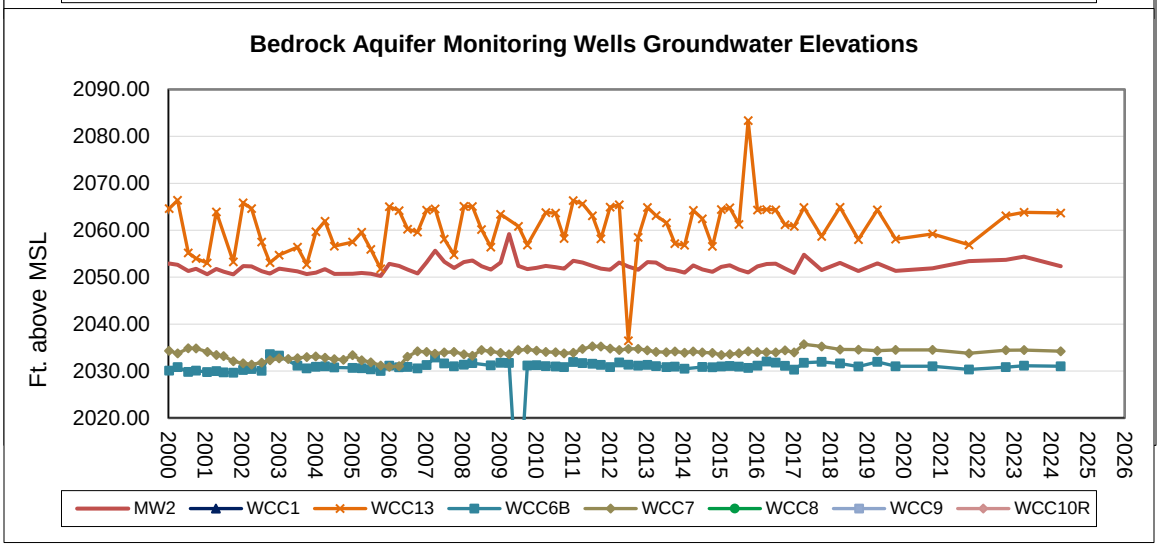


Figure 2-2 Bedrock Aquifer Groundwater Elevations vs. Time







Greenacres Estimated Groundwater Contours

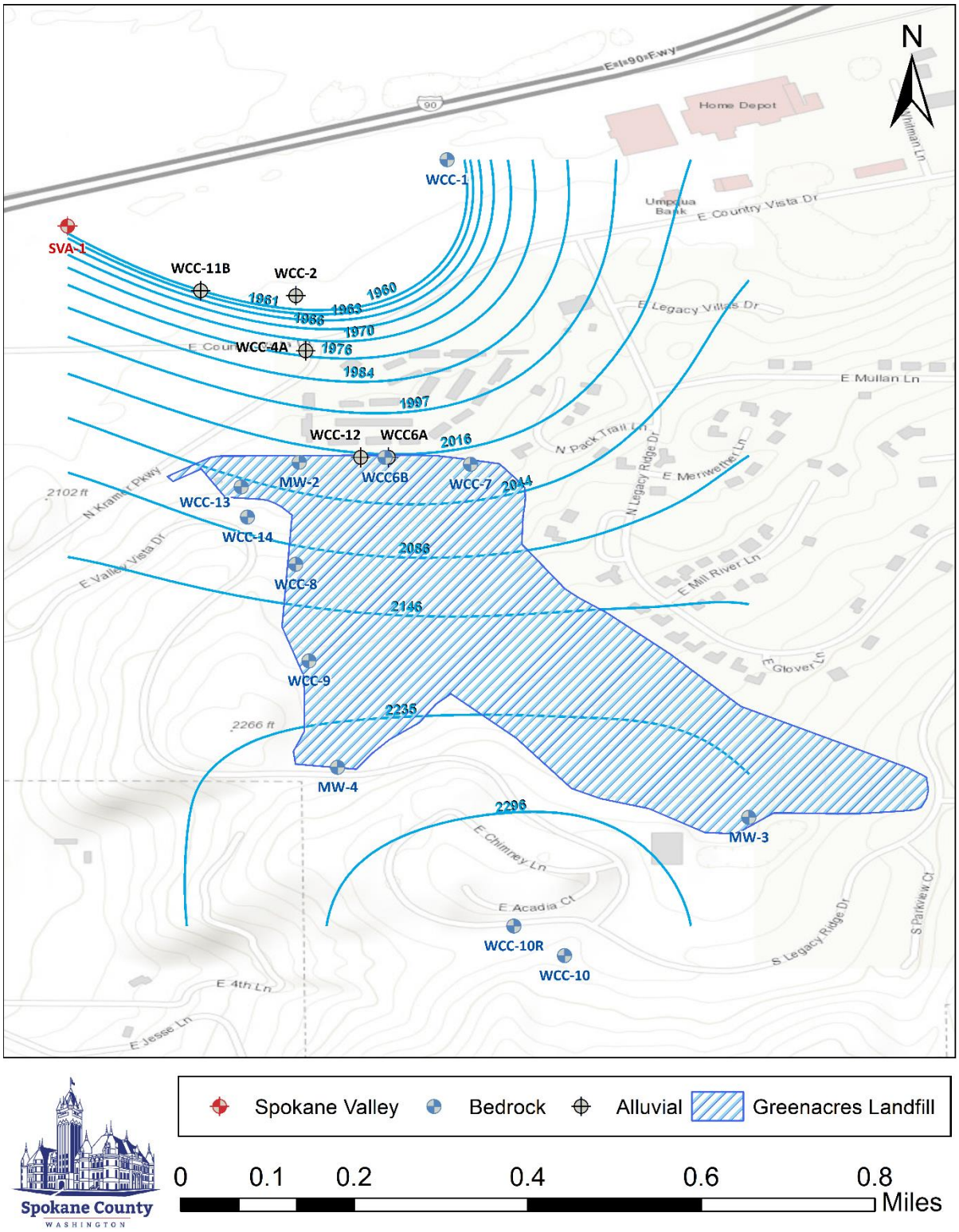


Figure 2-3: Greenacres Landfill Estimated Groundwater Contours

Greenacres *Groundwater Elevations Map*

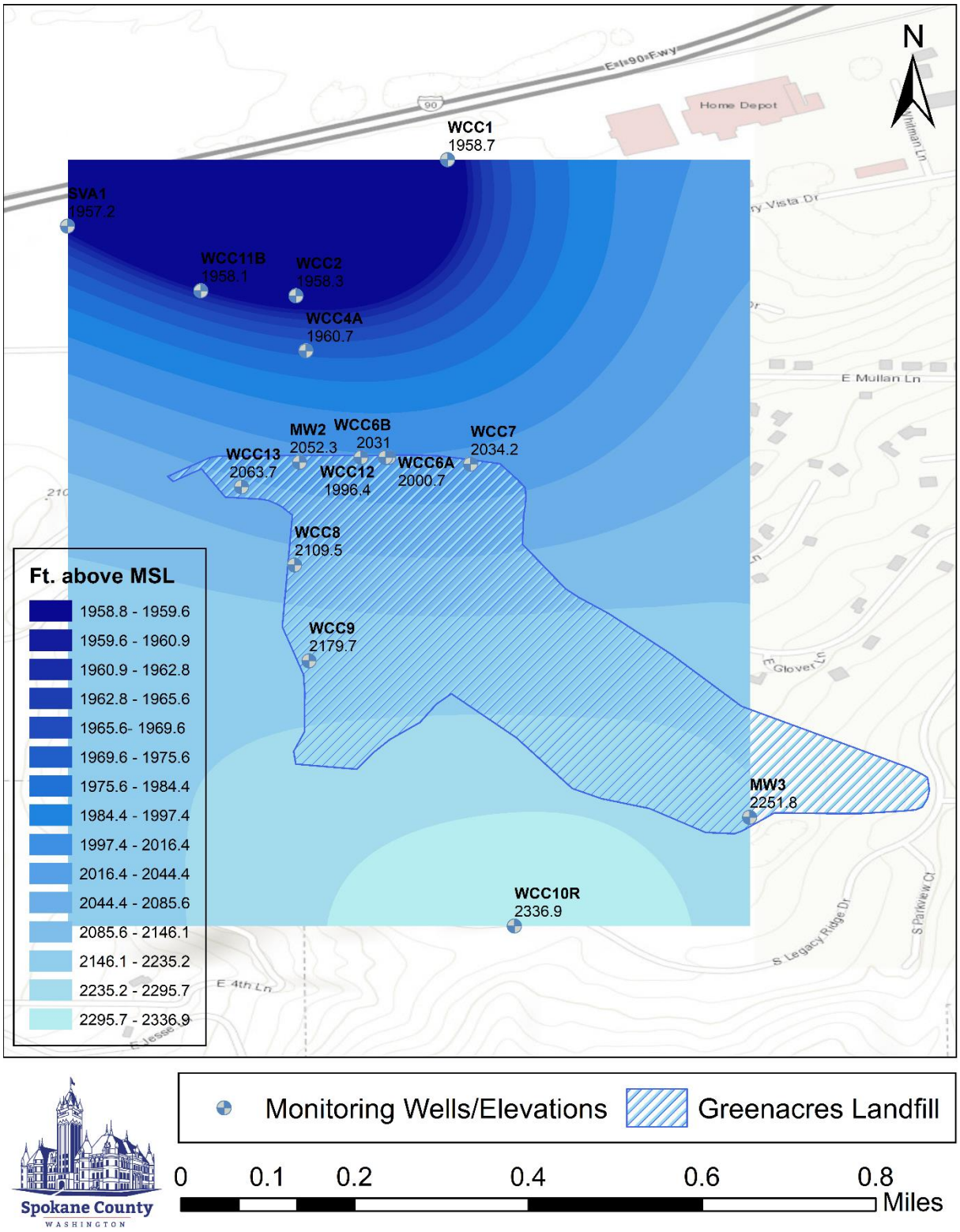


Figure 2-4: Greenacres Landfill Groundwater Elevations

Greenacres Landfill Field Parameters

Table 2-2 Greenacres Landfill Annual Monitoring Well Field Parameters

StationID	Unit	SampleDate	Temp*	PH*	Conductivity*	Turbidity*
SVA1	Alluvial Aquifer	5/2/2023	11	7.93	220	0.18
SVA1	Alluvial Aquifer	5/1/2024	10.9	7.99	243	0.15
WCC11B	Alluvial Aquifer	5/2/2023	12	7.5	736	0.21
WCC11B	Alluvial Aquifer	5/1/2024	11	7.47	721	0.22
WCC12	Alluvial Aquifer	5/2/2023	17.5	6.52	977	1.39
WCC12	Alluvial Aquifer	5/1/2024	13.3	6.62	893	1.04
WCC2	Alluvial Aquifer	5/2/2023	11.8	7.28	516	13.01
WCC2	Alluvial Aquifer	5/1/2024	9.6	7.52	518	0.77
WCC4A	Alluvial Aquifer	5/2/2023	11.9	6.95	703	0.26
WCC4A	Alluvial Aquifer	5/1/2024	10.9	7.02	680	0.19
WCC1	Bedrock Aquifer	5/2/2023	12.9	7.79	480	0.24
WCC1	Bedrock Aquifer	5/1/2024	11	7.81	481	0.21
WCC10R	Bedrock Aquifer	5/2/2023	12.4	9.26	1056	4.5
WCC10R	Bedrock Aquifer	5/1/2024	11.5	8.73	586	10.92
WCC7	Bedrock Aquifer	5/2/2023	12.9	7.42	819	0.22
WCC7	Bedrock Aquifer	5/1/2024	11.7	7.38	760	0.08
WCC8	Bedrock Aquifer	5/2/2023	12.9	7.02	141	0.25
WCC8	Bedrock Aquifer	5/1/2024	11.8	6.89	133	0.02
WCC9	Bedrock Aquifer	5/2/2023	11	6.4	90	0.17
WCC9	Bedrock Aquifer	5/1/2024	11.4	6.64	101	2.85

* Temp: Degrees C, Conductivity: umhos/cm, Turbidity: NTU

Greenacres Landfill Criteria Exceedances

Table 2-3: Greenacres Landfill Clean-up Criteria Exceedances

StationID	Unit	SampleDate	Concentration	Criteria	units	Analyte	Type
WCC11B	Alluvial Aquifer	5/1/2024	6.33	5	ug/L	PCE	V
WCC12	Alluvial Aquifer	5/1/2024	0.0416	0.005	mg/L	As	I
WCC12	Alluvial Aquifer	5/1/2024	1.59	0.05	mg/L	Mn	I
WCC12	Alluvial Aquifer	5/1/2024	3.33	1	ug/L	VC	V

Criteria Exceedances – Summary of changes from 2023 to 2024:

StationID	Unit	Analyte	Summary of change
N/A	N/A	N/A	No changes in analyte concentrations exceedances during this period.

Greenacres Landfill Volatile Organic Compound Detections

Table 2-4: Greenacres Landfill Annual Volatile Organic Results (ug/L)

StationID	Unit	SampleDate	1,2-DCA	CFC 12	cis-1,2-DCE	PCE	TCE	VC	Chloroform
WCC11B	Alluvial Aquifer	5/1/2024		2.46	0.6	**6.33**	1.11		0.51
WCC12	Alluvial Aquifer	5/1/2024	1.07	1.68	8.8		0.57	**3.33**	
WCC4A	Alluvial Aquifer	5/1/2024		0.75	2.51	0.73		0.54	
WCC7	Bedrock Aquifer	5/1/2024		0.52		1.01			

*Criteria exceedances are in **RED**

Greenacres Landfill Semi-Volatile Organic Compound Detections

Table 2-5: Greenacres Landfill Annual Semi-Volatile Organic Results (ug/L)

StationID	Unit	SampleDate	SVOC

Criteria exceedances are in **RED**

All SVOC concentrations were non-detection at the designated detection limit(s) during this reporting period.

Greenacres Landfill Conventional Detections

Table 2-6: Greenacres Landfill Annual Conventionals Results (mg/L)

StationID	Unit	SampleDate	NO3
WCC10R	Bedrock Aquifer	5/1/2024	1.55
WCC2	Alluvial Aquifer	5/1/2024	1.87
WCC8	Bedrock Aquifer	5/1/2024	1.32
WCC9	Bedrock Aquifer	5/1/2024	1.74

*Criteria exceedances are in **RED**

Greenacres Landfill Inorganic Detections

Table 2-7: Greenacres Landfill Annual Metals Results (mg/L)

StationID	Unit	SampleDate	As	Mn
SVA1	Alluvial Aquifer	5/1/2024	0.00236	
WCC10R	Bedrock Aquifer	5/1/2024	0.00221	0.0195
WCC12	Alluvial Aquifer	5/1/2024	**0.0416**	**1.59**
WCC2	Alluvial Aquifer	5/1/2024	0.001	0.0142
WCC4A	Alluvial Aquifer	5/1/2024	0.00106	0.0203

*Criteria exceedances are in **RED**

VOC detections/exceedance maps – Tetrachloroethene

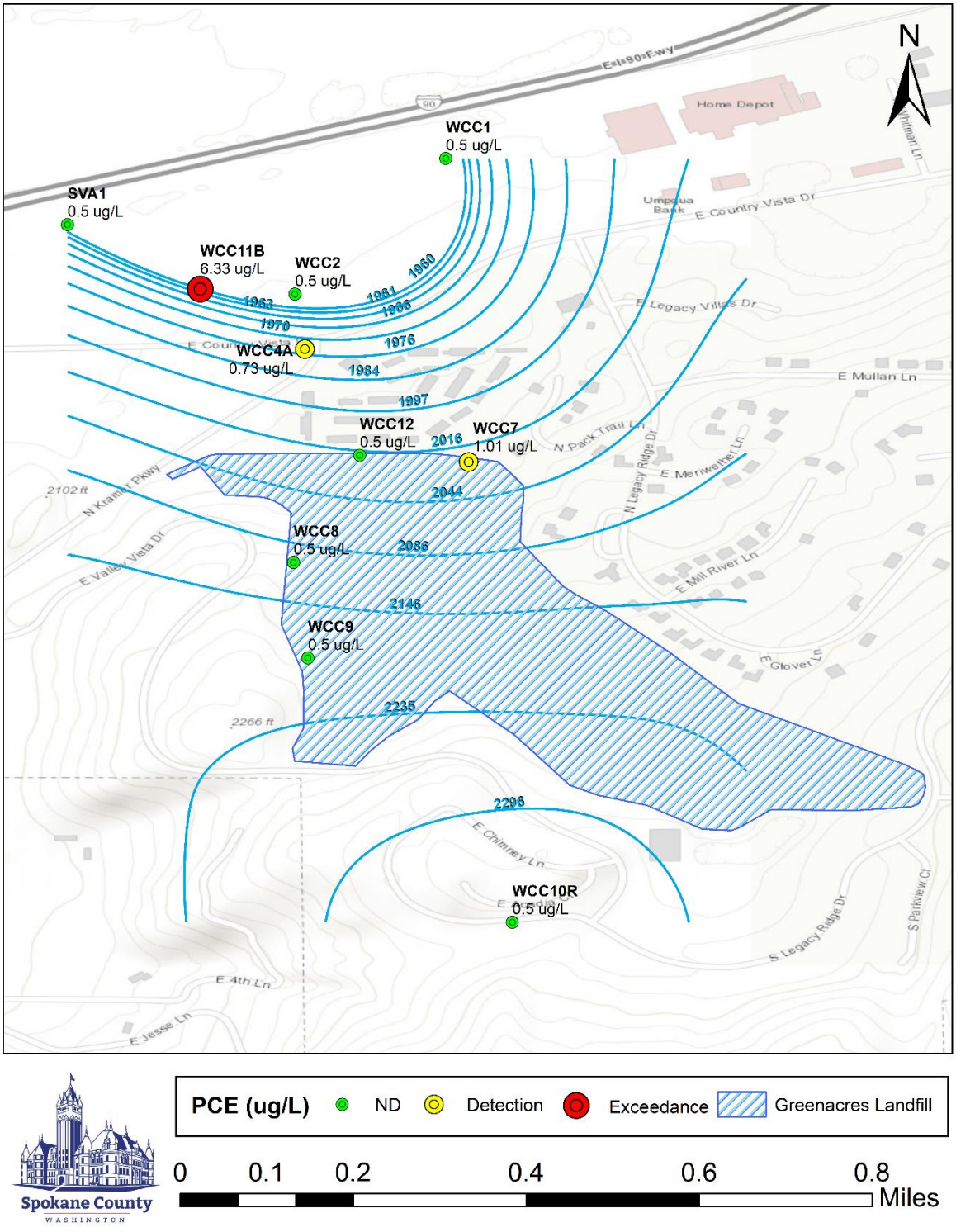


Figure 2-5: Tetrachloroethene detections/exceedance map – 2024

VOC Detections/Exceedance Maps – Vinyl chloride

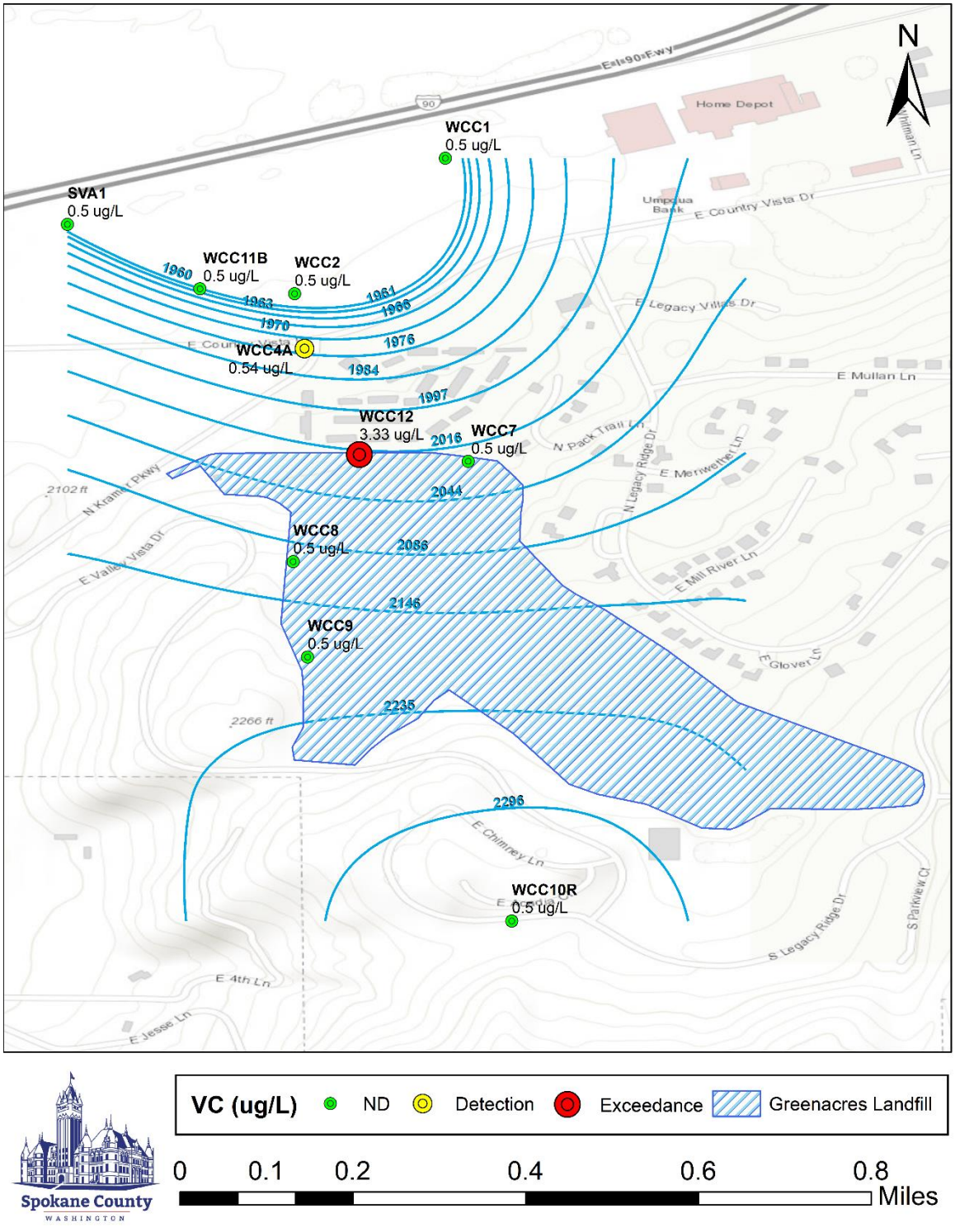


Figure 2-6: Vinyl chloride detections/exceedance map - 2024

Inorganics Detections/Exceedance Maps – Manganese

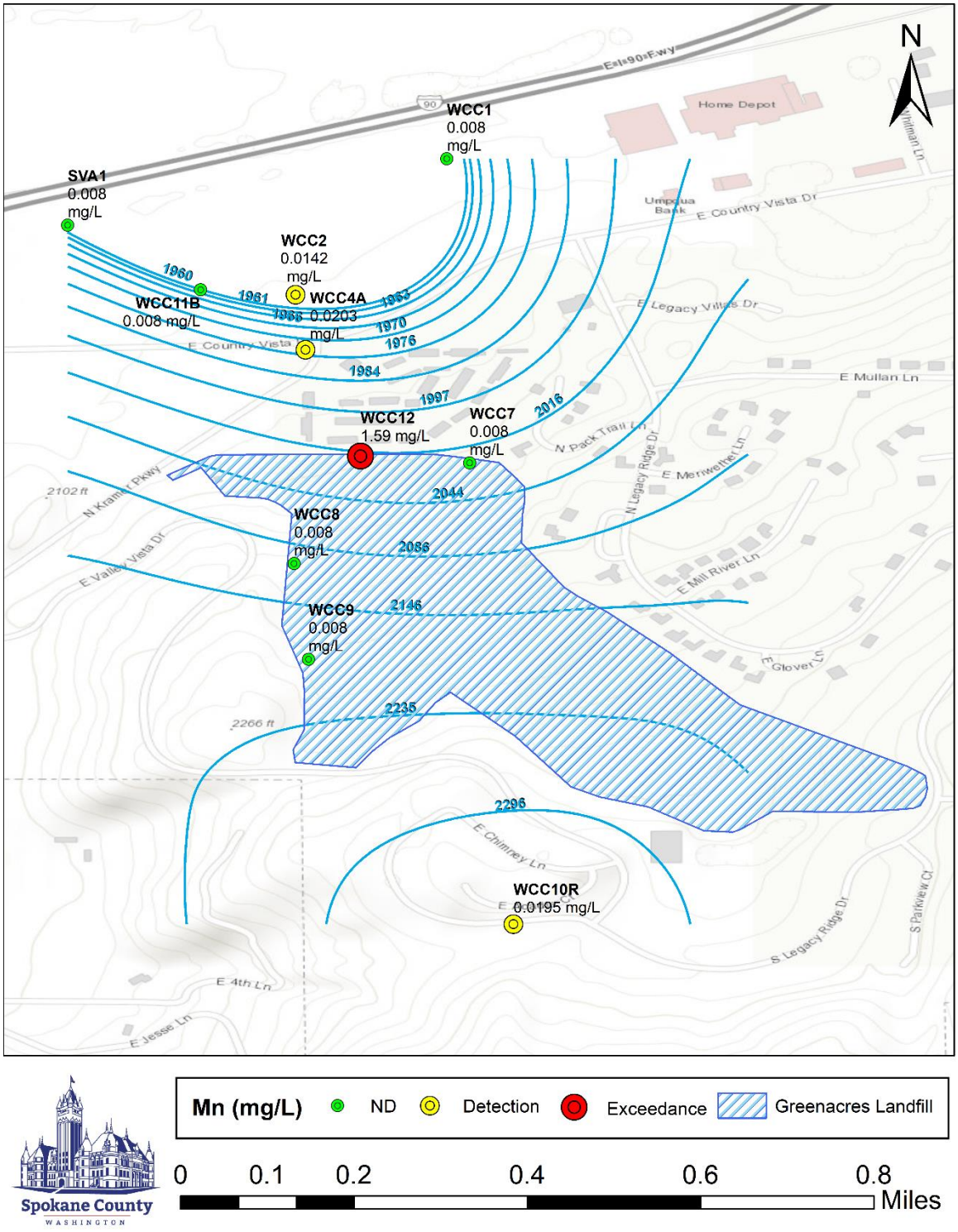


Figure 2-7: Manganese detections/exceedance map – 2024

Inorganic Detections/Exceedance Maps – Arsenic

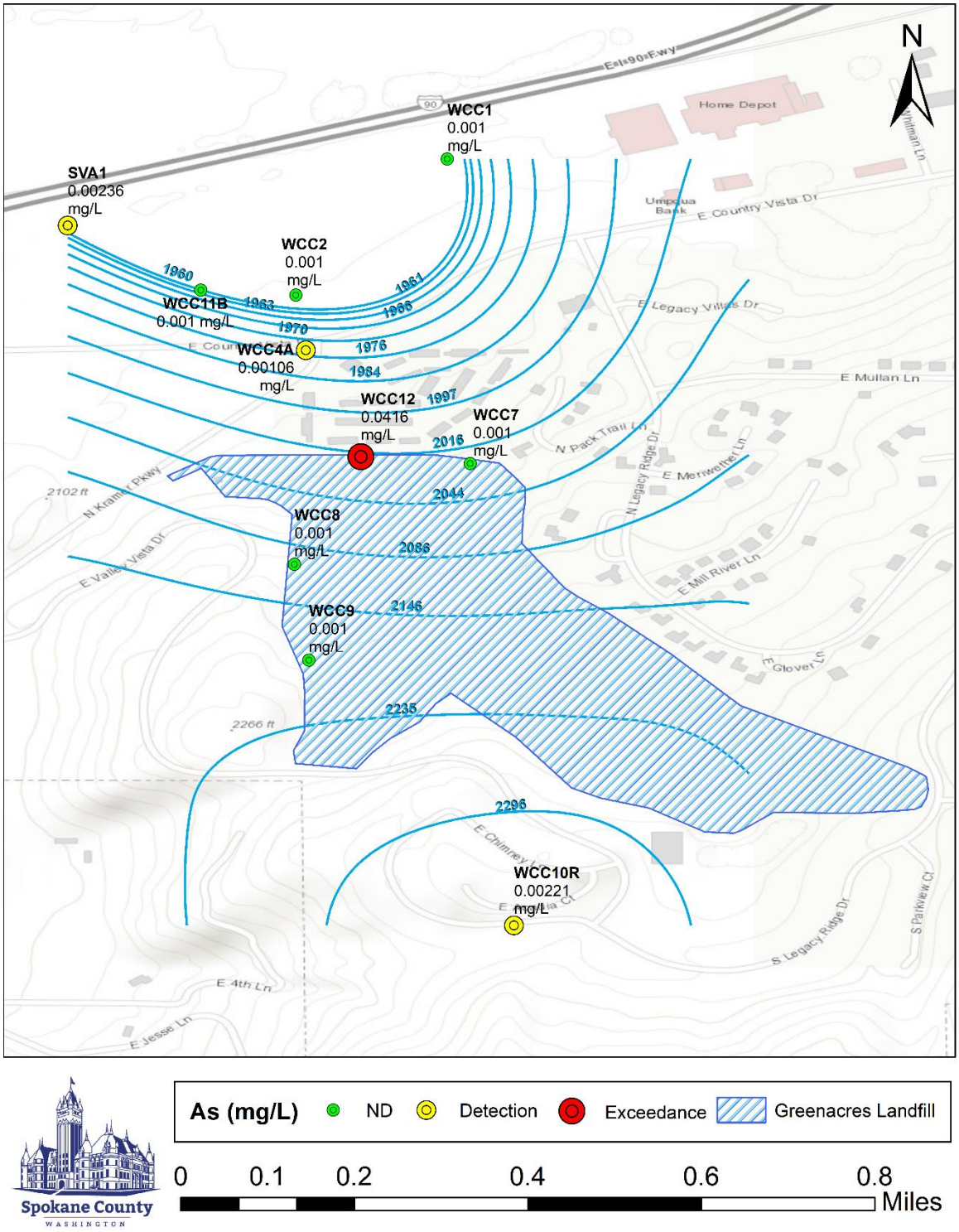


Figure 2-8: Arsenic detections/exceedance map – 2024

Greenacres Landfill Trend Analysis – 2024

Table 2-8: Greenacres Landfill Statistically Significant Trends (Sen's Test) 2024

Type	Unit:	Alluvial					Bedrock				
	Analyte	SVA1	WCC11B	WCC12	WCC2	WCC4A	WCC1	WCC10R	WCC7	WCC8	WCC9
VOCs	1,2-DCA			▼		▼					
	cis-1,2-DCE			▼	▼	▼				▼	
	PCE		▼		▼	▼	▼		▼		▼
	TCE		▼			▼					
	VC			▼		▼					
SVOCs	BEHP										
	PCP										
Metals	Sb										
	As										
	Pb										
	Mn			▼	▼	▼					
	Cr										

▲ **= Increasing trend**

▼ **= Decreasing trend**

= Criteria exceeded during this reporting period

Statistical analysis calculated on data after January 1994 using a 99% Confidence level

Trend Analysis – Summary of changes from 2023 to 2024

StationID	Unit	Analyte	Summary of change

No changes in trend analysis results occurred between 2023 to 2024.

Alluvial Monitoring Wells: VOCs/SVOCs Time-Series Graphs

Figure 2-9: Alluvial Wells – VOCs/SVOCs Concentration Graphs

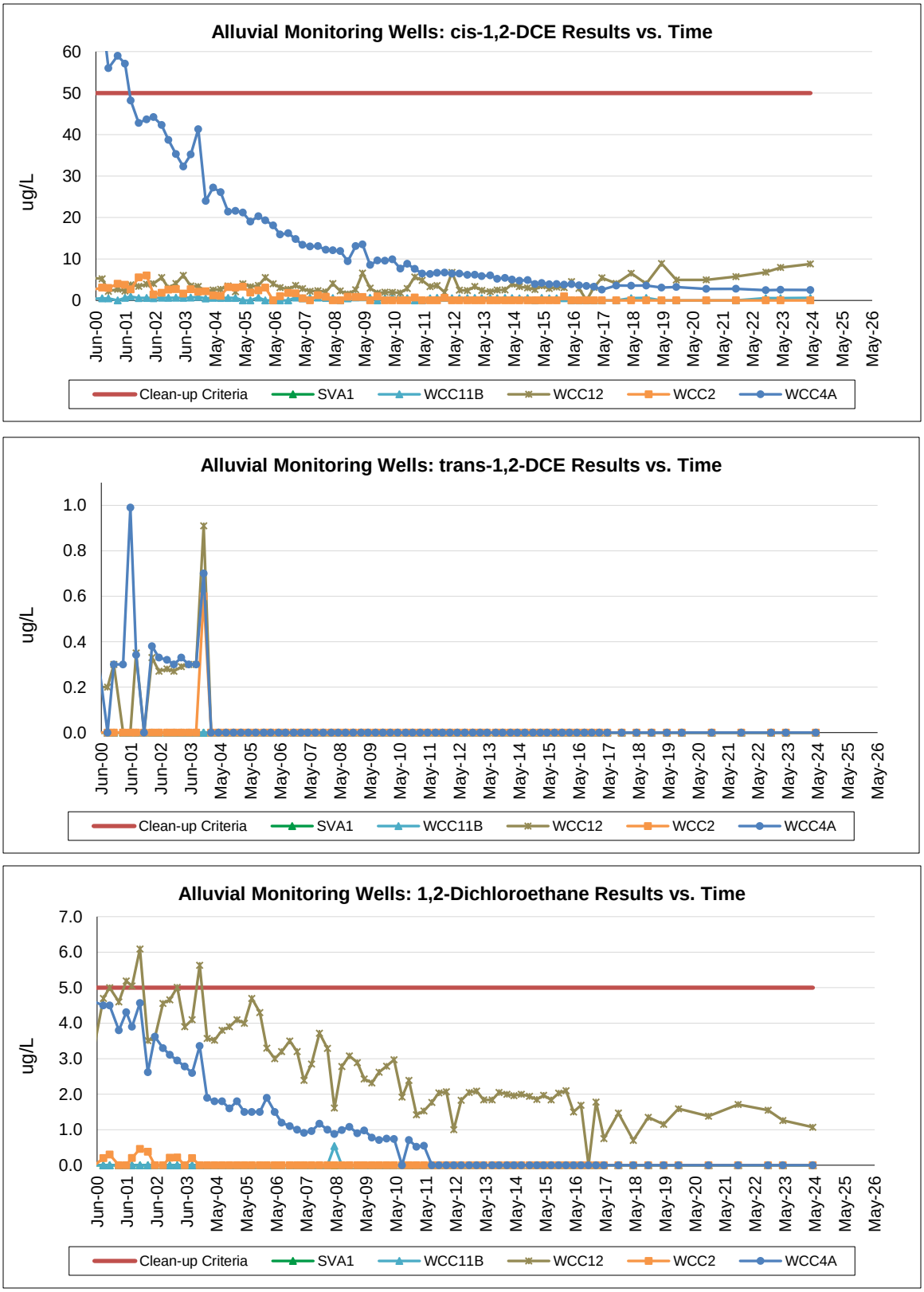
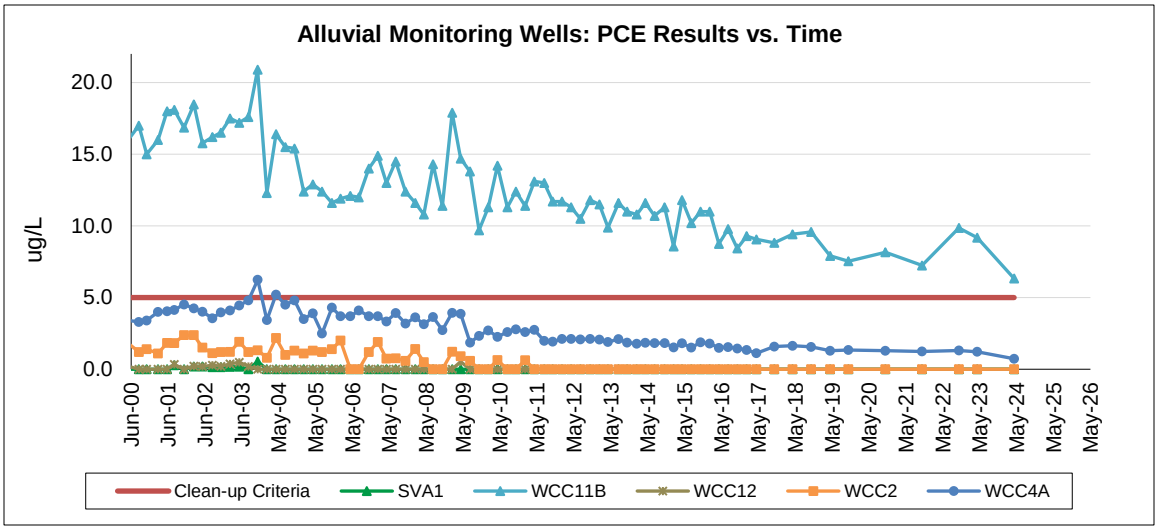
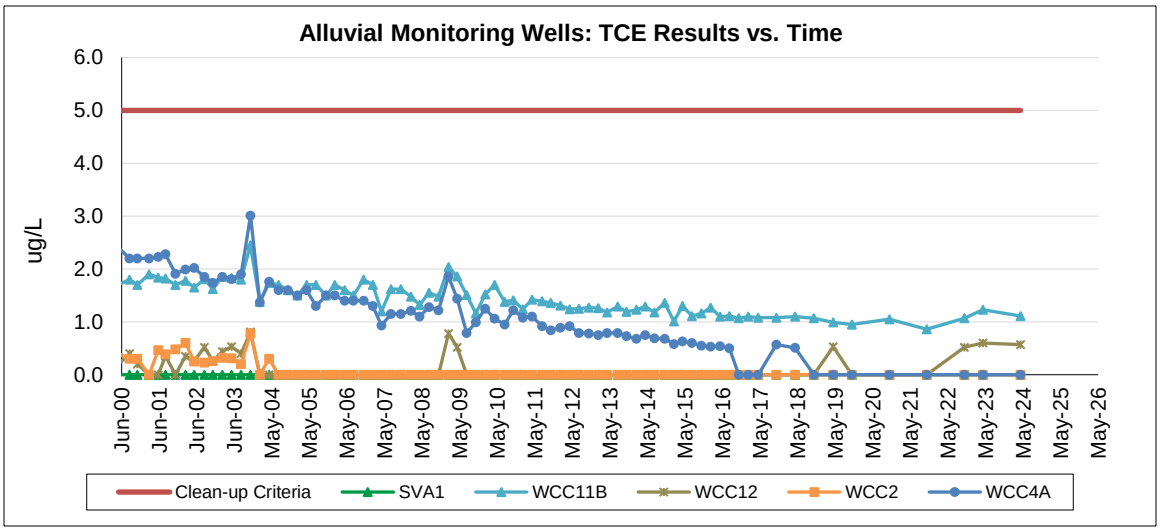


Figure 2-10: Alluvial Wells – VOCs/SVOCs Concentration Graphs (cont.)





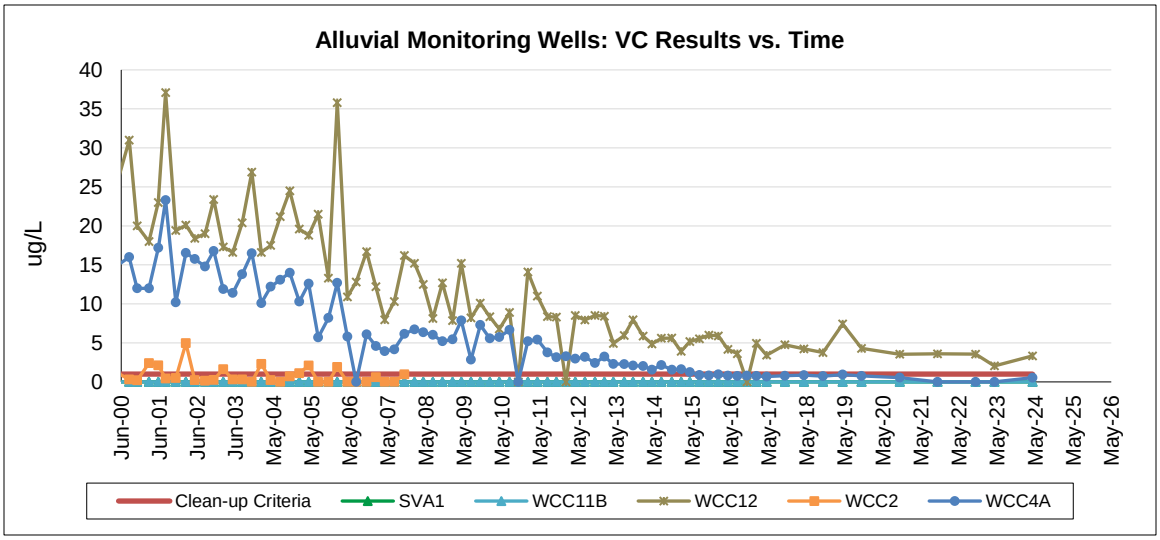
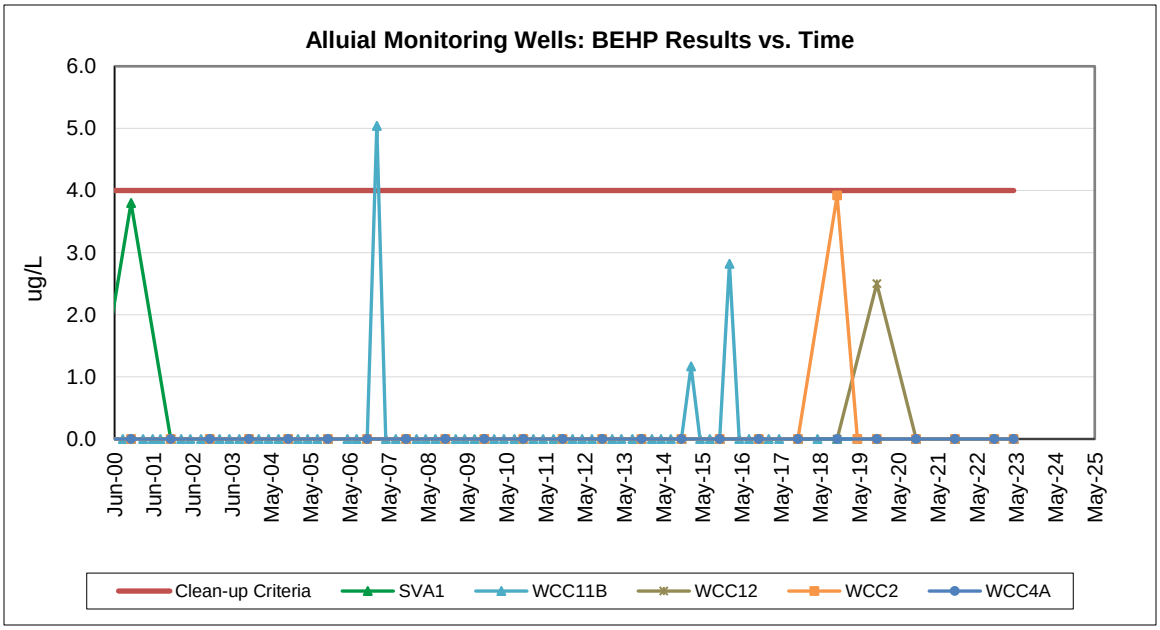
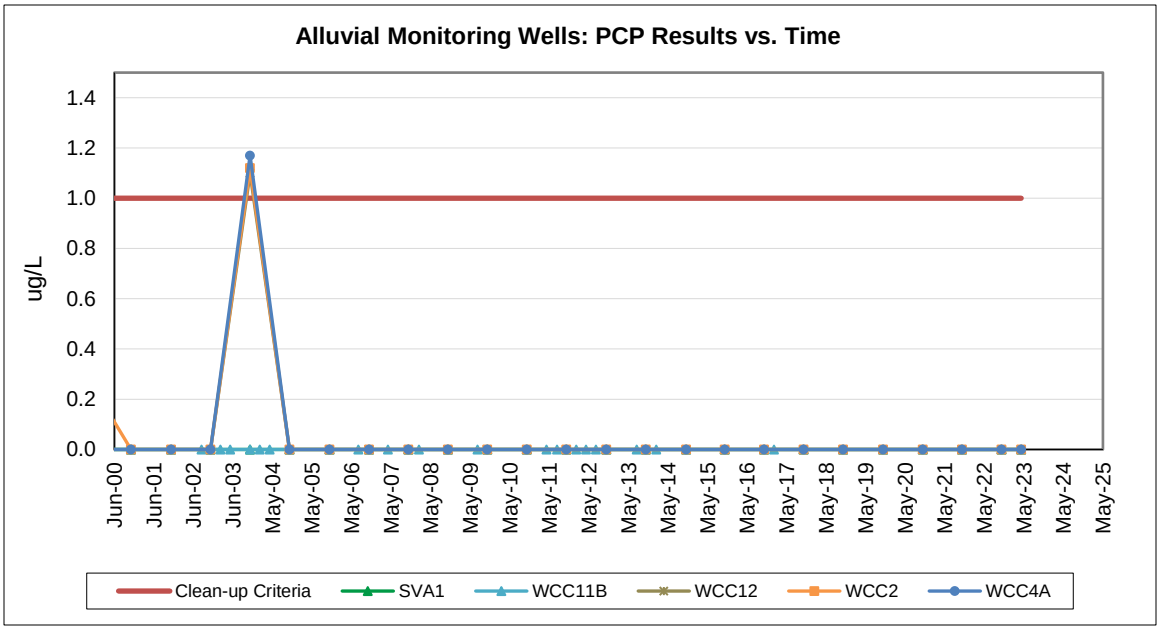


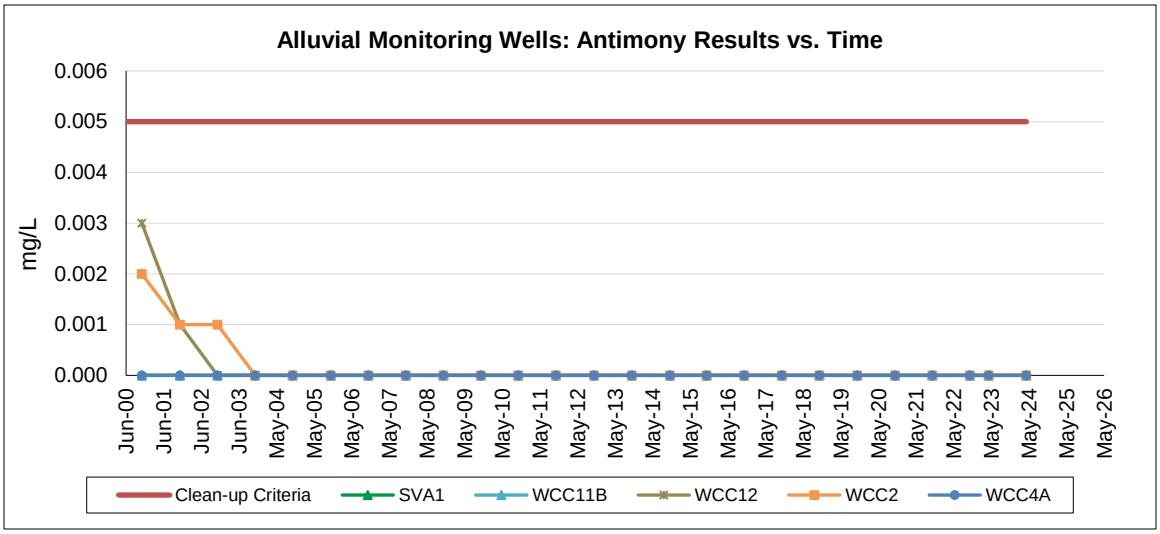
Figure 2-11: Alluvial Wells – VOCs/SVOCs Concentration Graphs (cont.)

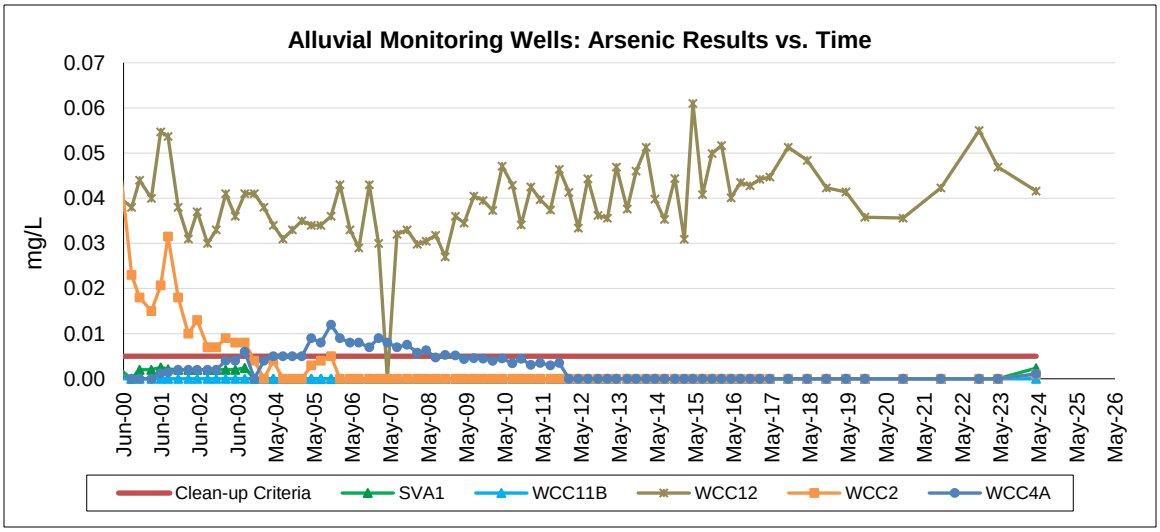




Alluvial Monitoring Wells: Inorganics Time-Series Graphs

Figure 2-12: Alluvial Wells – Inorganics Concentration Graphs





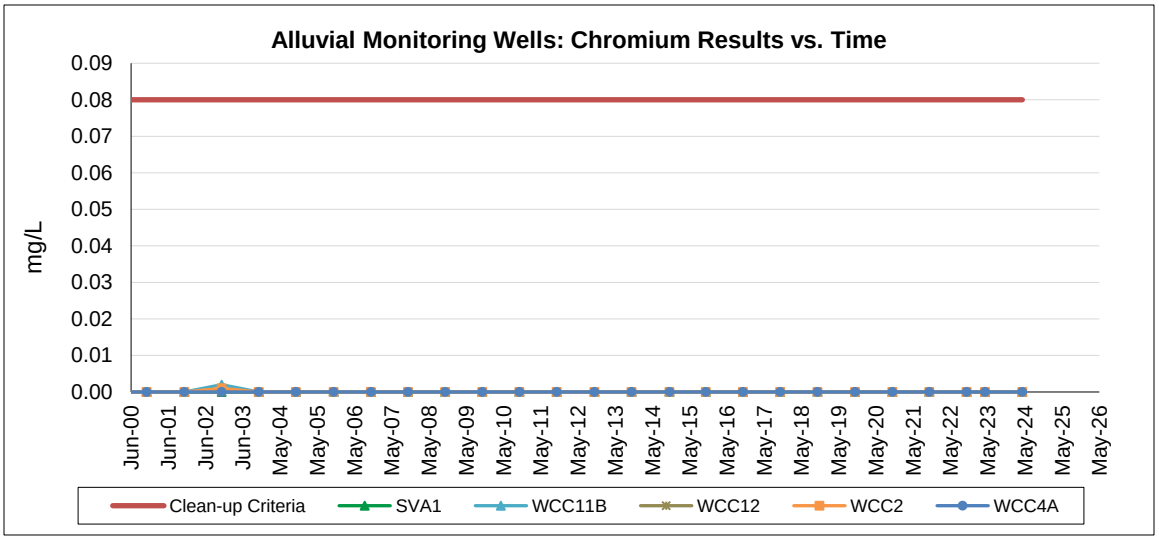
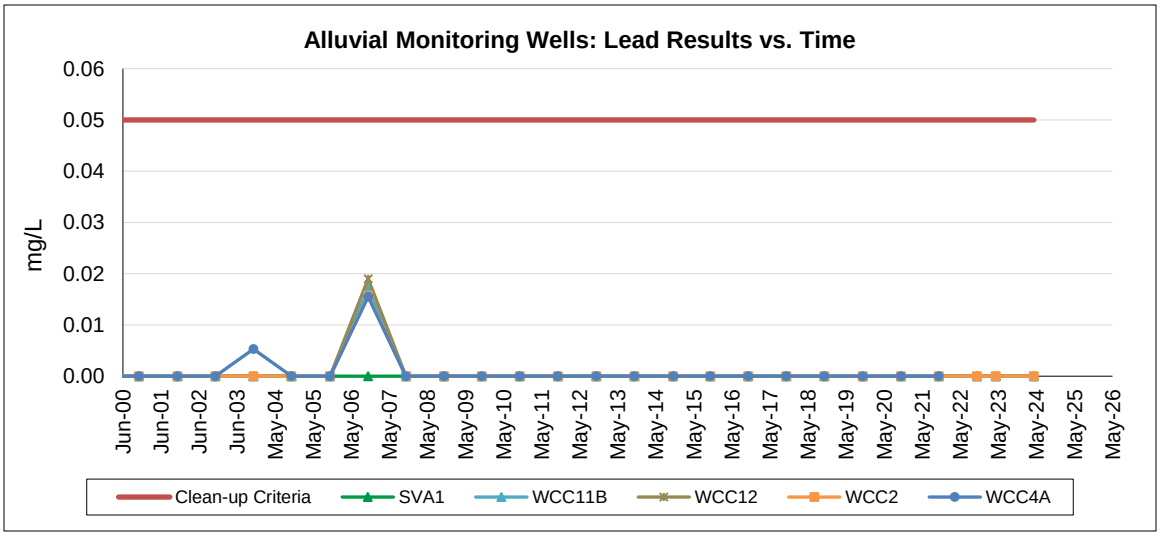
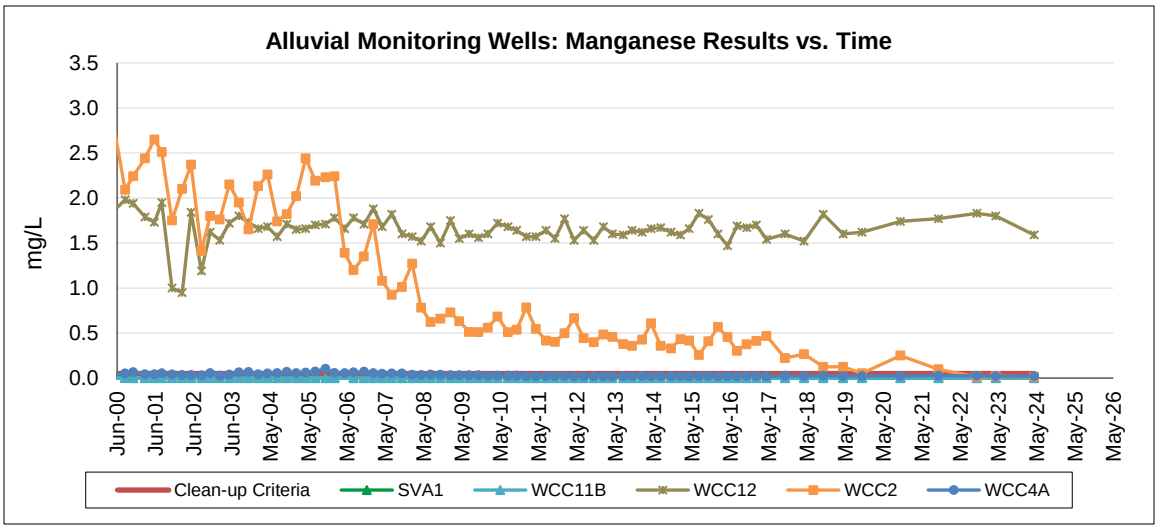


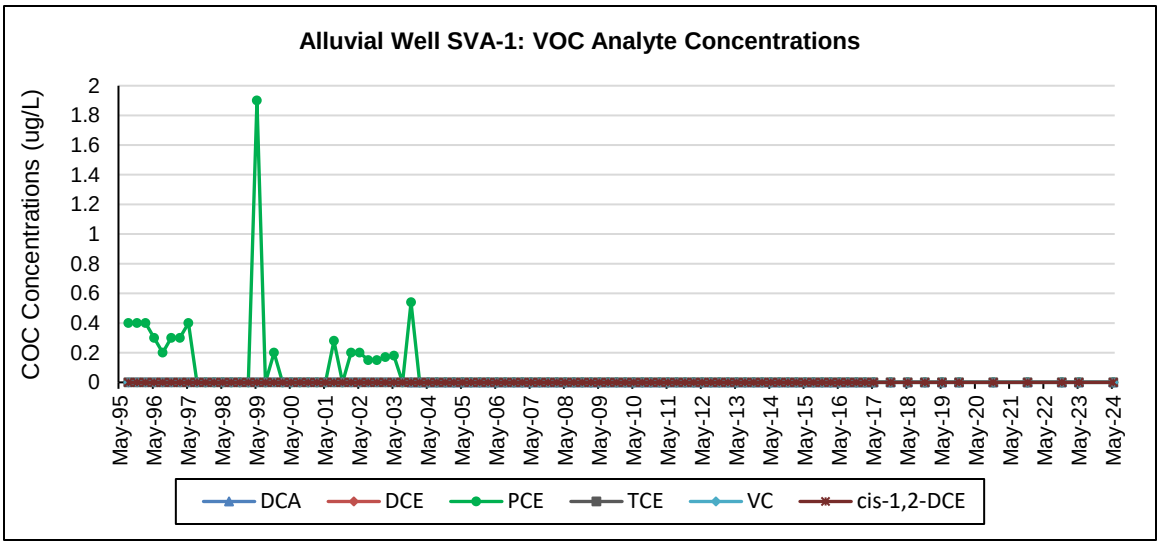
Figure 2-13: Alluvial Wells – Inorganics Concentration Graphs (cont.)

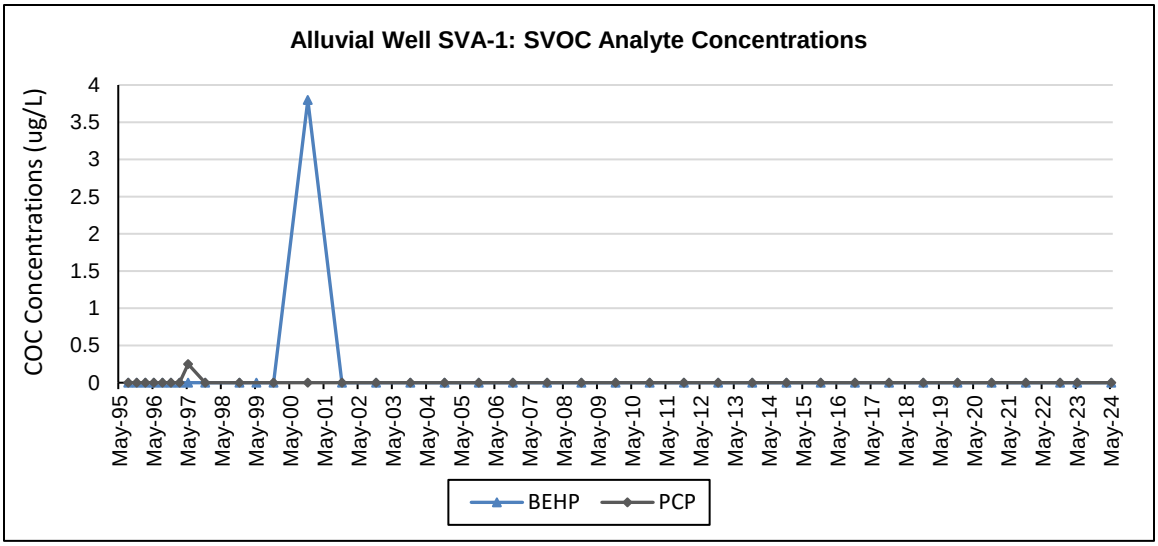




Individual Alluvial Monitoring Wells: Analyte Time-Series Graphs

Figure 2-14: Alluvial Well SVA-1 Analyte Concentration Graphs





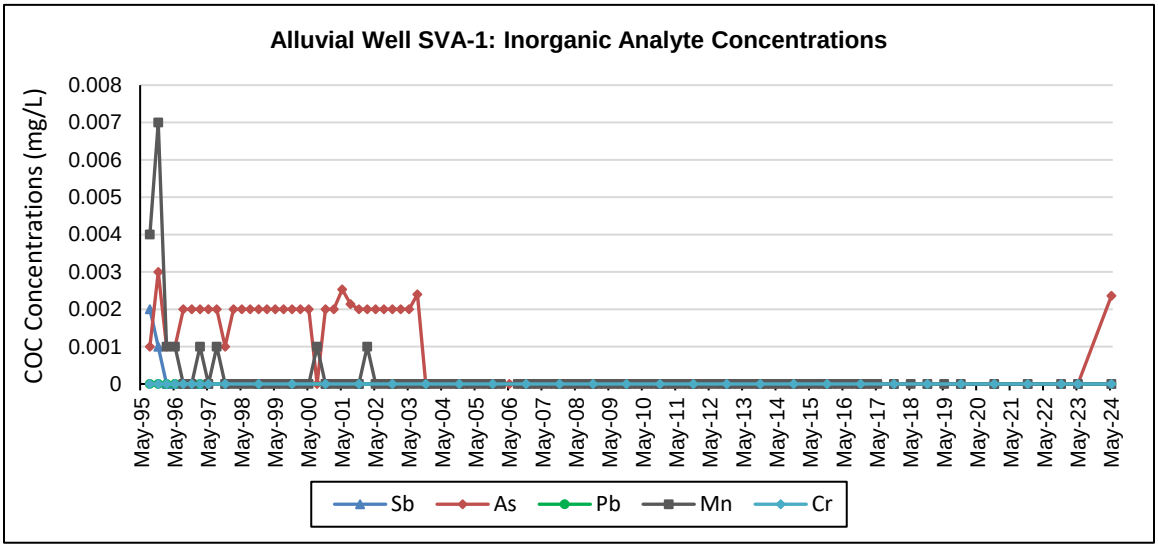
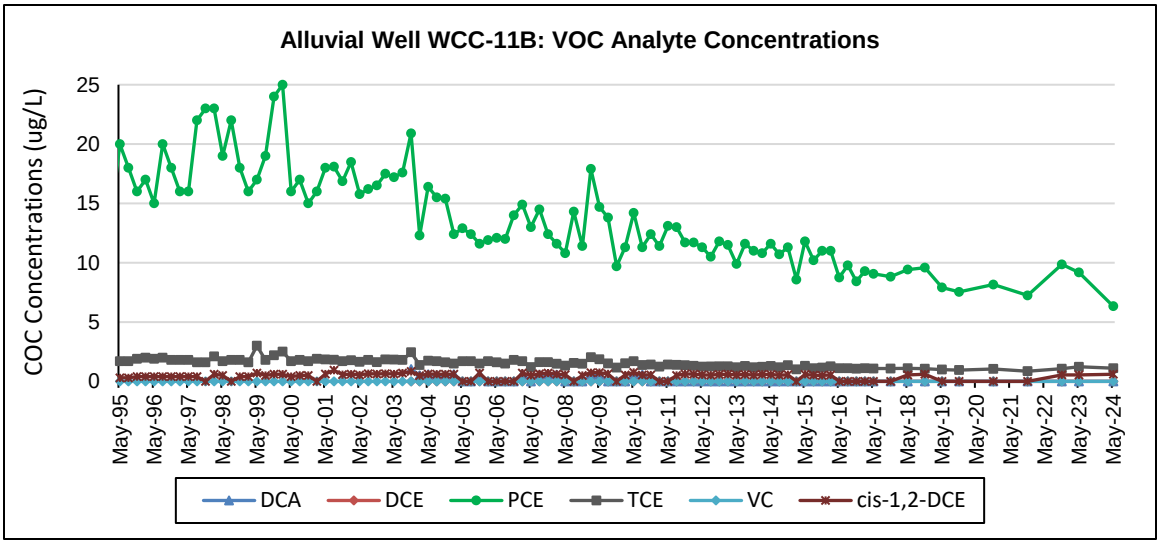
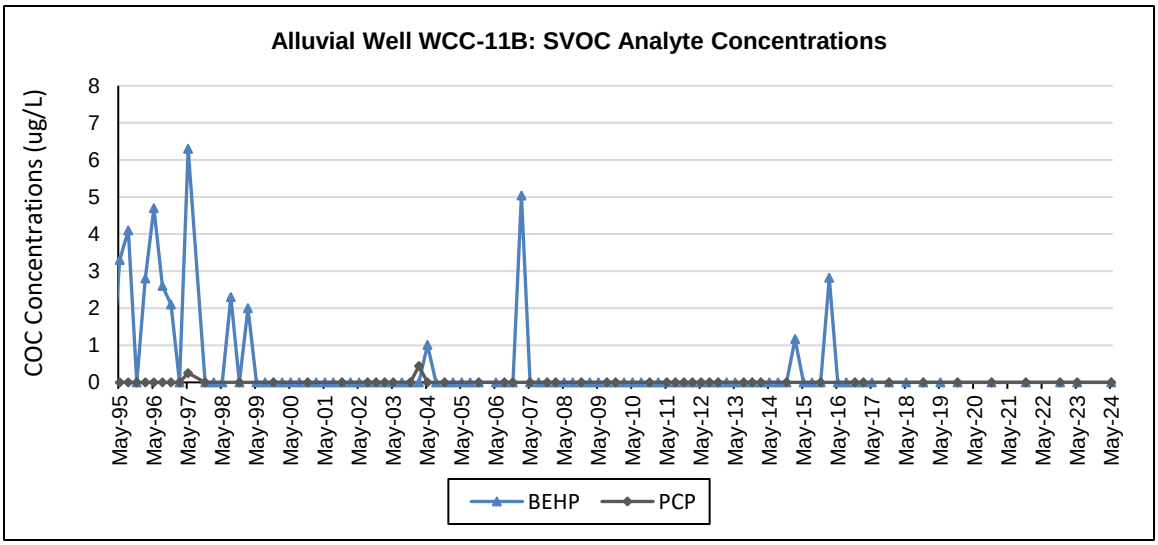


Figure 2-15: Alluvial Well WCC-11B Analyte Concentration Graphs





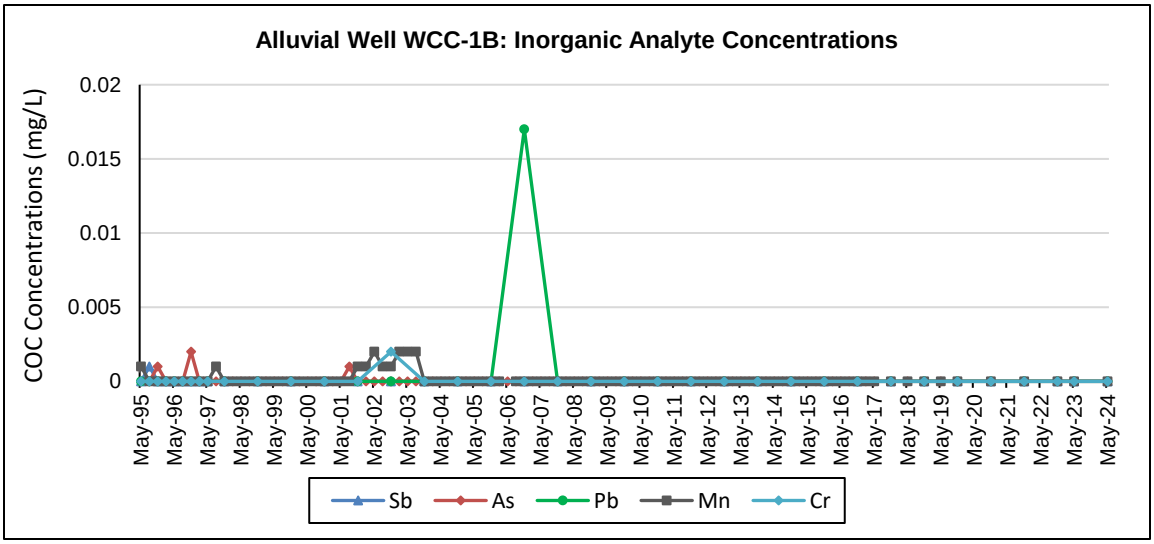
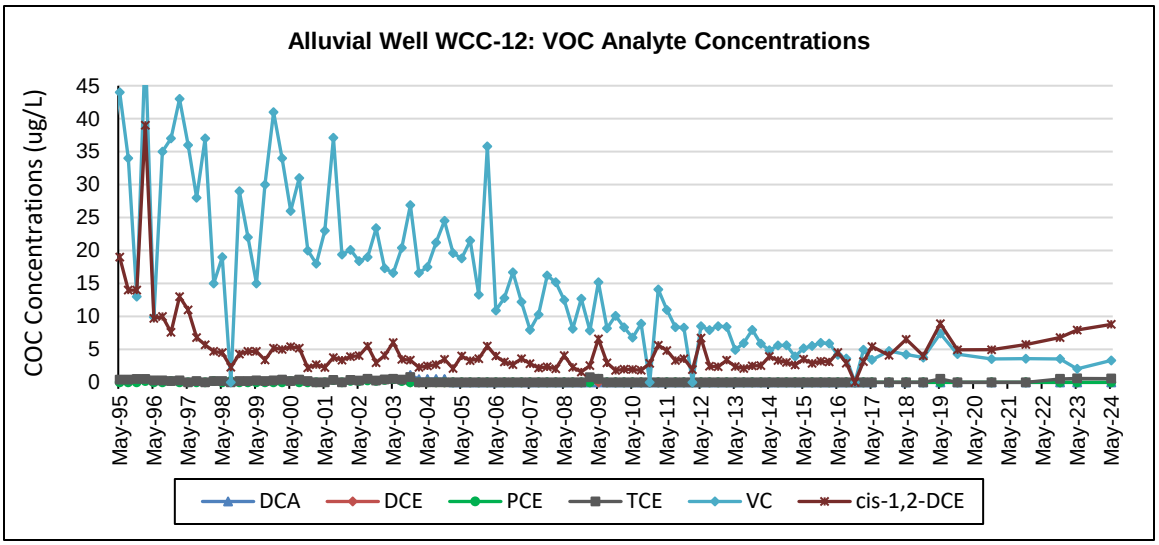
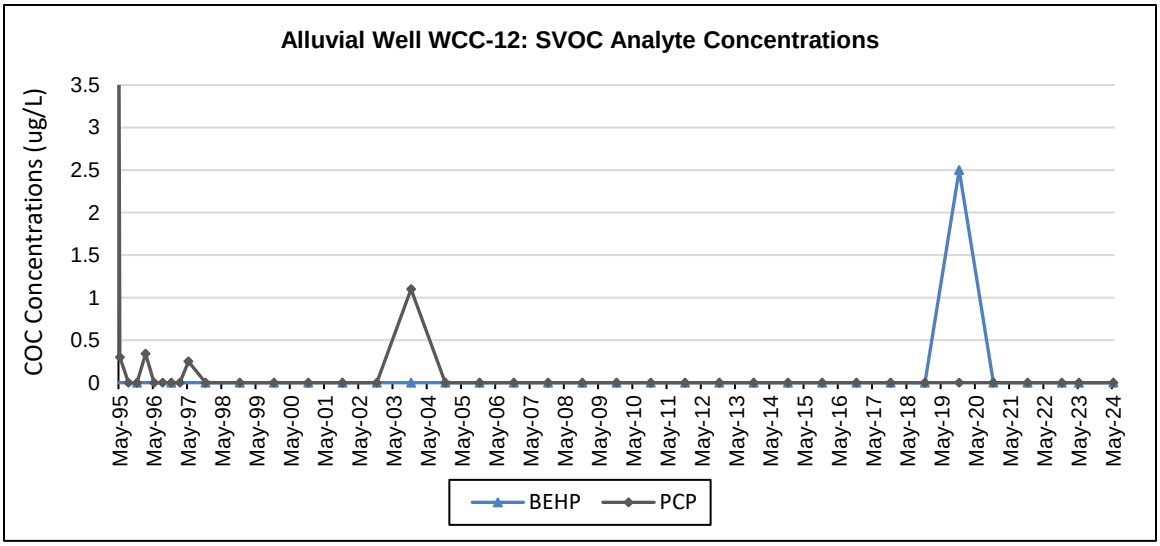


