# APPENDIX A BORING LOGS

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5'	ATLAS	D
_	GEODGENCES NW COMPANY	(

BORING/WELL ID:

**TW-4** 

	PROJECT/PROJECT NO:	PROJECT NUMBER:	DRILLING DATE:
	Boeing Field Chevron	01-0410-R	8/12/2022
Š	DRILLING CONTRACTOR:	BORING DIAMETER:	WEATHER:
NY	Cascade Drilling	2"	Partly Cloudy
	DRILLING METHOD:	TOTAL DEPTH:	DEPTH TO WATER:
	Direct Push	15'	10.38
	LOCATION:		LOGGED BY:
	Seattle, Washington		JMS

NOTES:

Depth (feet)	USCS Soil Type/Graphic	Description	Interval and % Recovery	PID	Sample ID		onstruction
0	Conc	0-0.5': Concrete.				0	Flush mounted 8" cover
-		0.5-5': Air knife extraction.					Concrete Seal
-							Bentonite Seal
5 -		5-9': SAND, dark gray to dark brown, medium grained, pebbles/gravel, dry, no odor, dense.		0.3	TW-4-5.5-6	-5	2" PVC Blank
-	SW					-	
_		9-11': SILTY SAND, dark brown, fine to medium grained with gravel, dry, no odor. Becomes wet		0	TW-4-8-8.5	- - - 10	Sand Pack
10 -	SM	at 10 feet.		0	TW-10-10.5	- 10	
-		11-12.5': SILTY SAND, light gray, fine to medium grained, wet, nonplastic, no odor, dense. Increased silt at 11.5 feet. Increased silt.				-	2" O.D. Well Screen (10 slot)
_	ML	12.5-14.5': SILT, damp to saturated.		0		- 15	
15 -	SM	14.5-15': SILTY SAND, fine to medium grained, damp, dense. Boring terminated at 15'.		0	TW-4-14.5-15	- 15	

1	PROJECT/PROJECT NO:	PROJECT NUMBER:	DRILLING DATE:
9-logics ATLAS GEOGGERES INV GEOGGERES INV	Boeing Field Chevron	01-0410-R	8/12/2022
	DRILLING CONTRACTOR:	BORING DIAMETER:	WEATHER:
	Cascade Drilling	2"	Partly Cloudy
BORING/WELL ID:	DRILLING METHOD:	TOTAL DEPTH:	DEPTH TO WATER:
BOKING/WELLID.	Direct Push	12'	9.94
TW-5	LOCATION:	LOGGED BY:	
	Seattle, Washington	JMS	

NOTES:

		,					
Depth (feet)	USCS Soil Type/Graphic	Description	Interval and % Recovery	PID	Sample ID	Well C	onstruction
0	Pav	0-0.5': Concrete.	_			0	Flush mounted 8" cover
-		0.5-5': Air knife extraction. 3-3.5' Cobbles, gray, dry. 3.5-5' Fill material, medium grained sand, dark brown, dry.					Concrete Seal
-						- 5	Bentonite Seal
							2" PVC Blank
5 -	SW	5-7': SAND, dark gray, medium grained, dry, soft, no odor. Becomes dark brown at 6 feet.		1238	TW-5-5.5-6	-5	
_	SM	7-10': SILTY SAND, dark brown, fine to coarse grained, dry, soft, no odor.		3	TW-5-8-8.5	-	Sand Pack
10 -	SM	10-11.5': SILTY SAND, dark gray, fine to medium grained, wet to almost saturated, strong odor, soft.		1195	TW-5-10-10.5	- - 10	2" O.D. Well Screen (10 slot)
_		11.5-12': SILTY SAND, fine to medium grained, moist, soft, no odor. Boring terminated at 12'.		3.8	TW-5-11.5-12		
15 -						- 18	5

## APPENDIX B FIELD NOTES

## August 2022

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DI- 0L	no-R Jack-2A 8/12/2022
	Well Install 640 FParty Cloudy
0753	IMS arrives to site. Cheek in with
	tenant + set up cones to block
	off work zone.
0802	Cascade arrives to site with
	(1) vac. there and (1) they w/
	trailer & geoprobe DPT vig +
0810	Support supplies. Tailgase + safety meeting to
	discuss scope, safety concerns, T
	other site information
0823	unload equipment + defenierte
The second secon	work area with cones +
F F F	cantion tape. Begin setup at TW-5
Total Control (Control (Contro	1at TW-5
0850	Begin concrete cutting at TWS
0917	Begin concrete cutting at TW5 Generator overheats, give it a rest
<u>a'</u>	before proceeding
0924	corne completed at TW-S. Setup
	Concrete Cutting equipment at
200	
0932	Begin air knift at TN-5
10/R	Umpate air white at TN-5.
Scale:	(Umpale air knife at TN-5.
	*

9<sub>9</sub>

26 01-0410-R Task 2A	01-0410-R Task 2A 27
1020 Begin Cutting Coverat TW-4  1045 Coving completed at TW-4-  1049 One (vew menuger proceeds  with removing concrete from  TW-4+ begin air Knife.	12.12 Begin Well construction at  TW-4 + complete concrete  Surface completion at TW-5.  0-2 concrete  2-4 hydrated bentonite
Other Cruw member sets up  DET at TW-5.  1100 Begin drilling at TW-5.  1120 Complete air Knife at TW-4  1139 Complete drilling at TW-5 Call  PM to confirm findings + well  Construction detail	1230 DTW at TW-5 is 9.94'  1235 Confinge well construction at TW-4, fixed  1248 Beginn divergement at TW-5.
1140 Set well screen + construct well  0-2 concrete  2-6 hyarated bentonis  6-12 silica sound  0-7 riser  7-12 slotted soveen  flush finish.  1147 Set up DPT rig at TW-4.	1250 well continuosly mans dry. 1307 DTN at TW-4 is 10.38  1419 Development finished at TW-5,  2 gallons purged  1420 Begin development at TW-4  1505 development finished at TW-4  4 gallons purged.  4 150il + 1 water drynn
1210 Complete dvilling at TW-4 Text  PM to confirm that lithology  is as expected.  Scale: 1 square = Pg, 2 of 3	15/0 (lean = restore site.  All parties depart site.  Scale: 1 square = 193 of 3 White in adding

01-0410-R Task 2A Boeing Field Chevron Cascade drilling 8/12/22 2" PVC well, prepacked screen, flush finish

	1	1		
dupm	bescription	PID	Sumple	(onetruotion
7 -	0-0.5 (oncrete 0.5-5.5 (air knife extraction)	*		111111111111111111111111111111111111111
4 -	5-9 Medium grained sand (SW)	×	TW-4:5.5-	, _ 5
6 -	to dark brown mixed color, dry, no odors, hard	0.3		
8 -	9-10 fine to medium grained sand W/ gravel (SM) dark brown, dry, no odors	0	TW-4:8- 8.5@ 1159	
10 -	10-11 SAA NET (SM) medium to 11-13.5 Sith mind with the fine graind sand light gray color, wet, nonplastic, dense	٥	TW-4: 10- 10.5 @ 1200	
	ML @12.5 Saturated	0		
14 -	14.5-15 SM, five to medium grained sound, danny, dunger	0	TW-4: 14.5- 15@ 1201	15
16 "		ļ	(	-

01-0410-R Task 2A, BFC cascade drilling 8/12/22

2" PVC, prepacked screen. flush finish

CdScade	drilling 8/12/22	110031	-	TW-5
Pepth	Description	PID	Sample	construction
0 1 - 2 -	0-0.5 concrete  0.5-5 (air Knife extraction)  5 (3-3.5 cobbles, gray, dry)  3.5-5 fill material	×	×	F
3 - 4 - 5 -	Sand, dark brown, dry	×	×	1 -4
6 -	5- Medium Sand (SW), dark gray, dry, soft, no odors & 6'- color change to dark brown	1238	TW-5:5.5-L @ 1120	2 - 2
7 - 8 - 9 -	7-10 fine to come grained smal(sn) and sitt. dark brown color, dry, to odors, soft	3.0	TW-5:8-8.5 @ 1125	
11 -	10-11 Sitty sand (SM). Fine to medium grained dark gray, wet to almost saturated. Strong odors, SOFT	1195	TW-5:10-10.5 © 1126 TW-5:11.5-12	- 10
13 -	11.5-12 sitty sand (SM) W/ five to med.  grained sand, no odors, soft,  moist	3.8	C1130	- 14
15 -	TD=12 viser 0-7			
	screen 7-12			

Project Name: Boeing Field Chevron

Property Address: 10805 E Marginal Way S, Tukwila, WA

Project Number: 01-0410-R Task 2A & 2B

Date: 8/12/22 , confirmed \$/16/22

Drum ID	Content (Soil/Water)	Date Drum Started	Fullness (%)	Drum Label (Y/N)	Drum Location, Access, and Other Comments
1	So ill Water	8/12	100	Y	along southern property
2	Water	8/12	30	Y	boundary near
3					boundary near sidewalk/walkway
*					
¥					
	-				

28	01-0410-R Task 2B
01-0410-R Task 2B 8/15/2022	1255 Begin measurenings TN-5
Boeing Field Cheuron sunny 650F	1335 Collect Sample TW-5
SWME	1340 Decon equipment + set up
	at AS-)
0820 JMS arriver to site tailgate +	1355 Begin Measurements AS-1
safety meeting I person in attendance	1408 Collect AS-1
0826 Check in with staff + secure	1412 delan equipment + set up it
work area with cones	TW-4
0834 open purge vater drum	1425 Begin measurements at TN-4
0840 Begin opening all wells to	1444 collect TW-4
sample (11x)	1448 delan equipment o set up at
0927 Confirm construction details on	IP-4
wells . Get TD's from boning logs	1510 Begin masswernetts at P-5
0943 Begin garging all wells start	1531 collect IP-5
W/2 interface prope measurements	1540 decontequipment + set up
1028 Finish gauging all wells	at 1P-3
1029 Confirm TDs at TW-1 TW-2	1550 Begin measurements IP-3
1035 Confirm gauging N/ PM	1617 Collect 1P-3 AND DUP-01 (0800)
1040 set up TN-5	1630 deron equipment of set up
1053 Begin monitoring TW-S	at 1P-4'
1100 Nowater - trouble shooting	1645 Begin measurements at IP-4, does
11 to dipy site for geotech	NOT contain product
230 smg arriver back to site Resetup	1707 collect P-4
equipment at TN-5	1712 deeon equipment and close all
1240 Troubleshooting w/ pump	wells.
Scale: 1 square = Pg. 1 of 3	Scale: 1 square = Pg 2 of 3 Rete in the Return

# Groundwater Monitoring Well Gauging Form

Project Name: Boeing Field Chevron
Project Number: 01-0410-R Task 2B
Date: 3 15 12022
Page: 1

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		T	_	_	T	_	_	Ī	7	1	_	1		_	_	_	_	-	_
	Observations/Notes	2472-15.20 21R" (IN)			1 X8.83 bottom 18, (1)			* 10.17 FTD 219"(5/4)				-							
	F	6	6	15	9	12/	17	0	)=	1	133	1241	7111						
	Well Sampled Y/N	Z	Z	6	) Z		8	2	, E		BAIL >	3							
		1	1	ì	1	Į	t	١	١		5.00	1	1						
	Thickness (in)	9.29	9.69	10.26	DRY	10.04	9.93	9.30	10.32		(7.93	12.13	14.00						
Darent to Day	Vepundo valter	(	١	١	)	I	(	1	1	\	12.93	,	1						
	Time Measured	6443	1610	1016		1000	1014	1013	1020	{	09 90	1019	1025						
	Well Diam. (in) Time Opened Time Measured	5480	17480	6899	0853	0855	0060	0401	0905		C060	5060	4160						
	Well Diam. (in)																		
	Well Identification	TM-2	1-MF	H-ML	SVE-1	H-di A	TW-S	TW-3	AS-1	1	18-91	18-5	18-3						
		X	X		X	N		X		1	Phonut (								_

Comments:

Well Number: AS~)	Project Name: BFC	
Project Number: () (- () 4/10 - 12 2B	Date: 8-15-22	Weather: 513000 78 °F
Development / Purge Method: UOW F10 W	Well Screen Interval: 2 to 14	Tidally Influenced?
Logged By: JMS	Water Depth Start: (0 . LUC)	Field Comments:
Purge Water Disposal Method:	Water Depth Finish: (10.010)	MEW taking
Purge Water Disposal Volume: 0.5 - GR (10M)	Bails Dry? Yes No What Volume?	Well Conditions: (OR) Not OK
12		Explain:

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	355	13.58	10/11	1404	1407		
Water Level (ft)	16.92	11.11	11.43	(0.10)	18.01		
±0.1 рн	(b. 60	6.57	0.55	6.50	(0. (20)		
±10 Conductivity (mS/cm)	d 0d	900	903	200	900		
±0.1 Temperature (F)	17.0	16.9	7.0	17.7			
±10 ORP (mV)	6.61	10.2	٥.	8,0	6.01		
<10 Turbidity (NTUs)							
±0.2 Diss. Ox. (mg/L,%)	16.0	0.56	0.51	29.0	0,54		
Color	chear	CLEAN	PLEAN	CLORN	rload		
Purge Volume	0.1	1.0	0.1	1-0			

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Decon Method:	Alconox + distilled	Sample Number:
Water Level Start:	10.40	Water Level Finish
Sampling Method:	LOW HOW	Field comments:
Filter Type:	とユ	

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M5-1	0.90

omments:

evel Finish:

Well Number: R-3 / DUR-0	-01 Project Name: BFC	
Project Number: 01-0410-12 2B	Date: 8-15-22	Weather: SUNN 876F
Development / Purge Method: \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Well Screen Interval: 18 to 24	ľ
Logged By: JMS	Water Depth Start:   \( \int \) . O \	Field Comments:
Purge Water Disposal Method: 1 WWW	Water Depth Finish: (6 - 0 L	New twen
Purge Water Disposal Volume: 0.8 GA (1017)	DDN Bails Dry? Yes (No) What Volume?	Well Conditions: OK Not OK
ſ	)	Explain:

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.683 gal/ft
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	(555	1558	1601	HO 91	1607	0191	11013	1615
Water Level (ft)	1605	h0.91	16.02	16.01	16.00	10.00	16,00	10.9K
±0.1 pH	CD.17	12.0	62.9	6.19	6.28	75	6.35	10.25
±10 Conductivity (mS/cm)	369.6	393.8	5.404	416.0	412.6	407.4	401.3	7000
±0.1 Temperature (F)	16.0	1.91	1.01	15.9	110.0	00	(Lan	1000
±10 ORP (mV)	36.2	5.1-	-12.2	-17.6	-28.3	で、天かり	. 35.6	1.75-
<10 Turbidity (NTUS)							4 ()	
±0.2 Diss. Ox. (mg/L,%)	0.56	0.33	0.29	0.75	h2.0	0.75	0.0 %	6.74
Color	D LEAN	Clida	CLOAN	Closed	110 MV	7007	C. I O. A.	(1001)
Purge Volume	0.1	0.)	0.)	0.1	1.0	0.1	0.1	0
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Alconos + distilled Decon Method:

16.01 Water Level Start: Sampling Method:

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Filter Type:

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Field comments:

Water Level Finish:

Sample Number:

DUP-01 @ 0800 1P-3 @ 1/617

g-logics

Well Number: 1P-4	Project Name: BFC	
Project Number: 01-0416-R 28	Date: 8-15-22	Weather: SUNNY 82° I
Development / Purge Method: LOW FLOW	Well Screen Interval: & to 14	Tidally Influenced?
Logged By: JNS	Water Depth Start: 10.13 NO PYODURET	Field Comments:
Purge Water Disposal Method: 01 WWW	Water Depth Finish:	/ Mentand
Purge Water Disposal Volume:	Bails Dry? Yes (60) What Volume?	Well Conditions: OR Not OK
	)	Explain:

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

	Ť	Т			1	1	Т	1	_
1708		6.53	206	160.60	115.5		0.32	CLOAN	0.1
1703		6.53	994	أوج	1.911		0.38	Closed	1.0
1700		(a. 54	988	9.0	-114.0		0.50	CLORK	0.0
(50)	10.57	6.5H	989	اه. ا	-112.6		1.54	Mean	1.0
hS91	10.55	75.9	HSV	16.7	1106.5		0.32	riear	0.1
1651	10.49	6.49	かしら	6.91	1. pp -		0.40	CLEAN	0.1
8401	(0.472	6.51	978	10.0	0.18-		1.40	chow	0.1
Time	Water Level (ft)	± 0.1 pH	±10 Conductivity (mS/cm)	±0.1 Temperature (F)	±10 ORP (mV)	(10 Turbidity (NTUS)	±0.2 Diss. Ox. (mg/L,%)	Color	Purge Volume

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Alconox + dignited Decon Method:

LOW FIUN 10.13 Water Level Start: Sampling Method:

Filter Type:

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Water Level Finish:

Field comments:

Sample Number: 17-14 @ 1707

odors present

Well Number: IP-5	Project Name:	
Project Number: 01-0410 - R 2B	Date: 8-15-22	Weather: SUNNY, 83-F
Development / Purge Method: LOW FIDUS	Well Screen Interval: 14 to 2.4	Tidally Influenced?
Logged By: U	Water Depth Start: 13.42	Field Comments:
Purge Water Disposal Method:	Water Depth Finish: ( S . S )	Steller Chunky grank in wed
Purge Water Disposal Volume: 0-4 qa[[0M]	() Bails Dry? Yes (6) What Volume?	Well Conditions: (K) Not OK
J.	)	Explain: Manway Contained product

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

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1									
1530	15.47	5.89	272.8	15.5	31.0		0.34	clear	0.0
1527	15.29	5.86	226.8	15.4	34.8		6.37	cheav	1.0
1524	15.20	58.82	228.7	16.4	34.6		0.43	ri pan	1.0
1521	14.95	5.77	231.2	15.4	h hh		(h.0	clear	1.0
1518	14.62	5.75	732.4	15.4	0: 647		0. US	Chean	1.0
1515	14.30	5.88	233.6	15.5	46.0		1.52	Clean	0.1
Time	Water Level (ft)	± 0.1 pH	±10 Conductivity (mS/cm)	±0.1 Temperature (F)	±10 ORP (mV)	440 Turbidity (NTUS)	±0.2 Diss. Ox. (mg/L,%)	Color	Purge Volume

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Decon Method:	

Water Level Start: 13. 42
Sampling Method: UNV FNW

Filter Type:

IP-5 @ 1531

15.51 Mw twhing

Water Level Finish:

Field comments:

Sample Number:

g-logics

\* PRODUCT - NO EQUIPMENT

Well Number: 18-7	Project Name:	
Project Number: 01-0410 . R 28	Date: Q - 16-22	Weather: ONONCOS F Com 6 P
Development / Purge Method: \Cai\Q\	Well Screen Interval: to	Tidally Influenced?
Logged By: \\\	Water Depth Start:	Field Comments:
Purge Water Disposal Method: AVVVV&	Water Depth Finish:	
Purge Water Disposal Volume: 5 GUN UM	Balls Dry? Yes (No) What Volume?	Well Conditions: OK Not OK
		Explain: LNAPU 5.00)
Well Development / Purging (circle one)	4	Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft Purge Volumes: 1" Diam 0.041 * 3 casings * 10' screen = 1.23 gallons, 2" Diam 0.163 * 3 casings * 10' screen = 4.89 gallons
Time		
Water Level (ft)		
±0.1 pH		
±10 Conductivity (mS/cm)		
±0.1 Temperature (F)		
±10 ORP (mV)		
<10 Turbidity (NTUs)		
±0.2 Diss. Ox. (mg/L,%)		

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Sample Number:

Water Level Finish:	Field comments:

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Sopyright G-Logics, well development, purging, sampling log form.vsd

Well Number:	Project Name: BFC	
Project Number: 01 - 04110 - R 728	Date: 8-15-22	Weather: SUNDS 81 oF
Development / Purge Method: LOW Flow	Well Screen Interval: 5 to   5	Tidally Influenced?
Logged By: JMVS	Water Depth Start:	Field Comments:
Purge Water Disposal Method:	Water Depth Finish: 12.02	Newthering
Purge Water Disposal Volume: 6.7 gd ((0/2)	Balls Dry? Yes (O) What Volume?	Well Conditions; Off, Not OK
		Explain: NEW

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

	_	_		1	1	1			
			_	_					
1443	11.93	6.73	19x	18.7	p. 45-		0.60	Chew	0.1
277	11.73	らしは	208	18.5	1.61.9		0,58	Clear	0.
1437	1.65	6.74	198	18.7	1.67-		6.59	clear	1.0
(433	11.52	6.74	098	18.8	7.96-		19.0 To.0	Clear	110
1431	11.30	6.74	95J	6.61	-32.2		6.72	clear	1.0
[428	11.10	6.73	959	18.8	4.18-		(L.0)	CLODY	1.0
1425	10.88	6.75	863	118.7	-20.1		10.	Elean	1.0
Time	Water Level (ft)	± 0.1 pH	±10 Conductivity (mS/cm)	±0.1 Temperature (F)	±10 ORP (mV)	<10 Turbidity (NTUS)	±0.2 Diss. Ox. (mg/L,%)	Color	Purge Volume

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Decon Method:	

10.41 Water Level Start:

LOVE Flow Sampling Method:

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Filter Type:

Sample Number:

Water Level Finish:

TW-4 @ 1444

Field comments:

Well Number: TN-5	Project Name: BFC	
Project Number: 61-0410-12	Date: 8-15-22	Weather: SUNNY, 68"F
Development / Purge Method: LIW - Plow	Well Screen Interval: 7 to 12	Tidally Influenced?
Logged By: JMS	Water Depth Start: 9.93	Field Comments:
Purge Water Disposal Method: $d_{YW}$	Water Depth Finish:	new tubing
Purge Water Disposal Volume: 1.5 GAIIONS	Bails Dry? Yes No /What Volume?	Well Conditions: 🔗 Not OK
7		Explain: NEW

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.683 gal/ft.
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1255	1258	1301	1304	1307	1310	1313	1216	
Water Level (ft)	(0.60	10.63	19.01	10.58	ID. 55	10.57	10.57	10.38	
±0.1 pH	6.27	6.26	6.30	5.34	6.38	<u>-</u>	6.44	6.45	
±10 Conductivity (mS/cm)	604	(65)	65	899	700	716	726	755	
±0.1 Temperature (K)(C)	16.3	16.3	8.9.1	16.8	16.7	8.9	16.7	16.7	
±10 ORP (mV)	48.7	32.4	12.2	-10.0	17.71	- 20.9	3.14.	-52.7	
<10 Turbidity (NTUs)									
±0.2 Diss. Ox. (mg/L)%)	1.84	1.45	1.27	J.4.	1.36	1.26	1.1	1.24	£
Color	Clear	clear	clear	Char	C LO EN	Clook	CLUDY	Noor	Mario
Purge Volume (941)	0.1	0.1	0.)	0.1	(.0	0.1	1.0	1	Park Market
	-								No.

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Alconox +	
Decon Method:	

Low from Water Level Start: Sampling Method:

女2 Filter Type:

TW.5 10.71 Sample Number:

Water Level Finish:

Field comments:

new tweiner; slight adov

SAMPLE TIME: 1335

g-logics

Copyright G-Logics, well development, purging, sampling log form.vsd

Well Number: TN-5 CONTINUM	ed Project Name: BFC	
Project Number:	Date:	Weather:
Development / Purge Method:	Well Screen Interval: to_	Tidally Influenced?
Logged By:	Water Depth Start:	Field Comments:
Purge Water Disposal Methods	Water Depth Finish:	
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
b.		Explain:

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

/ F821	69 10.69		828	7	80.3 -87.9		81 6	, clear	
(33)	10.60	ė	826	6	08 -		61.1	Clear	- <
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1325	99.0)	09.0)	415	16.6	-75.2		1.23	clear	6.1
1322	10.64	00).9	798	اله. (	4.06-		1.24	Close	1.0
1319	10.5	60.48	273	16.7	~ 60.5		57:1	Clean	0.1
Time	Water Level (ft)	±0.1 рН	±10 Conductivity (mS/cm)	±0.1 Temperature (F)	±10 ORP (mV)	<10 Turbidity (NTUs)	±0.2 Diss. Ox. (mg/L,%)	Color	Purge Volume

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Decon Method:
Water Level Start:

Sampling Method:

Filter Type:

Se pg.1

Water Level Finish: Field comments:

Sample Number:

g-logics

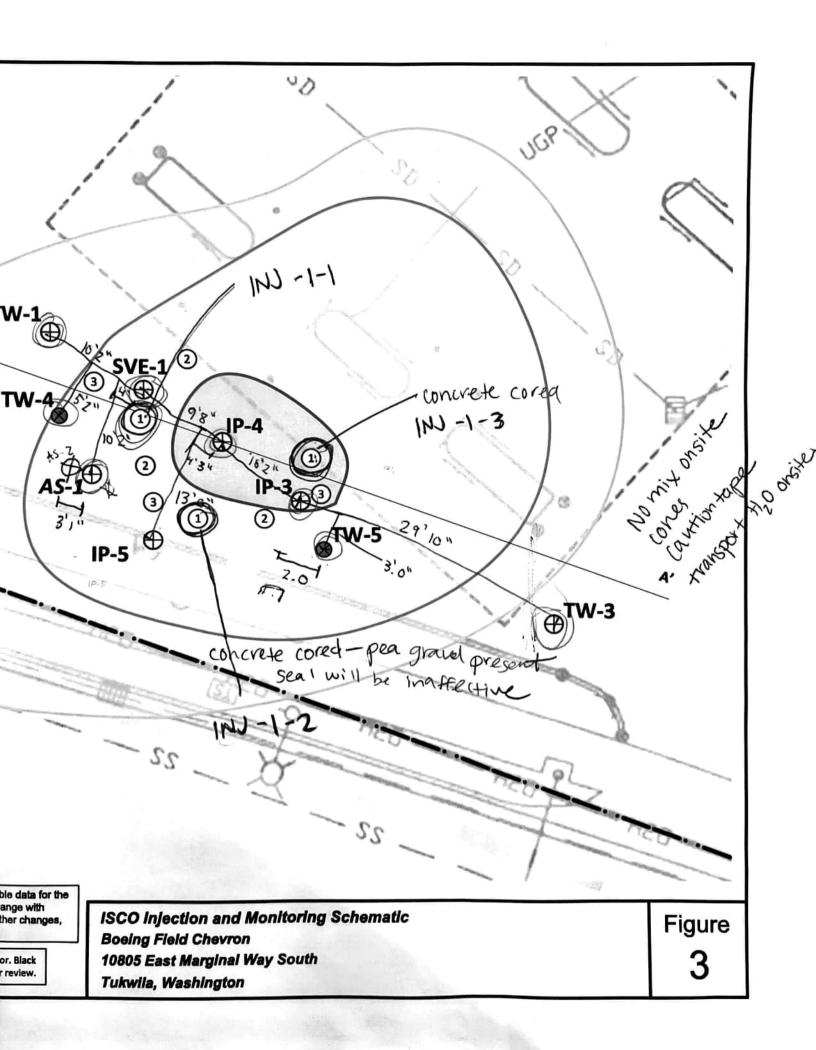
### September 2022

Task3 Injection volume/pressure table Table 1
Summary of Information Needs
Summary of Information Needs
ISCO and Total Liquids Extraction Pilot Test

Noeing Field Chevron, 10805 East Marginal Way South depth to water table INJECTIONS **Tukwila**, Washington Table 1

Injection 1

Information Need	Field Data Development Plan
Establish baseline groundwater quality conditions in the Upper and Lower Hydraulic Zones prior to pllot testing	Install two new monitoring wells (TW-4 and TW-5) in the pilot test injection area  Collect groundwater samples from wells A5-1, IP-3, IP-4, IP-5, IP-7, SVE-1, and TW-1 through TW-5 prior to initial injection phase, field screen groundwater for presence of LNAPL (wells IP-4 and IP-7 only), pH, reduction/oxidation potential, dissolved oxwen, specific conductance, and temperature; and analyze for GRO, DRO, BTEX, and total organic carbon
Evaluate LNAPL accumulation and reduction in Upper and Lower Hydraulic Zone wells	Measure LNAPL thickness in well IP-4 and IP-7 using an oil/water interface probe prior to each injection phase and prior to and immediately after each total liquids extraction phase Measure or estimate volume of recovered LNAPL during each total liquids extraction event
Evaluate ISCO injection delivery effectiveness	Confirm ISCO reagent mass and water volume injected at each point Record injection fluid pressure at each point Record start and end time of injection at each point Measure water levels in wells AS-1, IP-3, IP-4, IP-5, IP-7, SVE-1, and TW-1 through TW-5 during each injection phase
7.1	Measure dissolved oxygen and reduction/oxidation potential in wells AS-1, IP-3, IP-4, IP-5, IP-7, SVE-1, and TW-1 through TW-5 during each groundwater monitoring event
Evaluate change in dissolved phase petroleum hydrocarbon concentrations in Upper Hydraulic Zone	Collect groundwater samples from AS-1, IP-4, SVE-1, and TW-1 through TW-5 prior to injections and analyze for GRO, DRO, and BTEX prior to injections, between first and second injection phases, and at 1 month, 3 months, and 6 months after the final phase of injection and total liquids extraction
Evaluate change in dissolved phase petroleum hydrocarbon concentrations in Lower Hydraulic Zone	Evaluate change in dissolved phase petroleum hydrocarbon concentrations in Collect groundwater samples from IP-3, IP-5, and IP-7 and analyze for TPH-G and BTEX prior to injections and at 1 month, 3 Lower Hydraulic Zone
Evaluate radius of hydraulic and chemical influence from injections (Upper and Lower Hydraulic Zones)	Measure water levels in wells AS-1, IP-3, IP-4, IP-5, IP-7, SVE-1, and TW-1 through TW-5 prior to each injection phase and and within 2 hours after each injection phase is completed  Measure pH, reduction/oxidation potential, dissolved oxygen, specific conductance, and temprerature in AS-1, IP-3, IP-4, IP-5, IP-7, SVE-1, and TW-1 through TW-5 prior to the initial injection phase, between the first and second injection phases (omit Lower Zone wells), and at 1 month, 3 months, and 6 months after the final injection and total fluid extraction phases are complete
Evaluate effectiveness of total liquids extraction	Measure or approximate volume of liquids and LNAPL removed from well IP-4 and other wells containing LNAPL during each event. Record start and end time of total liquids extraction at wells IP-4 and other wells containing LNAPL.
Evaluate radius of hydraulic influence from total liquids extraction in the Upper and Lower Hydraulic Zones	Measure water levels in AS-1, AS-2, IP-3, IP-4, IP-5, IP-7, SVE-1, and TW-1 through TW-5 prior to each total liquids extraction phase and as soon as possible after each extraction phase is completed
Evaluate rebound of LNAPL accumulation in the Upper and Lower Hydraulic Zones	Measure LNAPL thickness in wells IP-4 using an oil/water interface probe at 1 month, 3 months, and 6 months after the final total liquids extraction event. Screen for LNAPL and, if present, measure LNAPL using an oil/water interface probe in the remaining wells in the pilot test monitroing program.
Evaluate rebound of dissolved-phase petroleum hydrocarbons in the Upper and Lower Hydraulic Zones	Collect groundwater samples from AS-1, IP-3, IP-4, IP-5, IP-7, SVE-1, and TW-1 through TW-5 and analyze for GRO, DRO, and BTEX at 1 month, 3 months, and 6 months after the final total liquids extraction event



1232 JMS arrives to site. Lone of workzone areas + cheekin with staff

1245 Cascade arrives to site. Thurs stiff offsite. Conduct taignte + sufety meeting. Scope discussed

1256 Mobilize trucks + equipment onsite

1340 Set up equipment to core concrete at 3 first round injection pointy

1352 Begin converse coring

1421 Begin opening wells for water depth/product depth measurements

1448 All 3 cores for injection points are cut. Begin hand clearing points to 5'

1516 in 1-1-2 is pea gravel from former remedial excavation - chared with

INJ-1-1 was nand augured to 10" bgs before refused by concrete picet tratway too large to get up the hole.

INJ-1-3 was hand augered to 1' bgs before refusal by piece of concrete that was too large to come up hole.

1517 called PMs to confirm that we are good to proceed

1525 Continue setup on injection points + equipment

1600 contine setup

1618 rearrange equipment trailers to get water closer to points

170s Setup complete - to return tomorrow for injections.

1720 All parties depart site.

9/e/22 My Boeing Field Cherron 01-0410-R Task 3 10805 E. Marginar Way, Thruis, WA

September 7,2022 Injection Event #1

0620 JMS arrives to site. Begin opening wells, delineate work

0623 Set cones + open wells

0645 Begin water level measurements

0780 Cascade arrives to six-begin set up for the day

0730 Finish water fevel measurements

0740 Tailgate + safety meeting. Discuss scope for the day, injections, spill response, assembly area, etc.

0755 continue injection setup

1110 Begin injection 1, INJ-1-1

Start time: 1110 Start pressure: 20 Sustained pressure: 20

end time: 1137 end pressure: 20 total volume injected: 360

1140 Set up at #2, INJ-1-3 Start time: 1150 Start pressure: 20 Sustained prossure: 20

end time: 1216 end pressure: 20 total Vol. injected: 365

1230 sep up injection 3, INJ-1-2

Start time: 1255 Start pressure: 20 end tine: 1319 end pressure: 20 total vol. injected: 360

Sustained pressure: 20

1330 Begin cleanup 1348 Begin water fevel measure ments 1430 Finish WL measure ments

Pg. 1 of 2

BFC OI-0410-R Task 3 10805 E. Margina I Way, Thkwila, WA

September 7, 2022 Injection Event #1

1431 Begin Cleanup of injection equipment.

1520 Lunen

1548 Lunch ends

1550 continue chanup activities

1700 continue cleaning

1821 All parties depart site. To return tomorrow Am for final cleanup and demob.

Jus 9/7/2022

Pg. 2 of 2

Project Name: Boeing Field Chevron

Project Number: 01-0410-R TASK 3

September 7,2022 Injection event#1

Address: 1080S E Marginal Way, Tuknila, WA

WATER LEVEL MEASUREMENTS								
	TIME	FIME	pepth to	Depth to water	Product Thickness	Notes		
WELL	MEASINED	DIN	product	Murey	Thiodies			
AS-I	0710	10.71	NW		-			
1P-3 🕏	0715	15.57	. —		.0	odors		
1P-4 €	0721	10.49	_		0	odovs		
IP-5 ®	0711-	16.45	-		-0	odors		
IP-7 🏵	0727	17:31	16.26		2.05	odors & groduet		
SVE-1	0707	DRY	NW		_			
TW-1	0103	9.87	ИW		_			
TW-2	.0700	9.46	NW		-			
TW-3	0650	9.50	NW		_			
TW-4	0656	10 64	NW		_			
TW-5	0658	10.26	NW					
MM=not n	reashved							
D= Inte	heasuved Have prob					20		

Bocing Field Charron
01-0410-R task3
10805 E. Marginal Way, Thkwila, WA

September 7, , 2022 \* Affer Injution Event#1 INJULTIONS

1					
WELL	TIME	DTW	DTP.	Product Thickness	Notes
AS-1	1410	9.72	NM		
1P-3*	1416	14.28	.0	-0	
1P-4 *	1420	10.60	0	0	
IP-5*	1412	13:25	0	0	
1P-7®	1426	13.66	15.47	2,01	
SVE-1	1405	DRY	NW	-	
TW-1	1402	9.86	ИМ	_	
TW-2	1400	944	NM		
TN-3	1350	4.25	NM .	_	
TN-4	1352	10-06	NM	_	
TW-S	1356	9.82	NW		
No.					
	J	J			

32	01-0410-PC tast 4A 9/27/22 33
01-0410-12-TUSK-4A 9/27/22	1025 Bagin Gimpling TW-5
Boeing Field Chewon	1041 TW-S COILEGED
CWMESS has be been been been been been been been	1050 Decon equipment + close well
Barrier Berlin, the header bracket benche to be be by the highest the	1053 Set VD Equipment at TW-4
0725 JMs armives to site. Chearin	IIIU Pump propiems
with staff + delineate work	1130 Beegin measurements at TW-4
zone with cones.	MUS Collect TW-4
0732 Tailgate + safety meeting 1	208 Decon equipment + close well
in afendance sign HASP	1210 Setup at AS-1
0740 Begin opening MWs For	7216 Pump trombles
gaing/monitoring.	1240 Bearn measurements at AS-1
0820 Begin gauding water product	1244 Call PM to tell them of opaque,
depths	rust-colored GN + that
0ess complée grange	parameters may not stabilizer
1859 Bail product from 1P-7	13:19 AS-1 Collected, DUP-1 (0800)
with disposable bailer	is collected
Product to be purced in drum.	1339 Decon equipment + close well
0923: Complete built-7	1342 set up at 1P-4
Product + drum About	1345 Begin measurements at IP-4
egallons: Vernoved:	1412: COMECT: 1P-4
0930 Close Wells not sampled	1425: Decon equipment + close all
awing this event	wells
0946 set up at TW-5 0950 begin campling TW-5	1430 purgewater to dram + close
1010 Pump problems - troubleshoot	Restore site
劉樹麗 こうしゅう しょうしょう さんぎ こうりゅう 単一 ・ ・ 単一 ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・	1445 All parties dupart site.
Scale: 1 square = Pg. 1 of 2	Scale: 1 square = Pg. 2 of 2 Rite: Athe Raise.

### **Groundwater Monitoring Well Gauging Form**

Project Name: Boeing Field Chevron	
Project Number: 01-0410-R Task 4a	٤
Date: 9/27/2022	_

Sampler: Jessica Soliz

_					o taker	1 from	previous	even	<u> </u>
	Well Identification	Time Opened	Time Measured	Total Depth (feet)	Depth to Water	44	Product Thickness (feet)		Observations/Notes
U	pper Saturated Zone		1	,					
	AS-1	0754	0836	16,	10.90	NM			
L	IP-4**	0801	0847	14	10.69	9			No product detected
L	SVE-1	0756	0839	DRY	DRY	NM			Not sampled - dry
L	TW-1 NS		0822	11 - 18	10.04	NM			Not enough volume to sample Not enough volume to sample Not enough volume to sample
L	TW-2 NS	0742	0320	10.20	9.43	NM			Not enough volume to sample
L	TW-3 NS	0747	0825	10.17	9.72	NM			Not enough volume to sumple
L	TW-4	0751	0830	15	10.76	NM			
	TW-5	0750	0827	12	10.42	NM			
Lo	ower Saturated Zone		T						
L	IP-3 N'5	0759	0642	24	14.15	NM			Not sampled during this event
	IP-5 NS	0752	0833	24`	14.92	NM			Not sampled during this event / Styong odovs
L	IP-7** NS	(J403	0851	233	16.76	13.43			Not sampled during this event (Product bailed to dru
L									
L									
L									

Comments: \*\* = Interface Probe used to measure product thickness

NS- not sumpled for analytical

			GI	ROUNDWAT	ER SAMPLING	
Zone	Well ID	Gauge	Dup	Analysis	Container	Method
Upper				GRO,	3x40 mL VOAs w/HCL,	NWTPH-Gx,
Saturated	AS-1	Υ	Υ	DRO,	500 mL amber w/ HCl	NWTPH-Dx,
Upper Saturated AS-1 Zone  IP-4  SVE-  TW-2  TW-2				BTEX		EPA 8060C
	A			GRO,	3x40 mL VOAs w/HCL,	NWTPH-Gx,
	IP-4	Y		DRO,	500 mL amber w/ HCl	NWTPH-Dx,
				BTEX		EPA 8060C
				GRO,	3x40 mL VOAs w/HCL,	NWTPH-Gx,
	SVE-1	Y		DRO,	500 mL amber w/ HCl	NWTPH-Dx,
				BTEX		EPA 8060C
				GRO,	3x40 mL VOAs w/HCL,	NWTPH-Gx,
	TW-1	Υ		DRO,	500 mL amber w/ HCl	NWTPH-Dx,
				BTEX		EPA 8060C
				GRO,	3x40 mL VOAs w/HCL,	NWTPH-Gx,
	TW-2	Y		DRO,	500 mL amber w/ HCl	NWTPH-Dx,
				BTEX		EPA 8060C
			GRO,	3x40 mL VOAs w/HCL,	NWTPH-Gx,	
	TW-3	Υ		DRO,	500 mL amber w/ HCl	NWTPH-Dx,
				BTEX		EPA 8060C
				GRO,	3x40 mL VOAs w/HCL,	NWTPH-Gx,
	TW-4	Υ		DRO,	500 mL amber w/ HCl	NWTPH-Dx,
!				BTEX		EPA 8060C
				GRO,	3x40 mL VOAs w/HCL,	NWTPH-Gx,
	TW-5	Y		DRO,	500 mL amber w/ HCl	NWTPH-Dx,
				BTEX		EPA 8060C
Lower Saturated	IP-3	Y		None		
Zone	IP-5	Y		None		
	IP-7 🎓	Υ		None	***	

TASK 4a

\*= Interface probe

Project Number: 01-0410-R T	ask 4a	Date: 09/267	2022 9 127	12022	Weather:	Weather: SUNNY, SMOKY, 73°F							
Development / Purge Method: LOW Flow Well Screen Interval: 12  Logged By: JMS Water Depth Start:				14 to	Tidally Infl	Tidally Influenced?							
					Field Com	ments:							
Purge Water Disposal Method: D	rum	Water Depth Fin	ish:		Λ	ew thing	<u> </u>	····					
Purge Water Disposal Volume:		Balls Dry? Yes	s No What Volume?	)	Well Cond	tions: OK Not OK	•						
Well Development / Purging (circle one)  Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft Purge Volumes: 1" Diam 0.041 *3 casings * 10' screen = 1.23 gal/ons, 2" Diam 0.163 *3 casings * 10' screen = 4.89 gal/ons													
Time	1243	1246	1249	1262	1255	1258	1303	1308	]				
Water Level (ft)	11.74	12.08	12.10	12.16	12.23	12:27	12.53	12.80					
± 0.1 pH	9.25	9.09	9.03	9.92	4.77	8.56	9.12	7.79	The second secon				
±10 Conductivity (mS/cm	1 5429	5 053	4925	4706	4450	4215	3136	3347	1 Pg.10				
±0.1 Temperature (F)(C)	17.9	18.1	14.1	16.0	14.0	17.8	17.6	17.7					
±10 ORP (mV)	-313:9	-314.7	-321.2	-328.5	-324.6	-317.0	- 283.4	-259.2	aprice of the street				
<10 Turbidity (NTUs)	20-0-43	The state of the s					nia tanàna manjatina dia kaominina dia mandri ny fisiana dia mandri ny fisiana dia mandri ny fisiana dia mandri	1	Ju .				
±0.2 Diss. Ox. (mg/L,%)	-335	0.24	0.10	O - V	0.1	0.10	0 - 11	0.10	1				
Color	Rusty	Rushe	Rushy	RUSTY	RUSTY	RUSTY	RUSTY	fusty	1				
Purge Volume	10-1	621	0.3	0.4	0-5	0.6	0.9	1.2					
Water Level Start:	Alconox	plete if well is s		Sample Ni Water Lev Field com	el Finish:	5-1@ 13	8	P-1@09	(00				

Color: fluid is opaque + an orande/red rust color g-logics

Project Number: 01-0410-R Task 4a D			Date: -09/26/2022 9 /27 /22				Weather: SVNNY, SMOKY, 730 F				
evelopment / Purge Method:	ow Flow	Well Screen interv	Well Screen Interval: 12 to 12				enced?				
ogged By: JMS		Water Depth Start:	11.01			Field Comn	nents:		· · · · · · · · · · · · · · · · · · ·	****	
Purge Water Disposal Method:	Drum	Water Depth Finisi	1:			Υ	uw tubir	<u> </u>			
Purge Water Disposal Volume:		Balls Dry? Yes	No What Volume?			Well Condit	lons: OK Not O	<b>K</b>			
Well Developme	nt ⊄ Purging (circ	cle one)		Casing Volume	in Gallons:	1" Diam = 0.04	11 gal/ft, 2" Diam = 0.1	63 gal/ft, 4" Diam = 0.6	53 gai/ft 3 casings * 10' screen :		
(continue	d)	·		i aigo voidine.	s. i Diamiro.	Al Casily:	s to screen = 1.23 ga	mions, 2 Diam (1.163 -	3 casings - 10 screen :	= 4.89 gailons	
Time	1313	1319		•				and the same of th	\		
Water Level (ft)									\		
0.1 pH	7.48	7.67		/		OF THE STREET					
±10 Conductivity (mS/cr	m) 3247	3254		/						and the second sections of the second	
:0.1 Temperature (F)	17.6	17.5								<b>-</b>	
±10 ORP (mV)	-246.7	- 240.4						o a particular de la companya de la			
<10 Turbidity (NTUs)	and the second s		Tokan harifan dan samanan kehiri bingga pada kan apan asa mahijan didi	Milliam marana a a a gran and arthrophic pagagins s annus de martin Singl	tina kirakajan paga pamaini bila kirak	jó príson	Continue de la contraction de	the environment and the state of the state o	/	<b>-</b> N	
:0.2 Diss. Ox. (mg/L,%)	0 - 10	0.10						A Particular Services			
Color	Rusty	Rusty				a company			+/-		
Purge Volume	1.5	1.8					/			-	
	nformation (comp		mplod)								
Decon Method:	Alconox		mpica,	Sample N	lumber:	AS-	10 131	9 / DUF	-1000	07)	
Water Level Start:	11.01			_ Water Lev					The state of the s		
Sampling Method:	LOW FINIS	Devi Dumo				4 1 h A	= not m	acraved		<del></del>	
	a was	1		_ Field com	ments:	MAI	- VIVI VVV	WYAN			
Sampling Method: WW HOW WAR PVMP  Filter Type: None			_				jed Vefore				