Figure 2-16: Alluvial Well WCC-12 Analyte Concentration Graphs





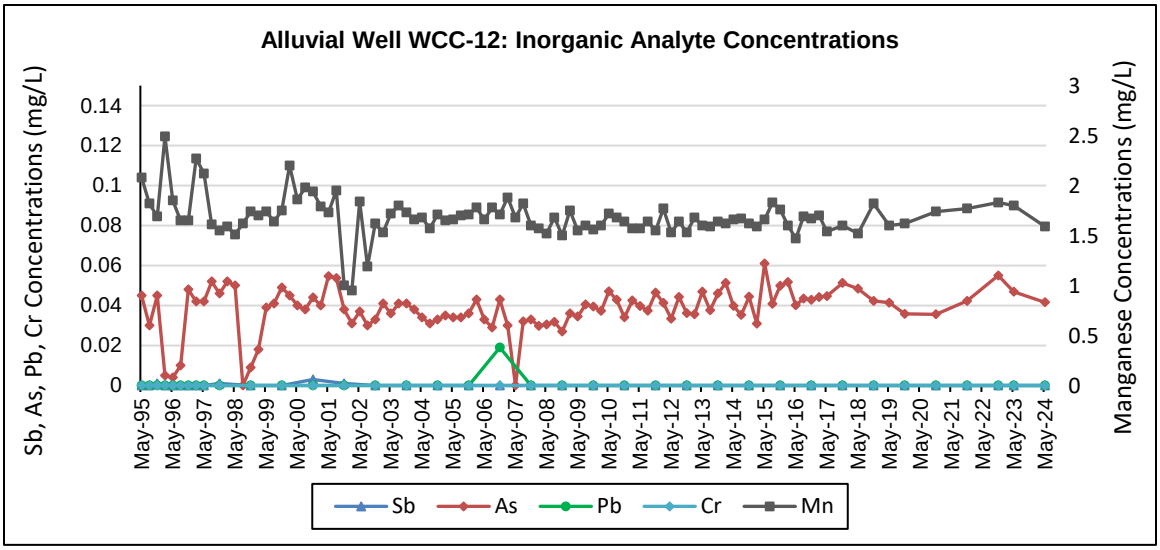
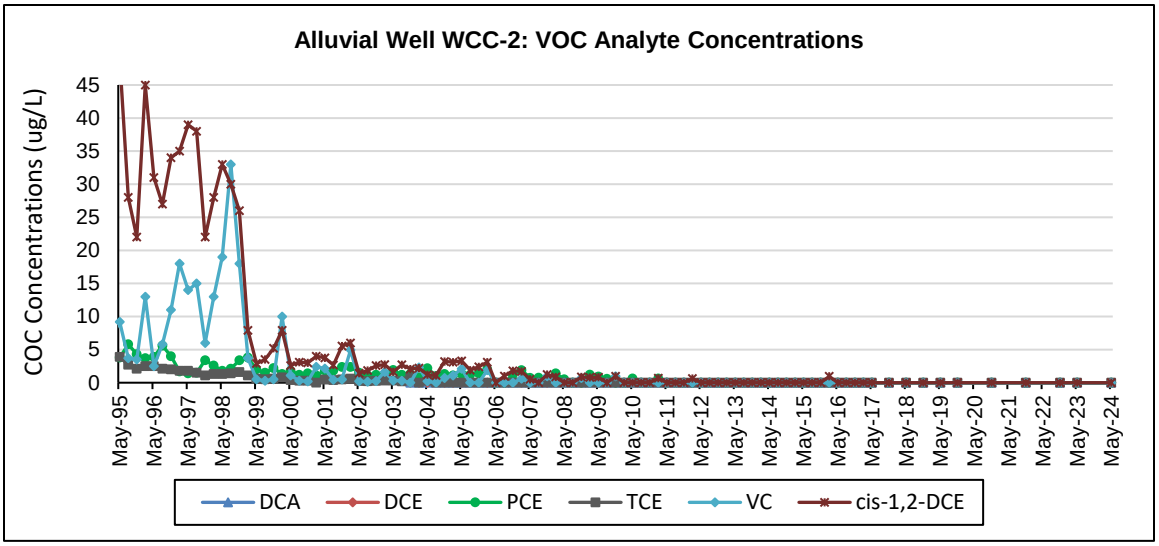
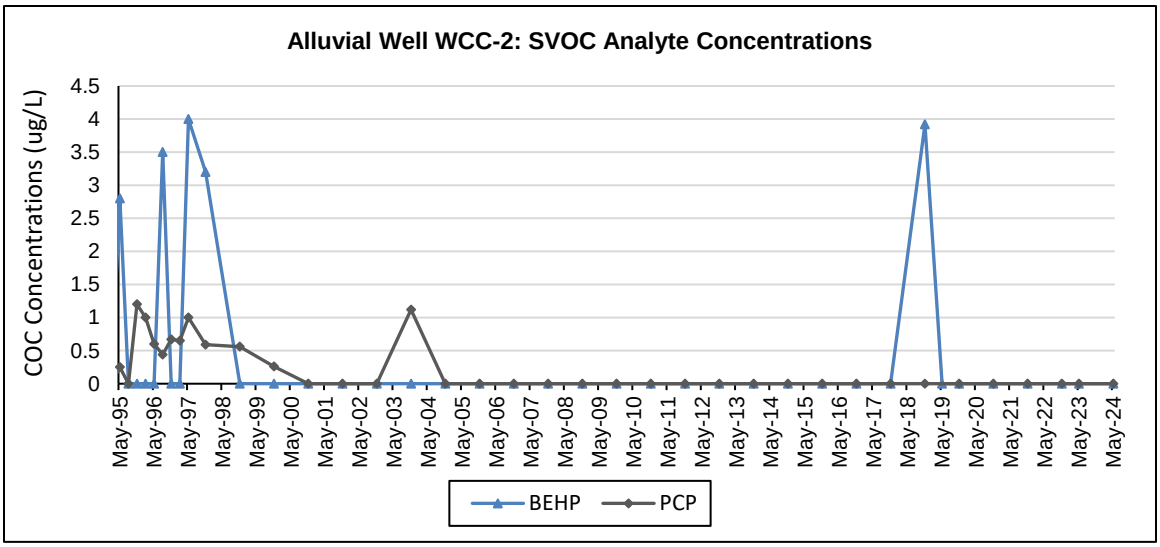


Figure 2-17: Alluvial Well WCC-2 Analyte Concentration Graphs





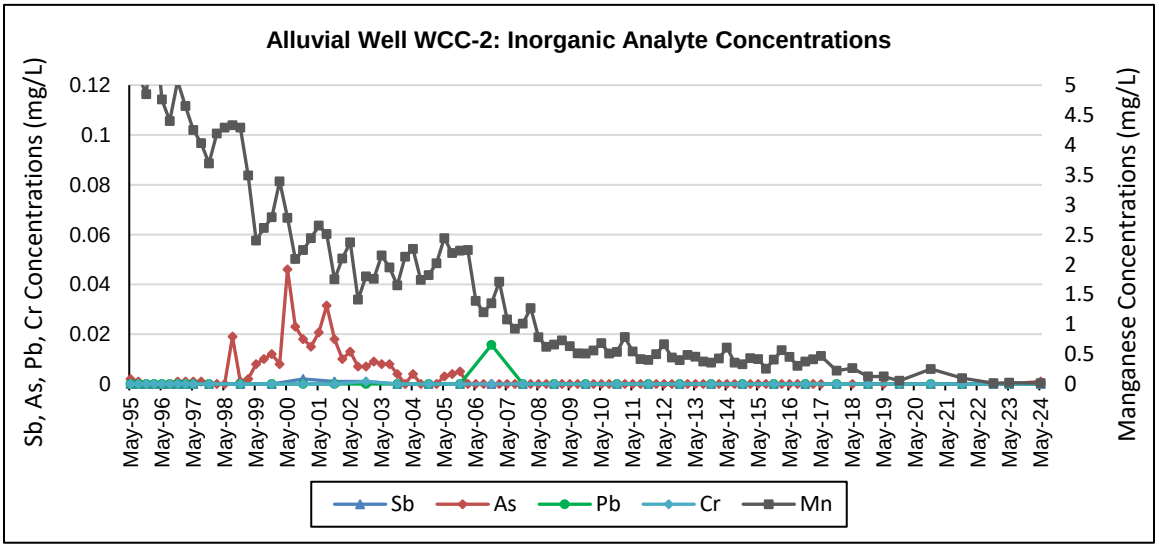
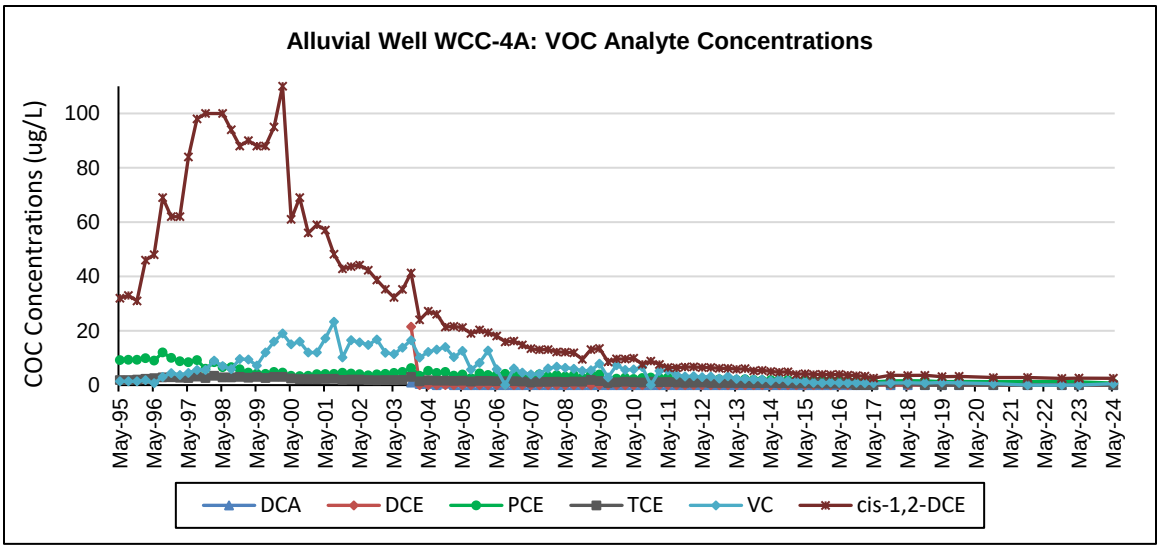
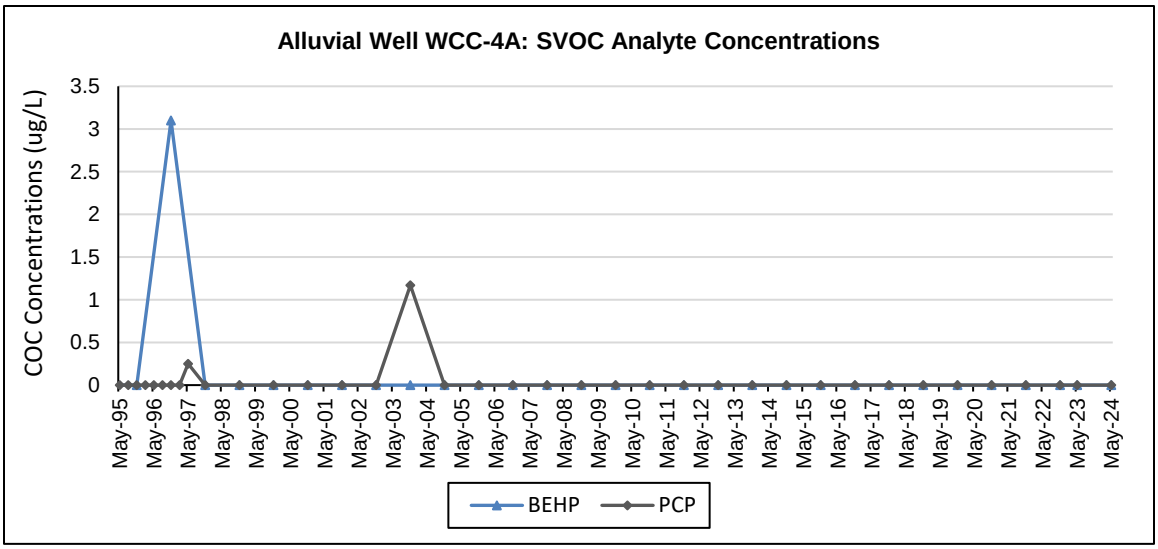
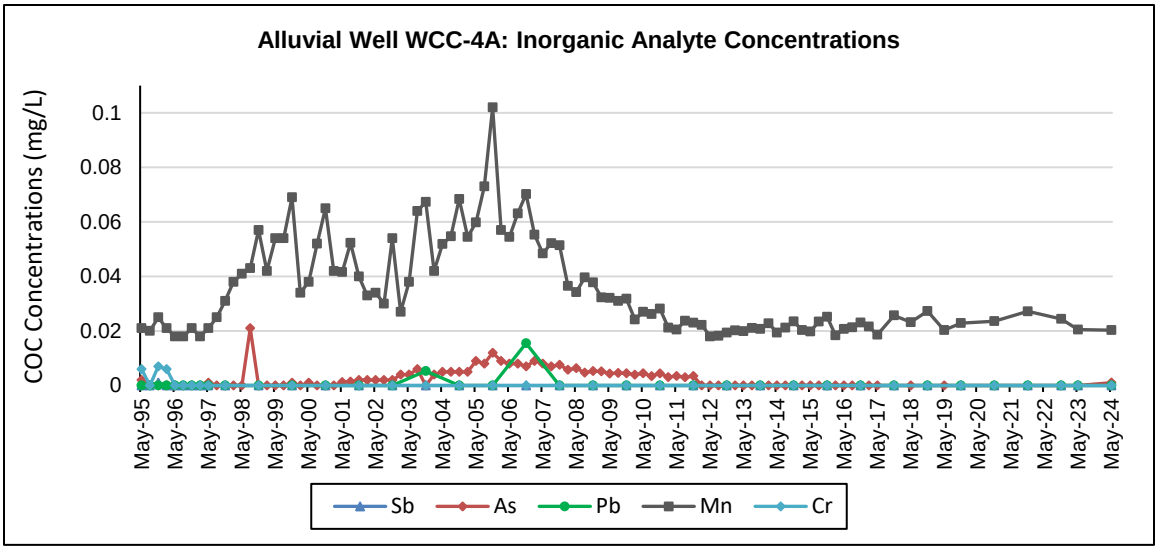


Figure 2-18: Alluvial Well WCC-4A Analyte Concentration Graphs







Alluvial Analyte Concentrations: 5-year/1-year differences:

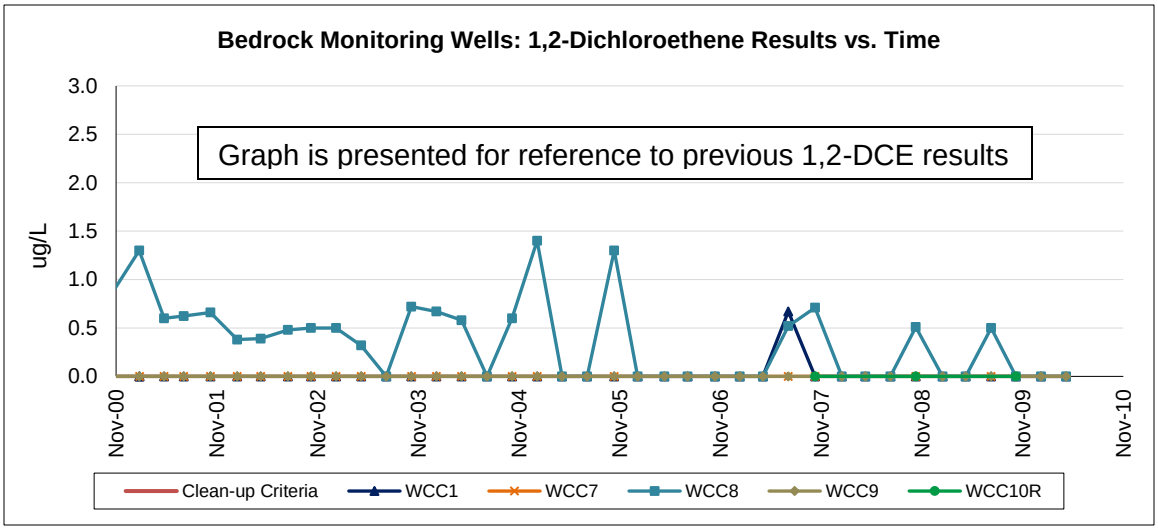
StationID	Unit	Analyte	2019 Results	2023 Results	Current Year Results	5-Year Difference	1-Year Difference	Units	AnalyteCat
SVA1	Alluvial Aquifer	1,2-DCA	0	0	0	0	0	ug/L	V
SVA1	Alluvial Aquifer	As	0	0	0.00236	0.00236	0.00236	mg/L	I
SVA1	Alluvial Aquifer	BEHP	0	0	0	0	0	ug/L	S
SVA1	Alluvial Aquifer	cis-1,2-DCE	0	0	0	0	0	ug/L	V
SVA1	Alluvial Aquifer	Cr	0	0	0	0	0	mg/L	I
SVA1	Alluvial Aquifer	Mn	0	0	0	0	0	mg/L	I
SVA1	Alluvial Aquifer	Pb	0	0	0	0	0	mg/L	I
SVA1	Alluvial Aquifer	PCE	0	0	0	0	0	ug/L	V
SVA1	Alluvial Aquifer	PCP	0	0	0	0	0	ug/L	S
SVA1	Alluvial Aquifer	Sb	0	0	0	0	0	mg/L	I
SVA1	Alluvial Aquifer	TCE	0	0	0	0	0	ug/L	V
SVA1	Alluvial Aquifer	VC	0	0	0	0	0	ug/L	V
WCC11B	Alluvial Aquifer	1,2-DCA	0	0	0	0	0	ug/L	V
WCC11B	Alluvial Aquifer	As	0	0	0	0	0	mg/L	I
WCC11B	Alluvial Aquifer	BEHP	0	0	0	0	0	ug/L	S
WCC11B	Alluvial Aquifer	cis-1,2-DCE	0	0.54	0.6	0.6	0.06	ug/L	V
WCC11B	Alluvial Aquifer	Cr	0	0	0	0	0	mg/L	I
WCC11B	Alluvial Aquifer	Mn	0	0	0	0	0	mg/L	I
WCC11B	Alluvial Aquifer	Pb	0	0	0	0	0	mg/L	I
WCC11B	Alluvial Aquifer	PCE	7.54	9.18	6.33	-1.21	-2.85	ug/L	V
WCC11B	Alluvial Aquifer	PCP	0	0	0	0	0	ug/L	S
WCC11B	Alluvial Aquifer	Sb	0	0	0	0	0	mg/L	I
WCC11B	Alluvial Aquifer	TCE	0.95	1.23	1.11	0.16	-0.12	ug/L	V
WCC11B	Alluvial Aquifer	VC	0	0	0	0	0	ug/L	V
WCC12	Alluvial Aquifer	1,2-DCA	1.59	1.26	1.07	-0.52	-0.19	ug/L	V
WCC12	Alluvial Aquifer	As	0.0358	0.0469	0.0416	0.0058	-0.0053	mg/L	I
WCC12	Alluvial Aquifer	BEHP	2.5	0	0	-2.5	0	ug/L	S
WCC12	Alluvial Aquifer	cis-1,2-DCE	4.94	7.94	8.8	3.86	0.86	ug/L	V
WCC12	Alluvial Aquifer	Cr	0	0	0	0	0	mg/L	I
WCC12	Alluvial Aquifer	Mn	1.62	1.8	1.59	-0.03	-0.21	mg/L	I
WCC12	Alluvial Aquifer	Pb	0	0	0	0	0	mg/L	I
WCC12	Alluvial Aquifer	PCE	0	0	0	0	0	ug/L	V
WCC12	Alluvial Aquifer	PCP	0	0	0	0	0	ug/L	S
WCC12	Alluvial Aquifer	Sb	0	0	0	0	0	mg/L	I
WCC12	Alluvial Aquifer	TCE	0	0.6	0.57	0.57	-0.03	ug/L	V
WCC12	Alluvial Aquifer	VC	4.29	2.05	3.33	-0.96	1.28	ug/L	V
WCC2	Alluvial Aquifer	1,2-DCA	0	0	0	0	0	ug/L	V
WCC2	Alluvial Aquifer	As	0	0	0.001	0.001	0.001	mg/L	I

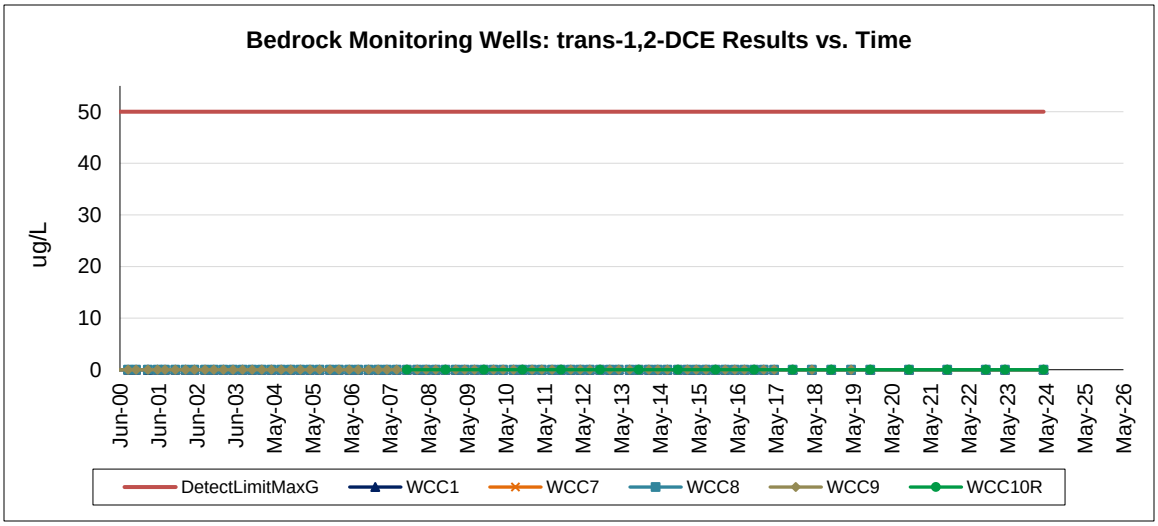
StationID	Unit	Analyte	2019 Results	2023 Results	Current Year Results	5-Year Difference	1-Year Difference	Units	AnalyteCat
WCC2	Alluvial Aquifer	BEHP	0	0	0	0	0	ug/L	S
WCC2	Alluvial Aquifer	cis-1,2-DCE	0	0	0	0	0	ug/L	V
WCC2	Alluvial Aquifer	Cr	0	0	0	0	0	mg/L	I
WCC2	Alluvial Aquifer	Mn	0.0513	0.0207	0.0142	**-0.0371**	**-0.0065**	mg/L	I
WCC2	Alluvial Aquifer	NO3	1.22	2.67	1.87	**0.65**	**-0.8**	mg/L	C
WCC2	Alluvial Aquifer	Pb	0	0	0	0	0	mg/L	I
WCC2	Alluvial Aquifer	PCE	0	0	0	0	0	ug/L	V
WCC2	Alluvial Aquifer	PCP	0	0	0	0	0	ug/L	S
WCC2	Alluvial Aquifer	Sb	0	0	0	0	0	mg/L	I
WCC2	Alluvial Aquifer	TCE	0	0	0	0	0	ug/L	V
WCC2	Alluvial Aquifer	VC	0	0	0	0	0	ug/L	V
WCC4A	Alluvial Aquifer	1,2-DCA	0	0	0	0	0	ug/L	V
WCC4A	Alluvial Aquifer	As	0	0	0.00106	**0.00106**	**0.00106**	mg/L	I
WCC4A	Alluvial Aquifer	BEHP	0	0	0	0	0	ug/L	S
WCC4A	Alluvial Aquifer	cis-1,2-DCE	3.23	2.56	2.51	**-0.72**	**-0.05**	ug/L	V
WCC4A	Alluvial Aquifer	Cr	0	0	0	0	0	mg/L	I
WCC4A	Alluvial Aquifer	Mn	0.0229	0.0205	0.0203	**-0.0026**	**-0.0002**	mg/L	I
WCC4A	Alluvial Aquifer	Pb	0	0	0	0	0	mg/L	I
WCC4A	Alluvial Aquifer	PCE	1.34	1.22	0.73	**-0.61**	**-0.49**	ug/L	V
WCC4A	Alluvial Aquifer	PCP	0	0	0	0	0	ug/L	S
WCC4A	Alluvial Aquifer	Sb	0	0	0	0	0	mg/L	I
WCC4A	Alluvial Aquifer	TCE	0	0	0	0	0	ug/L	V
WCC4A	Alluvial Aquifer	VC	0.77	0	0.54	**-0.23**	**0.54**	ug/L	V

Analytes that exceeded clean-up criteria this reporting period are displayed in **ORANGE**.
Increases in analyte concentrations are highlighted in **RED**.
Decreases in analyte concentrations are highlighted in **BLUE**

Bedrock Monitoring Wells: VOCs/SVOCs Time-Series Graphs

Figure 2-19: Bedrock Wells – VOCs/SVOCs Concentration Graphs





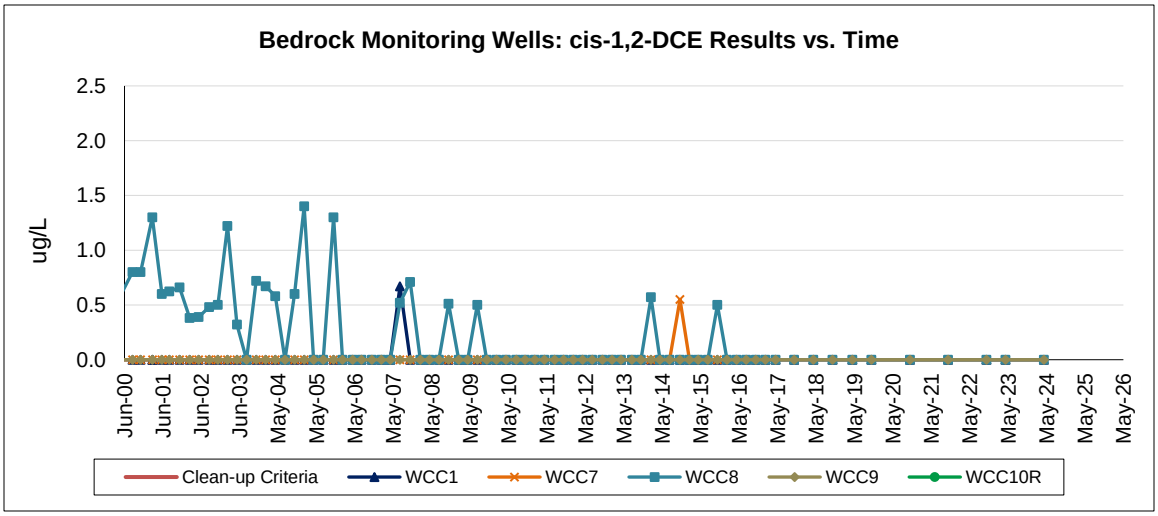
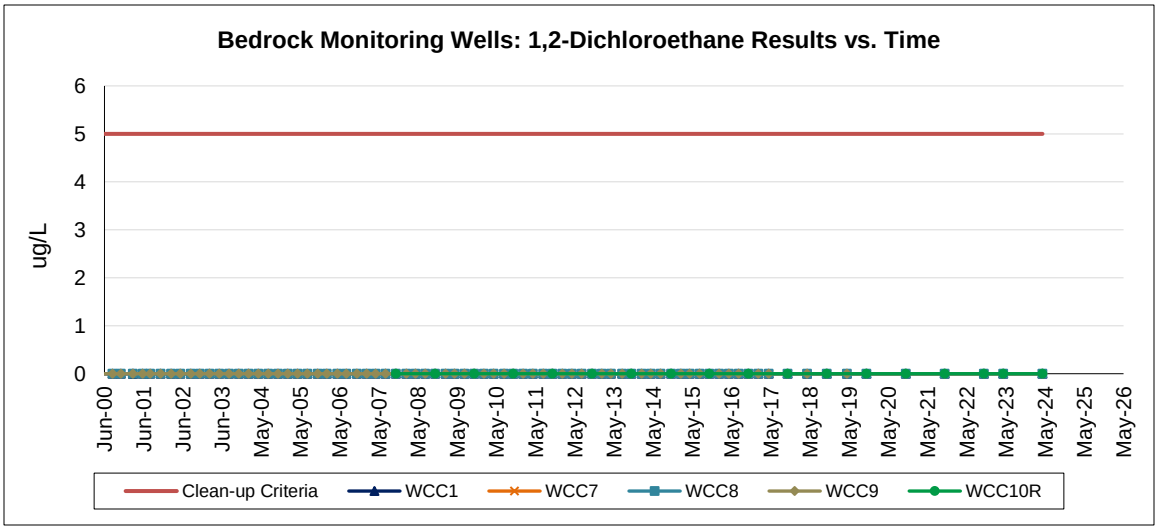
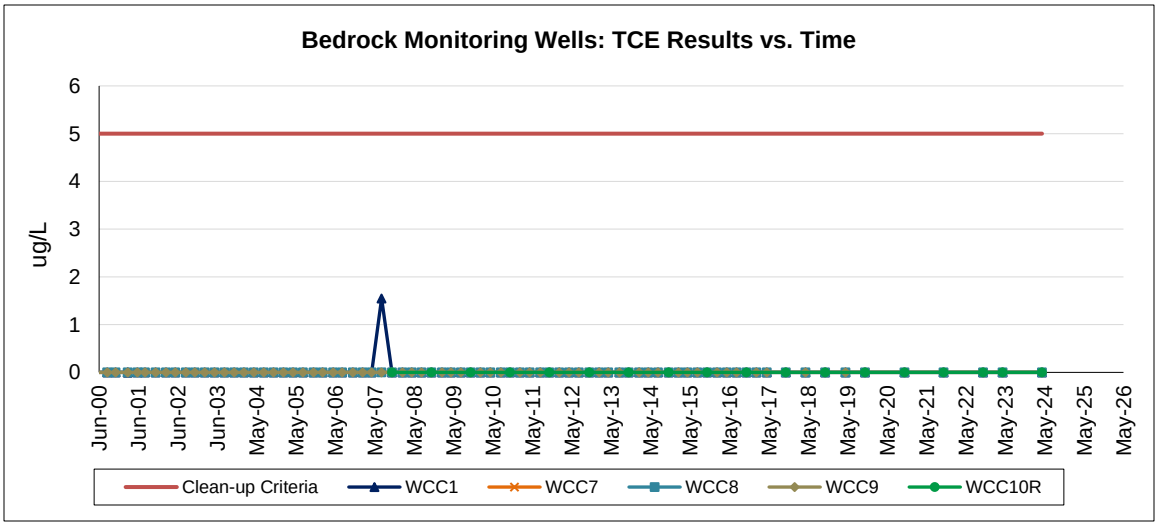


Figure 2-20: Bedrock Wells – VOCs/SVOCs Concentration Graphs (cont.)





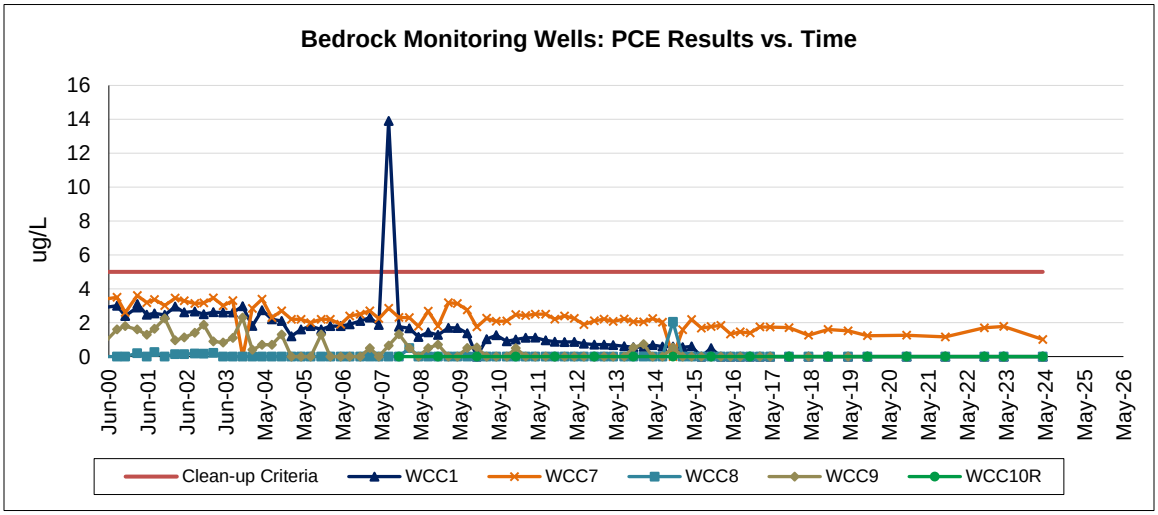
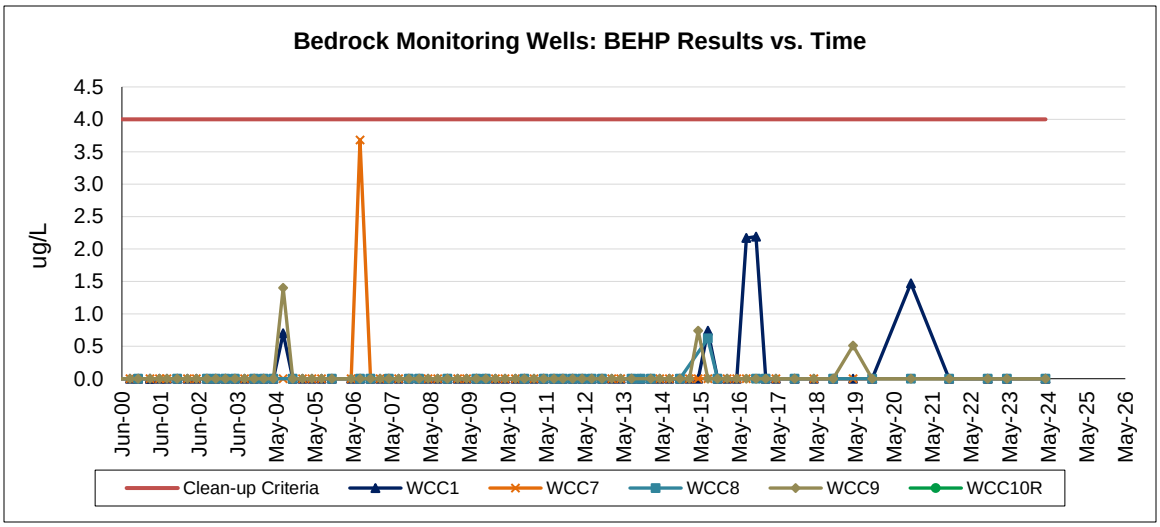
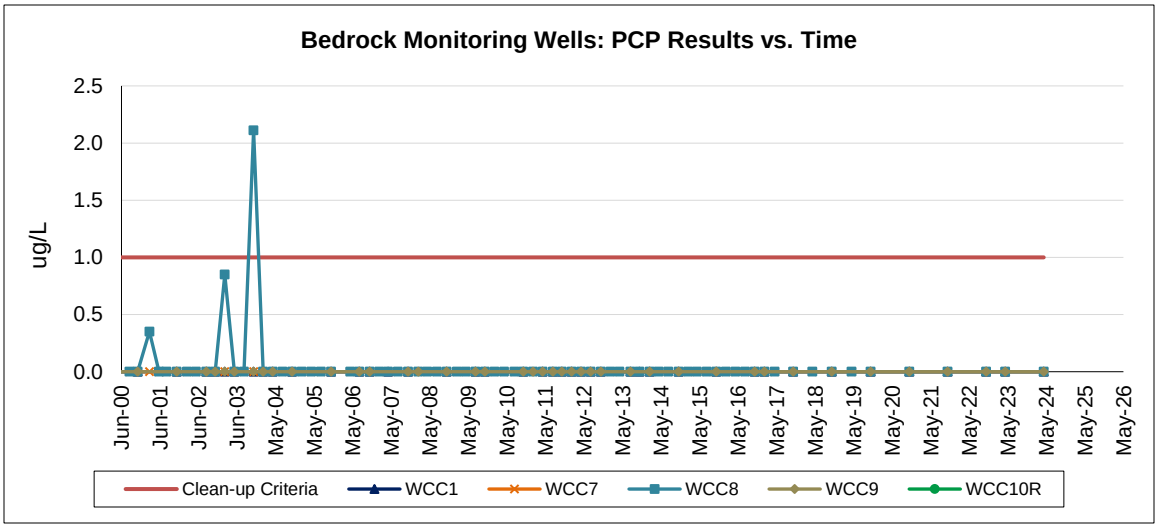


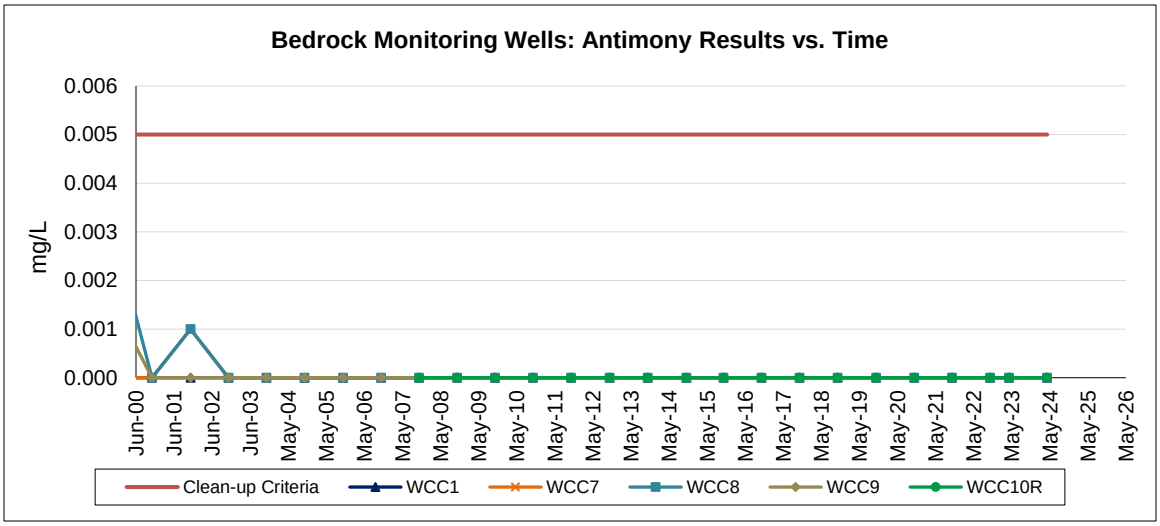
Figure 2-21: Bedrock Wells – VOCs/SVOCs Concentration Graphs (cont.)

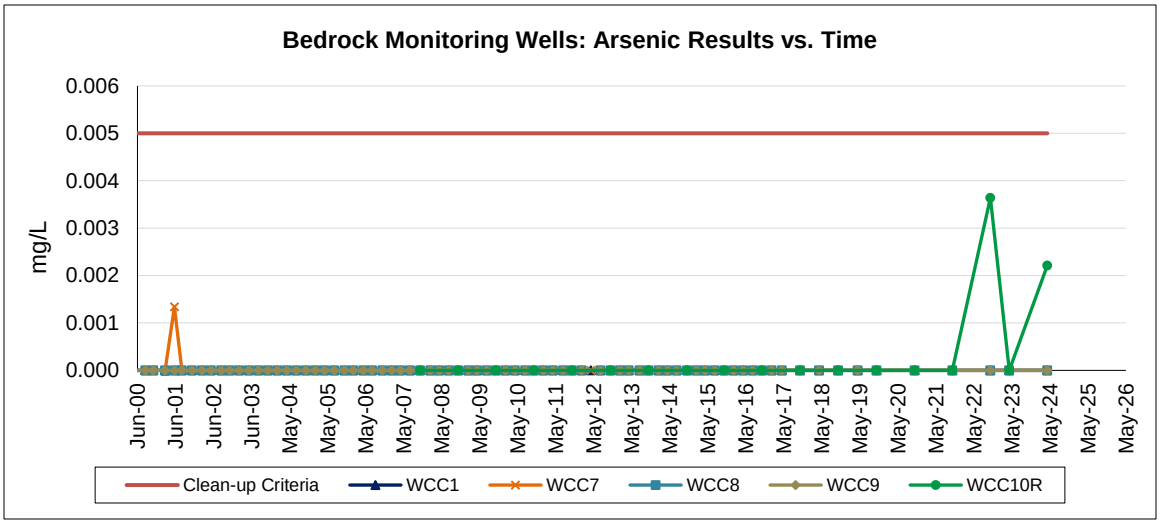




Bedrock Monitoring Wells – Inorganics Time-Series Graphs

Figure 2-22: Bedrock Wells – Inorganics Concentration Graphs





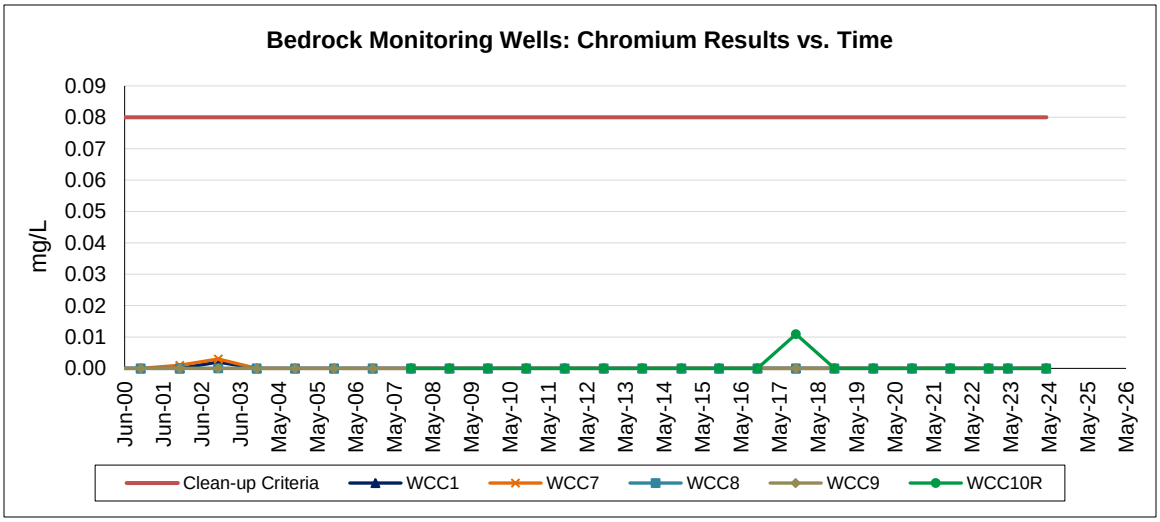
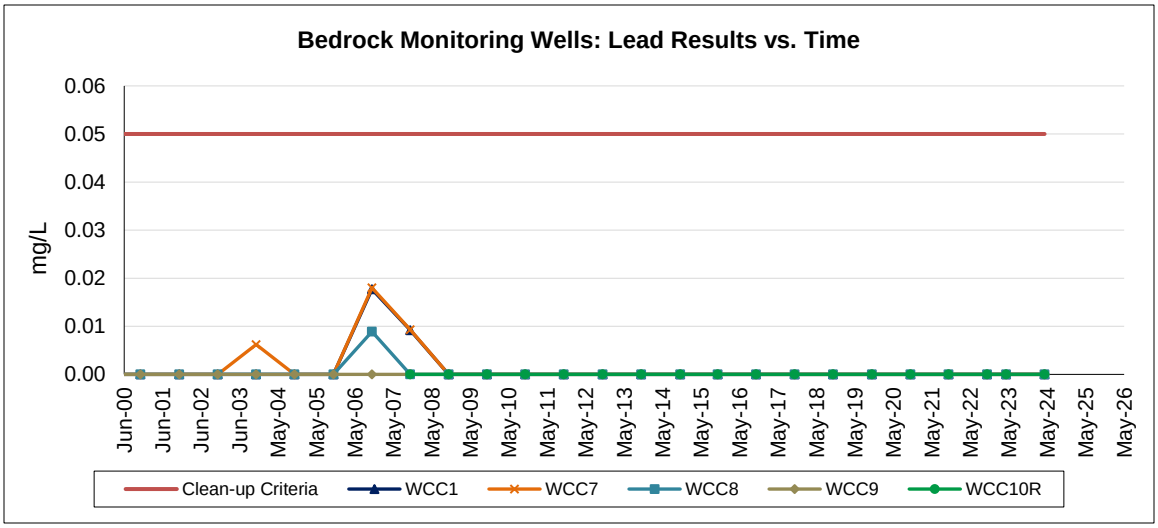
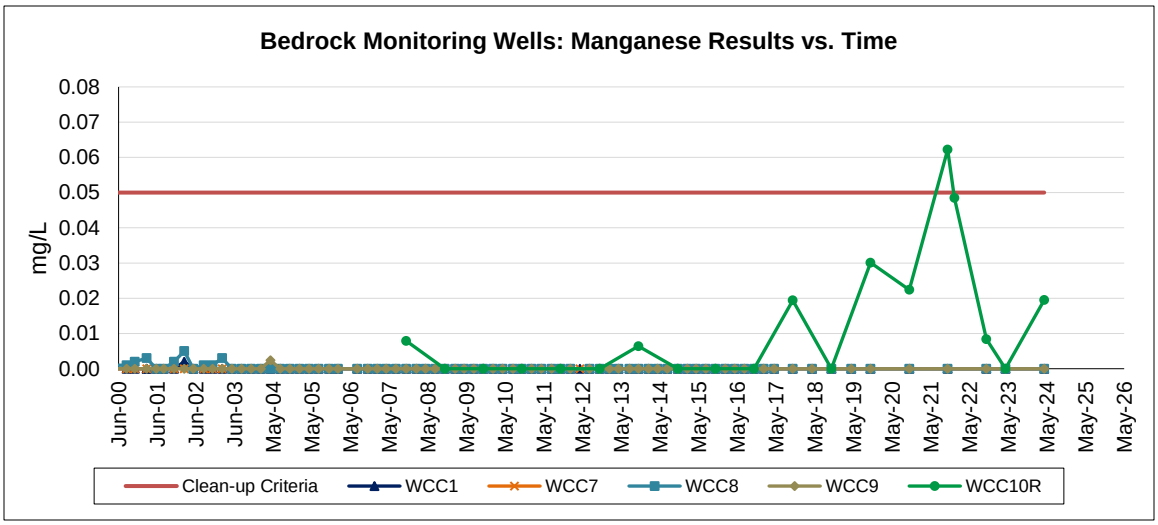


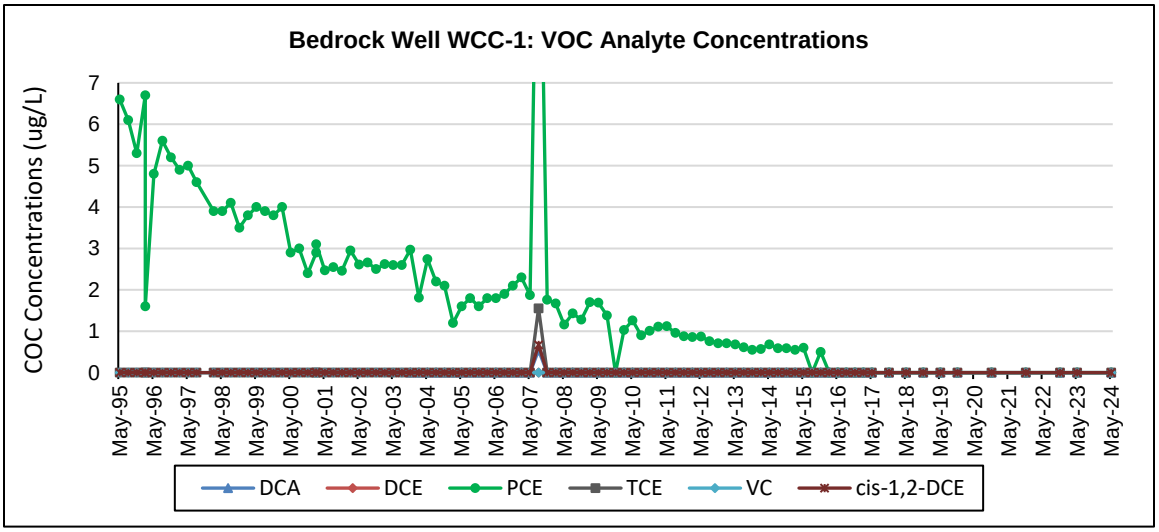
Figure 2-23: Bedrock Wells – Inorganics Concentration Graphs (cont.)

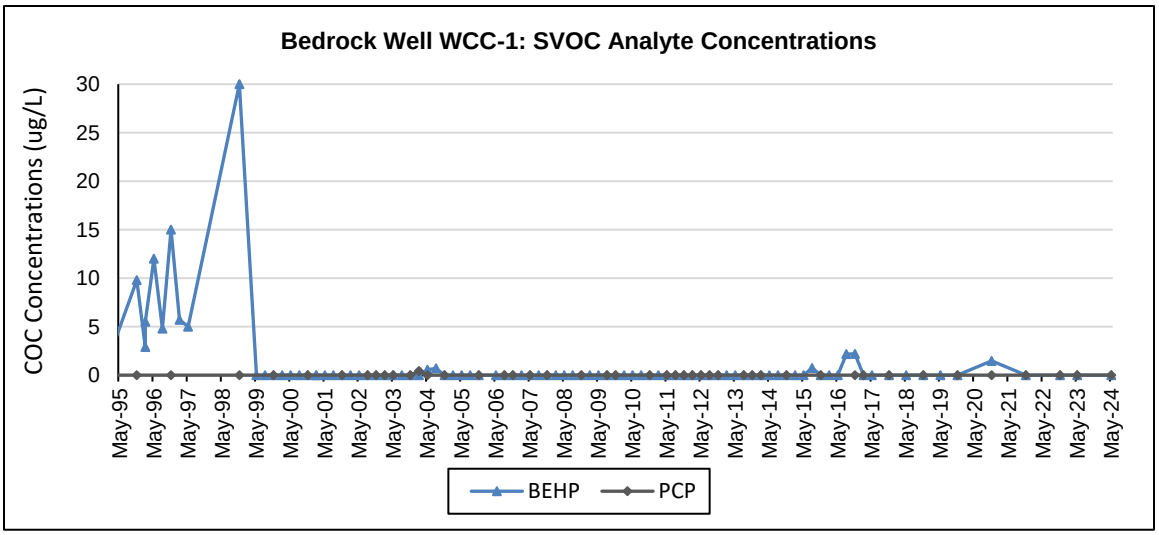




Individual Bedrock Monitoring Wells: Analyte Time-Series Graphs

Figure 2-24: Bedrock Well WCC-1 Analyte Concentration Graphs





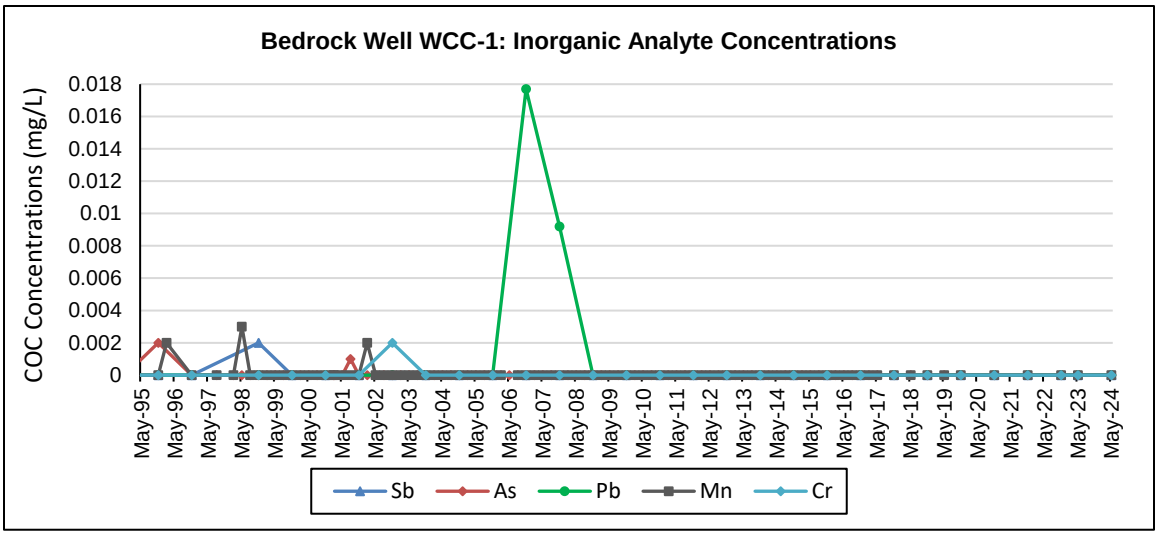
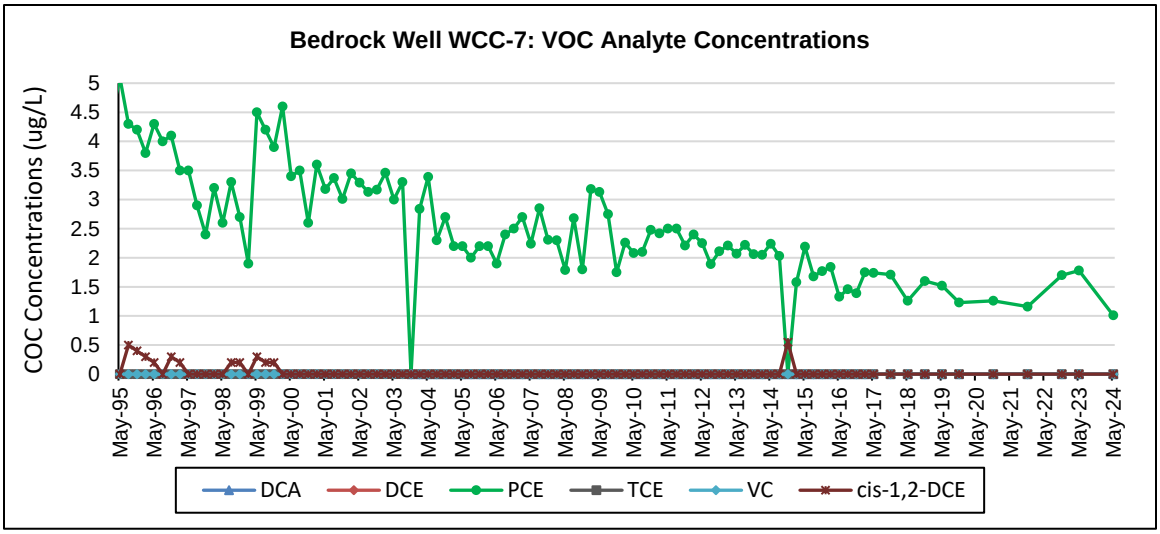
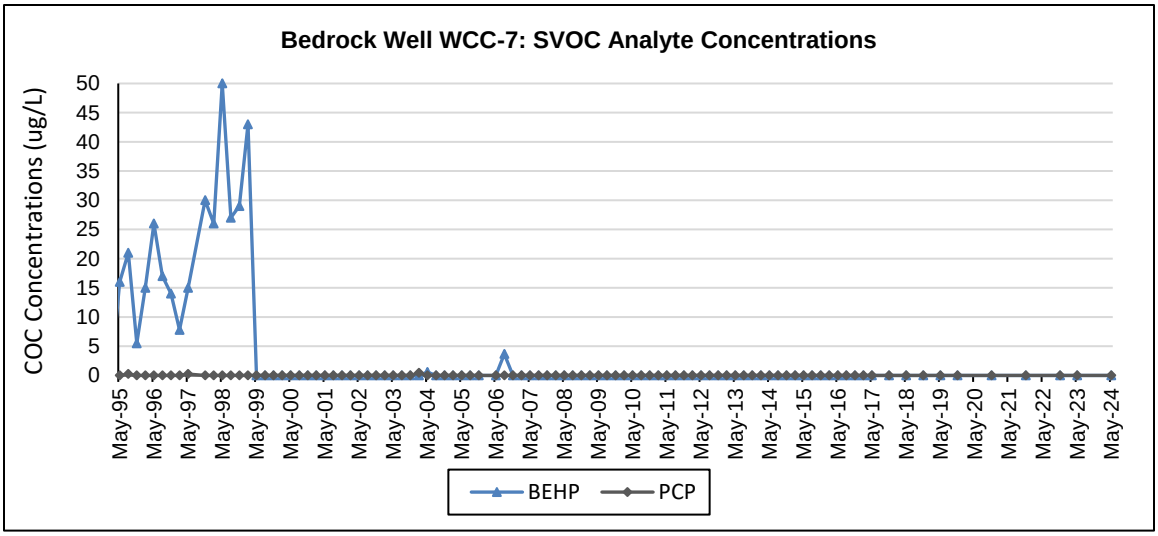


Figure 2-25: Bedrock Well WCC-7 Analyte Concentration Graphs





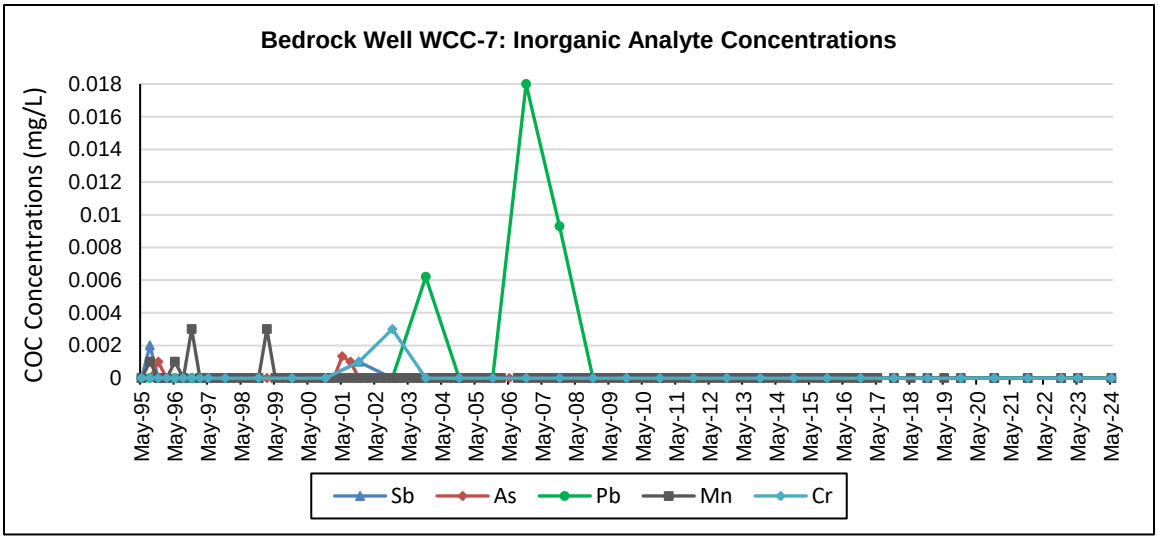
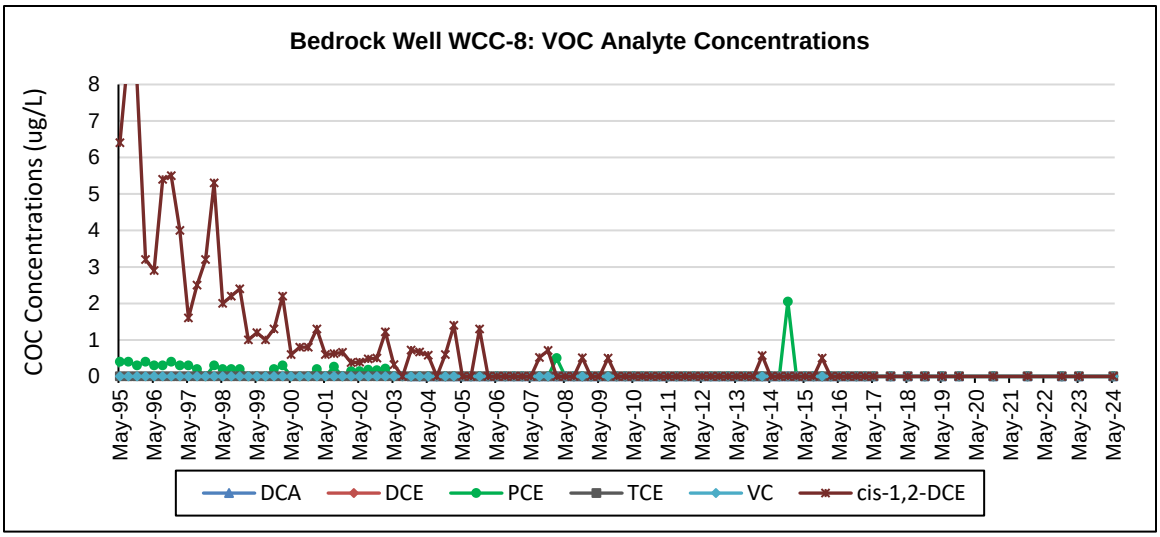
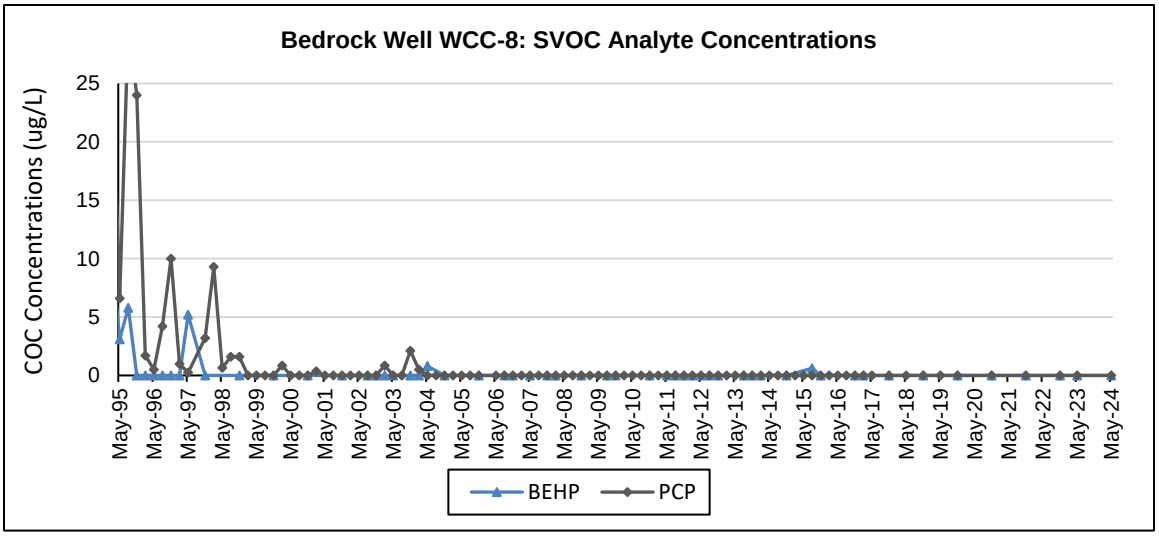


Figure 2-26: Bedrock Well WCC-8 Analyte Concentration Graphs





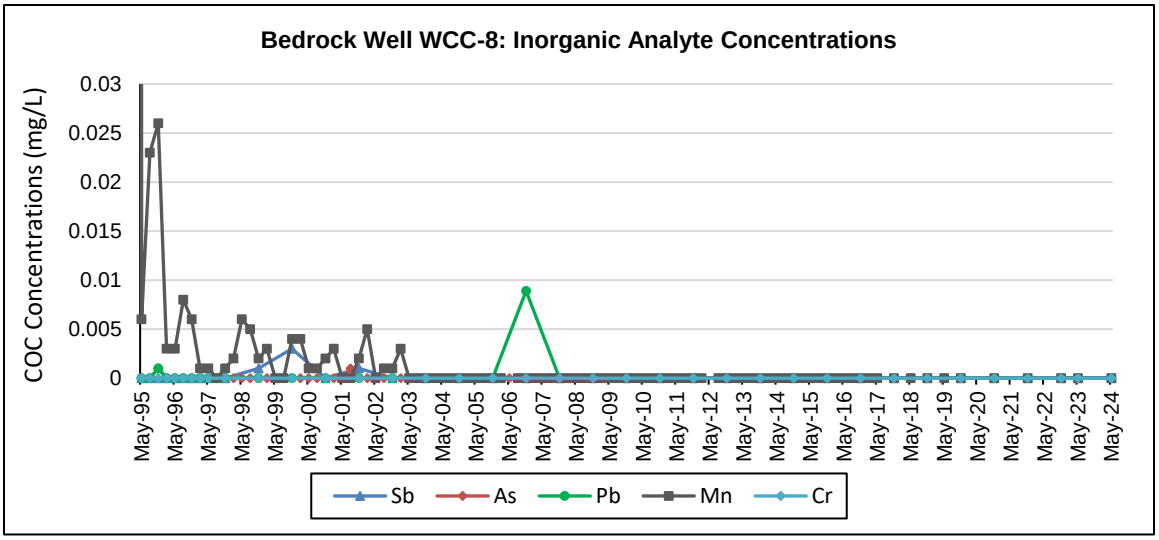
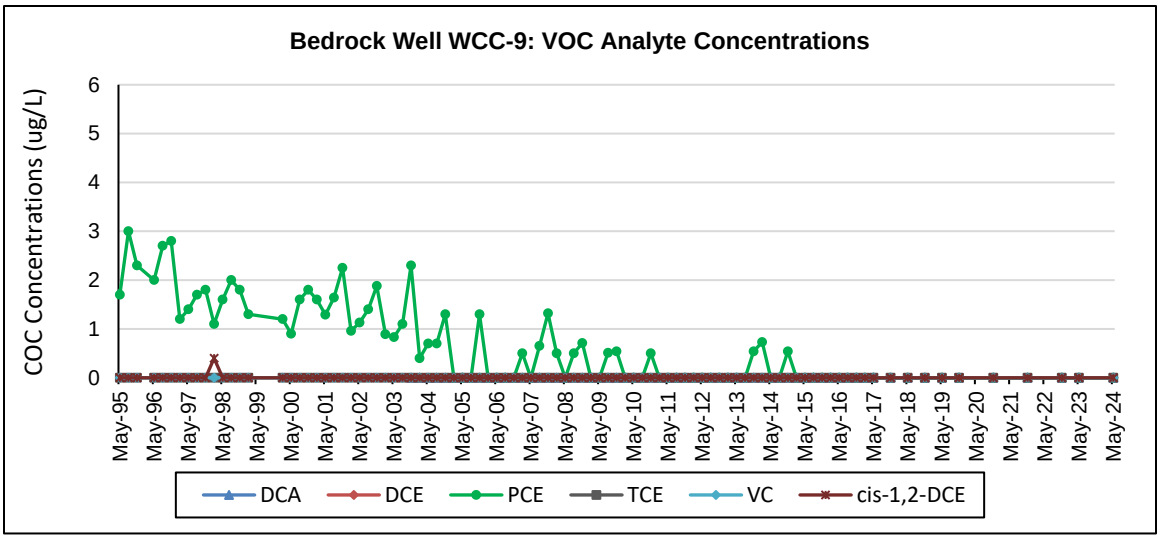
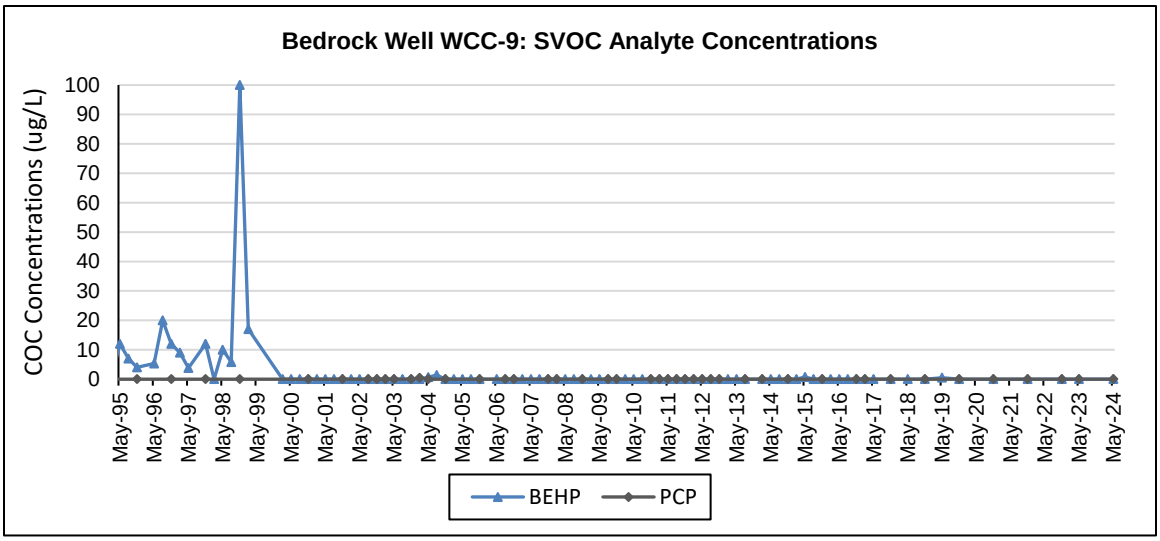