Well Number: IP-4	Project Name: Boeing Field Ch	evron
Project Number: 01-0410-R Task 4a	Date: 200/25/2022 9 27 / 20 22	Weather: Synny, Smoky, 75°F
Development / Purge Method: LOW Flow	Well Screen Interval: 8 to 14	Tidally influenced?
Logged By: JMS	Water Depth Start: 11) - 8 6	Field Comments:
Purge Water Disposal Method: Drum	Water Depth Finish: 11.5 H	how than
Purge Water Disposal Volume:	Bails Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Casing Volume in Gallons: 1" Diam = 0.041 galfft, 2" Diam = 0.163 galfft, 4" Diam = 0.653 galfft
Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	(350	1353	1354	1359	1402	1405	1408	41
Water Level (ft)	11.04	11.07	11.10	11.19	11.26	11.38	11.40	11.46
± 0.1 pH	6.62	4.57	6.55	6.55	6.40	6.61	6.64	6.66
±10 Conductivity (mS/cm)	1098	1050	1025	993	1004	1026	1094	1100
±0.1 Temperature (F)	17.1	17.1	11.2	17.3	17.3	17.3	17.4	17.3
±10 ORP (mV)	-108.4	-111.6	-113.8	-117.5	-120.)	-125.9	-131.5	-134.7
<10 Turbidity (NTUs)	A CONTRACTOR OF THE PROPERTY O			The sales of the s	$x = x^{-1/2} + x^{-1$		Call all property and an additional property of the state	A STATE OF THE PROPERTY OF THE
±0.2 Diss. Ox. (mg/L,%)	0.21	6.25	0.19	0.16	0.16	0.15	0.15	0.16
Color	spague	Opaque	Paque	grague	opaque	opaque	gragne	opaque
Purge Volume	0.1	0.2	0.3	0.4	0.5	0.6	0.1	0.8

Well Sampling Information (complete if well is sampled)

Decon Method:	Alconox	Sample Number:	1P-4@ 1412
Water Level Start:	10.86	Water Level Finish:	11.54
Sampling Method:	LOW Flow, Peri. Pump	Field comments:	NM- not missinged

Filter Type: None

g-logics

Well Number: TW-4	Project Name: Boeing Field Ch	evron
Project Number: 01-0410-R Task 4a	Date: 200/20/2022 9 27 2022	Weather: SUNNY, SMOKY, 689F
Development / Purge Method: LOW Flow	Well Screen Interval: 5 to 15	Tidally influenced?
Logged By: JMS	Water Depth Start: 10.80	Field Comments:
Purge Water Disposal Method: Drum	Water Depth Finish: 13.01-1	new triang
Purge Water Disposal Volume:	Balls Dry? Yes No What Volume?	Well Conditions: OK Not OK
		Explain:

Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.653 gal/ft Purge Volumes: 1" Diam 0.041 \* 3 casings \* 10' screen = 1.23 gallons, 2" Diam 0.163 \* 3 casings \* 10' screen = 4.89 gallons

Time	1135	1938	1041	1144	1047		$\overline{\ }$	
Water Level (ft)	11.28	11.83	12.31	12.50	12.72			1
: 0.1 pH	6.73	6.74	6.74	0.74	ŷ.73	/		$\dashv$
±10 Conductivity (mS/cm)	732	733	733	733	734			$\dashv$
±0.1 Temperature (F)(()	18.4	18.2	18.2	18.1	18.0			ᅱ
±10 ORP (mV)	-60.4	-78.8	-43.5	-86.6	-88.1			$\dashv$
<10 Turbidity (NTUs)	The second secon	A THE PROPERTY OF THE PROPERTY				The state of the s	Marie Ma	
±0.2 Diss. Ox. (mg/L,%)	0.44	0.28	0:29	0.28	0.26	/		-
Color	Clear	Clear	Clear	cllav	CILAN			-
Purge Volume	0 - 1	0.2	0.3	0.4	0.5			$\dashv$

Decon Method:	Alconox	Sample Number:	TN-4@1048
Water Level Start:	10.80	Water Level Finish:	13.04
Sampling Method:	LON Flow Peri Pump	Field comments:	NM=not measured

None Filter Type: extra containers collected for lab (requested ac)

g-logics

Project Number: 01-0410-R Ta	sk 4a	Date: -09/26	1 <del>2022</del> 9 12-	1/2022	12022 Weather: SUNNY, SMOKY, 66°F							
Development / Purge Method: LOW	Flow	Well Screen Int	erval: 7	to12	<b>L</b>	Tidally influenced?						
Logged By: JMS		Water Depth S	art: 10.43		Fiel	d Comments:		, «				
Purge Water Disposal Method: Dru	ım	Water Depth Fi	nlsh:     .Q. ]			Y	w tu	VING.				
Purge Water Disposal Volume: ().		Balls Dry? Yo	s No What Volume	e?	Well Conditions: OK Not OK							
						lain:						
Well Development	/ Purging (circ	le one)		Casing Volume Purge Volumes	In Gallons: 1" Dia : 1" Diam 0.041 * 3	n = 0.041 gal/ft, 2 casings * 10'scr	:" Diam = 0.163 een = 1.23 galk	gal/ft, 4" Diam ons, 2" Diam 0.1	= 0.653 gal/ft 63 * 3 casings *	10' screen =	4.89 gallons	
Time	1028	1031	11034	1037	1040	1						
Water Level (ft)	1107	11.46	11.73	11.92	11.95	la Control			71		7	
: 0.1 pH	6.35	6.35	6.38	6.41	6.42					<del>\</del>	7	
±10 Conductivity (mS/cm)	926	419	915	810	812						-	
±0.1 Temperature (N(C)	7.1	17.2	17.3	17.2	17.2				The state of the s			
±10 ORP (mV)	-142.4	- 146.9	-149.0	-149.6	-147.9						7	
<10 Turbidity (NTUs)	AND THE PROPERTY OF THE PROPER	Marie Language Communication C	entropy and the first section of the first section	A SECURITION OF THE PROPERTY O					THE STATE AND ADDRESS OF THE STATE ADDRESS OF THE STATE ADDRESS OF THE STATE AND ADDRESS OF THE	managalikina saasaya da ara aya biribah.	$\exists_{N}$	
±0.2 Diss. Ox. (mg/l, %)	1m0,47	0.39	0.30	0.28	0.29	,				Clin (Property)	7'	
Color	Clar	Clear	Chear	Clar	Clear						-	
Purge Volume	0 · 1	0.2	0.3	nu	0.5			<del></del>		1	7	
				1 V:\	<u> </u>							
Well Sampling Info	ormation (comp	lete if well is	sampled)									
Decon Method: A	lconox			Sample N	umber:	TW-5	@ 10	140				
Water Level Start:	10.43			11 07						<u></u>		
Sampling Method:	IN SOW. T	DIA DIAMA	_	Water Level Finish: 11.91  Field comments: NM = NO+ Weaswed								

None

Filter Type:

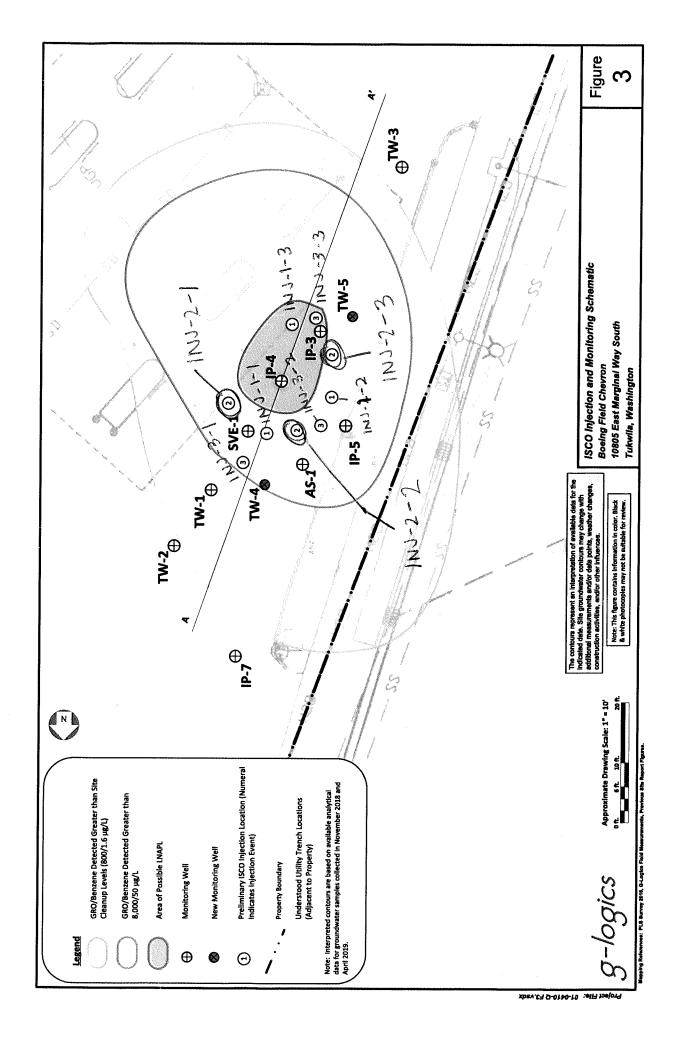
g-logics

## October 2022

38	31-0410-12 Task3 10/17/22 39
01-0410-R Task3 BRC 1,5011-2	<u> </u>
Invection Event #2	1145 : Call cascade to confirm arrival.
October 17, 2022	Delayed on picking up supplies:
	Plans to be onsite by 2 pm
0802 JMS arrives to site. AUUL (locator)	1200 Jak departe site until 2 pm.
onsite.	1300 JMS retruns to site to make
0805 Discos scope + delineate work	give work area is still
avea : w) cones .:	delineated
0812: Check in with stapp	1350 Cascade to site Informed me
OYIS Begin cleaving work areas	that they still need to pick up
and private locate scan.	additional equipment before starting.
USHO: locate completed Allinjection:	1400 cascade departs site:
points cleaved one underground	1410 : water tanker truck arrives to site
in fine marked is the full line from	1503 Casade arrives to site Bagin
in MNVs to pump islands.	stagmes equipment/export tricks
CXYI: AVUL departs site: Begin opening	1523 Water delivery complete. Departs site.
all wells for ganging	1525 Continu staging equipment, let up
1855: All Wells: opened "Depayt: site to	spill containment prep for injections
più up interfaia probe	1025 tailgate meeting to discuss full
0915: Petum: to site:	Scope + safety hazards:
0920: Begin: gonging wells.	1652 All parties olipat site. End day 1:
0950: All Wells ganged.	
1952 Get starp to relocate cars	
1000: Nait fol Cascade to arrive.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Scale: 1 square = Pg. 10 F Z	Scale: 1 square = Pq. 2 OF Z Retains
scale. 1 square 19. 10 7.	Scale. I square =
그 사는 사람들은 사람들은 사람들은 사람들은 사람들은 함께 다른 살림을 받았다.	
	(1987년 1982년 - 1987년) 1987년 - 1987년

40	01-0410-12 Task 3, BFC 10/18/2241
O1-0410-12 Taske3 BFC J. Soliz	
Injection Event+12	NJ:2-2
October 18,2022	start time: 1009 end time: 103)
	stavit pressure: 19 endpressure: 19
0655 JMS arrives to site. Cascade onsite:	sustained pressure: 19 Frotal.
0702 Tailgak + safety meeting. Discuss	Vol inscrete: 365
scope + daily plan.	* The English Residence And State Nickly Analysis (6) (1) (2)
1710 Continue setup for injections	1036 Complete geoprobe temp install at
5730 Discuss + Sign HASP. 4 people in .	
: : aftendance: : : : : : : : : :	1053 set up for INJ-2-1 injection
0742 Begin concrete coreing for	100-2-1
1NJ-2-1; INJ-2-2; and INJ-2-3 -	start time: 1107 end time: 1132
0835 Comprete concrete covering Courtinue	Start pressure: 20 end pressure: 20
injuition trailer setup.	svistained pressure? 20 Tot. vol. injected: 365
0842 Begin hand clearing at INJ-2-1	
0850: location of INU-2-2 is within	
peagravel of former excavation	1140 Begin advancing cuopose for temp
USSG Begin advancing geoprobe for temp	12/2 Set up for INJ-2-3 injection.
Installation at INJ-2-2	VAMB [N.J-2-3
1934 Begin advancing geoprobe for temp	start time: 1213 end time: 1240
installation at INJ-2-1: (ontinue	start pressure: 20 end pressure: 20
nand chaving at INJ-2-3:	sustained pressave: 20 Tot-vol. injected: 365
10 08 Set up for INJ-2-2 injections	
	1246: All 3 injections: completed Bogin:
Scale: 1 square = Pg. 1 of 3	Scale: 1 square = P0.2 of 3 · Rete in the Rain.

- UI U	410 R Task3, BFC 10/18/22	Secretarian Source Court Service Court Basic Court Court Court Service C	
t t			, ř.
	deconstruction of injection points.		· · · · · · · · · · · · · · · · · · ·
339	Continue Cleanup Gather hoses +		
	extension chords.		
403	Completed restoring injection:		
6 E	: points to surface backfilled:		
r r	with bontonite chips + sealed at		
E E	Surface with concrete paten.		
1 .	: Continue sife cleanup prestore:		
452	Continue Cleanup. Begin:		F
	opening all wells for gauging		
<u> 530 :</u>	Gange all Wells:		1
S44 !	Finalize restoring/ Cleaning		
1 1	site.		
600 :	All parties depart six End:		
t t	day 2. One thick (support thick	TO SECURE 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 (1) 1 (1) 1 (1)
1 .	w/ probe trailer will stay onsite		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
6 6 6 1	overnight + will be piaked up +	For the Control of th	
F F	driven offsite tomorrow by 0800.	T	1
	Approved plan w/ site staff:		
	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	The first transfer of	
Part Control			
( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )	$\begin{array}{cccccccccccccccccccccccccccccccccccc$		€ 100 E
		$ = \frac{1}{10000000000000000000000000000000000$	- F
	10(18/22:		
Scale: 1 sc	quare = $\frac{pq}{3}$ of 3	Scale: 1 square =	Rain



Pre-injection=2

# Groundwater Monitoring Well Sample Form

			Sampler: Jessica Soliz	
Project Name: Boeing Field Chevron	Project Number: 01-0410-R Task 3	Address: 10805 East Marginal Way, Tukwila, WA	Date: 10 117 (2027.	

g-logics

			over " they have	120 120									intoface peaks	77.4				
Observations/Notes			No Fraduct															
Sheen			La										A Company of the Comp					
Product Thickness (feet)		52	Φ	ž	Ž	2	S	<u>د</u> 2	2		٤ 2	2	99.					,
Depth to Water (feet)		11.19	96.01	DPN	10,18	48.9	00-01	11.03	10 · 67		14.65	IF. 41	15.80			1100		
Depth to Product (feet)		22	<b>D</b>	ξZ	SZ	∑ 2	2	Z Z	NN		N.Z	Š	11 11			The state of the s		
Time Opened Time Measured Total Depth (feet)		16'	14.	PARAMETER	10.18	10.2	10.17	15'	12'		24'	24'	23'					
Time Measured		1545.0927	0.8520 au3	6847 0433	0934	0450 0937	0841 0920	0630	6292 6923		odho	0925	Oditle				A PARTIE AND A PAR	
Time Opened		2443	0.867	1689	68719	0,450	1480	0670 0630	5647		0400 15Q0	0843 0925	0854 6946		*			
Well Identification	Lower Saturated Zone	AS-1	(P-4)	SVE-1	TW-1	TW-2	TW-3	TW-4	TW-5	Upper Saturated Zone	IP-3	IP-5	(P.)	Additional Wells				
		Έ.	્ર	ح	~	æ		12)	ę٠Į		0	3	=			 	······································	 1

Comments: Total depths taken from previous phase of work

post-injection #2
gaugung

Address: 10805 East Marginal Way, Tukwila, WA
Date: 10 18 2 Project Name: Boeing Field Chevron Project Number: 01-0410-R Task 3

Sampler: Jessica Soliz

					xxx or												
ObservationalNotes					Jelly substance/buildup, cannot breakthrong											THE PARTY AND ADDRESS OF THE PARTY AND ADDRESS	
Product Sheen Thickness (teet) YM		, market his	Ф		Jelly substan			•									
Depth to Water (feet)		16.17	10.24	DRY	10.70	H8. W	10·01	6.03	10.26		14.03	これ	15.77				
Depth to Product (feet)		<u>S</u>	Ф	<u>ک</u> 2	<u> </u>	Ş 2	Ž Ž	ΣZ	NN		ž	Σ	14.08				
Total Depth (feet)		16'	14'		10.18	10.2	10.17	15'	12'		24'	24'	23'				
Time Opened Time Messured Total Depth (feet)																	
Time Opened		このこ	-50gs	1500	-00 -00	1502	1453	1458	1154		1504	デ の 。	1507				
Well Identification	Lower Saturated Zone	AS-1	₩ 4-dl	SVE-1	TW-1	TW-2	TW-3	7W-4	TW-5	Upper Saturated Zone	IP-3	IP-5	IP-7 ★	Additional Wells			
an interest of Alares		.5	0	.¥	<del></del>	ص	**-	V	ر,	1	T	40		1		 	

Comments: Total depths taken from previous phase of work

\*= intaface probe

#### **Drum Inventory Sheet**

\* will need new soil drum for future injection event

Project Name: BFC

Property Address: 10805 F. Marginal Way, Tukuija
Project Number: 61-0410-R Task 3

1 Cal:

		131 -2 -	J. Soliz			
Drum ID	Content (Sol/Water)	Date Drum Started	Fullness (%)	Drum Label (Y/N)	Drum Location, Access, and Other Comments	
1	S	8/11/22	100	Ą		
2	W	8/11/22	5	У	recently evacuated via	
		•			recently evacuated via vacitment event.	
					* both located on SW Side of property building	
					side of property building	
	:					

01-0410-R Task 3, BFC  Extraction Event#1  October 7, 2022  O725 JMS arrives to site Checkin thirm  store clerk. Pelineale work space	evacuating product.  1017 turn on vac truck + continue  pumping fac 10 minutes.
October 7 2022  O725 JMS arrives to site Checkin thirm	1017 turn on vac truck + continue
October 7, 2022:	1017 turn on vac truck + continue
la de la companya de	
Barrian Barria Barr	
slave steine Dollarde woode casine	1027 Vac truck off. collect product!
STONE CHEVE . HE HARONE MOTHER SPACES	: Mater I evel again:
with cones	DTP= NP Ø DTW = 16.84 Δ=λόνε
0745 Begin opening MWs for gauging	1030 End vac event at 1P+7
0758 Northern Environmental (1) arrives:	total Vol. extracted = 550 gallons
to site. Told to hang tight find	approximate:
cars to be cleared in the area	1041 estimated percentage of
0815 Berjin product ( water fevel :	Product : MAYBEN 10 gallons ?
: medswemmes :	you truck arriver indicates that this
0840 Set up vacitaries + 1P-7:	is likely a bad fina convate
0855: Begin: evaluating: 1P:-7::	measurement due to
0423 Continue pumping on 1P-7. Update	: constraint on product thickness:
P.M. of site conditions.	measurements in vac truck being
9950: approx 2:00-300 galloins evacuated	inneven (at an angle). Driver
so far. Hard to tell product vs.	will call us when emptying
Naturamounts:	truer with a better estimate.
1009 Pull yac off mell to check product	1043 Begin packing up val thick:
water jerel: 500 gallons evacueted	materials.
1012 : DTP= 16.76 : DTW = 16.77 :TP=2235	1100 Relocate truck to evacuate drum
:: Product thinkness = 0.01 ft	onste, Liquid extracted in 25 gallons
1015 Hook back wp: to 17-7 to continue	11/8: Vactruck departs site:
Scale: 1 square = $pg - 1043$	Scale: 1 square = Pg. 2 of 3 Rite in the Rain

Project Name:	Boeing Field Chevron									
Project Number:	r: 01-0410-R Task 3									
Address:	10805 East	Margir	nal Way, Tukwila	ı, WA						
Date:	10	17	122							
Date:			LL			· · · · · · · · · · · · · · · · · · ·				

Pre-vac g-logics

Sampler: Jessica Soliz

	Well Identification	Time Opened	Time Measured	Total Depth (feet)	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Sheen Y/N	Observations/Notes	
	Lower Saturated Zone							-	Observately polytotes	
ζ,	AS-1	0753	0426	16'	4	11.00	0	N		
10	IP-4	0-199	0431	14'	0	10.43	÷	N	strong odors	
T	SVE-1	0756	0933		DE	27 —			, ,	
3	TW-1	0749	0621	10.18	Ð	10.04	Ð	2	Product Sediment buildup on to	on of water
2	TW-2	6747	0819	10.2	H	9.76	<del>+</del>	N	Product sediment buildup on to	DVALLED I
1	TW-3	0746	0816	10.17	8	9.96	0	N		- 1000
٤	TW-4	0752	0825	15'	0	11.01	0	N		
£	TW-5	OTS)	08:13	12'	0	10-61	0	N		
	Upper Saturated Zone	I I					,			
9	IP-3	6751	0834	24'	0	15.68	0	N		
7	IP-5	0755	0830	24'	0	16.54	0	N	strong oday	
11	iP-7	05/90	075¶	23'	15.34	17.71	2.37	LNA	PL Present, strong odors	
ł	Additional Wells									
	MW-23			15.5						
ŀ	MW-25			14						
	MW-27S			12						
	MW-27D			?.						
L	MW-29			25					MW-29D?	

Comments: Total depths taken from previous phase of work

during vac

Project Name:	Boeing Field Chevron	
roject Number:	01-0410-R Task 3	
Address:	10805 East Marginal Way, Tukwila, WA	

Sampler: Jessica Soliz

7		t de la company	ensembore STAGO basining	and order over a proper party of the property of the party of the part	The second control of	A COLOR CONTROL OF THE PROPERTY OF THE PROPERT			
	Well Identification	Time Opened	Time Measured	Total Depth (feet	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Sheen Y/N	Observations/Notes
Ŀ	ower Saturated Zone								
V.	<b>A</b> S-1		0830	16'	NV	16.54	2		
	IP-4		0900	14'	NY	17.02	8		
	SVE-1	g <sub>a</sub> con constitution of the constitution of t	0915			17.30			
L	TW-1		0930	10.18	- Office Option	17.39			
	TW 2		0945	10.2		17.49			
-	TW-B		1000	10.17		17.57			
-	TW-			15'				-,,	
L	TW-5	organization of		12'	The state of the s				
U	Jpper Saturated Zone								
	IP-3	and the Control		24'					
	P-5			24'					
L	IP-7	and the second con-		23'					
Α	Additional Wells								
-	MW-23	E COMPANIE DE LA COMP		15.5					
-	NW-25	ALL MANUEL AND		14					
-	MW-27S	and the second		12					
	MW-27D	i se		?					
L	MW- <b>2</b> 9	The second second		25					MW-29D?

Comments: Total depths taken from previous phase of work

POST-VAC g-logics

Project Name: Boeing Field Chevron Project Number: 01-0410-R Task 3 Address: 10805 East Marginal Way, Tukwila, WA

Sampler: Jessica Soliz

	Well Identification	Time Opened	Time Measured	Total Depth (feet)	Depth to Product	Depth to Water (feet)	Product Thickness (feet)	Sheen Y/N		
Low	er Saturated Zone						Michigan (1666)	- 174	Observations/Notes	
_	AS-1		1136	16'						
_	IP-4		1149	14'	0	10-83	0		4" SS N/2 connector	
	SVE-1		1143		DRY	1	The state of the s	A STATE OF THE STA	4" FVC	
L	TW-1		1126	10.20 10.18	O R	1	The second secon	almajasta maska astronomiteratura		
_	TW-2		1123	10.2	- <del> </del>	9.77	- Lance		2º PVC	
<u> </u>	TW-3		1120	10.17	0	9.96	<del>-</del>		Z PVC	
_	TW-4	2	1133	15'	0	11.09	model		2° PVC	
	TW-5		1130	12'	0	10.60			2" PVC	
Uppe	er Saturated Zone								The state of the s	
L	IP-3	and it was to be a first or the second	1145	24'	9	16.50	£7		2"55	
	IP-5		1140	24'	9	17.30	C)		2 55	
	IP-7		1152	23'	9	16.84	and the second		Well was just evacuated of podu	et mater to 1. "
Addit	tional Wells	1								- 1 1 may 1 2 3 3
_	MW-23	- Company of the Comp		15.5						
<u> </u>	MW-25	i circi de		14						
	MW-27S	A COLUMN		12						
L	MW-27D	200		?						
<u> </u>	MW-29	Parameter		25					MW-29D?	