Figure 2-27: Bedrock Well WCC-9 Analyte Concentration Graphs





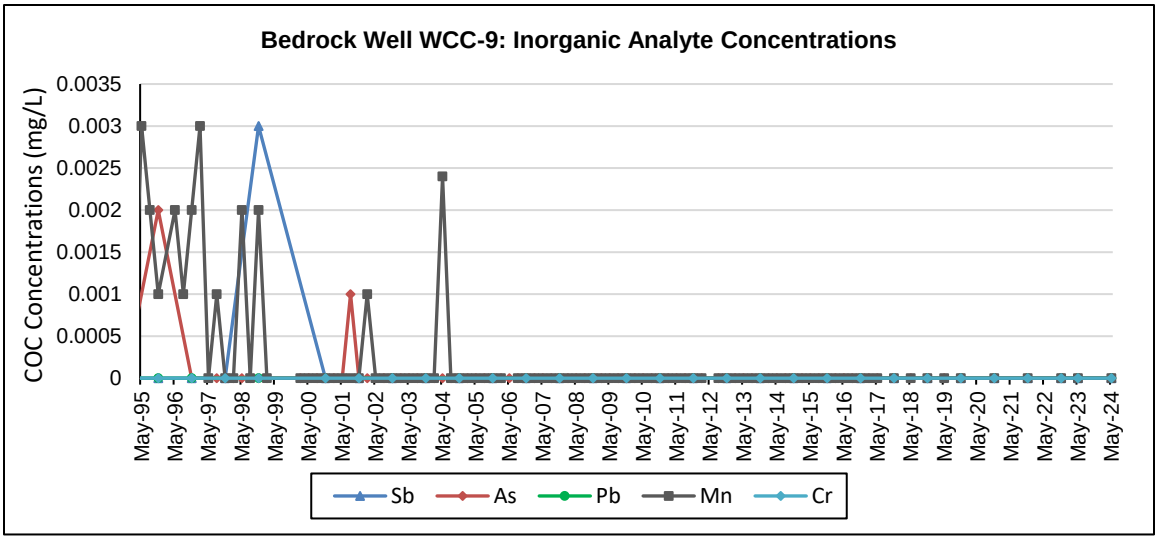
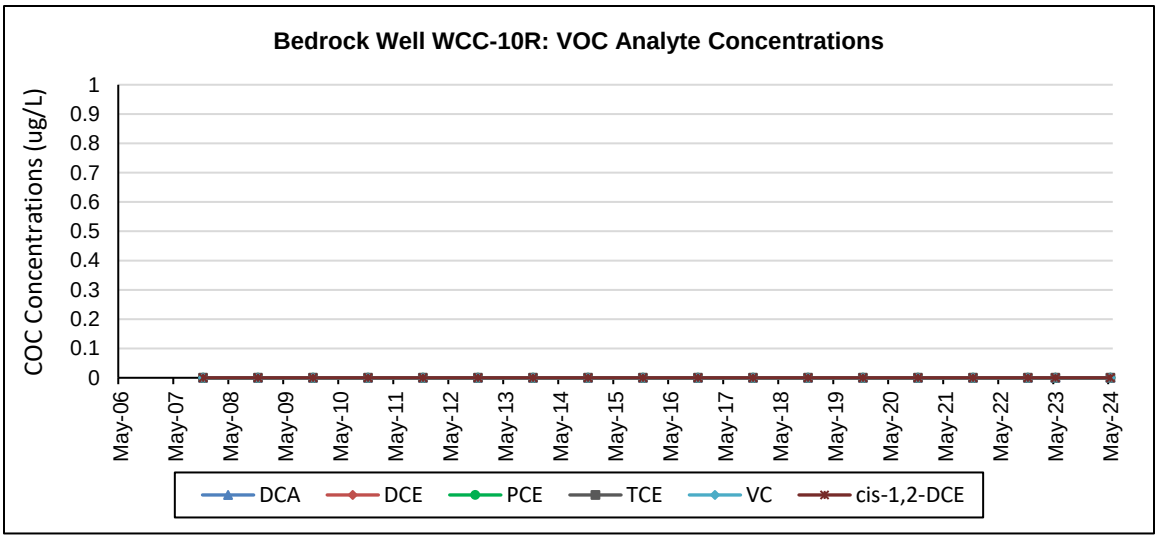
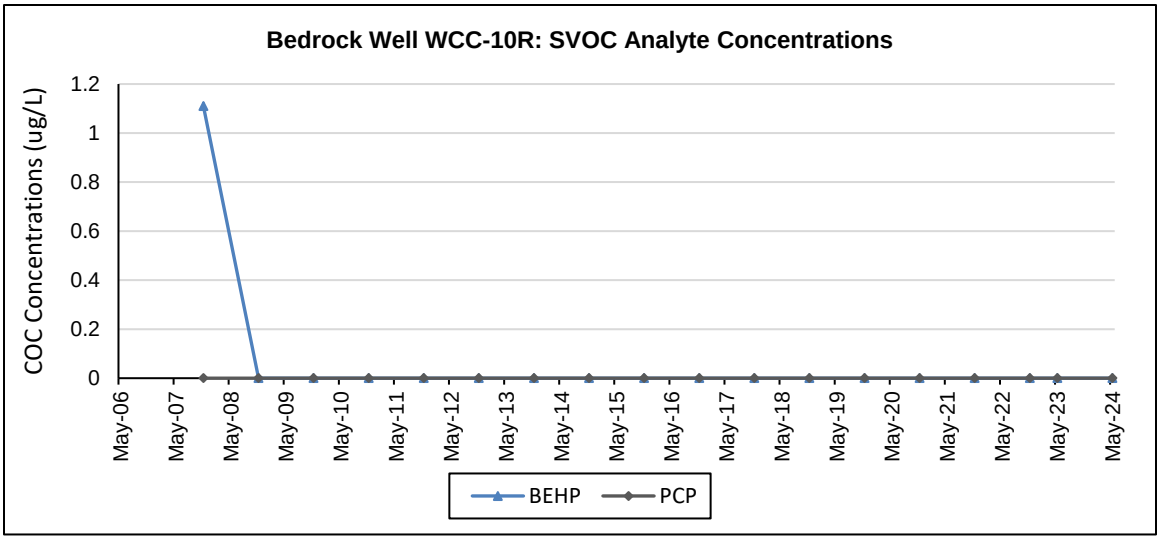
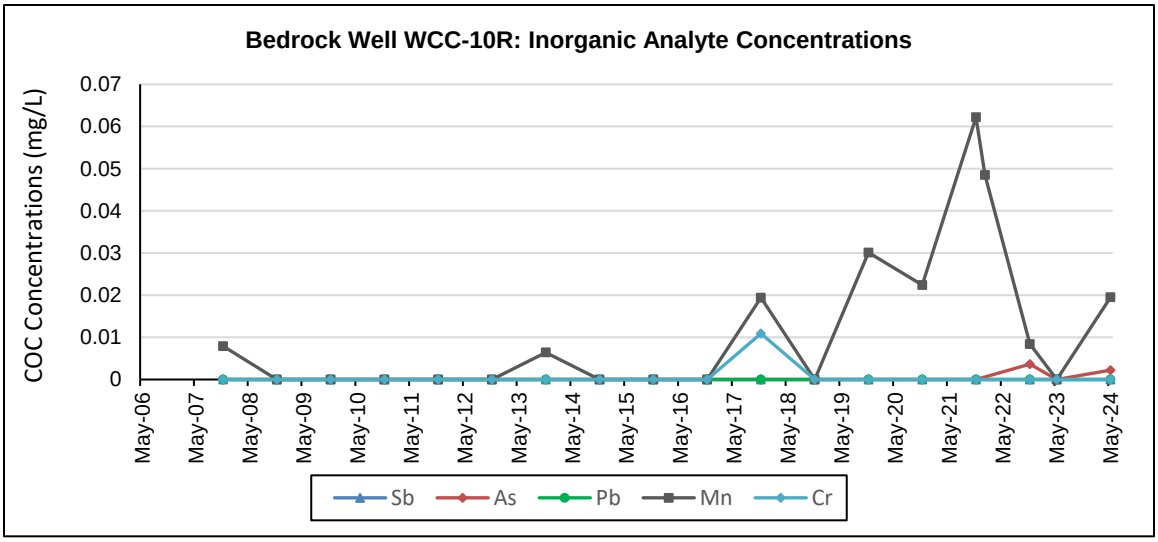


Figure 2-28: Bedrock Well WCC-10R Analyte Concentration Graphs







Bedrock Analyte Concentrations: 5-year/1-year differences:

StationID	Unit	Analyte	2019 Results	2023 Results	Current Year Results	5-Year Difference	1-Year Difference	Units	AnalyteCat
WCC1	Bedrock Aquifer	1,2-DCA	0	0	0	0	0	ug/L	V
WCC1	Bedrock Aquifer	As	0	0	0	0	0	mg/L	I
WCC1	Bedrock Aquifer	BEHP	0	0	0	0	0	ug/L	S
WCC1	Bedrock Aquifer	cis-1,2-DCE	0	0	0	0	0	ug/L	V
WCC1	Bedrock Aquifer	Cr	0	0	0	0	0	mg/L	I
WCC1	Bedrock Aquifer	Mn	0	0	0	0	0	mg/L	I
WCC1	Bedrock Aquifer	Pb	0	0	0	0	0	mg/L	I
WCC1	Bedrock Aquifer	PCE	0	0	0	0	0	ug/L	V
WCC1	Bedrock Aquifer	PCP	0	0	0	0	0	ug/L	S
WCC1	Bedrock Aquifer	Sb	0	0	0	0	0	mg/L	I
WCC1	Bedrock Aquifer	TCE	0	0	0	0	0	ug/L	V
WCC1	Bedrock Aquifer	VC	0	0	0	0	0	ug/L	V
WCC10R	Bedrock Aquifer	1,2-DCA	0	0	0	0	0	ug/L	V
WCC10R	Bedrock Aquifer	As	0	0	0.00221	**0.00221**	**0.00221**	mg/L	I
WCC10R	Bedrock Aquifer	BEHP	0	0	0	0	0	ug/L	S
WCC10R	Bedrock Aquifer	cis-1,2-DCE	0	0	0	0	0	ug/L	V
WCC10R	Bedrock Aquifer	Cr	0	0	0	0	0	mg/L	I
WCC10R	Bedrock Aquifer	Mn	0.0301	0	0.0195	**-0.0106**	**0.0195**	mg/L	I
WCC10R	Bedrock Aquifer	NO3	1.82	1.1	1.55	**-0.27**	**0.45**	mg/L	C
WCC10R	Bedrock Aquifer	Pb	0	0	0	0	0	mg/L	I
WCC10R	Bedrock Aquifer	PCE	0	0	0	0	0	ug/L	V
WCC10R	Bedrock Aquifer	PCP	0	0	0	0	0	ug/L	S
WCC10R	Bedrock Aquifer	Sb	0	0	0	0	0	mg/L	I
WCC10R	Bedrock Aquifer	TCE	0	0	0	0	0	ug/L	V
WCC10R	Bedrock Aquifer	VC	0	0	0	0	0	ug/L	V
WCC7	Bedrock Aquifer	1,2-DCA	0	0	0	0	0	ug/L	V
WCC7	Bedrock Aquifer	As	0	0	0	0	0	mg/L	I
WCC7	Bedrock Aquifer	BEHP	0	0	0	0	0	ug/L	S
WCC7	Bedrock Aquifer	cis-1,2-DCE	0	0	0	0	0	ug/L	V
WCC7	Bedrock Aquifer	Cr	0	0	0	0	0	mg/L	I
WCC7	Bedrock Aquifer	Mn	0	0	0	0	0	mg/L	I
WCC7	Bedrock Aquifer	Pb	0	0	0	0	0	mg/L	I

StationID	Unit	Analyte	2019 Results	2023 Results	Current Year Results	5-Year Difference	1-Year Difference	Units	AnalyteCat
WCC7	Bedrock Aquifer	PCE	1.23	1.78	1.01	-0.22	-0.77	ug/L	V
WCC7	Bedrock Aquifer	PCP	0	0	0	0	0	ug/L	S
WCC7	Bedrock Aquifer	Sb	0	0	0	0	0	mg/L	I
WCC7	Bedrock Aquifer	TCE	0	0	0	0	0	ug/L	V
WCC7	Bedrock Aquifer	VC	0	0	0	0	0	ug/L	V
WCC8	Bedrock Aquifer	1,2-DCA	0	0	0	0	0	ug/L	V
WCC8	Bedrock Aquifer	As	0	0	0	0	0	mg/L	I
WCC8	Bedrock Aquifer	BEHP	0	0	0	0	0	ug/L	S
WCC8	Bedrock Aquifer	cis-1,2-DCE	0	0	0	0	0	ug/L	V
WCC8	Bedrock Aquifer	Cr	0	0	0	0	0	mg/L	I
WCC8	Bedrock Aquifer	Mn	0	0	0	0	0	mg/L	I
WCC8	Bedrock Aquifer	NO3	1.39	1.33	1.32	-0.07	-0.01	mg/L	C
WCC8	Bedrock Aquifer	Pb	0	0	0	0	0	mg/L	I
WCC8	Bedrock Aquifer	PCE	0	0	0	0	0	ug/L	V
WCC8	Bedrock Aquifer	PCP	0	0	0	0	0	ug/L	S
WCC8	Bedrock Aquifer	Sb	0	0	0	0	0	mg/L	I
WCC8	Bedrock Aquifer	TCE	0	0	0	0	0	ug/L	V
WCC8	Bedrock Aquifer	VC	0	0	0	0	0	ug/L	V
WCC9	Bedrock Aquifer	1,2-DCA	0	0	0	0	0	ug/L	V
WCC9	Bedrock Aquifer	As	0	0	0	0	0	mg/L	I
WCC9	Bedrock Aquifer	BEHP	0	0	0	0	0	ug/L	S
WCC9	Bedrock Aquifer	cis-1,2-DCE	0	0	0	0	0	ug/L	V
WCC9	Bedrock Aquifer	Cr	0	0	0	0	0	mg/L	I
WCC9	Bedrock Aquifer	Mn	0	0	0	0	0	mg/L	I
WCC9	Bedrock Aquifer	NO3	2.84	2.42	1.74	-1.1	-0.68	mg/L	C
WCC9	Bedrock Aquifer	Pb	0	0	0	0	0	mg/L	I
WCC9	Bedrock Aquifer	PCE	0	0	0	0	0	ug/L	V
WCC9	Bedrock Aquifer	PCP	0	0	0	0	0	ug/L	S
WCC9	Bedrock Aquifer	Sb	0	0	0	0	0	mg/L	I
WCC9	Bedrock Aquifer	TCE	0	0	0	0	0	ug/L	V
WCC9	Bedrock Aquifer	VC	0	0	0	0	0	ug/L	V

Analytes that exceeded clean-up criteria this reporting period are displayed in **ORANGE**.
Increases in analyte concentrations are highlighted in **RED**.
Decreases in analyte concentrations are highlighted in **BLUE**

3. GREENACRES LANDFILL GAS

Greenacres Landfill Gas Probe Locations

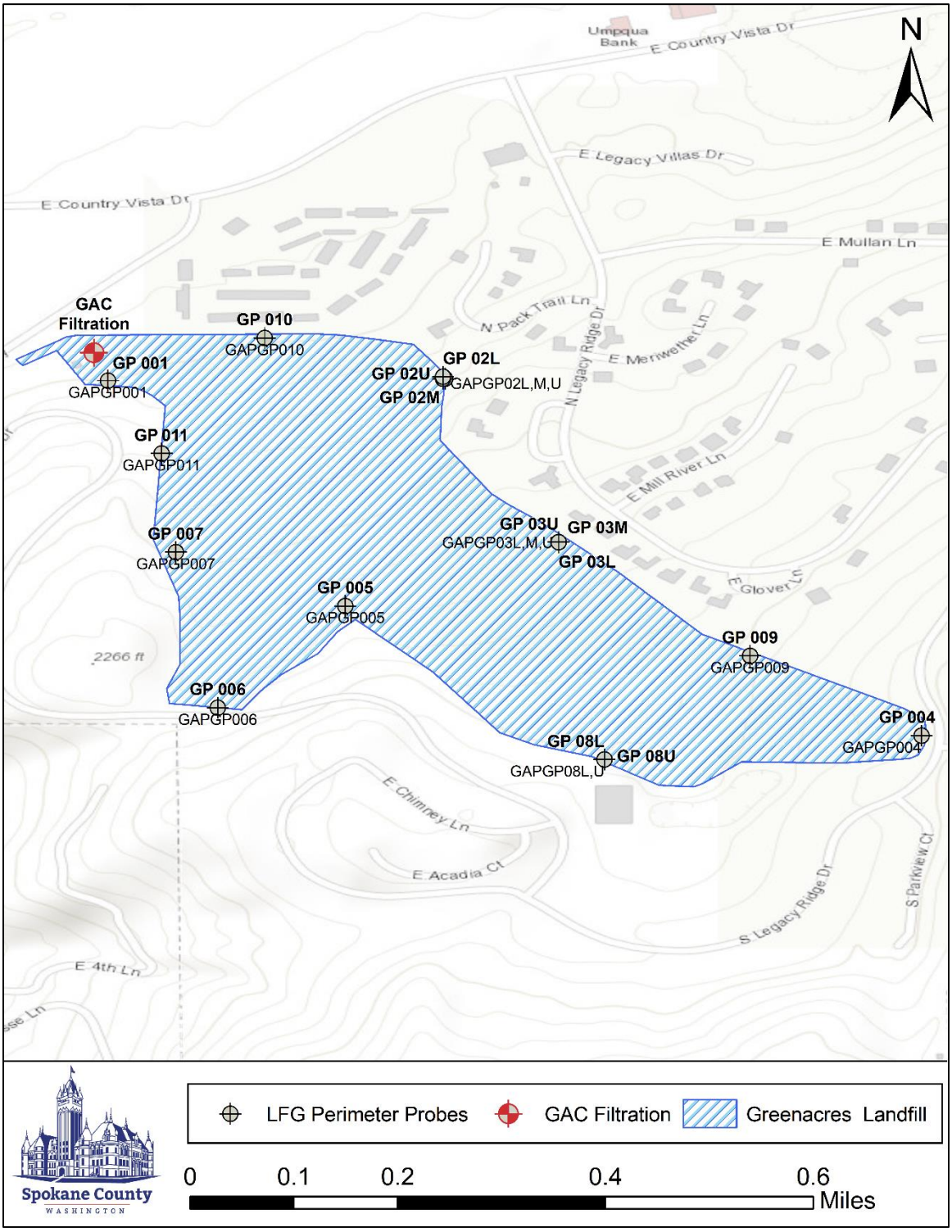


Figure 3-1: Greenacres Landfill Gas Probe Locations

GREENACRES LANDFILL GAS SUMMARY

The Greenacres Landfill gas generation/average methane concentration summary is presented below in Table 3-1. Greenacres Landfill produced an estimated 23.5 million cubic feet of landfill gas in 2023. The average methane concentration was approximately 4.53%.

Spokane County conducted a pilot test to assess the feasibility of using granular activated carbon (GAC) to treat the landfill gas. The study began in May 2023, and it consisted of installing a temporary GAC filtration system to treat the landfill gas and discharge the treated gas 25 feet into the air. County personnel collected Toxic Organics (TO-15) samples on a weekly basis for 4 weeks to evaluate the effectiveness of treating the landfill gas contaminants through GAC filtration. The sampling results were analyzed by the Spokane Regional Clean Air Agency. The study concluded in July 2023, and the results indicated that the GAC unit provided significant improvements in treating the contaminants found in the landfill gas compared to the biofilter. The Spokane Regional Clean Air Agency approved the revision for the Notice of Construction (NOC) in July 2023, and County personnel installed the permanent GAC filtration system in late August 2023. A summary of the TO-15 results collected on June 10th, 2024 is presented in Appendix D. After comparing the TO-15 results against the criteria for GAC changeout/recharge, County personnel have determined that a changeout/recharge is not necessary at this time as the GAC unit continues to remain protective.

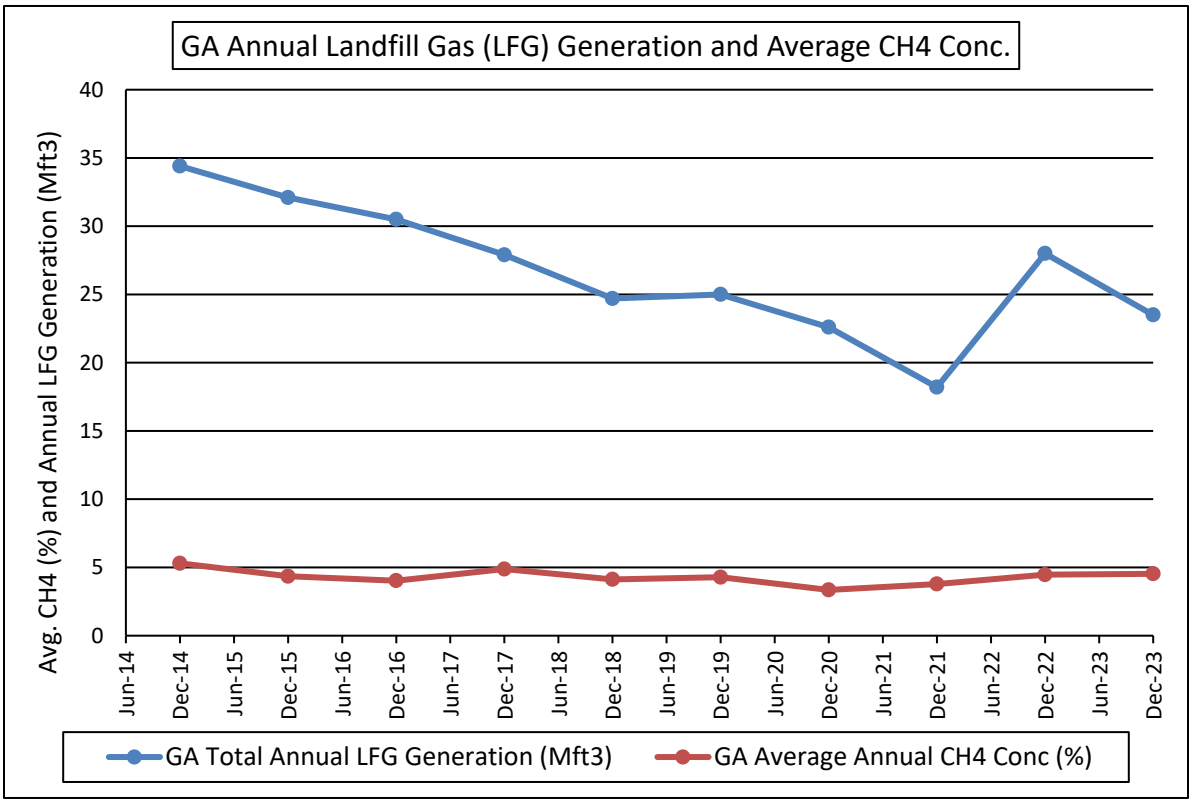
To ensure that the perimeter landfill gas collection/treatment system remains protective of human health and the environment, Spokane County installed 2 additional landfill gas perimeter gas probes (GP-010 and GP-011) near areas of high resident density in October 2023. Additionally, County personnel collected TO-15 samples at each perimeter landfill gas probe surrounding the Greenacres Landfill to assess COC concentrations. Using ASTM Designation: D7648/D7648M and the Eurofins Air Toxics Soil Gas Manifold Sampling Guide, County personnel developed and implemented a detailed sampling procedure to collect the TO-15 samples. This detailed sampling procedure, and the master field sheet template used during the sampling are presented in Appendix E.

The main goal of the perimeter probe sampling was to determine whether VOC concentrations at the perimeter were present/potentially pose a risk to indoor air that could affect nearby residences/businesses. Before conducting the perimeter probe sampling, County personnel observed the barometric pressure for several weeks to ensure the conditions were adequate for representative sampling. When barometric pressure exhibited an overall decreasing trend, perimeter probe samples were collected. Perimeter probe sampling was implemented on 4/4/2024 – barometric pressure gradually decreased from 30.13 inHg on 4/2/2024 to 29.79 inHg on 4/4/2024, and barometric pressure continued to decrease as the perimeter probe TO-15 samples were collected. County personnel utilized ASTM Designation: D7648/D7648M and the Eurofins Air Toxics Soil Gas Manifold Sampling Guide methodology to collect the TO-15 samples, and no deviations from the methodologies were noted. The only issues that occurred during sampling were abnormal activity of the flow controller(s) during sampling and/or failed vacuum tests, and County personnel resolved the issues before collecting the TO-15 samples to ensure representative sampling.

Detected COCs/COC concentrations from the TO-15 analyses were compared against their vapor intrusion soil gas screening levels. A summary of the detected COCs/COC concentrations vs. their respective vapor intrusion soil gas screening level is presented in Table 3-3. A site map summarizing landfill gas probe detections/non-detections is presented in Figure 3-2.

GREENACRES PERIMETER GAS PROBES

The perimeter gas probe summary is presented below in Table 3-2. The Greenacres Landfill perimeter gas probe data is presented in *Appendix C: Landfill Gas Probe Measurements*.



Greenacres Landfill Gas Emission

Table 3-1: Greenacres Landfill Gas Emission Point Summary

Greenacres landfill Emission Point Summary: 2023		
Date	**Flow (cfm)**	**%CH4**
Jan	53	4.7
Feb	40	5.2
Mar	51	4.9
Apr	51	3.8
May	50	3.7
Jun	44	3.3
Jul	42	3.5
Aug	43	3.1
Sep	39	4.6
Oct	42	4.6
Nov	40	6.6
Dec	42	6.4
Total	1611	163.2
Average	44.75	4.53
44.75	* 525,600 / 10^6 =	**23.5 Mft3**

Greenacres Landfill Perimeter Gas Probes

Table 3-2: Greenacres Landfill Perimeter Gas Probe Summary

Greenacres Landfill Probe Summary - 2024									
	CH4			CO2			O2		
Probe ID	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max
GAPGP001	0.00	0.00	0.00	1.35	0.00	3.40	18.65	10.60	20.90
GAPGP004	0.00	0.00	0.00	0.63	0.00	1.60	20.45	19.80	21.00
GAPGP005	0.00	0.00	0.00	1.50	0.00	2.80	17.90	14.40	21.00
GAPGP006	0.00	0.00	0.00	0.71	0.00	1.20	20.33	19.40	21.00
GAPGP007	0.00	0.00	0.00	0.65	0.10	1.30	20.27	19.60	20.70
GAPGP009	0.00	0.00	0.00	0.16	0.00	0.30	20.69	20.40	21.00
GAPGP02L	0.00	0.00	0.00	4.33	3.20	5.50	14.05	12.10	16.20
GAPGP02M	0.00	0.00	0.00	1.15	0.80	1.40	19.63	19.10	20.00
GAPGP02U	0.00	0.00	0.00	0.64	0.20	1.30	20.39	19.90	21.00
GAPGP03L	0.00	0.00	0.00	0.88	0.60	1.20	19.06	18.10	19.90
GAPGP03M	0.00	0.00	0.00	0.53	0.50	0.60	20.25	20.00	20.50
GAPGP03U	0.00	0.00	0.00	0.27	0.10	0.40	20.39	19.70	20.80
GAPGP08L	0.00	0.00	0.00	0.00	0.00	0.00	20.70	20.60	20.80
GAPGP08U	0.00	0.00	0.00	0.70	0.30	1.20	20.28	19.60	20.70
GAPGP010	0.00	0.00	0.00	0.84	0.60	1.40	19.84	19.30	20.40
GAPGP011	0.00	0.00	0.00	0.19	0.00	0.50	20.69	20.30	21.00

Greenacres Landfill Perimeter Gas Probe Sampling Results Summary

Table 3-3: TO-15 COC Detection Results vs. COC Screening Levels

Gas Probe ID	Sample Date	RESULTS (ug/m3)	COMPOUND NAME	CASNUM	Exceed Screening Level?	Screening Level (ug/m3, VI Meth B Value)
GAGP-001-240404	04/11/2024	8.3	1,1,1-TCA	71-55-6	No	76000
GAGP-005-240404	04/11/2024	13	2-Propanol	67-63-0	No	N/A
GAGP-001-240404	04/11/2024	66	Acetone	67-64-1	No	N/A
GAGP-005-240404	04/11/2024	60	Acetone	67-64-1	No	N/A
GAGP-004-240404	04/11/2024	5.2	Benzene	71-43-2	No	11
GAGP-010-240321	03/27/2024	3.8	Benzene	71-43-2	No	11
GAGP-011-240321	03/27/2024	10	Benzene	71-43-2	No	11
GAGP-011-240321	4/11/2024	3.5	Benzene	71-43-2	No	11
GAGP-010-240321	03/27/2024	8.5	Cumene	98-82-8	No	6100
GAGP-010-240404	04/12/2024	7.4	Cumene	98-82-8	No	6100
GAGP-011-240321	03/27/2024	8	Cumene	98-82-8	No	6100
GAGP-011-240321	03/27/2024	35	Ethanol	64-17-5	No	N/A
GAGP-001-240404	04/11/2024	10	Freon 11	75-69-4	No	11000
GAGP-005-240404	04/11/2024	8.6	Freon 114	76-14-2	No	N/A
GAGP-03U-240404	04/11/2024	30	Freon 114	76-14-2	No	N/A
GAGP-010-240404	04/12/2024	12	Freon 12	75-71-8	No	1500
GAGP-03U-240404	04/11/2024	72	Freon 12	75-71-8	No	1500
GAGP-011-240321	03/27/2024	8.8	PCE	127-18-4	No	320
GAGP-03U-240404	04/11/2024	110	PCE	127-18-4	No	320
GAGP-007-240404	04/11/2024	180	Tetrahydrofuran	109-99-9	No	30000

County personnel conducted a trial run for the perimeter gas probe sampling to establish the procedures, techniques, and equipment for the comprehensive sampling event. Due to the presence of benzene concentrations approaching the vapor intrusion soil gas screening level of 11 ug/m3 in GAGP-011 during the trial run (10 ug/m3), Spokane County will collect a TO-15 sample at GAGP-011 during the fall of 2024 to confirm concentrations. Benzene concentrations detected at GAGP-011 during the comprehensive sampling event were well below the vapor intrusion soil gas screening level of 11 ug/m3.

Greenacres Landfill Gas Probe TO-15 Detections Summary

Figure 3-2: Greenacres Landfill TO-15 Sampling Detections Summary

Appendix A: Groundwater Sampling Field Sheets

GREENACRES LANDFILL
ANNUAL GROUNDWATER SAMPLING FIELD SHEET May 2024

DATE: 5/1/2024	WELL ID: SVA-1	FIELD TEAM: (MT) GF, CC
SAMPLE ID: W-SVA1-240501	QA / QC SAMPLE ID: NA	
FIELD CONDITIONS: P. C. SOUTH WIND 25 MPH 38°F		
DEDICATED BLADDER: X	DISPOSABLE BAILER:	OTHER:

TIMES

START TIME:	0800	QA / QC SAMPLE TIME:	NA
SAMPLE TIME:	0900	END TIME:	0904

FIELD MEASUREMENT EQUIPMENT

METER	MAKE / MODEL	SERIAL NO.	CALIB. COMMENTS
pH	EXTECH pH 100	2307121	Calibrated to 4, 7 & 10 buffer
CONDUCTIVITY	ECTestr 11+	24B	Std. to 700 umhos/cm
TURBIDITY	Hach 2100P	#020100024957	Std to 4.02, 39.4, & 331 NTU
SWL INDICATOR			

PURGING INFORMATION

WELL DIAMETER (IN):	2"	1 CASING VOLUME (GAL):	5 GAL
TOTAL DEPTH OF WELL (FT):	127.00'	3 CASING VOLUME (GAL):	15 GAL
INITIAL DEPTH TO WATER (SWL):	97.29'	PURGE RATE:	
PACKER DEPTH:			
COW (FT):	29.71'	PACKER INFORMATION:	
CALCULATION: 29.71' (COW) X 0.17 = 5.01 (GAL)		COW X .433 X 1.25 + 30 = PACKER INFLATION (PSI)	

FIELD PARAMETERS: (+/- 10%) (+/- .1) (+/- 10%)

VOL. PURGED(GAL) / TIME	TEMP °C	pH	CONDUCTIVITY (umhos)	APPEARANCE
5GAL 0817	10.9	7.97	240	CLEAR
10GAL 0834	11.0	7.99	242	CLEAR
15GAL 0851	10.9	7.99	243	CLEAR
/				
			TURBIDITY: 0.15	IN FIELD NTU (~~meas in field lab~~)

COMMENTS:

ALL FIELD PARAMTERS ARE ACCURATE AND TRUE: SIGNATURE: [signature] DATE: 5/1/24

ANNUAL ROUND: W. SVA1 - 240501

SAMPLE ID: ~~W-WCG~~

SAMPLE TIME: 0900

QA / QC SAMPLE ID: NA

QA / QC SAMPLE TIME: NA

GROUNDWATER SAMPLES

PARAMETERS:	VOLATILES (A)	SEMI VOLATILES (B) Bis(2-ethylhexyl)phthalate (BEHP)	SEMI VOLATILES (B) Pentachlorophenol (PCP)	NITRATE (NO3)	METALS (C) Arsenic (As) (Dissolved)	METALS (C) Manganese (Mn) (Dissolved)	METALS (C) Chromium (Cr) (Dissolved)	METALS (C) Lead (Pb) (Dissolved)	METALS (C) Antimony (Sb) (Dissolved)
CONTAINERS:	3-40 ml Viles	1 Liter Amber Glass	1 Liter Amber Glass	1-250 ml. Poly Bottle	1 -500 ml Poly Bottle	1 -500 ml Poly Bottle	1 -500 ml Poly Bottle	1 - 500 ml Poly Bottle	1 - 500 ml Poly Bottle
PRESERVATION:	HCl pH < 2	Unpreserved	Unpreserved	Unpreserved	HNO3 to pH < 2 Field Filtered	HNO3 to pH < 2 Field Filtered	HNO3 to pH < 2 Field Filtered	HNO3 to pH<2 Field Filtered	HNO3 to pH<2 Field Filtered
HOLDING TIME:	14 Days	7 Days To Extract	7 Days To Extract	48 Hours to extract	6 Months	6 Months	6 Months	6 Months	6 Months
METHODS:	SW 8260B	SW 8270C	SW 8270C	300	SW 7060A	SW 6010	SW 6010	SW 6010	SW 7041
SAMPLING:	*1	*1	*1	~~*2~~	*2	*2	*2	*2	*2

(A) Tetrachlorethylene; Trichloroethylene; Vinyl Chloride; 1,2-Dichloroethane; 1,2-Dichloroethylene

(B) BEHP and PCP sampled from same 2 bottles (started filling 2 1-Liter botttles on 11/2021)

(C) All metals are sampled from same bottle

COMMENTS: *1 - ANATEK LAB IN MOSCOW ID

*2 - SVL IN KELLOGG ID

GREENACRES LANDFILL
ANNUAL GROUNDWATER SAMPLING FIELD SHEET May 2024

DATE: 5/1/2024	WELL ID: WCC-1	FIELD TEAM: (MT), GF, CC
SAMPLE ID: W-WCC1-240501	QA / QC SAMPLE ID: WS-1-1-240501	
FIELD CONDITIONS: P. CLOUDY WIND FROM SOUTH 40°F		
DEDICATED BLADDER: X	DISPOSABLE BAILER:	OTHER:

TIMES

START TIME:	0920	QA / QC SAMPLE TIME:	0930
SAMPLE TIME:	1005	END TIME:	1015

FIELD MEASUREMENT EQUIPMENT

METER	MAKE / MODEL	SERIAL NO.	CALIB. COMMENTS
pH	EXTECH pH 100	2307121	Calibrated to 4, 7 & 10 buffer
CONDUCTIVITY	ECTestr 11+	248	Std. to 700 umhos/cm
TURBIDITY	Hach 2100P	#020100024957	Std to 4.02, 39.4, & 331 NTU
SWL INDICATOR			

PURGING INFORMATION

WELL DIAMETER (IN):	2"	1 CASING VOLUME (GAL):	5 GAL
TOTAL DEPTH OF WELL (FT):	124.00'	3 CASING VOLUME (GAL):	15 GAL
INITIAL DEPTH TO WATER (SWL):	95.81'	PURGE RATE:	
PACKER DEPTH:			
COW (FT):	28.19'	PACKER INFORMATION:	
CALCULATION: 28.19 (COW) X 0.17 = 4.79 = 5.0 GAL (GAL)		COW X .433 X 1.25 + 30 = PACKER INFLATION (PSI)	

FIELD PARAMETERS: (+/- 10%) (+/- .1) (+/- 10%)

VOL. PURGED(GAL) / TIME	TEMP °C	pH	CONDUCTIVITY (umhos)	APPEARANCE
5 GAL / 0933	11.2	7.75	475	CLEAR
10 GAL / 0946	11.1	7.79	479	CLEAR
15 GAL / 1004	11.0	7.81	481	CLEAR
/				
			TURBIDITY: 0.21	IN FIELD NTU (meas in field lab)

COMMENTS: DUPE TAKEN HERE

ALL FIELD PARAMTERS ARE ACCURATE AND TRUE: SIGNATURE: [signature] DATE: 5/1/24

ANNUAL ROUND:

SAMPLE ID: W-WCC1-240501 **SAMPLE TIME:** 1005

QA / QC SAMPLE ID: WS-1-1-240501 **QA / QC SAMPLE TIME:** 0930

GROUNDWATER SAMPLES

PARAMETERS:	VOLATILES (A)	SEMI VOLATILES (B) Bis(2-ethylhexyl)phthalate (BEHP)	SEMI VOLATILES (B) Pentachlorophenol (PCP)	NITRATE (NO3)	METALS (C) Arsenic (As) (Dissolved)	METALS (C) Manganese (Mn) (Dissolved)	METALS (C) Chromium (Cr) (Dissolved)	METALS (C) Lead (Pb) (Dissolved)	METALS (C) Antimony (Sb) (Dissolved)
CONTAINERS:	3-40 ml Viles	1 Liter Amber Glass	1 Liter Amber Glass	1-250 ml. Poly Bottle	1 -500 ml Poly Bottle	1 -500 ml Poly Bottle	1 -500 ml Poly Bottle	1 - 500 ml Poly Bottle	1 - 500 ml Poly Bottle
PRESERVATION:	HCl pH < 2	Unpreserved	Unpreserved	Unpreserved	HNO3 to pH < 2 Field Filtered	HNO3 to pH < 2 Field Filtered	HNO3 to pH < 2 Field Filtered	HNO3 to pH<2 Field Filtered	HNO3 to pH<2 Field Filtered
HOLDING TIME:	14 Days	7 Days To Extract	7 Days To Extract	48 Hours to extract	6 Months	6 Months	6 Months	6 Months	6 Months
METHODS:	SW 8260B	SW 8270C	SW 8270C	300	SW 7060A	SW 6010	SW 6010	SW 6010	SW 7041
SAMPLING:	*1	*1	*1	*2	*2	*2	*2	*2	*2

(A) Tetrachlorethylene; Trichloroethylene; Vinyl Chloride; 1,2-Dichloroethane; 1,2-Dichloroethylene

(B) BEHP and PCP sampled from same 2 bottles (started filling 2 1-Liter botttles on 11/2021)

(C) All metals are sampled from same bottle

COMMENTS: ***1 - ANATEK LAB IN MOSCOW ID**

***2 - SVL IN KELLOGG ID**

*DUPE TAKEN HERE, FILLED 1 EXTRA SET OF BOTTLES FOR EACH SAMPLE ABOVE.

GREENACRES LANDFILL
ANNUAL GROUNDWATER SAMPLING FIELD SHEET May 2024

DATE: 5-1-2024	WELL ID: WCC 2	FIELD TEAM: MT, (GF), CC
SAMPLE ID: W-WCC2-240501	QA / QC SAMPLE ID: NA	
FIELD CONDITIONS: windy, mstly cldy, 50s		
DEDICATED BLADDER: X	DISPOSABLE BAILER:	OTHER:

TIMES

START TIME: 1318	QA / QC SAMPLE TIME: NA
SAMPLE TIME: 1401	END TIME: 1408

FIELD MEASUREMENT EQUIPMENT

METER	MAKE / MODEL	SERIAL NO.	CALIB. COMMENTS
pH	EXTECH pH 100	476432	Calibrated to 4, 7 & 10 buffer
CONDUCTIVITY	ECTestr 11+	7810	Std. to 700 umhos/cm
TURBIDITY	~~Hach 2100P~~ Apera	~~#020100024957~~	~~Std to 4.02, 39.4, & 331 NTU~~ 0 & 20 NTU
SWL INDICATOR	Slope Ind	23474	

PURGING INFORMATION

WELL DIAMETER (IN): 2"	1 CASING VOLUME (GAL): 4
TOTAL DEPTH OF WELL (FT): 123.0	3 CASING VOLUME (GAL): 12
INITIAL DEPTH TO WATER (SWL): 100.96	PURGE RATE: —
PACKER DEPTH: NA	
COW (FT): 22.04	PACKER INFORMATION:
CALCULATION: 22.04 X 0.17 = 3.7 use 4.0 (COW) (GAL)	COW X .433 X 1.25 + 30 = PACKER INFLATION (PSI)

FIELD PARAMETERS: (+/- 10%) (+/- .1) (+/- 10%)

VOL. PURGED(GAL) / TIME	TEMP °C	pH	CONDUCTIVITY (umhos)	APPEARANCE
4 / 1318	9.6	7.45	536	Clear
8 / 1346	9.5	7.51	522	Clear
12 / 1400	9.6	7.52	518	Clear
/				
			TURBIDITY: 0.77	NTU (meas in field lab)

COMMENTS:

ALL FIELD PARAMTERS ARE ACCURATE AND TRUE: SIGNATURE: _____ DATE: 5/1/2024

ANNUAL ROUND:

SAMPLE ID: W-WCC2-240501 **SAMPLE TIME:** 1401

QA / QC SAMPLE ID: NA **QA / QC SAMPLE TIME:** NA

GROUNDWATER SAMPLES

PARAMETERS:	VOLATILES (A)	SEMI VOLATILES (B) Bis(2-ethylhexyl)phthalate (BEHP)	SEMI VOLATILES (B) Pentachlorophenol (PCP)	NITRATE (NO3)	METALS (C) Arsenic (As) (Dissolved)	METALS (C) Manganese (Mn) (Dissolved)	METALS (C) Chromium (Cr) (Dissolved)	METALS (C) Lead (Pb) (Dissolved)	METALS (C) Antimony (Sb) (Dissolved)
CONTAINERS:	3-40 ml Viles	1 Liter Amber Glass	1 Liter Amber Glass	1-250 ml. Poly Bottle	1 -500 ml Poly Bottle	1 -500 ml Poly Bottle	1 -500 ml Poly Bottle	1 - 500 ml Poly Bottle	1 - 500 ml Poly Bottle
PRESERVATION:	HCl pH < 2	Unpreserved	Unpreserved	Unpreserved	HNO3 to pH < 2 Field Filtered	HNO3 to pH < 2 Field Filtered	HNO3 to pH < 2 Field Filtered	HNO3 to pH<2 Field Filtered	HNO3 to pH<2 Field Filtered
HOLDING TIME:	14 Days	7 Days To Extract	7 Days To Extract	48 Hours to extract	6 Months	6 Months	6 Months	6 Months	6 Months
METHODS:	SW 8260B	SW 8270C	SW 8270C	300	SW 7060A	SW 6010	SW 6010	SW 6010	SW 7041
SAMPLING:	*1	*1	*1	*2	*2	*2	*2	*2	*2

(A) Tetrachlorethylene; Trichloroethylene; Vinyl Chloride; 1,2-Dichloroethane; 1,2-Dichloroethylene

(B) BEHP and PCP sampled from same 2 bottles (started filling 2 1-Liter botttles on 11/2021)

(C) All metals are sampled from same bottle

COMMENTS: *1 - ANATEK LAB IN MOSCOW ID

*2 - SVL IN KELLOGG ID

GREENACRES LANDFILL
ANNUAL GROUNDWATER SAMPLING FIELD SHEET May 2024

DATE: 05/01/24	WELL ID: WCC-4A	FIELD TEAM: MT, GF, (CC)
SAMPLE ID: W-WCC4A-240501	QA / QC SAMPLE ID: N/A	
FIELD CONDITIONS: Mostly Cloudy, 33-52°F		
DEDICATED BLADDER: X	DISPOSABLE BAILER:	OTHER:

TIMES

START TIME: 1120	QA / QC SAMPLE TIME: N/A
SAMPLE TIME: 1225	END TIME: 1230

FIELD MEASUREMENT EQUIPMENT

METER	MAKE / MODEL	SERIAL NO.	CALIB. COMMENTS
pH	EXTECH pH 100	2307/24	Calibrated to 4, 7 & 10 buffer
CONDUCTIVITY	ECTestr 11+	1312423	Std. to 700 umhos/cm
TURBIDITY	Apera Hach ~~2100P~~	7810 ~~#020100024957~~	Std to 4.02, 39.4, & 331 NTU
SWL INDICATOR	Slope Ind	4/2018	N/A

PURGING INFORMATION

WELL DIAMETER (IN): 2"	1 CASING VOLUME (GAL): 5.67 ⇒ 6
TOTAL DEPTH OF WELL (FT): 138.00	3 CASING VOLUME (GAL): 18
INITIAL DEPTH TO WATER (SWL): 104.63	PURGE RATE: N/A
PACKER DEPTH: N/A	
COW (FT): 33.37	PACKER INFORMATION:
CALCULATION: 33.37 X 0.17 = 5.67 ⇒ 6	COW X .433 X 1.25 + 30 = PACKER INFLATION (PSI)
(COW) 33.37 (GAL) 5.67 ⇒ 6	N/A

FIELD PARAMETERS: (+/- 10%) (+/- .1) (+/- 10%)

VOL. PURGED(GAL) / TIME	TEMP °C	pH	CONDUCTIVITY (umhos)	APPEARANCE
6 / 1152	11.5	6.94	674	Clear, slight odor
12 / 1205	11.1	7.00	680	Clear, slight odor
18 / 1221	10.9	7.02	680	Clear, slight odor
/				
			TURBIDITY: 0.19	NTU (meas in field lab)

COMMENTS: 60 psi inadequate, adjusted to 70 psi after 1st set of parameters. Fitting on discharge tubing was replaced. Dry well enclosure.

ALL FIELD PARAMTERS ARE ACCURATE AND TRUE: SIGNATURE: [signature] DATE: 5/1/24

ANNUAL ROUND:

SAMPLE ID: W-WCC4A-240501 **SAMPLE TIME:** 1225

QA / QC SAMPLE ID: N/A **QA / QC SAMPLE TIME:** N/A

GROUNDWATER SAMPLES

PARAMETERS:	VOLATILES (A)	SEMI VOLATILES (B) Bis(2-ethylhexyl)phthalate (BEHP)	SEMI VOLATILES (B) Pentachlorophenol (PCP)	NITRATE (NO3)	METALS (C) Arsenic (As) (Dissolved)	METALS (C) Manganese (Mn) (Dissolved)	METALS (C) Chromium (Cr) (Dissolved)	METALS (C) Lead (Pb) (Dissolved)	METALS (C) Antimony (Sb) (Dissolved)
CONTAINERS:	3-40 ml Viles	1 Liter Amber Glass	1 Liter Amber Glass	1-250 ml. Poly Bottle	1 -500 ml Poly Bottle	1 -500 ml Poly Bottle	1 -500 ml Poly Bottle	1 - 500 ml Poly Bottle	1 - 500 ml Poly Bottle
PRESERVATION:	HCl pH < 2	Unpreserved	Unpreserved	Unpreserved	HNO3 to pH < 2 Field Filtered	HNO3 to pH < 2 Field Filtered	HNO3 to pH < 2 Field Filtered	HNO3 to pH<2 Field Filtered	HNO3 to pH<2 Field Filtered
HOLDING TIME:	14 Days	7 Days To Extract	7 Days To Extract	48 Hours to extract	6 Months	6 Months	6 Months	6 Months	6 Months
METHODS:	SW 8260B	SW 8270C	SW 8270C	300	SW 7060A	SW 6010	SW 6010	SW 6010	SW 7041
SAMPLING:	*1	*1	*1	*2	*2	*2	*2	*2	*2

(A) Tetrachlorethylene; Trichloroethylene; Vinyl Chloride; 1,2-Dichloroethane; 1,2-Dichloroethylene

(B) BEHP and PCP sampled from same 2 bottles (started filling 2 1-Liter botttles on 11/2021)

(C) All metals are sampled from same bottle

COMMENTS: *1 - ANATEK LAB IN MOSCOW ID

*2 - SVL IN KELLOGG ID

GREENACRES LANDFILL
ANNUAL GROUNDWATER SAMPLING FIELD SHEET May 2024

DATE: 05/01/24	WELL ID: WCC-7	FIELD TEAM: MT, GF, (CC)
SAMPLE ID: W-WCC7-240501	QA / QC SAMPLE ID:	W-WCC7-240501 MS W-WCC7-240501 MSD
FIELD CONDITIONS: Mostly Cloudy, 37-52°F		
DEDICATED BLADDER: X	DISPOSABLE BAILER: N/A	OTHER: N/A

TIMES

START TIME: 0855	QA / QC SAMPLE TIME: 0930
SAMPLE TIME: 0930	END TIME: 0945

FIELD MEASUREMENT EQUIPMENT

METER	MAKE / MODEL	SERIAL NO.	CALIB. COMMENTS
pH	EXTECH pH 100	2307124	Calibrated to 4, 7 & 10 buffer
CONDUCTIVITY	ECTestr 11+	1312423	Std. to 700 umhos/cm
TURBIDITY	Agera ~~Hach 2100P~~	81003 ~~#020100024957~~	Std to 4.02, 39.4, & 331 NTU
SWL INDICATOR	Slope Ind	412018	

PURGING INFORMATION

WELL DIAMETER (IN): 2"	1 CASING VOLUME (GAL): 2.52 ⇒ 3
TOTAL DEPTH OF WELL (FT): 86.00	3 CASING VOLUME (GAL): 9
INITIAL DEPTH TO WATER (SWL): 71.18	PURGE RATE: N/A
PACKER DEPTH: N/A	
COW (FT): 14.82	PACKER INFORMATION:
CALCULATION: 14.82 X 0.17 = 2.52 ⇒ 3	COW X .433 X 1.25 + 30 = PACKER INFLATION (PSI)
(COW) 14.82 (GAL) 3 gal/vol	N/A

FIELD PARAMETERS: (+/- 10%) (+/- .1) (+/- 10%)

VOL. PURGED(GAL) / TIME	TEMP °C	pH	CONDUCTIVITY (umhos)	APPEARANCE
3 / 0905	11.6	7.44	708	Clear, odorless
6 / 0915	11.8	7.41	737	Clear, odorless
9 / 0927	11.7	7.38	760	Clear, odorless
/				
			TURBIDITY: 0.08	NTU (meas in field lab)

COMMENTS: * MS/MSD Taken Here. Filled 2 extra sets of bottles. Collected all purge water and measured volume.

ALL FIELD PARAMTERS ARE ACCURATE AND TRUE: SIGNATURE: MC DATE: 05/01/24

ANNUAL ROUND:

SAMPLE ID: W-WCC7-240501

QA / QC SAMPLE ID: W-WCC7-240501MS / W-WCC7-240501MSD

SAMPLE TIME: 0930

QA / QC SAMPLE TIME: 0930

GROUNDWATER SAMPLES

PARAMETERS:	VOLATILES (A)	SEMI VOLATILES (B) Bis(2-ethylhexyl)phthalate (BEHP)	SEMI VOLATILES (B) Pentachlorophenol (PCP)	NITRATE (NO3)	METALS (C) Arsenic (As) (Dissolved)	METALS (C) Manganese (Mn) (Dissolved)	METALS (C) Chromium (Cr) (Dissolved)	METALS (C) Lead (Pb) (Dissolved)	METALS (C) Antimony (Sb) (Dissolved)
CONTAINERS:	3-40 ml Viles	1 Liter Amber Glass	1 Liter Amber Glass	1-250 ml. Poly Bottle	1 -500 ml Poly Bottle	1 -500 ml Poly Bottle	1 -500 ml Poly Bottle	1 - 500 ml Poly Bottle	1 - 500 ml Poly Bottle
PRESERVATION:	HCl pH < 2	Unpreserved	Unpreserved	Unpreserved	HNO3 to pH < 2 Field Filtered	HNO3 to pH < 2 Field Filtered	HNO3 to pH < 2 Field Filtered	HNO3 to pH<2 Field Filtered	HNO3 to pH<2 Field Filtered
HOLDING TIME:	14 Days	7 Days To Extract	7 Days To Extract	48 Hours to extract	6 Months	6 Months	6 Months	6 Months	6 Months
METHODS:	SW 8260B	SW 8270C	SW 8270C	300	SW 7060A	SW 6010	SW 6010	SW 6010	SW 7041
SAMPLING:	*1	*1	*1	*2	*2	*2	*2	*2	*2

(A) Tetrachlorethylene; Trichloroethylene; Vinyl Chloride; 1,2-Dichloroethane; 1,2-Dichloroethylene

(B) BEHP and PCP sampled from same 2 bottles (started filling 2 1-Liter botttles on 11/2021)

(C) All metals are sampled from same bottle

COMMENTS: *1 - ANATEK LAB IN MOSCOW ID

*2 - SVL IN KELLOGG ID

GREENACRES LANDFILL
ANNUAL GROUNDWATER SAMPLING FIELD SHEET May 2024

DATE: 5-1-2024	WELL ID: WCC 8	FIELD TEAM: MT / GF / CC
SAMPLE ID: W-WCC8-240501	QA / QC SAMPLE ID: NA	
FIELD CONDITIONS: Windy, ptly cldy, 50°		
DEDICATED BLADDER: X	DISPOSABLE BAILER:	OTHER:

TIMES

START TIME: 1145	QA / QC SAMPLE TIME: NA
SAMPLE TIME: 1227	END TIME: 1235

FIELD MEASUREMENT EQUIPMENT

METER	MAKE / MODEL	SERIAL NO.	CALIB. COMMENTS
pH	EXTECH pH 100	476432	Calibrated to 4, 7 & 10 buffer
CONDUCTIVITY	ECTestr 11+	7810	Std. to 700 umhos/cm
TURBIDITY	APERA ~~Hach 2100P~~	#020100024957	Std to 4.02, 39.4, & 331 NTU
SWL INDICATOR	A. Slope Ind.	23474	

PURGING INFORMATION

WELL DIAMETER (IN): 2"	1 CASING VOLUME (GAL): 2.5
TOTAL DEPTH OF WELL (FT): 111.0	3 CASING VOLUME (GAL): 7.5
INITIAL DEPTH TO WATER (SWL): 52.96	PURGE RATE: —
PACKER DEPTH: 111.0	
COW (FT): above packer 43.04 = 54psi	PACKER INFORMATION:
CALCULATION: (Below Packer) 14.0 X 0.17 = 2.4 use 2.5 gal/vol (COW) (GAL)	COW X .433 X 1.25 + 30 = PACKER INFLATION (PSI)

FIELD PARAMETERS: (+/- 10%) (+/- .1) (+/- 10%)

VOL. PURGED(GAL) / TIME	TEMP °C	pH	CONDUCTIVITY (umhos)	APPEARANCE
2.5 / 1200	11.6	6.90	140	clear
5.0 / 1213	11.7	6.87	135	clear
7.5 / 1226	11.8	6.89	133	clear
/				
			TURBIDITY: 0.02	NTU (meas in field lab)

COMMENTS:

ALL FIELD PARAMTERS ARE ACCURATE AND TRUE: SIGNATURE: L. Fuller DATE: 5/1/2024

ANNUAL ROUND:

SAMPLE ID: W-WCC8-240501 **SAMPLE TIME:** 1227

QA / QC SAMPLE ID: NA **QA / QC SAMPLE TIME:** NA

GROUNDWATER SAMPLES

PARAMETERS:	VOLATILES (A)	SEMI VOLATILES (B) Bis(2-ethylhexyl)phthalate (BEHP)	SEMI VOLATILES (B) Pentachlorophenol (PCP)	NITRATE (NO3)	METALS (C) Arsenic (As) (Dissolved)	METALS (C) Manganese (Mn) (Dissolved)	METALS (C) Chromium (Cr) (Dissolved)	METALS (C) Lead (Pb) (Dissolved)	METALS (C) Antimony (Sb) (Dissolved)
CONTAINERS:	3-40 ml Viles	1 Liter Amber Glass	1 Liter Amber Glass	1-250 ml. Poly Bottle	1 -500 ml Poly Bottle	1 -500 ml Poly Bottle	1 -500 ml Poly Bottle	1 - 500 ml Poly Bottle	1 - 500 ml Poly Bottle
PRESERVATION:	HCl pH < 2	Unpreserved	Unpreserved	Unpreserved	HNO3 to pH < 2 Field Filtered	HNO3 to pH < 2 Field Filtered	HNO3 to pH < 2 Field Filtered	HNO3 to pH<2 Field Filtered	HNO3 to pH<2 Field Filtered
HOLDING TIME:	14 Days	7 Days To Extract	7 Days To Extract	48 Hours to extract	6 Months	6 Months	6 Months	6 Months	6 Months
METHODS:	SW 8260B	SW 8270C	SW 8270C	300	SW 7060A	SW 6010	SW 6010	SW 6010	SW 7041
SAMPLING:	*1	*1	*1	*2	*2	*2	*2	*2	*2

(A) Tetrachlorethylene; Trichloroethylene; Vinyl Chloride; 1,2-Dichloroethane; 1,2-Dichloroethylene

(B) BEHP and PCP sampled from same 2 bottles (started filling 2 1-Liter botttles on 11/2021)

(C) All metals are sampled from same bottle

COMMENTS: *1 - ANATEK LAB IN MOSCOW ID

*2 - SVL IN KELLOGG ID

GREENACRES LANDFILL
ANNUAL GROUNDWATER SAMPLING FIELD SHEET May 2024

DATE: 5-1-24	WELL ID: WCC 9	FIELD TEAM: MT, GF, CC
SAMPLE ID: W-WCC9-240501	QA / QC SAMPLE ID: NA	
FIELD CONDITIONS: windy, ptly cldy, 40°		
DEDICATED BLADDER: X	DISPOSABLE BAILER:	OTHER:

TIMES

START TIME: 1035	QA / QC SAMPLE TIME: NA
SAMPLE TIME: 1059	END TIME: 1105

FIELD MEASUREMENT EQUIPMENT

METER	MAKE / MODEL	SERIAL NO.	CALIB. COMMENTS
pH	EXTECH pH 100	476432	Calibrated to 4, 7 & 10 buffer
CONDUCTIVITY	ECTestr 11+	7810	Std. to 700 umhos/cm
TURBIDITY	~~Hach 2100P~~ Aqua	~~#020100024957~~	Std to ~~4.02, 39.4, & 331 NTU~~ 0 & 20 NTU 81003
SWL INDICATOR	Slope Ind	23474	

PURGING INFORMATION

WELL DIAMETER (IN): 2"	1 CASING VOLUME (GAL): 4.0
TOTAL DEPTH OF WELL (FT): 45.0	3 CASING VOLUME (GAL): 12.0
INITIAL DEPTH TO WATER (SWL): 25.15	PURGE RATE: —
PACKER DEPTH: NA	
COW (FT): 19.85	PACKER INFORMATION:
CALCULATION: 19.85 X 0.17 = 3.4 use 4.0 (COW) (GAL)	COW X .433 X 1.25 + 30 = PACKER INFLATION (PSI)

FIELD PARAMETERS: (+/- 10%) (+/- .1) (+/- 10%)

VOL. PURGED(GAL) / TIME	TEMP °C	pH	CONDUCTIVITY (umhos)	APPEARANCE
4.0 / 1045	11.1	6.66	99.8	Clear
8.0 / 1051	11.2	6.67	99.9	Clear
12.0 / 1057	11.4	6.64	101.1	Clear
/				
			TURBIDITY: 2.85	NTU (meas in field lab)

COMMENTS:

ALL FIELD PARAMTERS ARE ACCURATE AND TRUE: SIGNATURE: [signature] DATE: 5-1-2024

ANNUAL ROUND:

SAMPLE ID: W-WCC9-240501 **SAMPLE TIME:** 1059

QA / QC SAMPLE ID: NA **QA / QC SAMPLE TIME:** NA

GROUNDWATER SAMPLES

PARAMETERS:	VOLATILES (A)	SEMI VOLATILES (B) Bis(2-ethylhexyl)phthalate (BEHP)	SEMI VOLATILES (B) Pentachlorophenol (PCP)	NITRATE (NO3)	METALS (C) Arsenic (As) (Dissolved)	METALS (C) Manganese (Mn) (Dissolved)	METALS (C) Chromium (Cr) (Dissolved)	METALS (C) Lead (Pb) (Dissolved)	METALS (C) Antimony (Sb) (Dissolved)
CONTAINERS:	3-40 ml Vials	1 Liter Amber Glass	1 Liter Amber Glass	1-250 ml. Poly Bottle	1 -500 ml Poly Bottle	1 -500 ml Poly Bottle	1 -500 ml Poly Bottle	1 - 500 ml Poly Bottle	1 - 500 ml Poly Bottle
PRESERVATION:	HCl pH < 2	Unpreserved	Unpreserved	Unpreserved	HNO3 to pH < 2 Field Filtered	HNO3 to pH < 2 Field Filtered	HNO3 to pH < 2 Field Filtered	HNO3 to pH<2 Field Filtered	HNO3 to pH<2 Field Filtered
HOLDING TIME:	14 Days	7 Days To Extract	7 Days To Extract	48 Hours to extract	6 Months	6 Months	6 Months	6 Months	6 Months
METHODS:	SW 8260B	SW 8270C	SW 8270C	300	SW 7060A	SW 6010	SW 6010	SW 6010	SW 7041
SAMPLING:	*1	*1	*1	*2	*2	*2	*2	*2	*2

(A) Tetrachlorethylene; Trichloroethylene; Vinyl Chloride; 1,2-Dichloroethane; 1,2-Dichloroethylene

(B) BEHP and PCP sampled from same 2 bottles (started filling 2 1-Liter botttles on 11/2021)

(C) All metals are sampled from same bottle

COMMENTS: ***1 - ANATEK LAB IN MOSCOW ID**

***2 - SVL IN KELLOGG ID**

GREENACRES LANDFILL
ANNUAL GROUNDWATER SAMPLING FIELD SHEET May 2024

DATE: 5/1/2024	WELL ID: WCC 10R	FIELD TEAM: MT, GF, CC
~~SAMPLE ID:~~ windy, mstly cldy, 39°	QA / QC SAMPLE ID: NA	
~~FIELD CONDITIONS:~~ W-WCC10R-240501		
DEDICATED BLADDER: X	DISPOSABLE BAILER:	OTHER:

TIMES

START TIME: 0834	QA / QC SAMPLE TIME: NA
SAMPLE TIME: 0943	END TIME: 0950

FIELD MEASUREMENT EQUIPMENT

METER	MAKE / MODEL	SERIAL NO.	CALIB. COMMENTS
pH	EXTECH pH 100	476432	Calibrated to 4, 7 & 10 buffer
CONDUCTIVITY	ECTestr 11+	7810	Std. to 700 umhos/cm
TURBIDITY	~~Hach 2100P~~ Apera	81003 #020100024957	0 & 20 Std to ~~4.02, 39.4, & 331 NTU~~
SWL INDICATOR	Slope Ind	23474	

PURGING INFORMATION

WELL DIAMETER (IN): 2"	1 CASING VOLUME (GAL): 5
TOTAL DEPTH OF WELL (FT): 41.40	3 CASING VOLUME (GAL): 15
INITIAL DEPTH TO WATER (SWL): 12.51	PURGE RATE: Slow
PACKER DEPTH: NA	
COW (FT): 28.89	PACKER INFORMATION:
CALCULATION: 28.89 X 0.17 = 4.9 use 5.0 (COW) (GAL)	COW X .433 X 1.25 + 30 = PACKER INFLATION (PSI)

FIELD PARAMETERS: (+/- 10%) (+/- .1) (+/- 10%)

VOL. PURGED(GAL) / TIME	TEMP °C	pH	CONDUCTIVITY (umhos)	APPEARANCE
5 / 0840	11.3	8.99	442	lt tan color
10 / 0909	11.4	8.87	629	very lt tan
15 / 0942	11.5	8.73	586	Sli lt tan
/				
			TURBIDITY: 10.92	NTU (meas in field lab)

COMMENTS: * phoned Austin & let him know the pH was still unusually high. This started when homes etc were built in the area.