Comments: Total depths taken from previous phase of work

	ısk	Date: \ {	017/22		Weathe	SUNNY SV	MOKY 7401	
Development / Purge Method: LOV	v Flow, Peri Pump	Well Screen in	iterval:	to		nfluenced?	and the second second	
Logged By: JMS		Water Depth S	Start: 15.04		Field Co	mments: 2	PVr.	
Purge Water Disposal Method: Dr	ums	Water Depth F	inish:		bla	il sludge	all in top of	fuel Co
Purge Water Disposal Volume:		Balls Dry? Y	es No What Volume	?	Well Co		о <b>фото</b> мя <b>`</b>	
Well Development				Casing Volume Purge Volumes	in Gallons: 1" Diam =	0.041 gai/ft. 2" Diam = 0	0.163 gal/ft, 4" Diam = 0.65 3 gallons, 2" Diam 0.163 ° 3	3 gal/ft casings * 10' screen = 4.8(
ïme	1313	1316	1319	1322	1325			
Vater Level (ft)								
Н	6.23	6.03	6.01	5.99	5.97			
conductivity (mS/cm)	389.7	394.8	382.1	375-6	374.8			
emperature (F)	15.7	15.6	15.6	15.6	16.6			
RP (mV)	-40.8	-38.1	- 38,2	-38.0	-34.7		1,000	
urbidity (NTUs)	Milledgescher Britisher Specialist and an anagement of the size of the Special state of the S	and the second s			and the second state of the second state of the second state of the second seco	tions and the state of the section o	and the first of the second se	- NA
issolved Oxygen (mg/L,%)	2.34	2.09	2.05	2-06	1.88			
olor	neque	and out	3144 M	Hagus	HANDE			
urge Volume	0.1	0.2	0.3	0.24	9.5			No. of the last of

g-logics

Project Number: 01-0410-R Ta	ask	Date:	17/22		Weather:	MANY SYMMIZ	Ly , 73	The State of the S
Development / Purge Method: Lo	w Flow, Peri Pump	Well Screen Int	erval:	to	Tidally Ini	2. 4	7 4 ! 4	
Logged By: JMS		Water Depth St	tart: 9,79		Field Con	ments:	**	· · · · · · · · · · · · · · · · · · ·
Purge Water Disposal Method: Di	rums	Water Depth Fi	nish: (() . \ (		i i	Market St.	(A) ( ) A)	124 Filled we
Purge Water Disposal Volume:		Bails Dry? Ye	es No What Volume	?	Well Cond	litions: OK Not OK		
					Explain:			
Well Developmen				Casing Volume Purge Volume	s in Gallons: 1" Diam = 0, s: 1" Diam 0.041 * 3 casin	041 gal/ft, 2" Diam = 0.163 gal/ gs * 10' screen = 1.23 gallons,	ft, 4" Diam = 0.653 ga 2" Diam 0.163 * 3 cas	sl/ft lings * 10' screen = 4.89 gallon
- Fime	1248	1251	1251	1251	1300			
Vater Level (ft)	9.96	10-0-1	10-11	10.14	10.16			
Н	6.35	6.26	6.25	6-26	627			
Conductivity (mS/cm)	635	826	809	792	741			
emperature (F)	19.1	19.2	19-2	19.2	19.2			
ORP (mV)	1043	109-5	111.8	112.3	112-9		1	
urbidity (NTUs)	The state of the s	The second desired the second	THE THE STREET STREET,	and the control of the state of the second o		and the same of th		INCI
Dissolved Oxygen (mg/L,%)	0.38	0.35	0.26	0.21	0.19			
Color	OMANE	0 Pa able	ONANE	OWATAL	Ovasill			
Purge Volume	0.1	7.7	0.3	200	/\ <			****

g – logics Copyright G-Logics, well development, purging, sampling log form.vad

Project Number: 01-0410-R Ta	sk	Date:  6/	7/22		Weather:	SUMMU	Smoky	73°F	
Development / Purge Method: LOV	v Flow, Peri Pump	Well Screen Inte	rval:t	to 152	Tidally Inflo	,			
Logged By: JMS		Water Depth Sta	nt: 11,72		Fleid Com				
Purge Water Disposal Method: Dri	ums	Water Depth Fin	lish: DQ		1"	PVC well "	1/screw to	PP Cap (A	<u>/c)</u>
Purge Water Disposal Volume:		Balls Dry? Yes	No What Volume?			itions: OK Not Of	·	The state of the s	
Well Development	t/Purging (circ (0いもしい)	le one)		Casing Volume i Purge Volumes:	Explain:  n Gallons: 1" Diam = 0.0 1" Diam 0.041 * 3 casing	41 gal/ft, 2" Diam = 0.16 ps * 10' screen = 1.23 gai	3 gal/ft, 4" Diam = 0.65 lions, 2" Diam 0.163 * 3	3 gal/ft casings * 10' screen = 4.	39 gallons
<b>Time</b>	1220	(2)-	V	1224	232	1235			
Vater Level (ft)	I" well.	connot us	EWLM A	1004 x010	SALONAS		3.1		-
Н	0.51	Mell	6.30	6.41	Á.	(0-39)			1
Conductivity (mS/cm)		DUVALS	424.5	428.3	Weil	1129.9	, Age		+
emperature (F)	19.4	dw	20.3	20-3	PAVICE	20:4			
ORP (mV)	1.3	**************************************	- 7.5		dN	-14.0		A. A	1
urbidity (NTUs)	·····································	an th' Christian aireann an San Amhailteann an Amhail ann an t-an t-an t-an t-an t-an t-an t-	如此种种的经验公园的设计,但是我们的现在形式,可以不会会会是这种的,但是我们的是我们的是我们的是我们的是我们的是我们的是我们的是我们的是我们的是我们的	angantana katikalin angga pidaganakana kan kantana katika katika katika	Makeuring on good against something and the state of the	n er styre – en stem delmennen stephen familiet stem falle falle falle falle falle falle falle falle falle fall	the additional forces, in the contract of the	W frame	1 : 10
Dissolved Oxygen (mg/L)%)	2.03	No	2.45	2.46	MO	2.40			mca
Color	H-MADAI	Yaramelen	NE YOUN	4 WIM	Pavanta				
Purge Volume				,	-ver			The state of the s	

g-logics

#### **Drum Inventory Sheet**

Project Name: Boeing Field Chevron

10805 East Marginal Way, Tukwila, WA Property Address:

Project Number: 01-0410-R

Date: October 7, 2022

14 A C

					JMS
Drum ID	Content (Soll/Water)	Date Drum Started	Fuliness (%)	Drum Label (Y/N)	Drum Location, Access, and Other Comments
,	S	8/12/22	100	Y	
2	W (	10/7/22	5%	λ	Fwas evacuated today +  partially filled w/ new  MW purge water
					partially filled w/ new
	And a second sec		***		MW purge water
	***				
	\				
			7.00		
***					

DATE



### **B.O.L.** # 13394

### **SHIPPING PAPER**

	USDOT# 2133996 253.503.3096	DA	ΛΤΕ ///)	7	<u> </u>	<b>"</b> 645	17	
SHIPPEI	ATUS (TEC)	C	ONTACT	NAME				
ADDRES	10905 E Marrival Was 5	Pi	HONE #	76	· · · · · · · · · · · · · · · · · · ·	1616		
CITY, ST	ATE, ZIP							
CONSIG	NEE / FACILITY	co	ONTACT	NAME )				
ADDRES	s War Vac	PH	HONE #	- 1 <b>\</b>	<del>V</del>			
CITY, ST	15/6 9, 19/aham 5 T.	•						
	Seattle WA 98108		Contair	ners				
НМ	US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number	er)	No.	Type	Total Quantity	UOI	M CHL	OR pH
A	MATERIAL NOT REGULATED BY DOT							
	around water			1	650	A		
В						No.		
C								
D	<i>*</i>						+-	
		100 mg/m						
E								
								- 7
F								
Special	 Handling Instruction and Additional Information:							
A) Profile	• #							
SHIPPEI package regulation	R'S CERTIFICATION: "I hereby declare that the contents of this consignment are fully d, marked and labelled/placarded, and are in all respects in proper condition for transons." I also certify that all times listed above are true and correct.	and accurately sport according	describ to appl	ed above icable inte	by proper shipping rnational and national	g name and onal govern	are clas mental	sified,
(SHIPPE	R) PRINT OR TYPE NAME SIGNATURE		Address			MONTH	DAY .	YEAR
(CARRIE	SSICA SOLIZ ON DE MALF OF GENEVATOR X ENTRANSPORTER) PRINT OR TYPE NAME SIGNATURE	Control of the Control		15		MONTH	DAY	/ C.L. L. YEAR
X	Tesse Perkham x		and the same of th	anni di Maria.	arcaerco/procercy/processory	70	-	2.2
(CONSIG	SIGNATURE SIGNATURE		****			MONTH	DAY	YEAR
x	. <b>X</b>		76 24 24 (19)					

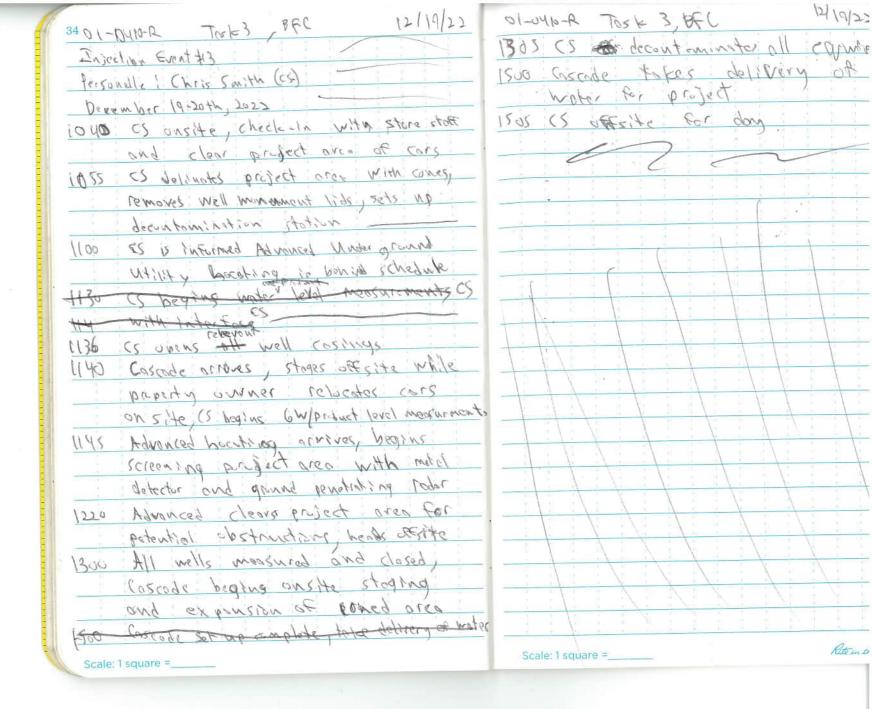


#### 2661 North Pearl St. #145 Tacoma, WA 98407 253.503.3096

DATE	WORK	ORDER#	TICKET#
17-14	695	17	36207
OPERATO	R	L	ABORER
Jesse			

Customer /+ /	145 bec		Job Phone	161-81	3-4876
Job Address 10	805 E. Ma	rainal way 5	C, S, Z_	Seattle	,wA
	L TO SITE	ON SITE	DUMP OUT COMPLETED	RETURN TO SHOP	TRUCK #
START 600	STOP 7 4 5	745 OUT 1100			219
QUANTITY		JOB DESCRIPTI	ОИ		RATE TOTAL
550 W	PUMP INCOU	und water from	nonitor u	10/ls	
	0% solids				•
1	Vac tru	ck's driver	•		
·	Eneray	compliance	Lee		
DISPOSAL:	ON SITE		SITE	SUBTOTAL	
LOCATION:	May	- Vac		TAX	
				TOTAL	
SIGNATURE BELOW ACKNO	WLEDGES PAYMENT TERMS ON F		$\chi_{i}$		• I
CUSTOMER NAME:	OLYGH (A d	LINEA HOY	GNATURE: VISC	an roll	

## December 2022



Project Name: Boeing Field Chevron Project Number: 01-0410-R Task 3

Address: 10805 East Marginal Way, Tukwila, WA

Date: 12/19/2002

Well Identification	Time Opened	Time Measured	Total Depth (feet)	Depth to Product	Depth to Water	Product	01.	
Lower Saturated Zone			(reat)	(feet)	(feet)	Thickness (feet)	Sheen Y/N	
AS-1	1144	1503			9 78		T > :	Observations/Notes
IP-4	1136	11118	16'		1,10	/	W	Brismized &
		11 10	14'	/,	14,6	/	Y	(2) 1
SVE-1	1137	1710		/	33.8		M	Carl se feed when pulloc
TW-1	1135	1227	10.18	/	VIV		1/1	Sold waxy motorial on good tid
TW-2	1136	1533	10.2	/	X 5 1		14	
TW-3	1139	[240]		-	0,31		N	
TW-4	1130	1242	10.17		( ) 6 .		V	
	137	1	15'	//	1.30	/	N	
TW-5 per Saturated Zone	11.2.7	1546	12'	(	1.32		M	
	111/						14	
IP-3	1140	1250	24'	1	3.05	/	N	
IP-5	1	1272	24'	1	47.8			
IP-7	1140	257	23'	12.13/1	210	17	1	
tional Wells			23	1 1)   1	0,10	1 /	Y	
MW-23			15.5					
MW-25								
MW-27S			14					
			12					
MW-27D			?					
MW-29			25				-	

Project Name: Boeing Field Chevron

Project Number: 01-0410-R Task 3

Address: 10905 East Marginal Way, Tukwila, WA
Date: 12/19/2000

8-logics

Sampler: Chris Smith

Well Identification	Time		Total Depth	Denth to Doodnes				
Lower Saturated Zone	nume Opened	Ime Opened Time Measured		(feet) (feet)		Product	Sheen	
	21 1 1 1	,				(had) seament	A.W.	Observations/Notes
AS-1	3	707	ş	1	77		- 1	
P4	9E11	3	2	1	, N	1	2	Pressingod
SVE-1	137	1216	4	1	- 0		>-	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
TW-1	11 3 × 11	12.27			0 , 0	\	Z.	Solid waxy watering on sub the
TW-2	1138	233	10.18		70.2	\	>	
TW-3	1130	(2 do	70.2	1	, 0		2	
TW.4	1139	243	10.17		5	\	2	
TW-5	134	1246	15.	2	1. 2.	\ \ \	- 2	
Upper Saturated Zone			12.	3	. 52		_	
IP-3	3	1250						
IP-5	1 4°	1252	24.	1	500		>	
P-7	1 1/1/	45	24"	_	7	1		
Additional Wells			23.	16.13	15,10 0.17	7		
MW-23			4 4 4	-	-			
MW-25			0.01					
MW-27S			44		1			
MW-27D			12	+				
MW.20			4					
	1	1	25					
1							MW-29D2	2000

Comments: Total depths taken from previous phase of work

01-4410-8 Fork 31 BFC 12/20/22 37 36 St-0410-A Jost 3, BEC 12/20/22 1130 Tighten solect wall cops short ingestion Injection Front # 3 (continued) oto coscod onsite for final setup ot TIP3-1 115 Injection of IP3-2 complete, 0795 CS onsite temp 3500 onl raining Offo Orlea start coring activity es 375 gallong at 20 PSE with 25 gal Flash 0830 fite owner tracing (5 at conseins (120 Snow becomes wiked total with delivery access 1215 Injection of TIP3-2 Stort of song llos 2) exalques entros 1500 1240 - Aprilian of TIP3-2 complete, 375 gol monoger to discuss monitoring NEW 14 lop CC suc 129 25-65 to 0035 Roin intensitied Extended softy 1250 Injection of TIP3-3 < tort meetria 1258 Injection poused after bubbling thing withold to song snowbit 8400 1-9I burnos voter acount IP-1 moviment opened, no leak injectate TIP3-1 1010 Snowfall Starts temperature daps present left apply for monitoring 1313 Injection 1783-3 complete, 375 gol F 300F 1018 TIP3-1 complete 12 13 bgs and at 2024 psi, with 25gal Flash 1320 Begin demob and site restantion. temporary injection point intalled 1330 Coscode completes domab and site 1930 Oriller set up heating unit to restantion, of dominant site condition combot cold, following conversations ISUS CS check out with store personell. with Glagies technical directors unit leming give p concern with open flome 1855 CS ORS. 40 1045 TIPZ-2 advanced to 13 Privised as injection 8-89I trat 2 8/11 1103 TIP3 3 savouced to 131 bys, Finished 011 Prep for sofed in mix populate eleger clease) with not or Scale: 1 square =\_\_\_\_\_ Scale: 1 square =\_\_\_

Rite in the Rain.

01-00	110-R' TOSK=3, BFC 12/16/22 31
Ext	traction Event #2
Dece	mber 16, 2022
1. 1.	
07.45	Chris Smith (CS) of Atlog on site with
Y 1	Northern Entironmental
2080	Check in with store stoff clear
V 0	presect area of cors deliniste with
	softy comes
0820	
0830	Cs opins offer wells, except AS-1/-2,
1 - 1	which can not be occessed at this
1	pulling no terred whom smit
	enoted than Well walts defore
	corings are unsealed
0832	CS unspole rellevent well cosings.
0850	Northern stoges beside IP-T
	for explicition
0910	es begins grand noter level and
7	product level uncosures, see grandmote
	monitoring well somps form for
1 1	detail, IP-7 measured fright
09:15	Northern begins extraction from
	IP-7
2000 04	70 thomosucosm convers 2) of
1 1	(contains water modult levels (cont)
Scale: 1	square = Rite in the Rain

1, 3

32 01-1410-R Tosk3, BFC 12(16)22	01-046-R 705K3 BFC	12/16/22 33
OBO CS deposit on notes parameter (ow) es	1225 Cs offsite	
Product Interface Probe between		
each well with isoproply alcohool, distilled		
woll and a altinux solution		
1000 Northern prases extraction as well IP-7.		
level has drapped below accessible depty		
1022 & appax 250 golling purged		
1022 CS massives IP-7 water product depth		
tyd Usiavorsa level secon pat		
no fice product apparent, project		
manager nadoted		
1025 Northern resumes evocuoling IP-7		
1050 Northern completes extraction		
of ~500 gollons From IP-7.		
1800 Northern relocates truck to allow		
moosur DF AS-1/A5-2. Poth		
Atod & orwand as bolded un 31/9W		
taken		
1139 6 Wand Polent meanies completed,		
no Enther product Contride IPT)		
evidenced		
1145 Northern completes paper work ind	- 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
de milos		
1200 (5 decemborated all well measuring		
COUNTDING N. + Proposes to for Pelloune scope	111111111111111	-1.
Scale: 1 square =	Scale: 1 square =	Rete in the Rain.

Project Name:	Boeing Field Chevron
Project Number:	
Address:	10805 East Marginal Way, Tukwila, WA

Sampler: Chris Smith

Date: 12-16-2022

Well Identification	Time Opened	Time Measured	Total Depth (feet)	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Sheen	
ver Saturated Zone				free	9,87/13,2	Trickness (reet)	N/N	Observations/Notes
AS-1 (AS-2	1100	1134	16'	13,27	15.41	2.14	1.1	Show in with and a sing
IP-4	0835	1001	14'	-	9.43		N	
SVE-1	0835	6.3			8,66	_	N	
TW-1	0832	3490	10.18	/	12.8		N	_
TW-2	0835	0140	10.2	/	8,42	/	N	
TW-3	0835	1040	10.17	/	31.8	1	M	
TW-4	0232	0224	15'		1.12	_	N	Well cop or loose
TW-5	0232	1048	12'	/	9,27	/	N	10036
er Saturated Zone							10	
	0835	1013	24'		3,33	**	At	
1P-5 0835.	1016	Jia1	24'		4,27	~	N	
IP-7	9632	6010	23'	1327	15,41	5.111	LNAPL	Shorn in water Around costs
ional Wells IP-7		100 5 T		/	3.28	/	N	
MW-23			15.5					Einst EN @ 13'53
MW-25			14					
MW-27S			12					
MW-27D			?					
MW-29			25					MW-29D?

Comments: Total depths taken from previous phase of work

Project Name:	Boeing Field Chevron
Project Number:	
Address:	10805 East Marginal Way, Tukwila, WA

Sampler: Chris Smith

Date: 12-16-2022

Well Identification	Time Opened	Time Measured	Total Depth (feet)	Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Sheen	
ver Saturated Zone				free	9,87/13,2	Trickness (reet)	N/N	Observations/Notes
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IP-4	0835	1001	14'	-	9.43		N	
SVE-1	0835	6.3			8,66	_	N	
TW-1	0832	3490	10.18	/	12.8		N	_
TW-2	0835	0140	10.2	/	8,42	/	N	
TW-3	0835	1040	10.17	/	31.8	1	M	
TW-4	0232	0224	15'		1.12	_	N	Well cop or loose
TW-5	0232	1048	12'	/	9,27	/	N	10036
er Saturated Zone							10	
	0835	1013	24'		3,33	**	At	
1P-5 0835.	1016	Jia1	24'		4,27	~	N	
IP-7	9632	6010	23'	1327	15,41	5.111	LNAPL	Shorn in water Around costs
ional Wells IP-7		100 5 T		/	3.28	/	N	
MW-23			15.5					Einst EN @ 13'53
MW-25			14					
MW-27S			12					
MW-27D			?					
MW-29			25					MW-29D?