ALL FIELD PARAMTERS ARE ACCURATE AND TRUE: SIGNATURE: [signature] DATE: 5/1/24

ANNUAL ROUND:

SAMPLE ID: W-WCC10R-240501 **SAMPLE TIME:** 0943

QA / QC SAMPLE ID: NA **QA / QC SAMPLE TIME:** NA

GROUNDWATER SAMPLES

PARAMETERS:	VOLATILES (A)	SEMI VOLATILES (B) Bis(2-ethylhexyl)phthalate (BEHP)	SEMI VOLATILES (B) Pentachlorophenol (PCP)	NITRATE (NO3)	METALS (C) Arsenic (As) (Dissolved)	METALS (C) Manganese (Mn) (Dissolved)	METALS (C) Chromium (Cr) (Dissolved)	METALS (C) Lead (Pb) (Dissolved)	METALS (C) Antimony (Sb) (Dissolved)
CONTAINERS:	3-40 ml Viles	1 Liter Amber Glass	1 Liter Amber Glass	1-250 ml. Poly Bottle	1 -500 ml Poly Bottle	1 -500 ml Poly Bottle	1 -500 ml Poly Bottle	1 - 500 ml Poly Bottle	1 - 500 ml Poly Bottle
PRESERVATION:	HCl pH < 2	Unpreserved	Unpreserved	Unpreserved	HNO3 to pH < 2 Field Filtered	HNO3 to pH < 2 Field Filtered	HNO3 to pH < 2 Field Filtered	HNO3 to pH<2 Field Filtered	HNO3 to pH<2 Field Filtered
HOLDING TIME:	14 Days	7 Days To Extract	7 Days To Extract	48 Hours to extract	6 Months	6 Months	6 Months	6 Months	6 Months
METHODS:	SW 8260B	SW 8270C	SW 8270C	300	SW 7060A	SW 6010	SW 6010	SW 6010	SW 7041
SAMPLING:	*1	*1	*1	*2	*2	*2	*2	*2	*2

(A) Tetrachlorethylene; Trichloroethylene; Vinyl Chloride; 1,2-Dichloroethane; 1,2-Dichloroethylene

(B) BEHP and PCP sampled from same 2 bottles (started filling 2 1-Liter botttles on 11/2021)

(C) All metals are sampled from same bottle

COMMENTS: ***1 - ANATEK LAB IN MOSCOW ID**

***2 - SVL IN KELLOGG ID**

GREENACRES LANDFILL
ANNUAL GROUNDWATER SAMPLING FIELD SHEET May 2024

DATE: 5/1/2024	WELL ID: WCC-11B	FIELD TEAM: (MT), GF, CC
SAMPLE ID: W-WCC11B-240501	QA / QC SAMPLE ID:	
FIELD CONDITIONS: P.C. STRONG S WIND 45°F		
DEDICATED BLADDER: X	DISPOSABLE BAILER:	OTHER:

TIMES

START TIME:	1100	QA / QC SAMPLE TIME:	NA
SAMPLE TIME:	1250	END TIME:	1255

FIELD MEASUREMENT EQUIPMENT

METER	MAKE / MODEL	SERIAL NO.	CALIB. COMMENTS
pH	EXTECH pH 100	2307121	Calibrated to 4, 7 & 10 buffer
CONDUCTIVITY	ECTestr 11+	248	Std. to 700 umhos/cm
TURBIDITY	Hach 2100P	#020100024957	Std to 4.02, 39.4, & 331 NTU
SWL INDICATOR			

PURGING INFORMATION

WELL DIAMETER (IN):	2"	1 CASING VOLUME (GAL):	7.5 GAL
TOTAL DEPTH OF WELL (FT):	140.00'	3 CASING VOLUME (GAL):	22.5 GAL
INITIAL DEPTH TO WATER (SWL):	96.93'	PURGE RATE:	
PACKER DEPTH:			
COW (FT):	43.07'	PACKER INFORMATION:	
CALCULATION: 4307' X 0.17 = 7.32 : 7.5 GAL (COW) (GAL)		COW X .433 X 1.25 + 30 = PACKER INFLATION (PSI)	

FIELD PARAMETERS: (+/- 10%) (+/- .1) (+/- 10%)

VOL. PURGED(GAL) / TIME	TEMP °C	pH	CONDUCTIVITY (umhos)	APPEARANCE
7.5GAL/ 1135	11.2	7.42	721	CLEAR
15.0G/ 1210	11.1	7.46	720	CLEAR
22.5G / 1245	11.0	7.47	721	CLEAR
/				
			TURBIDITY: 0.22	IN FIELD NTU (meas in field lab)

COMMENTS: WCC-11A WLE 96.47'

ALL FIELD PARAMTERS ARE ACCURATE AND TRUE: SIGNATURE: [signature] DATE: 5/1/24

ANNUAL ROUND:

SAMPLE ID: W-WCC11B-240501 **SAMPLE TIME:** 1250

QA / QC SAMPLE ID: NA **QA / QC SAMPLE TIME:**

GROUNDWATER SAMPLES

PARAMETERS:	VOLATILES (A)	SEMI VOLATILES (B) Bis(2-ethylhexyl)phthalate (BEHP)	SEMI VOLATILES (B) Pentachlorophenol (PCP)	NITRATE (NO3)	METALS (C) Arsenic (As) (Dissolved)	METALS (C) Manganese (Mn) (Dissolved)	METALS (C) Chromium (Cr) (Dissolved)	METALS (C) Lead (Pb) (Dissolved)	METALS (C) Antimony (Sb) (Dissolved)
CONTAINERS:	3-40 ml Viles	1 Liter Amber Glass	1 Liter Amber Glass	1-250 ml. Poly Bottle	1 -500 ml Poly Bottle	1 -500 ml Poly Bottle	1 -500 ml Poly Bottle	1 - 500 ml Poly Bottle	1 - 500 ml Poly Bottle
PRESERVATION:	HCl pH < 2	Unpreserved	Unpreserved	Unpreserved	HNO3 to pH < 2 Field Filtered	HNO3 to pH < 2 Field Filtered	HNO3 to pH < 2 Field Filtered	HNO3 to pH<2 Field Filtered	HNO3 to pH<2 Field Filtered
HOLDING TIME:	14 Days	7 Days To Extract	7 Days To Extract	48 Hours to extract	6 Months	6 Months	6 Months	6 Months	6 Months
METHODS:	SW 8260B	SW 8270C	SW 8270C	300	SW 7060A	SW 6010	SW 6010	SW 6010	SW 7041
SAMPLING:	*1	*1	*1	*2	*2	*2	*2	*2	*2

(A) Tetrachlorethylene; Trichloroethylene; Vinyl Chloride; 1,2-Dichloroethane; 1,2-Dichloroethylene

(B) BEHP and PCP sampled from same 2 bottles (started filling 2 1-Liter botttles on 11/2021)

(C) All metals are sampled from same bottle

COMMENTS: *1 - ANATEK LAB IN MOSCOW ID

*2 - SVL IN KELLOGG ID

GREENACRES LANDFILL
ANNUAL GROUNDWATER SAMPLING FIELD SHEET May 2024

DATE: 05/01/24	WELL ID: WCC-12	FIELD TEAM: MT, GF, CC
SAMPLE ID: W-WCC12-24050)	QA / QC SAMPLE ID:	
FIELD CONDITIONS: Mostly Cloudy, 33-52°F		
DEDICATED BLADDER: X	DISPOSABLE BAILER:	OTHER:

TIMES

START TIME: 1310	QA / QC SAMPLE TIME: N/A
SAMPLE TIME: 1410	END TIME: 1430

FIELD MEASUREMENT EQUIPMENT

METER	MAKE / MODEL	SERIAL NO.	CALIB. COMMENTS
pH	EXTECH pH 100	2307124	Calibrated to 4, 7 & 10 buffer
CONDUCTIVITY	ECTestr 11+	1312423	Std. to 700 umhos/cm
TURBIDITY	Apera ~~Hach 2100P~~	7810 ~~#020100024957~~	Std to 4.02, 39.4, & 331 NTU
SWL INDICATOR	Slope Ind.	412018	

PURGING INFORMATION

WELL DIAMETER (IN): 2"	1 CASING VOLUME (GAL): 1.56 ⇒ 2
TOTAL DEPTH OF WELL (FT): 106.00'	3 CASING VOLUME (GAL): 6
INITIAL DEPTH TO WATER (SWL): 96.81'	PURGE RATE: N/A
PACKER DEPTH: N/A	
COW (FT): 9.19'	PACKER INFORMATION:
CALCULATION: 9.19' X 0.17 = 1.56 ⇒ 2	COW X .433 X 1.25 + 30 = PACKER INFLATION (PSI)
(COW) 9.19' (GAL) 1.56 ⇒ 2 gal	N/A

FIELD PARAMETERS: (+/- 10%) (+/- .1) (+/- 10%)

VOL. PURGED(GAL) / TIME	TEMP °C	pH	CONDUCTIVITY (umhos)	APPEARANCE
2 / 1321	12.9	6.67	895	Slight tan tint, slight odor
4 / 1344	13.4	6.65	879	Slight tan tint, slight odor
6 / 1407	13.3	6.62	893	Slight tan, tint, slight odor
/				
			TURBIDITY: 1.04	NTU (meas in field lab)

COMMENTS: WL's

2 - 39.48 6B - 62.00
6A - 93.21 13 - 33.92

ALL FIELD PARAMTERS ARE ACCURATE AND TRUE: SIGNATURE: MAE DATE: 05/01/24

ANNUAL ROUND:

SAMPLE ID: W-WCC12-240501 **SAMPLE TIME:** 1410

QA / QC SAMPLE ID: N/A **QA / QC SAMPLE TIME:** N/A

GROUNDWATER SAMPLES

PARAMETERS:	VOLATILES (A)	SEMI VOLATILES (B) Bis(2-ethylhexyl)phthalate (BEHP)	SEMI VOLATILES (B) Pentachlorophenol (PCP)	NITRATE (NO3)	METALS (C) Arsenic (As) (Dissolved)	METALS (C) Manganese (Mn) (Dissolved)	METALS (C) Chromium (Cr) (Dissolved)	METALS (C) Lead (Pb) (Dissolved)	METALS (C) Antimony (Sb) (Dissolved)
CONTAINERS:	3-40 ml Viles	1 Liter Amber Glass	1 Liter Amber Glass	1-250 ml. Poly Bottle	1 -500 ml Poly Bottle	1 -500 ml Poly Bottle	1 -500 ml Poly Bottle	1 - 500 ml Poly Bottle	1 - 500 ml Poly Bottle
PRESERVATION:	HCl pH < 2	Unpreserved	Unpreserved	Unpreserved	HNO3 to pH < 2 Field Filtered	HNO3 to pH < 2 Field Filtered	HNO3 to pH < 2 Field Filtered	HNO3 to pH<2 Field Filtered	HNO3 to pH<2 Field Filtered
HOLDING TIME:	14 Days	7 Days To Extract	7 Days To Extract	48 Hours to extract	6 Months	6 Months	6 Months	6 Months	6 Months
METHODS:	SW 8260B	SW 8270C	SW 8270C	300	SW 7060A	SW 6010	SW 6010	SW 6010	SW 7041
SAMPLING:	*1	*1	*1	*2	*2	*2	*2	*2	*2

(A) Tetrachlorethylene; Trichloroethylene; Vinyl Chloride; 1,2-Dichloroethane; 1,2-Dichloroethylene

(B) BEHP and PCP sampled from same 2 bottles (started filling 2 1-Liter botttles on 11/2021)

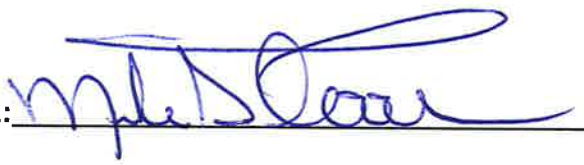
(C) All metals are sampled from same bottle

COMMENTS: *1 - ANATEK LAB IN MOSCOW ID

*2 - SVL IN KELLOGG ID

GREENACRES LANDFILL SWL REPORT
NOVEMBER ANNUAL 2024

WELL ID	PUMP INSTALLED	TOTAL DEPTH	SCREENED INTERVALS	DATE	TECH	SWL
MW-2	HYDROSTAR	120	110 - 115	5-1-24	CC	39.48'
SVA-1	BLADDER	127	114 - 124	5-1-24	MT	97.29'
WCC-1	BLADDER	124	114 - 124	5-1-24	MT	95.81'
WCC-10R	BLADDER	41.4	38 - 43	5-1-24	GF	12.51'
WCC-11A	HYDROSTAR	140	112 - 117	5-1-24	MT	96.47'
WCC-11B	BLADDER	140	129 - 139	5-1-24	MT	96.93'
WCC-12	BLADDER	106	90 - 100	5-1-24	CC	96.81'
WCC-13	HYDROSTAR	107	51 - 61	5-1-24	CC	33.92'
WCC-2	BLADDER	123	113 - 123	5-1-24	GF	100.96'
WCC-4A	BLADDER	138	125 - 135	5-1-24	CC	104.63'
WCC-6A	NO PUMP	99	85 - 95	5-1-24	CC	93.21'
WCC-6B	HYDROSTAR	136	126 - 136	5-1-24	CC	62.00'
WCC-7	BLADDER	86	76 - 86	5-1-24	CC	71.18'
WCC-8	BLADDER	111	100 - 110	5-1-24	GF	52.96'
WCC-9	BLADDER	45	35 - 45	5-1-24	GF	25.15'

ALL SWL AND ACCURATE AND TRUE: SIGNATURE:  **DATE:** 5/3/2024

Appendix B: Laboratory Results

One Government Gulch - PO Box 929
Kellogg, ID 83837-0929
(208) 784-1258
www.svl.net

Spokane County Environmental Services (Colbert)
22515 N. Elk Chattaroy Road
Colbert, WA 99005

Work Order: **X4E0035**
Reported: 14-May-24 12:45

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
W-SVA1-240501	X4E0035-01	Waste Water	01-May-24 09:00	02-May-2024	
W-WCC1-240501	X4E0035-02	Waste Water	01-May-24 10:05	02-May-2024	
W-WCC2-240501	X4E0035-03	Waste Water	01-May-24 14:01	02-May-2024	
W-WCC4A-240501	X4E0035-04	Waste Water	01-May-24 12:25	02-May-2024	
W-WCC7-240501	X4E0035-05	Waste Water	01-May-24 09:30	02-May-2024	
W-WCC8-240501	X4E0035-06	Waste Water	01-May-24 12:27	02-May-2024	
W-WCC9-240501	X4E0035-07	Waste Water	01-May-24 10:59	02-May-2024	
W-WCC10R-240501	X4E0035-08	Waste Water	01-May-24 09:43	02-May-2024	
W-WCC11B-240501	X4E0035-09	Waste Water	01-May-24 12:50	02-May-2024	
W-WCC12-240501	X4E0035-10	Waste Water	01-May-24 14:10	02-May-2024	
WS-1-1-240501	X4E0035-11	Waste Water	01-May-24 09:30	02-May-2024	

Sample preparation is defined by the client as per their Data Quality Objectives.
This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
Analyses were performed in accordance with SVL standard operating procedures and calibrations were performed and met SVL internal QC criteria.
The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

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Spokane County Environmental Services (Colbert)
22515 N. Elk Chattaroy Road
Colbert, WA 99005

Work Order: **X4E0035**
Reported: 14-May-24 12:45

Client Sample ID: **W-SVA1-240501**
SVL Sample ID: **X4E0035-01 (Waste Water)**

Sampled: 01-May-24 09:00
Received: 02-May-24
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 6010D	Chromium	< 0.0060	mg/L	0.0060	0.0020		X418279	NMS	05/10/24 13:12	
EPA 6010D	Lead	< 0.0150	mg/L	0.0150	0.0049		X418279	NMS	05/10/24 13:12	
EPA 6010D	Manganese	< 0.0080	mg/L	0.0080	0.0034		X418279	NMS	05/10/24 13:12	
EPA 6020B	Antimony	< 0.00100	mg/L	0.00100	0.00072		X418298	SMU	05/10/24 11:46	
EPA 6020B	**Arsenic**	0.00236	mg/L	0.00100	0.00021		X418298	SMU	05/10/24 11:46	

This data has been reviewed for accuracy and has been authorized for release.

Kathryn Salter
Project Manager

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Spokane County Environmental Services (Colbert)
22515 N. Elk Chattaroy Road
Colbert, WA 99005

Work Order: **X4E0035**
Reported: 14-May-24 12:45

Client Sample ID: **W-WCC1-240501**
SVL Sample ID: **X4E0035-02 (Waste Water)**

Sampled: 01-May-24 10:05
Received: 02-May-24
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 6010D	Chromium	< 0.0060	mg/L	0.0060	0.0020		X418279	NMS	05/10/24 13:15	
EPA 6010D	Lead	< 0.0150	mg/L	0.0150	0.0049		X418279	NMS	05/10/24 13:15	
EPA 6010D	Manganese	< 0.0080	mg/L	0.0080	0.0034		X418279	NMS	05/10/24 13:15	
EPA 6020B	Antimony	< 0.00100	mg/L	0.00100	0.00072		X418298	SMU	05/10/24 11:49	
EPA 6020B	Arsenic	< 0.00100	mg/L	0.00100	0.00021		X418298	SMU	05/10/24 11:49	

This data has been reviewed for accuracy and has been authorized for release.

Kathryn Salter
Project Manager

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Spokane County Environmental Services (Colbert)
22515 N. Elk Chattaroy Road
Colbert, WA 99005

Work Order: **X4E0035**
Reported: 14-May-24 12:45

Client Sample ID: **W-WCC2-240501**
SVL Sample ID: **X4E0035-03 (Waste Water)**

Sampled: 01-May-24 14:01
Received: 02-May-24
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 6010D	Chromium	< 0.0060	mg/L	0.0060	0.0020		X418279	NMS	05/10/24 13:19	
EPA 6010D	Lead	< 0.0150	mg/L	0.0150	0.0049		X418279	NMS	05/10/24 13:19	
EPA 6010D	**Manganese**	0.0142	mg/L	0.0080	0.0034		X418279	NMS	05/10/24 13:19	
EPA 6020B	Antimony	< 0.00100	mg/L	0.00100	0.00072		X418298	SMU	05/10/24 11:52	
EPA 6020B	**Arsenic**	0.00100	mg/L	0.00100	0.00021		X418298	SMU	05/10/24 11:52	
Anions by Ion Chromatography										
EPA 300.0	**Nitrate as N**	1.87	mg/L	0.050	0.013		X418254	RS	05/02/24 14:05	

This data has been reviewed for accuracy and has been authorized for release.

Kathryn Salter
Project Manager

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Spokane County Environmental Services (Colbert)
22515 N. Elk Chattaroy Road
Colbert, WA 99005

Work Order: **X4E0035**
Reported: 14-May-24 12:45

Client Sample ID: **W-WCC4A-240501**
SVL Sample ID: **X4E0035-04 (Waste Water)**

Sampled: 01-May-24 12:25
Received: 02-May-24
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 6010D	Chromium	< 0.0060	mg/L	0.0060	0.0020		X418279	NMS	05/10/24 13:23	
EPA 6010D	Lead	< 0.0150	mg/L	0.0150	0.0049		X418279	NMS	05/10/24 13:23	
EPA 6010D	**Manganese**	0.0203	mg/L	0.0080	0.0034		X418279	NMS	05/10/24 13:23	
EPA 6020B	Antimony	< 0.00100	mg/L	0.00100	0.00072		X418298	SMU	05/10/24 11:55	
EPA 6020B	**Arsenic**	0.00106	mg/L	0.00100	0.00021		X418298	SMU	05/10/24 11:55	

This data has been reviewed for accuracy and has been authorized for release.

Kathryn Salter
Project Manager

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Spokane County Environmental Services (Colbert)
22515 N. Elk Chattaroy Road
Colbert, WA 99005

Work Order: **X4E0035**
Reported: 14-May-24 12:45

Client Sample ID: **W-WCC7-240501**
SVL Sample ID: **X4E0035-05 (Waste Water)**

Sampled: 01-May-24 09:30
Received: 02-May-24
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 6010D	Chromium	< 0.0060	mg/L	0.0060	0.0020		X418279	NMS	05/10/24 13:27	
EPA 6010D	Lead	< 0.0150	mg/L	0.0150	0.0049		X418279	NMS	05/10/24 13:27	
EPA 6010D	Manganese	< 0.0080	mg/L	0.0080	0.0034		X418279	NMS	05/10/24 13:27	
EPA 6020B	Antimony	< 0.00100	mg/L	0.00100	0.00072		X418298	SMU	05/10/24 11:59	
EPA 6020B	Arsenic	< 0.00100	mg/L	0.00100	0.00021		X418298	SMU	05/10/24 11:59	

This data has been reviewed for accuracy and has been authorized for release.

Kathryn Salter
Project Manager

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Spokane County Environmental Services (Colbert)
22515 N. Elk Chattaroy Road
Colbert, WA 99005

Work Order: **X4E0035**
Reported: 14-May-24 12:45

Client Sample ID: **W-WCC8-240501**
SVL Sample ID: **X4E0035-06 (Waste Water)**

Sample Report Page 1 of 1

Sampled: 01-May-24 12:27
Received: 02-May-24
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 6010D	Chromium	< 0.0060	mg/L	0.0060	0.0020		X418279	NMS	05/10/24 13:30	
EPA 6010D	Lead	< 0.0150	mg/L	0.0150	0.0049		X418279	NMS	05/10/24 13:30	
EPA 6010D	Manganese	< 0.0080	mg/L	0.0080	0.0034		X418279	NMS	05/10/24 13:30	
EPA 6020B	Antimony	< 0.00100	mg/L	0.00100	0.00072		X418298	SMU	05/10/24 12:22	
EPA 6020B	Arsenic	< 0.00100	mg/L	0.00100	0.00021		X418298	SMU	05/10/24 12:22	
Anions by Ion Chromatography										
EPA 300.0	**Nitrate as N**	1.32	mg/L	0.050	0.013		X418254	RS	05/02/24 14:42	

This data has been reviewed for accuracy and has been authorized for release.

Kathryn Salter
Project Manager

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Spokane County Environmental Services (Colbert)
22515 N. Elk Chattaroy Road
Colbert, WA 99005

Work Order: **X4E0035**
Reported: 14-May-24 12:45

Client Sample ID: **W-WCC9-240501**
SVL Sample ID: **X4E0035-07 (Waste Water)**

Sampled: 01-May-24 10:59
Received: 02-May-24
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 6010D	Chromium	< 0.0060	mg/L	0.0060	0.0020		X418279	NMS	05/10/24 13:43	
EPA 6010D	Lead	< 0.0150	mg/L	0.0150	0.0049		X418279	NMS	05/10/24 13:43	
EPA 6010D	Manganese	< 0.0080	mg/L	0.0080	0.0034		X418279	NMS	05/10/24 13:43	
EPA 6020B	Antimony	< 0.00100	mg/L	0.00100	0.00072		X418298	SMU	05/10/24 12:25	
EPA 6020B	Arsenic	< 0.00100	mg/L	0.00100	0.00021		X418298	SMU	05/10/24 12:25	
Anions by Ion Chromatography										
EPA 300.0	**Nitrate as N**	1.74	mg/L	0.050	0.013		X418254	RS	05/02/24 15:18	

This data has been reviewed for accuracy and has been authorized for release.

Kathryn Salter
Project Manager

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(208) 784-1258
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Spokane County Environmental Services (Colbert)
22515 N. Elk Chattaroy Road
Colbert, WA 99005

Work Order: **X4E0035**
Reported: 14-May-24 12:45

Client Sample ID: **W-WCC10R-240501**
SVL Sample ID: **X4E0035-08 (Waste Water)**

Sampled: 01-May-24 09:43
Received: 02-May-24
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 6010D	Chromium	< 0.0060	mg/L	0.0060	0.0020		X418279	NMS	05/10/24 13:47	
EPA 6010D	Lead	< 0.0150	mg/L	0.0150	0.0049		X418279	NMS	05/10/24 13:47	
EPA 6010D	**Manganese**	0.0195	mg/L	0.0080	0.0034		X418279	NMS	05/10/24 13:47	
EPA 6020B	Antimony	< 0.00100	mg/L	0.00100	0.00072		X418298	SMU	05/10/24 12:28	
EPA 6020B	**Arsenic**	0.00221	mg/L	0.00100	0.00021		X418298	SMU	05/10/24 12:28	
Anions by Ion Chromatography										
EPA 300.0	**Nitrate as N**	1.55	mg/L	0.050	0.013		X418254	RS	05/02/24 14:23	

This data has been reviewed for accuracy and has been authorized for release.

Kathryn Salter
Project Manager

One Government Gulch - PO Box 929
Kellogg, ID 83837-0929
(208) 784-1258
www.svl.net

Spokane County Environmental Services (Colbert)
22515 N. Elk Chattaroy Road
Colbert, WA 99005

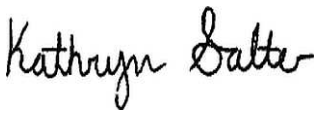
Work Order: **X4E0035**
Reported: 14-May-24 12:45

Client Sample ID: **W-WCC11B-240501**
SVL Sample ID: **X4E0035-09 (Waste Water)**

Sampled: 01-May-24 12:50
Received: 02-May-24
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 6010D	Chromium	< 0.0060	mg/L	0.0060	0.0020		X418279	NMS	05/10/24 13:51	
EPA 6010D	Lead	< 0.0150	mg/L	0.0150	0.0049		X418279	NMS	05/10/24 13:51	
EPA 6010D	Manganese	< 0.0080	mg/L	0.0080	0.0034		X418279	NMS	05/10/24 13:51	
EPA 6020B	Antimony	< 0.00100	mg/L	0.00100	0.00072		X418298	SMU	05/10/24 12:31	
EPA 6020B	Arsenic	< 0.00100	mg/L	0.00100	0.00021		X418298	SMU	05/10/24 12:31	

This data has been reviewed for accuracy and has been authorized for release.



Kathryn Salter
Project Manager

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Spokane County Environmental Services (Colbert)
22515 N. Elk Chattaroy Road
Colbert, WA 99005

Work Order: **X4E0035**
Reported: 14-May-24 12:45

Client Sample ID: **W-WCC12-240501**
SVL Sample ID: **X4E0035-10 (Waste Water)**

Sampled: 01-May-24 14:10
Received: 02-May-24
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 6010D	Chromium	< 0.0060	mg/L	0.0060	0.0020		X418279	NMS	05/10/24 13:54	
EPA 6010D	Lead	< 0.0150	mg/L	0.0150	0.0049		X418279	NMS	05/10/24 13:54	
EPA 6010D	**Manganese**	1.59	mg/L	0.0080	0.0034		X418279	NMS	05/10/24 13:54	
EPA 6020B	Antimony	< 0.00100	mg/L	0.00100	0.00072		X418298	SMU	05/10/24 12:34	
EPA 6020B	**Arsenic**	0.0416	mg/L	0.00100	0.00021		X418298	SMU	05/10/24 12:34	

This data has been reviewed for accuracy and has been authorized for release.

Kathryn Salter
Project Manager

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Spokane County Environmental Services (Colbert)
22515 N. Elk Chattaroy Road
Colbert, WA 99005

Work Order: **X4E0035**
Reported: 14-May-24 12:45

Client Sample ID: **WS-1-1-240501**
SVL Sample ID: **X4E0035-11 (Waste Water)**

Sampled: 01-May-24 09:30
Received: 02-May-24
Sampled By:

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 6010D	Chromium	< 0.0060	mg/L	0.0060	0.0020		X418279	NMS	05/10/24 13:58	
EPA 6010D	Lead	< 0.0150	mg/L	0.0150	0.0049		X418279	NMS	05/10/24 13:58	
EPA 6010D	Manganese	< 0.0080	mg/L	0.0080	0.0034		X418279	NMS	05/10/24 13:58	
EPA 6020B	Antimony	< 0.00100	mg/L	0.00100	0.00072		X418298	SMU	05/10/24 12:37	
EPA 6020B	Arsenic	< 0.00100	mg/L	0.00100	0.00021		X418298	SMU	05/10/24 12:37	

This data has been reviewed for accuracy and has been authorized for release.

Kathryn Salter
Project Manager

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Spokane County Environmental Services (Colbert)
22515 N. Elk Chattaroy Road
Colbert, WA 99005

Work Order: **X4E0035**
Reported: 14-May-24 12:45

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals (Dissolved)								
EPA 6010D	Chromium	mg/L	<0.0060	0.0020	0.0060	X418279	10-May-24	
EPA 6010D	Lead	mg/L	<0.0150	0.0049	0.0150	X418279	10-May-24	
EPA 6010D	Manganese	mg/L	<0.0080	0.0034	0.0080	X418279	10-May-24	
EPA 6020B	Antimony	mg/L	<0.00100	0.00072	0.00100	X418298	10-May-24	
EPA 6020B	Arsenic	mg/L	<0.00100	0.00021	0.00100	X418298	10-May-24	
Anions by Ion Chromatography								
EPA 300.0	Nitrate as N	mg/L	<0.050	0.013	0.050	X418254	02-May-24	

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Dissolved)									
EPA 6010D	Chromium	mg/L	0.927	1.00	92.7	80 - 120	X418279	10-May-24	
EPA 6010D	Lead	mg/L	0.908	1.00	90.8	80 - 120	X418279	10-May-24	
EPA 6010D	Manganese	mg/L	0.914	1.00	91.4	80 - 120	X418279	10-May-24	
EPA 6020B	Antimony	mg/L	0.0231	0.0250	92.4	80 - 120	X418298	10-May-24	
EPA 6020B	Arsenic	mg/L	0.0237	0.0250	94.7	80 - 120	X418298	10-May-24	

Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch and Source ID	Analyzed	Notes
Metals (Dissolved)										
EPA 6010D	Chromium	mg/L	0.958	<0.0060	1.00	95.8	75 - 125	X418279 - X4E0035-05	10-May-24	
EPA 6010D	Lead	mg/L	0.927	<0.0150	1.00	92.7	75 - 125	X418279 - X4E0035-05	10-May-24	
EPA 6010D	Manganese	mg/L	0.943	<0.0080	1.00	94.3	75 - 125	X418279 - X4E0035-05	10-May-24	
EPA 6020B	Antimony	mg/L	0.0233	<0.00100	0.0250	93.0	75 - 125	X418298 - X4E0035-05	10-May-24	
EPA 6020B	Arsenic	mg/L	0.0251	<0.00100	0.0250	100	75 - 125	X418298 - X4E0035-05	10-May-24	
Anions by Ion Chromatography										
EPA 300.0	Nitrate as N	mg/L	3.32	1.32	2.00	99.8	90 - 110	X418254 - X4E0035-06	02-May-24	
EPA 300.0	Nitrate as N	mg/L	3.75	1.74	2.00	101	90 - 110	X418254 - X4E0035-07	02-May-24	

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	RPD	RPD Limit	% Recovery	Batch and Source ID	Notes
Metals (Dissolved)										
EPA 6010D	Chromium	mg/L	0.979	0.958	1.00	2.2	20	97.9	X418279 - X4E0035-05	
EPA 6010D	Lead	mg/L	0.949	0.927	1.00	2.3	20	94.9	X418279 - X4E0035-05	
EPA 6010D	Manganese	mg/L	0.969	0.943	1.00	2.8	20	96.9	X418279 - X4E0035-05	
EPA 6020B	Antimony	mg/L	0.0231	0.0233	0.0250	0.7	20	92.4	X418298 - X4E0035-05	
EPA 6020B	Arsenic	mg/L	0.0253	0.0251	0.0250	1.1	20	101	X418298 - X4E0035-05	
Anions by Ion Chromatography										
EPA 300.0	Nitrate as N	mg/L	3.79	3.75	2.00	1.0	20	102	X418254 - X4E0035-07	

One Government Gulch - PO Box 929
Kellogg, ID 83837-0929
(208) 784-1258
www.svl.net

Spokane County Environmental Services (Colbert)
22515 N. Elk Chattaroy Road
Colbert, WA 99005

Work Order: **X4E0035**
Reported: 14-May-24 12:45

Qualitiy Control - SERIAL DILUTION Data

Method	Analyte	Sample Result	Serial Dilution Result	RPD	Q	QC Limits	Batch and Source ID	Notes
Metals (Dissolved)								
EPA 6020B	Arsenic (dissolved)	0.0251	0.0199	22.8	E	20	X418298 - MS1	R2B

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Spokane County Environmental Services (Colbert)
22515 N. Elk Chattaroy Road
Colbert, WA 99005

Work Order: **X4E0035**
Reported: 14-May-24 12:45

Notes and Definitions

R2B	RPD exceeded the laboratory acceptance limit.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
0.30R>S	% recovery not applicable; spike level is less than 30% of the sample concentration
<RL	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
N/A	Not Applicable

SPOKANE COUNTY ENVIRONMENTAL SERVICES LANDFILL CLOSURE
CHAIN OF CUSTODY RECORD 2024

Work Order: **X4E0035**
Spokane County Environmental Services (C

SPOKANE COUNTY ENVIROMENTAL SERVICES
22515 N. ELK CHATTAROY RD.
COLERT, WASHINGTON 99005
PHONE: (509) 238-6607
FAX: (509) 238-6812

PROJECT: GREENACRES SEMI-ANNUAL OR ANNUAL SAMPLING (CIRCLE ONE)
SHIPPING COMPANY: UPS
SHIPPING NUMBER: UPS LABELS
NUMBER OF COOLERS: 1

LAB: SVL ANALYTICAL
ONE GOVERNMENT GULCH
KELLOGG, ID 83837-0929
(208) 784-1258; FAX (208)783-0891
ATTENTION: Sample Receiving

LAB: ANATEK LAB
1282 ALTURAS DR
MOSCOW, IDAHO 83843
(208) 883-2839
ATTENTION: Sample Receiving

PARAMETERS:	VOC'S	BEHP / PCP	NITRATE	TRACE METALS Mn / As / Sb / Pb / Cr
CONTAINERS:	3-40 ml Voa's	1-1 Liter Amber Glass	500ml ~~1-250 ml~~ Poly bottle	1-500 ml Poly Bottle
PRESERVATION:	HCl to pH<2	NONE	NONE	FIELD FILTERED HNO3 to pH<2
HOLDING TIME:	14 days	7 Days (to extract)	48 HOURS (to extract)	6 months
METHODS:	8260B	8270C	300.0	Mn 6010 / As 7060A / Sb 7041 / Pb 6010 / Cr 6010

SAMPLER'S:
Mike Terris
Gordie Fisette
Craig Campbell
DATE: 5/1/2024

SAMPLE ID:	DATE:	TIME:	VOC'S	BEHP / PCP	NITRATE	Mn 6010	As 7060A	Sb 7041	Pb 6010	Cr 6010	# BOTTLES	COOLER#	COMMENTS:
W-SVA1-240501	5/1/2024	0900				X	X	X	X	X	1	6	
W-WCC1-240501	5/1/2024	1005				X	X	X	X	X	1	6	
W-WCC2-240501	5/1/2024	~~1318~~ 1401			X	X	X	X	X	X	2	6	
W-WCC4A-240501	5/1/2024	1225				X	X	X	X	X	1	6	
W-WCC7-240501	5/1/2024	0930				X	X	X	X	X	3	6	MS/MSD
W-WCC8-240501	5/1/2024	1227			X	X	X	X	X	X	2	6	
W-WCC9-240501	5/1/2024	1059			X	X	X	X	X	X	2	6	
W-WCC10R-240501	5/1/2024	0943			X	X	X	X	X	X	2	6	
W-WCC11B-240501	5/1/2024	1250				X	X	X	X	X	1	6	
W-WCC12-240501	5/1/2024	1410				X	X	X	X	X	1	6	
WS-1-1-240501	5/1/2024	0930				X	X	X	X	X	1	6	

5.7°C

COMMENT: Please email the sample condition report to Mike and Austin ASAP; mterris@spokanecounty.org & astewart@spokanecounty.org

RELINQUISHED BY:
SIGNATURE: Mike Terris
PRINT NAME: Mike S Terris
DATE: 5/1/2024
TIME: 1530
SPOKANE COUNTY UTILITIES LANDFILL CLOSURE

RECEIVED BY:
SIGNATURE:
PRINT NAME: Megan Bricher
COMPANY SVL
DATE: 5/2/24
TIME: 0905

SAMPLE RECEIPT/CHAIN-OF-CUSTODY CHECKLIST

The following items were checked for completeness, correctness, and compliance to project specifications using the Chain-of-Custody (COC) and other supporting information.

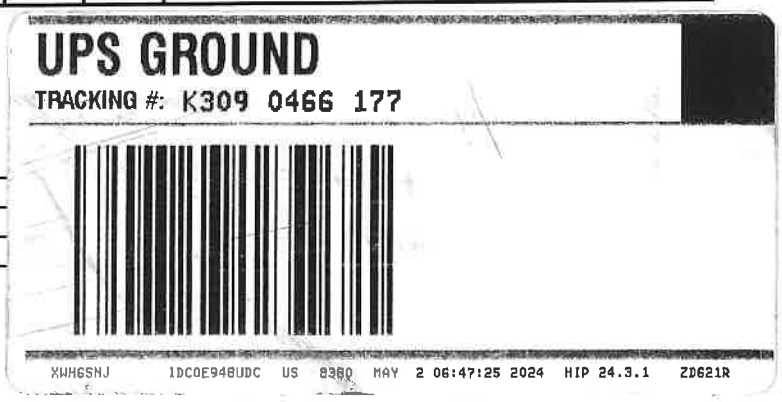
Date of acceptance: 5/2/24 **By:** Melissa D

SVL Work No: X4E0035

Item	Description	V	NA	Comments
1	Client or project name	✓		Spokane County
2	Date and time of receipt at lab	✓		5/2/24 0905
3	Received by	✓		NB
4	Temperature blank or cooler temperature	✓		Temp. 3 - 7°C T098/T126
5	Were the sample(s) received on ice	✓		
6	Custody tape/bottle seals	✓		
7	Shipper's air bill	✓		UPS
8	Condition of samples upon receipt (leaking; bubbles in VOA vials)	✓		good
9	Analysis requested for each sample	✓		
10	Sample matrix description	✓		
11	The correct preservative for the analysis requested	✓		
12	Did an SVL employee preserve sample(s) upon receipt		✓	
13	Additional Information		✓	

V- Verified **NA- Not Applicable**

Comments:



Analytical Results Report For:

Spokane County Utilities

Project Number:

X4E0045

Anatek Work Order:

MEE0083

Anatek Moscow - 1282 Alturas Drive - Moscow, ID 83843 - 208-883-2839 - moscow@anateklabs.com - FL NELAP E87893
Anatek Spokane - 504 E Sprague Ste. D - Spokane, WA 99202 - 509-838-3999 - spokane@anateklabs.com - FL NELAP E871099
Anatek Yakima - 4802 Tieton Drive - Yakima, WA 98908 - 509-225-9404 - yakima@anateklabs.com - FL NELAP E871190
Anatek Wenatchee - 3019 Gs Center Rd - Wenatchee, WA 98801 - 509-701-8362

Anatek Labs, Inc.

1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Client:	Spokane County Utilities	Work Order:	MEE0083
Address:	22515 N. Elk Chattaroy Rd	Project:	X4E0045
	Colbert, WA 99005	Reported:	5/16/2024 13:54
Attn:	Dave Tryon		

Analytical Results Report

Sample Location:	X4E0045-01 (W-SVA1-240501)		
Lab/Sample Number:	MEE0083-01	Collect Date:	05/01/24 09:00
Date Received:	05/02/24 13:27	Collected By:	GF/MT/CC
Matrix:	Water		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles							
bis(2-Ethylhexyl)phthalate	ND	ug/L	0.506	5/10/24 3:31	MAH	EPA 8270E	
Pentachlorophenol	ND	ug/L	0.506	5/10/24 3:31	MAH	EPA 8270E	
Surrogate: 2,4,6-Tribromophenol	*104%*		*48-120*	*5/10/24 3:31*	*MAH*	*EPA 8270E*	
Surrogate: 2-Fluorobiphenyl	*91.1%*		*57-113*	*5/10/24 3:31*	*MAH*	*EPA 8270E*	
Surrogate: 2-Fluorophenol	*89.5%*		*37-110*	*5/10/24 3:31*	*MAH*	*EPA 8270E*	
Surrogate: Nitrobenzene-d5	*89.8%*		*65-110*	*5/10/24 3:31*	*MAH*	*EPA 8270E*	
Surrogate: Phenol-2,3,4,5,6-d5	*95.2%*		*51-112*	*5/10/24 3:31*	*MAH*	*EPA 8270E*	
Surrogate: Terphenyl-d14	*108%*		*57-133*	*5/10/24 3:31*	*MAH*	*EPA 8270E*	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	

Anatek Labs, Inc.

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504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Sample Location: X4E0045-01 (W-SVA1-240501)
Lab/Sample Number: MEE0083-01 Collect Date: 05/01/24 09:00
Date Received: 05/02/24 13:27 Collected By: GF/MT/CC
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles (Continued)							
1,3-Dichloropropane	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	5/8/24 12:04	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	5/8/24 12:04	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Bromochloromethane	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	5/8/24 12:04	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	5/8/24 12:04	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	5/8/24 12:04	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	

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Sample Location: X4E0045-01 (W-SVA1-240501)
Lab/Sample Number: MEE0083-01 Collect Date: 05/01/24 09:00
Date Received: 05/02/24 13:27 Collected By: GF/MT/CC
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles (Continued)							
Vinyl Chloride	ND	ug/L	0.500	5/8/24 12:04	BKP	EPA 8260D	
Surrogate: 1,2-Dichlorobenzene-d4	*102%*		*70-130*	*5/8/24 12:04*	*BKP*	*EPA 8260D*	
Surrogate: 4-Bromofluorobenzene	*98.3%*		*70-130*	*5/8/24 12:04*	*BKP*	*EPA 8260D*	
Surrogate: Toluene-d8	*111%*		*70-130*	*5/8/24 12:04*	*BKP*	*EPA 8260D*	

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Sample Location: X4E0045-02 (W-WCC1-240501)
Lab/Sample Number: MEE0083-02 Collect Date: 05/01/24 10:05
Date Received: 05/02/24 13:27 Collected By: GF/MT/CC
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles							
bis(2-Ethylhexyl)phthalate	ND	ug/L	0.484	5/10/24 3:58	MAH	EPA 8270E	
Pentachlorophenol	ND	ug/L	0.484	5/10/24 3:58	MAH	EPA 8270E	
Surrogate: 2,4,6-Tribromophenol	*97.4%*		*48-120*	*5/10/24 3:58*	*MAH*	*EPA 8270E*	
Surrogate: 2-Fluorobiphenyl	*87.4%*		*57-113*	*5/10/24 3:58*	*MAH*	*EPA 8270E*	
Surrogate: 2-Fluorophenol	*87.4%*		*37-110*	*5/10/24 3:58*	*MAH*	*EPA 8270E*	
Surrogate: Nitrobenzene-d5	*85.5%*		*65-110*	*5/10/24 3:58*	*MAH*	*EPA 8270E*	
Surrogate: Phenol-2,3,4,5,6-d5	*92.7%*		*51-112*	*5/10/24 3:58*	*MAH*	*EPA 8270E*	
Surrogate: Terphenyl-d14	*104%*		*57-133*	*5/10/24 3:58*	*MAH*	*EPA 8270E*	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	5/8/24 12:32	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	5/8/24 12:32	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	

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Sample Location: X4E0045-02 (W-WCC1-240501)
Lab/Sample Number: MEE0083-02 Collect Date: 05/01/24 10:05
Date Received: 05/02/24 13:27 Collected By: GF/MT/CC
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles (Continued)							
Bromochloromethane	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	5/8/24 12:32	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	5/8/24 12:32	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	5/8/24 12:32	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	5/8/24 12:32	BKP	EPA 8260D	
Surrogate: 1,2-Dichlorobenzene-d4	*101%*		*70-130*	*5/8/24 12:32*	*BKP*	*EPA 8260D*	
Surrogate: 4-Bromofluorobenzene	*97.8%*		*70-130*	*5/8/24 12:32*	*BKP*	*EPA 8260D*	
Surrogate: Toluene-d8	*111%*		*70-130*	*5/8/24 12:32*	*BKP*	*EPA 8260D*	

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Sample Location: X4E0045-03 (W-WCC2-240501)
Lab/Sample Number: MEE0083-03 Collect Date: 05/01/24 14:01
Date Received: 05/02/24 13:27 Collected By: GF/MT/CC
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles							
bis(2-Ethylhexyl)phthalate	ND	ug/L	0.495	5/10/24 4:25	MAH	EPA 8270E	
Pentachlorophenol	ND	ug/L	0.495	5/10/24 4:25	MAH	EPA 8270E	
Surrogate: 2,4,6-Tribromophenol	*101%*		*48-120*	*5/10/24 4:25*	*MAH*	*EPA 8270E*	
Surrogate: 2-Fluorobiphenyl	*94.1%*		*57-113*	*5/10/24 4:25*	*MAH*	*EPA 8270E*	
Surrogate: 2-Fluorophenol	*91.4%*		*37-110*	*5/10/24 4:25*	*MAH*	*EPA 8270E*	
Surrogate: Nitrobenzene-d5	*89.9%*		*65-110*	*5/10/24 4:25*	*MAH*	*EPA 8270E*	
Surrogate: Phenol-2,3,4,5,6-d5	*96.9%*		*51-112*	*5/10/24 4:25*	*MAH*	*EPA 8270E*	
Surrogate: Terphenyl-d14	*112%*		*57-133*	*5/10/24 4:25*	*MAH*	*EPA 8270E*	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	5/8/24 13:00	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	5/8/24 13:00	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	

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Sample Location:	X4E0045-03 (W-WCC2-240501)		
Lab/Sample Number:	MEE0083-03	Collect Date:	05/01/24 14:01
Date Received:	05/02/24 13:27	Collected By:	GF/MT/CC
Matrix:	Water		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles (Continued)							
Bromochloromethane	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	5/8/24 13:00	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	5/8/24 13:00	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	5/8/24 13:00	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	5/8/24 13:00	BKP	EPA 8260D	
Surrogate: 1,2-Dichlorobenzene-d4	*101%*		*70-130*	*5/8/24 13:00*	*BKP*	*EPA 8260D*	
Surrogate: 4-Bromofluorobenzene	*99.7%*		*70-130*	*5/8/24 13:00*	*BKP*	*EPA 8260D*	
Surrogate: Toluene-d8	*112%*		*70-130*	*5/8/24 13:00*	*BKP*	*EPA 8260D*	

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Sample Location: X4E0045-04 (W-WCC4A-240501)
Lab/Sample Number: MEE0083-04 Collect Date: 05/01/24 12:25
Date Received: 05/02/24 13:27 Collected By: GF/MT/CC
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles							
bis(2-Ethylhexyl)phthalate	ND	ug/L	0.488	5/10/24 4:53	MAH	EPA 8270E	
Pentachlorophenol	ND	ug/L	0.488	5/10/24 4:53	MAH	EPA 8270E	
Surrogate: 2,4,6-Tribromophenol	*92.6%*		*48-120*	*5/10/24 4:53*	*MAH*	*EPA 8270E*	
Surrogate: 2-Fluorobiphenyl	*82.2%*		*57-113*	*5/10/24 4:53*	*MAH*	*EPA 8270E*	
Surrogate: 2-Fluorophenol	*83.3%*		*37-110*	*5/10/24 4:53*	*MAH*	*EPA 8270E*	
Surrogate: Nitrobenzene-d5	*81.4%*		*65-110*	*5/10/24 4:53*	*MAH*	*EPA 8270E*	
Surrogate: Phenol-2,3,4,5,6-d5	*86.9%*		*51-112*	*5/10/24 4:53*	*MAH*	*EPA 8270E*	
Surrogate: Terphenyl-d14	*106%*		*57-133*	*5/10/24 4:53*	*MAH*	*EPA 8270E*	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	5/8/24 13:28	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	5/8/24 13:28	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	

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Sample Location:	X4E0045-04 (W-WCC4A-240501)		
Lab/Sample Number:	MEE0083-04	Collect Date:	05/01/24 12:25
Date Received:	05/02/24 13:27	Collected By:	GF/MT/CC
Matrix:	Water		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles (Continued)							
Bromochloromethane	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
cis-1,2-dichloroethene	2.51	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Dichlorodifluoromethane	0.750	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	5/8/24 13:28	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	5/8/24 13:28	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	5/8/24 13:28	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Tetrachloroethene	0.730	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Vinyl Chloride	0.540	ug/L	0.500	5/8/24 13:28	BKP	EPA 8260D	
Surrogate: 1,2-Dichlorobenzene-d4	*103%*		*70-130*	*5/8/24 13:28*	*BKP*	*EPA 8260D*	
Surrogate: 4-Bromofluorobenzene	*101%*		*70-130*	*5/8/24 13:28*	*BKP*	*EPA 8260D*	
Surrogate: Toluene-d8	*110%*		*70-130*	*5/8/24 13:28*	*BKP*	*EPA 8260D*	

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Sample Location: X4E0045-05 (W-WCC7-240501)
Lab/Sample Number: MEE0083-05 Collect Date: 05/01/24 09:30
Date Received: 05/02/24 13:27 Collected By: GF/MT/CC
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles							
bis(2-Ethylhexyl)phthalate	ND	ug/L	0.484	5/10/24 5:20	MAH	EPA 8270E	
Pentachlorophenol	ND	ug/L	0.484	5/10/24 5:20	MAH	EPA 8270E	
Surrogate: 2,4,6-Tribromophenol	*99.0%*		*48-120*	*5/10/24 5:20*	*MAH*	*EPA 8270E*	
Surrogate: 2-Fluorobiphenyl	*93.6%*		*57-113*	*5/10/24 5:20*	*MAH*	*EPA 8270E*	
Surrogate: 2-Fluorophenol	*86.4%*		*37-110*	*5/10/24 5:20*	*MAH*	*EPA 8270E*	
Surrogate: Nitrobenzene-d5	*92.1%*		*65-110*	*5/10/24 5:20*	*MAH*	*EPA 8270E*	
Surrogate: Phenol-2,3,4,5,6-d5	*92.0%*		*51-112*	*5/10/24 5:20*	*MAH*	*EPA 8270E*	
Surrogate: Terphenyl-d14	*139%*		*57-133*	*5/10/24 5:20*	*MAH*	*EPA 8270E*	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	5/8/24 11:36	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	5/8/24 11:36	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	

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Sample Location:	X4E0045-05 (W-WCC7-240501)		
Lab/Sample Number:	MEE0083-05	Collect Date:	05/01/24 09:30
Date Received:	05/02/24 13:27	Collected By:	GF/MT/CC
Matrix:	Water		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles (Continued)							
Bromochloromethane	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Dichlorodifluoromethane	0.520	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	5/8/24 11:36	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	5/8/24 11:36	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	5/8/24 11:36	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Tetrachloroethene	1.01	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	5/8/24 11:36	BKP	EPA 8260D	
Surrogate: 1,2-Dichlorobenzene-d4	*102%*		*70-130*	*5/8/24 11:36*	*BKP*	*EPA 8260D*	
Surrogate: 4-Bromofluorobenzene	*99.6%*		*70-130*	*5/8/24 11:36*	*BKP*	*EPA 8260D*	
Surrogate: Toluene-d8	*112%*		*70-130*	*5/8/24 11:36*	*BKP*	*EPA 8260D*	

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Sample Location: X4E0045-06 (W-WCC8-240501)
Lab/Sample Number: MEE0083-06 Collect Date: 05/01/24 12:27
Date Received: 05/02/24 13:27 Collected By: GF/MT/CC
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles							
bis(2-Ethylhexyl)phthalate	ND	ug/L	0.498	5/10/24 5:47	MAH	EPA 8270E	
Pentachlorophenol	ND	ug/L	0.498	5/10/24 5:47	MAH	EPA 8270E	
Surrogate: 2,4,6-Tribromophenol	*89.1%*		*48-120*	*5/10/24 5:47*	*MAH*	*EPA 8270E*	
Surrogate: 2-Fluorobiphenyl	*85.6%*		*57-113*	*5/10/24 5:47*	*MAH*	*EPA 8270E*	
Surrogate: 2-Fluorophenol	*77.6%*		*37-110*	*5/10/24 5:47*	*MAH*	*EPA 8270E*	
Surrogate: Nitrobenzene-d5	*85.7%*		*65-110*	*5/10/24 5:47*	*MAH*	*EPA 8270E*	
Surrogate: Phenol-2,3,4,5,6-d5	*85.0%*		*51-112*	*5/10/24 5:47*	*MAH*	*EPA 8270E*	
Surrogate: Terphenyl-d14	*107%*		*57-133*	*5/10/24 5:47*	*MAH*	*EPA 8270E*	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	5/8/24 13:56	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	5/8/24 13:56	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	

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Sample Location: X4E0045-06 (W-WCC8-240501)
Lab/Sample Number: MEE0083-06 Collect Date: 05/01/24 12:27
Date Received: 05/02/24 13:27 Collected By: GF/MT/CC
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles (Continued)							
Bromochloromethane	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	5/8/24 13:56	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	5/8/24 13:56	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	5/8/24 13:56	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	5/8/24 13:56	BKP	EPA 8260D	
Surrogate: 1,2-Dichlorobenzene-d4	*102%*		*70-130*	*5/8/24 13:56*	*BKP*	*EPA 8260D*	
Surrogate: 4-Bromofluorobenzene	*99.0%*		*70-130*	*5/8/24 13:56*	*BKP*	*EPA 8260D*	
Surrogate: Toluene-d8	*110%*		*70-130*	*5/8/24 13:56*	*BKP*	*EPA 8260D*	

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Sample Location: X4E0045-07 (W-WCC9-240501)
Lab/Sample Number: MEE0083-07 Collect Date: 05/01/24 10:59
Date Received: 05/02/24 13:27 Collected By: GF/MT/CC
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles							
bis(2-Ethylhexyl)phthalate	ND	ug/L	0.501	5/10/24 6:15	MAH	EPA 8270E	
Pentachlorophenol	ND	ug/L	0.501	5/10/24 6:15	MAH	EPA 8270E	
Surrogate: 2,4,6-Tribromophenol	*94.8%*		*48-120*	*5/10/24 6:15*	*MAH*	*EPA 8270E*	
Surrogate: 2-Fluorobiphenyl	*83.2%*		*57-113*	*5/10/24 6:15*	*MAH*	*EPA 8270E*	
Surrogate: 2-Fluorophenol	*81.4%*		*37-110*	*5/10/24 6:15*	*MAH*	*EPA 8270E*	
Surrogate: Nitrobenzene-d5	*83.3%*		*65-110*	*5/10/24 6:15*	*MAH*	*EPA 8270E*	
Surrogate: Phenol-2,3,4,5,6-d5	*86.4%*		*51-112*	*5/10/24 6:15*	*MAH*	*EPA 8270E*	
Surrogate: Terphenyl-d14	*109%*		*57-133*	*5/10/24 6:15*	*MAH*	*EPA 8270E*	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	5/8/24 14:24	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	5/8/24 14:24	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	

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Sample Location: X4E0045-07 (W-WCC9-240501)
Lab/Sample Number: MEE0083-07 Collect Date: 05/01/24 10:59
Date Received: 05/02/24 13:27 Collected By: GF/MT/CC
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles (Continued)							
Bromochloromethane	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	5/8/24 14:24	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	5/8/24 14:24	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	5/8/24 14:24	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	5/8/24 14:24	BKP	EPA 8260D	
Surrogate: 1,2-Dichlorobenzene-d4	*102%*		*70-130*	*5/8/24 14:24*	*BKP*	*EPA 8260D*	
Surrogate: 4-Bromofluorobenzene	*99.3%*		*70-130*	*5/8/24 14:24*	*BKP*	*EPA 8260D*	
Surrogate: Toluene-d8	*112%*		*70-130*	*5/8/24 14:24*	*BKP*	*EPA 8260D*	

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Sample Location: X4E0045-08 (W-WCC10R-240501)
Lab/Sample Number: MEE0083-08 Collect Date: 05/01/24 09:43
Date Received: 05/02/24 13:27 Collected By: GF/MT/CC
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles							
bis(2-Ethylhexyl)phthalate	ND	ug/L	0.501	5/10/24 6:42	MAH	EPA 8270E	
Pentachlorophenol	ND	ug/L	0.501	5/10/24 6:42	MAH	EPA 8270E	
Surrogate: 2,4,6-Tribromophenol	*99.7%*		*48-120*	*5/10/24 6:42*	*MAH*	*EPA 8270E*	
Surrogate: 2-Fluorobiphenyl	*84.7%*		*57-113*	*5/10/24 6:42*	*MAH*	*EPA 8270E*	
Surrogate: 2-Fluorophenol	*83.7%*		*37-110*	*5/10/24 6:42*	*MAH*	*EPA 8270E*	
Surrogate: Nitrobenzene-d5	*86.2%*		*65-110*	*5/10/24 6:42*	*MAH*	*EPA 8270E*	
Surrogate: Phenol-2,3,4,5,6-d5	*90.9%*		*51-112*	*5/10/24 6:42*	*MAH*	*EPA 8270E*	
Surrogate: Terphenyl-d14	*116%*		*57-133*	*5/10/24 6:42*	*MAH*	*EPA 8270E*	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	5/8/24 14:52	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	5/8/24 14:52	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	

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Sample Location:	X4E0045-08 (W-WCC10R-240501)		
Lab/Sample Number:	MEE0083-08	Collect Date:	05/01/24 09:43
Date Received:	05/02/24 13:27	Collected By:	GF/MT/CC
Matrix:	Water		

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles (Continued)							
Bromochloromethane	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	5/8/24 14:52	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	5/8/24 14:52	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	5/8/24 14:52	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	5/8/24 14:52	BKP	EPA 8260D	
Surrogate: 1,2-Dichlorobenzene-d4	*102%*		*70-130*	*5/8/24 14:52*	*BKP*	*EPA 8260D*	
Surrogate: 4-Bromofluorobenzene	*101%*		*70-130*	*5/8/24 14:52*	*BKP*	*EPA 8260D*	
Surrogate: Toluene-d8	*113%*		*70-130*	*5/8/24 14:52*	*BKP*	*EPA 8260D*	

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Sample Location: X4E0045-09 (W-WCC11B-240501)
Lab/Sample Number: MEE0083-09 Collect Date: 05/01/24 12:50
Date Received: 05/02/24 13:27 Collected By: GF/MT/CC
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles							
bis(2-Ethylhexyl)phthalate	ND	ug/L	0.490	5/10/24 7:09	MAH	EPA 8270E	
Pentachlorophenol	ND	ug/L	0.490	5/10/24 7:09	MAH	EPA 8270E	
Surrogate: 2,4,6-Tribromophenol	*87.5%*		*48-120*	*5/10/24 7:09*	*MAH*	*EPA 8270E*	
Surrogate: 2-Fluorobiphenyl	*92.6%*		*57-113*	*5/10/24 7:09*	*MAH*	*EPA 8270E*	
Surrogate: 2-Fluorophenol	*85.0%*		*37-110*	*5/10/24 7:09*	*MAH*	*EPA 8270E*	
Surrogate: Nitrobenzene-d5	*88.0%*		*65-110*	*5/10/24 7:09*	*MAH*	*EPA 8270E*	
Surrogate: Phenol-2,3,4,5,6-d5	*89.8%*		*51-112*	*5/10/24 7:09*	*MAH*	*EPA 8270E*	
Surrogate: Terphenyl-d14	*116%*		*57-133*	*5/10/24 7:09*	*MAH*	*EPA 8270E*	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	5/8/24 15:20	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	5/8/24 15:20	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	

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Sample Location: X4E0045-09 (W-WCC11B-240501)
Lab/Sample Number: MEE0083-09 Collect Date: 05/01/24 12:50
Date Received: 05/02/24 13:27 Collected By: GF/MT/CC
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles (Continued)							
Bromochloromethane	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Chloroform	0.510	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
cis-1,2-dichloroethene	0.600	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Dichlorodifluoromethane	2.46	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	5/8/24 15:20	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	5/8/24 15:20	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	5/8/24 15:20	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Tetrachloroethene	6.33	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Trichloroethene	1.11	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	5/8/24 15:20	BKP	EPA 8260D	
Surrogate: 1,2-Dichlorobenzene-d4	*102%*		*70-130*	*5/8/24 15:20*	*BKP*	*EPA 8260D*	
Surrogate: 4-Bromofluorobenzene	*98.8%*		*70-130*	*5/8/24 15:20*	*BKP*	*EPA 8260D*	
Surrogate: Toluene-d8	*111%*		*70-130*	*5/8/24 15:20*	*BKP*	*EPA 8260D*	

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Sample Location: X4E0045-10 (W-WCC12-240501)
Lab/Sample Number: MEE0083-10 Collect Date: 05/01/24 14:10
Date Received: 05/02/24 13:27 Collected By: GF/MT/CC
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles							
bis(2-Ethylhexyl)phthalate	ND	ug/L	0.483	5/10/24 7:36	MAH	EPA 8270E	
Pentachlorophenol	ND	ug/L	0.483	5/10/24 7:36	MAH	EPA 8270E	
Surrogate: 2,4,6-Tribromophenol	*99.1%*		*48-120*	*5/10/24 7:36*	*MAH*	*EPA 8270E*	
Surrogate: 2-Fluorobiphenyl	*81.4%*		*57-113*	*5/10/24 7:36*	*MAH*	*EPA 8270E*	
Surrogate: 2-Fluorophenol	*86.5%*		*37-110*	*5/10/24 7:36*	*MAH*	*EPA 8270E*	
Surrogate: Nitrobenzene-d5	*79.8%*		*65-110*	*5/10/24 7:36*	*MAH*	*EPA 8270E*	
Surrogate: Phenol-2,3,4,5,6-d5	*91.4%*		*51-112*	*5/10/24 7:36*	*MAH*	*EPA 8270E*	
Surrogate: Terphenyl-d14	*108%*		*57-133*	*5/10/24 7:36*	*MAH*	*EPA 8270E*	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
1,2-Dichloroethane	1.07	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	5/8/24 15:48	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	5/8/24 15:48	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	

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Sample Location: X4E0045-10 (W-WCC12-240501)
Lab/Sample Number: MEE0083-10 Collect Date: 05/01/24 14:10
Date Received: 05/02/24 13:27 Collected By: GF/MT/CC
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles (Continued)							
Bromochloromethane	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
cis-1,2-dichloroethene	8.80	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Dichlorodifluoromethane	1.68	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	5/8/24 15:48	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	5/8/24 15:48	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	5/8/24 15:48	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Trichloroethene	0.570	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Vinyl Chloride	3.33	ug/L	0.500	5/8/24 15:48	BKP	EPA 8260D	
Surrogate: 1,2-Dichlorobenzene-d4	*102%*		*70-130*	*5/8/24 15:48*	*BKP*	*EPA 8260D*	
Surrogate: 4-Bromofluorobenzene	*100%*		*70-130*	*5/8/24 15:48*	*BKP*	*EPA 8260D*	
Surrogate: Toluene-d8	*112%*		*70-130*	*5/8/24 15:48*	*BKP*	*EPA 8260D*	

Anatek Labs, Inc.