Comments: Total depths taken from previous phase of work

Project Name: Boeing Field Chevron Project Number: 01-0410-R Task 3

Address: 10805 East Marginal Way, Tukwila, WA

Date: 12/19/2002

Well Identification	Time Opened	Time Measured	Total Depth (feet)	Depth to Product	Depth to Water	Product	01.	
Lower Saturated Zone			(reat)	(feet)	(feet)	Thickness (feet)	Sheen Y/N	
AS-1	1144	1503			9 78		T > :	Observations/Notes
IP-4	1136	11118	16'		1,10	/	W	Brismized &
		11 10	14'	/,	14,6	/	Y	(2) 1
SVE-1	1137	1710		/	33.8		M	Carl se feed when pulloc
TW-1	1135	1227	10.18	/	VIV		1/1	Sold waxy motorial on good tid
TW-2	1136	1533	10.2	/	X 5 1		14	
TW-3	1139	[240]		-	0,31		N	
TW-4	1130	1242	10.17		( ) 6		V	
	137	1	15'	//	1.30	/	N	
TW-5 per Saturated Zone	11.2.7	1546	12'	(	1.32		M	
	111/						14	
IP-3	1140	1250	24'	1	3.05	/	N	
IP-5	1	1272	24'	1	47.8			
IP-7	1140	257	23'	12.13/1	210	17	1	
tional Wells			23	1 1)   1	0,10	1 /	Y	
MW-23			15.5					
MW-25								
MW-27S			14					
			12					
MW-27D			?					
MW-29			25				-	

## ENVIRONMENTAL EPAID# WAH000039211 USDOT# 2133996

#### SHIPPING PAPER

V	USDOT# 2133996 253.503.3096	DATE	16	2Z   wo	695	:46	
SHIPPER	CUSTOMER ATLAS GEO-Boeing Reld Chours	CONTACT	NAME	Ton			
ADDRESS	10805 East Marsinel WAY 5	PHONE #	(200	5)261-8	046		
CITY, STA	Seattle WA 98108						
CONSIGN	EE/FACILITY Mar - Vac	CONTACT	NAME	7-7-1-1			
ADDRESS	1516 S Graham St	PHONE #					
CITY, STA	SECTOL JUA 98108						
НМ	US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	Contain No.	ners Type	Total Quantity	UO	M CH	HLOR pH
A	MATERIAL NOT REGULATED BY DOT	1,10.	1,100				
	Water With tocce feel	ω\	TT	500	G		
В							
С							
D							
E							
F							
Special Ha	andling Instruction and Additional Information:						
SHIPPER'S packaged, regulations	S CERTIFICATION: "I hereby declare that the contents of this consignment are fully and ac marked and labelled/placarded, and are in all respects in proper condition for transport ac s." I also certify that all times listed above are true and correct.	curately describe cording to appli	ed above cable inte	by proper shipping ernational and nation	name and nal govern	are cla mental	ssified,
(SHIPPER)	PRINT OR TYPE NAME SIGNATURE				MONTH	DAY	YEAR
X (CARRIER/	TRANSPORTER) PRINT OR TYPE NAME SIGNATURE	V			MONTH	DAY	YEAR
x (	Justin Prath x	2			112/200	6	22
(CONSIGN	EE/FACILITY) PRINT OR TYPE NAME SIGNATURE	-/	-15		монтн	DAY	YEAR



2661 North Pearl St. #145 Tacoma, WA 98407 253.503.3096

DATE	WORK ORDER #	TICKET #
12/16/22	69546	37011
OPERATOR	THE REAL PROPERTY.	LABORER
Justin	PA	aron

Customer_A+	las Geo. Bezing field Charm	Job Phone	(206)26	1-80	16
Job Address	0805 East Marginal WAY 5	C, S, Z_	seattle, 1	NA	78 08
START 5/30	STOP 7:00 IN 7:00 OUT 1:45	DUMP OUT COMPLETED	RETURN TO SHOP		RUCK#
QUANTITY	JOB DESCRIPTION		18 1-19 11	RATE	TOTAL
1×	Pumpel 500 gallons of water from mentering well Energy compliance fee	with to	rea toel		
DISPOSAL:	ON SITE OFF SITE		SUBTOTAL	- 13/1	To be part
LOCATION: M			TAX	Sec	
SIGNATURE BELOW ACKNOW	Graham St Seattle, W+	99108	TOTAL		
CUSTOMER NAME:	SIGNATURE SIGNATURE				

## January 2023

Pro / During-Extraction

8-logics

Project Number: 01-0410-R Task 3 Project Name: Boeing Field Chevron Address: 10805 East Marginal Way, Tukwila, WA

Date: 1/20/23

Date:

Sampler: Hannah Spear

7	4	3	2	2	Additional Wells				Upper Saturated Zone						S		,	Lower Saturated Zone	Wellid
MW-29	MW-27D	MW-27S	MW-25	MW-23	Vells	IP-7	IP-5	IP-3	ated Zone	TW-5	TW-4	TW-3	TW-2	TW-1	SVE-1	IP-4	AS-1	ated Zone	Well Identification
						0805	0808095	OTHE		2442	7080	OHO,	0757	0764	075	0750	0725		Time Opened
						09/2	095)	J. 260 apt. 0		0923	る出	0838	4460	(400	13PD	CONTROL OF	1480		
25	7	12	14	15.5		23	24'	24'		12'	157	10.17	10.2	10.18		0931	16:		Time Measured Total Depth (feet)
						12.23	\	1		\	/	\	/	1	\	/	/		
						1255 0.35	ان بان +	12.42		8.39	0000 S 15	C.F. F.	201.4	7.76	N.	1 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	8.8		Depth to Product Depth to Water (feet) (feet)
				)		0.35	\	1		\	3	\	/	1	/	54	\		Product Thickness (feet)
					,	_	_	×		Z	Z	Z	Z	Z	Z	Z	Z		Sheen
MW-29D2						reto o	Sheen in water around casing peto active	ne screws sheen in water				filled u/water, no seal or screws	DO SCIEW S	no screws	no screws	well cap loose, no seal or screws	sheen in water in casing school		Observations/Notes
							Detro and								9	20	100 SA	2	

Comments: Total depths taken from previous phase of work

Project Number (2020) 187 (1975)   Product   Sampler (Auran) Speak   Sampler	MW-29	MW-27D	MW-27S	, MW-25	MW-23	Additional Wells	IP-7	IP-5	IP-3	Upper Saturated Zone	TW-5	TW-4	TW-3	TW-2	TW-1	SVE-1	IP-4	AS-1	Lower Saturated Zone	Well Identification	Date:	Addres	Project Numb
Sampler: Harnah Spear  123  Sampler: Harnah Spear  1039  106  8.80  N  N  N  N  N  N  N  N  N  N  N  N  N					1															Time Opened	e:     2	s: 10805 East N	oject Number: 01-0410-R Task 3
Begin to Product Depth to Water Product (feet))  R. 80  R. 10  R.							1110	165	1030		1026	1034	1024	1100	1056	105	1047	1039		Time Measured	0 23	larginal Way, Tuk	sk 3
Dapth to Water Product Sheen N DIK  8.80 N NO SCIEWS, OI  8.55 N NO SCIEWS, OI  7.70 N NO SCIEWS, IDD  7.72 N NO SCIEWS, IDD  7.73 N NO SCIEWS, IDD  12.49 N NO SCIEWS, DUT  8.35 N NO SCIEWS, DUT  8.35 N NO SCIEWS, DUT  12.49 N OOSCIEWS, DUT  12.49 NO SCIEWS, DUT  12.49 NO SCIEWS, DUT  12.45 NO SCIEWS, D	25	-2	12	14	15.5		23'	24'	24"		12'	ਰੰ	10.17	10.2	10.18			16'				wila, WA	
Moscrews, of Noscrews, of Noscrews, of Noscrews, low Noscrews, of Noscrews, but Noscre							/	/	\		\	/	\	/	/	1	/	\					
Sampler: Hannah Spear  No Screws, of No Screws, of No Screws, los No Screws, los No Screws, but No Seal, no Sea							12.45	1335	12.49		8.38	71.8	7.72	7.68	34.4	8.10	8.55	08.8		Depth to Water (feet)			
Sampler: Hannah Spear  No Screws, of No Screws, of No Screws, low No Screws, low No Screws, but No Seal, no Sea							\	\	/		\	\	\	/	- (	\	\	\		Product Thickness (feet)			, L
Well Well by Crews has, but						-	Z	2	Z		Z	Z	2	Z	Z	Z	Z	Z		TERM	Sampler		
2	MW-29D?							415CVEW 1008C	Scal, 1005pmellca	- 1	Y SCRPIO		Noscrews	Noseal, noscrews, boken well	No Screws, loose well ap	noscrews lid clocuntsitilant	old well cap	OI		1 9	". Hannah Spear	AILAS assault	9-logics

201/18/23 Cannon Property 02-0095-A 0843 Hannah onsite, texted Lawne 0927 Finished taking all pictures	01/20/23 Boeing Field Chevron 01-0410-PZZ 0705 Hannah Spear (HS) ansite,
sot Of to head but one all	0726 All traffic management put up,
	everything unpacked, a sing to start
84th St Povento	0825 All wells opened after rem
	Oring water fram casings
	and begin measurements
	0845 Worthern Environmentalon
	0915 Pive Morthown as allower
	Start extracting TD 7
	0952 Northern done extracting and
	all well measurements complete,
	told Northern we need estimate of
	pleader dallois, calling pess 70
	1003 Northern ~ 10/0 fuel
	1015 Northern offsite, begin taking
	1041 Med in wittern continuing to take
	water level memouvements
	1112 All Water level Measurements
Scale: 1 square =	Scale: 1 square =

# Groundwater Monitoring Well Sample Form

Pro / During-Extraction

8-logics

Project Number: 01-0410-R Task 3 Project Name: Boeing Field Chevron Address: 10805 East Marginal Way, Tukwila, WA

Date: 1/20/23

Date:

Sampler: Hannah Spear

7	4	3	2	2	Additional Wells				Upper Saturated Zone						S		,	Lower Saturated Zone	Wellid
MW-29	MW-27D	MW-27S	MW-25	MW-23	Vells	IP-7	IP-5	IP-3	ated Zone	TW-5	TW-4	TW-3	TW-2	TW-1	SVE-1	IP-4	AS-1	ated Zone	Well Identification
				1		0805	0808095	OTHE		2442	7080	OHO,	0757	0764	075	0750	0725		Time Opened
						09/2	095)	J. 260 apt. 0		0923	る出	0838	4460	(400	13PD	(SA)	1480		
25	7	12	14	15.5		23	24'	24'		12'	157	10.17	10.2	10.18		0931	16:		Time Measured Total Depth (feet)
						12.23	\	1		\	/	\	/	1	\	/	/		
						1255 0.35	ان بان +	12.42		8.39	0000 S 15	C.F. F.	201.4	7.76	N.	1 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	8.8		Depth to Product Depth to Water (feet) (feet)
				)		0.35	\	1		\	3	\	/	1	/	54	\		Product Thickness (feet)
					,	_	_	×		Z	Z	Z	Z	Z	Z	Z	Z		Sheen
MW-29D2						reto o	Sheen in water around casing peto active	ne screws sheen in water				filled u/water, no seal or screws	DO SCIEW S	no screws	no screws	well cap loose, no seal or screws	sheen in water in casing school		Observations/Notes
							Detro and								9	20	100 SA	2	

Comments: Total depths taken from previous phase of work

Interface probe used on all wells prior to, during, and after extraction event

# Groundwater Monitoring Well Sample Form

1030   1030	MW-29	MW-27D	MW-27S	, MW-25	MW-23	Additional Wells	IP-7	IP-5	IP-3	Upper Saturated Zone	TW-5	TW4	TW-3	TW-2	TW-1	SVE-1	IP-4	AS-1	Lower Saturated Zone	Well Identification	Date:	Project Name: Boeing Field Chev Project Number: 01-0410-R Task 3 Address: 10805 East Margin
Sampler: Harnah Spair   Well of the product   Depth to Water   Product   Sheen   Well of the product   Depth to Water   Product   Sheen   Well of the product   Well of the pr					J										÷					Time Opened	1/20	Boeing Field C 01-0410-R Ta 10805 East M
Sampler: Hannah Spear  Sampler: Hannah Spear  Medi)  Depth to Water  Product  (feet)  Depth to Water  Product  R. 55  N No Screws, old  R. 10					le:		1110	Si	1030		1026	1034	1024	1100	1056	05	1047	1039		Time Measured	23	Sk 3 arginal Way, Tul
Depth to Product Depth to Product Depth to Product Depth to Water Product Sheen N DIK N DIK N N DIK N DI	25	>	12	14	15.5		23"	24'	24"		12'	151	10.17	10.2				16"		Total Depth (feet)		cwila, WA
Sampler: Hannah Spear  8.80 N N OK  8.80 N N OK  8.10 N No Screws, old  7.108 N No Screws, lid  7.108 N No Screws, lid  7.108 N No Screws, lid  8.38 N No Screws, lid  8.38 N No Screws, but,  8.38 N No Screws,  8.38 N N N N N N N N N N N N N N N N N N N							/	/	\		\	/	\	/	/	-	/	\		Depth to Product (feet)		
Sampler: Hannah Spear  N DIG  N DO SCIEWS, OLD  N NO SCIEWS, 100  N NO SCIEWS, 100  N NO SCIEWS, 100  N ONLY I SCIEWS, Dut.  N ONLY I SCIEWS, Dut.  NO SERI, NO S							12.45	1335	12.49		8.38	~	7.72	7.68	276	8.10	8.55	08.8		Depth to Water (feet)		
Sampler: Hannah Spear  N DIG  N DO SCIEWS, OLD  N NO SCIEWS, 100  N NO SCIEWS, 100  N NO SCIEWS, 100  N ONLY I SCIEWS, Dut.  N ONLY I SCIEWS, Dut.  NO SERI, NO S							\	\			\	\	\	1	- (	/	\	\		Product Thickness (feet)		1 1 18
Well well was but school of the mas but school of the mas but all nose							Z	2	Z		Z	Z	2	2	Z	Z	Z	Z		TEE	Sampler:	
	MW-29D?						al, nos	SCIEW 100 SC	scal, 100sp wellca		(( ) )				do man ab	clocunt sit	old well can o	0万		Obse	: Hannah Spear	g-logics

Interface probe used on all wells prior to, during, and after extraction event



# SHIPPING PAPER

A	USDOT# 2133996 253.503.3096		DATE //	20/	23 "	10# -	7061	57	
SHIPPER	CUSTOMER Atlas Geo	C	CONTACT	IAME (	1000				
ADDRESS	108.05 East Marginal Ways	_	PHONE #	28	-8/3	4	876		
CITY, STA	SEG+HE WA 98/68								
CONSIGN	IEE / FACILITY MOVICE	C	CONTACT	NAME					
ADDRESS	13/6) G han	P	HONE #	20	6-76	2-	024	0	
CITY, STA	ATE, ZIP SEATTLE WA 98/08	*							
НМ	US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		Containe No.	Type	Total Quantity		ЈОМ СН	ILOR	рН
A	MATERIAL NOT REGULATED BY DOT	14	MA A	4 1		364			H
	grand water W/Tracis of gaso	live c	100	TT	0060	000	2		
В									
С					- 1 -				
D									
								1	
E				7					
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F	THE DATE OF THE PARTY OF THE PA		- 3						
				- 4					
Special Ha	andling Instruction and Additional Information:			7				- 4	gi.
A) Profile	n sompling								
Evt	n <del>†</del>								
		41							
packaged regulation	S CERTIFICATION: "I hereby declare that the contents of this consignment are fully and , marked and labelled/placarded, and are in all respects in proper condition for transports." I also certify that all times listed above are true and correct.	t according	g to applic	above able inte	by proper shipp rnational and na	ing name a itional gov	and are cla ernmental	ssified,	ig.
(SHIPPER	PRINT OR TYPE NAME SIGNATURE	1.11-	the .		H25	MONTH	DAY 20	YEAR	3
(CARRIER	/TRANSPORTER) PRINT OR TYPE NAME SIGNATURE		1		, /	MONTH	DAY	YEAR	
X	NEE/FACILITY) PRINT OR TYPE NAME SIGNATURE	1	10	3	/	AACUTU	20	23	
X	NEE/FACILITY) PRINT OR TYPE NAME SIGNATURE	-				MONTH	DAY	YEAR	
-	^								



2661 North Pearl St. #145 Tacoma, WA 98407 253.503.3096

DATE	WORK ORDER #	TICKET #
1/20/23	70667	37165
OPERATOR		LABORER
Karl	Ao	ron wall stab

Customer	tor you		_ Job Phone	201-81	5-78	16
Job Address	0805 Eas	+ Marginal Wa	c, s, z	Scattle	WA	Hely to
TRAVE	L TO SITE	ON SITE	DUMP OUT COMPLETED	RETURN TO SHOP	TR	UCK#
START 7:00	STOP 8 45	IN 8 45 OUT 6 15			5	79
QUANTITY		JOB DESCRIPTION			RATE	TOTAL
500 ml/m	Dambon	+ grand hot	of from			
	monitoring	well				
1	Vocum f	Lac / aprodec/	1/06000	1	1. 2.	
	cherago Co	implante 18th				
DISPOSAL:	ON SITE	OFF SIT	E	SUBTOTAL		
LOCATION:	Morvoc			TAX	How	
				TOTAL	A Les	5
SIGNATURE BELOW ACKNO	WLEDGES PAYMENT TERMS ON F		7)1	1		
CUSTOMER NAME:	Hannah Spear	ATTAS (190 SIGNAT	URE: Last	n The		

# February 2023

0750 Scale: 1 square = かとうの DOW DOWN Sampling My a Surements rea ciremen Jas Station Staff and 11196 Eumpleted all Bueing tield walle affred Geally Lemonin + WMAIS Casings biasite, check inishsampling nevion 01-0410-R M-2, /11/1/16 moung and STOUTHS ì all con 1300 1000

Scale: 1 sour					H DON	12 M	1537	1450 1	Code	1900 K	1342 F	later	TW-3	2/26/23
are :	***				annah o-	In Sills	16-5	louing t	Town	すさら	nd silas	W-4	put of	Boeing F
	5 505 2 404				おもっ	15, take	Samp	ASA &	WILL TO	1 2 2 2	moline	andi	an dry	eld Ch
				A S	Ssagu	ing cone	od, pa	TD-5	of the A	2	1-M	W/10/ 3	agai	4
0 0	5 8 8 8		100 TO 1		Jan 1	sdaw	(Kins)				alusm	1 septer	L' WON-	01-0410sp

TOLL 18				A CONTRACTOR	ton Con	The state of the s				
Well ID :	TW-	-2	Grot	Married World Co.	Number:	THE RESERVE THE PERSON NAMED IN		mation Samplin	D 4	2/22/23
Total Dept	n (ft):	21	<del></del>	Water Vol	ume in Casi	ng (gal): (\	28	Sampler: H		
Well Scree	n Interval (ft)	):		Purge Met	hod: Peri P	ump/Low F	low	Equipment	: YSI, peri-	oump, interface probe
Well Diam	eter (in):			End Depth	to Water (f	t):	150	1		
Tubing Inta	ke Depth: 🔨	101		Calculated	Purge Volu	me (gal):	1.84	Well Condi	tions:	
		r (ft): 8 4	9	Total Volu	me Purged (	(gal):	0 - 6-40	1		,
			Grou	ndwat	er Par	amete	r Moni	toring	Giglis S	
Time	TEMP	рН	ORP	COND	TURB	DO	DTW	Volume		Notes
	°C	SU	mV	mS/cm	NTU	mg/L	feet	gallons	(App	earance, Odors, Etc.)
1010	± 3%	± 0.1	±10	± 3%	±10%	± 10%	<0.33		1	
0930	1.+	8.73	59.9	1.571	27676	13.82	8.51		Clou	idy
0932	8.0	8.40	62.9	1.517	202.54	14.19	8.45		Clou	oly
0934	8.1	8.36	68.5	1,559	145.70	14.54	8.99		Clou	dy
19310	7.9	8.11	73.7	1534	117.44	14.84	9.05		1	di
0938	8.2	7.99	77.8	1531	107.82	15.13	9.05			udv
vario.	8	7.85	830	1.518	50.70	15 44	915			NAC. I
0942	0.1	7 70	01.9	1.514	26 US	15.75	9.25	1.3	Class	Sucio
1	8.U	7.79	04.1	1 -1	20.10	10.10	91115	0.0	Clear	1119 45
0944	0.7		08.0	1.520	2690	15.88	9.40	A 11	Cléa	
0946	8.3	7.82	89.7	1.517	26.96	16.09	9.45	0.4	Clea	r
									3 7 7 7	
							*			
			0						n = 0.163 ga	al/ft, 4" Diam = 0.653 gal/ft
0		0			Collec					
Sample	Number	Sample		Ana	lytes	Sample C	ontainers	Preserv	/atives	Duplicate (Y/N)
TW	-2	095	00	_		VOAs, 2	2 Ambers	Н	CI	
						-				<del></del>
					Tota	l Number o	f Sample (	Containers (	Collector	7
Collection	Method: Ba	iler / Perista	Itic / Subm	ersible / Ot		i Number 0	anipie (	ontainers (	onected:	t
Purge Wat	er Disposal	Method: Dru								
Additional (	Comments:									

			Grou	ındwa	ter Sa	mpling	Infor	mation		
Well ID:	TW-	- ]			Number:	THE RESERVE THE PARTY NAMED IN	Color III III III III III III III III III I	Samplin		
Total Dept		81.		Water Vol	ume in Casi	ing (gal):	117	Sampler: F	IVS	
Well Scree	en Interval (ft)	):		Purge Met	hod: Peri P	ump/Low F	low	Equipment	: YSI, peri	-pump, interface probe
Well Diam	eter (in):	21		End Depth	to Water (f	t):	*	1	20.7	
Tubing Inta				Calculated	Purge Volu	ıme (gal):	.4	Well Condi	tions:	
Starting De	epth to Water	r (ft): 7.3		Total Volu	me Purged	(gal):		Mis	sing bo	1+5 (2)
			Grou	ndwat	er Par	amete	r Moni	toring		THE RESIDENCE OF THE PARTY OF T
Time	TEMP	рН	ORP	COND	TURB	DO	DTW	Volume		Notes
	° C	SU	mV	mS/cm	NTU	mg/L	feet	gallons	(Ар	pearance, Odors, Etc.)
Inca C	± 3%	± 0.1	±10	± 3%	± 10%	± 10%	<0.33		7	
1050	9.1	10.45	3.0	2.650	808.01	12.82				ncloudy
1037	8. +	10.02	0.	2-332	Tu7.61	13.08	8.60		į.	
1039	9.2	10.29	6.0	2.034	427.38	13.33	8.40		į	
1041	8.9	10.08	9.9	2.460	294.72	13.59	8.55		brown	, cloudy
1043	8.7	9.84	15.0	2.073	225.67	13.87	855		clear	1
1045	8.9	9.58	21.2	1317	14647	14 (3)	8.55	0.25	Km	stightly Moudy
1047	90	9.48	25.9	1.28/2	12884	14.19	855		e ru	11
1049	9 1	934	30.10	1 277	11771	14 21	8 95			` (
105/	8 8	977	325	1 245	120 87	111.50	P 55	-		
1053	88	930	35.3	1270	127.27	11/10	0.25			ear
1055	0.0	1.00	371	1.273	122.00	14.60	2.25	0 6		7
	8.9	9.02	01.0	1.252	131.84	14.60	8.55	0.5		1
1057	0.9	9.31	37.7	1.259	135.34	14.73	8.55		Cle	ear
				λ						
							:81			
20				Casing Volu	ume in Gallo	ons: 1" Dian	n = 0.041 ga	al/ft, 2" Diam	= 0.163 g	al/ft, 4" Diam = 0.653 gal/ft
			Sa	mple (	Collect	tion In	format	tion		
Sample	Number	Sample	Time	Anal	ytes	Sample C	ontainers	Preserv	atives	Duplicate (Y/N)
N	V-1	1100	5			VOAs, 2	2 Ambers	НС	:1	
					Total	Number o	f Sample C	ontainers C	ollected:	7
		ler /(Peristal		rsible / Oth						
Additional C		Method: Drui	m							
additional C	oninents:									