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504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Sample Location: X4E0045-11 (WS-1-1-240501)
Lab/Sample Number: MEE0083-11 Collect Date: 05/01/24 09:30
Date Received: 05/02/24 13:27 Collected By: GF/MT/CC
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles							
bis(2-Ethylhexyl)phthalate	ND	ug/L	0.486	5/10/24 8:04	MAH	EPA 8270E	
Pentachlorophenol	ND	ug/L	0.486	5/10/24 8:04	MAH	EPA 8270E	
Surrogate: 2,4,6-Tribromophenol	*85.0%*		*48-120*	*5/10/24 8:04*	*MAH*	*EPA 8270E*	
Surrogate: 2-Fluorobiphenyl	*82.7%*		*57-113*	*5/10/24 8:04*	*MAH*	*EPA 8270E*	
Surrogate: 2-Fluorophenol	*79.5%*		*37-110*	*5/10/24 8:04*	*MAH*	*EPA 8270E*	
Surrogate: Nitrobenzene-d5	*80.1%*		*65-110*	*5/10/24 8:04*	*MAH*	*EPA 8270E*	
Surrogate: Phenol-2,3,4,5,6-d5	*84.9%*		*51-112*	*5/10/24 8:04*	*MAH*	*EPA 8270E*	
Surrogate: Terphenyl-d14	*109%*		*57-133*	*5/10/24 8:04*	*MAH*	*EPA 8270E*	
Volatiles							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	5/8/24 16:16	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Acetone	ND	ug/L	2.50	5/8/24 16:16	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Benzene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	

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Sample Location: X4E0045-11 (WS-1-1-240501)
Lab/Sample Number: MEE0083-11 Collect Date: 05/01/24 09:30
Date Received: 05/02/24 13:27 Collected By: GF/MT/CC
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles (Continued)							
Bromochloromethane	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Isopropylbenzene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	5/8/24 16:16	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	5/8/24 16:16	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	2.50	5/8/24 16:16	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.500	5/8/24 16:16	BKP	EPA 8260D	
Surrogate: 1,2-Dichlorobenzene-d4	*103%*		*70-130*	*5/8/24 16:16*	*BKP*	*EPA 8260D*	
Surrogate: 4-Bromofluorobenzene	*98.7%*		*70-130*	*5/8/24 16:16*	*BKP*	*EPA 8260D*	
Surrogate: Toluene-d8	*111%*		*70-130*	*5/8/24 16:16*	*BKP*	*EPA 8260D*	

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Sample Location: X4E0045-12 (WS-2-1-240501)
Lab/Sample Number: MEE0083-12 Collect Date: 05/01/24 00:00
Date Received: 05/02/24 13:27 Collected By: GF/MT/CC
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles							
1,1,1,2-Tetrachloroethane	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
1,1,1-Trichloroethane	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
1,1,2-Trichloroethane	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
1,1-Dichloroethane	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
1,1-Dichloroethene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
1,1-dichloropropene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
1,2,3-Trichlorobenzene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
1,2,3-Trichloropropane	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
1,2,4-Trichlorobenzene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
1,2,4-Trimethylbenzene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
1,2-Dibromo-3-chloropropane (DBCP)	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	ug/L	0.200	5/8/24 16:43	BKP	EPA 8260D	
1,2-Dichlorobenzene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
1,2-Dichloroethane	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
1,2-Dichloropropane	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
1,3,5-Trimethylbenzene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
1,3-Dichlorobenzene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
1,3-Dichloropropane	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
1,4-Dichlorobenzene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
2,2-Dichloropropane	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
2-Chloroethyl vinyl ether	ND	ug/L	2.50	5/8/24 16:43	BKP	EPA 8260D	
2-Chlorotoluene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
2-hexanone	ND	ug/L	2.50	5/8/24 16:43	BKP	EPA 8260D	
4-Chlorotoluene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
Acetone	3.45	ug/L	2.50	5/8/24 16:43	BKP	EPA 8260D	
Acrolein	ND	ug/L	2.50	5/8/24 16:43	BKP	EPA 8260D	
Acrylonitrile	ND	ug/L	2.50	5/8/24 16:43	BKP	EPA 8260D	
Benzene	ND	ug/L	0.200	5/8/24 16:43	BKP	EPA 8260D	
Bromobenzene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
Bromochloromethane	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
Bromodichloromethane	ND	ug/L	0.200	5/8/24 16:43	BKP	EPA 8260D	
Bromoform	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
Bromomethane	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
Carbon disulfide	ND	ug/L	2.50	5/8/24 16:43	BKP	EPA 8260D	
Carbon Tetrachloride	ND	ug/L	0.200	5/8/24 16:43	BKP	EPA 8260D	
Chlorobenzene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
Chloroethane	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
Chloroform	ND	ug/L	0.200	5/8/24 16:43	BKP	EPA 8260D	
Chloromethane	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
cis-1,2-dichloroethene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
cis-1,3-Dichloropropene	ND	ug/L	0.200	5/8/24 16:43	BKP	EPA 8260D	
Dibromochloromethane	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
Dibromomethane	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
Dichlorodifluoromethane	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
Ethylbenzene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
Hexachlorobutadiene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	

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Sample Location: X4E0045-12 (WS-2-1-240501)
Lab/Sample Number: MEE0083-12 Collect Date: 05/01/24 00:00
Date Received: 05/02/24 13:27 Collected By: GF/MT/CC
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles (Continued)							
Isopropylbenzene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
m+p-Xylene	ND	ug/L	1.00	5/8/24 16:43	BKP	EPA 8260D	
Methyl ethyl ketone (MEK)	ND	ug/L	2.50	5/8/24 16:43	BKP	EPA 8260D	
Methyl isobutyl ketone (MIBK)	ND	ug/L	2.50	5/8/24 16:43	BKP	EPA 8260D	
Methylene chloride	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
methyl-t-butyl ether (MTBE)	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
Naphthalene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
n-Butylbenzene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
n-Propylbenzene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
o-Xylene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
p-isopropyltoluene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
sec-Butylbenzene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
Styrene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
tert-Butylbenzene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
Tetrachloroethene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
Toluene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
Total Xylene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
trans-1,2-Dichloroethene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
trans-1,3-Dichloropropene	ND	ug/L	0.200	5/8/24 16:43	BKP	EPA 8260D	
trans-1-4-Dichloro-2-butene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
Trichloroethene	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
Trichlorofluoromethane	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
Vinyl acetate	ND	ug/L	0.500	5/8/24 16:43	BKP	EPA 8260D	
Vinyl Chloride	ND	ug/L	0.200	5/8/24 16:43	BKP	EPA 8260D	
Surrogate: 1,2-Dichlorobenzene-d4	*102%*		*70-130*	*5/8/24 16:43*	*BKP*	*EPA 8260D*	
Surrogate: 4-Bromofluorobenzene	*99.2%*		*70-130*	*5/8/24 16:43*	*BKP*	*EPA 8260D*	
Surrogate: Toluene-d8	*112%*		*70-130*	*5/8/24 16:43*	*BKP*	*EPA 8260D*	

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Authorized Signature,

Justin Doty For Todd Taruscio, Laboratory Manager

PQL	Practical Quantitation Limit
ND	Not Detected
MCL	EPA's Maximum Contaminant Level
Dry	Sample results reported on a dry weight basis
*	Not a state-certified analyte

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Quality Control Data

Semivolatiles

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEE0251 - SVOC Water										
Blank (BEE0251-BLK1)					Prepared: 05/07/24 17:31- Analyzed: 05/10/24 00:04					
Di (2-ethylhexyl) phthalate	ND		0.500	ug/L						
Pentachlorophenol	ND		0.500	ug/L						
Surrogate: Phenol-2,3,4,5,6-d5			*44.7*	*ug/L*	*50.0*		*89.4*	*51-112*		
Surrogate: Nitrobenzene-d5			*21.5*	*ug/L*	*25.0*		*85.8*	*65-110*		
Surrogate: Terphenyl-d14			*25.9*	*ug/L*	*25.0*		*104*	*57-133*		
Surrogate: 2-Fluorophenol			*41.6*	*ug/L*	*50.0*		*83.1*	*37-110*		
Surrogate: 2-Fluorobiphenyl			*21.3*	*ug/L*	*25.0*		*85.2*	*57-113*		
Surrogate: 2,4,6-Tribromophenol			*46.2*	*ug/L*	*50.0*		*92.4*	*48-120*		
LCS (BEE0251-BS1)					Prepared: 05/07/24 17:31- Analyzed: 05/09/24 22:14					
Pentachlorophenol	5.64		0.500	ug/L	5.00		113	51-118		
Di (2-ethylhexyl) phthalate	4.52		0.500	ug/L	5.00		90.4	60-144		
Matrix Spike (BEE0251-MS1)		**Source: MEE0083-05**			Prepared: 05/07/24 17:31- Analyzed: 05/09/24 23:09					
Di (2-ethylhexyl) phthalate	3.68		0.500	ug/L	5.00	ND	73.6	50-130		
Pentachlorophenol	5.10		0.500	ug/L	5.00	ND	102	50-130		
Matrix Spike Dup (BEE0251-MSD1)		**Source: MEE0083-05**			Prepared: 05/07/24 17:31- Analyzed: 05/09/24 23:36					
Pentachlorophenol	5.07		0.500	ug/L	5.00	ND	101	50-130	0.590	40
Di (2-ethylhexyl) phthalate	4.08		0.500	ug/L	5.00	ND	81.6	50-130	10.3	40

Quality Control Data

Volatiles

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEE0256 - VOC										
Blank (BEE0256-BLK1)					Prepared & Analyzed: 05/08/24 09:17					
cis-1,3-Dichloropropene	ND		0.500	ug/L						
m/p Xylenes (MCL for total)	ND		0.500	ug/L						
Isopropylbenzene	ND		0.500	ug/L						
Hexachlorobutadiene	ND		0.500	ug/L						
Ethylbenzene	ND		0.500	ug/L						
Dichlorodifluoromethane	ND		0.500	ug/L						
Dibromomethane	ND		0.500	ug/L						
Dibromochloromethane	ND		0.500	ug/L						
cis-1,2-Dichloroethylene	ND		0.500	ug/L						
Chloromethane	ND		0.500	ug/L						
Chloroform	ND		0.500	ug/L						
Chloroethane	ND		0.500	ug/L						
Chlorobenzene (Monochlorobenzene)	ND		0.500	ug/L						
Methyl ethyl ketone (MEK)	ND		2.50	ug/L						
Carbon disulfide	ND		0.500	ug/L						
p-isopropyltoluene	ND		0.500	ug/L						
Carbon Tetrachloride	ND		0.500	ug/L						

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Quality Control Data
(Continued)

Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEE0256 - VOC (Continued)										
Blank (BEE0256-BLK1)					Prepared & Analyzed: 05/08/24 09:17					
p-Chlorotoluene	ND		0.500	ug/L						
Trichloroflouromethane	ND		0.500	ug/L						
Trichloroethene	ND		0.500	ug/L						
trans-1,3-Dichloropropene	ND		0.500	ug/L						
trans-1,2 Dichloroethylene	ND		0.500	ug/L						
Toluene	ND		0.500	ug/L						
n-Propylbenzene	ND		0.500	ug/L						
Styrene	ND		0.500	ug/L						
Methyl isobutyl ketone (MIBK)	ND		2.50	ug/L						
o-Xylene (MCL for total)	ND		0.500	ug/L						
Bromomethane	ND		0.500	ug/L						
n-Butylbenzene	ND		0.500	ug/L						
Naphthalene	ND		0.500	ug/L						
methyl-t-butyl ether (MTBE)	ND		0.500	ug/L						
Methylene Chloride (Dichloromethane)	ND		2.50	ug/L						
Tetrachloroethylene	ND		0.500	ug/L						
1,1-Dichloropropene	ND		0.500	ug/L						
Acrylonitrile	ND		0.500	ug/L						
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	ND		0.500	ug/L						
EDB (screening)	ND		0.500	ug/L						
DBCP (screening)	ND		0.500	ug/L						
1,2,4-Trimethylbenzene	ND		0.500	ug/L						
1,2,4-Trichlorobenzene	ND		0.500	ug/L						
1,2-Dichloroethane	ND		0.500	ug/L						
1,2,3-Trichlorobenzene	ND		0.500	ug/L						
1,2-Dichloropropane	ND		0.500	ug/L						
1,1-Dichloroethylene	ND		0.500	ug/L						
1,1-Dichloroethane	ND		0.500	ug/L						
1,1,2-Trichlorethane	ND		0.500	ug/L						
1,1,2,2-Tetrachloroethane	ND		0.500	ug/L						
1,1,1-Trichloroethane	ND		0.500	ug/L						
1,1,1,2-Tetrachloroethane	ND		0.500	ug/L						
1,2,3-Trichloropropane	ND		0.500	ug/L						
2-hexanone	ND		2.50	ug/L						
Bromodichloromethane	ND		0.500	ug/L						
Bromochloromethane	ND		0.500	ug/L						
Bromobenzene	ND		0.500	ug/L						
Benzene	ND		0.500	ug/L						
Vinyl Chloride	ND		0.500	ug/L						
Acetone	ND		2.50	ug/L						
Bromoform	ND		0.500	ug/L						
o-Chlorotoluene	ND		0.500	ug/L						
2,2-Dichloropropane	ND		0.500	ug/L						
1,4-Dichlorobenzene (para-Dichlorobenzene)	ND		0.500	ug/L						
1,3-Dichloropropane	ND		0.500	ug/L						
m-Dichlorobenzene	ND		0.500	ug/L						

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Quality Control Data
(Continued)

Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEE0256 - VOC (Continued)										
Blank (BEE0256-BLK1)					Prepared & Analyzed: 05/08/24 09:17					
1,3,5-Trimethylbenzene	ND		0.500	ug/L						
tert-Butylbenzene	ND		0.500	ug/L						
sec-Butylbenzene	ND		0.500	ug/L						
Surrogate: Toluene-d8			*22.6*	*ug/L*	*20.0*		*113*	*70-130*		
Surrogate: 4-Bromofluorobenzene			*19.9*	*ug/L*	*20.0*		*99.4*	*70-130*		
Surrogate: 1,2-Dichlorobenzene-d4			*20.1*	*ug/L*	*20.0*		*100*	*70-130*		
LCS (BEE0256-BS1)					Prepared & Analyzed: 05/08/24 10:12					
1,2,3-Trichlorobenzene	10.9		0.500	ug/L	10.0		109	78-120		
methyl-t-butyl ether (MTBE)	9.37		0.500	ug/L	10.0		93.7	71-130		
1,1,1,2-Tetrachloroethane	8.45		0.500	ug/L	10.0		84.5	80-120		
1,1,1-Trichloroethane	10.1		0.500	ug/L	10.0		101	80-120		
1,1,2,2-Tetrachloroethane	8.23		0.500	ug/L	10.0		82.3	77-123		
1,1,2-Trichlorethane	8.48		0.500	ug/L	10.0		84.8	80-120		
1,1-Dichloroethane	10.3		0.500	ug/L	10.0		103	80-120		
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	8.49		0.500	ug/L	10.0		84.9	80-120		
1,1-Dichloropropene	10.1		0.500	ug/L	10.0		101	80-120		
n-Propylbenzene	8.93		0.500	ug/L	10.0		89.3	80-120		
1,2,3-Trichloropropane	8.08		0.500	ug/L	10.0		80.8	80-120		
1,2,4-Trichlorobenzene	9.00		0.500	ug/L	10.0		90.0	80-120		
1,2,4-Trimethylbenzene	8.53		0.500	ug/L	10.0		85.3	80-120		
DBCP (screening)	7.95		0.500	ug/L	10.0		79.5	71-128		
EDB (screening)	8.50		0.500	ug/L	10.0		85.0	70-130		
1,1-Dichloroethylene	10.3		0.500	ug/L	10.0		103	70-129		
Tetrachloroethylene	8.01		0.500	ug/L	10.0		80.1	80-120		
Methyl isobutyl ketone (MIBK)	9.84		2.50	ug/L	10.0		98.4	70-136		
Vinyl Chloride	10.6		0.500	ug/L	10.0		106	75-120		
Trichloroethene	9.74		0.500	ug/L	10.0		97.4	80-120		
trans-1,3-Dichloropropene	8.19		0.500	ug/L	10.0		81.9	69-130		
trans-1,2 Dichloroethylene	10.3		0.500	ug/L	10.0		103	80-120		
Naphthalene	10.1		0.500	ug/L	10.0		101	66-133		
Toluene	10.4		0.500	ug/L	10.0		104	80-120		
n-Butylbenzene	8.71		0.500	ug/L	10.0		87.1	74-122		
tert-Butylbenzene	8.87		0.500	ug/L	10.0		88.7	80-120		
Styrene	8.43		0.500	ug/L	10.0		84.3	80-120		
sec-Butylbenzene	8.96		0.500	ug/L	10.0		89.6	80-120		
p-isopropyltoluene	8.68		0.500	ug/L	10.0		86.8	80-120		
o-Xylene (MCL for total)	8.87		0.500	ug/L	10.0		88.7	80-120		
Trichloroflouromethane	10.5		0.500	ug/L	10.0		105	61-140		
Dibromomethane	10.4		0.500	ug/L	10.0		104	80-120		
Carbon disulfide	9.97		0.500	ug/L	10.0		99.7	80-120		
Carbon Tetrachloride	9.25		0.500	ug/L	10.0		92.5	80-120		
Chlorobenzene (Monochlorobenzene)	8.74		0.500	ug/L	10.0		87.4	80-120		
Chloroethane	9.87		0.500	ug/L	10.0		98.7	78-120		
Chloroform	10.3		0.500	ug/L	10.0		103	80-120		
cis-1,2-Dichloroethylene	10.2		0.500	ug/L	10.0		102	80-120		

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Quality Control Data
(Continued)

Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEE0256 - VOC (Continued)										
LCS (BEE0256-BS1)					Prepared & Analyzed: 05/08/24 10:12					
Bromoform	7.81		0.500	ug/L	10.0		78.1	68-133		
Dibromochloromethane	8.30		0.500	ug/L	10.0		83.0	80-121		
Hexachlorobutadiene	9.27		0.500	ug/L	10.0		92.7	80-120		
Dichlorodifluoromethane	8.86		0.500	ug/L	10.0		88.6	57-130		
Ethylbenzene	8.76		0.500	ug/L	10.0		87.6	80-120		
Isopropylbenzene	8.96		0.500	ug/L	10.0		89.6	80-120		
m/p Xylenes (MCL for total)	17.4		0.500	ug/L	20.0		87.2	80-120		
Methyl ethyl ketone (MEK)	10.3		2.50	ug/L	10.0		103	55-154		
cis-1,3-Dichloropropene	9.74		0.500	ug/L	10.0		97.4	79-123		
m-Dichlorobenzene	8.59		0.500	ug/L	10.0		85.9	80-120		
Bromodichloromethane	10.3		0.500	ug/L	10.0		103	80-120		
1,2-Dichloropropane	10.1		0.500	ug/L	10.0		101	80-120		
1,3,5-Trimethylbenzene	8.75		0.500	ug/L	10.0		87.5	80-121		
1,3-Dichloropropane	8.61		0.500	ug/L	10.0		86.1	80-120		
1,4-Dichlorobenzene (para-Dichlorobenzene)	8.43		0.500	ug/L	10.0		84.3	80-120		
2,2-Dichloropropane	9.82		0.500	ug/L	10.0		98.2	80-120		
o-Chlorotoluene	8.73		0.500	ug/L	10.0		87.3	80-120		
2-hexanone	8.47		2.50	ug/L	10.0		84.7	65-140		
1,2-Dichloroethane	10.1		0.500	ug/L	10.0		101	80-120		
p-Chlorotoluene	8.57		0.500	ug/L	10.0		85.7	80-124		
Acrylonitrile	10.3		0.500	ug/L	10.0		103	73-131		
Benzene	10.1		0.500	ug/L	10.0		101	80-120		
Bromobenzene	8.39		0.500	ug/L	10.0		83.9	80-120		
Bromochloromethane	10.0		0.500	ug/L	10.0		100	80-120		
Surrogate: Toluene-d8			*22.1*	*ug/L*	*20.0*		*110*	*70-130*		
Surrogate: 4-Bromofluorobenzene			*20.0*	*ug/L*	*20.0*		*99.8*	*70-130*		
Surrogate: 1,2-Dichlorobenzene-d4			*19.9*	*ug/L*	*20.0*		*99.7*	*70-130*		

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Quality Control Data
(Continued)

Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEE0256 - VOC (Continued)										
Matrix Spike (BEE0256-MS1)	**Source: MEE0083-05**				Prepared & Analyzed: 05/08/24 17:11					
cis-1,2-Dichloroethylene	10.7		0.500	ug/L	10.0	ND	107	70-130		
Methyl ethyl ketone (MEK)	10.4		2.50	ug/L	10.0	ND	104	47-165		
m/p Xylenes (MCL for total)	17.2		0.500	ug/L	20.0	ND	86.0	57-130		
Isopropylbenzene	8.87		0.500	ug/L	10.0	ND	88.7	70-130		
Hexachlorobutadiene	9.03		0.500	ug/L	10.0	ND	90.3	70-130		
Ethylbenzene	8.70		0.500	ug/L	10.0	ND	87.0	70-130		
Dichlorodifluoromethane	9.08		0.500	ug/L	10.0	0.520	85.6	57-136		
Dibromomethane	11.0		0.500	ug/L	10.0	ND	110	70-130		
Chlorobenzene (Monochlorobenzene)	8.79		0.500	ug/L	10.0	ND	87.9	70-130		
cis-1,3-Dichloropropene	10.3		0.500	ug/L	10.0	ND	103	74-124		
Carbon Tetrachloride	11.3		0.500	ug/L	10.0	ND	113	70-130		
Chloroform	11.0		0.500	ug/L	10.0	ND	110	70-130		
Chloroethane	10.1		0.500	ug/L	10.0	ND	101	68-138		
sec-Butylbenzene	8.68		0.500	ug/L	10.0	ND	86.8	70-130		
Dibromochloromethane	9.86		0.500	ug/L	10.0	ND	98.6	70-130		
Styrene	8.26		0.500	ug/L	10.0	ND	82.6	30-130		
Trichloroflouromethane	11.4		0.500	ug/L	10.0	ND	114	50-154		
Trichloroethene	9.93		0.500	ug/L	10.0	ND	99.3	70-130		
1,2-Dichloropropane	10.5		0.500	ug/L	10.0	ND	105	70-130		
trans-1,2 Dichloroethylene	10.7		0.500	ug/L	10.0	ND	107	70-130		
Toluene	10.7		0.500	ug/L	10.0	ND	107	70-130		
o-Xylene (MCL for total)	8.74		0.500	ug/L	10.0	ND	87.4	62-127		
tert-Butylbenzene	8.58		0.500	ug/L	10.0	ND	85.8	70-130		
Methyl isobutyl ketone (MIBK)	10.7		2.50	ug/L	10.0	ND	107	53-167		
p-isopropyltoluene	8.42		0.500	ug/L	10.0	ND	84.2	70-130		
trans-1,3-Dichloropropene	8.61		0.500	ug/L	10.0	ND	86.1	61-131		
n-Propylbenzene	8.78		0.500	ug/L	10.0	ND	87.8	70-130		
n-Butylbenzene	8.26		0.500	ug/L	10.0	ND	82.6	67-130		
Naphthalene	11.8		0.500	ug/L	10.0	ND	118	56-147		
methyl-t-butyl ether (MTBE)	9.47		0.500	ug/L	10.0	ND	94.7	57-138		
Tetrachloroethylene	8.21		0.500	ug/L	10.0	1.01	72.0	70-130		
1,1-Dichloropropene	10.3		0.500	ug/L	10.0	ND	103	70-130		
m-Dichlorobenzene	8.33		0.500	ug/L	10.0	ND	83.3	70-130		
EDB (screening)	8.78		0.500	ug/L	10.0	ND	87.8	70-130		
DBCP (screening)	9.44		0.500	ug/L	10.0	ND	94.4	55-146		
1,2,4-Trimethylbenzene	8.30		0.500	ug/L	10.0	ND	83.0	40-140		
1,2,4-Trichlorobenzene	9.13		0.500	ug/L	10.0	ND	91.3	70-130		
1,2,3-Trichlorobenzene	12.2		0.500	ug/L	10.0	ND	122	67-134		
1,2-Dichloroethane	10.4		0.500	ug/L	10.0	ND	104	70-130		
1,1-Dichloroethylene	10.3		0.500	ug/L	10.0	ND	103	70-130		
1,1-Dichloroethane	10.6		0.500	ug/L	10.0	ND	106	70-130		
1,1,2-Trichlorethane	8.83		0.500	ug/L	10.0	ND	88.3	70-130		
Vinyl Chloride	11.2		0.500	ug/L	10.0	ND	112	70-130		
1,1,1,2-Tetrachloroethane	9.27		0.500	ug/L	10.0	ND	92.7	70-130		
1,1,1-Trichloroethane	10.3		0.500	ug/L	10.0	ND	103	70-130		
1,2,3-Trichloropropane	8.10		0.500	ug/L	10.0	ND	81.0	69-137		

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Quality Control Data
(Continued)

Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEE0256 - VOC (Continued)										
Matrix Spike (BEE0256-MS1)	**Source: MEE0083-05**				Prepared & Analyzed: 05/08/24 17:11					
Bromoform	9.61		0.500	ug/L	10.0	ND	96.1	59-140		
Bromodichloromethane	11.9		0.500	ug/L	10.0	ND	119	70-130		
Bromochloromethane	10.9		0.500	ug/L	10.0	ND	109	70-130		
Bromobenzene	8.38		0.500	ug/L	10.0	ND	83.8	70-130		
Benzene	10.3		0.500	ug/L	10.0	ND	103	70-130		
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	8.31		0.500	ug/L	10.0	ND	83.1	70-130		
p-Chlorotoluene	8.29		0.500	ug/L	10.0	ND	82.9	70-130		
Carbon disulfide	11.4		0.500	ug/L	10.0	ND	114	70-130		
2-hexanone	8.77		2.50	ug/L	10.0	ND	87.7	43-175		
o-Chlorotoluene	8.60		0.500	ug/L	10.0	ND	86.0	70-130		
2,2-Dichloropropane	9.92		0.500	ug/L	10.0	ND	99.2	70-130		
1,4-Dichlorobenzene (para-Dichlorobenzene)	8.17		0.500	ug/L	10.0	ND	81.7	70-130		
1,3-Dichloropropane	8.59		0.500	ug/L	10.0	ND	85.9	70-130		
1,1,2,2-Tetrachloroethane	8.25		0.500	ug/L	10.0	ND	82.5	67-136		
1,3,5-Trimethylbenzene	8.48		0.500	ug/L	10.0	ND	84.8	40-140		
Acrylonitrile	11.2		0.500	ug/L	10.0	ND	112	65-137		
Surrogate: Toluene-d8			*22.7*	*ug/L*	*20.0*		*114*	*70-130*		
Surrogate: 4-Bromofluorobenzene			*20.4*	*ug/L*	*20.0*		*102*	*70-130*		
Surrogate: 1,2-Dichlorobenzene-d4			*20.1*	*ug/L*	*20.0*		*100*	*70-130*		
Matrix Spike Dup (BEE0256-MSD1)	**Source: MEE0083-05**				Prepared & Analyzed: 05/08/24 17:40					
Bromodichloromethane	11.5		0.500	ug/L	10.0	ND	115	70-130	3.26	20
o-Chlorotoluene	8.45		0.500	ug/L	10.0	ND	84.5	70-130	1.76	20
Bromochloromethane	10.7		0.500	ug/L	10.0	ND	107	70-130	2.41	20
1,2-Dichloropropane	10.3		0.500	ug/L	10.0	ND	103	70-130	1.82	20
1,3,5-Trimethylbenzene	8.36		0.500	ug/L	10.0	ND	83.6	40-140	1.43	20
m-Dichlorobenzene	8.27		0.500	ug/L	10.0	ND	82.7	70-130	0.723	20
1,3-Dichloropropane	8.68		0.500	ug/L	10.0	ND	86.8	70-130	1.04	20
2,2-Dichloropropane	9.87		0.500	ug/L	10.0	ND	98.7	70-130	0.505	20
1,2-Dichlorobenzene (ortho-Dichlorobenzene)	8.28		0.500	ug/L	10.0	ND	82.8	70-130	0.362	20
2-hexanone	8.69		2.50	ug/L	10.0	ND	86.9	43-175	0.916	20
p-Chlorotoluene	8.26		0.500	ug/L	10.0	ND	82.6	70-130	0.363	20
Acrylonitrile	11.1		0.500	ug/L	10.0	ND	111	65-137	1.07	20
Benzene	10.2		0.500	ug/L	10.0	ND	102	70-130	1.17	20
Carbon disulfide	11.1		0.500	ug/L	10.0	ND	111	70-130	2.94	20
1,4-Dichlorobenzene (para-Dichlorobenzene)	8.07		0.500	ug/L	10.0	ND	80.7	70-130	1.23	20
1,1-Dichloropropene	10.1		0.500	ug/L	10.0	ND	101	70-130	1.96	20
Vinyl Chloride	10.9		0.500	ug/L	10.0	ND	109	70-130	2.62	20
1,1,1,2-Tetrachloroethane	9.28		0.500	ug/L	10.0	ND	92.8	70-130	0.108	20
1,1,1-Trichloroethane	10.0		0.500	ug/L	10.0	ND	100	70-130	2.75	20
1,1,2,2-Tetrachloroethane	8.34		0.500	ug/L	10.0	ND	83.4	67-136	1.08	20
1,1,2-Trichlorethane	8.66		0.500	ug/L	10.0	ND	86.6	70-130	1.94	20
1,2-Dichloroethane	10.4		0.500	ug/L	10.0	ND	104	70-130	0.193	20
1,1-Dichloroethylene	10.2		0.500	ug/L	10.0	ND	102	70-130	0.980	20
Bromoform	9.41		0.500	ug/L	10.0	ND	94.1	59-140	2.10	20
1,2,3-Trichlorobenzene	12.7		0.500	ug/L	10.0	ND	127	67-134	4.10	20

Anatek Labs, Inc.

1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - email spokane@anateklabs.com

Quality Control Data
(Continued)

Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEE0256 - VOC (Continued)										
Matrix Spike Dup (BEE0256-MSD1)	**Source: MEE0083-05**				Prepared & Analyzed: 05/08/24 17:40					
1,2,3-Trichloropropane	7.90		0.500	ug/L	10.0	ND	79.0	69-137	2.50	20
1,2,4-Trichlorobenzene	9.25		0.500	ug/L	10.0	ND	92.5	70-130	1.31	20
1,2,4-Trimethylbenzene	8.20		0.500	ug/L	10.0	ND	82.0	40-140	1.21	20
DBCP (screening)	9.35		0.500	ug/L	10.0	ND	93.5	55-146	0.958	20
EDB (screening)	8.72		0.500	ug/L	10.0	ND	87.2	70-130	0.686	20
1,1-Dichloroethane	10.5		0.500	ug/L	10.0	ND	105	70-130	0.475	20
tert-Butylbenzene	8.46		0.500	ug/L	10.0	ND	84.6	70-130	1.41	20
Bromobenzene	8.27		0.500	ug/L	10.0	ND	82.7	70-130	1.32	20
n-Butylbenzene	8.14		0.500	ug/L	10.0	ND	81.4	67-130	1.46	20
n-Propylbenzene	8.68		0.500	ug/L	10.0	ND	86.8	70-130	1.15	20
o-Xylene (MCL for total)	8.59		0.500	ug/L	10.0	ND	85.9	62-127	1.73	20
p-isopropyltoluene	8.26		0.500	ug/L	10.0	ND	82.6	70-130	1.92	20
methyl-t-butyl ether (MTBE)	9.50		0.500	ug/L	10.0	ND	95.0	57-138	0.316	20
Styrene	8.32		0.500	ug/L	10.0	ND	83.2	30-130	0.724	20
Methyl isobutyl ketone (MIBK)	10.7		2.50	ug/L	10.0	ND	107	53-167	0.654	20
Tetrachloroethylene	8.20		0.500	ug/L	10.0	1.01	71.9	70-130	0.122	20
Toluene	10.5		0.500	ug/L	10.0	ND	105	70-130	2.27	20
trans-1,2 Dichloroethylene	10.7		0.500	ug/L	10.0	ND	107	70-130	0.748	20
trans-1,3-Dichloropropene	8.68		0.500	ug/L	10.0	ND	86.8	61-131	0.810	20
Trichloroethene	9.61		0.500	ug/L	10.0	ND	96.1	70-130	3.28	20
sec-Butylbenzene	8.48		0.500	ug/L	10.0	ND	84.8	70-130	2.33	20
Dibromomethane	11.1		0.500	ug/L	10.0	ND	111	70-130	0.906	20
Carbon Tetrachloride	10.9		0.500	ug/L	10.0	ND	109	70-130	3.52	20
Chlorobenzene (Monochlorobenzene)	8.59		0.500	ug/L	10.0	ND	85.9	70-130	2.30	20
Chloroethane	9.84		0.500	ug/L	10.0	ND	98.4	68-138	2.81	20
Chloroform	10.7		0.500	ug/L	10.0	ND	107	70-130	2.31	20
cis-1,2-Dichloroethylene	10.6		0.500	ug/L	10.0	ND	106	70-130	0.937	20
Naphthalene	12.1		0.500	ug/L	10.0	ND	121	56-147	2.43	20
Dibromochloromethane	9.66		0.500	ug/L	10.0	ND	96.6	70-130	2.05	20
Trichloroflouromethane	10.9		0.500	ug/L	10.0	ND	109	50-154	4.31	20
Dichlorodifluoromethane	8.71		0.500	ug/L	10.0	0.520	81.9	57-136	4.16	20
Ethylbenzene	8.65		0.500	ug/L	10.0	ND	86.5	70-130	0.576	20
Hexachlorobutadiene	9.02		0.500	ug/L	10.0	ND	90.2	70-130	0.111	20
Isopropylbenzene	8.63		0.500	ug/L	10.0	ND	86.3	70-130	2.74	20
m/p Xylenes (MCL for total)	16.9		0.500	ug/L	20.0	ND	84.5	57-130	1.76	20
Methyl ethyl ketone (MEK)	10.9		2.50	ug/L	10.0	ND	109	47-165	4.68	20
cis-1,3-Dichloropropene	10.3		0.500	ug/L	10.0	ND	103	74-124	0.0974	20
Surrogate: 4-Bromofluorobenzene			*20.1*	*ug/L*	*20.0*		*100*	*70-130*		
Surrogate: Toluene-d8			*22.4*	*ug/L*	*20.0*		*112*	*70-130*		
Surrogate: 1,2-Dichlorobenzene-d4			*20.0*	*ug/L*	*20.0*		*99.9*	*70-130*		

MEE0083

Due: 05/16/24

SPOKANE COUNTY ENVIRONMENTAL SERVICES LANDFILL CLOSURE
CHAIN OF CUSTODY RECORD 2024

SPOKANE COUNTY ENVIROMENTAL SERVICES
22515 N. ELK CHATTAROY RD.
COLERT, WASHINGTON 99005
PHONE: (509) 238-6607
FAX: (509) 238-6812

PROJECT: GREENACRES SEMI-ANNUAL OR ANNUAL SAMPLING (CIRCLE ONE)
SHIPPING COMPANY: UPS
SHIPPING NUMBER: UPS LABELS
NUMBER OF COOLERS: 2

LAB: SVL ANALYTICAL
ONE GOVERNMENT GULCH
KELLOGG, ID 83837-0929
(208) 784-1258; FAX (208)783-0891
ATTENTION: Sample Receiving

LAB: ANATEK LAB
1282 ALTURAS DR
MOSCOW, IDAHO 83843
(208) 883-2839
ATTENTION: Sample Receiving

PARAMETERS:	VOC'S	BEHP / PCP	NITRATE	TRACE METALS Mn / As / Sb / Pb / Cr				
CONTAINERS:	3-40 ml Voa's	1-1 Liter Amber Glass	1-250 ml Poly bottle	1-500 ml Poly Bottle				
PRESERVATION:	HCl to pH<2	NONE	NONE	FIELD FILTERED HNO3 to pH<2				
HOLDING TIME:	14 days	7 Days (to extract)	48 HOURS (to extract)	6 months				
METHODS:	8260B	8270C	300.0	Mn 6010	As 7060A	Sb 7041	Pb 6010	Cr 6010

SAMPLER'S:
Mike Terris
Gordie Fisette
Craig Campbell
DATE: 5/1/2024

SAMPLE ID:	DATE:	TIME:	VOC'S	BEHP / PCP	NITRATE	Mn	As	Sb	Pb	Cr	# BOTTLES	COOLER#	COMMENTS:
W-SVA1-240501	5/1/2024	0900	X	X							4	8	
W-WCC1-240501	5/1/2024	1005	X	X							4	8	
W-WCC2-240501	5/1/2024	~~1318~~ 1401	X	X							4	8	
W-WCC4A-240501	5/1/2024	1225	X	X							4	8	
W-WCC7-240501	5/1/2024	0930	X	X							12	141	MS/MSD
W-WCC8-240501	5/1/2024	1227	X	X							4	8	
W-WCC9-240501	5/1/2024	1059	X	X							4	8	
W-WCC10R-240501	5/1/2024	0943	X	X							4	8	
W-WCC11B-240501	5/1/2024	1250	X	X							4	141	
W-WCC12-240501	5/1/2024	1410	X	X							4	141	
WS-1-1-240501	5/1/2024	0930	X	X							4	8	
WS-2-1-240501	5/1/2024	—	X								2	141	Trip Blanks

COMMENT: Please email the sample condition report to Mike and Austin ASAP; mterris@spokanecounty.org & astewart@spokanecounty.org

RELINQUISHED BY:
SIGNATURE: Mike S Terris
PRINT NAME: Mike S Terris
DATE: 5/1/2024
TIME: 1530
SPOKANE COUNTY UTILITIES LANDFILL CLOSURE

RECEIVED BY:
SIGNATURE: SM
PRINT NAME:
DATE: 5/2/24
TIME: 9:35
COMPANY

ALL VOC'S ARE PLACED INTO COOLER #141

Subcontract Order

X4E0045

One Government Gulch - PO Box 929
Kellogg ID 83837-0929
(208) 784-1258

Sending Laboratory:
SVL Analytical, Inc.
One Government Gulch
PO Box 929
Kellogg, ID 83837-0929
Phone: 208-784-1258
Project Manager: Dave Tryon

Client:
Spokane County Environmental Services (Colbert)

Project Name:
Routine

Project State of Origin:
Washington

Receiving Laboratory:
Anatek Labs (ID)
1282 Alturas Drive
Moscow, ID 83843
Phone: 208-883-2839

Report and Invoice to SVL Analytical, Inc.

Analysis	Due	HT Expires		
SVL ID: X4E0045-01 Client ID: **W-SVA1-240501**			**Water**	**Sampled: 01-May-24 09:00**
Spokane County - Sub VOC 8260 (Anatek)	16-May-24	15-May-24 09:00	DEDICATED QC	
Sub Pesticides Screen by EPA 8270C		08-May-24 09:00		
Containers Supplied:				
Amber VOA HCl (A)				
Amber VOA HCl (B)				
Amber VOA HCl (C)				
Raw Amber Glass (D)				
SVL ID: X4E0045-02 Client ID: **W-WCC1-240501**			**Water**	**Sampled: 01-May-24 10:05**
Spokane County - Sub VOC 8260 (Anatek)	16-May-24	15-May-24 10:05	DEDICATED QC	
Sub Pesticides Screen by EPA 8270C		08-May-24 10:05		
Containers Supplied:				
Amber VOA HCl (A)				
Amber VOA HCl (B)				
Amber VOA HCl (C)				
Raw Amber Glass (D)				
SVL ID: X4E0045-03 Client ID: **W-WCC2-240501**			**Water**	**Sampled: 01-May-24 14:01**
Spokane County - Sub VOC 8260 (Anatek)	16-May-24	15-May-24 14:01	DEDICATED QC	
Sub Pesticides Screen by EPA 8270C		08-May-24 14:01		
Containers Supplied:				
Amber VOA HCl (A)				
Amber VOA HCl (B)				
Amber VOA HCl (C)				
Raw Amber Glass (D)				
SVL ID: X4E0045-04 Client ID: **W-WCC4A-240501**			**Water**	**Sampled: 01-May-24 12:25**
Spokane County - Sub VOC 8260 (Anatek)	16-May-24	15-May-24 12:25	DEDICATED QC	
Sub Pesticides Screen by EPA 8270C		08-May-24 12:25		
Containers Supplied:				
Amber VOA HCl (A)				
Amber VOA HCl (B)				
Amber VOA HCl (C)				
Raw Amber Glass (D)				

Shipped Directly to Anatek
MMD 5/2/24

Relinquished by:_____ Date/Time:_____ Received by: SM Date/Time: 9:35 5/2/24

Relinquished by:_____ Date/Time:_____ Received by:_____ Date/Time:_____

One Government Gulch - PO Box 929
Kellogg ID 83837-0929
(208) 784-1258

Subcontract Order

X4E0045

Analysis	Due	HT Expires		
SVL ID: X4E0045-05 Client ID: **W-WCC7-240501**			**Water**	**Sampled: 01-May-24 09:30**
Spokane County - Sub VOC 8260 (Anatek)	16-May-24	15-May-24 09:30	DEDICATED QC	
Sub Pesticides Screen by EPA 8270C		08-May-24 09:30		
Containers Supplied:				
Amber VOA HCl (A)				
Amber VOA HCl (B)				
Amber VOA HCl (C)				
Raw Amber Glass (D)				
Amber VOA HCl (E)				
Amber VOA HCl (F)				
Amber VOA HCl (G)				
Amber VOA HCl (H)				
Amber VOA HCl (I)				
Amber VOA HCl (J)				
Raw Amber Glass (K)				
Raw Amber Glass (L)				
SVL ID: X4E0045-06 Client ID: **W-WCC8-240501**			**Water**	**Sampled: 01-May-24 12:27**
Spokane County - Sub VOC 8260 (Anatek)	16-May-24	15-May-24 12:27	DEDICATED QC	
Sub Pesticides Screen by EPA 8270C		08-May-24 12:27		
Containers Supplied:				
Amber VOA HCl (A)				
Amber VOA HCl (B)				
Amber VOA HCl (C)				
Raw Amber Glass (D)				
SVL ID: X4E0045-07 Client ID: **W-WCC9-240501**			**Water**	**Sampled: 01-May-24 10:59**
Spokane County - Sub VOC 8260 (Anatek)	16-May-24	15-May-24 10:59	DEDICATED QC	
Sub Pesticides Screen by EPA 8270C		08-May-24 10:59		
Containers Supplied:				
Amber VOA HCl (A)				
Amber VOA HCl (B)				
Amber VOA HCl (C)				
Raw Amber Glass (D)				
SVL ID: X4E0045-08 Client ID: **W-WCC10R-240501**			**Water**	**Sampled: 01-May-24 09:43**
Spokane County - Sub VOC 8260 (Anatek)	16-May-24	15-May-24 09:43	DEDICATED QC	
Sub Pesticides Screen by EPA 8270C		08-May-24 09:43		
Containers Supplied:				
Amber VOA HCl (A)				
Amber VOA HCl (B)				
Amber VOA HCl (C)				
Raw Amber Glass (D)				
SVL ID: X4E0045-09 Client ID: **W-WCC11B-240501**			**Water**	**Sampled: 01-May-24 12:50**
Spokane County - Sub VOC 8260 (Anatek)	16-May-24	15-May-24 12:50	DEDICATED QC	
Sub Pesticides Screen by EPA 8270C		08-May-24 12:50		
Containers Supplied:				
Amber VOA HCl (A)				
Amber VOA HCl (B)				
Amber VOA HCl (C)				
Raw Amber Glass (D)				

Shipped Directly to Anatek MMD 5/2/24

Relinquished by:_____ Date/Time:_____ Received by:_____ Date/Time:_____

Relinquished by:_____ Date/Time:_____ Received by:_____ Date/Time:_____

One Government Gulch - PO Box 929
Kellogg ID 83837-0929
(208) 784-1258

Subcontract Order

X4E0045

Analysis	Due	HT Expires		
SVL ID: X4E0045-10 Client ID: **W-WCC12-240501**			**Water**	**Sampled: 01-May-24 14:10**
Spokane County - Sub VOC 8260 (Anatek)	16-May-24	15-May-24 14:10	DEDICATED QC	
Sub Pesticides Screen by EPA 8270C		08-May-24 14:10		
Containers Supplied:				
Amber VOA HCl (A)				
Amber VOA HCl (B)				
Amber VOA HCl (C)				
Raw Amber Glass (D)				
SVL ID: X4E0045-11 Client ID: **WS-1-1-240501**			**Water**	**Sampled: 01-May-24 09:30**
Spokane County - Sub VOC 8260 (Anatek)	16-May-24	15-May-24 09:30	DEDICATED QC	
Sub Pesticides Screen by EPA 8270C		08-May-24 09:30		
Containers Supplied:				
Amber VOA HCl (A)				
Amber VOA HCl (B)				
Amber VOA HCl (C)				
Raw Amber Glass (D)				
SVL ID: X4E0045-12 Client ID: **WS-2-1-240501**			**Water**	**Sampled: 01-May-24 00:00**
Spokane County - Sub VOC 8260 (Anatek)	16-May-24	15-May-24 00:00	DEDICATED QC	
Sub Pesticides Screen by EPA 8270C		08-May-24 00:00		
Containers Supplied:				
Amber VOA HCl (A)				
Amber VOA HCl (B)				
Amber VOA HCl (C)				
Raw Amber Glass (D)				

Shipped Directly to Anatek
5/2/24 mw

Relinquished by:_____ Date/Time:_____ Received by:_____ Date/Time:_____

Relinquished by:_____ Date/Time:_____ Received by:_____ Date/Time:_____

Anatek Labs, Inc.

Sample Receipt and Preservation Form

Client Name: Spokane County Enviro

TAT: (Normal) RUSH: _____ days

Samples Received From: FedEx (UPS) USPS Client Courier Other: —

Custody Seal on Cooler/Box: (Yes) No Custody Seals Intact: (Yes) No N/A

Number of Coolers/Boxes: 2 Type of Ice: (Wet Ice) Ice Packs Dry Ice None

Packing Material: (Bubble Wrap) (Bags) Foam/Peanuts Paper None Other: —

Cooler Temp As Read (°C): 5.6 Cooler Temp Corrected (°C): - Thermometer Used: IR-4 (IR-5)

				Comments:
Samples Received Intact?	(Yes)	No	N/A	
Chain of Custody Present/Complete?	(Yes)	No	N/A	
Labels and Chains Agree?	(Yes)	No	N/A	
Samples Received Within Hold Time?	(Yes)	No	N/A	
Correct Containers Received?	(Yes)	No	N/A	
Anatek Bottles Used?	(Yes)	No	Unknown	
Total Number of Sample Bottles Received: 54				

				Initial pH:	pH Paper ID:
Samples Properly Preserved?	(Yes)	No	N/A	<2 or	
If No, record preservation and pH-after details					
VOC Vials Free of Headspace (<6mm)?	(Yes)	No	N/A		
VOC Trip Blanks Present?	(Yes)	No	N/A		

Record preservatives (and lot numbers, if known) for containers below:

G1L - BEHP x 13

G44 HCl (2304) VOC x 39 + 2 Blanks

Notes, comments, etc. (also use this space if contacting the client - record names and date/time)

Received/Inspected By: SM Date/Time: 5/2/24 9:35

Form F19.01 - Eff 1 Dec 2022

Appendix C: Landfill Gas Probe Measurements

eurofins | Air Toxics

3/29/2024
Mr. Gordie Fisette
Spokane County Utilities
22515 N. Elk Chattaroy Road

Colbert WA 99005

Project Name: Greenacres Landfill
Project #: 308 N. Kramer Rd
Workorder #: 2403604

Dear Mr. Gordie Fisette

The following report includes the data for the above referenced project for sample(s) received on 3/22/2024 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Monica Tran at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Monica Tran

Project Manager

eurofins | Air Toxics

WORK ORDER #: 2403604

Work Order Summary

CLIENT:	Mr. Gordie Fisette Spokane County Utilities 22515 N. Elk Chattaroy Road Colbert, WA 99005	**BILL TO:**	Mr. Gordie Fisette Spokane County Utilities 22515 N. Elk Chattaroy Road Colbert, WA 99005
PHONE:	509-238-6607	**P.O. #**	GF404GA
FAX:	509-238-6812	**PROJECT #**	308 N. Kramer Rd Greenacres Landfill
DATE RECEIVED:	03/22/2024	**CONTACT:**	Monica Tran
DATE COMPLETED:	03/29/2024		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	GP011-240321	TO-15	4.7 "Hg	9.9 psi
02A	GP010-240321	TO-15	7.3 "Hg	10.1 psi
03A	Lab Blank	TO-15	NA	NA
04A	CCV	TO-15	NA	NA
05A	LCS	TO-15	NA	NA
05AA	LCSD	TO-15	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 03/29/24

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP – 209222, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP – T104704434-22-18, UT NELAP – CA009332022-14, VA NELAP - 12240, WA ELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-017
Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000

LABORATORY NARRATIVE
EPA Method TO-15
Spokane County Utilities
Workorder# 2403604

Two 1 Liter Summa Canister samples were received on March 22, 2024. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

eurofins | Air Toxics

Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: GP011-240321

Lab ID#: 2403604-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Ethanol	9.9	18	19	35
Benzene	0.99	3.1	3.2	10
Tetrachloroethene	0.99	1.3	6.7	8.8
Cumene	0.99	1.6	4.9	8.0

Client Sample ID: GP010-240321

Lab ID#: 2403604-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.1	1.2	3.6	3.8
Cumene	1.1	1.7	5.5	8.5

eurofins | Air Toxics

Client Sample ID: GP011-240321

Lab ID#: 2403604-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91032724**	**Date of Collection:**	**3/21/24 8:36:00 AM**
Dil. Factor:	**1.98**	**Date of Analysis:**	**3/27/24 09:57 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.99	Not Detected	4.9	Not Detected
Freon 114	0.99	Not Detected	6.9	Not Detected
Chloromethane	9.9	Not Detected	20	Not Detected
Vinyl Chloride	0.99	Not Detected	2.5	Not Detected
1,3-Butadiene	0.99	Not Detected	2.2	Not Detected
Bromomethane	9.9	Not Detected	38	Not Detected
Chloroethane	4.0	Not Detected	10	Not Detected
Freon 11	0.99	Not Detected	5.6	Not Detected
Ethanol	9.9	18	19	35
Freon 113	0.99	Not Detected	7.6	Not Detected
1,1-Dichloroethene	0.99	Not Detected	3.9	Not Detected
Acetone	9.9	Not Detected	24	Not Detected
2-Propanol	4.0	Not Detected	9.7	Not Detected
Carbon Disulfide	4.0	Not Detected	12	Not Detected
3-Chloropropene	4.0	Not Detected	12	Not Detected
Methylene Chloride	9.9	Not Detected	34	Not Detected
Methyl tert-butyl ether	4.0	Not Detected	14	Not Detected
trans-1,2-Dichloroethene	0.99	Not Detected	3.9	Not Detected
Hexane	0.99	Not Detected	3.5	Not Detected
1,1-Dichloroethane	0.99	Not Detected	4.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.0	Not Detected	12	Not Detected
cis-1,2-Dichloroethene	0.99	Not Detected	3.9	Not Detected
Tetrahydrofuran	0.99	Not Detected	2.9	Not Detected
Chloroform	0.99	Not Detected	4.8	Not Detected
1,1,1-Trichloroethane	0.99	Not Detected	5.4	Not Detected
Cyclohexane	0.99	Not Detected	3.4	Not Detected
Carbon Tetrachloride	0.99	Not Detected	6.2	Not Detected
2,2,4-Trimethylpentane	0.99	Not Detected	4.6	Not Detected
Benzene	0.99	3.1	3.2	10
1,2-Dichloroethane	0.99	Not Detected	4.0	Not Detected
Heptane	0.99	Not Detected	4.0	Not Detected
Trichloroethene	0.99	Not Detected	5.3	Not Detected
1,2-Dichloropropane	0.99	Not Detected	4.6	Not Detected
1,4-Dioxane	4.0	Not Detected	14	Not Detected
Bromodichloromethane	0.99	Not Detected	6.6	Not Detected
cis-1,3-Dichloropropene	0.99	Not Detected	4.5	Not Detected
4-Methyl-2-pentanone	0.99	Not Detected	4.0	Not Detected
Toluene	2.0	Not Detected	7.5	Not Detected
trans-1,3-Dichloropropene	0.99	Not Detected	4.5	Not Detected
1,1,2-Trichloroethane	0.99	Not Detected	5.4	Not Detected
Tetrachloroethene	0.99	1.3	6.7	8.8
2-Hexanone	4.0	Not Detected	16	Not Detected

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Client Sample ID: GP011-240321

Lab ID#: 2403604-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91032724**	**Date of Collection:**	**3/21/24 8:36:00 AM**
Dil. Factor:	**1.98**	**Date of Analysis:**	**3/27/24 09:57 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.99	Not Detected	8.4	Not Detected
1,2-Dibromoethane (EDB)	0.99	Not Detected	7.6	Not Detected
Chlorobenzene	0.99	Not Detected	4.6	Not Detected
Ethyl Benzene	0.99	Not Detected	4.3	Not Detected
m,p-Xylene	2.0	Not Detected	8.6	Not Detected
o-Xylene	0.99	Not Detected	4.3	Not Detected
Styrene	0.99	Not Detected	4.2	Not Detected
Bromoform	0.99	Not Detected	10	Not Detected
Cumene	0.99	1.6	4.9	8.0
1,1,2,2-Tetrachloroethane	0.99	Not Detected	6.8	Not Detected
Propylbenzene	0.99	Not Detected	4.9	Not Detected
4-Ethyltoluene	0.99	Not Detected	4.9	Not Detected
1,3,5-Trimethylbenzene	0.99	Not Detected	4.9	Not Detected
1,2,4-Trimethylbenzene	0.99	Not Detected	4.9	Not Detected
1,3-Dichlorobenzene	0.99	Not Detected	6.0	Not Detected
1,4-Dichlorobenzene	0.99	Not Detected	6.0	Not Detected
alpha-Chlorotoluene	0.99	Not Detected	5.1	Not Detected
1,2-Dichlorobenzene	0.99	Not Detected	6.0	Not Detected
1,2,4-Trichlorobenzene	4.0	Not Detected	29	Not Detected
Hexachlorobutadiene	4.0	Not Detected	42	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	107	70-130
4-Bromofluorobenzene	78	70-130

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Client Sample ID: GP010-240321

Lab ID#: 2403604-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91032725**	**Date of Collection:**	**3/21/24 9:32:00 AM**
Dil. Factor:	**2.23**	**Date of Analysis:**	**3/27/24 10:22 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.5	Not Detected
Freon 114	1.1	Not Detected	7.8	Not Detected
Chloromethane	11	Not Detected	23	Not Detected
Vinyl Chloride	1.1	Not Detected	2.8	Not Detected
1,3-Butadiene	1.1	Not Detected	2.5	Not Detected
Bromomethane	11	Not Detected	43	Not Detected
Chloroethane	4.5	Not Detected	12	Not Detected
Freon 11	1.1	Not Detected	6.3	Not Detected
Ethanol	11	Not Detected	21	Not Detected
Freon 113	1.1	Not Detected	8.5	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Acetone	11	Not Detected	26	Not Detected
2-Propanol	4.5	Not Detected	11	Not Detected
Carbon Disulfide	4.5	Not Detected	14	Not Detected
3-Chloropropene	4.5	Not Detected	14	Not Detected
Methylene Chloride	11	Not Detected	39	Not Detected
Methyl tert-butyl ether	4.5	Not Detected	16	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Hexane	1.1	Not Detected	3.9	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.5	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.5	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.3	Not Detected
Chloroform	1.1	Not Detected	5.4	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	6.1	Not Detected
Cyclohexane	1.1	Not Detected	3.8	Not Detected
Carbon Tetrachloride	1.1	Not Detected	7.0	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.2	Not Detected
Benzene	1.1	1.2	3.6	3.8
1,2-Dichloroethane	1.1	Not Detected	4.5	Not Detected
Heptane	1.1	Not Detected	4.6	Not Detected
Trichloroethene	1.1	Not Detected	6.0	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.2	Not Detected
1,4-Dioxane	4.5	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.5	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.1	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.6	Not Detected
Toluene	2.2	Not Detected	8.4	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected	5.1	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.1	Not Detected
Tetrachloroethene	1.1	Not Detected	7.6	Not Detected
2-Hexanone	4.5	Not Detected	18	Not Detected

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Client Sample ID: GP010-240321

Lab ID#: 2403604-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91032725**	**Date of Collection:**	**3/21/24 9:32:00 AM**
Dil. Factor:	**2.23**	**Date of Analysis:**	**3/27/24 10:22 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.5	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.6	Not Detected
Chlorobenzene	1.1	Not Detected	5.1	Not Detected
Ethyl Benzene	1.1	Not Detected	4.8	Not Detected
m,p-Xylene	2.2	Not Detected	9.7	Not Detected
o-Xylene	1.1	Not Detected	4.8	Not Detected
Styrene	1.1	Not Detected	4.7	Not Detected
Bromoform	1.1	Not Detected	12	Not Detected
Cumene	1.1	1.7	5.5	8.5
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.6	Not Detected
Propylbenzene	1.1	Not Detected	5.5	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.5	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.5	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.5	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.8	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.7	Not Detected
1,2,4-Trichlorobenzene	4.5	Not Detected	33	Not Detected
Hexachlorobutadiene	4.5	Not Detected	48	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	107	70-130
4-Bromofluorobenzene	80	70-130

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Client Sample ID: Lab Blank

Lab ID#: 2403604-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91032706**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/27/24 10:11 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	5.0	Not Detected	9.4	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	1.0	Not Detected	3.8	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

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Client Sample ID: Lab Blank

Lab ID#: 2403604-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91032706**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/27/24 10:11 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	1.0	Not Detected	4.3	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	110	70-130
4-Bromofluorobenzene	81	70-130

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Client Sample ID: CCV

Lab ID#: 2403604-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91032703**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 3/27/24 08:58 AM**

Compound	%Recovery
Freon 12	89
Freon 114	87
Chloromethane	111
Vinyl Chloride	110
1,3-Butadiene	90
Bromomethane	85
Chloroethane	98
Freon 11	89
Ethanol	73
Freon 113	83
1,1-Dichloroethene	88
Acetone	94
2-Propanol	71
Carbon Disulfide	97
3-Chloropropene	89
Methylene Chloride	93
Methyl tert-butyl ether	83
trans-1,2-Dichloroethene	90
Hexane	92
1,1-Dichloroethane	103
2-Butanone (Methyl Ethyl Ketone)	101
cis-1,2-Dichloroethene	85
Tetrahydrofuran	76
Chloroform	93
1,1,1-Trichloroethane	82
Cyclohexane	83
Carbon Tetrachloride	87
2,2,4-Trimethylpentane	95
Benzene	98
1,2-Dichloroethane	105
Heptane	102
Trichloroethene	88
1,2-Dichloropropane	110
1,4-Dioxane	90
Bromodichloromethane	99
cis-1,3-Dichloropropene	93
4-Methyl-2-pentanone	91
Toluene	95
trans-1,3-Dichloropropene	93
1,1,2-Trichloroethane	95
Tetrachloroethene	81
2-Hexanone	99

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Client Sample ID: CCV

Lab ID#: 2403604-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91032703**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/27/24 08:58 AM**	

Compound	%Recovery
Dibromochloromethane	100
1,2-Dibromoethane (EDB)	93
Chlorobenzene	100
Ethyl Benzene	94
m,p-Xylene	95
o-Xylene	88
Styrene	95
Bromoform	88
Cumene	88
1,1,2,2-Tetrachloroethane	106
Propylbenzene	96
4-Ethyltoluene	98
1,3,5-Trimethylbenzene	95
1,2,4-Trimethylbenzene	93
1,3-Dichlorobenzene	86
1,4-Dichlorobenzene	83
alpha-Chlorotoluene	86
1,2-Dichlorobenzene	85
1,2,4-Trichlorobenzene	84
Hexachlorobutadiene	77

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	98	70-130
4-Bromofluorobenzene	83	70-130

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Client Sample ID: LCS

Lab ID#: 2403604-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91032704**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/27/24 09:22 AM**	

Compound	%Recovery	Method Limits
Freon 12	90	70-130
Freon 114	86	70-130
Chloromethane	113	70-130
Vinyl Chloride	112	70-130
1,3-Butadiene	92	70-130
Bromomethane	88	70-130
Chloroethane	100	70-130
Freon 11	88	70-130
Ethanol	92	70-130
Freon 113	79	70-130
1,1-Dichloroethene	86	70-130
Acetone	99	70-130
2-Propanol	80	70-130
Carbon Disulfide	99	70-130
3-Chloropropene	90	70-130
Methylene Chloride	92	70-130
Methyl tert-butyl ether	83	70-130
trans-1,2-Dichloroethene	89	70-130
Hexane	94	70-130
1,1-Dichloroethane	103	70-130
2-Butanone (Methyl Ethyl Ketone)	103	70-130
cis-1,2-Dichloroethene	85	70-130
Tetrahydrofuran	83	70-130
Chloroform	92	70-130
1,1,1-Trichloroethane	84	70-130
Cyclohexane	87	70-130
Carbon Tetrachloride	86	70-130
2,2,4-Trimethylpentane	99	70-130
Benzene	98	70-130
1,2-Dichloroethane	106	70-130
Heptane	103	70-130
Trichloroethene	92	70-130
1,2-Dichloropropane	108	70-130
1,4-Dioxane	94	70-130
Bromodichloromethane	100	70-130
cis-1,3-Dichloropropene	92	70-130
4-Methyl-2-pentanone	93	70-130
Toluene	94	70-130
trans-1,3-Dichloropropene	94	70-130
1,1,2-Trichloroethane	97	70-130
Tetrachloroethene	83	70-130
2-Hexanone	99	70-130

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Client Sample ID: LCS

Lab ID#: 2403604-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91032704**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/27/24 09:22 AM**	

Compound	%Recovery	Method Limits
Dibromochloromethane	97	70-130
1,2-Dibromoethane (EDB)	95	70-130
Chlorobenzene	102	70-130
Ethyl Benzene	99	70-130
m,p-Xylene	98	70-130
o-Xylene	91	70-130
Styrene	96	70-130
Bromoform	86	70-130
Cumene	91	70-130
1,1,2,2-Tetrachloroethane	108	70-130
Propylbenzene	96	70-130
4-Ethyltoluene	97	70-130
1,3,5-Trimethylbenzene	96	70-130
1,2,4-Trimethylbenzene	94	70-130
1,3-Dichlorobenzene	85	70-130
1,4-Dichlorobenzene	83	70-130
alpha-Chlorotoluene	86	70-130
1,2-Dichlorobenzene	85	70-130
1,2,4-Trichlorobenzene	84	70-130
Hexachlorobutadiene	79	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	99	70-130
4-Bromofluorobenzene	82	70-130

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Client Sample ID: LCSD

Lab ID#: 2403604-05AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91032705**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/27/24 09:46 AM**	

Compound	%Recovery	Method Limits
Freon 12	90	70-130
Freon 114	86	70-130
Chloromethane	114	70-130
Vinyl Chloride	114	70-130
1,3-Butadiene	95	70-130
Bromomethane	88	70-130
Chloroethane	102	70-130
Freon 11	88	70-130
Ethanol	97	70-130
Freon 113	79	70-130
1,1-Dichloroethene	86	70-130
Acetone	102	70-130
2-Propanol	81	70-130
Carbon Disulfide	100	70-130
3-Chloropropene	91	70-130
Methylene Chloride	95	70-130
Methyl tert-butyl ether	85	70-130
trans-1,2-Dichloroethene	88	70-130
Hexane	95	70-130
1,1-Dichloroethane	104	70-130
2-Butanone (Methyl Ethyl Ketone)	101	70-130
cis-1,2-Dichloroethene	86	70-130
Tetrahydrofuran	84	70-130
Chloroform	92	70-130
1,1,1-Trichloroethane	84	70-130
Cyclohexane	88	70-130
Carbon Tetrachloride	88	70-130
2,2,4-Trimethylpentane	102	70-130
Benzene	98	70-130
1,2-Dichloroethane	105	70-130
Heptane	103	70-130
Trichloroethene	91	70-130
1,2-Dichloropropane	108	70-130
1,4-Dioxane	94	70-130
Bromodichloromethane	98	70-130
cis-1,3-Dichloropropene	93	70-130
4-Methyl-2-pentanone	93	70-130
Toluene	95	70-130
trans-1,3-Dichloropropene	94	70-130
1,1,2-Trichloroethane	97	70-130
Tetrachloroethene	83	70-130
2-Hexanone	101	70-130

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Client Sample ID: LCSD

Lab ID#: 2403604-05AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91032705**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/27/24 09:46 AM**	

Compound	%Recovery	Method Limits
Dibromochloromethane	97	70-130
1,2-Dibromoethane (EDB)	95	70-130
Chlorobenzene	102	70-130
Ethyl Benzene	99	70-130
m,p-Xylene	98	70-130
o-Xylene	92	70-130
Styrene	96	70-130
Bromoform	86	70-130
Cumene	91	70-130
1,1,2,2-Tetrachloroethane	108	70-130
Propylbenzene	94	70-130
4-Ethyltoluene	96	70-130
1,3,5-Trimethylbenzene	95	70-130
1,2,4-Trimethylbenzene	94	70-130
1,3-Dichlorobenzene	85	70-130
1,4-Dichlorobenzene	83	70-130
alpha-Chlorotoluene	86	70-130
1,2-Dichlorobenzene	84	70-130
1,2,4-Trichlorobenzene	84	70-130
Hexachlorobutadiene	78	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	101	70-130
4-Bromofluorobenzene	82	70-130

Analysis Request / Canister Chain of Custody

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Phone (800) 985-5955; Fax (916) 351-8279

Workorder #: 2403604

Instructions

page 1 of 1

Client: Spokane County
Site Name: Greenacres Landfill
Project Manager: Austin Stewart
Sampler: GF, MT, CC

Project Name: Greenacres Landfill
Project #: 308 N. Kramer Rd
PO#: GF404GA

Turnaround Time (Specify Below)
Standard X Rush _____ (Surcharges will apply, per availability)
Samples received after 3PM PST are considered to be received on the following workday.
Requested Date (mm/dd/yy):
OR Number of Days:

Lab ID	Field Sample Identification (Location)	Canister Barcode #	Flow Controller Barcode #	Start Sampling Information		Stop Sampling Information		Requested Analyses				Canister Vacuum/Pressure		Lab Use Only	
				Date	Time	Date	Time	EPA TO-15				Initial ("Hg)	Final ("Hg)	Receipt ("Hg)	Final (psi) Gas: N2 / He
01A	GP011-240321	IL4307	20917	3/21/24	0829	3/21/24	0836	✓				-27.4	-05.0		
02A	GP010-240321	IL1748	22399	3/21/24	0926	3/21/24	0932	✓				-29.2	-5.0		

Special Instructions/Notes:

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
[signature]	3/21/24	1200	[signature] EATL	3/22/24	9:56
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time

Lab Use Only

Shipper Name: FedEx | Custody Seals Intact? (Yes) No None | Condition:

Sample Transportation Notice: Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples. D.O.T Hotline (800) 467-4922

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4/16/2024
Mr. Gordie Fisette
Spokane County Utilities
22515 N. Elk Chattaroy Road

Colbert WA 99005

Project Name: Greenacres LF
Project #: 308 N Kramer RD
Workorder #: 2404214

Dear Mr. Gordie Fisette

The following report includes the data for the above referenced project for sample(s) received on 4/9/2024 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Monica Tran at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Monica Tran

Project Manager

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WORK ORDER #: 2404214

Work Order Summary

CLIENT:	Mr. Gordie Fisette Spokane County Utilities 22515 N. Elk Chattaroy Road Colbert, WA 99005	**BILL TO:**	Mr. Gordie Fisette Spokane County Utilities 22515 N. Elk Chattaroy Road Colbert, WA 99005
PHONE:	509-238-6607	**P.O. #**	MT 404 GA
FAX:	509-238-6812	**PROJECT #**	308 N Kramer RD Greenacres LF
DATE RECEIVED:	04/09/2024	**CONTACT:**	Monica Tran
DATE COMPLETED:	04/15/2024		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	GAGP-02U-240404	TO-15	8 "Hg	9.8 psi
02A	GAGP-001-240404	TO-15	9.6 "Hg	9.6 psi
03A	GAGP-03U-240404	TO-15	8.8 "Hg	10 psi
04A	GAGP-004-240404	TO-15	6.5 "Hg	9.9 psi
05A	GAGP-005-240404	TO-15	8 "Hg	9.9 psi
06A	GAGP-006-240404	TO-15	7.3 "Hg	9.9 psi
07A	GAGP-007-240404	TO-15	6.9 "Hg	9.7 psi
08A	GAGP-08U-240404	TO-15	7.8 "Hg	10 psi
09A	GAGP-009-240404	TO-15	6.5 "Hg	9.8 psi
10A	GAGP-010-240404	TO-15	7.6 "Hg	10 psi
11A	GAGP-011-240404	TO-15	7.1 "Hg	10 psi
12A	Lab Blank	TO-15	NA	NA
13A	CCV	TO-15	NA	NA
14A	LCS	TO-15	NA	NA
14AA	LCSD	TO-15	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 04/15/24

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP – 209222, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP – T104704434-22-18, UT NELAP – CA009332022-14, VA NELAP - 12240, WA ELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-017
Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000

LABORATORY NARRATIVE
EPA Method TO-15
Spokane County Utilities
Workorder# 2404214

Eleven 1 Liter Summa Canister samples were received on April 09, 2024. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

All Quality Control Limit exceedances and affected sample results are noted by flags. Each flag is defined at the bottom of this Case Narrative and on each Sample Result Summary page. Target compound non-detects in the samples that are associated with high bias in QC analyses have not been flagged.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: GAGP-02U-240404

Lab ID#: 2404214-01A

No Detections Were Found.

Client Sample ID: GAGP-001-240404

Lab ID#: 2404214-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.2	1.8	6.8	10
Acetone	12	28	29	66
1,1,1-Trichloroethane	1.2	1.5	6.6	8.3

Client Sample ID: GAGP-03U-240404

Lab ID#: 2404214-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	15	5.9	72
Freon 114	1.2	4.3	8.3	30
Tetrachloroethene	1.2	16	8.1	110

Client Sample ID: GAGP-004-240404

Lab ID#: 2404214-04A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	1.1	1.6	3.4	5.2

Client Sample ID: GAGP-005-240404

Lab ID#: 2404214-05A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 114	1.1	1.2	8.0	8.6
Acetone	11	25	27	60
2-Propanol	4.6	5.2	11	13

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: GAGP-006-240404

Lab ID#: 2404214-06A

No Detections Were Found.

Client Sample ID: GAGP-007-240404

Lab ID#: 2404214-07A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Tetrahydrofuran	1.1	62	3.2	180

Client Sample ID: GAGP-08U-240404

Lab ID#: 2404214-08A

No Detections Were Found.

Client Sample ID: GAGP-009-240404

Lab ID#: 2404214-09A

No Detections Were Found.

Client Sample ID: GAGP-010-240404

Lab ID#: 2404214-10A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	2.5	5.6	12
Cumene	1.1	1.5	5.5	7.4

Client Sample ID: GAGP-011-240404

Lab ID#: 2404214-11A

No Detections Were Found.

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Client Sample ID: GAGP-02U-240404

Lab ID#: 2404214-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041113**	**Date of Collection:**	**4/4/24 9:27:00 AM**
Dil. Factor:	**2.27**	**Date of Analysis:**	**4/11/24 06:19 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.6	Not Detected
Freon 114	1.1	Not Detected	7.9	Not Detected
Chloromethane	11	Not Detected	23	Not Detected
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
1,3-Butadiene	1.1	Not Detected	2.5	Not Detected
Bromomethane	11	Not Detected	44	Not Detected
Chloroethane	4.5	Not Detected	12	Not Detected
Freon 11	1.1	Not Detected	6.4	Not Detected
Ethanol	11	Not Detected	21	Not Detected
Freon 113	1.1	Not Detected	8.7	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Acetone	11	Not Detected	27	Not Detected
2-Propanol	4.5	Not Detected	11	Not Detected
Carbon Disulfide	4.5	Not Detected	14	Not Detected
3-Chloropropene	4.5	Not Detected	14	Not Detected
Methylene Chloride	11	Not Detected	39	Not Detected
Methyl tert-butyl ether	4.5	Not Detected	16	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Hexane	1.1	Not Detected	4.0	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.6	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.5	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.3	Not Detected
Chloroform	1.1	Not Detected	5.5	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	6.2	Not Detected
Cyclohexane	1.1	Not Detected	3.9	Not Detected
Carbon Tetrachloride	1.1	Not Detected	7.1	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.3	Not Detected
Benzene	1.1	Not Detected	3.6	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.6	Not Detected
Heptane	1.1	Not Detected	4.6	Not Detected
Trichloroethene	1.1	Not Detected	6.1	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.2	Not Detected
1,4-Dioxane	4.5	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.6	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.2	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.6	Not Detected
Toluene	2.3	Not Detected	8.6	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected	5.2	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.2	Not Detected
Tetrachloroethene	1.1	Not Detected	7.7	Not Detected
2-Hexanone	4.5	Not Detected	18	Not Detected

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Client Sample ID: GAGP-02U-240404

Lab ID#: 2404214-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041113**	**Date of Collection:**	**4/4/24 9:27:00 AM**
Dil. Factor:	**2.27**	**Date of Analysis:**	**4/11/24 06:19 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.7	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.7	Not Detected
Chlorobenzene	1.1	Not Detected	5.2	Not Detected
Ethyl Benzene	1.1	Not Detected	4.9	Not Detected
m,p-Xylene	2.3	Not Detected	9.8	Not Detected
o-Xylene	1.1	Not Detected	4.9	Not Detected
Styrene	1.1	Not Detected	4.8	Not Detected
Bromoform	1.1	Not Detected	12	Not Detected
Cumene	1.1	Not Detected	5.6	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.8	Not Detected
Propylbenzene	1.1	Not Detected	5.6	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.6	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.6	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.6	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.8	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.8	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.9	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.8	Not Detected
1,2,4-Trichlorobenzene	4.5	Not Detected	34	Not Detected
Hexachlorobutadiene	4.5	Not Detected	48	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	78	70-130

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Client Sample ID: GAGP-001-240404

Lab ID#: 2404214-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041114**	**Date of Collection:**	**4/4/24 1:37:00 PM**
Dil. Factor:	**2.43**	**Date of Analysis:**	**4/11/24 06:44 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.0	Not Detected
Freon 114	1.2	Not Detected	8.5	Not Detected
Chloromethane	12	Not Detected	25	Not Detected
Vinyl Chloride	1.2	Not Detected	3.1	Not Detected
1,3-Butadiene	1.2	Not Detected	2.7	Not Detected
Bromomethane	12	Not Detected	47	Not Detected
Chloroethane	4.9	Not Detected	13	Not Detected
Freon 11	1.2	1.8	6.8	10
Ethanol	12	Not Detected	23	Not Detected
Freon 113	1.2	Not Detected	9.3	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Acetone	12	28	29	66
2-Propanol	4.9	Not Detected	12	Not Detected
Carbon Disulfide	4.9	Not Detected	15	Not Detected
3-Chloropropene	4.9	Not Detected	15	Not Detected
Methylene Chloride	12	Not Detected	42	Not Detected
Methyl tert-butyl ether	4.9	Not Detected	18	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Hexane	1.2	Not Detected	4.3	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.9	Not Detected	14	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.8	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.6	Not Detected
Chloroform	1.2	Not Detected	5.9	Not Detected
1,1,1-Trichloroethane	1.2	1.5	6.6	8.3
Cyclohexane	1.2	Not Detected	4.2	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.6	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.7	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.9	Not Detected
Heptane	1.2	Not Detected	5.0	Not Detected
Trichloroethene	1.2	Not Detected	6.5	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.6	Not Detected
1,4-Dioxane	4.9	Not Detected	18	Not Detected
Bromodichloromethane	1.2	Not Detected	8.1	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.5	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	5.0	Not Detected
Toluene	2.4	Not Detected	9.2	Not Detected
trans-1,3-Dichloropropene	1.2	Not Detected	5.5	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Tetrachloroethene	1.2	Not Detected	8.2	Not Detected
2-Hexanone	4.9	Not Detected	20	Not Detected

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Client Sample ID: GAGP-001-240404

Lab ID#: 2404214-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041114**	**Date of Collection:**	**4/4/24 1:37:00 PM**
Dil. Factor:	**2.43**	**Date of Analysis:**	**4/11/24 06:44 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.3	Not Detected
Chlorobenzene	1.2	Not Detected	5.6	Not Detected
Ethyl Benzene	1.2	Not Detected	5.3	Not Detected
m,p-Xylene	2.4	Not Detected	10	Not Detected
o-Xylene	1.2	Not Detected	5.3	Not Detected
Styrene	1.2	Not Detected	5.2	Not Detected
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	6.0	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.3	Not Detected
Propylbenzene	1.2	Not Detected	6.0	Not Detected
4-Ethyltoluene	1.2	Not Detected	6.0	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	6.0	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	6.0	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.3	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.3	Not Detected
1,2,4-Trichlorobenzene	4.9	Not Detected	36	Not Detected
Hexachlorobutadiene	4.9	Not Detected	52	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	109	70-130
4-Bromofluorobenzene	79	70-130

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Client Sample ID: GAGP-03U-240404

Lab ID#: 2404214-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041115**	**Date of Collection:**	**4/4/24 2:08:00 PM**
Dil. Factor:	**2.38**	**Date of Analysis:**	**4/11/24 07:09 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	15	5.9	72
Freon 114	1.2	4.3	8.3	30
Chloromethane	12	Not Detected	24	Not Detected
Vinyl Chloride	1.2	Not Detected	3.0	Not Detected
1,3-Butadiene	1.2	Not Detected	2.6	Not Detected
Bromomethane	12	Not Detected	46	Not Detected
Chloroethane	4.8	Not Detected	12	Not Detected
Freon 11	1.2	Not Detected	6.7	Not Detected
Ethanol	12	Not Detected	22	Not Detected
Freon 113	1.2	Not Detected	9.1	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Acetone	12	Not Detected	28	Not Detected
2-Propanol	4.8	Not Detected	12	Not Detected
Carbon Disulfide	4.8	Not Detected	15	Not Detected
3-Chloropropene	4.8	Not Detected	15	Not Detected
Methylene Chloride	12	Not Detected	41	Not Detected
Methyl tert-butyl ether	4.8	Not Detected	17	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Hexane	1.2	Not Detected	4.2	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.8	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.8	Not Detected	14	Not Detected
cis-1,2-Dichloroethene	1.2	Not Detected	4.7	Not Detected
Tetrahydrofuran	1.2	Not Detected	3.5	Not Detected
Chloroform	1.2	Not Detected	5.8	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.5	Not Detected
Cyclohexane	1.2	Not Detected	4.1	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.5	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.6	Not Detected
Benzene	1.2	Not Detected	3.8	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.8	Not Detected
Heptane	1.2	Not Detected	4.9	Not Detected
Trichloroethene	1.2	Not Detected	6.4	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.5	Not Detected
1,4-Dioxane	4.8	Not Detected	17	Not Detected
Bromodichloromethane	1.2	Not Detected	8.0	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.4	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	4.9	Not Detected
Toluene	2.4	Not Detected	9.0	Not Detected
trans-1,3-Dichloropropene	1.2	Not Detected	5.4	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.5	Not Detected
Tetrachloroethene	1.2	16	8.1	110
2-Hexanone	4.8	Not Detected	19	Not Detected

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Client Sample ID: GAGP-03U-240404

Lab ID#: 2404214-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041115**	**Date of Collection:**	**4/4/24 2:08:00 PM**
Dil. Factor:	**2.38**	**Date of Analysis:**	**4/11/24 07:09 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.1	Not Detected
Chlorobenzene	1.2	Not Detected	5.5	Not Detected
Ethyl Benzene	1.2	Not Detected	5.2	Not Detected
m,p-Xylene	2.4	Not Detected	10	Not Detected
o-Xylene	1.2	Not Detected	5.2	Not Detected
Styrene	1.2	Not Detected	5.1	Not Detected
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	5.8	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.2	Not Detected
Propylbenzene	1.2	Not Detected	5.8	Not Detected
4-Ethyltoluene	1.2	Not Detected	5.8	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	5.8	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	5.8	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.2	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.2	Not Detected
1,2,4-Trichlorobenzene	4.8	Not Detected	35	Not Detected
Hexachlorobutadiene	4.8	Not Detected	51	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	107	70-130
4-Bromofluorobenzene	78	70-130

eurofins | Air Toxics

Client Sample ID: GAGP-004-240404

Lab ID#: 2404214-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041116**	**Date of Collection:**	**4/4/24 11:14:00 AM**
Dil. Factor:	**2.14**	**Date of Analysis:**	**4/11/24 07:34 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.3	Not Detected
Freon 114	1.1	Not Detected	7.5	Not Detected
Chloromethane	11	Not Detected	22	Not Detected
Vinyl Chloride	1.1	Not Detected	2.7	Not Detected
1,3-Butadiene	1.1	Not Detected	2.4	Not Detected
Bromomethane	11	Not Detected	42	Not Detected
Chloroethane	4.3	Not Detected	11	Not Detected
Freon 11	1.1	Not Detected	6.0	Not Detected
Ethanol	11	Not Detected	20	Not Detected
Freon 113	1.1	Not Detected	8.2	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Acetone	11	Not Detected	25	Not Detected
2-Propanol	4.3	Not Detected	10	Not Detected
Carbon Disulfide	4.3	Not Detected	13	Not Detected
3-Chloropropene	4.3	Not Detected	13	Not Detected
Methylene Chloride	11	Not Detected	37	Not Detected
Methyl tert-butyl ether	4.3	Not Detected	15	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Hexane	1.1	Not Detected	3.8	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.3	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.3	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.2	Not Detected
Chloroform	1.1	Not Detected	5.2	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	5.8	Not Detected
Cyclohexane	1.1	Not Detected	3.7	Not Detected
Carbon Tetrachloride	1.1	Not Detected	6.7	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.0	Not Detected
Benzene	1.1	1.6	3.4	5.2
1,2-Dichloroethane	1.1	Not Detected	4.3	Not Detected
Heptane	1.1	Not Detected	4.4	Not Detected
Trichloroethene	1.1	Not Detected	5.8	Not Detected
1,2-Dichloropropane	1.1	Not Detected	4.9	Not Detected
1,4-Dioxane	4.3	Not Detected	15	Not Detected
Bromodichloromethane	1.1	Not Detected	7.2	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	4.8	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.4	Not Detected
Toluene	2.1	Not Detected	8.1	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected	4.8	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	5.8	Not Detected
Tetrachloroethene	1.1	Not Detected	7.2	Not Detected
2-Hexanone	4.3	Not Detected	18	Not Detected

eurofins | Air Toxics

Client Sample ID: GAGP-004-240404

Lab ID#: 2404214-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041116**	**Date of Collection:**	**4/4/24 11:14:00 AM**
Dil. Factor:	**2.14**	**Date of Analysis:**	**4/11/24 07:34 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.1	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.2	Not Detected
Chlorobenzene	1.1	Not Detected	4.9	Not Detected
Ethyl Benzene	1.1	Not Detected	4.6	Not Detected
m,p-Xylene	2.1	Not Detected	9.3	Not Detected
o-Xylene	1.1	Not Detected	4.6	Not Detected
Styrene	1.1	Not Detected	4.6	Not Detected
Bromoform	1.1	Not Detected	11	Not Detected
Cumene	1.1	Not Detected	5.2	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.3	Not Detected
Propylbenzene	1.1	Not Detected	5.3	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.3	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.3	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.2	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.4	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.4	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.5	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.4	Not Detected
1,2,4-Trichlorobenzene	4.3	Not Detected	32	Not Detected
Hexachlorobutadiene	4.3	Not Detected	46	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	107	70-130
4-Bromofluorobenzene	78	70-130

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Client Sample ID: GAGP-005-240404

Lab ID#: 2404214-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041117**	**Date of Collection:**	**4/4/24 12:17:00 PM**
Dil. Factor:	**2.28**	**Date of Analysis:**	**4/11/24 07:59 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.6	Not Detected
Freon 114	1.1	1.2	8.0	8.6
Chloromethane	11	Not Detected	24	Not Detected
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
1,3-Butadiene	1.1	Not Detected	2.5	Not Detected
Bromomethane	11	Not Detected	44	Not Detected
Chloroethane	4.6	Not Detected	12	Not Detected
Freon 11	1.1	Not Detected	6.4	Not Detected
Ethanol	11	Not Detected	21	Not Detected
Freon 113	1.1	Not Detected	8.7	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Acetone	11	25	27	60
2-Propanol	4.6	5.2	11	13
Carbon Disulfide	4.6	Not Detected	14	Not Detected
3-Chloropropene	4.6	Not Detected	14	Not Detected
Methylene Chloride	11	Not Detected	40	Not Detected
Methyl tert-butyl ether	4.6	Not Detected	16	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Hexane	1.1	Not Detected	4.0	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.6	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.6	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.4	Not Detected
Chloroform	1.1	Not Detected	5.6	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	6.2	Not Detected
Cyclohexane	1.1	Not Detected	3.9	Not Detected
Carbon Tetrachloride	1.1	Not Detected	7.2	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.3	Not Detected
Benzene	1.1	Not Detected	3.6	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.6	Not Detected
Heptane	1.1	Not Detected	4.7	Not Detected
Trichloroethene	1.1	Not Detected	6.1	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.3	Not Detected
1,4-Dioxane	4.6	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.6	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.2	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.7	Not Detected
Toluene	2.3	Not Detected	8.6	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected	5.2	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.2	Not Detected
Tetrachloroethene	1.1	Not Detected	7.7	Not Detected
2-Hexanone	4.6	Not Detected	19	Not Detected

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Client Sample ID: GAGP-005-240404

Lab ID#: 2404214-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041117**	**Date of Collection:**	**4/4/24 12:17:00 PM**
Dil. Factor:	**2.28**	**Date of Analysis:**	**4/11/24 07:59 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.7	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.8	Not Detected
Chlorobenzene	1.1	Not Detected	5.2	Not Detected
Ethyl Benzene	1.1	Not Detected	4.9	Not Detected
m,p-Xylene	2.3	Not Detected	9.9	Not Detected
o-Xylene	1.1	Not Detected	5.0	Not Detected
Styrene	1.1	Not Detected	4.8	Not Detected
Bromoform	1.1	Not Detected	12	Not Detected
Cumene	1.1	Not Detected	5.6	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.8	Not Detected
Propylbenzene	1.1	Not Detected	5.6	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.6	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.6	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.6	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.8	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.8	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.9	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.8	Not Detected
1,2,4-Trichlorobenzene	4.6	Not Detected	34	Not Detected
Hexachlorobutadiene	4.6	Not Detected	49	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	105	70-130
4-Bromofluorobenzene	78	70-130

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Client Sample ID: GAGP-006-240404

Lab ID#: 2404214-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041121**	**Date of Collection:**	**4/4/24 12:42:00 PM**
Dil. Factor:	**2.21**	**Date of Analysis:**	**4/11/24 11:05 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.5	Not Detected
Freon 114	1.1	Not Detected	7.7	Not Detected
Chloromethane	11	Not Detected	23	Not Detected
Vinyl Chloride	1.1	Not Detected	2.8	Not Detected
1,3-Butadiene	1.1	Not Detected	2.4	Not Detected
Bromomethane	11	Not Detected	43	Not Detected
Chloroethane	4.4	Not Detected	12	Not Detected
Freon 11	1.1	Not Detected	6.2	Not Detected
Ethanol	11	Not Detected	21	Not Detected
Freon 113	1.1	Not Detected	8.5	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Acetone	11	Not Detected	26	Not Detected
2-Propanol	4.4	Not Detected	11	Not Detected
Carbon Disulfide	4.4	Not Detected	14	Not Detected
3-Chloropropene	4.4	Not Detected	14	Not Detected
Methylene Chloride	11	Not Detected	38	Not Detected
Methyl tert-butyl ether	4.4	Not Detected	16	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Hexane	1.1	Not Detected	3.9	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.5	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.4	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.2	Not Detected
Chloroform	1.1	Not Detected	5.4	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	6.0	Not Detected
Cyclohexane	1.1	Not Detected	3.8	Not Detected
Carbon Tetrachloride	1.1	Not Detected	7.0	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.2	Not Detected
Benzene	1.1	Not Detected	3.5	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.5	Not Detected
Heptane	1.1	Not Detected	4.5	Not Detected
Trichloroethene	1.1	Not Detected	5.9	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.1	Not Detected
1,4-Dioxane	4.4	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.4	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.0	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.5	Not Detected
Toluene	2.2	Not Detected	8.3	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected	5.0	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.0	Not Detected
Tetrachloroethene	1.1	Not Detected	7.5	Not Detected
2-Hexanone	4.4	Not Detected	18	Not Detected

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Client Sample ID: GAGP-006-240404

Lab ID#: 2404214-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041121**	**Date of Collection:**	**4/4/24 12:42:00 PM**
Dil. Factor:	**2.21**	**Date of Analysis:**	**4/11/24 11:05 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.4	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.5	Not Detected
Chlorobenzene	1.1	Not Detected	5.1	Not Detected
Ethyl Benzene	1.1	Not Detected	4.8	Not Detected
m,p-Xylene	2.2	Not Detected	9.6	Not Detected
o-Xylene	1.1	Not Detected	4.8	Not Detected
Styrene	1.1	Not Detected	4.7	Not Detected
Bromoform	1.1	Not Detected	11	Not Detected
Cumene	1.1	Not Detected	5.4	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.6	Not Detected
Propylbenzene	1.1	Not Detected	5.4	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.4	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.4	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.4	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.7	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected
1,2,4-Trichlorobenzene	4.4	Not Detected	33	Not Detected
Hexachlorobutadiene	4.4	Not Detected	47	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	107	70-130
4-Bromofluorobenzene	78	70-130

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Client Sample ID: GAGP-007-240404

Lab ID#: 2404214-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041122**	**Date of Collection:**	**4/4/24 1:08:00 PM**
Dil. Factor:	**2.16**	**Date of Analysis:**	**4/11/24 11:30 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.3	Not Detected
Freon 114	1.1	Not Detected	7.6	Not Detected
Chloromethane	11	Not Detected	22	Not Detected
Vinyl Chloride	1.1	Not Detected	2.8	Not Detected
1,3-Butadiene	1.1	Not Detected	2.4	Not Detected
Bromomethane	11	Not Detected	42	Not Detected
Chloroethane	4.3	Not Detected	11	Not Detected
Freon 11	1.1	Not Detected	6.1	Not Detected
Ethanol	11	Not Detected	20	Not Detected
Freon 113	1.1	Not Detected	8.3	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.3	Not Detected
Acetone	11	Not Detected	26	Not Detected
2-Propanol	4.3	Not Detected	11	Not Detected
Carbon Disulfide	4.3	Not Detected	13	Not Detected
3-Chloropropene	4.3	Not Detected	14	Not Detected
Methylene Chloride	11	Not Detected	38	Not Detected
Methyl tert-butyl ether	4.3	Not Detected	16	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.3	Not Detected
Hexane	1.1	Not Detected	3.8	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.3	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.3	Not Detected
Tetrahydrofuran	1.1	62	3.2	180
Chloroform	1.1	Not Detected	5.3	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	5.9	Not Detected
Cyclohexane	1.1	Not Detected	3.7	Not Detected
Carbon Tetrachloride	1.1	Not Detected	6.8	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.0	Not Detected
Benzene	1.1	Not Detected	3.4	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.4	Not Detected
Heptane	1.1	Not Detected	4.4	Not Detected
Trichloroethene	1.1	Not Detected	5.8	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.0	Not Detected
1,4-Dioxane	4.3	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.2	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	4.9	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.4	Not Detected
Toluene	2.2	Not Detected	8.1	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected	4.9	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	5.9	Not Detected
Tetrachloroethene	1.1	Not Detected	7.3	Not Detected
2-Hexanone	4.3	Not Detected	18	Not Detected

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Client Sample ID: GAGP-007-240404

Lab ID#: 2404214-07A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041122**	**Date of Collection:**	**4/4/24 1:08:00 PM**
Dil. Factor:	**2.16**	**Date of Analysis:**	**4/11/24 11:30 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.2	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.3	Not Detected
Chlorobenzene	1.1	Not Detected	5.0	Not Detected
Ethyl Benzene	1.1	Not Detected	4.7	Not Detected
m,p-Xylene	2.2	Not Detected	9.4	Not Detected
o-Xylene	1.1	Not Detected	4.7	Not Detected
Styrene	1.1	Not Detected	4.6	Not Detected
Bromoform	1.1	Not Detected	11	Not Detected
Cumene	1.1	Not Detected	5.3	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.4	Not Detected
Propylbenzene	1.1	Not Detected	5.3	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.3	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.3	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.3	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.5	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.5	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.6	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.5	Not Detected
1,2,4-Trichlorobenzene	4.3	Not Detected	32	Not Detected
Hexachlorobutadiene	4.3	Not Detected	46	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	105	70-130
4-Bromofluorobenzene	79	70-130

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Client Sample ID: GAGP-08U-240404

Lab ID#: 2404214-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041123**	**Date of Collection:**	**4/4/24 11:43:00 AM**
Dil. Factor:	**2.27**	**Date of Analysis:**	**4/11/24 11:55 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.6	Not Detected
Freon 114	1.1	Not Detected	7.9	Not Detected
Chloromethane	11	Not Detected	23	Not Detected
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
1,3-Butadiene	1.1	Not Detected	2.5	Not Detected
Bromomethane	11	Not Detected	44	Not Detected
Chloroethane	4.5	Not Detected	12	Not Detected
Freon 11	1.1	Not Detected	6.4	Not Detected
Ethanol	11	Not Detected	21	Not Detected
Freon 113	1.1	Not Detected	8.7	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Acetone	11	Not Detected	27	Not Detected
2-Propanol	4.5	Not Detected	11	Not Detected
Carbon Disulfide	4.5	Not Detected	14	Not Detected
3-Chloropropene	4.5	Not Detected	14	Not Detected
Methylene Chloride	11	Not Detected	39	Not Detected
Methyl tert-butyl ether	4.5	Not Detected	16	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Hexane	1.1	Not Detected	4.0	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.6	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.5	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.3	Not Detected
Chloroform	1.1	Not Detected	5.5	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	6.2	Not Detected
Cyclohexane	1.1	Not Detected	3.9	Not Detected
Carbon Tetrachloride	1.1	Not Detected	7.1	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.3	Not Detected
Benzene	1.1	Not Detected	3.6	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.6	Not Detected
Heptane	1.1	Not Detected	4.6	Not Detected
Trichloroethene	1.1	Not Detected	6.1	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.2	Not Detected
1,4-Dioxane	4.5	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.6	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.2	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.6	Not Detected
Toluene	2.3	Not Detected	8.6	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected	5.2	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.2	Not Detected
Tetrachloroethene	1.1	Not Detected	7.7	Not Detected
2-Hexanone	4.5	Not Detected	18	Not Detected

eurofins | Air Toxics

Client Sample ID: GAGP-08U-240404

Lab ID#: 2404214-08A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041123**	**Date of Collection:**	**4/4/24 11:43:00 AM**
Dil. Factor:	**2.27**	**Date of Analysis:**	**4/11/24 11:55 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.7	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.7	Not Detected
Chlorobenzene	1.1	Not Detected	5.2	Not Detected
Ethyl Benzene	1.1	Not Detected	4.9	Not Detected
m,p-Xylene	2.3	Not Detected	9.8	Not Detected
o-Xylene	1.1	Not Detected	4.9	Not Detected
Styrene	1.1	Not Detected	4.8	Not Detected
Bromoform	1.1	Not Detected	12	Not Detected
Cumene	1.1	Not Detected	5.6	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.8	Not Detected
Propylbenzene	1.1	Not Detected	5.6	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.6	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.6	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.6	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.8	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.8	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.9	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.8	Not Detected
1,2,4-Trichlorobenzene	4.5	Not Detected	34	Not Detected
Hexachlorobutadiene	4.5	Not Detected	48	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	78	70-130

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Client Sample ID: GAGP-009-240404

Lab ID#: 2404214-09A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041124**	**Date of Collection:**	**4/4/24 10:48:00 AM**
Dil. Factor:	**2.13**	**Date of Analysis:**	**4/12/24 12:20 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.3	Not Detected
Freon 114	1.1	Not Detected	7.4	Not Detected
Chloromethane	11	Not Detected	22	Not Detected
Vinyl Chloride	1.1	Not Detected	2.7	Not Detected
1,3-Butadiene	1.1	Not Detected	2.4	Not Detected
Bromomethane	11	Not Detected	41	Not Detected
Chloroethane	4.3	Not Detected	11	Not Detected
Freon 11	1.1	Not Detected	6.0	Not Detected
Ethanol	11	Not Detected	20	Not Detected
Freon 113	1.1	Not Detected	8.2	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Acetone	11	Not Detected	25	Not Detected
2-Propanol	4.3	Not Detected	10	Not Detected
Carbon Disulfide	4.3	Not Detected	13	Not Detected
3-Chloropropene	4.3	Not Detected	13	Not Detected
Methylene Chloride	11	Not Detected	37	Not Detected
Methyl tert-butyl ether	4.3	Not Detected	15	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Hexane	1.1	Not Detected	3.8	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.3	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.3	Not Detected	12	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.2	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.1	Not Detected
Chloroform	1.1	Not Detected	5.2	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	5.8	Not Detected
Cyclohexane	1.1	Not Detected	3.7	Not Detected
Carbon Tetrachloride	1.1	Not Detected	6.7	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.0	Not Detected
Benzene	1.1	Not Detected	3.4	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.3	Not Detected
Heptane	1.1	Not Detected	4.4	Not Detected
Trichloroethene	1.1	Not Detected	5.7	Not Detected
1,2-Dichloropropane	1.1	Not Detected	4.9	Not Detected
1,4-Dioxane	4.3	Not Detected	15	Not Detected
Bromodichloromethane	1.1	Not Detected	7.1	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	4.8	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.4	Not Detected
Toluene	2.1	Not Detected	8.0	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected	4.8	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	5.8	Not Detected
Tetrachloroethene	1.1	Not Detected	7.2	Not Detected
2-Hexanone	4.3	Not Detected	17	Not Detected

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Client Sample ID: GAGP-009-240404

Lab ID#: 2404214-09A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041124**	**Date of Collection:**	**4/4/24 10:48:00 AM**
Dil. Factor:	**2.13**	**Date of Analysis:**	**4/12/24 12:20 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.1	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.2	Not Detected
Chlorobenzene	1.1	Not Detected	4.9	Not Detected
Ethyl Benzene	1.1	Not Detected	4.6	Not Detected
m,p-Xylene	2.1	Not Detected	9.2	Not Detected
o-Xylene	1.1	Not Detected	4.6	Not Detected
Styrene	1.1	Not Detected	4.5	Not Detected
Bromoform	1.1	Not Detected	11	Not Detected
Cumene	1.1	Not Detected	5.2	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.3	Not Detected
Propylbenzene	1.1	Not Detected	5.2	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.2	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.2	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.2	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.4	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.4	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.5	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.4	Not Detected
1,2,4-Trichlorobenzene	4.3	Not Detected	32	Not Detected
Hexachlorobutadiene	4.3	Not Detected	45	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	106	70-130
4-Bromofluorobenzene	78	70-130

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Client Sample ID: GAGP-010-240404

Lab ID#: 2404214-10A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041125**	**Date of Collection:**	**4/4/24 2:40:00 PM**
Dil. Factor:	**2.25**	**Date of Analysis:**	**4/12/24 12:45 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	2.5	5.6	12
Freon 114	1.1	Not Detected	7.9	Not Detected
Chloromethane	11	Not Detected	23	Not Detected
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
1,3-Butadiene	1.1	Not Detected	2.5	Not Detected
Bromomethane	11	Not Detected	44	Not Detected
Chloroethane	4.5	Not Detected	12	Not Detected
Freon 11	1.1	Not Detected	6.3	Not Detected
Ethanol	11	Not Detected	21	Not Detected
Freon 113	1.1	Not Detected	8.6	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Acetone	11	Not Detected	27	Not Detected
2-Propanol	4.5	Not Detected	11	Not Detected
Carbon Disulfide	4.5	Not Detected	14	Not Detected
3-Chloropropene	4.5	Not Detected	14	Not Detected
Methylene Chloride	11	Not Detected	39	Not Detected
Methyl tert-butyl ether	4.5	Not Detected	16	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Hexane	1.1	Not Detected	4.0	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.6	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.5	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.5	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.3	Not Detected
Chloroform	1.1	Not Detected	5.5	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	6.1	Not Detected
Cyclohexane	1.1	Not Detected	3.9	Not Detected
Carbon Tetrachloride	1.1	Not Detected	7.1	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.2	Not Detected
Benzene	1.1	Not Detected	3.6	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.6	Not Detected
Heptane	1.1	Not Detected	4.6	Not Detected
Trichloroethene	1.1	Not Detected	6.0	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.2	Not Detected
1,4-Dioxane	4.5	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.5	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.1	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.6	Not Detected
Toluene	2.2	Not Detected	8.5	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected	5.1	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.1	Not Detected
Tetrachloroethene	1.1	Not Detected	7.6	Not Detected
2-Hexanone	4.5	Not Detected	18	Not Detected

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Client Sample ID: GAGP-010-240404

Lab ID#: 2404214-10A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041125**	**Date of Collection:**	**4/4/24 2:40:00 PM**
Dil. Factor:	**2.25**	**Date of Analysis:**	**4/12/24 12:45 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.6	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.6	Not Detected
Chlorobenzene	1.1	Not Detected	5.2	Not Detected
Ethyl Benzene	1.1	Not Detected	4.9	Not Detected
m,p-Xylene	2.2	Not Detected	9.8	Not Detected
o-Xylene	1.1	Not Detected	4.9	Not Detected
Styrene	1.1	Not Detected	4.8	Not Detected
Bromoform	1.1	Not Detected	12	Not Detected
Cumene	1.1	1.5	5.5	7.4
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.7	Not Detected
Propylbenzene	1.1	Not Detected	5.5	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.5	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.5	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.5	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.8	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.8	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.8	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.8	Not Detected
1,2,4-Trichlorobenzene	4.5	Not Detected	33	Not Detected
Hexachlorobutadiene	4.5	Not Detected	48	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	106	70-130
4-Bromofluorobenzene	78	70-130

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Client Sample ID: GAGP-011-240404

Lab ID#: 2404214-11A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041126**	**Date of Collection:**	**4/4/24 3:19:00 PM**
Dil. Factor:	**2.20**	**Date of Analysis:**	**4/12/24 01:10 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.4	Not Detected
Freon 114	1.1	Not Detected	7.7	Not Detected
Chloromethane	11	Not Detected	23	Not Detected
Vinyl Chloride	1.1	Not Detected	2.8	Not Detected
1,3-Butadiene	1.1	Not Detected	2.4	Not Detected
Bromomethane	11	Not Detected	43	Not Detected
Chloroethane	4.4	Not Detected	12	Not Detected
Freon 11	1.1	Not Detected	6.2	Not Detected
Ethanol	11	Not Detected	21	Not Detected
Freon 113	1.1	Not Detected	8.4	Not Detected
1,1-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Acetone	11	Not Detected	26	Not Detected
2-Propanol	4.4	Not Detected	11	Not Detected
Carbon Disulfide	4.4	Not Detected	14	Not Detected
3-Chloropropene	4.4	Not Detected	14	Not Detected
Methylene Chloride	11	Not Detected	38	Not Detected
Methyl tert-butyl ether	4.4	Not Detected	16	Not Detected
trans-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Hexane	1.1	Not Detected	3.9	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.4	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.4	Not Detected	13	Not Detected
cis-1,2-Dichloroethene	1.1	Not Detected	4.4	Not Detected
Tetrahydrofuran	1.1	Not Detected	3.2	Not Detected
Chloroform	1.1	Not Detected	5.4	Not Detected
1,1,1-Trichloroethane	1.1	Not Detected	6.0	Not Detected
Cyclohexane	1.1	Not Detected	3.8	Not Detected
Carbon Tetrachloride	1.1	Not Detected	6.9	Not Detected
2,2,4-Trimethylpentane	1.1	Not Detected	5.1	Not Detected
Benzene	1.1	Not Detected	3.5	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.4	Not Detected
Heptane	1.1	Not Detected	4.5	Not Detected
Trichloroethene	1.1	Not Detected	5.9	Not Detected
1,2-Dichloropropane	1.1	Not Detected	5.1	Not Detected
1,4-Dioxane	4.4	Not Detected	16	Not Detected
Bromodichloromethane	1.1	Not Detected	7.4	Not Detected
cis-1,3-Dichloropropene	1.1	Not Detected	5.0	Not Detected
4-Methyl-2-pentanone	1.1	Not Detected	4.5	Not Detected
Toluene	2.2	Not Detected	8.3	Not Detected
trans-1,3-Dichloropropene	1.1	Not Detected	5.0	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.0	Not Detected
Tetrachloroethene	1.1	Not Detected	7.5	Not Detected
2-Hexanone	4.4	Not Detected	18	Not Detected

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Client Sample ID: GAGP-011-240404

Lab ID#: 2404214-11A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041126**	**Date of Collection:**	**4/4/24 3:19:00 PM**
Dil. Factor:	**2.20**	**Date of Analysis:**	**4/12/24 01:10 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.1	Not Detected	9.4	Not Detected
1,2-Dibromoethane (EDB)	1.1	Not Detected	8.4	Not Detected
Chlorobenzene	1.1	Not Detected	5.1	Not Detected
Ethyl Benzene	1.1	Not Detected	4.8	Not Detected
m,p-Xylene	2.2	Not Detected	9.6	Not Detected
o-Xylene	1.1	Not Detected	4.8	Not Detected
Styrene	1.1	Not Detected	4.7	Not Detected
Bromoform	1.1	Not Detected	11	Not Detected
Cumene	1.1	Not Detected	5.4	Not Detected
1,1,2,2-Tetrachloroethane	1.1	Not Detected	7.6	Not Detected
Propylbenzene	1.1	Not Detected	5.4	Not Detected
4-Ethyltoluene	1.1	Not Detected	5.4	Not Detected
1,3,5-Trimethylbenzene	1.1	Not Detected	5.4	Not Detected
1,2,4-Trimethylbenzene	1.1	Not Detected	5.4	Not Detected
1,3-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected
1,4-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected
alpha-Chlorotoluene	1.1	Not Detected	5.7	Not Detected
1,2-Dichlorobenzene	1.1	Not Detected	6.6	Not Detected
1,2,4-Trichlorobenzene	4.4	Not Detected	33	Not Detected
Hexachlorobutadiene	4.4	Not Detected	47	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	106	70-130
4-Bromofluorobenzene	78	70-130

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Client Sample ID: Lab Blank

Lab ID#: 2404214-12A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041106**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/11/24 10:26 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	5.0	Not Detected	9.4	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	1.0	Not Detected	3.8	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

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Client Sample ID: Lab Blank

Lab ID#: 2404214-12A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041106**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/11/24 10:26 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	1.0	Not Detected	4.3	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	108	70-130
4-Bromofluorobenzene	79	70-130

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Client Sample ID: CCV

Lab ID#: 2404214-13A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041103**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 4/11/24 09:12 AM**

Compound	%Recovery
Freon 12	102
Freon 114	90
Chloromethane	127
Vinyl Chloride	122
1,3-Butadiene	102
Bromomethane	108
Chloroethane	107
Freon 11	98
Ethanol	100
Freon 113	83
1,1-Dichloroethene	107
Acetone	109
2-Propanol	94
Carbon Disulfide	113
3-Chloropropene	97
Methylene Chloride	107
Methyl tert-butyl ether	86
trans-1,2-Dichloroethene	106
Hexane	95
1,1-Dichloroethane	108
2-Butanone (Methyl Ethyl Ketone)	106
cis-1,2-Dichloroethene	100
Tetrahydrofuran	82
Chloroform	103
1,1,1-Trichloroethane	90
Cyclohexane	95
Carbon Tetrachloride	91
2,2,4-Trimethylpentane	105
Benzene	105
1,2-Dichloroethane	106
Heptane	103
Trichloroethene	99
1,2-Dichloropropane	107
1,4-Dioxane	111
Bromodichloromethane	114
cis-1,3-Dichloropropene	95
4-Methyl-2-pentanone	89
Toluene	98
trans-1,3-Dichloropropene	99
1,1,2-Trichloroethane	106
Tetrachloroethene	84
2-Hexanone	103

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Client Sample ID: CCV

Lab ID#: 2404214-13A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041103**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 4/11/24 09:12 AM**

Compound	%Recovery
Dibromochloromethane	100
1,2-Dibromoethane (EDB)	101
Chlorobenzene	102
Ethyl Benzene	98
m,p-Xylene	99
o-Xylene	91
Styrene	100
Bromoform	90
Cumene	91
1,1,2,2-Tetrachloroethane	118
Propylbenzene	95
4-Ethyltoluene	97
1,3,5-Trimethylbenzene	94
1,2,4-Trimethylbenzene	93
1,3-Dichlorobenzene	87
1,4-Dichlorobenzene	83
alpha-Chlorotoluene	92
1,2-Dichlorobenzene	86
1,2,4-Trichlorobenzene	85
Hexachlorobutadiene	84

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	85	70-130

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Client Sample ID: LCS

Lab ID#: 2404214-14A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041104**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/11/24 09:37 AM**	

Compound	%Recovery	Method Limits
Freon 12	108	70-130
Freon 114	93	70-130
Chloromethane	128	70-130
Vinyl Chloride	129	70-130
1,3-Butadiene	109	70-130
Bromomethane	112	70-130
Chloroethane	112	70-130
Freon 11	99	70-130
Ethanol	130	70-130
Freon 113	82	70-130
1,1-Dichloroethene	105	70-130
Acetone	115	70-130
2-Propanol	111	70-130
Carbon Disulfide	119	70-130
3-Chloropropene	103	70-130
Methylene Chloride	108	70-130
Methyl tert-butyl ether	91	70-130
trans-1,2-Dichloroethene	108	70-130
Hexane	99	70-130
1,1-Dichloroethane	111	70-130
2-Butanone (Methyl Ethyl Ketone)	111	70-130
cis-1,2-Dichloroethene	103	70-130
Tetrahydrofuran	92	70-130
Chloroform	106	70-130
1,1,1-Trichloroethane	95	70-130
Cyclohexane	103	70-130
Carbon Tetrachloride	94	70-130
2,2,4-Trimethylpentane	110	70-130
Benzene	108	70-130
1,2-Dichloroethane	107	70-130
Heptane	105	70-130
Trichloroethene	100	70-130
1,2-Dichloropropane	111	70-130
1,4-Dioxane	124	70-130
Bromodichloromethane	109	70-130
cis-1,3-Dichloropropene	99	70-130
4-Methyl-2-pentanone	93	70-130
Toluene	101	70-130
trans-1,3-Dichloropropene	99	70-130
1,1,2-Trichloroethane	106	70-130
Tetrachloroethene	85	70-130
2-Hexanone	103	70-130

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Client Sample ID: LCS

Lab ID#: 2404214-14A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041104**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/11/24 09:37 AM**	

Compound	%Recovery	Method Limits
Dibromochloromethane	98	70-130
1,2-Dibromoethane (EDB)	102	70-130
Chlorobenzene	103	70-130
Ethyl Benzene	101	70-130
m,p-Xylene	101	70-130
o-Xylene	92	70-130
Styrene	98	70-130
Bromoform	88	70-130
Cumene	92	70-130
1,1,2,2-Tetrachloroethane	120	70-130
Propylbenzene	94	70-130
4-Ethyltoluene	97	70-130
1,3,5-Trimethylbenzene	95	70-130
1,2,4-Trimethylbenzene	95	70-130
1,3-Dichlorobenzene	86	70-130
1,4-Dichlorobenzene	82	70-130
alpha-Chlorotoluene	89	70-130
1,2-Dichlorobenzene	86	70-130
1,2,4-Trichlorobenzene	85	70-130
Hexachlorobutadiene	87	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	85	70-130

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Client Sample ID: LCSD

Lab ID#: 2404214-14AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041105**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/11/24 10:01 AM**	

Compound	%Recovery	Method Limits
Freon 12	106	70-130
Freon 114	92	70-130
Chloromethane	131 Q	70-130
Vinyl Chloride	128	70-130
1,3-Butadiene	109	70-130
Bromomethane	112	70-130
Chloroethane	110	70-130
Freon 11	98	70-130
Ethanol	126	70-130
Freon 113	81	70-130
1,1-Dichloroethene	105	70-130
Acetone	114	70-130
2-Propanol	108	70-130
Carbon Disulfide	119	70-130
3-Chloropropene	103	70-130
Methylene Chloride	108	70-130
Methyl tert-butyl ether	91	70-130
trans-1,2-Dichloroethene	107	70-130
Hexane	98	70-130
1,1-Dichloroethane	111	70-130
2-Butanone (Methyl Ethyl Ketone)	109	70-130
cis-1,2-Dichloroethene	102	70-130
Tetrahydrofuran	92	70-130
Chloroform	105	70-130
1,1,1-Trichloroethane	94	70-130
Cyclohexane	101	70-130
Carbon Tetrachloride	93	70-130
2,2,4-Trimethylpentane	114	70-130
Benzene	109	70-130
1,2-Dichloroethane	108	70-130
Heptane	105	70-130
Trichloroethene	102	70-130
1,2-Dichloropropane	110	70-130
1,4-Dioxane	122	70-130
Bromodichloromethane	114	70-130
cis-1,3-Dichloropropene	100	70-130
4-Methyl-2-pentanone	92	70-130
Toluene	101	70-130
trans-1,3-Dichloropropene	103	70-130
1,1,2-Trichloroethane	108	70-130
Tetrachloroethene	86	70-130
2-Hexanone	104	70-130

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Client Sample ID: LCSD

Lab ID#: 2404214-14AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91041105**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/11/24 10:01 AM**	

Compound	%Recovery	Method Limits
Dibromochloromethane	99	70-130
1,2-Dibromoethane (EDB)	103	70-130
Chlorobenzene	104	70-130
Ethyl Benzene	103	70-130
m,p-Xylene	100	70-130
o-Xylene	95	70-130
Styrene	100	70-130
Bromoform	89	70-130
Cumene	95	70-130
1,1,2,2-Tetrachloroethane	121	70-130
Propylbenzene	95	70-130
4-Ethyltoluene	97	70-130
1,3,5-Trimethylbenzene	96	70-130
1,2,4-Trimethylbenzene	95	70-130
1,3-Dichlorobenzene	88	70-130
1,4-Dichlorobenzene	83	70-130
alpha-Chlorotoluene	91	70-130
1,2-Dichlorobenzene	87	70-130
1,2,4-Trichlorobenzene	87	70-130
Hexachlorobutadiene	88	70-130

Q = Exceeds Quality Control limits.

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	87	70-130

Analysis Request / Canister Chain of Custody

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Eurofins Environment Testing Northern California, LLC
180 Blue Ravine Rd. Suite B, Folsom, CA 95630
Phone (800) 985-5955; Fax (916) 351-8279

Workorder #: 2404214

Instructions

Client: SPOKANE COUNTY
Site Name: GREENACRES LF
Project Manager: AUSTIN STEWART
Sampler: GF | CC

Project Name: GREENACRES LF
Project #: 308 N KRAMER RD
PO#: MT 404 GA

Turnaround Time (Specify Below)
Standard (X) Rush _____ (Surcharges will apply, per availability)
Samples received after 3PM PST are considered to be received on the following workday.
Requested Date (mm/dd/yy):
OR Number of Days:

Lab ID	Field Sample Identification (Location)	Canister Barcode #	Flow Controller Barcode #	Start Sampling Information		Stop Sampling Information		Requested Analyses	Canister Vacuum/Pressure		Lab Use Only	
				Date	Time	Date	Time	EPA TO-15	Initial (in "Hg)	Final (in "Hg)	Receipt (in "Hg)	Final (in psi) Gas: N2 / He
01A	GAGP-02U-240404	1L4489	30792	4/4/24	0921	4/4/24	0927	X	-27.5	-5.0		
02A	GAGP-001-240404	1L3881	22661	4/4/24	1332	4/4/24	1337	X	-27.4	-5.0		
03A	GAGP-03U-240404	1L2884	4345	4/4/24	1403	4/4/24	1408	X	-27.0	-5.5		
04A	GAGP-004-240404	1L3089	25499	4/4/24	1109	4/4/24	1114	X	-28.5	-5.0		
05A	GAGP-005-240404	1L1508	25480	4/4/24	1212	4/4/24	1217	X	-30.0	-5.0		
06A	GAGP-006-240404	1L3537	25435	4/4/24	1237	4/4/24	1242	X	-27.5	-5.0		
07A	GAGP-007-240404	1L1676	25492	4/4/24	1303	4/4/24	1308	X	-27.4	-5.0		
08A	GAGP-08U-240404	1L4557	25332	4/4/24	1138	4/4/24	1143	X	-27.4	-5.0		
09A	GAGP-009-240404	40894	25482	4/4/24	1043	4/4/24	1048	X	-27.4	-5.0		
10A	GAGP-010-240404	1L3838	25540	4/4/24	1435	4/4/24	1440	X	-27.0	-5.0		
11A	GAGP-011-240404	1L4501	21484	4/4/24	1514	4/4/24	1519	X	-27.1	-5.0		

Special Instructions/Notes:

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
	4/5/24	1300	FedEx ATL	4.9.24	1506
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time

Lab Use Only

Shipper Name: FedEx | Custody Seals Intact? Yes (X) No ~~None~~ | Condition:

Appendix D: Greenacres Landfill TO-15 Sampling Results

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6/19/2024
Mr. Gordie Fisette
Spokane County Utilities
22515 N. Elk Chattaroy Road

Colbert WA 99005

Project Name: GA Carbon treratment of LF gas
Project #: 308 NHR
Workorder #: 2406295

Dear Mr. Gordie Fisette

The following report includes the data for the above referenced project for sample(s) received on 6/12/2024 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Monica Tran at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Monica Tran

Project Manager

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WORK ORDER #: 2406295

Work Order Summary

CLIENT:	Mr. Gordie Fisette Spokane County Utilities 22515 N. Elk Chattaroy Road Colbert, WA 99005	**BILL TO:**	Mr. Gordie Fisette Spokane County Utilities 22515 N. Elk Chattaroy Road Colbert, WA 99005
PHONE:	509-238-6607	**P.O. #**	308 NHR
FAX:	509-238-6812	**PROJECT #**	308 NHR GA Carbon treratment of LF gas
DATE RECEIVED:	06/12/2024	**CONTACT:**	Monica Tran
DATE COMPLETED:	06/19/2024		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	GBC-240610	TO-15	7.6 "Hg	9.8 psi
02A	GAC-240610	TO-15	8.6 "Hg	9.9 psi
03A	Lab Blank	TO-15	NA	NA
04A	CCV	TO-15	NA	NA
05A	LCS	TO-15	NA	NA
05AA	LCSD	TO-15	NA	NA

CERTIFIED BY: Heidi Hayes DATE: 06/19/24

Technical Director

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP – 209222, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP – T104704434-22-18, UT NELAP – CA009332022-14, VA NELAP - 12240, WA ELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program) CA300005-017
Eurofins Environment Testing Northern California, LLC certifies that the test results contained in this report meet all requirements of the 2016 TNI Standard.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000

LABORATORY NARRATIVE
EPA Method TO-15
Spokane County Utilities
Workorder# 2406295

Two 1 Liter Summa Canister samples were received on June 12, 2024. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

Dilution was performed on sample GBC-240610 due to the presence of high level target species.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

M - Reported value may be biased due to apparent matrix interferences.

CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: GBC-240610

Lab ID#: 2406295-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	4.5	220	22	1100
Freon 114	4.5	69	31	480
Vinyl Chloride	4.5	200	11	520
Freon 11	4.5	10	25	59
Ethanol	45	65	84	120
trans-1,2-Dichloroethene	4.5	5.0	18	20
Hexane	4.5	87	16	300
cis-1,2-Dichloroethene	4.5	320	18	1300
Tetrahydrofuran	4.5	6.5	13	19
Cyclohexane	4.5	53	15	180
2,2,4-Trimethylpentane	4.5	9.3	21	43
Benzene	4.5	33	14	100
Heptane	4.5	140	18	570
Trichloroethene	4.5	12	24	64
Toluene	8.9	89	34	330
Tetrachloroethene	4.5	12	30	84
Chlorobenzene	4.5	8.5	20	39
Ethyl Benzene	4.5	910	19	4000
m,p-Xylene	8.9	950	39	4100
o-Xylene	4.5	190	19	820
Cumene	4.5	61	22	300
Propylbenzene	4.5	88	22	430
4-Ethyltoluene	4.5	250	22	1200
1,3,5-Trimethylbenzene	4.5	140	22	700
1,2,4-Trimethylbenzene	4.5	240	22	1200
1,4-Dichlorobenzene	4.5	27	27	160

Client Sample ID: GAC-240610

Lab ID#: 2406295-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	160	5.8	810
Freon 114	1.2	120	8.2	820

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: GAC-240610

Lab ID#: 2406295-02A

Vinyl Chloride	1.2	170	3.0	440
Chloroethane	4.7	15	12	41
Freon 11	1.2	27	6.6	150
2-Propanol	4.7	4.7 J	12	11 J
Methylene Chloride	12	16	41	55
Hexane	1.2	5.1	4.1	18
cis-1,2-Dichloroethene	1.2	2.3	4.6	9.2
Toluene	2.3	42	8.8	160
Chlorobenzene	1.2	2.8	5.4	13
Ethyl Benzene	1.2	1.3	5.1	5.8
m,p-Xylene	2.3	6.1	10	26
o-Xylene	1.2	1.7	5.1	7.5

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Client Sample ID: GBC-240610

Lab ID#: 2406295-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91061713**	**Date of Collection:**	**6/10/24 12:48:00 PM**
Dil. Factor:	**8.93**	**Date of Analysis:**	**6/17/24 06:11 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	4.5	220	22	1100
Freon 114	4.5	69	31	480
Chloromethane	45	Not Detected	92	Not Detected
Vinyl Chloride	4.5	200	11	520
1,3-Butadiene	4.5	Not Detected	9.9	Not Detected
Bromomethane	45	Not Detected	170	Not Detected
Chloroethane	18	Not Detected	47	Not Detected
Freon 11	4.5	10	25	59
Ethanol	45	65	84	120
Freon 113	4.5	Not Detected	34	Not Detected
1,1-Dichloroethene	4.5	Not Detected	18	Not Detected
Acetone	45	Not Detected	110	Not Detected
2-Propanol	18	Not Detected	44	Not Detected
Carbon Disulfide	18	Not Detected	56	Not Detected
3-Chloropropene	18	Not Detected	56	Not Detected
Methylene Chloride	45	Not Detected	160	Not Detected
Methyl tert-butyl ether	18	Not Detected	64	Not Detected
trans-1,2-Dichloroethene	4.5	5.0	18	20
Hexane	4.5	87	16	300
1,1-Dichloroethane	4.5	Not Detected	18	Not Detected
2-Butanone (Methyl Ethyl Ketone)	18	Not Detected	53	Not Detected
cis-1,2-Dichloroethene	4.5	320	18	1300
Tetrahydrofuran	4.5	6.5	13	19
Chloroform	4.5	Not Detected	22	Not Detected
1,1,1-Trichloroethane	4.5	Not Detected	24	Not Detected
Cyclohexane	4.5	53	15	180
Carbon Tetrachloride	4.5	Not Detected	28	Not Detected
2,2,4-Trimethylpentane	4.5	9.3	21	43
Benzene	4.5	33	14	100
1,2-Dichloroethane	4.5	Not Detected	18	Not Detected
Heptane	4.5	140	18	570
Trichloroethene	4.5	12	24	64
1,2-Dichloropropane	4.5	Not Detected	21	Not Detected
1,4-Dioxane	18	Not Detected	64	Not Detected
Bromodichloromethane	4.5	Not Detected	30	Not Detected
cis-1,3-Dichloropropene	4.5	Not Detected	20	Not Detected
4-Methyl-2-pentanone	4.5	Not Detected	18	Not Detected
Toluene	8.9	89	34	330
trans-1,3-Dichloropropene	4.5	Not Detected	20	Not Detected
1,1,2-Trichloroethane	4.5	Not Detected	24	Not Detected
Tetrachloroethene	4.5	12	30	84
2-Hexanone	18	Not Detected	73	Not Detected

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Client Sample ID: GBC-240610

Lab ID#: 2406295-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91061713**	**Date of Collection:**	**6/10/24 12:48:00 PM**
Dil. Factor:	**8.93**	**Date of Analysis:**	**6/17/24 06:11 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	4.5	Not Detected	38	Not Detected
1,2-Dibromoethane (EDB)	4.5	Not Detected	34	Not Detected
Chlorobenzene	4.5	8.5	20	39
Ethyl Benzene	4.5	910	19	4000
m,p-Xylene	8.9	950	39	4100
o-Xylene	4.5	190	19	820
Styrene	4.5	Not Detected	19	Not Detected
Bromoform	4.5	Not Detected	46	Not Detected
Cumene	4.5	61	22	300
1,1,2,2-Tetrachloroethane	4.5	Not Detected	31	Not Detected
Propylbenzene	4.5	88	22	430
4-Ethyltoluene	4.5	250	22	1200
1,3,5-Trimethylbenzene	4.5	140	22	700
1,2,4-Trimethylbenzene	4.5	240	22	1200
1,3-Dichlorobenzene	4.5	Not Detected	27	Not Detected
1,4-Dichlorobenzene	4.5	27	27	160
alpha-Chlorotoluene	4.5	Not Detected	23	Not Detected
1,2-Dichlorobenzene	4.5	Not Detected	27	Not Detected
1,2,4-Trichlorobenzene	18	Not Detected	130	Not Detected
Hexachlorobutadiene	18	Not Detected	190	Not Detected

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	94	70-130

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Client Sample ID: GAC-240610

Lab ID#: 2406295-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91061714**	**Date of Collection:**	**6/10/24 12:50:00 PM**
Dil. Factor:	**2.34**	**Date of Analysis:**	**6/17/24 06:37 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	160	5.8	810
Freon 114	1.2	120	8.2	820
Chloromethane	12	Not Detected	24	Not Detected
Vinyl Chloride	1.2	170	3.0	440
1,3-Butadiene	1.2	Not Detected	2.6	Not Detected
Bromomethane	12	Not Detected	45	Not Detected
Chloroethane	4.7	15	12	41
Freon 11	1.2	27	6.6	150
Ethanol	12	Not Detected	22	Not Detected
Freon 113	1.2	Not Detected	9.0	Not Detected
1,1-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Acetone	12	Not Detected	28	Not Detected
2-Propanol	4.7	4.7 J	12	11 J
Carbon Disulfide	4.7	Not Detected	14	Not Detected
3-Chloropropene	4.7	Not Detected	15	Not Detected
Methylene Chloride	12	16	41	55
Methyl tert-butyl ether	4.7	Not Detected	17	Not Detected
trans-1,2-Dichloroethene	1.2	Not Detected	4.6	Not Detected
Hexane	1.2	5.1	4.1	18
1,1-Dichloroethane	1.2	Not Detected	4.7	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.7	Not Detected	14	Not Detected
cis-1,2-Dichloroethene	1.2	2.3	4.6	9.2
Tetrahydrofuran	1.2	Not Detected	3.4	Not Detected
Chloroform	1.2	Not Detected	5.7	Not Detected
1,1,1-Trichloroethane	1.2	Not Detected	6.4	Not Detected
Cyclohexane	1.2	Not Detected	4.0	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.4	Not Detected
2,2,4-Trimethylpentane	1.2	Not Detected	5.5	Not Detected
Benzene	1.2	Not Detected	3.7	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.7	Not Detected
Heptane	1.2	Not Detected	4.8	Not Detected
Trichloroethene	1.2	Not Detected	6.3	Not Detected
1,2-Dichloropropane	1.2	Not Detected	5.4	Not Detected
1,4-Dioxane	4.7	Not Detected	17	Not Detected
Bromodichloromethane	1.2	Not Detected	7.8	Not Detected
cis-1,3-Dichloropropene	1.2	Not Detected	5.3	Not Detected
4-Methyl-2-pentanone	1.2	Not Detected	4.8	Not Detected
Toluene	2.3	42	8.8	160
trans-1,3-Dichloropropene	1.2	Not Detected	5.3	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.4	Not Detected
Tetrachloroethene	1.2	Not Detected	7.9	Not Detected
2-Hexanone	4.7	Not Detected	19	Not Detected

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Client Sample ID: GAC-240610

Lab ID#: 2406295-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91061714**	**Date of Collection:**	**6/10/24 12:50:00 PM**
Dil. Factor:	**2.34**	**Date of Analysis:**	**6/17/24 06:37 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	1.2	Not Detected	10	Not Detected
1,2-Dibromoethane (EDB)	1.2	Not Detected	9.0	Not Detected
Chlorobenzene	1.2	2.8	5.4	13
Ethyl Benzene	1.2	1.3	5.1	5.8
m,p-Xylene	2.3	6.1	10	26
o-Xylene	1.2	1.7	5.1	7.5
Styrene	1.2	Not Detected	5.0	Not Detected
Bromoform	1.2	Not Detected	12	Not Detected
Cumene	1.2	Not Detected	5.8	Not Detected
1,1,2,2-Tetrachloroethane	1.2	Not Detected	8.0	Not Detected
Propylbenzene	1.2	Not Detected	5.8	Not Detected
4-Ethyltoluene	1.2	Not Detected	5.8	Not Detected
1,3,5-Trimethylbenzene	1.2	Not Detected	5.8	Not Detected
1,2,4-Trimethylbenzene	1.2	Not Detected	5.8	Not Detected
1,3-Dichlorobenzene	1.2	Not Detected	7.0	Not Detected
1,4-Dichlorobenzene	1.2	Not Detected	7.0	Not Detected
alpha-Chlorotoluene	1.2	Not Detected	6.0	Not Detected
1,2-Dichlorobenzene	1.2	Not Detected	7.0	Not Detected
1,2,4-Trichlorobenzene	4.7	Not Detected	35	Not Detected
Hexachlorobutadiene	4.7	Not Detected	50	Not Detected

J = Estimated value.

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	103	70-130
1,2-Dichloroethane-d4	105	70-130
4-Bromofluorobenzene	105	70-130

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Client Sample ID: Lab Blank

Lab ID#: 2406295-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91061706**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/17/24 01:40 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Freon 114	0.50	Not Detected	3.5	Not Detected
Chloromethane	5.0	Not Detected	10	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
1,3-Butadiene	0.50	Not Detected	1.1	Not Detected
Bromomethane	5.0	Not Detected	19	Not Detected
Chloroethane	2.0	Not Detected	5.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Ethanol	5.0	Not Detected	9.4	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Acetone	5.0	Not Detected	12	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
3-Chloropropene	2.0	Not Detected	6.3	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Methyl tert-butyl ether	2.0	Not Detected	7.2	Not Detected
trans-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
cis-1,2-Dichloroethene	0.50	Not Detected	2.0	Not Detected
Tetrahydrofuran	0.50	Not Detected	1.5	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Cyclohexane	0.50	Not Detected	1.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
2,2,4-Trimethylpentane	0.50	Not Detected	2.3	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Heptane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,2-Dichloropropane	0.50	Not Detected	2.3	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Bromodichloromethane	0.50	Not Detected	3.4	Not Detected
cis-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
4-Methyl-2-pentanone	0.50	Not Detected	2.0	Not Detected
Toluene	1.0	Not Detected	3.8	Not Detected
trans-1,3-Dichloropropene	0.50	Not Detected	2.3	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
2-Hexanone	2.0	Not Detected	8.2	Not Detected

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Client Sample ID: Lab Blank

Lab ID#: 2406295-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91061706**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/17/24 01:40 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Dibromochloromethane	0.50	Not Detected	4.2	Not Detected
1,2-Dibromoethane (EDB)	0.50	Not Detected	3.8	Not Detected
Chlorobenzene	0.50	Not Detected	2.3	Not Detected
Ethyl Benzene	0.50	Not Detected	2.2	Not Detected
m,p-Xylene	1.0	Not Detected	4.3	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
Styrene	0.50	Not Detected	2.1	Not Detected
Bromoform	0.50	Not Detected	5.2	Not Detected
Cumene	0.50	Not Detected	2.4	Not Detected
1,1,2,2-Tetrachloroethane	0.50	Not Detected	3.4	Not Detected
Propylbenzene	0.50	Not Detected	2.4	Not Detected
4-Ethyltoluene	0.50	Not Detected	2.4	Not Detected
1,3,5-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,2,4-Trimethylbenzene	0.50	Not Detected	2.4	Not Detected
1,3-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,4-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
alpha-Chlorotoluene	0.50	Not Detected	2.6	Not Detected
1,2-Dichlorobenzene	0.50	Not Detected	3.0	Not Detected
1,2,4-Trichlorobenzene	2.0	Not Detected	15	Not Detected
Hexachlorobutadiene	2.0	Not Detected	21	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	105	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: CCV

Lab ID#: 2406295-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91061703**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 6/17/24 12:28 PM**

Compound	%Recovery
Freon 12	102
Freon 114	102
Chloromethane	103
Vinyl Chloride	102
1,3-Butadiene	101
Bromomethane	100
Chloroethane	103
Freon 11	100
Ethanol	106
Freon 113	104
1,1-Dichloroethene	105
Acetone	99
2-Propanol	101
Carbon Disulfide	105
3-Chloropropene	106
Methylene Chloride	101
Methyl tert-butyl ether	103
trans-1,2-Dichloroethene	105
Hexane	107
1,1-Dichloroethane	101
2-Butanone (Methyl Ethyl Ketone)	99
cis-1,2-Dichloroethene	107
Tetrahydrofuran	100
Chloroform	101
1,1,1-Trichloroethane	102
Cyclohexane	108
Carbon Tetrachloride	102
2,2,4-Trimethylpentane	110
Benzene	104
1,2-Dichloroethane	99
Heptane	116
Trichloroethene	98
1,2-Dichloropropane	96
1,4-Dioxane	106
Bromodichloromethane	104
cis-1,3-Dichloropropene	99
4-Methyl-2-pentanone	98
Toluene	100
trans-1,3-Dichloropropene	104
1,1,2-Trichloroethane	104
Tetrachloroethene	105
2-Hexanone	103

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Client Sample ID: CCV

Lab ID#: 2406295-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91061703**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/17/24 12:28 PM**	

Compound	%Recovery
Dibromochloromethane	105
1,2-Dibromoethane (EDB)	105
Chlorobenzene	104
Ethyl Benzene	111
m,p-Xylene	112
o-Xylene	108
Styrene	116
Bromoform	103
Cumene	111
1,1,2,2-Tetrachloroethane	102
Propylbenzene	109
4-Ethyltoluene	112
1,3,5-Trimethylbenzene	109
1,2,4-Trimethylbenzene	112
1,3-Dichlorobenzene	105
1,4-Dichlorobenzene	105
alpha-Chlorotoluene	104
1,2-Dichlorobenzene	103
1,2,4-Trichlorobenzene	118
Hexachlorobutadiene	104

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	95	70-130
4-Bromofluorobenzene	102	70-130

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Client Sample ID: LCS

Lab ID#: 2406295-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91061704**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/17/24 12:51 PM**	

Compound	%Recovery	Method Limits
Freon 12	102	70-130
Freon 114	102	70-130
Chloromethane	105	70-130
Vinyl Chloride	105	70-130
1,3-Butadiene	103	70-130
Bromomethane	100	70-130
Chloroethane	104	70-130
Freon 11	99	70-130
Ethanol	119	70-130
Freon 113	99	70-130
1,1-Dichloroethene	98	70-130
Acetone	98	70-130
2-Propanol	99	70-130
Carbon Disulfide	104	70-130
3-Chloropropene	105	70-130
Methylene Chloride	97	70-130
Methyl tert-butyl ether	102	70-130
trans-1,2-Dichloroethene	101	70-130
Hexane	104	70-130
1,1-Dichloroethane	98	70-130
2-Butanone (Methyl Ethyl Ketone)	100	70-130
cis-1,2-Dichloroethene	102	70-130
Tetrahydrofuran	107	70-130
Chloroform	97	70-130
1,1,1-Trichloroethane	100	70-130
Cyclohexane	108	70-130
Carbon Tetrachloride	99	70-130
2,2,4-Trimethylpentane	109	70-130
Benzene	101	70-130
1,2-Dichloroethane	97	70-130
Heptane	119	70-130
Trichloroethene	100	70-130
1,2-Dichloropropane	96	70-130
1,4-Dioxane	102	70-130
Bromodichloromethane	98	70-130
cis-1,3-Dichloropropene	100	70-130
4-Methyl-2-pentanone	104	70-130
Toluene	100	70-130
trans-1,3-Dichloropropene	101	70-130
1,1,2-Trichloroethane	101	70-130
Tetrachloroethene	104	70-130
2-Hexanone	105	70-130

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Client Sample ID: LCS

Lab ID#: 2406295-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91061704**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/17/24 12:51 PM**	

Compound	%Recovery	Method Limits
Dibromochloromethane	100	70-130
1,2-Dibromoethane (EDB)	102	70-130
Chlorobenzene	102	70-130
Ethyl Benzene	110	70-130
m,p-Xylene	109	70-130
o-Xylene	108	70-130
Styrene	112	70-130
Bromoform	99	70-130
Cumene	110	70-130
1,1,2,2-Tetrachloroethane	101	70-130
Propylbenzene	107	70-130
4-Ethyltoluene	110	70-130
1,3,5-Trimethylbenzene	108	70-130
1,2,4-Trimethylbenzene	112	70-130
1,3-Dichlorobenzene	103	70-130
1,4-Dichlorobenzene	104	70-130
alpha-Chlorotoluene	104	70-130
1,2-Dichlorobenzene	102	70-130
1,2,4-Trichlorobenzene	121	70-130
Hexachlorobutadiene	106	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	100	70-130
1,2-Dichloroethane-d4	96	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: LCSD

Lab ID#: 2406295-05AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91061705**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/17/24 01:14 PM**	

Compound	%Recovery	Method Limits
Freon 12	97	70-130
Freon 114	95	70-130
Chloromethane	96	70-130
Vinyl Chloride	96	70-130
1,3-Butadiene	95	70-130
Bromomethane	96	70-130
Chloroethane	97	70-130
Freon 11	94	70-130
Ethanol	113	70-130
Freon 113	97	70-130
1,1-Dichloroethene	96	70-130
Acetone	97	70-130
2-Propanol	101	70-130
Carbon Disulfide	103	70-130
3-Chloropropene	103	70-130
Methylene Chloride	96	70-130
Methyl tert-butyl ether	102	70-130
trans-1,2-Dichloroethene	101	70-130
Hexane	104	70-130
1,1-Dichloroethane	99	70-130
2-Butanone (Methyl Ethyl Ketone)	104	70-130
cis-1,2-Dichloroethene	103	70-130
Tetrahydrofuran	107	70-130
Chloroform	98	70-130
1,1,1-Trichloroethane	102	70-130
Cyclohexane	111	70-130
Carbon Tetrachloride	102	70-130
2,2,4-Trimethylpentane	111	70-130
Benzene	100	70-130
1,2-Dichloroethane	96	70-130
Heptane	117	70-130
Trichloroethene	97	70-130
1,2-Dichloropropane	94	70-130
1,4-Dioxane	103	70-130
Bromodichloromethane	101	70-130
cis-1,3-Dichloropropene	99	70-130
4-Methyl-2-pentanone	102	70-130
Toluene	98	70-130
trans-1,3-Dichloropropene	104	70-130
1,1,2-Trichloroethane	102	70-130
Tetrachloroethene	105	70-130
2-Hexanone	107	70-130

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Client Sample ID: LCSD

Lab ID#: 2406295-05AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**91061705**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 6/17/24 01:14 PM**	

Compound	%Recovery	Method Limits
Dibromochloromethane	100	70-130
1,2-Dibromoethane (EDB)	102	70-130
Chlorobenzene	103	70-130
Ethyl Benzene	113	70-130
m,p-Xylene	110	70-130
o-Xylene	110	70-130
Styrene	114	70-130
Bromoform	100	70-130
Cumene	111	70-130
1,1,2,2-Tetrachloroethane	102	70-130
Propylbenzene	109	70-130
4-Ethyltoluene	110	70-130
1,3,5-Trimethylbenzene	109	70-130
1,2,4-Trimethylbenzene	113	70-130
1,3-Dichlorobenzene	105	70-130
1,4-Dichlorobenzene	104	70-130
alpha-Chlorotoluene	104	70-130
1,2-Dichlorobenzene	102	70-130
1,2,4-Trichlorobenzene	122	70-130
Hexachlorobutadiene	107	70-130

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	97	70-130
4-Bromofluorobenzene	105	70-130

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Method : TO-15

CAS Number	Compound	Rpt. Limit (ppbv)
75-71-8	Freon 12	0.50
76-14-2	Freon 114	0.50
74-87-3	Chloromethane	5.0
75-01-4	Vinyl Chloride	0.50
106-99-0	1,3-Butadiene	0.50
74-83-9	Bromomethane	5.0
75-00-3	Chloroethane	2.0
75-69-4	Freon 11	0.50
64-17-5	Ethanol	5.0
76-13-1	Freon 113	0.50
75-35-4	1,1-Dichloroethene	0.50
67-64-1	Acetone	5.0
67-63-0	2-Propanol	2.0
75-15-0	Carbon Disulfide	2.0
107-05-1	3-Chloropropene	2.0
75-09-2	Methylene Chloride	5.0
1634-04-4	Methyl tert-butyl ether	2.0
156-60-5	trans-1,2-Dichloroethene	0.50
110-54-3	Hexane	0.50
75-34-3	1,1-Dichloroethane	0.50
78-93-3	2-Butanone (Methyl Ethyl Ketone)	2.0
156-59-2	cis-1,2-Dichloroethene	0.50
109-99-9	Tetrahydrofuran	0.50
67-66-3	Chloroform	0.50
71-55-6	1,1,1-Trichloroethane	0.50
110-82-7	Cyclohexane	0.50
56-23-5	Carbon Tetrachloride	0.50
540-84-1	2,2,4-Trimethylpentane	0.50
71-43-2	Benzene	0.50
107-06-2	1,2-Dichloroethane	0.50
142-82-5	Heptane	0.50
79-01-6	Trichloroethene	0.50
78-87-5	1,2-Dichloropropane	0.50
123-91-1	1,4-Dioxane	2.0
75-27-4	Bromodichloromethane	0.50
10061-01-5	cis-1,3-Dichloropropene	0.50
108-10-1	4-Methyl-2-pentanone	0.50
108-88-3	Toluene	1.0
10061-02-6	trans-1,3-Dichloropropene	0.50
79-00-5	1,1,2-Trichloroethane	0.50
127-18-4	Tetrachloroethene	0.50
591-78-6	2-Hexanone	2.0
124-48-1	Dibromochloromethane	0.50
106-93-4	1,2-Dibromoethane (EDB)	0.50

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Method : TO-15

CAS Number	Compound	Rpt. Limit (ppbv)
108-90-7	Chlorobenzene	0.50
100-41-4	Ethyl Benzene	0.50
108-38-3	m,p-Xylene	1.0
95-47-6	o-Xylene	0.50
100-42-5	Styrene	0.50
75-25-2	Bromoform	0.50
98-82-8	Cumene	0.50
79-34-5	1,1,2,2-Tetrachloroethane	0.50
103-65-1	Propylbenzene	0.50
622-96-8	4-Ethyltoluene	0.50
108-67-8	1,3,5-Trimethylbenzene	0.50
95-63-6	1,2,4-Trimethylbenzene	0.50
541-73-1	1,3-Dichlorobenzene	0.50
106-46-7	1,4-Dichlorobenzene	0.50
100-44-7	alpha-Chlorotoluene	0.50
95-50-1	1,2-Dichlorobenzene	0.50
120-82-1	1,2,4-Trichlorobenzene	2.0
87-68-3	Hexachlorobutadiene	2.0

	Surrogate	Method Limits
2037-26-5	Toluene-d8	70-130
17060-07-0	1,2-Dichloroethane-d4	70-130
460-00-4	4-Bromofluorobenzene	70-130

Analysis Request / Canister Chain of Custody

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Eurofins Environment Testing Northern California, LLC
180 Blue Ravine Rd. Suite B, Folsom, CA 95630
Phone (800) 985-5955; Fax (916) 351-8279

Workorder #: 2406295

Instructions

If no TAT is marked, EATL will proceed with Standard TAT

page 1 of 1

Client: Spokane County
Site Name: Greenacres Landfill
Project Manager: Austin Stewart
Sampler: GF

Project Name: GA Carbon treatment of LFG gas
Project #: 308 NHR
PO#: 308 NHR

Turnaround Time (Specify Below)
Standard X Rush _____ (Surcharges will apply, per availability)
~~Samples received after 3PM PST~~ are considered to be received on the following workday.
Requested Date (mm/dd/yy):
OR Number of Days:

Lab ID	Field Sample Identification (Location)	Canister Barcode #	Flow Controller Barcode #	Start Sampling Information		Stop Sampling Information		Requested Analyses				Canister Vacuum/Pressure		Lab Use Only	
				Date	Time	Date	Time	EPA TO-15				Initial (in "Hg)	Final (in "Hg)	Receipt (in "Hg)	Final (in psi) Gas: N2 / He
01A	GBC-240610	1L4209	24295	6/10/24	1242	6/10/24	1248	X				-28.8	-5.5		
02A	GAC-240610	1L4297	23509	6/10/24	1244	6/10/24	1250	X				-28.2	-6.0		

Special Instructions/Notes: Please email results to: AStewart@spokanecounty.org
GFisette@spokanecounty.org

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Gordon Fisette Spokane Cnty	6/10/24	1445		6/12/24	0950
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time

Lab Use Only

Shipper Name: Fed Ex | Custody Seals Intact? Yes No None | Condition:

Sample Transportation Notice: Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples. D.O.T Hotline (800) 467-4922

Appendix E: LFG Perimeter Probe Sampling Resources

Designation: D7648/D7648M – 18

Standard Practice for Active Soil Gas Sampling for Direct Push or Manual-Driven Hand-Sampling Equipment[1]

This standard is issued under the fixed designation D7648/D7648M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope*

1.1 This practice details the collection of active soil gas samples using a variety of sample collection techniques with tooling associated with direct push drilling (DP) or manual-driven hand-sampling equipment, for the express purpose of conducting soil gas surveys.

1.2 This practice proceeds on the premise that soil gas surveys are primarily used for two (2) purposes: *1*) as a preliminary site investigative tool and *2*) for the monitoring of ongoing remediation activities (D7663).

1.3 The practicality of field use demands that soil gas surveys are relatively accurate, as well as being simple, quick, and inexpensive. This guide suggests that the objective of soil gas surveys is linked to three factors:

1.3.1 VOC detection and quantitation, including determination of depth of VOC contamination.

1.3.2 Sample retrieval ease and time.

1.3.3 Cost.

1.4 This practice may increase the awareness of a fundamental difference between soil gas sampling for the purpose of soil gas surveys versus sub-slab or vapor intrusion investigations or both. Specifically, the purpose of a soil gas survey is to provide quick and inexpensive data to the investigator that will allow the investigator to 1) develop a site investigation plan that is strategic in its efforts, 2) determine success or progress of on-going remedial activities, or 3) select the most suitable subsequent investigation equipment, or combinations thereof. On the other hand, the objective of soil gas sampling for sub-slab and vapor intrusion investigations is not preliminary, but rather the end result of the site investigation or long-term precise monitoring. As such, stringent sampling methods and protocol are necessary for precise samples and data collection.

1.5 Details included in this practice include a broad spectrum of practices and applications of soil gas surveys, including:

1.5.1 Sample recovery and handling,

1.5.2 Sample analysis,

1.5.3 Data interpretation, and

1.5.4 Data reporting.

1.6 *Units*—The values stated in either SI units or Inch-pound units [given in brackets] are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in non-conformance with the standard.

1.7 All observed and calculated values shall conform to the guidelines for significant digits and rounding established in Practice D6026.

1.7.1 The procedures used to specify how data are collected/recorded and calculated in the standard are regarded as the industry standard. In addition, they are representative of the significant digits that generally should be retained. The procedures used do not consider material variation, purpose for obtaining the data, special purpose studies, or any consideration for the user's objectives; and it is common practice to increase or reduce significant digits of reported data to be commensurate with these considerations. It is beyond the scope of this standard to consider significant digits used in analysis methods for engineering data.

1.8 This practice offers a set of instructions for performing one or more specific operations. This standard cannot replace education or experience and should be used in conjunction with professional judgment. Not all aspects of this practice may be applicable in all circumstances. This ASTM standard is not intended to represent or replace the standard of care by which the adequacy of a given professional service must be judged, nor should this document be applied without consideration of a project's many unique aspects. The word "Standard" in the title of this document means only that the document has been approved through the ASTM consensus process.

1.9 This practice is not to be used for long term monitoring of contaminated sites or for site closure confirmation.

1.10 This practice is not to be used for passive determination of flow patterns at contaminated sites.

1.11 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the*

[1] This practice is under the jurisdiction of ASTM Committee D18 on Soil and Rock and is the direct responsibility of Subcommittee D18.21 on Groundwater and Vadose Zone Investigations.

Current edition approved Dec. 1, 2018. Published December 2018. Originally approved in 2012. Last previous edition approved in 2012 as D7648 – 12. DOI: 10.1520/D7648_D7648M-18.

***A Summary of Changes section appears at the end of this standard**

responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.

1.12 This practice does not purport to set standard levels of acceptable risk. Use of this practice for purposes of risk assessment is wholly the responsibility of the user.

1.13 Concerns of practitioner liability or protection from or release from such liability, or both, are not addressed by this practice.