Yang be			Grou	ındwa	ter Sai	nplina	Inform	nation	THE ST	
Well ID	: TW-F	5			Number:	THE RESERVE THE PERSON NAMED IN		Samplin		1/22/23
Total Dept	th (ft): 12 \			Water Vol	ume in Casi	ng (gal): /	40	Sampler: H	IVS	(axja)
Well Scree	en Interval (ft)	:		Purge Met	hod: Peri P	ump/Low F	low	Equipment	: YSI, peri-p	oump, interface probe
Well Diam	eter (in):	·		End Depth	to Water (f	t):				
Tubing Inta	ake Depth:   )	16'		Calculated	Purge Volu	me (gal):	148	Well Condi	tions:	
Starting De	epth to Water		8	Total Volu	me Purged	(gal):	1 . 10		OK	
			Grou	ndwat	er Par	amete	r Moni	toring	MAN I	
Time	TEMP	pН	ORP	COND	TURB	DO	DTW	Volume		Notes
	°C	SU	mV	mS/cm	NTU	mg/L	feet	gallons	(App	earance, Odors, Etc.)
1 - 2 0	± 3%	± 0.1	± 10	± 3%	±10%	± 10%	<0.33		1	
1228	10.6	10.53	-240.6	12.396	15.12	9,40	9.14		· Clouck	brownsh-red
1230	10.7	10.42	-2168	12.280	16.87	8.93	9.31		it '	
1232	10.4	10.35	-304.8	11.965	32.02	8.51	9.35		- 11	
1234	10.2	111,28	-330.4	115/08	13307	8.11	9.34	0.25	dock	amber color
1221	10.1	10 22	-3 50 X	11131	3938	777	-9 35	-	il	nath a doc
1728	10.1	10,00	~2 70 2	11.00	1.307	750	0 35		11	118 0001
1200	10.1	10.10	2010	0 000	10750	7.20	0.15		χ.	k*:
1240	10.0	10.00	-1100	9.547	12100	7.00	9.50		11	1:
1272	10,4	9.90	7905,0	9,062	100.00	T.04	9.70			
1245	10.+	9.86	-410.1	8.699	155.16	18.01	9.43	-	Ιį	1 (
1246	10.8	9.81	-414.4	8,474	146.76	le.le.	9.45		tį	1 '
1248	10.7	9.79	-422,1	8.202	172.35	10.43	9.45		(C	1.7
1250	10.3	9.77	-408.1	8.017	277.90	6.03	9.35	0.6	3.4	(+
1254	10.4	9.76	-404.6	7.765	286.75	5.92	9.35		- ((	1,
1256	10.2	9.75	-4093	7.643	243.74	5.84	9.35		10	71
1258	10.2	9.77	418.7	7 482	234.6	35.68	9.25	_	11	11
1300	10.3	9.77	-4258	7,753	190.69	5,57	9.35			
1302	11.3	9.78	-428.10	7 7860	213,89	5.47	935	10		
	/		9:		lume in Gall				n = 0.163 ga	l/ft, 4" Diam = 0.653 gal/f.
Sample	e Number	Sample			lytes		ontainers	Presen	vatives	Duplicate (Y/N)
T	1.5	121	<i>(</i> )							Dapiloate (1711)
/_/	V -)	13/1			A Dispersion in the	5 VOAs,	2 Ambers	H	انا	
	222 112				Tota	l Number o	of Sample C	Containers (	Collected:	7
	Method: Ba			ersible / Ot	ther:					
the second of the second	ter Disposal									
Additional	Comments:	on 10	ivest.	Settin	g to	54:11	get	West	2	

			Grou	ındwa	ter Sar	and the second	Inform	nation		
Well ID	:TM-6	2	0.00	Name and Address of the Owner, where	Number:	WHEN PERSON NAMED IN	Name and Address of the Owner, where the Owner, which is the Owner, where the Owner, which is	Samplin	g Date:	2/22/23
Total Dept	1 4 4	17		Water Volu	ıme in Casi	ng (gal): /	1.35	Sampler: H		2/20/02)
	en Interval (ft)	1 /			hod: Peri P					oump, interface probe
Well Diam				_	to Water (fi			Equipmoni	. roi, poir p	amp, monace prope
Tubing Inta		^			Purge Volu		1 110	Well Condi	tions:	
	epth to Water	(ft): ~ "	_		ne Purged (		1.04	M133	sing bei	ts (2) and gas
Otarting Di	Spirito vvater	(11). 8. ():		ndwat			r Moni		(Contract)	
Time	TEMP	pH	ORP	COND	TURB	DO	DTW	Volume		Notes
111110	° C	SU	mV	mS/cm	NTU	mg/L	feet	gallons	(App	earance, Odors, Etc.)
	± 3%	± 0.1	±10	± 3%	±10%	±10%	<0.33		( 11	
11410	9.7	1.95	-179.0	1) 9/1/	1.85	10 97	259		clea	r
11/18	10 1	1. 84	-11010	A GINT	1183	1124	V 1.0	-	-	
1150	10.1	1 07	10/1.3	0.140	Till	7007	0.001		01001	
1100	10.0	6.82	131.7	0.108	7,70	907	0.50	-	CIEUr	petro odor
1152	9.9	6.81	-145 2	0.4100	4.12	9.46	8.97		- /(	
1154	9.7	6.81	-/4/./	0.956	4.82	9.09	9.15	125	71	
1156	9.10	1081	-137.9	1 953	3.61	8.81	9.311		11	
1158	90	6.81	-1358	1 952	3.37	8.52	9.45		11	
1200	9.8	10.11	-134.1	0.954	3.55	8.25	01.0		_ \ (	
1200	918	6.82	124.1	0.454	0.00	0.20	4.40		111	
				1						
								1		
,										
				- 120					n = 0.163 ga	l/ft, 4" Diam = 0.653 gal/ft
Sample	Number	Sample		mple (	ytes		ontainers	Preserv	ratives	Duplicate (Y/N)
	1-3	121				ĭ VOAs,-	11- 10	1/		Duplicate (Tity)
11	<i>y</i>	1 421	0			VOAS,	2-Ambers	H	,	
		- Distance in the			Tota	l Number o	of Sample C	ontainers (	Collected:	7
	Method: Ba	_		ersible / Ot						
The second second second	er Disposal									
Additional	Comments:	Pump	on lew	es/ 58	thing t	0 5till	get a	vater		
anl	v able	to get	5 VI	DAS O	und 1	2 am	ber			

			Grou	ındwat	ter Sar	npling	Inform	nation		
Well ID :	TW-2	+		Project I	Number:	01-0410-	R	Samplin	g Date: ع	1/22/23
Total Depth	n (ft): 151			Water Volu	ıme in Casiı	ng (gal): /)	018	Sampler: H	IVS	
Well Scree	n Interval (ft):			Purge Meth	nod: Peri Pu	ump/Low F	low	Equipment	: YSI, peri-p	oump, interface probe
Well Diame	eter (in):			End Depth	to Water (ft	:):	5	1		
Tubing Inta	ike Depth:	1.75'		Calculated	Purge Volu	me (gal):	2 93	Well Condi	tions:	1.116
Starting De	epth to Water	(ft): 9.0(	)	Total Volur	ne Purged (	gal): / ,	0	1111221	ng lof3	Deres
			Grou	ndwat	er Par	amete	r Moni			
Time	TEMP	pН	ORP	COND	TURB	DO	DTW	Volume		Notes
	° C ± 3%	SU ± 0.1	mV ± 10	mS/cm ± 3%	NTU ± 10%	mg/L ± 10%	feet <0.33	gallons	(App	earance, Odors, Etc.)
1347	10.1	11147	-70.7	303/0	152 58	8910	945		Cloud	11
1249	10.4	111.40	-103.2	2.840	(39.70)	8.9%	950		close	del
1351	10.2	10,37	-59.1	2.565	116.35	9.00	9100		Cloud	101
1353	10.5	10.28	-53.9	2.398	100.50	8.99	9.65		Sligh	Hy cloudy
1355	10.3	10.18	-48.4	2.181	92.32	9,05	9.74	0.3	11	, , , , ,
1357	10.1	10.12	-43,8	2.022	81.84	9.09	9.80		1.1	
1359	10.3	10.11	-40.5	2.085	255.66	9.13	9.86		clou	dy
1401	10.1	9.86	-33.4	1.792	13437	9.13	9.90		clou	du
1403	10.2	9.73	-27.4	1.661	130.38	9.14	9.96	0.5	Slight	tly cloudy
1405	10.2	9.63	-21,5	1.598	10809	9,15	10.00		"11	,
1407	10.3	9.81	-21.4	1.666	462.95	9.16	10.05	_	clou	dy, brown
1409	10.2	9.66	-17.3	1.573	266.41	9.20	10.05		11	, .
1410	10.0	9.60	-14.7	1.539	297.25	9.30	10.06		11	
1412	10.0	9.63	-11.3	1.467	215.14	9.20	10.08		(1)	
1414	10.0	9.52	- 1.3	1.44	166.40	9.17	10,10	1.0	Migh	tly cloudy
			). 				a1 .			
						orane e				
				Casing Vol	ume in Galle	ons: 1" Diar	n = 0.041 g	al/ft, 2" Dian	n = 0.163 ga	l/ft, 4" Diam = 0.653 gal/ft
			Sa	ample	Collec	tion In	forma	tion		
Sample	Number	Sample	Time	Ana	lytes	Sample C	ontainers	Preser	vatives	Duplicate (Y/N)
TW.	-4	142	0			VOAs,	2 Ambers	Н	СІ	
	•						<del>),</del>			**************************************
					Tota	l Number -	of Sample (	`ontoi	Callagtad	7
Collection	Method: Bai	iler (Perista	ltic Subm	ersible / Ot		Number o	o sample (	Containers	Collected:	7
Purge Wat	ter Disposal	Method: Dru	ım							
	Comments:			etting	to ge	t wa	ter			

1			Grou	ındwa	ter Sar	nplina	Inform	nation		
Well ID :	IP-5	5		Marie Control of the	Number:	THE RESERVE OF THE PERSON NAMED IN		Samplin	g Date:	2/22/23
THE RESERVE OF THE PARTY OF THE	(ft): 741			Water Volu	ıme in Casir	ng (gal): j	4,2	Sampler: H	vs	100 100
	n Interval (ft):				nod: Peri Pu	- 11	10	Equipment	YSI, peri-	pump, interface probe
Well Diame	eter (in):			A CAMP CAPE	to Water (ft		~			
Tubing Inta	ke Depth:			Calculated	Purge Volu	me (gal): /	175.	Well Condi	tions:	
	pth to Water	(ft): ic= 3	ì	Total Volur	ne Purged (	gal): /) C	120			
		(ft): 15.3		ndwat			r Moni	toring		
Time	TEMP	pH	ORP	COND	TURB	DO	DTW	Volume		Notes
1	° C	SU	mV	mS/cm	NTU	mg/L	feet	gallons	(Apr	pearance, Odors, Etc.)
	± 3%	± 0.1	± 10	± 3%	± 10%	± 10%	<0.33			
510	11.10	10.39	-106.8	4.846	487.47	8.90	15.36		aveu	cloudy
512	11.4	11.39	-100.9	4.1898	331.39	8.40	15.31	. piccontinuos	14	,
514	11.7	1038	-120.3	4.10610	20751	8.00	15.3()		11	
515	11.7	10.38-	1278	4 1,58	17/2/0	7.81	15.30		1 (	
15/10	118	10.38	-134 ()	4 1,44	12852	7103	15.31		11	
1517	118	1138	-139.3	4 150	99 15	7117	15.31		11	
1518	110	10.20	-1112.1	11.1.1.0	(11.)	725	15.31		2400.1	010 011
1-11	11.51	16.30	1117 0	41111	7/10/	7.77	15.31	05		cloudy
519	11.8	10.28	-147.9	4.602	Tle.12 T	7-00	10.01	0.5	am Dev.	privod or sh
									<del></del>	
									2.5	
					-					
						2 2 2				
				Casing Vol	ume in Gallo	ons: 1" Dian	n = 0.041 ga	al/ft, 2" Dian	n = 0.163 g	al/ft, 4" Diam = 0.653 gal/ft
			Sa	mple	Collec	tion In	forma	tion		
Sample	Number	Sample	Time	Ana	lytes	Sample C	ontainers	Preserv	atives	Duplicate (Y/N)
I	P-5	152	5			VOAs,	2 Ambers	Н	CI	
		1				Number o	f Sample C	ontainers (	Collected:	7
	Method: Bai			ersible / Ot	her:					
urge Wat	er Disposal	Method: Dru	ım							

# Groundwater Monitoring Well Sample Form

	Sampler: nannan Spear	Date: LILLIANCO	
	Complete Language Control	Date: 2/22/2023	
		Address: 10805 East Marginal Way, Tukwila, WA	
(		rioject Nulliber: 01-0410-K	
スつつ		District Name of the Parket of	
ノーン		Project Name: Boeing Field Chevron	

Well Identification	Time Opened	Time Measured Total Depth (feet)	Total Depth (feet)	Depth to Product (feet)	Depth to Water (feet)	Depth to Water Product Thickness (feet)	Sheen	Observations/Notes
ower Saturated Zone						3	21	
AS-1	743	0837	16'	A/N	9.33	4		
(i) IP-4	3448	085 W	14.	NIX	4:0			
SVE-1	746	0350		M/M	DRY			
€) TW-1	736	810	10.18	Z/A	7.31			
<b></b> TW-2	734	SO:	10.2	NA	SH S			
ာ်) TW-3	738	818	10.17	て/シ	8.05			
(5) TW-4	740	0830	15'	N/A	9.00		- di	
(A) TW-5	739	082 W	12'	7/4	810.8	0.84		
Upper Saturated Zone				1 1 1				
(A) IP-3	747	0753	24'	2/2	12.81			
© IP-5	742	0833	24'	NA	(3.63			15.
(I) IP-7	@ 750	0901	23'	12.62	13.46			

Comments: Total depths taken from previous phase of work

Interface probe used on all wells prior to, during, and after extraction event

Oloss Hamala 35/23/23 Boring Field (Warran 01-0410-R 0713 Brain to S-50 TANAMANAN MANAMAN Scale: 1 square = 7855 2/11/2 TW-3 to and one ~ binches of WESS Com 1DUNC+ CHILL CANDILL Schildurg our grand Saleching bubbles out MINT I'din about 90 DITIE So Hippo Waterin 17 CINC CIDELY 2 500 and movine Sampa 2.0 p-4, waving 15-1 office de P . 3 Too m bai and N-3, 2/25/23 Decing Field Cherran 01-04/0-R37 100 1145 SL Scale: 1 square = 31/2taking Tarke down any rant packingu anims and コルスけらい o vac Rite in the Rain

Vell ID :	42-			Project	Number:	01-0410-	R	Samplin	g Date: 2/23/22
otal Depth	(ft): [[p]			Water Volu	ıme in Casir	ng (gal):  .	09	Sampler: H	IVS
Vell Scree	n Interval (ft)	;		Purge Meti	nod: Peri Pu	mp/Low F	low	Equipment	YSI, peri-pump, interface probe
Vell Diame	eter (in):				to Water (ft	,	-5	1	
	ke Depth:			Calculated	Purge Volu	me (gal): 3	211	Well Condi	
Starting De	pth to Water	(ft): 9.33			ne Purged (	call: 1	al	Missha	2 of 2 buts
			Grou	ndwat	er Par	amete	r Moni	toring	
Time	TEMP	pН	ORP	COND	TURB	DO	DTW	Volume	Notes
	°C	SU	mV	mS/cm	NTU	mg/L	feet	gallons	(Appearance, Odors, Etc.)
*:2111t	± 3%	± 0.1	±10	± 3%	± 10%	± 10%	<0.33		
1744	9.2	9.41	114.2	4.465	247.13	11.20	10.05	- The state of the	JAME GLAY, Clowary
1440	9.1	9,42	-20c W	4955	4 63.43	1062	10.2		n ·
1748	9.2	9.42	-207.0	4.946	430.79	1031	1028	1.	11
0750	9.5	9.33	-212.2	4.475	277.04	9.86	10.4	Elizabeth and	o munic wier
1752	9.4	9.13	-2223	4.020	23557	9.58	10.48	0.4	gray, cluday, c. 50
0754	9.5	8.74	-258.4	3.472	25536	920	10.55		11
0756	9.4	7.94	-234.7	2.458	342.47	912	10.00		11
0758	9.5	7.54	-201.8	2.346	583.60	8.90	10.64		+1
0800	9.6	7.51	201.3	2.346	68051	8.65	10.67	0.7	11
0802	9.8	7.57	-208.3	2.440	648.83	8.46	10.7	-	į I
0804	10.1	7.74	-224.7	2.586	542.98	8.23	10.73	2.9	grayish brain, organi
0806	10.1	7.78	-235.6	2.676	497.93	8.15	10.75		- 11
0308	10.0	7.85	-2589	2679	378.75	8.09	10 50		11

	Sa	mple Colle	ection Informati	on	
Sample Number	Sample Time	Analytes	Sample Containers	Preservatives	Duplicate (Y/N)
AS-1	0815		5 VOAs, 2 Ambers	НСІ	
Dup-1	0800		11	",	Y
		T	otal Number of Sample Co	ntainers Collected:	7

Collection Method: Bailer Peristaltic / Submersible / Other:

Purge Water Disposal Method: Drum

Additional Comments:

pump on 10.00st setting to get water





ell ID	TD 2	3		Project	Number:	01-0410-	R	Samplin	g Date: 🤈	23/23
tal Dept	h (ft): 2111	)		Water Volu	ıme in Casir	ng (gal):	4	Sampler: F	· · · · · ·	20/20
	en Interval (ft)	):			nod: Peri Pu		low			np, interface probe
	eter (in):				to Water (ft		*		87.7 %	5.00
ibing Inta	ake Depth: 3	3 76		Calculated	Purge Volu	me (gal):	54.	Well Condi	tions:	
arting De	epth to Water	0.10	14		ne Purged (	(call): 1	xu!	Missin	92072	beits
100/61			4	ndwat	er Par		r Moni	torina		<b>以</b> 自然差别是 6.50
Time	TEMP	pH	ORP	COND	TURB	DO	DTW	Volume		Notes
	°C	SU	mV	mS/cm	NTU	mg/L	feet	gallons	(Appear	ance, Odors, Etc.)
	± 3%	± 0.1	± 10	± 3%	± 10%	± 10%	<0.33			
125	9.2	9.36	-112.8	3.307	405.78	10.46	13.00	1 May Diversion of	gray CI	oudy pero
27	9.2	9.37	-102.8	3.326	328.75	9,99	13.00	-	, 11,	, .
29	9.2	9.37	-205.9	3.328	217.11	9.64	13.00		orevis	h billion ck
31	9.4	9.37	-234.0	3.361	152.38	9.23	13,00	0.3	cleanin	
33	9.9	9.36	- 254.4	3 400	112.49	8.93	13.01		Suchtle	Licialy o
35	9.9	9.37	-1705	3 38/2	9499	8 64	13.00	0.5	11	7
27	9.8	938	-2821	3318	9375	841	13.02		50216	ne he odor
139	100	938	- 7025	2 254	774C	8 75	13/12		11	De 110 Octor
	10.0	0 20	2/13.7	3 351	1.017	0 Oil	13.03	A 75	11	
1941	10.0	9.77	2111	1.701	WELL	3.04		0.75		
43	10.3	7.39	367	3.355	100.14	1.85	13.04		- 11	
45	10.2	9.39	315.3	2.548	47-08	1.74	13.05	7 1	- /(	
47	10.4	9.39	319.4	3,353	5940	7.64	13.05	@ 1	11	
										· <del>····································</del>
			Ca						n = 0.163 gal/ft	4" Diam = 0.653 gal/ft
Sample	Number	Sample		The state of the s	lytes		forma Containers		vatives	Duplicate (Y/N)
7	0 2	_			-					The state of the s
+1	-5	090	00			₹ VOAs,	2 Ambers	H	CI	
					Tota	l Number o	of Sample C	Containers	Collected:	7
	Method: Ba	-	The second second	ersible / Ot	her:					
urgo Min	tor Dienocal	Method: Dr	1177							

Well ID:	IP-L	-			Number:	THE RESERVE TO THE PERSON NAMED IN		nation Samplin	The second state of the second	2/73/12
Total Depth		1		Water Volu	ıme in Casiı	ng (gal):	.70	Sampler: F	IVS	1/20/2
	n Interval (ft)	:			hod: Peri Pu	U	low			pump, interface probe
Well Diame					to Water (fl					•
Tubing Inta	ke Depth:			Calculated	Purge Volu	me (gal):	127.	Well Condi	tions:	
	pth to Water	(ft): 1 15	_		ne Purged (	- 0	<u> </u>	MISS	111920	12bilts 1
	SIGN OF STREET	119.10	Grou			().	- Moni		9CSK	
Time					er Par					Notes
Time	* C	pH SU	ORP mV	mS/cm	TURB NTU	DO mg/L	DTW feet	Volume gallons	(App	Notes earance, Odors, Etc.)
	± 3%	± 0.1	± 10	± 3%	± 10%	± 10%	<0.33		( 777	
1043	6.6	7.70	-101.2	1.055	5768	972	9.29	_	Slight	hy donaly
11145	79	756	-1,4.5	1.074	4871	9.35	9.33		11	1 110119
1047	85	140	-711	1083	41 20	902	9211		11	
LALIC	0.5	1/1/	-62/	1 000	30 11	800	9 25	1 2	,	1.4
044	0.5	7.44	82.6	1.080	25 45	0.80	7.75	0.2	dea	V
1051	D.10	1.4	-84, +	1.081	35.15	8.55	9.35	1 0		
1053	8.6	7.38	43.5	1.081	35.11	8.38	9.35	0.3	11	
1055	8.4	7.360	-46.5	1.081	3365	8.24	9.35	0.35	cle	arpenta
1057	8.4	7.35	-97.8	1.070	3381	8.18	9.34		cle	aripent
1059	8.5	7.34	-98.5	1.071	33.44	806	9.34		cle	ar, Denico
		T								
	li e									
		<u> </u>					-			
									_	
				Casing Vol	ume in Gall	ons: 1" Diar	n = 0.041 ga	al/ft, 2" Dian	n = 0.163 ga	al/ft, 4" Diam = 0.653 gal/f
	ESHIP.		Sa	mnle	Collec	tion In	forma	tion		
Sample	Number	Sample			lytes		ontainers		vatives	Duplicate (Y/N)
	2 1	111				-				
11	7-4	110	15			VOAs,	2 Ambers	H	CI	
					Tota	l Number o	of Sample C	Containers	Collected:	7
Collection	Method: Ba	iler / Perista	ltic / Subm	ersible / Ot	her:					
Purge Wat	er Disnosal	Method: Dru	um							



Well ID :	TO -	7.		Project I	Number:	01-0410-	R	Samplin	g Date: _	/23/23
	Th	<u> </u>		i, .						123/20
	h (ft): 231			Water Volu		7	191410	Sampler: I		
	n Interval (ft)	:			nod: Peri Pu		low	Equipment	: YSI, peri-pu	imp, interface probe
Well Diam					to Water (ft		5			
Tubing Inta				Calculated	Purge Volu	me (gal): [	1,4	Well Cond	itions:	+ 3 bilts.
Starting De	epth to Water	(ft): 14-6	00	Total Volun	ne Purged (	gal): / /	gal	Pasal	16,50	f 3 bilts,
			Ģrou	ndwat	er Par	amete	Moni	toring		
Time	TEMP	pН	ORP	COND	TURB	DO	DTW	Volume		Notes
	° C	SU	mV	mS/cm	NTU + 40%	mg/L	feet	gallons	(Appe	arance, Odors, Etc.)
12/17	±3%	± 0.1	±10	± 3%	±10%	±10%	<0.33		alex	116 mad
1207	10.0	171	04 1	0.500	a) 15.56	9.51	14.00		Clear	u/free pred
1209	10.9	10.TI	-97.1	01000	14 21	9.20	14.03		./	1 1
211	11.1	6.64	747.5	0.995	46×1	8.81	14.05		Clear,	Tre produc
215	11.6	6.60	100.2	0.499	8690	8.40	14.04		11	
1215	11.8	659	-102.4	0.505	86.75	8.00	14.05	0.5	11	
1217	11.7	6.59	-103.2	0.504	107.92	7.79	14.05		11	
1219	11.4	6.58	-103.7	0 502	115.45	7.59	14,10	-	clear	V/preduct,s
1221	11.4	4.58	-103.7	0.501	119.23	7.40	1413	0.75	11	
1223	114	6.58	103.9	0.501	118.75	7.20	14.14	-	1.1	
245	11.1	W-58	100.1	0.001	110.75	1.00	7 (1)			
		-		-						
			Sa	Casing Volu					m = 0.163 gal/	ft, 4" Diam = 0.653 gal/i
Sample	Number	Sample		Anal			ontainers		vatives	Duplicate (Y/N)
TF	2.7	123	5			5 VOAs.	2 Ambers	н	CI	
		100				707.0,	_ ranger	·		
					Tota	l Number o	of Sample C	Containers	Collected:	7
	Method: Ba	married war and the same of th		ersible / Ot	her:					
Purge Wat	ter Disposal	Method: Dru	Im							

# April 2023

(BFC) 4/24/23 Boeing Field Oberron 01-04/0-K 710 Hannah arnives on site, check-in with store staff and set up traffic management 127 Decon setup, begin opening wells in order of sampling 0805 All wells open after removing water in well monument and setting Up new down for disposal, now will' begin taking water level measurements 0854 Done taking water level msimts, now going to set up at first well for sampling, TW-2 0912 Begin purging TW-2 0932 Parameters stable, sampling TW-2 0950 De conning; monng to next well, M-1 Begin purging The -TW-1 parameters stable sampling TW-1051 Done Sampling TW-1 and taking duplicate, moring to next well, TW-3 1110 Begin Durging TW-1128 TW-3 parameters stabilized sampling TW-3 Scale: 1 square =

BFC Continued 01-0410-R7 1147 Well running dry while sampling, have all 5 VOAs and I full aimber, the se and amber is ~1/4 full, Stopped pump to wait for recharge and will try to get little more water Got a little bit more water, well ran my very quickly again 1215 Begin purging TW-51-1242 TW-5 parameters stable, Sampling nou 1308 Done sampling TW-5, moving to next well, TW-4 1309 Will check TW-3 after next well for recharge 1318 Begin purging 1346 TW-4 parameters Stable, sampling TW-4 1406 Done sampling TW-4, moved back to TW-3 to see if I can fill amber 1412 Able to get 1/3 ancher before well went my again, now moving to next well, IP-5 1500 IP-5 parameters have Stabilized Rete in the Rain Scale: 1 square =

4/24/23 BFC Cont 01-0410-12		9
Sampling IP-5		
1523 Done sampling IP-5, packing up		<del></del>
equipment		
1536 Close and lakel drum		
1542 Closing all wells		
550 All that fic management down, sample management / ESC before		
sample management/loc before		
1555 Harriah offsite to Issaguah		
office		
ZV		
Scale: 1 square =	Scale: 1 square =	the Rain.