1.14 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

D653 Terminology Relating to Soil, Rock, and Contained Fluids

D1452 Practice for Soil Exploration and Sampling by Auger Borings

D3249 Practice for General Ambient Air Analyzer Procedures

D3614 Guide for Laboratories Engaged in Sampling and Analysis of Atmospheres and Emissions

D3740 Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction

D5314 Guide for Soil Gas Monitoring in the Vadose Zone (Withdrawn 2015)[3]

D6026 Practice for Using Significant Digits in Geotechnical Data

D6196 Practice for Choosing Sorbents, Sampling Parameters and Thermal Desorption Analytical Conditions for Monitoring Volatile Organic Chemicals in Air

D7663 Practice for Active Soil Gas Sampling in the Vadose Zone for Vapor Intrusion Evaluations

3. Terminology

3.1 For definitions of common technical terms used in this standard, refer to Terminology D653.

3.2 *Definitions of Terms Specific to This Standard:*

3.2.1 *active sampling, n—in vadose zone*, a means of collecting an airborne or emission substance that employs a mechanical device such as a pump or vacuum assisted orifice to draw air or emissions onto or through the sampling device.

3.2.2 *capillary fringe, n—in vadose zone*, the basal region of the vadose zone comprising sediments that are saturated, or nearly saturated, near the water table, gradually decreasing in water content with increasing elevation above the water table. Also see Terminology D653.

3.2.3 *free vapor phase, n—in vadose zone*, a condition of contaminant residence in which volatilized contaminants occur in porosity that is effective to free and open gaseous flow and exchange, such porosity generally being macroporosity.

3.2.4 *hot spot, n—in vadose zone*, areas where contaminants exceed cleanup standards or the highest level at a contaminated site.

3.2.5 *partitioning, n—in vadose zone*, the act of movement of contaminants from one soil residence phase to another.

3.2.6 *soil gas, n—in vadose zone*, vadose zone atmosphere.

3.2.7 *volatile organic compound (VOC), n*—an organic compound with boiling points typically ranging from a lower limit between 50°C and 100°C, and an upper limit between 240°C and 260°C, where the upper limits represent mostly polar compounds.

4. Summary of Guide

4.1 Sampling of soil gases (volatile compounds such as methane and carbon dioxide, which are indicators of increased microbial activity resulting from organic contaminants) in the vadose zone is an industry-accepted method used to directly measure characteristics of the soil atmosphere. Characteristics determined from soil gas sampling are frequently used as indirect indicators of processes occurring in and below a sampling horizon, including the presence, composition, origin and distribution of contaminants in and below the vadose zone.

4.2 Originally, soil gas sampling was used more as a tool for laying the groundwork for further soil exploration. The ability to quickly, accurately, and inexpensively determine VOCs presence, levels, and depths have allowed this method to become a standard practice for preliminary site investigation as well as for monitoring the success of on-going site remediation efforts. Currently soil gas sampling has been gaining acceptance as a reasonable method for the determination of risk assessment of contaminated sites, known as soil gas investigations. Soil gas sampling is now playing a major role in the development of new methodologies with a current trend towards more stringent soil gas sampling methods and protocols.

4.3 However, the practicality of field use demands that there is a soil gas sampling method that is accurate as well as simple, quick, and inexpensive, for the purposes of preliminary site investigation and the monitoring of on-going remediation efforts. This practice refers to this method as a soil gas survey.

4.4 The objective of a soil gas survey is to determine, through relative data, the highest level of contamination at a site (hot spot). Data collected from soil gas surveys provides information useful for the development of strategic and cost effective site investigation plans.

4.5 While the need for stringent methodology is strongly supported for soil gas investigations, (sub-slab and vapor intrusion investigations) those same stringent methods and protocols, when used for the purpose of soil gas surveying, are not cost effective nor time efficient.

[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[3] The last approved version of this historical standard is referenced on www.astm.org.

4.6 Soil gas surveys need to use quick, time efficient, and cost effective soil gas methods. The economic limits coupled with the objective of a soil gas survey must be the leading factor behind the development of soil gas survey methodology and protocol. If it takes as much time or much cost to survey as to investigate, then investigators will not utilize this tool/practice.

4.7 Vadose zone sampling methods have a set of procedures, both general and specific, that must be consistently followed in order to provide maximum data quality and usefulness. Soil gas surveys have the primary procedures common to most soil gas sampling techniques. The procedures include:

(1) Planning and preparation,

(2) The act of sampling soil gas in the field,

(3) Handling and transporting the sample, and

(4) This method does not recommend a sample analysis, interpretation of the results of analysis, nor specific format for the preparation of a report of findings. Instead it indicates minimum information to be included in a report of findings.

4.7.1 The planning and preparation step begins with the formulation of project objectives, including purpose of the survey, appropriate application of the data to be collected and data quality objectives.

4.7.2 Actual field work consists of recovery of soil gas samples. The method selected should be based upon site specific factors and dictated by the project objectives.

4.7.3 As samples are being recovered or collected, they should be handled, field screened, or transported, or combinations thereof, in such a way as to preserve the sample prior to analysis.

5. Significance and Use

5.1 Soil gas is simply the gas phase (air) that exists in the open spaces between soil particles in the unsaturated portion of the vadose zone. VOCs can potentially migrate through the soil, or ground water, or both, and present an impact to the environment and human health.

NOTE 1—Not all VOCs in soil gas are due to spills or leaks. Simple VOCs, such as acetone, methanol, and ethanol may also arise from natural biological processes.

5.2 *Application of Soil Gas Surveys*—Soil gas surveying offers an effective, quick and cost-effective method of detecting volatile contaminants in the vadose zone. Soil gas surveying has been demonstrated to be effective for selection of suitable and representative samples for other more costly and definitive investigative methods. This method is highly useful at the initiation of the preliminary site investigation for determining the existence and extent of volatile or semi volatile organic contamination, and determination of location of highest concentrations, as well as, monitoring the effectiveness of on-going remedial activities (D6196).

5.3 Samples are collected by inserting a sampling device into a borehole with hydraulically-driven direct push drilling or manually-driven driven hand sampling equipment (see Note 2).

NOTE 2—Soil gas sampling can be performed beneath impervious surfaces, such as concrete slabs or pavement by drilling or boring through the surface.

5.4 Soil gas surveys can be performed over a wide range of spatial designs. Spatial designs include soil gas sampling in profiles or grid patterns at a single depth or multiple depths. Multiple depth sampling is particularly useful for contaminant determinations in cases with complex soil type distribution and multiple sources. Depth profiling can also be useful in the determination of the most appropriate depth(s) at which to monitor soil gas, as well as the demonstration of migration and degradation processes in the vadose zone.

5.5 Soil gas surveys are used extensively in preliminary site investigations and monitoring of effectiveness of on-going site remediation efforts. Project objectives should be known and the limitation of this method considered. Limitations include:

5.5.1 Data generated from soil gas surveying is relative and not of the quality necessary for final decisions; and

5.5.2 Soil gas surveys need to be done quickly, so this method is for active soil-gas sampling devices only.

6. Apparatus

6.1 Soil gas samples are collected by inserting a sampling device into an open borehole or telescopically pushed into native lithology, through other subsurface conduits, with hydraulically driven direct push drilling or manual driven hand (D1452) sampling equipment (Figs. 1 and 2). Table 1 provides a summary of potential causes of false positive and false negative values.

6.2 Whether the sampling device is driven by direct push equipment or by hand it should be sealed and isolated at the depth to which it is opened and exposed, so that soil gas that is drawn comes from the specific target depth. The sampling inlet can range from less than 0.65 cm to 0.3 m [0.25 to 12 in.] in length (Figs. 1 and 2).

NOTE 3—The use of bentonite slurries for sealing in the vadose zone for more than short term can be problematic as the bentonite lacking moisture will potentially shrink and allow air leakage. An extensive research program on annular sealants was conducted from 2001 through 2009 and subsequent years by the Nebraska Grout Task Force. This research included cement and bentonite grouts. The general finding of the study indicates all sealing methods suffer from some shrinkage in the unsaturated zone. The best grouts were cement-sand, bentonite chips, neat cements and bentonite slurries with more than 20 % solids bentonite. Bentonite slurry was not recommended in the unsaturated zone regardless of solids content for longer term use. When bentonite is used for sealing, it should be properly hydrated to form an adequate seal with cautions to avoid the intrusion of water into the sampling zone.

6.3 The inlet of the sampling device should eliminate or minimize the chance of soil particles or other debris from being drawn to the surface or into the sample container (Figs. 1 and 2). A list of acceptable sample containers or monitoring devices is included in Table 2.

6.4 The sample train from the inlet to the container of choice should be of closed loop configuration and valving components that will allow for purging of ambient air existing from the installation and set up (Figs. 3 and 4).

6.5 Once the ambient air and a purge volume equal to three times the total volume of the sample train has been purged the sample train should be isolated to make sure that ambient air does not reenter the sample train.

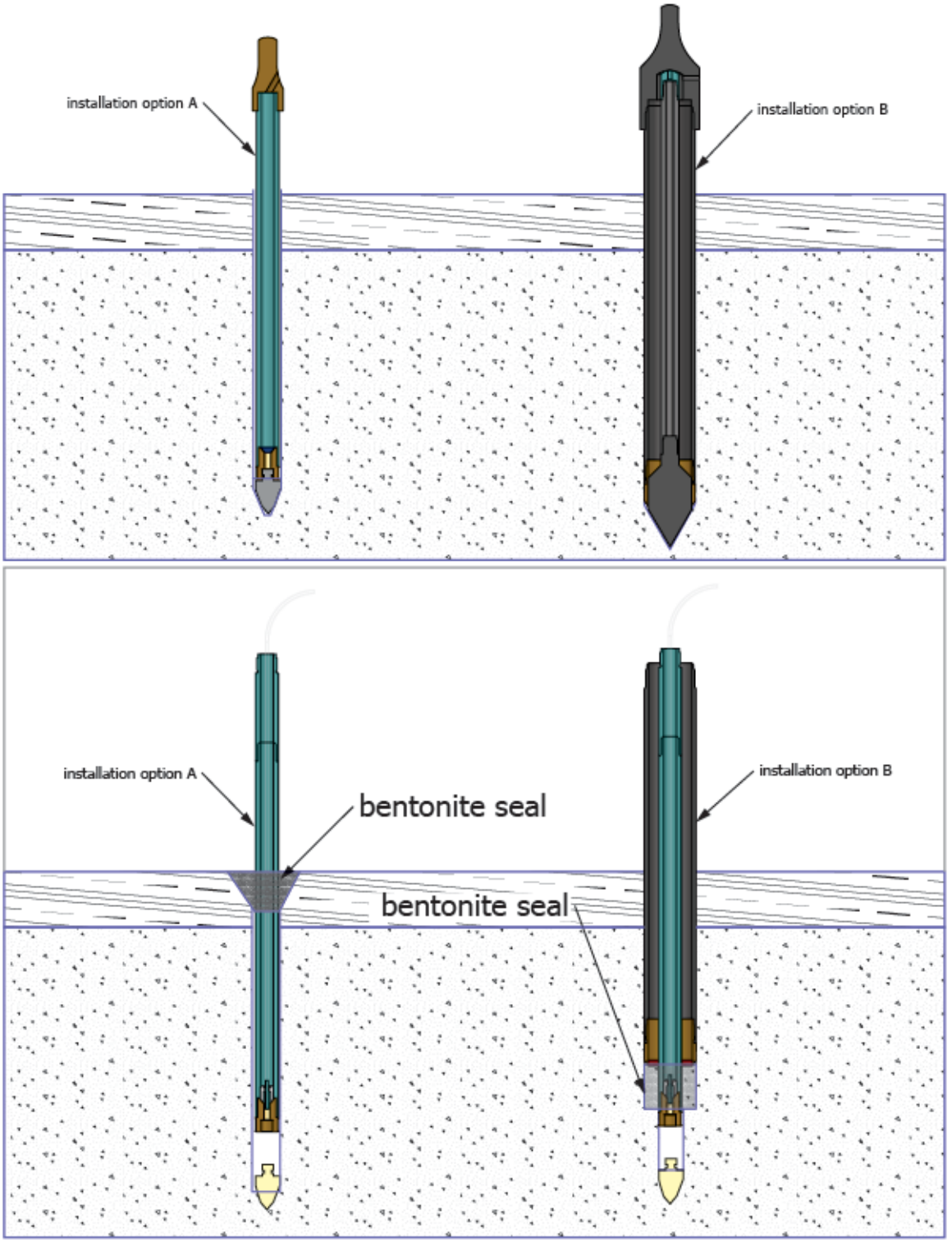

FIG. 1 Direct Push

6.6 As the sampling device is opened or exposed it should be of the design so that ambient air from internal or external area of the direct push or hand sampling equipment is prevented from being drawn into the inlet.

6.7 It is important that soil gas samples are collected in the same procedure from every boring and depth so that the relative results analysis or field screening can be compared to each other.

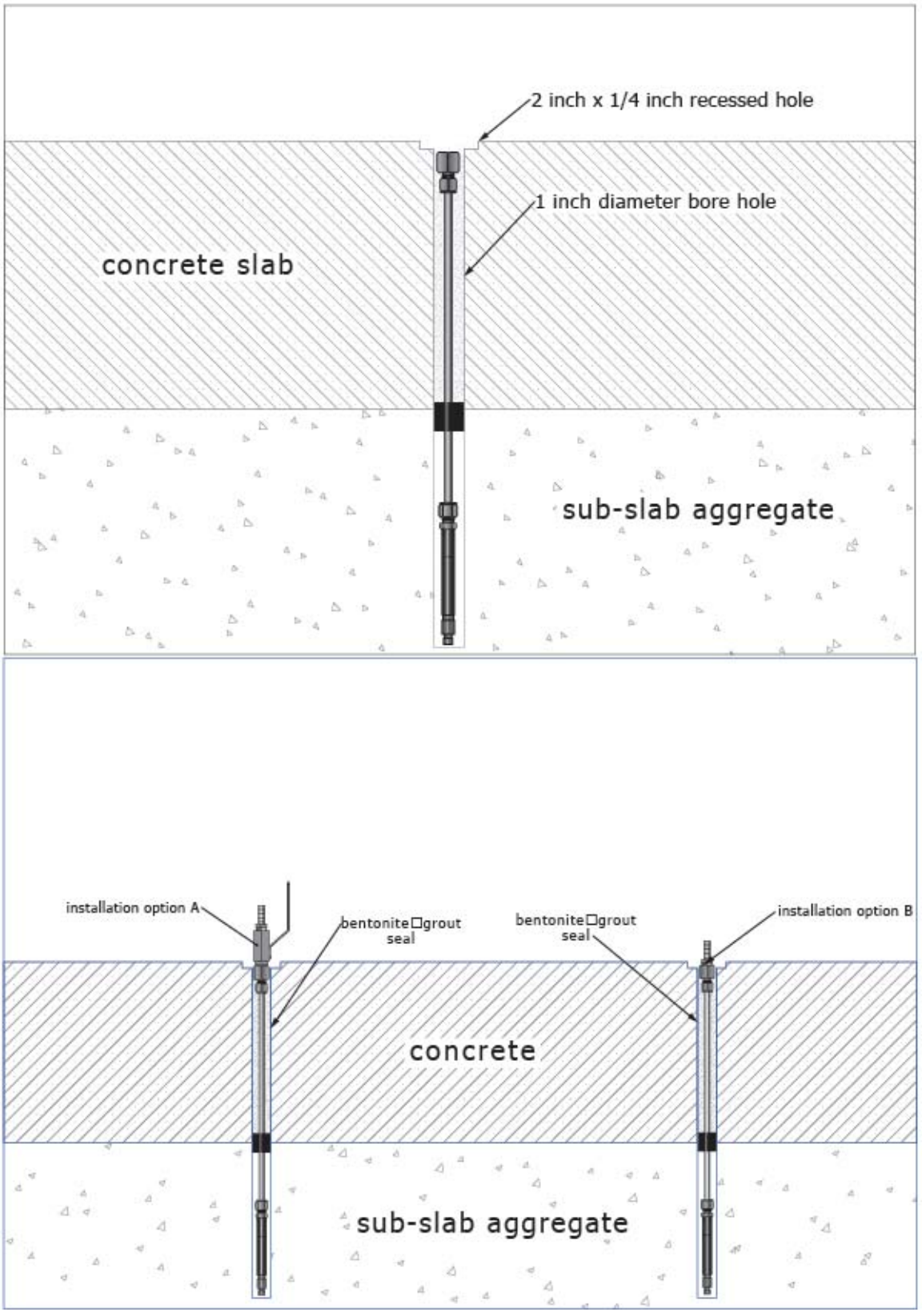

FIG. 2 Hand Sampling

6.8 Lithology can affect the existence of a contaminant or the ability of the contaminant to migrate in the subsurface. Soil gas sampling as part of a survey can provide useful information

TABLE 1 Summary of Potential Explanations for Unexpected Results

Result	Causes
False negatives, that is, falsely low values	Barriers to gaseous diffusion, such as perched water, clay lenses, impervious man-made debris, saturation of soil pores with water (as from rain), low subsurface temperatures. Biological or chemical degradation. Leakage or blockage in the sample train, improper purge procedure, loss of sample from sample container, problem with analytical system.
False positives, that is, falsely high values	Contamination in sampling train, sample container, or analytical system. Contribution of volatile organic contaminants from vegetation. Significant contamination in overlying soil.

TABLE 2 Soil Gas Containers or Monitoring Devices

Type	Application	Advantages	Limitations	References
Summa canisters	Sample collection for offsite analysis	Durability Ease of sample collection Re-usable More stable than other containers—especially for very volatile, non-polar compounds Allow replicate analysis Sampling of very volatiles	Higher cost Bulky to transport/store Incomplete recovery of less volatile cpds (> n-C10), for example, middle distillate fuels, and polar compounds Regeneration requires expensive vacuum equipment Can be difficult to decontaminate Can't be used for TWA monitoring	
Tedlar bags	Sample collection for offsite analysis	Lower cost Good for very volatiles Allow replicate analysis Useful for sampling reduced sulfur compounds (RSCs)	Significant analyte losses after extended storage (>24 hrs) Incomplete recovery of less volatile cpds, for example, middle distillate fuels, and polars Some bags can introduce contaminants Not easily re-usable Leaks in valves	
Active sampling onto sorbent tubes using large gas syringe/hand pump or low cost bellows pumps	Sample collection for offsite analysis	Low cost Reusable Most commercial apparatus now compatible with repeat analysis Easy to use for example, with large gas syringe, bellows pump or constant flow pump Versatile analyte range—for example, butadiene to n-C30 on a single tube, plus compatible with polars Cheap to store/transport Proven storage stability Allows TWA or grab sampling Facilitates sampling of large air/gas volumes for trace analysis Self re-generate during analysis—no extra cleaning needed Eliminates losses due to condensation or dissolution in condensed water during sample storage/transport	Not suitable for ultra-volatiles (for example, C2 hydrocarbons or CF4) Multi-sorbent tubes require refrigeration for storage over 7 days Repeat analysis requires modern TD instrumentation (but the 2 main commercial brands now offer this capability) Potential for artifacts if tubes are incorrectly stored or incompletely desorbed. Potential for background contamination.	ASTM D6196 ASTM D7663 USEPA TO-17
Syringe	Sample collection for onsite analysis	Ease of sample collection Does not require special instrumentation to introduce sample to GC(/MS)	Very limited sample volume limits sensitivity Higher boiling compounds will condense on syringe walls and will not be completely recovered Requires very fast transfer from field to analyzer Can't be used for TWA monitoring Very unlikely to provide quantitative data for only the most volatile compounds Syringe needs to be stringently cleaned between uses	
Direct read-out detector (PID, OVM, FID, etc.)	Real time monitoring	Easy to use No expensive analytical equipment needed Only means of producing real time data Great for quick screening of 'hot spots'	Very limited sensitivity Doesn't provide speciated information Recommended to provide relative information	

to provide preliminary indications as to what has happened or is happening in the subsurface.

6.9 It is up to the project manager, remedial engineer, or regulatory oversight personnel, or combinations thereof, to

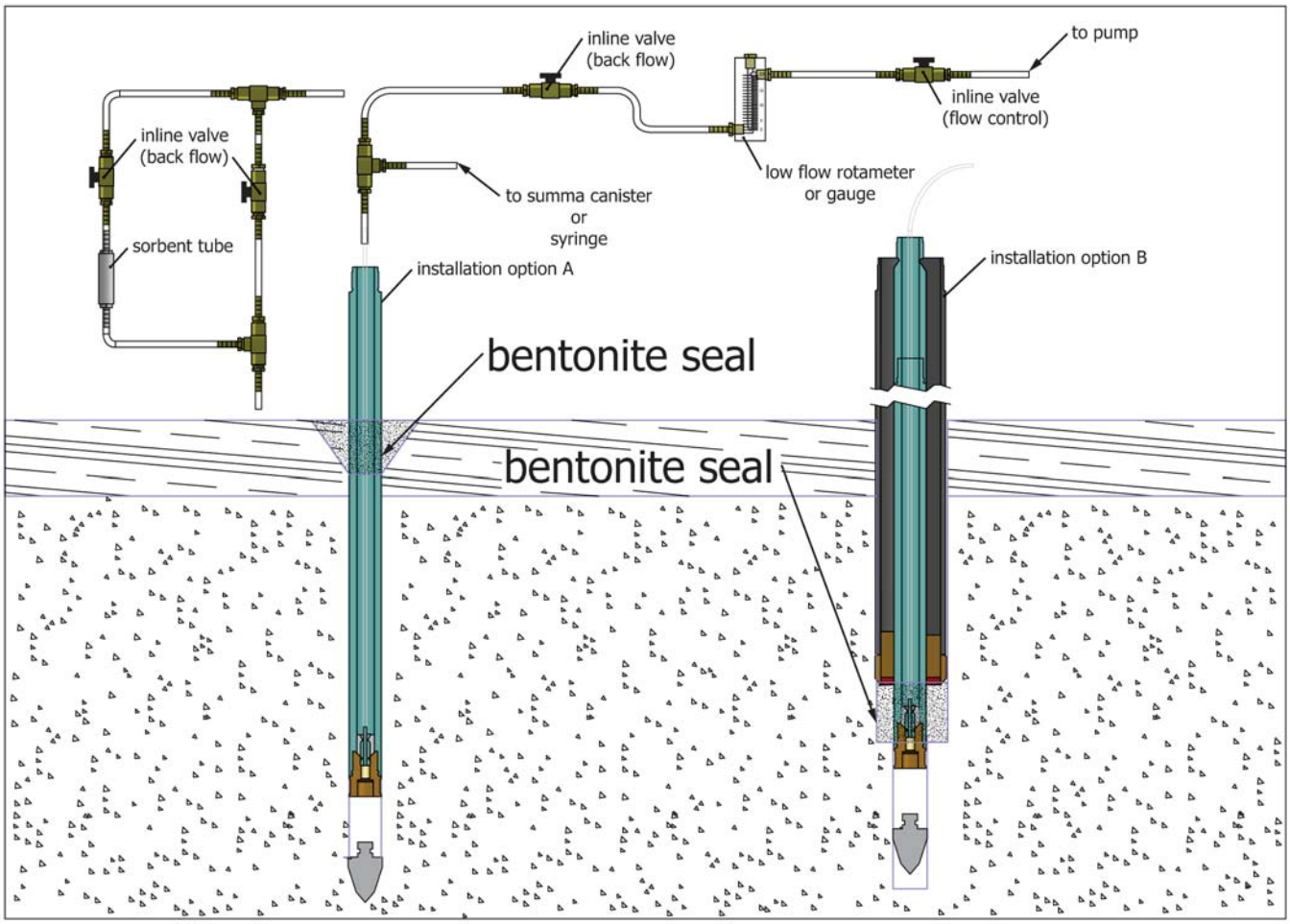

FIG. 3 Direct Push

determine how to use the analytical results or field screening readings for planning or reporting on different phases of the site investigation and remedial activities.

7. Sampling Method or Procedure

7.1 *Sampling Methodology*—Soil gas sampling methodology has evolved over time and through practice in several industries. The equipment with which to perform this monitoring technique is highly varied; however, a single method or procedure cannot be recommended to the reader due to the variation in site specific factors. The selection of a soil gas sampling method involves consideration of three primary issues. These are the type of sampling system, the methodology of application of that sampling system and the rigor of the field QA/QC protocol. Informed investigators assume the responsibility of selecting the technique most appropriate to the subject application, whether that technique is commercially available from contractors or equipment suppliers, or reliant upon the ingenuity of the investigator in the field utilizing commonly available materials. Success in choosing an appropriate sampling device or an entire sampling system is dependent upon the investigator's level of understanding of vadose zone processes, contaminant properties and appropriate applicability of the soil gas method. The target analyte volatility range is key criteria affecting sampling method selection.

7.1.1 The application of these methods needs to be controlled by strict adherence to a standard operating procedure. Occasional deviations as dictated by unusual field conditions should be recorded in the project field notebook. Inadvertent minor deviations in field procedure can result in misinterpretation of the data acquired.

7.2 *Soil types* should be taken into consideration as soil gas samples are collected across a given site. Although the level of concentration of VOCs in soil gas samples collected from different lithologies is expected to be different as migration of soil gas can be influenced by the parameters of a particular lithology.

7.3 *Active Soil Gas Surveying*—Active methods are those that obtain a soil gas sample by positioning a sampling device in the subsurface and the withdrawal of soil atmosphere through the device from the sampling horizon. (Passive methods are those that obtain a soil gas sample by placing a collection device in the soil or on the soil surface, and allowing the atmosphere within the device to come into compositional equilibrium with the soil atmosphere.)

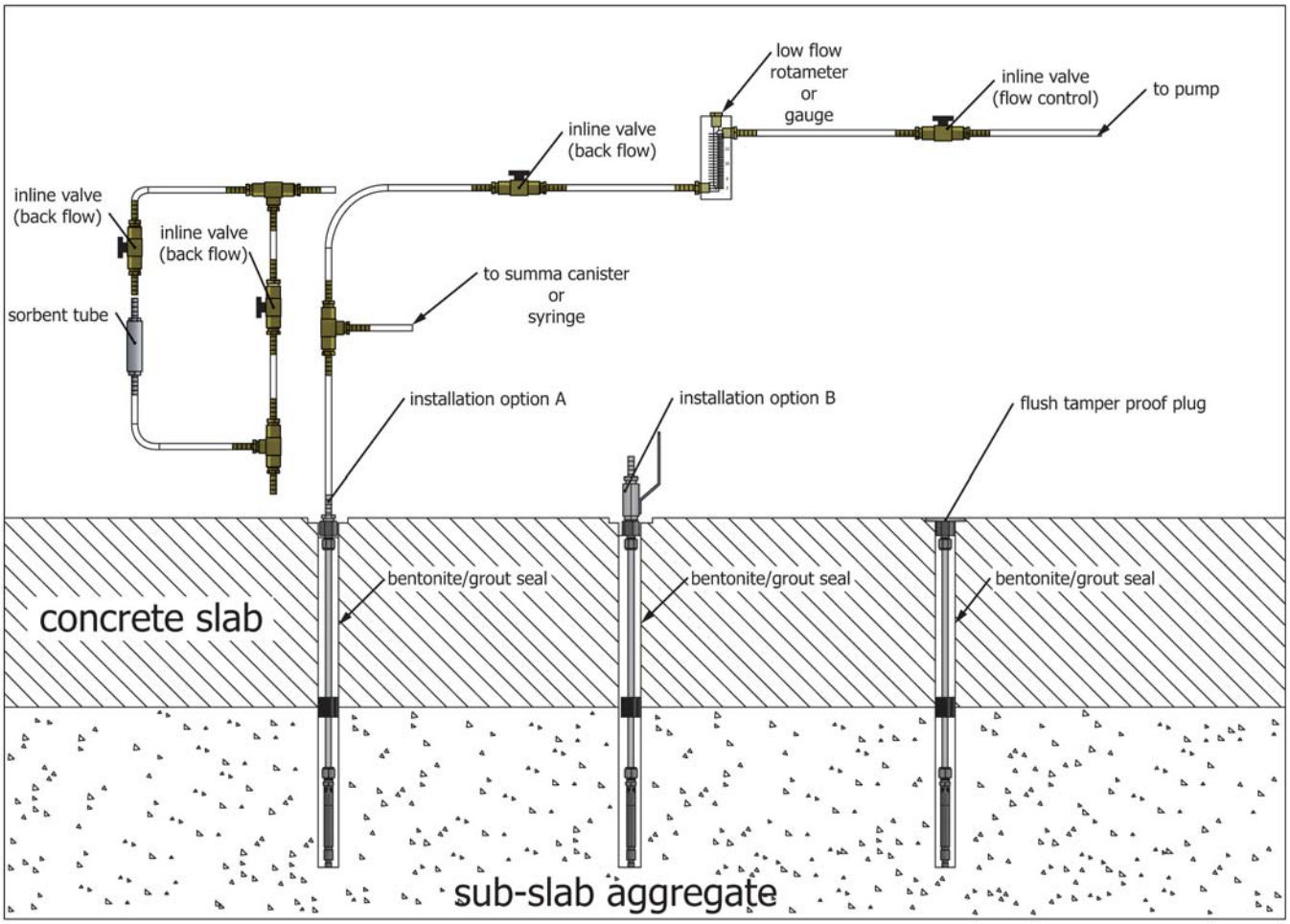

FIG. 4 Hand Sampling

7.4 *Methodology in Application of a Sampling Technique*—The likelihood of success of the soil gas sampling technique selected is controlled in part by the methodology in application of that sampling technique. This methodology should be guided by the objectives of the subject project and the perceived spatial and temporal array of the potential sampling targets.

7.4.1 *Grids*—Many problems suitable for soil gas monitoring are often solved by obtaining data distributed over a geographic area. Sampling in grid patterns of variable design and spacing can be a very effective way to provide data coverage over a large area for a very low cost of acquisition. Common applications of soil gas grid sampling are environmental contaminant assessments, exploration for natural resources and the siting of locations for other monitoring or exploratory techniques. Compositional analyses in conjunction with correctly designed grid systems are often fundamental to successful evaluation of soil gas monitoring.

7.4.2 *Strategic Soil Gas Survey*—A strategic soil gas survey can be developed based upon known site history, historical records, historical aerial photography, current site status, site visit, and future plans for the subject site.

7.4.3 *Profiling*—Profiling is a soil gas sampling methodology useful to test a linear array for the existence of contaminants. Profiling is most often performed by sampling at closely spaced intervals in a linear array and is displayed as contaminant concentration or composition versus distance sampled on an $X - Y$ plot. Concentration data are often displayed logarithmically on the ordinant (Y) axis, while single components or ratios of compositional data are often displayed linearly on the ordinant axis.

7.4.3.1 For environmental applications such as leak detection along the length of a pipeline or monitoring of contaminant encroachment across a property boundary, soil gas samples are recovered along a profile at intervals from 8 to 30 m [25 to 100 ft]. Profiling for natural resource exploration can be performed at sample intervals from 15 to 50 m [50 to 500 ft], depending upon the application.

7.4.3.2 Profiling is useful as a corroborative tool for other monitoring or exploration methods. For example, a soil gas sample profile acquired coincident with a seismic profile can suggest primary contaminant migration pathways or the boundaries of confining layers in shallow, complex geologic settings. This technique has been demonstrated as highly effective in reducing exploratory risk prior to drilling for petroleum and natural gas, by suggesting the presence of hydrocarbon seepage coincident with structures with reservoir potential defined by the seismic method.

7.4.4 *Multiple Depth Sampling*—Methodologies encompassing multiple depths sampling normally have one of two goals, that is, to monitor changes in soil gas contaminant fractions versus depth, and to closely follow a single sampling horizon for an entire soil gas grid or profile.

7.4.4.1 When the goal of a survey is to monitor contaminants over varying depths, some sampling systems can recover soil gas samples as probes are advanced deeper into the vadose zone. This practice is helpful in determining the optimum sampling depth for a particular site or to demonstrate the presence or absence of soil atmosphere contamination in a certain horizon. Soil gas contaminant concentrations often increase with depth as the sampling horizon approaches contaminated ground water or other source of soil gas contaminants. Caution needs to be exercised when soil gas sampling tools are advanced to increasing depths due to the fact that cross contamination of some or most of the sampling system is unavoidable. This situation limits quality control for this type of multiple depth sampling. Attempts to eliminate cross contamination in multiple depths sampling by replacement or decontamination of sampling equipment with each new sample aliquot also result in limited quality control. Tool withdrawal and tool reinsertion result in venting of the sampling environment via an open hole. The open hole behaves as a macroporous pore space, allowing enhanced partitioning into the vapor phase and convective migration to the atmosphere. This results in a reduction in representativeness for each subsequently recovered soil gas sample.

7.4.4.2 Multiple depth sampling can also be used to focus a sampling program into a single geologic unit or suite of units without regard to depth. This practice is helpful at sites with complex lithologic changes in the vadose zone. Samples can be recovered from lithologies with greater permeability to vapor or greater storage capacity for vapor when bias in sampling depth is necessary to accomplish project goals. This practice involves greater effort and expense than most methodologies due to the necessity to establish the presence, thickness, and depth of the target horizons prior to soil gas sampling. The most common application of this methodology is the sampling of soil gas at the top of the capillary fringe.

7.5 *Field QA/QC*—Quality assurance and quality control procedures (QA/QC) are important to establishing support for interpretation of measurement data and can be used to identify error due to sampling or analytical methodologies and chain-of custody procedures or both. Soil gas surveying data requires a thorough QA/QC protocol confirming that data have been generated to satisfy the data quality objectives for the survey. Justification for interpretations based upon data of unknown quality is not practicable.

7.5.1 QA/QC requirements are dependent upon the data quality objectives defined in the planning phase of the survey. For example, soil gas surveying with the objective or gathering relative data, requires a less demanding QA/QC protocol than other soil gas sampling methods with the objective focused on the gathering of a single data source, such as vapor intrusion investigations. If appropriate and applicable, leak detection tracer gases can be used to verify that ambient air is not being drawn from the surface down around the probe rods to the sample inlet/intake. Or leak detection tracer gasses such as helium are required by regulatory agencies in some states. These tracers are used to detect leaks in the sample train or in the seal along the probe rods. They are introduced into the air in a small hood or tent surrounding the top of the probe rod. The detection of up to 20 % or less of leak detection tracer gas has been used by regulators to reject active soil gas sample results.

Details of QA/QC are in Guide D5314.

7.6 *Sample Handling and Transport*—Soil gas sampling and analysis usually involve the monitoring of contaminants at very low levels. Consideration of sample handling and transport is not trivial to this exercise.

7.6.1 The period of sample handling and transport represents the greatest opportunity for loss or gain of contaminants from or to sample containers. Loss occurs by contaminant condensation within the sampling train, sorption onto materials within the sampling train, solution into condensed water in the sampling train, chemical changes, or leakage to the atmosphere through defects in the sampling apparatus or sample container. Gain of contaminants from sources other than the sampling horizon can occur through related mechanisms working in reverse. Both processes can severely limit the value of data obtained from a survey, and they need to be minimized. Losses due to condensation or dissolution into condensed water or both, specifically affect sample containers and not sorbent tubes (See Guide D5314).

7.7 *Analysis of Soil Gas Samples*—Soil gas analysis procedure is based upon pre-existing protocol established for the analysis of contaminants in ambient air. A common reference practice defining terms, sampling information, calibration techniques and methods for validating results may be applied to most automatic analyzers (See Practice D3249). Basic laboratory practice common to investigators engaged in sampling and analysis of atmospheres applies to soil gas analysis. Note that air sampling protocols and soil gas sampling protocols are not equivalent; geophysical and geochemical factors as well as definition of air sample volume contribute to this lack of equivalency. This guide includes the criteria, guidelines and recommendations for analytical segments including the mode of operation of the laboratory and data validation (See Practice D3614).

7.7.1 *Basic Analytical Approach*—Soil gas analysis is performed to identify the presence of contaminants, their type and relative concentrations. Various analytical methods are highly general, satisfying only the most rudimentary requirements of contaminant screening. Others are sophisticated, providing identification and relative concentration information for numerous chemical compounds determined to be present in a soil gas sample. The choice of basic analytical approach in soil gas analysis is driven by the purpose of the soil gas survey, quality assurance objectives, and budgetary constraints placed upon investigators (See Guide D5314).

7.8 *Interpreting Soil Gas Data Profiles*—Soil gas data from survey profiles displayed on an $X - Y$ plot are an effective aid to data interpretation. This display is useful to examine the overall context for soil gas measurement data potentially

indicating contamination. If the profile is displayed as a cross section through a grid pattern or as a linear array of sample points, the profile display can illustrate spatially significant groupings of data subpopulations (See Guide D5314).

8. Report: Test Data Sheet(s)/Form(s)

8.1 The methodology used to specify how data are recorded on the test data sheet(s)/form(s) as given below is covered in Practice D6026.

8.2 Record as a minimum the following general information (data):

8.2.1 The data records or field logs that contain information, measurements, or readings (data) collected in the field before, during, and after soil gas sample collection should be kept in order, and made available to be accessed by anyone who needs to review them in conjunction with the generation or report review or both. The data reports should contain, but are not limited to what the sample identifications (IDs) were, where the samples were collected, how deep they were collected, how they were collected, and applicable field readings, such as line pressure, barometric pressure, and temperature.

8.3 *Purpose of Records*—Of primary concern in records of findings pertaining to a soil gas survey is that the records includes the information necessary to describe the results of that survey performed for a particular application.

8.4 Information to be included are:

8.4.1 Where the sample was collected and its unique identification, such as boring number, sample number, and depth (a site plan or map indicating the sample locations should be included),

8.4.2 How the sample was collected, quality control and decontamination procedures,

8.4.3 Field readings/measurements (if taken), and the laboratory results should be included in every report.

8.4.3.1 In many instances, certain interpretative methods or data reporting formats useful to end users for one particular application are not relevant to the needs of end users applying the information to a different application. Examples of these differing applications that require unique records subject matter are soil gas contaminant determinations for real property environmental assessments, soil gas monitoring of volatile organic contaminants from underground storage tanks and soil gas sampling as a tool useful in the exploration for natural resources. Certain applications require a thorough treatment of a significant number of factors impacting the meaning and usefulness of soil gas data interpretations. Examples of such applications include damage assessments, contaminant source identification or tests of the effectiveness of remediation. Other applications may need specific records. An example of such an application is the monitoring of releases from underground storage tanks over time.

9. Keywords

9.1 active soil gas sampling; contaminant; direct push; environmental monitoring; geochemistry; ground water; petroleum hydrocarbon; preliminary site investigation; sampling; soil gas; soil gas sampling; soil gas surveying; unsaturated flow; vadose zone; vapor monitoring; volatile organic compound

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SUMMARY OF CHANGES

In accordance with Committee D18 policy, this section identifies the locations of changes to this standard since the last edition that may impact the users of this standard. (December 1, 2018)

(1) Section 1 Scope—Updated professional judgment caveat, added units section, added D6026 wording to comply with D18 policies.
(2) Section 2 Referenced Documents—Removed standards that were not referenced in the text of the standard. Added D3740 and D6026, moved EPA documents to references.
(3) Section 3 Terminology—Removed common terms, terms in D653, and terms not used in the text of the standard. Added delimiting terms. Revised term for VOCs to match D7663 and the ISIAQ glossary.
(4) Section 5—Revised 5.1 to correct erroneous statements and added new Note 1.
(5) Section 6 Section—Added note concerning the use of bentonite grouts for sealing for long term use. Revised Title of Table 1 to reflect the content. Combined Figures 1 and 3 and 2 and 4 for simplicity. Subsection 6.5—Revised volumes for purging from two to three volumes
(6) Subsection 6.6—Deleted and following subsections renumbered. Subsection 6.5.1—Revised acceptable leakage rate from 10% to 20% to reflect measurement variabilities.
(7) Section 7 Sampling Procedure—Revised the SI/IP unit to match units statement.
(8) Section 8 Report—Revised title and intro to conform with D18 Policies.
(9) References—Removed vague EPA, Cal DTSC and NY-DOH reference; added U.S EPA procedures that were in Section 2; added Nebraska Grout task force paper reference.
(10) General—Removed or replaced jargon and superlatives throughout the standard.

GA - PERIMETER PROBE SOIL GAS SAMPLING

Spokane County – Public Works - 2024

OBJECTIVE

This document is a procedural and scientific reference to be used by Spokane County – Public Works/Landfill Technicians to perform Perimeter Probe Soil Gas Sampling. It is our intention that this document will provide enough procedural information to enable a Landfill Technician to understand and perform Perimeter Probe Soil Gas Sampling.

PROCEDURE

Perimeter Probe Soil Gas Sampling using TO-15 analysis is a technique that takes advantage of negative barometric pressure trends to collect physical gas samples from perimeter probes. Samples will be taken using 1 L summa canisters and sent to the lab for TO-15 analysis.

1. Each perimeter probe has a unique Field Sheet including a probe purge calculation, so begin by printing out Field Sheets for each probe to be sampled.

    a. Field Sheets are named "FS – GA - PERIMETER PROBE SOIL GAS SAMPLING – (Probe ID)" in the database.

    b. The "MASTER" Field Sheet contains all field sheets for Greenacres Landfill.

2. Prepare sample kits for each probe to be sampled. One sample kit per probe. Each kit will include:

    a. 1L Summa Canister
    b. Sample Train
    c. Influent Tubing
    d. Effluent Tubing

    Sample tubing consists of clean Teflon and silicone tubing. Tubing is dedicated to each sample location.

    - Sample kits must be probe-specific to avoid cross-contamination! Under no circumstances can any part of a sample kit be re-used or used to sample more than one probe.

    - Be sure to prepare a few spare kits to speed up sampling in the event of a failed sample or test.

    - Sample kits consist of 1.5-gallon Ziploc bags with dedicated tubing, tubing nuts, and sealing ferrules.

3. Each sample kit will be assigned a unique Flow Controller and Sample Train. IDs must be recorded on the Field Sheet:

    a. See the "Equipment" section of the Field Sheet.

b. Write in the Flow Controller ID found on the Summa Canister.

c. Write in the Sample Train ID found on the influent line vacuum gauge of the Sample Train.

4. Assemble the necessary tools needed for sampling:

    a. GEM-500
    b. Manual Purge Pump
    c. Stopwatch
    d. Needle Nose Pliers
    e. 2 crescent wrenches
    f. Field Sheets
    g. Sun Shield (Umbrella or some means to block sunlight from the canister during sampling)

5. The barometric pressure trend, or qualifier, must be falling for 2 consecutive days or more, before sampling:

    a. See "Barometric Pressure Data" on the Field Sheet.

    b. In the "Start" box, write down the current barometric pressure and the time.

    c. To verify if barometric pressure conditions are acceptable, export the .csv file from the Extech SD700 Datalogger. Be sure to print out the relevant data, at least 2 days prior, up to current, to include in the paperwork.

    d. Find the barometric pressure from -48 Hours (2 days) ago and write it, along with its corresponding time, into the "-48 Hour box." Pick a data point that is (+/-) 1 hour from the time written in the "Start" box.

    e. Do the same for the "-24 Hours" (1 day) ago box.

    f. Leave the "End" box blank for now but write in the barometric pressure and the time at the end of the sampling run.

    g. In the "Qualifier: -48H to -24H" box, write "Falling" if the pressure at -24H is less than the pressure at -48H. If it is not, do not sample, and wait for better barometric pressure conditions.

    h. In the "Qualifier: -24 to Current" box, write "Falling" if the current pressure is less than the pressure at -24H. If it is not, do not sample, and wait for better barometric pressure conditions.

    i. In the "Qualifier: Current:" box, write "Falling" if the END pressure is less than the START pressure, write "Steady" if the END pressure is the same as the START pressure, or write "Rising" if the END pressure is greater than the START pressure.

6. After barometric pressure conditions are verified, calibrate the GEM-500 using 10% CH4, 10% CO2, and N2 Bal calibration gas. Be sure to write in the calibration time on the Field Sheets.

7. Load all sample kits, field sheets, and tools into the truck and travel out to the first probe being sampled (Generally GP-10).

8. Use the GEM-500 to record the "Initial Internal Probe Pressure.":

    a. See "Probe Purge Calculation" on the Field Sheet.

    b. Turn on the GEM-500 and find the probe being sampled in the list of IDs and select it.

    c. Zero pressure on the GEM with both hoses disconnected. Ensure both Static and Differential pressures read zero after zeroing.

    d. Connect the Differential hose (Bottom hose, blue) from the bottom left port on the GEM-500 to the probe, leaving the Static/sample hose (Top hose, clear) disconnected.

    e. Open the valve for the probe.

    f. Record the Differential Pressure, displayed as "Diff" on the GEM display, into the "Initial Probe Pressure" box.

    g. Close the valve for the probe and disconnect the GEM-500.

    h. If the valve for the probe was open upon arrival, close the valve and move on to the next probe being sampled. Come back to this probe at the end.

9. To clear all stagnant air out of the probe and draw in soil gas from the screen section, 3 - 5 volumes of the probe must be purged before a sample is taken.

    a. See "Probe Purge Calculation" on the Field Sheet.

    b. Locate the number of cycles required to purge a minimum of 3 - 5 volumes on the Field Sheet.

    c. Connect the manual purge pump to the probe.

    d. Open the valve for the probe.

    e. Cycle the pump the required number of times. A cycle is defined as one up OR down motion, so one UP then Down motion is 2 pump cycles.

    f. After all cycles are completed, close the valve for the probe. The probe purge section is now complete.

10. Since leaks in the sample train will dilute the sample, a vacuum test to -15 inHg must be performed on the Sample Train before taking the sample:

    a. See "Vacuum Test" on the Field Sheet.

b. Remove the Sample Train from the sample kit and open the influent valve and remove the cap from the effluent connection. Ensure both vacuum gauges read zero after opening. Once verified at zero, close the influent valve and place a cap on the effluent connection.

c. Remove the Summa canister from the sample kit.

d. Install the pre-cleaned single-use Sample Train onto the Summa Canister by pulling back the quick connect on the Sample Train. Once a connection is confirmed, the effluent valve is closed, and a cap is installed on the influent line, **BRIEFLY** open the valve of the summa canister and write down the initial vacuum. Make sure the valve is open for no more than 2 seconds.

e. Attach the influent tubing (longer tube) to the probe.

f. Attach the influent tubing to the influent side of the Sample Train. Ensure the ferrule is installed so that the smaller diameter is closest to the end of the tube. Use crescent wrenches to tighten.

g. Attach the Effluent Tubing to the effluent side of the Sample Train. Ensure the ferrule (in the nut) is installed so that the smaller diameter is closest to the end of the tube. Use crescent wrenches to tighten. Once connected, open the effluent valve.

h. Connect the Effluent Tubing to the Static/sampling line of the GEM-500. Use silicone tubing to shim and couple as needed. Tighten hose clamps with needle nose pliers.

i. Disconnect the Static line from the GEM-500 at the inlet and connect the manual purge pump to the static line at the inlet tube.

j. Use the manual purge pump to bring the vacuum down to at least -15 inHg, but no more than -20 inHg. Once the desired vacuum is reached, close the Effluent Valve.

k. The vacuum test has now begun (See "VACUUM TEST" section of the Field Sheet). Write the vacuum level in the "INITIAL VACUUM" box and the time into the "START TIME" box.

l. While the test is going on, disconnect the Manual Purge Pump from the Static Line Inlet Tube, and re-attach the Static Line Inlet Tube to the GEM-500.

m. After 5 minutes, check the vacuum level. If the level hasn't changed, the vacuum test indicates no leakage and passes. Record the "FINAL VACUUM" and "END TIME."

11. After the vacuum test is complete, a 3-gas calibrated GEM-500 is used to gather a 1 - 2 sample to accompany the results at the time of sampling. Sampled gas percentages must be stable for at least 1 – 2 minutes before collecting the sample:

    a. See the "GEM-500 SAMPLE DATA" section of the Field Sheet.

    b. Travel to the GEM-500 Sampling Screen for the probe being sampled.

    c. Record the time and current gas percentages in the "START" row.

d. Press “#5” on the GEM to turn the pump on.

e. Open the Effluent Valve on the Sample Train.

f. Open the valve on the Probe.

g. Monitor the gas composition until the percentages become stable. When they have been stable for around 1 minute, record the time and current gas percentages on a piece of scratch paper.

h. Close the Effluent Valve on the Sample Train. We are now ready to sample.

i. Open the Summa valve:

- See the “SAMPLE DATA” section of the Field Sheet
- Record the vacuum level in the “INITIAL VACUUM” and “SUMMA INITIAL VACUUM” boxes.
- Record the time in the “START” box.

j. Press “#5” on the GEM to turn the pump off.

k. Save the Data to the GEM.

l. Monitor the vacuum level.

- When the vacuum level is at -5 inHg, CLOSE THE SUMMA VALVE.
- Record the FINAL VACUUM and END TIME in the SAMPLE DATA section of the Field Sheet. Sampling should take approximately 5 minutes to complete.

FIGURES

STEP 2 – SAMPLE SETUP COMPONENTS

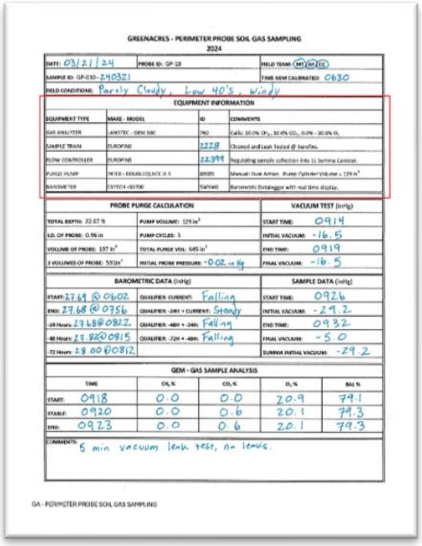
**Figure 2a - Summa Canister*

**Figure 2b - Sample Train 1*

**Figure 2c - Influent Tubing*

**Figure 2d - Effluent Tubing*

STEP 3 & 4 – EQUIPMENT INFORMATION



GREENACRES - PERIMETER PROBE SOIL GAS SAMPLING
2024

DATE: 03/21/24	PROBE ID: GP-10	FIELD TEAM: MT GP CC
SAMPLE ID: GP-010-240321		TIME GEM CALIBRATED: 0630
FIELD CONDITIONS: Partly Cloudy, Low 40's, Windy		

EQUIPMENT INFORMATION

EQUIPMENT TYPE	MAKE - MODEL	ID	COMMENTS
GAS ANALYZER	LANDTEC - GEM 500	760	Calib: 10.0% CH_4, 10.4% CO_2, 0.0% - 20.9% O_2
SAMPLE TRAIN	EUROFINS	2278	Cleaned and Leak Tested @ Eurofins.
FLOW CONTROLLER	EUROFINS	22399	Regulating sample collection into 1L Summa Canister.
PURGE PUMP	[illegible]	[illegible]	Manual Dual Action. Pump Cylinder Volume = 129 in³
BAROMETER	EXTECH [illegible]	[illegible]	Barometric Datalogger with real time display.

PROBE PURGE CALCULATION		VACUUM TEST (inHg)
TOTAL DEPTH: 22.67 ft	PUMP VOLUME: 129 in³	START TIME: 0914
I.D. OF PROBE: 0.96 in	PUMP CYCLES: 5	INITIAL VACUUM: -16.5
VOLUME OF PROBE: 197 in³	TOTAL PURGE VOL: 645 in³	END TIME: 0919
3 VOLUMES OF PROBE: 591 in³	INITIAL PROBE PRESSURE: -0.02 in Hg	FINAL VACUUM: -16.5

BAROMETRIC DATA (inHg)		SAMPLE DATA (inHg)
START: 27.69 @ 0602	QUALIFIER CURRENT: Falling	START TIME: 0926
END: 27.68 @ 0756	QUALIFIER -24H + CURRENT: Steady	INITIAL VACUUM: -29.2
-24 Hours: 27.68 @ 0822	QUALIFIER -48H + -24H: Falling	END TIME: 0932
-48 Hours: 27.82 @ 0815	QUALIFIER -72H + -48H: Falling	FINAL VACUUM: -5.0
-72 Hours: 28.00 @ 0812		SUMMA INITIAL VACUUM: -29.2

GEM - GAS SAMPLE ANALYSIS

	TIME	CH_4 %	CO_2 %	O_2 %	BAL %
START:	0918	0.0	0.0	20.9	79.1
STABLE:	0920	0.0	0.6	20.1	79.3
END:	0923	0.0	0.6	20.1	79.3

COMMENTS: 5 min vacuum leak test, no leaks.

GA - PERIMETER PROBE SOIL GAS SAMPLING

Figure 3a - Equipment Section

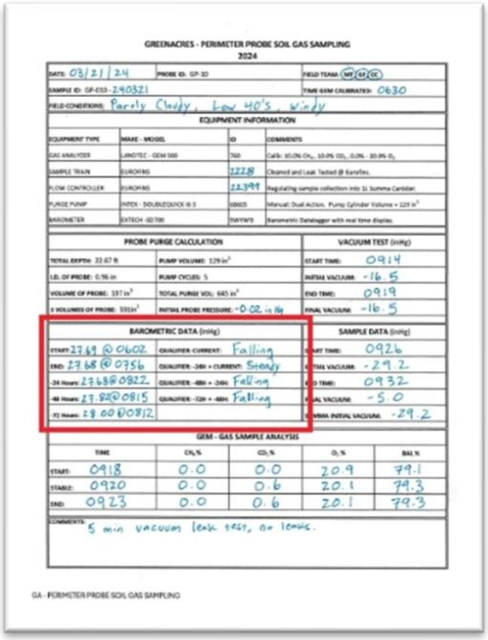
Figure 3b - Flow Controller ID

Figure 4a – GEM(Gas Extraction Monitor) 500 Gas Analyzer

Figure 3c - Sample Train ID

Figure 4b - Manual Purge Pump

STEP 5 – BAROMETRIC DATA



GREENACRES - PERIMETER PROBE SOIL GAS SAMPLING
2024

DATE: 03/21/24	PROBE ID: GP-10	FIELD TEAM: (MT) (GF) (CC)
SAMPLE ID: GP-010-240321		TIME GEM CALIBRATED: 0630
FIELD CONDITIONS: Partly Cloudy, Low 40's, Windy		

EQUIPMENT INFORMATION

EQUIPMENT TYPE	MAKE - MODEL	ID	COMMENTS
GAS ANALYZER	LANDTEC - GEM 500	760	Calib: 10.0% CH_4, 10.0% CO_2, 0.0% - 20.9% O_2
SAMPLE TRAIN	EUROFINS	1228	Cleaned and Leak Tested @ Eurofins.
FLOW CONTROLLER	EUROFINS	22399	Regulating sample collection into 1L Summa Canister.
PURGE PUMP	INTEX - DOUBLEQUICK III S	68605	Manual: Dual Action. Pump Cylinder Volume = 129 in^3
BAROMETER	EXTECH -SD700	[illegible]	Barometric Datalogger with real time display.

PROBE PURGE CALCULATION		VACUUM TEST (inHg)
TOTAL DEPTH: 22.67 ft	PUMP VOLUME: 129 in^3	START TIME: 0914
I.D. OF PROBE: 0.96 in	PUMP CYCLES: 5	INITIAL VACUUM: -16.5
VOLUME OF PROBE: 197 in^3	TOTAL PURGE VOL: 645 in^3	END TIME: 0919
3 VOLUMES OF PROBE: 591 in^3	INITIAL PROBE PRESSURE: -0.02 in Hg	FINAL VACUUM: -16.5

BAROMETRIC DATA (inHg)		SAMPLE DATA (inHg)
START: 27.69 @ 0602	QUALIFIER CURRENT: Falling	START TIME: 0926
END: 27.68 @ 0756	QUALIFIER -24H + CURRENT: Steady	INITIAL VACUUM: -29.2
-24 Hours: 27.68 @ 0822	QUALIFIER -48H + -24H: Falling	END TIME: 0932
-48 Hours: 27.82 @ 0815	QUALIFIER -72H + -48H: Falling	FINAL VACUUM: -5.0
-72 Hours: 28.00 @ 0812		SUMMA INITIAL VACUUM: -29.2

GEM - GAS SAMPLE ANALYSIS

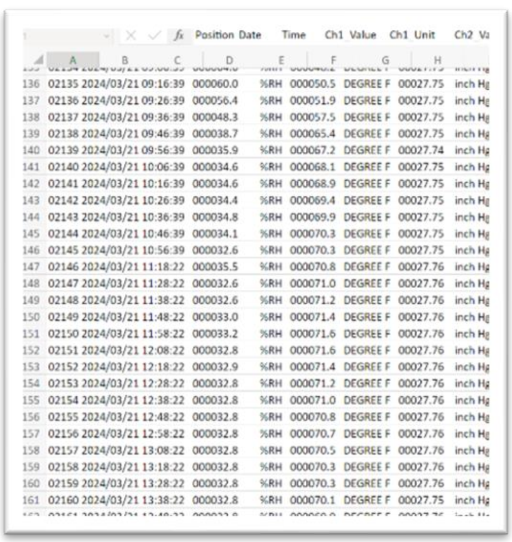
	TIME	CH_4 %	CO_2 %	O_2 %	BAL %
START:	0918	0.0	0.0	20.9	79.1
STABLE:	0920	0.0	0.6	20.1	79.3
END:	0923	0.0	0.6	20.1	79.3

COMMENTS: 5 min vacuum leak test, no leaks.

GA - PERIMETER PROBE SOIL GAS SAMPLING

Figure 5a - Barometric Data Section

Figure 5b – Current Barometric Pressure



Position Date Time Ch1_Value Ch1_Unit Ch2_Va

	A	B	C	D	E	F	G	H	
136	02135	2024/03/21	09:16:39	000060.0	%RH	000050.5	DEGREE F	00027.75	inch Hg
137	02136	2024/03/21	09:26:39	000056.4	%RH	000051.9	DEGREE F	00027.75	inch Hg
138	02137	2024/03/21	09:36:39	000048.3	%RH	000057.5	DEGREE F	00027.75	inch Hg
139	02138	2024/03/21	09:46:39	000038.7	%RH	000065.4	DEGREE F	00027.75	inch Hg
140	02139	2024/03/21	09:56:39	000035.9	%RH	000067.2	DEGREE F	00027.74	inch Hg
141	02140	2024/03/21	10:06:39	000034.6	%RH	000068.1	DEGREE F	00027.75	inch Hg
142	02141	2024/03/21	10:16:39	000034.6	%RH	000068.9	DEGREE F	00027.75	inch Hg
143	02142	2024/03/21	10:26:39	000034.4	%RH	000069.4	DEGREE F	00027.75	inch Hg
144	02143	2024/03/21	10:36:39	000034.8	%RH	000069.9	DEGREE F	00027.75	inch Hg
145	02144	2024/03/21	10:46:39	000034.1	%RH	000070.3	DEGREE F	00027.75	inch Hg
146	02145	2024/03/21	10:56:39	000032.6	%RH	000070.3	DEGREE F	00027.75	inch Hg
147	02146	2024/03/21	11:18:22	000035.5	%RH	000070.8	DEGREE F	00027.76	inch Hg
148	02147	2024/03/21	11:28:22	000032.6	%RH	000071.0	DEGREE F	00027.76	inch Hg
149	02148	2024/03/21	11:38:22	000032.6	%RH	000071.2	DEGREE F	00027.76	inch Hg
150	02149	2024/03/21	11:48:22	000033.0	%RH	000071.4	DEGREE F	00027.76	inch Hg
151	02150	2024/03/21	11:58:22	000033.2	%RH	000071.6	DEGREE F	00027.76	inch Hg
152	02151	2024/03/21	12:08:22	000032.8	%RH	000071.6	DEGREE F	00027.76	inch Hg
153	02152	2024/03/21	12:18:22	000032.9	%RH	000071.4	DEGREE F	00027.76	inch Hg
154	02153	2024/03/21	12:28:22	000032.8	%RH	000071.2	DEGREE F	00027.76	inch Hg
155	02154	2024/03/21	12:38:22	000032.8	%RH	000071.0	DEGREE F	00027.76	inch Hg
156	02155	2024/03/21	12:48:22	000032.8	%RH	000070.8	DEGREE F	00027.76	inch Hg
157	02156	2024/03/21	12:58:22	000032.8	%RH	000070.7	DEGREE F	00027.76	inch Hg
158	02157	2024/03/21	13:08:22	000032.8	%RH	000070.5	DEGREE F	00027.76	inch Hg
159	02158	2024/03/21	13:18:22	000032.8	%RH	000070.3	DEGREE F	00027.76	inch Hg
160	02159	2024/03/21	13:28:22	000032.8	%RH	000070.3	DEGREE F	00027.76	inch Hg
161	02160	2024/03/21	13:38:22	000032.8	%RH	000070.1	DEGREE F	00027.75	inch Hg

Figure 5c - Extech Barometric Data

STEP 8 – PROBE INITIAL PRESSURE READING

**Figure 8 - Probe Initial Pressure*

STEP 9 – MANUAL PURGE OF PROBE

**Figure 9 - Manual Probe Purge*

STEP 10 – VACUUM TEST

Figure 10b - Ensure Zero

Figure 10c – Connect Summa

Figure 10e - Influent to Probe

Figure 10f - Influent to Train

Figure 10g - Effluent to Train

Figure 10h - Effluent to GEM

Figure 10i- Purge Pump to GEM

Figure 10j - Vacuum -15 inHg

Figure 10h - Close Effluent

STEP 11 – COLLECTING SAMPLE

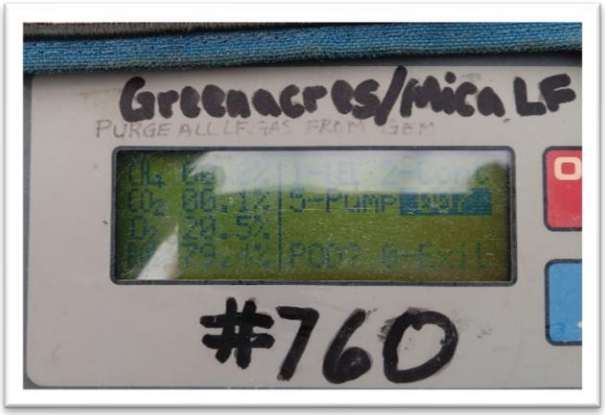


**Figure 11a-d - GEM sample start*

**Figure 11e - Open Effluent Valve*

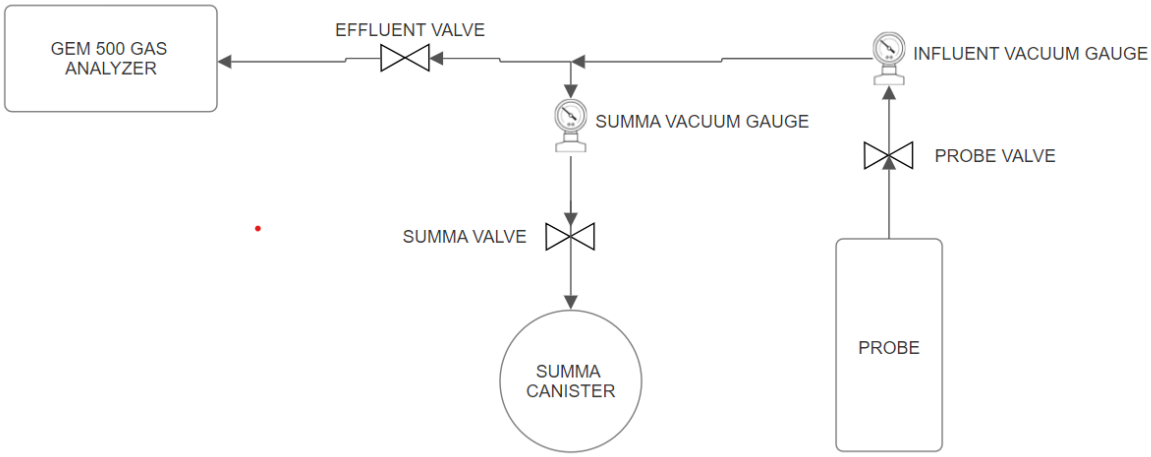
**Figure 11f - Open Probe Valve*

**Figure 11i - Close Effluent when stable*

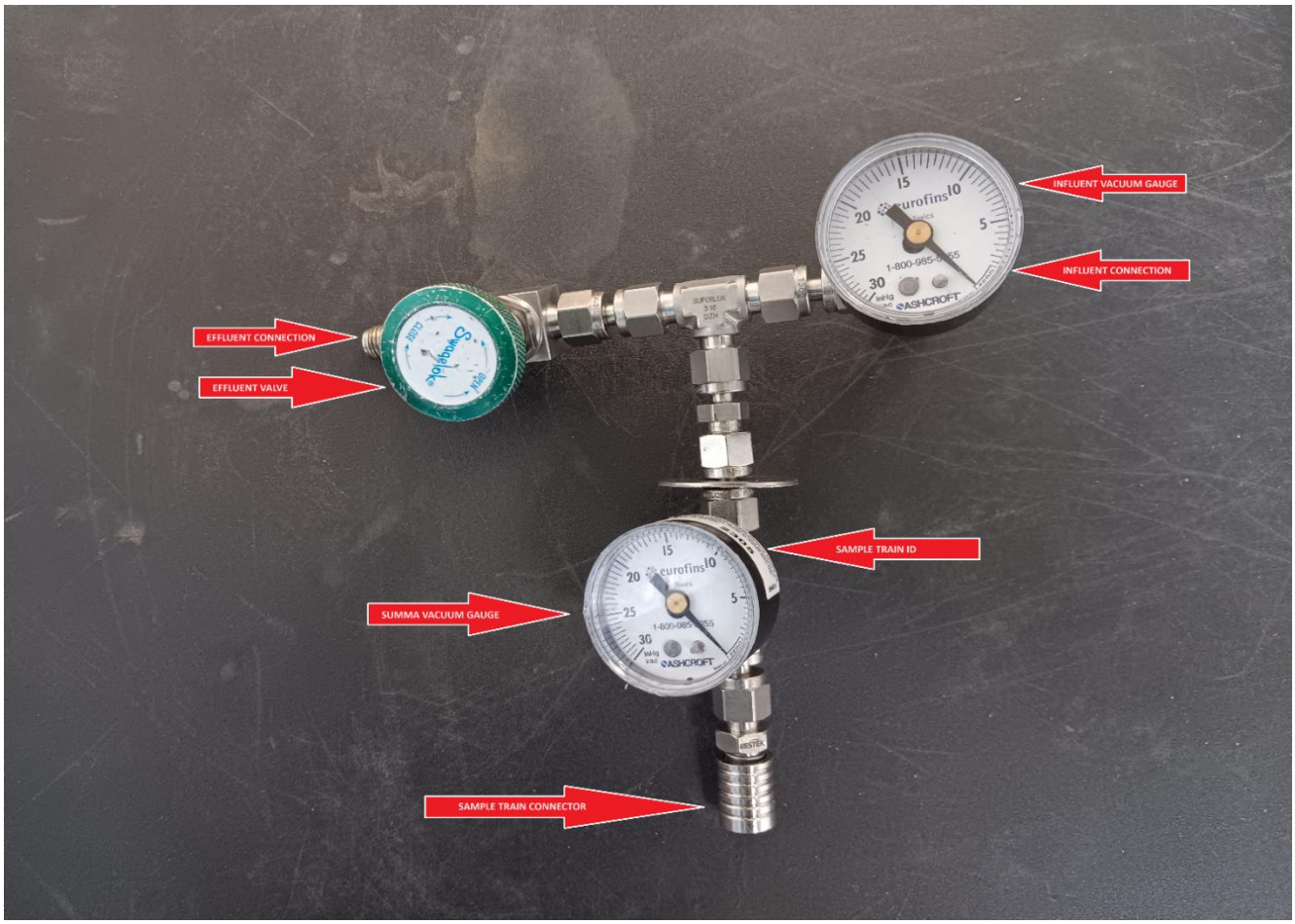
**Figure 11j - Open to Sample*

Figure 11h - Close at -7 to -5 mmHg

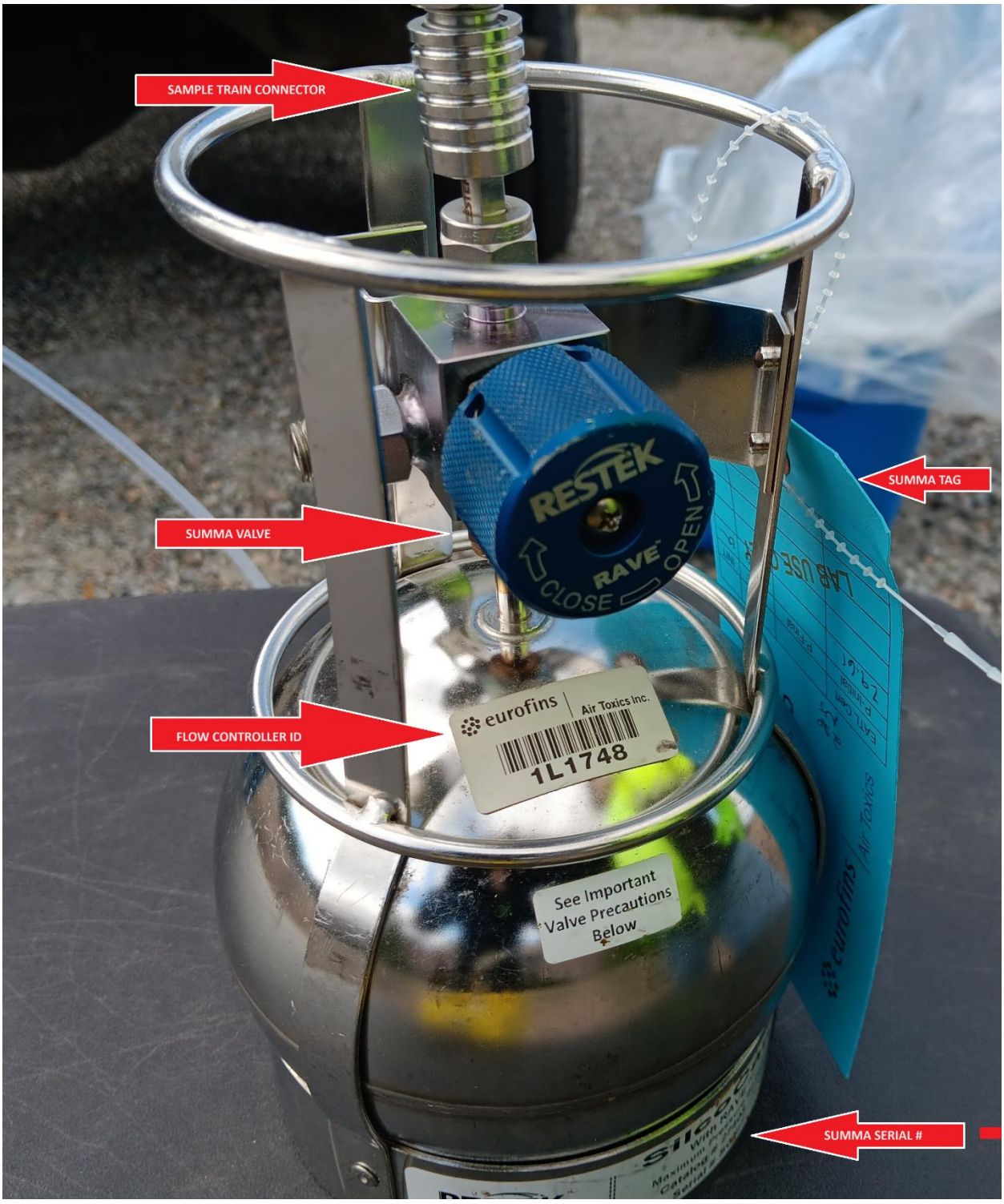
SETUP & DEFINITIONS



**Functional Line Diagram of Sample Setup*



**Sample Train with Labels*



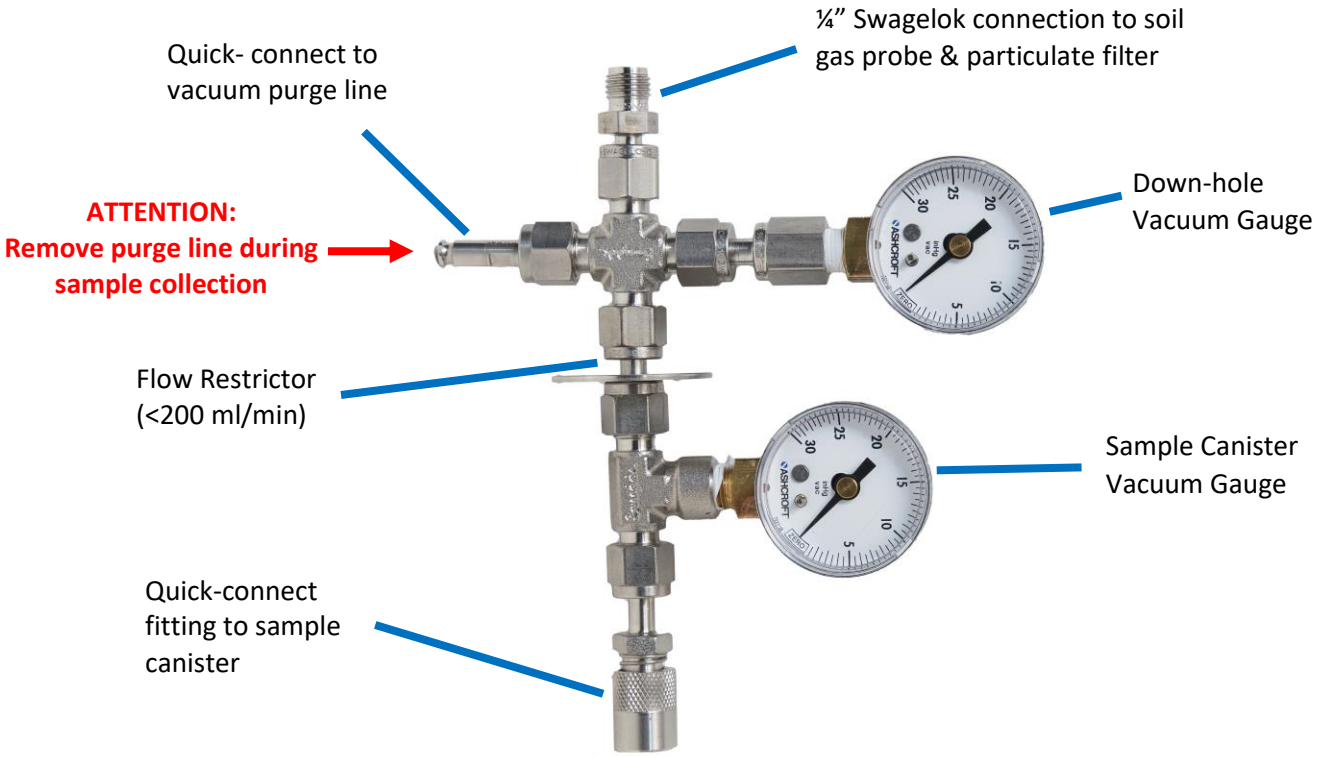
**Summa Canister Components Defined*

Eurofins Air Toxics Soil Gas Manifold Sampling Guide

The soil gas manifold (SGM) is designed to provide the field sampler with a simple way to:

1) Conduct a shut-in test to verify canister sampling train is free of leaks prior to collection;
2) Purge the soil gas probe to remove ambient air prior to sampling; and
3) Monitor the vacuum in the subsurface during purging and sample collection.

The components of the SGM provided by the lab are shown below:



The purge vacuum source attached to the SGM can be a:

- 6L evacuated canister equipped with a 150 ml/min flow controller/vacuum gauge assembly;
- Calibrated vacuum pump; or
- Syringe with a 3-way valve.

Recommended SGM procedures using each of these purge options are outlined in this guide. Additionally, sample collection procedures using the SGM are described on pages 2 and 3. Dimensions of the SGM can be found on page 11. Please note that it is the user's responsibility to ensure the procedures used in the field for soil gas collection meet the applicable regulatory guidance and are appropriate for the site conditions.

Preparing the canister for sample collection:

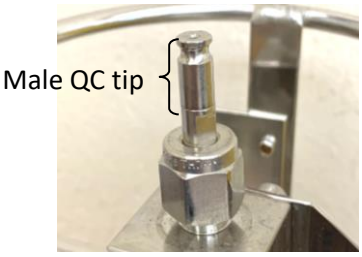


Figure 1. Male QC fitting check

1) Confirm canister valve is closed.

2) Check the male QC on the canister and verify the stem tip is tight. If loose, finger tighten by screwing tip clockwise **(Fig 1.)**

3) To install the Soil Gas Manifold on the canister, pull back on the sleeve of the female QC fitting **(Fig 2.)**

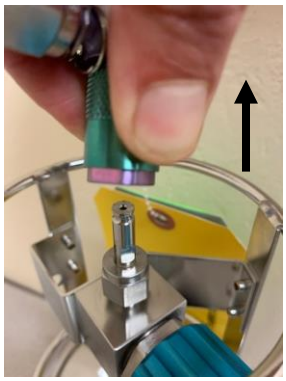


Figure 2. Installing SGM on canister

Place the female QC fitting over the male QT fitting located on top of the canister, then release the sleeve once fully seated. Gently pull up on the Soil Gas Manifold to make sure it is securely connected to the canister. Once installed, the vacuum gauge will read zero.

Sample Collection using the SGM:

1) Perform shut-in tests and purge the lines according to work plan. Several purge vacuum sources are described in this sampling guide:
   - Evacuated canister (page 4),
   - Calibrated vacuum pump (page 7), and
   - Syringe with a 3-way valve (page 10).

STOP **2) Prior to sample collection, disconnect the purge line at the quick connect fitting, the valve in the male stem will close automatically (Fig 3.)**

3) To start sample collection, keep the valve to the soil gas probe open.
4) Open the sample collection canister valve, and verify the canister vacuum gauge registers approximately >25 in Hg at the start of sampling. Record your initial vacuum on the COC.
5) Monitor the downhole vacuum gauge during sample collection to ensure vacuum reading is below ~7 in Hg. A high vacuum reading means that low permeability conditions likely exist, restricting the flow of soil gas into the canister. If high vacuum conditions are encountered in the process of sample collection, please consult with regulatory guidance for options.
6) Close sample canister valve when vacuum gauge reading is approximately 5 in Hg or as indicated in your sampling plan.

Continued on next page

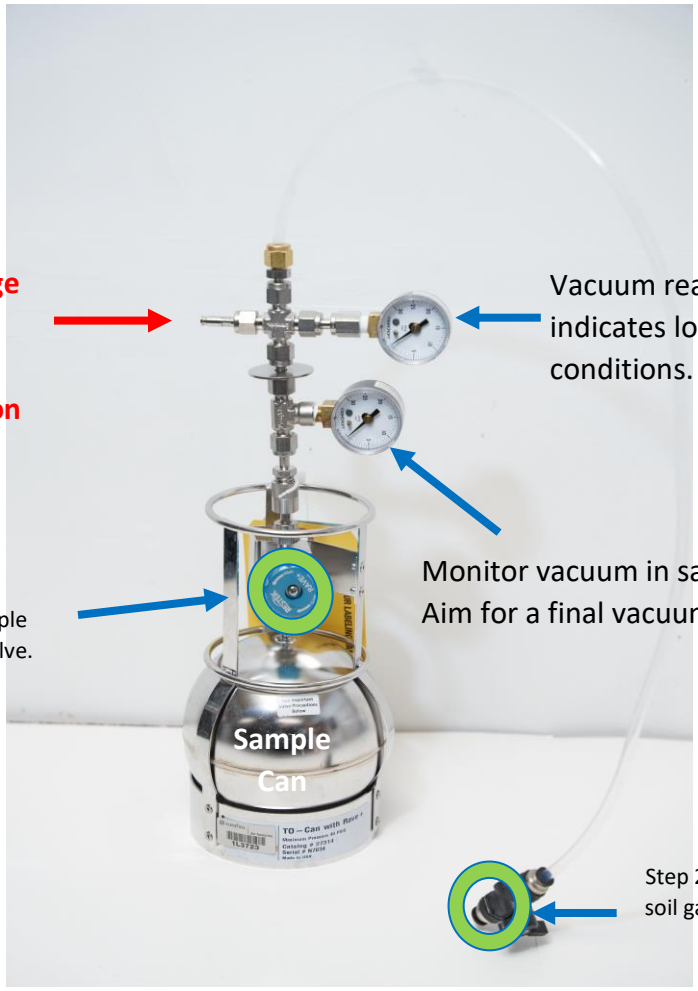


Figure 3. Collecting Soil Gas sample using SGM

7) Record your final vacuum on the COC.
8) Disconnect the soil gas line using a 9/16" wrench.
9) Uncouple the quick connect fitting between the SGM and the sample canister.
10) Send the canister and the SGM back to the laboratory in the original packing along with the completed COC.

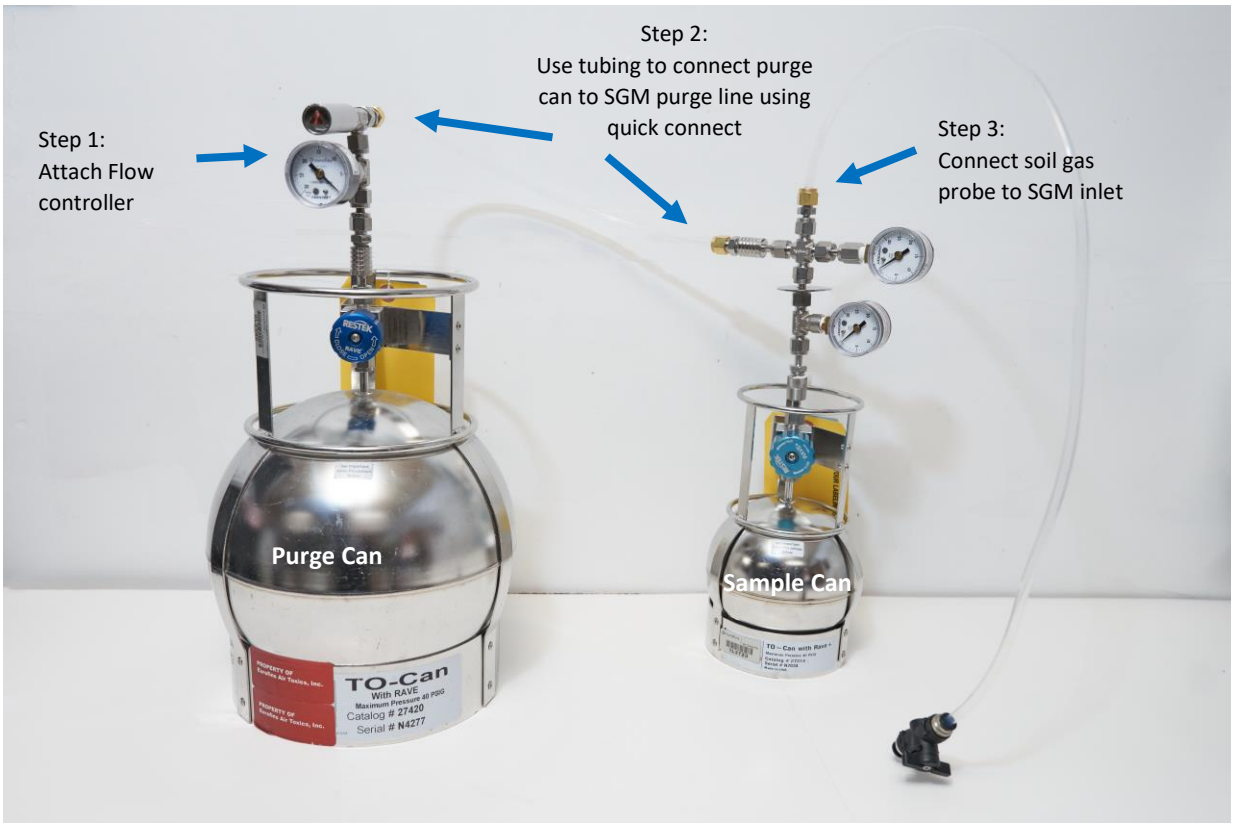
Monitor the downhole vacuum gauge while sampling. A reading of greater than 7 in Hg indicates low permeability conditions, restricting the flow of soil gas into the canister.

SGM Sampling Procedures Using a 6L Purge Canister

Overview: The laboratory can provide a 6L evacuated canister equipped with a 150 mL/min flow restrictor and a rough vacuum gauge to attach to the SGM. A 6L purge canister is a convenient vacuum source to conduct the shut-in test and purge the lines and is best suited for sampling events with limited number of soil gas samples and total purge volume for each probe of 1L or less. The total purge volume is monitored by changes in the purge canister's vacuum. Recommendations on conducting the shut-in test and purging sample lines using the SGM coupled with a 6L purge canister are outlined below.

Assembly:

1) Prepare the purge canister by attaching the provided flow controller with the built-in vacuum gauge onto the purge canister using the quick connect fitting.
2) Attach the purge canister sampling inlet to the SGM purge line using a segment of ¼" Teflon tubing with a Swagelok nut and ferrule on the purge can end and quick-connect fitting on the SGM end. Tighten nut and ferrule connection using a 9/16" wrench.
3) Connect the inlet of the SGM to the soil gas probe tubing. If using ¼" Teflon tubing, use a ¼" nut and ferrule and tighten using a 9/16" wrench.



The 6L purge canister option is ideal for sampling events with small number of samples and total purge volumes < 1L.

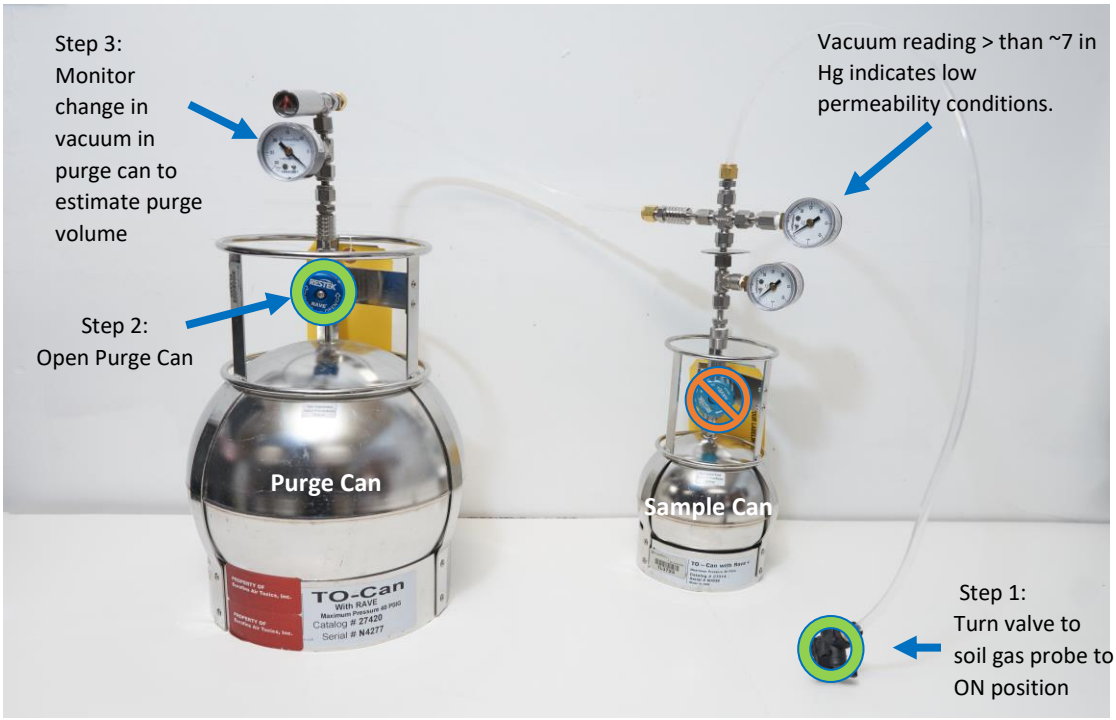
Shut-in Test with Purge Canister:

1) To isolate the canister sampling train, turn the valve to the soil gas probe to the off position.
2) Open the purge can valve to initiate a vacuum on the system.
3) Both gauges on the SGM will show an increasing vacuum reading and equilibrate with the purge canister vacuum reading. For example, if the purge canister is at 20 in Hg, the two gauges on the SGM will increase in vacuum to approximately 20 in Hg. Note that the gauges on the equipment are rough gauges with expected accuracy of ~+/-5 in Hg.

4) Close the valve on the purge canister.
5) Monitor the vacuum gauges on the SGM. Vacuum reading should be stable. If vacuum decreases toward ambient, tighten connections and repeat the shut-in test.

Purging Lines using Purge Canister:

1) To initiate purging of the soil gas line, turn the valve to the soil gas probe to the ON position.
2) Open the purge can valve to initiate a vacuum on the system.



3) To determine the purge volume collected using a purge canister with a 150 ml/min flow restrictor, the time can be monitored to estimate the volume and/or the change in the purge canister vacuum can be monitored. (Note that the estimating the total volume using time elapsed and assuming a 150 ml/min flow rate is best used when the purge canister vacuum is greater than 15 in Hg since flow rate will decrease as the canister fills to ambient pressure.)

   Recommended option: Since the change in vacuum in the purge canister is proportional to the purge volume collected, the purge volume can be estimated by determining the minimum change in vacuum to achieve the desired total purge volume. Table 1 is a guide to correlate vacuum changes to purge volumes in a 6L canister. Alternatively, use equation below to calculate a specific purge volume:

   Δ Vacuum (in Hg) = Pv (L) * 30 in Hg/6 L, where Pv = Targeted total purge volume in Liters

Table 1. Purge Volume Estimated by Vacuum Change (6L canister)

Vacuum Change (in Hg)	Purge Volume (L)
1.0	0.20
2.0	0.40
5.0	1.0

4) When desired purge volume has been reached, close the purge canister valve and disconnect the purge line from the soil gas manifold.

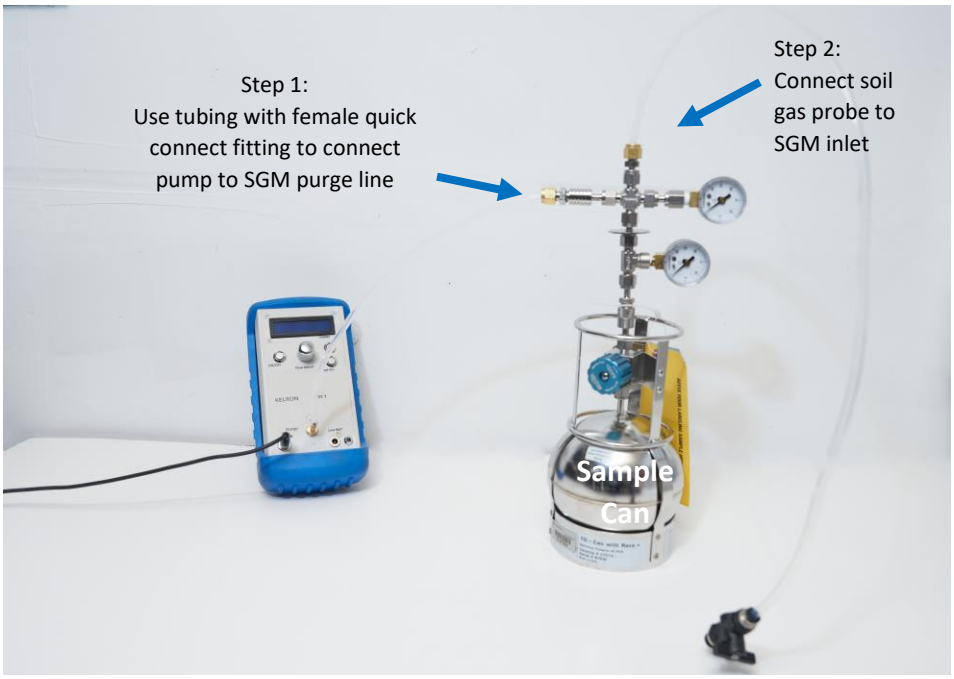
Monitor the downhole vacuum gauge while purging. A reading of greater than 7 in Hg indicates low permeability conditions, restricting the flow of soil gas.

SGM Sampling Procedures Using a Calibrated Vacuum Pump

Overview: A calibrated vacuum pump can be attached to the SGM as a vacuum source. Pumps are best suited for sampling events with a large number of soil gas samples and/or sites requiring large total purge volumes (e.g. >4 liters). While the default flow rate for the pump is generally <200 mL/min for purging, the specific pump flow rate used for purging may vary depending on the site conditions. In some cases, flow rates >200 ml/min may be appropriate if purge times are long due to large purge volume requirements. Pumps are not provided by the laboratory and must be secured by the client. Recommendations on conducting the shut-in test and purging sample lines using the SGM coupled with a vacuum pump are outlined below.

Assembly:

1) Attach the pump inlet to the to the SGM outlet using a segment of ¼" Teflon tubing with a Quick Connect fitting to attach to SGM.
2) Connect the inlet of the SGM to the soil gas probe tubing. If using ¼" Teflon tubing, use a ¼" nut and ferrule and tighten using a 9/16" wrench.

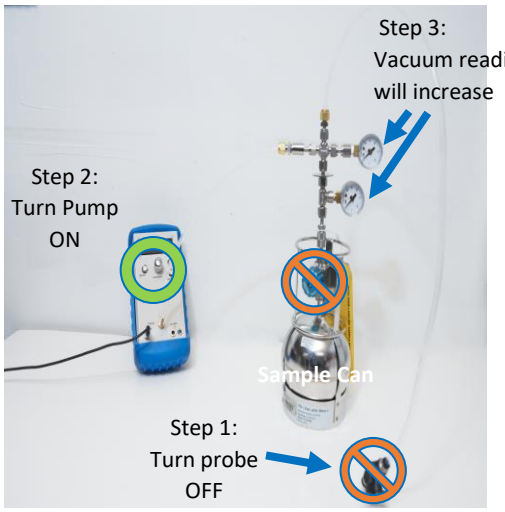


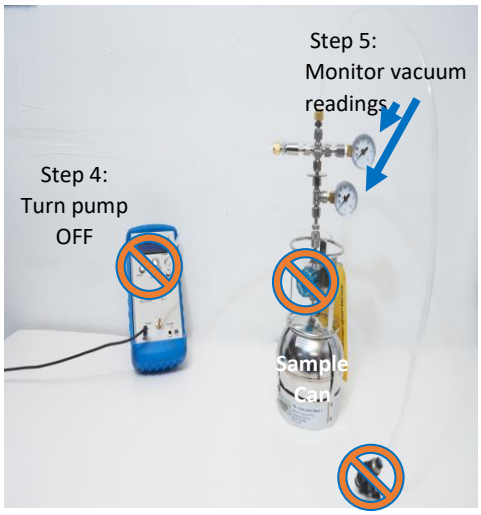
The calibrated pump option is ideal for sampling events with large number of samples and/or total purge volumes < 4L.

Shut-in Test with Vacuum Pump:

Note: A constant pressure low flow pump calibrated to 200 mL/min pulls a small vacuum on the canister sampling train and is ***not*** recommended to conduct a shut-in test. If the pump can easily be converted to a higher flow configuration (>1000 ml/min), a high vacuum is expected to be quickly pulled on the train and allow for an effective shut-in test. Please refer to the pump's operating manual for additional information and guidance. As an easy alternative to using a pump, the shut-in test can be conducted using a gas-tight syringe. See page 10 for details.

1) To isolate the canister sampling train, turn the valve to the soil gas probe to the off position.
2) With the pump in high flow mode, turn on the pump.
3) Both gauges on the SGM will show an immediate increase vacuum reading and quickly reach at least 10 in Hg.



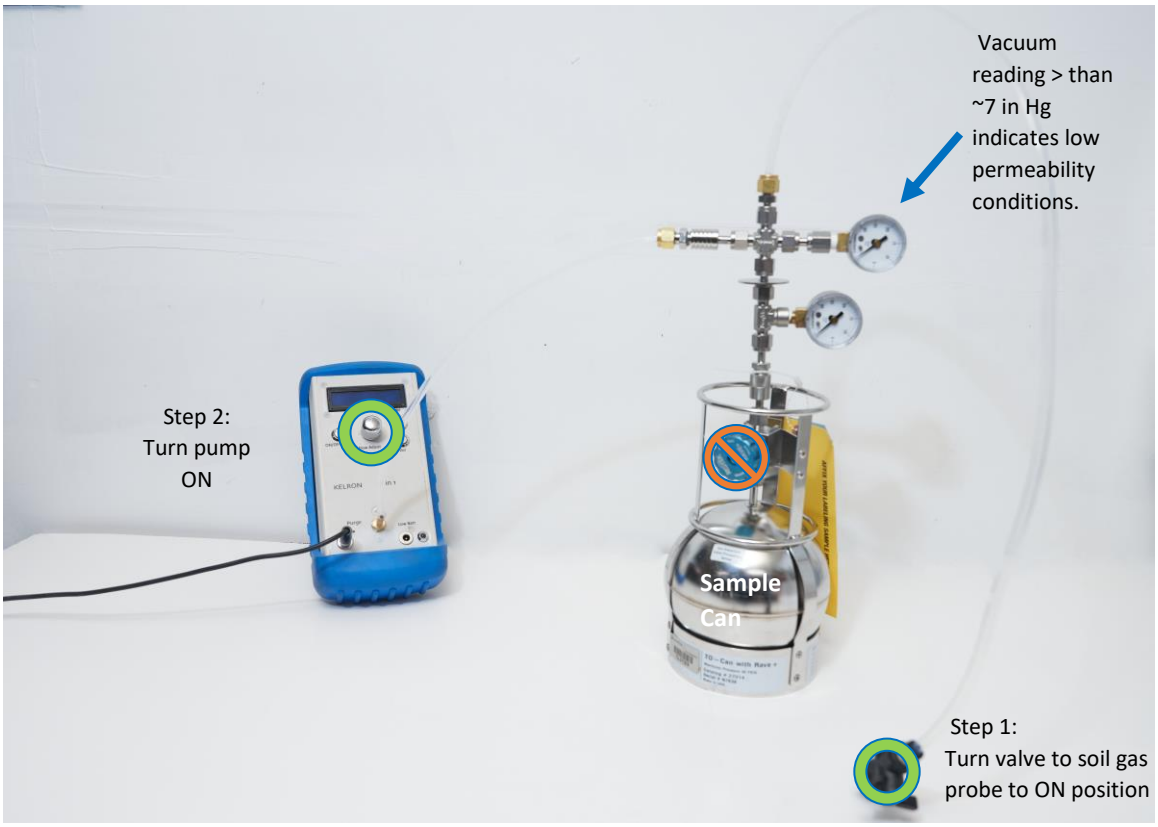


4) Once 10"Hg is reached immediately shut off the pump.
5) Monitor the vacuum gauges on the SGM. Vacuum reading should be stable. If vacuum decreases toward ambient, tighten connections and repeat the shut-in test.

A constant pressure low flow pump generates a small vacuum and is not recommended for a shut-in test.

Purging Lines using a calibrated vacuum pump:

1) To initiate purging of the soil gas line, turn the valve to the soil gas probe to the ON position.
2) Open the SGM purge valve.
3) Turn on the calibrated pump to start purging at the desired flow rate, noting the start time.



4) When desired purge volume has been reached, turn off the pump and disconnect purge line using quick connect.

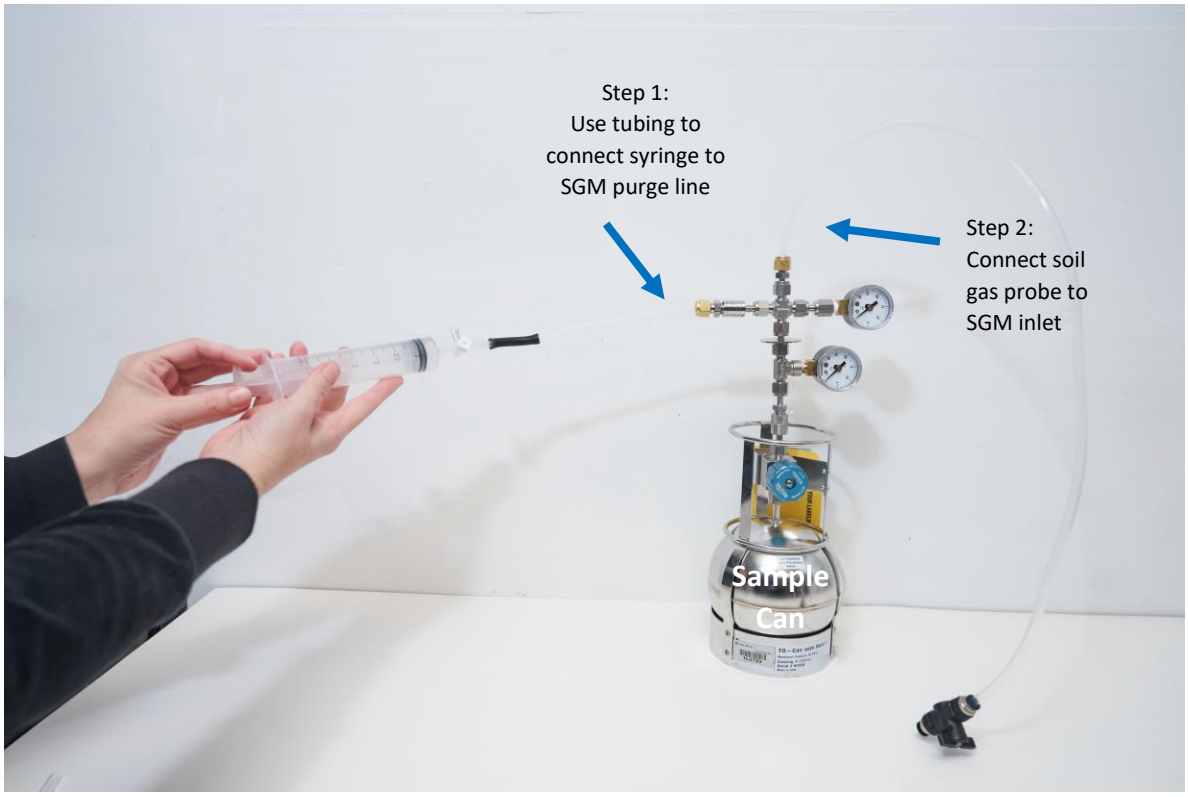
Monitor the downhole vacuum gauge while purging. A reading of greater than 7 in Hg indicates low permeability conditions, restricting the flow of soil gas.

SGM Sampling Procedures Using a Gas-tight syringe

Overview: A gas-tight syringe equipped with a 3-way valve can be attached to the SGM as a vacuum source. Syringes are best suited for sites requiring very small purge volumes (<500 mL) and/or as an alternative vacuum source for a shut-in test. The laboratory can provide a 50 cc disposable syringe, equipped with a 3-way valve assembly that is compatible with ¼" Teflon tubing. One syringe can be used for multiple SGMs.

Assembly:

1) Attach the syringe to the SGM outlet using a segment of ¼" Teflon tubing with a quick connect fitting to attach to SGM.
2) Connect the inlet of the SGM to the soil gas probe tubing. If using ¼" Teflon tubing, use a ¼" nut and ferrule and tighten using a 9/16" wrench.



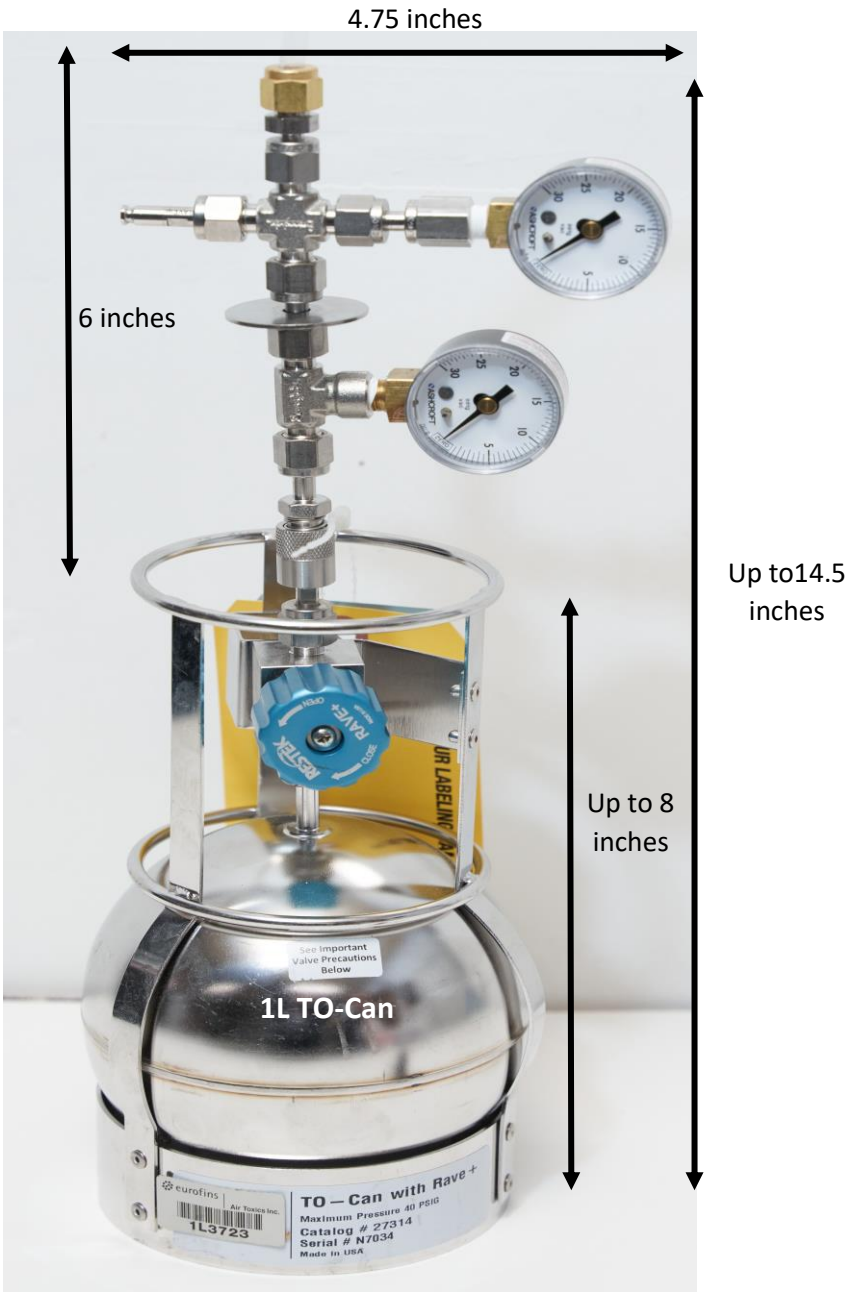
Shut-in Test using a Syringe:

1) To isolate the canister sampling train, turn the valve to the soil gas probe to the off position.
2) With the 3-way syringe valve opened to the purge line, pull the plunger to quickly initiate vacuum. Both gauges on the SGM will show an immediate increase vacuum reading and quickly reach at least 10 in Hg.
3) While holding the plunger to maintain vacuum on the system, turn the 3-way syringe valve to close the purge line.
4) Monitor the vacuum gauges on the SGM. Vacuum reading should be stable. If vacuum decreases toward ambient, tighten connections and repeat the shut-in test.

Purging Lines using a syringe:

1) To initiate purging of the soil gas line, turn the valve to the soil gas probe to the ON position.
2) With the 3-way valve on the syringe positioned to the purge line, slowly pull the syringe plunger to the desired volume. Switch the 3-way valve to the vent position to empty the syringe barrel. A bag can be connected to the vent position if desired. Repeat step 3 until the desired volume has been extracted.
3) When complete, disconnect the purge line with quick connect fitting.

Dimensions of the SGM paired with a 1L TO-Canister



GREENACRES - PERIMETER PROBE SOIL GAS SAMPLING
2024

DATE:	**PROBE ID:** GP-10	**FIELD TEAM: MT , GF , CC**
SAMPLE ID: GP-010 -		**TIME GEM CALIBRATED:**
FIELD CONDITIONS:		

EQUIPMENT INFORMATION

EQUIPMENT TYPE	MAKE - MODEL	ID	COMMENTS
GAS ANALYZER	LANDTEC - GEM 500	760	Calib: 10.0% CH_4 , 10.0% CO_2 , 0.0% - 20.9% O_2
SAMPLE TRAIN	EUROFINS		Cleaned and Leak Tested @ Eurofins.
FLOW CONTROLLER	EUROFINS		Regulating sample collection into 1L Summa Canister.
PURGE PUMP	INTEX - DOUBLEQUICK III S	68605	Manual: Dual Action. Pump Cylinder Volume = 129 in^3
BAROMETER	EXTECH -SD700	5WYW0	Barometric Datalogger with real time display.

PROBE PURGE CALCULATION		VACUUM TEST (inHg)
TOTAL DEPTH: 22.67 ft	**PUMP VOLUME:** 129 in^3	**START TIME:**
I.D. OF PROBE: 0.96 in	**PUMP CYCLES:** 5	**INITIAL VACUUM:**
VOLUME OF PROBE: 197 in^3	**TOTAL PURGE VOL:** 645 in^3	**END TIME:**
3 VOLUMES OF PROBE: 591in^3	**INITIAL PROBE PRESSURE:**	**FINAL VACUUM:**

BAROMETRIC DATA (inHg)		SAMPLE DATA (inHg)
START:	**QUALIFIER: CURRENT:**	**START TIME:**
END:	**QUALIFIER: -24H → CURRENT:**	**INITIAL VACUUM:**
-24 Hours:	**QUALIFIER: -48H → -24H:**	**END TIME:**
-48 Hours:	**QUALIFIER: -72H → -48H:**	**FINAL VACUUM:**
-72 Hours:		**SUMMA INITIAL VACUUM:**

GEM - GAS SAMPLE ANALYSIS

TIME	CH_4 %	CO_2 %	O_2 %	BAL %
START:				
STABLE:				
END:				

COMMENTS:

GREENACRES - PERIMETER PROBE SOIL GAS SAMPLING
2024

DATE: 04-04-24	**PROBE ID:** GP-10	**FIELD TEAM:** GF , CC , MT
SAMPLE ID: GAGP-010 -240404		**TIME GEM CALIBRATED:** 0800
FIELD CONDITIONS: CLOUDY, 36-42F		

EQUIPMENT INFORMATION

EQUIPMENT TYPE	MAKE - MODEL	ID	COMMENTS
GAS ANALYZER	LANDTEC - GEM 500	760	Calib: 10.0% CH_4 , 10.0% CO_2 , 0.0% - 20.9% O_2
SUMMA ID	EUROFINS	1L3838	Cleaned and Leak Tested @ Eurofins.
FLOW CONTROLLER	EUROFINS	25540	Regulating sample collection into 1L Summa Canister.
PURGE PUMP	INTEX - DOUBLEQUICK III S	68605	Manual: Dual Action. Pump Cylinder Volume = 129 in^3
BAROMETER	EXTECH -SD700	5WYW0	Barometric Datalogger with real time display.

PROBE PURGE CALCULATION		VACUUM TEST (inHg)
TOTAL DEPTH: 22.67 ft	**PUMP VOLUME:** 129 in^3	**START TIME:** 1427
I.D. OF PROBE: 0.96 in	**PUMP CYCLES:** 5	**INITIAL VACUUM:** -12.7
VOLUME OF PROBE: 197 in^3	**TOTAL PURGE VOL:** 645 in^3	**END TIME:** 1432
3 VOLUMES OF PROBE: 591in^3	**INITIAL PROBE PRESSURE:** +0.01	**FINAL VACUUM:** -12.7

BAROMETRIC DATA (inHg)		SAMPLE DATA (inHg)
START: 29.66 @ 0744	**QUALIFIER: CURRENT**: FALLING	**START TIME:** 1435
END: 29.56 @ 1530	**QUALIFIER: -24H → CURRENT:** FALLING	**INITIAL VACUUM:** -27.0
-24 Hours: 29.96 @ 0744	**QUALIFIER: -48H → -24H:** FALLING	**END TIME:** 1440
-48 Hours: 30.13 @ 0744	**QUALIFIER: -72H → -48H:** N/A	**FINAL VACUUM:** -5.0
-72 Hours: N/A		**SUMMA INITIAL VACUUM:** -27.0

GEM - GAS SAMPLE ANALYSIS

TIME	CH_4 %	CO_2 %	O_2 %	BAL %
START: 1432	0.0	0.0	20.8	79.2
STABLE: 1433	0.0	0.7	19.5	79.9
END: 1435	0.0	0.7	19.5	79.9

COMMENTS:

TIGHTENED BARBED FITTING ON PROBE BEFORE CONDUCTING VACUUM TEST.

GREENACRES - PERIMETER PROBE SOIL GAS SAMPLING
2024

DATE: 04-04-24	**PROBE ID:** GP-2U	**FIELD TEAM:** GF , CC , MT
SAMPLE ID: GAGP-02U-240404		**TIME GEM CALIBRATED:** 0800
FIELD CONDITIONS: CLOUDY, 36-42F		

EQUIPMENT INFORMATION

EQUIPMENT TYPE	MAKE - MODEL	ID	COMMENTS
GAS ANALYZER	LANDTEC - GEM 500	760	Calib: 10.0% CH_4 , 10.0% CO_2 , 0.0% - 20.9% O_2
SUMMA ID	EUROFINS	1L4489	Cleaned and Leak Tested @ Eurofins.
FLOW CONTROLLER	EUROFINS	30792	Regulating sample collection into 1L Summa Canister.
PURGE PUMP	INTEX - DOUBLEQUICK III S	68605	Manual: Dual Action. Pump Cylinder Volume = 129 in^3
BAROMETER	EXTECH -SD700	5WYW0	Barometric Datalogger with real time display.

PROBE PURGE CALCULATION		VACUUM TEST (inHg)
TOTAL DEPTH: 17.15 ft	**PUMP VOLUME:** 129 in^3	**START TIME:** 0908
I.D. OF PROBE: 0.96 in	**PUMP CYCLES:** 4	**INITIAL VACUUM**: -10.9
VOLUME OF PROBE: 149 in^3	**TOTAL PURGE VOL:** 517 in^3	**END TIME:** 0913
3 VOLUMES OF PROBE: 447 in^3	**INITIAL PROBE PRESSURE:** +0.02	**FINAL VACUUM:** -10.9

BAROMETRIC DATA (inHg)		SAMPLE DATA (inHg)
START: 29.66 @ 0744	**QUALIFIER: CURRENT**: FALLING	**START TIME:** 0921
END: 29.56 @ 1530	**QUALIFIER: -24H → CURRENT:** FALLING	**INITIAL VACUUM:** -27.5
-24 Hours: 29.96 @ 0744	**QUALIFIER: -48H → -24H:** FALLING	**END TIME:** 0927
-48 Hours: 30.13 @ 0744	**QUALIFIER: -72H → -48H:** N/A	**FINAL VACUUM:** -5.0
-72 Hours: N/A		**SUMMA INITIAL VACUUM:** -27.5

GEM - GAS SAMPLE ANALYSIS

TIME	CH_4 %	CO_2 %	O_2 %	BAL %
START: 0915	0.0	0.0	20.8	79.2
STABLE: 0916	0.0	0.3	20.4	79.3
END: 0918	0.0	0.3	20.4	79.3

COMMENTS:

FIRST TWO VACUUM TESTS FAILED DUE TO A LEAK IN THE BARBED CONNECTOR ON THE PROBE. THIRD TEST PASSED .

GREENACRES - PERIMETER PROBE SOIL GAS SAMPLING
2024

DATE: 04-04-24	**PROBE ID:** GP-3U	**FIELD TEAM:** GF , CC , MT
SAMPLE ID: GAGP-03U-240404		**TIME GEM CALIBRATED:** 0800
FIELD CONDITIONS: CLOUDY, 36-42F		

EQUIPMENT INFORMATION

EQUIPMENT TYPE	MAKE - MODEL	ID	COMMENTS
GAS ANALYZER	LANDTEC - GEM 500	760	Calib: 10.0% CH_4 , 10.0% CO_2 , 0.0% - 20.9% O_2
SUMMA ID	EUROFINS	1L2884	Cleaned and Leak Tested @ Eurofins.
FLOW CONTROLLER	EUROFINS	4345	Regulating sample collection into 1L Summa Canister.
PURGE PUMP	INTEX - DOUBLEQUICK III S	68605	Manual: Dual Action. Pump Cylinder Volume = 129 in^3
BAROMETER	EXTECH -SD700	5WYW0	Barometric Datalogger with real time display.

PROBE PURGE CALCULATION		VACUUM TEST (inHg)
TOTAL DEPTH: 14.1 ft	**PUMP VOLUME:** 129 in^3	**START TIME:** 1354
I.D. OF PROBE: 0.96 in	**PUMP CYCLES:** 3	**INITIAL VACUUM:** -14.6
VOLUME OF PROBE: 122 in^3	**TOTAL PURGE VOL:** 388 in^3	**END TIME:** 1359
3 VOLUMES OF PROBE: 366 in^3	**INITIAL PROBE PRESSURE:** +0.02	**FINAL VACUUM:** -14.6

BAROMETRIC DATA (inHg)		SAMPLE DATA (inHg)
START: 29.66 @ 0744	**QUALIFIER: CURRENT**: FALLING	**START TIME:** 1403
END: 29.56 @ 1530	**QUALIFIER: -24H → CURRENT:** FALLING	**INITIAL VACUUM:** -27.0
-24 Hours: 29.96 @ 0744	**QUALIFIER: -48H → -24H:** FALLING	**END TIME:** 1408
-48 Hours: 30.13 @ 0744	**QUALIFIER: -72H → -48H:** N/A	**FINAL VACUUM**: -5.5
-72 Hours: N/A		**SUMMA INITIAL VACUUM:** -27.0

GEM - GAS SAMPLE ANALYSIS

TIME	CH_4 %	CO_2 %	O_2 %	BAL %
START: 1359	0.0	0.0	20.8	79.2
STABLE: 1401	0.0	0.3	19.7	80.0
END: 1403	0.0	0.3	19.7	80.0

COMMENTS:

RESAMPLED DUE TO ABNORMAL ACTIVITY OF THE FLOW CONTROLLER DURING SAMPLING.

GREENACRES - PERIMETER PROBE SOIL GAS SAMPLING
2024

DATE: 04-04-24	**PROBE ID:** GP-9	**FIELD TEAM:** GF , CC, MT
SAMPLE ID: GAGP-009-240404		**TIME GEM CALIBRATED:** 0800
FIELD CONDITIONS: CLOUDY, 36-42F		

EQUIPMENT INFORMATION

EQUIPMENT TYPE	MAKE - MODEL	ID	COMMENTS
GAS ANALYZER	LANDTEC - GEM 500	760	Calib: 10.0% CH_4 , 10.0% CO_2 , 0.0% - 20.9% O_2
SUMMA ID	EUROFINS	25482	Cleaned and Leak Tested @ Eurofins.
FLOW CONTROLLER	EUROFINS	40894	Regulating sample collection into 1L Summa Canister.
PURGE PUMP	INTEX - DOUBLEQUICK III S	68605	Manual: Dual Action. Pump Cylinder Volume = 129 in^3
BAROMETER	EXTECH -SD700	5WYW0	Barometric Datalogger with real time display.

PROBE PURGE CALCULATION		VACUUM TEST (inHg)
TOTAL DEPTH: 22.5 ft	**PUMP VOLUME:** 129 in^3	**START TIME:** 1033
I.D. OF PROBE: 0.96 in	**PUMP CYCLES:** 5	**INITIAL VACUUM:** -11.7
VOLUME OF PROBE: 195 in^3	**TOTAL PURGE VOL:** 645 in^3	**END TIME:** 1038
3 VOLUMES OF PROBE: 585 in^3	**INITIAL PROBE PRESSURE:** +0.02	**FINAL VACUUM:** -11.7

BAROMETRIC DATA (inHg)		SAMPLE DATA (inHg)
START: 29.66 @ 0744	**QUALIFIER: CURRENT**: FALLING	**START TIME:** 1043
END: 29.56 @ 1530	**QUALIFIER: -24H → CURRENT:** FALLING	**INITIAL VACUUM:** -27.4
-24 Hours: 29.96 @ 0744	**QUALIFIER: -48H → -24H:** FALLING	**END TIME:** 1048
-48 Hours: 30.13 @ 0744	**QUALIFIER: -72H → -48H:** N/A	**FINAL VACUUM:** -5.0
-72 Hours: N/A		**SUMMA INITIAL VACUUM:** -27.4

GEM - GAS SAMPLE ANALYSIS

TIME	CH_4 %	CO_2 %	O_2 %	BAL %
START: 1039	0.0	0.0	20.8	79.2
STABLE: 1040	0.0	0.0	20.8	79.2
END: 1042	0.0	0.0	20.8	79.2

COMMENTS:

TIGHTENED BARBED FITTING ON PROBE BEFORE VACUUM TEST.

GREENACRES - PERIMETER PROBE SOIL GAS SAMPLING
2024

DATE: 04-04-24	**PROBE ID:** GP-4	**FIELD TEAM:** GF , CC , MT
SAMPLE ID: GAGP-004-240404		**TIME GEM CALIBRATED:** 0800
FIELD CONDITIONS: CLOUDY, 36-42F		

EQUIPMENT INFORMATION

EQUIPMENT TYPE	MAKE - MODEL	ID	COMMENTS
GAS ANALYZER	LANDTEC - GEM 500	760	Calib: 10.0% CH_4 , 10.0% CO_2 , 0.0% - 20.9% O_2
SUMMA ID	EUROFINS	1L3089	Cleaned and Leak Tested @ Eurofins.
FLOW CONTROLLER	EUROFINS	25499	Regulating sample collection into 1L Summa Canister.
PURGE PUMP	INTEX - DOUBLEQUICK III S	68605	Manual: Dual Action. Pump Cylinder Volume = 129 in^3
BAROMETER	EXTECH -SD700	5WYW0	Barometric Datalogger with real time display.

PROBE PURGE CALCULATION		VACUUM TEST (inHg)
TOTAL DEPTH: 22.0 ft	**PUMP VOLUME:** 129 in^3	**START TIME:** 1100
I.D. OF PROBE: 0.96 in	**PUMP CYCLES:** 5	**INITIAL VACUUM:** -12.6
VOLUME OF PROBE: 191 in^3	**TOTAL PURGE VOL:** 645 in^3	**END TIME:** 1105
3 VOLUMES OF PROBE: 573 in^3	**INITIAL PROBE PRESSURE:** +0.02	**FINAL VACUUM:** -12.6

BAROMETRIC DATA (inHg)		SAMPLE DATA (inHg)
START: 29.66 @ 0744	**QUALIFIER: CURRENT**: FALLING	**START TIME:** 1109
END: 29.56 @ 1530	**QUALIFIER: -24H → CURRENT:** FALLING	**INITIAL VACUUM:** -28.5
-24 Hours: 29.96 @ 0744	**QUALIFIER: -48H → -24H:** FALLING	**END TIME:** 1114
-48 Hours: 30.13 @ 0744	**QUALIFIER: -72H → -48H:** N/A	**FINAL VACUUM:** -5.0
-72 Hours: N/A		**SUMMA INITIAL VACUUM:** -28.5

GEM - GAS SAMPLE ANALYSIS

TIME	CH_4 %	CO_2 %	O_2 %	BAL %
START: 1106	0.0	0.0	20.8	79.2
STABLE: 1107	0.0	1.0	20.2	78.8
END: 1109	0.0	1.0	20.2	78.8

COMMENTS:

TIGHTENED BARBED FITTING ON PROBE BEFORE VACUUM TEST.

GREENACRES - PERIMETER PROBE SOIL GAS SAMPLING
2024

DATE: 04-04-24	**PROBE ID:** GP-8U	**FIELD TEAM:** GF , CC , MT
SAMPLE ID: GAGP-08U-240404		**TIME GEM CALIBRATED:** 0800
FIELD CONDITIONS: CLOUDY, 36-42F		

EQUIPMENT INFORMATION

EQUIPMENT TYPE	MAKE - MODEL	ID	COMMENTS
GAS ANALYZER	LANDTEC - GEM 500	760	Calib: 10.0% CH_4 , 10.0% CO_2 , 0.0% - 20.9% O_2
SUMMA ID	EUROFINS	1L4557	Cleaned and Leak Tested @ Eurofins.
FLOW CONTROLLER	EUROFINS	25332	Regulating sample collection into 1L Summa Canister.
PURGE PUMP	INTEX - DOUBLEQUICK III S	68605	Manual: Dual Action. Pump Cylinder Volume = 129 in^3
BAROMETER	EXTECH -SD700	5WYW0	Barometric Datalogger with real time display.

PROBE PURGE CALCULATION		VACUUM TEST (inHg)
TOTAL DEPTH: 17.13	**PUMP VOLUME:** 129 in^3	**START TIME:** 1130
I.D. OF PROBE: 0.96 in	**PUMP CYCLES:** 4	**INITIAL VACUUM:** -13.4
VOLUME OF PROBE: 149 in^3	**TOTAL PURGE VOL:** 516 in^3	**END TIME:** 1135
3 VOLUMES OF PROBE: 447 in^3	**INITIAL PROBE PRESSURE:** +0.02	**FINAL VACUUM:** -13.4

BAROMETRIC DATA (inHg)		SAMPLE DATA (inHg)
START: 29.66 @ 0744	**QUALIFIER: CURRENT**: FALLING	**START TIME:** 1138
END: 29.56 @ 1530	**QUALIFIER: -24H → CURRENT:** FALLING	**INITIAL VACUUM:** -27.4
-24 Hours: 29.96 @ 0744	**QUALIFIER: -48H → -24H:** FALLING	**END TIME:** 1143
-48 Hours: 30.13 @ 0744	**QUALIFIER: -72H → -48H:** N/A	**FINAL VACUUM:** -5.0
-72 Hours: N/A		**SUMMA INITIAL VACUUM:** -27.4

GEM - GAS SAMPLE ANALYSIS

TIME	CH_4 %	CO_2 %	O_2 %	BAL %
START: 1135	0.0	0.0	20.8	79.2
STABLE: 1136	0.0	0.5	20.2	79.4
END: 1138	0.0	0.5	20.2	79.4

COMMENTS:

FIRST VACUUM TEST FAILED DUE TO A LEAK IN A STAINLESS COMPRESSION FITTING.

GREENACRES - PERIMETER PROBE SOIL GAS SAMPLING
2024

DATE: 04-04-24	**PROBE ID:** GP-5	**FIELD TEAM:** GF , CC , MT
SAMPLE ID: GAGP-005-240404		**TIME GEM CALIBRATED:** 0800
FIELD CONDITIONS: CLOUDY, 36-42F		

EQUIPMENT INFORMATION

EQUIPMENT TYPE	MAKE - MODEL	ID	COMMENTS
GAS ANALYZER	LANDTEC - GEM 500	760	Calib: 10.0% CH_4 , 10.0% CO_2 , 0.0% - 20.9% O_2
SUMMA ID	EUROFINS	1L1508	Cleaned and Leak Tested @ Eurofins.
FLOW CONTROLLER	EUROFINS	25480	Regulating sample collection into 1L Summa Canister.
PURGE PUMP	INTEX - DOUBLEQUICK III S	68605	Manual: Dual Action. Pump Cylinder Volume = 129 in^3
BAROMETER	EXTECH -SD700	5WYW0	Barometric Datalogger with real time display.

PROBE PURGE CALCULATION		VACUUM TEST (inHg)
TOTAL DEPTH: 13.5 ft	**PUMP VOLUME:** 129 in^3	**START TIME:** 1202
I.D. OF PROBE: 0.96 in	**PUMP CYCLES:** 3	**INITIAL VACUUM:** -12.8
VOLUME OF PROBE: 117 in^3	**TOTAL PURGE VOL:** 387 in^3	**END TIME:** 1217
3 VOLUMES OF PROBE: 351 in^3	**INITIAL PROBE PRESSURE:** +0.02	**FINAL VACUUM:** -5.0

BAROMETRIC DATA (inHg)		SAMPLE DATA (inHg)
START: 29.66 @ 0744	**QUALIFIER: CURRENT**: FALLING	**START TIME:** 1212
END: 29.56 @ 1530	**QUALIFIER: -24H → CURRENT:** FALLING	**INITIAL VACUUM:** -30.00
-24 Hours: 29.96 @ 0744	**QUALIFIER: -48H → -24H:** FALLING	**END TIME:** 1217
-48 Hours: 30.13 @ 0744	**QUALIFIER: -72H → -48H:** N/A	**FINAL VACUUM:** -5.0
-72 Hours: N/A		**SUMMA INITIAL VACUUM:**-30.00

GEM - GAS SAMPLE ANALYSIS

TIME	CH_4 %	CO_2 %	O_2 %	BAL %
START: 1208	0.0	0.0	20.8	79.2
STABLE: 1209	0.0	2.8	14.4	82.9
END: 1211	0.0	2.8	14.4	82.9

COMMENTS:

FIRST VACUUM TEST FAILED DUE TO A LEAK AT THE BARBED FITTING ON THE PROBE.

GREENACRES - PERIMETER PROBE SOIL GAS SAMPLING
2024

DATE: 04-04-24	**PROBE ID:** GP-6	**FIELD TEAM:** GF , CC , MT
SAMPLE ID: GAGP-006-240404		**TIME GEM CALIBRATED:** 0800
FIELD CONDITIONS: CLOUDY, 36-42F		

EQUIPMENT INFORMATION

EQUIPMENT TYPE	MAKE - MODEL	ID	COMMENTS
GAS ANALYZER	LANDTEC - GEM 500	547	Calib: 10.0% CH_4 , 10.0% CO_2 , 0.0% - 20.9% O_2
SUMMA ID	EUROFINS	1L3537	Cleaned and Leak Tested @ Eurofins.
FLOW CONTROLLER	EUROFINS	25435	Regulating sample collection into 1L Summa Canister.
PURGE PUMP	INTEX - DOUBLEQUICK III S	68605	Manual: Dual Action. Pump Cylinder Volume = 129 in^3
BAROMETER	EXTECH -SD700	5WYW0	Barometric Datalogger with real time display.

PROBE PURGE CALCULATION		VACUUM TEST (inHg)
TOTAL DEPTH: 16.25 ft	**PUMP VOLUME:** 129 in^3	**START TIME:** 1228
I.D. OF PROBE: 0.96 in	**PUMP CYCLES:** 4	**INITIAL VACUUM:** -12.1
VOLUME OF PROBE: 141 in^3	**TOTAL PURGE VOL:** 516 in^3	**END TIME:** 1233
3 VOLUMES OF PROBE: 423 in^3	**INITIAL PROBE PRESSURE:** +0.02	**FINAL VACUUM:** -12.1

BAROMETRIC DATA (inHg)		SAMPLE DATA (inHg)
START: 29.66 @ 0744	**QUALIFIER: CURRENT**: FALLING	**START TIME:** 1237
END: 29.56 @ 1530	**QUALIFIER: -24H → CURRENT:** FALLING	**INITIAL VACUUM:** -27.5
-24 Hours: 29.96 @ 0744	**QUALIFIER: -48H → -24H:** FALLING	**END TIME:** 1242
-48 Hours: 30.13 @ 0744	**QUALIFIER: -72H → -48H:** N/A	**FINAL VACUUM:** -5.0
-72 Hours: N/A		**SUMMA INITIAL VACUUM:** -27.5

GEM - GAS SAMPLE ANALYSIS

TIME	CH_4 %	CO_2 %	O_2 %	BAL %
START: 1233	0.0	0.0	20.8	79.2
STABLE: 1234	0.0	0.6	19.8	79.6
END: 1236	0.0	0.6	19.8	79.6

COMMENTS:

BARBED FITTING ON PROBE WAS TIGHTENED BEFORE VACUUM TEST.

GREENACRES - PERIMETER PROBE SOIL GAS SAMPLING
2024

DATE: 04-04-24	**PROBE ID:** GP-7	**FIELD TEAM:** GF , CC , MT
SAMPLE ID: GAGP-007-240404		**TIME GEM CALIBRATED:** 0800
FIELD CONDITIONS: CLOUDY, 36-42F		

EQUIPMENT INFORMATION

EQUIPMENT TYPE	MAKE - MODEL	ID	COMMENTS
GAS ANALYZER	LANDTEC - GEM 500	547	Calib: 10.0% CH_4 , 10.0% CO_2 , 0.0% - 20.9% O_2
SUMMA ID	EUROFINS	1L1676	Cleaned and Leak Tested @ Eurofins.
FLOW CONTROLLER	EUROFINS	25492	Regulating sample collection into 1L Summa Canister.
PURGE PUMP	INTEX - DOUBLEQUICK III S	68605	Manual: Dual Action. Pump Cylinder Volume = 129 in^3
BAROMETER	EXTECH -SD700	5WYW0	Barometric Datalogger with real time display.

PROBE PURGE CALCULATION		VACUUM TEST (inHg)
TOTAL DEPTH: 10.85ft	**PUMP VOLUME:** 129 in^3	**START TIME:** 1254
I.D. OF PROBE: 0.96 in	**PUMP CYCLES:** 3	**INITIAL VACUUM:** -11.5
VOLUME OF PROBE: 94 in^3	**TOTAL PURGE VOL:** 387 in^3	**END TIME:** 1259
3 VOLUMES OF PROBE: 282 in^3	**INITIAL PROBE PRESSURE:** +0.03	**FINAL VACUUM:** -11.5

BAROMETRIC DATA (inHg)		SAMPLE DATA (inHg)
START: 29.66 @ 0744	**QUALIFIER: CURRENT**: FALLING	**START TIME:** 1303
END: 29.56 @ 1530	**QUALIFIER: -24H → CURRENT:** FALLING	**INITIAL VACUUM:** -27.4
-24 Hours: 29.96 @ 0744	**QUALIFIER: -48H → -24H:** FALLING	**END TIME:** 1308
-48 Hours: 30.13 @ 0744	**QUALIFIER: -72H → -48H:** N/A	**FINAL VACUUM:** -5.0
-72 Hours: N/A		**SUMMA INITIAL VACUUM:** -27.4

GEM - GAS SAMPLE ANALYSIS

TIME	CH_4 %	CO_2 %	O_2 %	BAL %
START: 1300	0.0	0.0	20.8	79.2
STABLE: 1301	0.0	0.5	20.0	79.5
END: 1303	0.0	0.5	20.0	79.5

COMMENTS:

BARBED FITTING ON PROBE WAS TIGHTENED BEFORE VACUUM TEST.

GREENACRES - PERIMETER PROBE SOIL GAS SAMPLING
2024

DATE: 04-04-24	**PROBE ID:** GP-11	**FIELD TEAM:** GF , CC , MT
SAMPLE ID: GAGP-011-240404		**TIME GEM CALIBRATED:** 0800
FIELD CONDITIONS: CLOUDY 36-41F		

EQUIPMENT INFORMATION

EQUIPMENT TYPE	MAKE - MODEL	ID	COMMENTS
GAS ANALYZER	LANDTEC - GEM 500	547	Calib: 10.0% CH_4 , 10.0% CO_2 , 0.0% - 20.9% O_2
SUMMA ID	EUROFINS	1L4501	Cleaned and Leak Tested @ Eurofins.
FLOW CONTROLLER	EUROFINS	21484	Regulating sample collection into 1L Summa Canister.
PURGE PUMP	INTEX - DOUBLEQUICK III S	68605	Manual: Dual Action. Pump Cylinder Volume = 129 in^3
BAROMETER	EXTECH -SD700	5WYW0	Barometric Datalogger with real time display.

PROBE PURGE CALCULATION		VACUUM TEST (inHg)
TOTAL DEPTH: 18.0 ft	**PUMP VOLUME:** 129 in^3	**START TIME:** 1455
I.D. OF PROBE: 0.96 in	**PUMP CYCLES:** 4	**INITIAL VACUUM:** -12.6
VOLUME OF PROBE: 156.35 in^3	**TOTAL PURGE VOL:** 517 in^3	**END TIME:** 1500
3 VOLUMES OF PROBE: 469.04 in^3	**INITIAL PROBE PRESSURE:** +0.01	**FINAL VACUUM:** -12.6

BAROMETRIC DATA (inHg)		SAMPLE DATA (inHg)
START: 29.66 @ 0744	**QUALIFIER: CURRENT**: FALLING	**START TIME:** 1514
END: 29.56 @ 1530	**QUALIFIER: -24H → CURRENT:** FALLING	**INITIAL VACUUM:** -27.1
-24 Hours: 29.96 @ 0744	**QUALIFIER: -48H → -24H:** FALLING	**END TIME:** 1519
-48 Hours: 30.13 @ 0744	**QUALIFIER: -72H → -48H:** N/A	**FINAL VACUUM:** -5.0
-72 Hours: N/A		**SUMMA INITIAL VACUUM:** -27.1

GEM - GAS SAMPLE ANALYSIS

TIME	CH_4 %	CO_2 %	O_2 %	BAL %
START: 1509	0.0	0.0	20.8	79.2
STABLE: 1511	0.0	0.3	20.3	79.4
END: 1513	0.0	0.3	20.3	79.4

COMMENTS:

BARBED FITTING ON PROBE WAS TIGHTENED BEFORE VACUUM TEST WAS CONDUCTED.

GREENACRES - PERIMETER PROBE SOIL GAS SAMPLING
2024

DATE: 04-04-24		**PROBE ID:** GP-1			**FIELD TEAM:** GF , CC , MT	
SAMPLE ID: GAGAGP-001-240404					**TIME GEM CALIBRATED:** 0800	
FIELD CONDITIONS: CLOUDY, 36-42F						

EQUIPMENT INFORMATION

EQUIPMENT TYPE	MAKE - MODEL	ID	COMMENTS
GAS ANALYZER	LANDTEC - GEM 500	547	Calib: 10.0% CH_4 , 10.0% CO_2 , 0.0% - 20.9% O_2
SUMMA ID	EUROFINS	1L3881	Cleaned and Leak Tested @ Eurofins.
FLOW CONTROLLER	EUROFINS	22661	Regulating sample collection into 1L Summa Canister.
PURGE PUMP	INTEX - DOUBLEQUICK III S	68605	Manual: Dual Action. Pump Cylinder Volume = 129 in^3
BAROMETER	EXTECH -SD700	5WYW0	Barometric Datalogger with real time display.

PROBE PURGE CALCULATION		VACUUM TEST (inHg)
TOTAL DEPTH: 15.2 ft	**PUMP VOLUME:** 129 in^3	**START TIME:** 1323
I.D. OF PROBE: 0.96 in	**PUMP CYCLES:** 4	**INITIAL VACUUM:** -13.6
VOLUME OF PROBE: 132 in^3	**TOTAL PURGE VOL:** 516 in^3	**END TIME:** 1328
3 VOLUMES OF PROBE: 396 in^3	**INITIAL PROBE PRESSURE:** +0.02	**FINAL VACUUM:** -13.6

BAROMETRIC DATA (inHg)		SAMPLE DATA (inHg)
START: 29.66 @ 0744	**QUALIFIER: CURRENT**: FALLING	**START TIME:** 1332
END: 29.56 @ 1530	**QUALIFIER: -24H → CURRENT:** FALLING	**INITIAL VACUUM:** -27.4
-24 Hours: 29.96 @ 0744	**QUALIFIER: -48H → -24H:** FALLING	**END TIME:** 1337
-48 Hours: 30.13 @ 0744	**QUALIFIER: -72H → -48H:** N/A	**FINAL VACUUM:** -5.0
-72 Hours: N/A		**SUMMA INITIAL VACUUM:** -27.4

GEM - GAS SAMPLE ANALYSIS

TIME	CH_4 %	CO_2 %	O_2 %	BAL %
START: 1329	0.0	0.0	20.8	79.2
STABLE: 1330	0.0	0.9	20.0	79.1
END: 1332	0.0	0.9	20.0	79.1

COMMENTS:

BARBED FITTING ON PROBE WAS TIGHTENED BEFORE VACUUM TEST.