Time TEMP pH  °C SU  ±3% ±0.1  0915 11.2 7.15  0917 11.3 7.13 7  0919 11.3 7.13 9  0921 11.3 7.10 8  0923 11.4 7.04 9  0925 11.4 7.04 9  0927 11.3 7.03 1  0929 11.3 7.04 1	Wa Pur Enc Cal Tot Ground ORP C mv m ± 10 ± 10 1.0 85.10 1.10 92.1	ater Volunge Method Depth alculated otal Volunge Method Depth alculated Depth	me in Casimod: j w to Water (ff Purge Volume Purged (for Part 10% 51.25 42.29 37.55 27.07 20.44 17.93 18.44	Flow (gal): (gal): ~	32 9.95 Noni ptw feet <0.33 8.55 8.57 8.62 8.72 8.75 8.76 8.78	Sampler: F Equipment probe Well Condi 3 of 3	(Appe	, <u> </u>
Well Screen Interval (ft):  Well Diameter (in): 2  Tubing Intake Depth: 10'  Starting Depth to Water (ft): 8.2(  Time TEMP pH  °C SU  ±3% ±0.1  0915 11.2 7.15  0917 11.3 7.13 7  0919 11.3 7.13 7  0921 11.3 7.10 8  0923 11.4 7.04 9  0925 11.4 7.04 9  0927 11.3 7.03 1	Pur Enc Cal Tot Ground ORP C mv mv ± 10 ± 10 1.0 85.10 1.10 92.1 1	urge Method Depthod De	to Water (ff Purge Volume Purged ( er Par  TURB  NTU  ± 10%  51.25  42.29  37.55  27.07  20.44  17.93  18.44	Flow (gal): (gal): ~	9.95 P. Moni DTW feet <0.33 8.55 8.57 8.68 8.72 8.75 8.76 8.78	Sampler: P Equipment probe Well Condi 3 of 3  toring Volume gallons (),   (), 2	(Appe	Notes earance, Odors, Etc.)
Well Diameter (in): 2         Tubing Intake Depth: 10'         Starting Depth to Water (ft): 8.2 (a)         Time       TEMP or SU ± 3% ± 0.1         0915       11.2 7.15         0917       11.3 7.13 7.13 7.13 7.13 7.13 7.13 7.13	Ground ORP C mV m ±10 ± 71.5 1. 74.8 1.0 85.10 1.1 92.1 1.0 90.9 1.	COND mS/cm ±3% .673 .672 .674 .674	to Water (ff Purge Volume Purged (fi er Par: TURB NTU ±10% 51.25 42.29 37.55 27.07 20.44 17.93 18.44	me (gal): (gal): (gal): ~ (gal	0.45  r Moni  feet  <0.33  8.55  8.57  8.62  8.72  8.72  8.75  8.76  8.78	vell Condi	clear clear clear	Notes earance, Odors, Etc.)
Tubing Intake Depth: 10' Starting Depth to Water (ft): 8.26  Time TEMP pH  °C SU  ±3% ±0.1  0915 11.2 7.15  0917 11.3 7.13 7  0919 11.3 7.13 7  0921 11.3 7.10 8  0923 11.4 7.04 9  0925 11.4 7.04 9  0927 11.3 7.04 1	Cal Total Ground ORP C mV m ± 10 ± 10.5 1.6 80.1 1.6 85.6 1.6 92.1 1.6 92.1 1.6 92.1 1.6 92.1 1.6 92.1 1.6	cond ms/cm ± 3% 666 672 674 674	to Water (ff Purge Volume Purged ( er Par  TURB  NTU ±10%  51.25  42.29  37.55  27.07  20.44  17.93  18.44	me (gal): (gal): (gal): ~ (gal	0.45  r Moni  feet  <0.33  8.55  8.57  8.62  8.72  8.72  8.75  8.76  8.78	Well Condi	Clear Clear Clear Clear	Notes earance, Odors, Etc.)
Time   TEMP   pH   °C   SU   ±3%   ±0.1   0915   11.2   7.15   7.13   7.13   7.13   7.13   7.13   7.13   7.13   7.13   7.10   7.	Total Control	cond ms/cm ± 3% .673 .666 6672 .674 .674	er Pari TURB NTU ±10% 51.25 42.29 37.55 27.07 20.44 17.93 18.44	(gal): ~ amete DO mg/L ±10% 6.74 5.93 5.95 6.33 6.62 6.71	0.45  r Moni  feet  <0.33  8.55  8.57  8.62  8.72  8.72  8.75  8.76  8.78	Volume gallons (),	Clear Clear Clear Clear	Notes earance, Odors, Etc.)
Time TEMP PH  °C SU  ±3% ±0.1  0915 11.2 7.15  0917 11.3 7.13 7  0919 11.3 7.13 9  0921 11.3 7.10 8  0923 11.4 7.04 9  0925 11.4 7.04 9  0927 11.3 7.03 1	Ground  ORP C  mV m  ±10 ±  71.5 1.  74.8 1.0  85.6 1.0  92.1 1.0  92.1 1.0  90.9 1.  101.4 1.0	COND ms/cm ± 3% .673 .666 665 672 .672 .674 .674	er Par TURB NTU ±10% 51.25 42.29 37.55 27.07 20.44 17.93 18.45	amete  DO  mg/L  ±10%  6.48  6.07  5.93  5.89  5.95  6.33  6.62  6.71	DTW feet <0.33 8.55 8.57 8.62 8.72 8.75 8.76 8.78	Volume gallons (),	Clear Clear Clear Clear	Notes earance, Odors, Etc.)
Time TEMP pH  °C SU  ±3% ±0.1  0915 11.2 7.15  0917 11.3 7.13 7  0919 11.3 7.13 9  0921 11.3 7.10 8  0923 11.4 7.04 9  0925 11.4 7.04 9  0927 11.3 7.03 1	ORP C mV m ±10 = 71.51. 74.8 1.0 85.6 1.0 92.1 1.0 92.1 1.0 90.9 1.	COND ms/cm ±3% .673 .666 665 .672 .674 .674	TURB NTU ± 10% 51.25 42.29 37.55 27.07 20.4 18.44 17.93 18,45	mete  DO mg/L ±10%  6.48  6.07  5.89  5.89  6.03  6.02  6.71	DTW feet <0.33 8.55 8.57 8.62 8.72 8.75 8.76 8.78	Volume gallons (),	clear clear clear	earance, Odors, Etc.)
°C SU ±3% ±0.1 0915 11.2 7.15 0917 11.3 7.13 7 0919 11.3 7.13 9 0921 11.3 7.10 8 0923 11.4 7.04 9 0925 11.4 7.04 9 0927 11.3 7.03 1 0929 11.3 7.04 1	mv m ±10 ± 71.5 1. 74.8 1.6 80.1 1.6 85.6 1.6 92.1 1.6 96.9 1. 101.4 1.6 104.3 1.6	15/cm 15/3 16/4 16/5 16/2 16/4 16/4 16/4 16/3	NTU ±10% 51.25 42.29 37.55 27.07 20.44 18.44 17.93 18,45	mg/L ±10% 6.48 6.07 5.89 5.89 5.95 6.33 6.62	feet <0.33 8.55 8.57 8.62 8.72 8.72 8.75 8.76 8.77	gallons	clear clear clear	earance, Odors, Etc.)
±3% ±0.1 0915 11.2 7.15 0917 11.3 7.13 7 0919 11.3 7.13 9 0921 11.3 7.10 8 0923 11.4 7.04 9 0925 11.4 7.04 9 0927 11.3 7.03 1	±10 ± 71.5 1. 74.8 1.6 80.1 1.6 85.6 [.1 92.1 1.1 96.9 1. 101.4 1.1	±3% .673 .666 .665 .672 .674 .674 .674	±10% 51.25 42.29 37.55 27.07 20.66 18.44 17.93 18.45	±10% 6.48 6.07 5.93 5.89 5.95 6.33 6.62 6.71	<0.33 8.55 8.57 8.62 8.72 8.72 8.75 8.76 8.78	0.1	clear clear clear	
0915 11.2 7.15 0917 11.3 7.13 7 0919 11.3 7.13 9 0921 11.3 7.10 8 0923 11.4 7.04 9 0925 11.4 7.04 9 0927 11.3 7.03 1	71.5 1. 74.8 1.0 80.1 1.0 85.6 1.1 92.1 1.1 96.9 1.1 101.4 1.1	673 666 665 672 672 674 674	51.25 42.29 37.55 27.07 20.66 18.44 17.93 18.45	6.48 607 593 5.89 5.95 6.33 6.62	8.55 8.57 8.62 8.72 8.72 8.75 8.76 8.78	0.1	clear clear clear	
0917 11.3 7.13 7 0919 11.3 7.13 9 0921 11.3 7.10 8 0923 11.4 7.04 9 0925 11.4 7.04 9 0927 11.3 7.03 1	74.8 1.1 80.1 1.1 85.10 [.1 92.1 [.1 96.9 [. 101.4 ].1	666 665 672 674 674 674	42.29 37.55 27.07 20.66 18.44 17.93 18.45	607 593 589 595 633 6.62	8.57 8.62 8.72 8.72 8.75 8.76 8.78	0.1	clear clear clear	
9919 11.3 7.13 9 9921 11.3 7.10 8 9923 11.4 7.04 9 9925 11.4 7.04 9 1927 11.3 7.03 1 1929 11.3 7.04 1	80, 1 1.0 85, 6 1.1 92, 1 1.1 96, 9 1. 101, 4 1.1	665 672 674 674 674 673	37.55 27.07 20.66 18.44 17.93 18.45	5.89 5.95 6.33 6.62 6.71	8.62 8.72 8.75 8.76 8.78	0.1	clear	
921 11.3 7.10 8 9923 11.4 7.04 9 9925 11.4 7.04 9 9927 11.3 7.03 1	85.6 [.1 92.1 [.1 96.9 [. 101.4 ].	672 672 674 674 673	27.07 20.66 18.44 17.93 18,45	5.89 5.95 6.33 6.62 6.71	8.68 8.72 8.75 8.76 8.78	0.1	Clear	
0923 11.4 7.04 9 0925 11.4 7.04 9 0927 11.3 7.03 1 0929 11.3 7.04 1	96.9 1.	674 673	27.07 20.66 18.44 17.93 18.45 18.32	5.95 6.33 6.62 6.71	8.72 8.75 8.76 8.78	0.1	Clear	
0927 11.3 7.03 1	96.9 1.	674 673	20.66 18.44 17.93 18.45 18.32	6.42	8.72 8.75 8.76 8.78	0.3	11	
0927 11.3 7.03 1	96.9 1.	674 673	18.44 17.93 18.45 18.32	6.62	8.76	0.3	()	/,nu odur ors
0927 11.3 7.03 1	104.3 1.	674	17.93 18,45 18.32	6.62	8.76	0.2	11	, no oder ors
0929 11.3 7.04 1	104.31	673	18,45	6.62	8.78	0.3	11	/nu oder ors
0931 11.3 7.05 1	1		18.32	6.76 6.56		0.3	,	, no odur ors
9931 11.3 7.05 1	10691.	66T	18.32	6.56	8.80	0.3	clean	, no odor ors
	+							
	Cas	asing Volu	ume in Gallo	ons: 1" Diar	n = 0.041 ga	al/ft, 2" Dian	n = 0.163 gai	l/ft, 4" Diam = 0.653 gal/
	Sam	nple (	Collec	tion In	forma	tion		
Sample Number Sample T	Time	Anal	lytes	Sample C	ontainers	Preser	atives	Duplicate (Y/N)
TW-2 094	0			5 VOA		He	1	
								7
Collection Method: Bailer / Peristaltic	i-) o i - :	ible / Ott		l Number o	of Sample C	Containers	Collected:	<i></i>
Purge Water Disposal Method:	IC / Summereil							
Additional Comments:  Peri-Pump on 10	Jin im							



Value   Valu	
Total Depth (ff): 10.18   Water Volume in Casing (gal): 0,30   Sampler: HVS	
Well Screen Interval (ft):	
Tubing Intake Depth: O Calculated Purge Volume (gal): 0,90 Well Conditions: Missing 2 of 2 boilts    Total Volume Purged (gal): 0,75   Well Conditions: Missing 2 of 2 boilts	ce
Time   TEMP   pH   ORP   COND   TURB   DO   DTW   Volume   Notes	
Total Volume Purged (gal): \( \cdot 0 \) 75   Total Volume Purged (gal): \( \cdot 0 \) 75   Total Volume Purged (gal): \( \cdot 0 \) 75   Time   TEMP   pH   ORP   COND   TURB   DO   DTW   Volume   ORP   COND   TURB   DO   DTW   ORP   COND   TURB   DO   DTW   ORP   ORP   SU   mV   mS/cm   NTU   mg/L   feet   gallons   (Appearance, Odors, Etc.)	
Time TEMP pH ORP COND TURB DO DTW Volume °C SU mV mS/cm NTU mg/L feet gallons (Appearance, Odors, Etc. ±3% ±0.1 ±10 ±3% ±10% ±10% <0.33  1002 11-5 9.51 82.6 2.448 279.36 4.91 8.35 Cloudy, orangey 1004 11-5 9.17 81.1 2.033 190.77 4.30 8.36 Cloudy, orangey 1004 11-5 8.78 82.1 1.772 72.01 3.99 8.36 Cloudy, orangey 1008 11-5 8.56 83.6 1.600 5381 3.70 8.36 Clearing up 1010 11-5 8.44 84.4 1.548 24.77 3.47 8.36 11 1012 11.4 8.38 84.3 1.519 19.66 3.34 8.36 0.35 1014 11.4 8.37 82.9 1.512 18.38 3.15 8.36 Clear, no sheet 1018 11.4 8.39 81.6 1.513 13.40 3.10 8.36 0.5 11	27.0
*C SU mV mS/cm NTU mg/L feet gallons (Appearance, Odors, Etc. ±3% ±0.1 ±10 ±3% ±10% ±10% <0.33  1002 11.5 9.51 82.6 2.448 279.36 4.91 8.35 — cloudy, crangry 1004 11.5 9.17 81.1 2.033 190.77 4.30 8.36 — cloudy, crangry 1006 11.5 8.78 82.1 1.772 72.01 3.99 8.36 — clearing up 1008 11.5 8.56 83.6 1.600 5381 3.70 8.36 — clearing up 1010 11.5 8.44 84.4 1.548 24.77 3.47 8.36 — 11 1012 11.4 8.38 84.3 1.519 19.66 3.34 8.36 0.35 11 1014 11.4 8.37 82.9 1.512 18.38 3.15 8.36 — clear, no sheet 1018 11.4 8.39 81.6 1.513 13.40 3.10 8.36 0.5 11	
1002 11-5 9.51 82.6 2448 279.36 4.91 8.35 — cloudy radiangry 1004 11-5 9.17 81.1 2.033 190.77 4.30 8.36 — cloudy orangry 1006 11-5 8.78 82.1 1.772 72.01 3.99 8.36 — cloudy orangry 1008 11-5 8.56 83.6 1.600 5381 3.70 8.36 — clearing up 1010 11-5 8.44 84.4 1.548 24.77 3.47 8.36 — 11012 11.4 8.38 84.3 1.519 19.66 3.34 8.36 0.35 11014 11.4 8.36 83.6 1.513 — 3.19 8.36 — VSF fell, turb 90ing with 1016 11.4 8.37 82.9 1.512 18.38 3.15 8.36 — clear, no sheel 1018 11.4 8.39 81.6 1.513 13.40 3.10 8.36 0.5 11	
1002 11-5 9.51 82.6 2448 279.36 491 8.35 — cloudy, radingry 1004 11-5 9.17 81.1 2.033 190.77 4.30 8.36 — cloudy, orangry 1006 11-5 8.78 82.1 1.772 72.01 3.99 8.36 — clearing up 1008 11-5 8.56 83.6 1.600 5381 3.70 8.36 — "1010 11-5 8.44 84.4 1.548 24.77 3.47 8.36 — "1012 11.4 8.38 84.3 1.519 19.66 3.34 8.36 0.35 11 1014 11.4 8.36 83.6 1.513 — 3.19 8.36 — VSF fell, turb 90ing with 1016 11.4 8.37 82.9 1.512 18.38 3.15 8.36 — clear, no sheel 1018 11.4 8.39 81.6 1.513 13.40 3.10 8.36 0.5 "	;.)
1004 11-5 9.17 81.1 2.033 190.77 4.30 8.36 — cloudy, orangry 1006 11-5 8.78 82.1 1.772 72.01 3.99 8.36 — clearing up 1008 11-5 8.56 83.6 1.600 5381 3.70 8.36 — " 1010 11-5 8.44 84.4 1.548 24.77 3.47 8.36 — " 1012 11.4 8.38 84.3 1.519 19.66 3.34 8.36 0.25 " 1014 11.4 8.36 83.6 1.513 — 3.19 8.36 — VST fell, Turb 90ing up 1018 11.4 8.37 82.9 1.512 18.38 3.15 8.36 — clear, no sheeld 1018 11.4 8.39 81.6 1.513 13.40 3.10 8.36 0.5 "	
1006 11-5 8.78 82.1 1.772 72.01 3.99 8.36 — Clearing up 1008 11-5 8.56 83.6 1.600 5381 3.70 8.36 — " 1010 11-5 8.44 84.4 1.548 24.77 3.47 8.36 — " 1012 11.4 8.38 84.3 1.519 19.66 3.34 8.36 0.25 " 1014 11.4 8.36 83.6 1.513 — 3.19 8.36 — VSF fell, Turb 9°ing w 1016 11.4 8.37 82.9 1.512 18.38 3.15 8.36 — Clear, no sheel	-boun
1006 11-5 8.78 82.1 1.772 72.01 3.99 8.36 — Clearing up 1008 11-5 8.56 83.6 1.600 5381 3.70 8.36 — " 1010 11-5 8.44 84.4 1.548 24.77 3.47 8.36 — " 1012 11.4 8.38 84.3 1.519 19.66 3.34 8.36 0.25 " 1014 11.4 8.36 83.6 1.513 — 3.19 8.36 — VSF fell, Turb 9°ing u 1016 11.4 8.37 82.9 1.512 18.38 3.15 8.36 — Clear, no sheel	-brown
1008 11.5 8.56 83.6 1.600 5381 3.70 8.36 — " 1010 11.5 8.44 84.4 1.548 24.77 3.47 8.36 — " 1012 11.4 8.38 84.3 1.519 19.66 3.34 8.36 0.25 " 1014 11.4 8.36 83.6 1.513 — 3.19 8.36 — VSF fell, Turb 90ing w 1016 11.4 8.37 82.9 1.512 18.38 3.15 8.36 — clear, no sheel	
1010 11-5 8.44 84.4 1.548 24 77 3.47 8.36 — " 1012 11.4 8.38 84.3 1.519 19.66 3.34 8.36 0.25 " 1014 11.4 8.36 83.6 1.513 — 3.19 8.36 — VST fell, Turb 9°ing w 1016 11.4 8.37 82.9 1.512 18.38 3.15 8.36 — clear, no sheel	
1012 11.4 8.38 84.3 1.519 19.66 3.34 8.36 0.25 \\ 1014 11.4 8.36 83.6 1.513 — 3.19 8.36 — VSF fell, Turb 90ing w 1016 11.4 8.37 82.9 1.512 18.38 3.15 8.36 — clear, no sheel	
1014 11.4 8.36 83.6 1.513 — 3.19 8.36 — VSI fell, Turb 90ing w 1016 11.4 8.37 82.9 1.512 18.38 3.15 8.36 — clear, no sheel 1018 11.4 8.39 81.6 1.513 13.40 3.10 8.36 0.5 "	-
1016 11.4 8.37 82.9 1.512 18.38 3.15 8.36 — clear, no sheed 1018 11.4 8.39 81.6 1.513 13.40 3.10 8.36 0.5 "	
1016 11.4 8.37 82.9 1.512 18.38 3.15 8.36 — clear, no sheet 1018 11.4 8.39 81.6 1.513 13.40 3.10 8.36 0.5 "	P
1018 11.4 839 81.6 1.513 13.40 3.10 836 0.5 "	1, hi
	71109
1020 11.4 8.40 80.6 1.511 6.45 3.08 8.36 11	
1022 11-5 8.39 80.1 1.510 7.16 3.08 8.36 "	
Casing Volume in Gallons: 1" Diam = 0.041 gal/ft, 2" Diam = 0.163 gal/ft, 4" Diam = 0.65	3 gal/ft
Sample Collection Information	
Sample Number Sample Time Analytes Sample Containers Preservatives Duplicate (Y/	N)
TW-1 1030 SUMPERS HCI Y	
Dup-1 0800 ""	
Total Number of Sample Containers Collected: 7 + 7	=14
Collection Method: Bailer / Peristaltic / Submersible / Other:	The state of the s
Purge Water Disposal Method: Drum	
Additional Comments:	

		Grou	ındwa	tor Sar	Company of the	Inform			
Vell ID: TW-3	ATTE ASSESS	Grot			01-0410-		nation Samplin		n 11/21/22
			1,						Q 4/24/23
otal Depth (ft): 10.1				ıme in Casiı		35	Sampler: I		
/ell Screen Interval (f	t):		Purge Meti	200	N-F101	V		YSI, per	i-pump, interface
/ell Diameter (in):			7	to Water (ff	***		probe		
ubing Intake Depth:	10			Purge Volu		1.06	Well Condi	tions:	o real :
tarting Depth to Wate	er (ft): 8.0		Total Volur	ne Purged (	(gal): ~ ()	25	_ ′	2	of 2 bolts
		Grou	ndwat	er Par	amete				
Time TEMP	pН	ORP	COND	TURB	DO	DTW	Volume		Notes
° C	SU	mV	mS/cm	NTU + 40%	mg/L	feet	gallons	(App	pearance, Odors, Etc.)
± 3%	± 0.1	±10	± 3%	± 10%	± 10%	<0.33		-1	
113 12.1	4.75	-44.3	1.355	10.74	2.36	8.54		Clear	
115 12.1	4-5t	-71.	1.352	6.03	1.28	8.65		- 11	
117 12.1	6.53	-77.3	1.357	4.95	0.95	8.82	_	. 1(	
119 12.0	6.52	-79.5	1.340	479	0.82	8.94		11	
121 12 1	10.52	-812	1.361	471	1 21	910		Ш	,
122 12.0		-81 0	1.00	1. 711	V. To	0.21			sunday sa
123 12.1	4.52	00.0	1.361	4.17	0.00	9.21		Clear	,noodor,nosh
125 12.1	4.52	-84. le	1.342	4.7	0.61	9.35		.01	
127 12.1	6.52	-810-2	1.364	4.60	0.60	9.43		11/	
1									
	+								
			Casing Vol	ume in Gall	ons: 1" Diar	n = 0.041 g	al/ft, 2" Dian	n = 0.163 ga	al/ft, 4" Diam = 0.653 gal/ft
		9.	mple	Collec	tion In	forma	tion		
Sample Number	Sample			lytes		ontainers		vatives	Duplicate (Y/N)
3 . • 273 · 127 · To 7 *	11.1			<b>■</b> µa €0			11	01	4/
·T. 1 2					3 Am	bers	l M		//
7W-3	1140							~	
TW-3	//40								
TW-3	//40								
TW-3	//7/			guar asser					
					l Number c	of Sample (	Containers	Collected:	7
ollection Method: B	ailer /(Perista	ltic) Subm	ersible / Ot		l Number o	of Sample (	Containers	Collected:	7
ollection Method: B urge Water Disposa	ailer / Perista			her:					7
ollection Method: B urge Water Disposa	ailer / Perista			her:					7
ollection Method: B urge Water Disposa	ailer / Perista			her:					7
ollection Method: B urge Water Disposa	ailer / Perista			her:					7 amber ~1/4
ollection Method: B urge Water Disposa	ailer / Perista			her:					7 amber ~1/4



Well ID :	TW-5		Grou		Number:			Samplin		1/21/27
				1	ıme in Casir					1/24/25
Total Depti						C	1.5	Sampler:		
	n Interval (ft):			Purge Meth		1-Flow	V		: YSI, peri	-pump, interface
Well Diame		,			to Water (ft			probe		
Tubing Inta		1.8			Purge Volu	,	.54	Well Condi	itions:	( )
Starting De	epth to Water	(ft): 8,8	5	Total Volur	ne Purged (	gal): ~ (	1.85		0)	
			Grou	ndwat	er Par	amete	r Moni	toring		
Time	TEMP	pН	ORP	COND	TURB	DO	DTW	Volume		Notes
	° C	SU	mV	mS/cm	NTU	mg/L	feet	gallons	(Appe	earance, Odors, Etc.)
	± 3%	± 0.1	±10	± 3%	± 10%	± 10%	<0.33		1	
1218	13.3	9.38	-168.2	12.897	191.01	0.98	9.15	-	darkhi	own cloudy, pe
1220	13.4	9.29	261.4	12.448	133.34	0.55	9.15		11	, ,
1222	13.2	9.25	-279.1	12.193	81.45	0.46	9.17		11	
774	13 4	918	-7955	1/777	471.0	1 39	9.24		11	
1221	/	9 11	-212 V	1/9/11	22711	0.01	9.30		.1	
220	13.2	7.11	200.0	10.741	25.74	0.35	0		In a	ngup
228	13.1	9.00	-314.1	10.015	25.21	0.32	9.30		Slight	ly cloudy
1230	13.1	8.88	-342.9	9.277	24.10	0.30	9.31		11	· · · · · · · · · · · · · · · · · · ·
232	13.1	8.80	-356.8	8.614	38.25	0.29	9.32	-	- 11 /	
1234	12.9	8.75	368.5	8.013	6075	0.27	932		(,	
1231	129	873	-3125	7703	7775	027	9.33	0.45	34	
1330	129	0.70	277 1	7.17	9217	1 21	9.35	0.5	. 11	
12110	128	0.13	2010	7.676	00.17	0.20	1: -	0.5	1.	
1240	12.0	8.70	1381.0	7.560	90.83	0.25	9.35	11	15	
1242	12.8	8.74	-383.6	7.506	95.26	0.25	9.36	0,6		
		100	9-		ume in Gallo				n = 0.163 ga	l/ft, 4" Diam = 0.653 ga
Sample	Number	Sample			lytes		ontainers	T	vatives	Duplicate (Y/N)
Th	1-5	175	T			5 VO	A5	Lin	$\tau$	N
111		120	C (			2 an	ASUPEYS	HC.	+	
			<u>,, , , , , , , , , , , , , , , , , , ,</u>							
			· · · · · · · · · · · · · · · · · · ·		T-4-	l Number	of Complet	Container	College	7
Collection	Method: Ba	iler Perista	Itic / Suhm	ersible / Ot		i Number o	o sample (	Containers	Collected:	
			Drem							



			Grou	ındwat	ter Sar	npling	Inforr	nation		
Well ID :	TW-4					01-0410-	_	Samplin	g Date: ∠	1/24/23
otal Depth	n (ft): <b>15</b>			Water Volu	ıme in Casiı	ng (gal): /	.03	Sampler: I	IVS	101100
Vell Scree	n Interval (ft)			Purge Meth	nod: Low	- Flow		Equipment	YSI, peri-	pump, interface
Vell Diame	eter (in):			End Depth	to Water (ft	t): 8.94		probe		
ubing Inta		4.75				me (gal):	.09.	Well Condi	tions:	ra wits
tarting De	epth to Water	(ft): 8.107		Total Volur	ne Purged (	(gal): '∼ (	,q	three	ads ru	sfed on ti-di
				ndwat	er Par	amete	r Moni			
Time	TEMP	рН	ORP	COND	TURB	DO	DTW	Volume		Notes
	° C	SU	mV	mS/cm	NTU	mg/L	feet	gallons	(Appe	arance, Odors, Etc.)
220	± 3%	±0.1	±10	± 3%	± 10%	± 10%	<0.33		_	
320	13.0	10.25	155.8	2.413	1272.22	4.15	8.91		very !	brown, cloudy
322	12.9	9.93	-154.9	3.060	959.89	6.54	8.91	_		
1324	12.8	9.55	-143.5	2120	533.76	6.93	8.90	_	clean	g up slightly
326	12.7	9.18	-129.0	1,750	282.37	7.14	8.90		- 15	, , , ,
328	12.6	8.81	-114.0	1.582	159.11	7.26	8.90		clear	
330	12.5	8.59	-97.4	1491	8748	7.32	8.90		11	
337	12.4	8.35	-851	14/01	100 25	734	890		)(	
334	12.4	813	-7110	1437	4447	7.25	890		11	
3360	12.4	8.02	-125	1415	2017	7 27	8.90			
	12.7	7.01	100.5	1,720	27.12	127	800	Aile	0	
1338	12.3	7.96	-55.0	1.415	27.92	7.07	8.90	0.45	- 1/	
1340	12.0	7.91	-49.2	1,911	24.81	1.31	8.70		1.	
342	12.3	7.87	-43.7	1.409	19.31	1.35	8:42			
344	12.4	7.85	-38:le	1.405	19.85	7.35	8.94	0.6	17	
346	12.4	7.84	-35,2	1.406	19.01	7.34	8.94		31	
							- T			
			Sa	Casing Vol					n = 0.163 gal	/ft, 4" Diam = 0.653 gal/ft
Sample	Number	Sample	e Time	Ana	lytes		ontainers	Presen	vatives	Duplicate (Y/N)
TW	-4	135	55			5 vor 2 an	ibers	HC	1	N
					T-1-	I Niverbasa	of Complet	Container	Collected	Z
ollection	Method: Ba	iler Perista	ltic Subm	ersible / Ot		ii Number o	or Sample (	Containers	Collectea:	T
	ter Disposal		Dinm							
	The second secon		The same of the sa							
Additional (	Comments:									



			Grou			THE RESERVE TO BE ADDRESSED.	Inforr			
Well ID:	IP-5			Project I	Number:	01-0410-	R	Samplin	g Date:	
Total Depth	n (ft): <b>24</b>			Water Volu	ıme in Casi	ng (gal):	.26	Sampler: I	IVS	
Vell Scree	n Interval (ft)	:		Purge Meth	nod: Low	-Flow	10	Equipment	YSI, peri-	pump, interface
Vell Diame				End Depth	to Water (fi	:):	- 10	probe		
Tubing Inta	ike Depth: 2	3.75		Calculated	Purge Volu	me (gal): 🢈	3.77	Well Condi	tions:	colts don't fit,
	pth to Water		9	Total Volur	ne Purged (	(gal): √ (	1.9	Sea	bntt	le
	AL FAIR		Grou	ndwat	er Par	amete	r Moni	toring	MARINAS	
Time	TEMP	pН	ORP	COND	TURB	DO	DTW	Volume		Notes
	°C	SU	mV	mS/cm	NTU	mg/L	feet	gallons	(Appe	arance, Odors, Etc.)
1111	± 3%	± 0.1	±10	± 3%	±10%	±10%	<0.33			
422	15.0	9.18	-19.0	3.106	+7.30	0.88	16.34	_		cloudy
435	15.1	9.10	-34.4	3.107	44.51	0.66	14.35		,1	*
437	15.0	9.09	-88.5	3,099	37.81	0.52	16.35		11	
439	14.7	9.08	-144.5	3.083	23.82	0.46	16.36		clean	ngup
1441	14.5	908	-1923	3,068	15.66	0.40	16.38		Sligh	
443	14.4	9.07	-2145	3053	15.32	1.38	11,39	0.2	31.0	tly reddish b
445	145	907	-727.6	3/149	15.63	13/2	16.40		'(	
447	14 10	9.07	-7571	2011	1295	124	10 414.		11	
11110	111 7	9.0 T	201.6	2011	111 61	0.27	16.40			
1171	17. +	9.00	269.5	2.040	14.00	0.00	16.41	1 :-	1	
451	14.8	9.06	-280,9	3,046	11.90	0.32	16.42	0.5	K	
453	14.6	4.06	-289.0	3.053	12.46	0.31	16.44		11	
455	14.5	4.06	-297.6	3.039	12.44	0.30	16.45		1.1	
457	14.5	9.06	-303.0	3.040	12.22	0.29	16.45	0.75	11	
459	14.4	9.06	-307.	3.037	12.37	0.29	16.45		16	
										/
				Casing Vol	ume in Gall	ons: 1" Diar	n = 0.041 ga	al/ft, 2" Dian	n = 0.163 gal.	/ft, 4" Diam = 0.653 gal/ft
V 18	W. 10.		S	mnle	Collec	tion In	forma	tion		
Sample	Number	Sample			lytes		ontainers	Preser	vatives	Duplicate (Y/N)
Ţ	P-5	151	5			5 VO/	ribers	HO	21	N
					T-1-				Callanda da	7
Collection	Method: Ba	iler //Perista	Itic Subm	ersible / Ot	THE RESERVE AND ADDRESS.	i Number o	n sample C	Containers	conected:	
			mun							

# Groundwater Monitoring Well Sample Form

Date:	Address:	Project Number: 01-0410-R Task 4	Project Name:
Date: 4/24/2023	Address: 10805 East Marginal Way, Tukwila, WA	01-0410-R Task 4	roject Name: Boeing Field Chevron

g-logics

Sampler: Hannah Spear

Commi	(A) IP-7	© IP-5	<b>9</b> IP-3	Upper Saturated Zone	(F) TW-5	S TW-4	3 TW-3	<b>○</b> Tw-2	<b>9</b> Tw-1	SVE-1	(I) IP-4	AS-1	Lower Saturated Zone	Well Identification
Comments: Total depths taken from previous phase of work	1080	754	0800 0837		344	151	742	732	736	758	0802	756		Time Opened
aken from previo	0864 0850	0828	0837		6680	0825	8180	8080	4180	0334	-	0831		Time Measured
us phase of wor	23'	24'	24'		12'	15'	10.17	10.2	10.18		0840	16'		Time Measured   Total Depth (feet)
^	12.32	N/A	NA		N/A	NIA	NIA	Z/A	NA	N/A	N/A	N/A	×	Depth to Product (feet)
¥ 14.55	オー	13.52	12.91		8.85	8.67	8.01	8.26	8.34	DRY	12:01	9.29		
O.	2.23	ZA	2/8		ZP	N/A	Z/A	NIA	NA	Z/A	1 19.01 N/A	N/A		Depth to Water Product Thickness (feet)
														Sheen Y/N
														Observations/Notes

Scale: 1 square =																OPICO TRUMBUL OFFICE TO 1889 PROCE		sample Individualment/ BOC before	1550 All the fic management down	sing all wells -	1556 Close and Tabel during	1525 Dave sampling IX-5, packing wo	Sampling IP-5	4/24/23 BFC Cont 01-0410-12
Scale: 1 square = Rite in the Ruin	Anal well, IP-+'-	1100 Dune sumpling IP-4, moving to	TP4	1040 IP 4 parameters stable, sampling	10/3 Begin purging IP4	TP-41	1000 Done sampling IP-3, packets	sampling TP-3	0940 IP-3 parameters stabilitecti	0904 Begin purging 18-3	we it is dry, west well is it is	to next well, skipping SIE-1 beca-	0853 Dow sampling AS-1, moving	Sampling AS-1	0824 AS-1 parameters stable,	4S-1	CARRY THE CONTRACT OF THE CONTRACT WELLS	0732 Showing to AS-1 for sampling, setting		-	1 ma this management set-up,	Transport of the solution of t	Hampah onsite	4/25/23 BFC 01-0410-R 9

Retrie to Rein	ET.								are =	1 squ	Scale: 1 square =										quare =	Scale: 1 square	50
	254 E	F31 8		E12 E	BSE 5		es f	E= 1		700 1		\$45	2.50	2 20	3 64	g 161				5			
							- 50			7 703	. 200			1/2		1274	*:0						
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							5.45				-			2 1		, ė.,							
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			era					-11	===		250		S 1		-								
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			i ege		100			0.00					T	2.5	- 1	-	İ	50.			+		
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		5						5.5	4.74	23-5	* 4	1			1	-						7	-
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12			* *3					. 53	4.3			C	MILI	150	esick	00	9	60	ack	2	VÜ	7	1
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19			100					200			S.C.	-	0				1	Ĺ	-	)	7,	-	V
			to d a					79.9				9	thing c	Set	7	7	6	INC	120	6	Udr	2	D
100		0.4	100	100				202	h =		5.7			-	120	9	KER	5	1	2	2	7	4
		1						20			100	-	t	200	1	- (		1- 2	2		-	2	7
2.0		200	151	03.4				E0:00		174	51	100	4 12	5	2	5	7 0	Ų.	+	2	37	0	
												10-10	N-01-8-10-K	A.		601	(0	7			2	125	-
												)					,	1 1 1			3		Ç



Well ID :	AS-1			Project	Number:	01-0410-	R	Samplin	g Date:	1 1/2-122
				1			2 1			4/25/23
Total Depth	LOCK W. C.				ıme in Casiı	1	,11	Sampler:		
	n Interval (ft):				hod: Low				: YSI, per	-pump, interface
Vell Diame					to Water (ft			probe		
	ake Depth: ال	and the second of			Purge Volu		3,33	Well Cond		2 of 2 bolts
Starting De	epth to Water	(ft): 9.17		Total Volur	me Purged (	(gal): ~()	75	-	1103179	20/2 00/10
			Grou	ndwat	er Par	amete	r Moni	toring		
Time	TEMP	pН	ORP	COND	TURB	DO	DTW	Volume		Notes
	°C	SU	mV	mS/cm	NTU	mg/L	feet	gallons	(Арр	earance, Odors, Etc.)
	± 3%	± 0.1	± 10	± 3%	± 10%	± 10%	<0.33			
1753	12.5	9.74	-4.4	9.339	509.18	4.58	10.01		dark	brun, petro o
755	12.60	9.43	-7.1	9.505	439.61	2.36	10.10	_	11	
757	12.5	9.103	-10.9	9.482	47879	2.112	10.15	-	i,	
759	12.4	91,2	-15.7	9471	42421	11.11	1001		Vani 1	ark brown petro
1 ~ 1	1211	1.60	202	C 20T	21211	1.07	1621	DIT		WE BROWN DOING
801	12,4	4.01	-20.5	4,325	212.14	1,09	10.27	0.15	i (	
803	12.4	9.52	-25.0	8.301	253.96	0.93	10,29		lt.	
805	12.3	9.26	-30.6	6.128	235.91	0.85	10.33		11	
1807	12.3	8.83	-38.10	4.731	20637	0.80	10.36		Cleani	aun Slinhtly
809	12.2	8 23	-521	2 Glai	168 60	178	11128	0.25	li li	4 ap my my
-	12 2	7,0	-1110	2 125	100-01	0.70	10.55	0.20	NI.	
811	12.2	7.69	64.7	0.500	110.42	0.79	10.71			<del></del>
813	12.2	7.31	-66. t	3,322	10.08	0.7+	10.45		h.	V
815	12.2	7.14	-659	3,268	63.52	0.76	10.44		11	
817	12.2	7.06	-106.4	3.247	49.22	0.73	10.44	0.4	redde	sh-brown, pet
819	12.2	7.02	-680	3,258	43.65	0.71	10.44		, ii	",
168	122	7.01	-707	3186	37.36	1168	10.44	0.5	11	
823	122	7.01	-123	3 343	2791	11.8	11.43		11	
020	1000	7.01	10.0	2,010	57.10	0.63	70.15		-	
			Sa		lume in Gall	Mark THE STREET			m = 0.163 ga	ll/ft, 4" Diam = 0.653 gal/fi
Sample	e Number	Sample		ī —	lytes	r	Containers	T -	vatives	Duplicate (Y/N)
A.	S-1	08	35			5 VOA 2 01m	S DELC	HC	1	N
7		0.5				Z CAII	WCF 3	110	,	
										7
Collection	Method: Ba	iler (Periete	itic dente	areible / O		Number o	of Sample (	Containers	Collected:	7
-0116011011			Drum	craine / Ol						



Well ID	IP-3			The state of the s		01-0410-		nation Samplin	g Date: ∠	4/25/23
otal Dept	h (ft): 24	27.11		Water Volu	ıme in Casi	ng (gal):	75	Sampler: I		1100120
	n Interval (ft)	:		Purge Met		Flow	1)			i-pump, interface
Vell Diam	eter (in):	2			to Water (f		~	probe	TOI, poi	rpanip, interrace
Tubing Inta	ake Depth: J	275		Calculated	Purge Volu	ıme (gal): т	74.	Well Condi	tions:	
Starting De	epth to Water	(ft): 13.20	9			(gal): /		N	issing se	al i 2 cf 2 belt
	1	ayy lan	,			amete	-	toring	E. S.	
Time	TEMP	рН	ORP	COND	TURB	DO	DTW	Volume		Notes
	°C	SU	mV	mS/cm	NTU	mg/L	feet	gallons	(App	earance, Odors, Etc.)
	± 3%	± 0.1	± 10	± 3%	± 10%	± 10%	<0.33			
9913	13.4	7.74	-20.4	3.660	82.71	1.14	13.31	-	clear	petro odo
915	13.0	7.71	-23.8	3647	34.17	0,95	13.32		ŁĮ.	//
1917	13.3	7.71	-30.2	3 636	23,21	0.74	13.32		11	
1919	13.3	7.71	-40,60	3.641	13.9 F	0.62	13.33	0.1	t <sub>l</sub>	.,
1921	13.4	7.72	-5)4	31041	10.58	0.55	13.3.2		ts.	
1973	13.4	773	-105.8	3 633	895	0.50	13 32		11	1 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
1975	13.5	7711	-71,8	31,75	8.67	A 410	1222	0.2	11	
1977	13.5	775	-88.0	3/1/15	8.59	0.10	12 22	012	li	
1929		775	-07 G	2 0-	9.59	6/17	12-23		1(	
الما	13.5	7.77	97.	3.597	7,74	0.42	12.22	117	11	
1931	13.5	1. th	-106.6	2.5 19	8.50	0.40	12.33	0.3		
9933	13.5	7.76	-114.6	3.562	8.39	0.38	13.55		T.F.	
9935	13.6	1.10	-124.0	5,541	8.26	0.57	13.53		3.4	
1437	13.6	7.75	-127.8	3.55t	8.55	0.36	13.33	0.5	) 1	
)939	13.6	7.75	-133.5	5.526	8.37	0.35	13.33		- 1/	
				-						
				Casing Vol	ume in Gall	ons: 1" Dian	n = 0.041 ga	al/ft, 2" Diam	ı = 0.163 ga	l/ft, 4" Diam = 0.653 ga
			Sa	mple	Collec	tion In	forma	tion		
Sample	Number	Sample	Time	Ana	lytes	Sample C	100	Preserv	atives	Duplicate (Y/N)
IP	-3	095	0			5 1 A	ubers	H	01	N
					g=30	7 a 2 8	28 G S			7
ollection	Method: Bai	iler / Porieta	tic Subm	areible / Or		l Number o	f Sample C	ontainers (	Collected:	7
	er Disposal	ASSESSMENT OF REAL PROPERTY.	Drum	A CONTRACTOR OF THE PARTY OF TH	iici.					

Mall ID	ID 4		Olou		THE RESERVE AND ADDRESS.	THE R. LEWIS CO., LANSING, MICH.	A STATE OF THE PARTY OF THE PAR	nation	a Dote:	1 1 2
Well ID :	IP-4			Project	Number:	01-0410-	K	Samplin	g Date: Z	1/25/23
Total Depth	n (ft): <b>14</b>	1		Water Volu	ıme in Casiı	ng (gal):	1.82	Sampler: I		7
	n Interval (ft):			Purge Meti	- LUV	Flow			: YSI, peri-	pump, interface
Well Diame					to Water (fi		*	probe		
Tubing Inta	ike Depth: 13	.75		l	Purge Volu	126	2,45	Well Condi	itions:	seal. 7 ( L) lail
Starting De	epth to Water	(ft): 8 90	1	Total Volur	ne Purged (	(gal): 1 (	0.5	plun	15 111-	seal, 2 of 2 bill
			Grou	ndwat	er Par	amete	r Moni	toring		
Time	TEMP	рН	ORP	COND	TURB	DO	DTW	Volume		Notes
	° C	SU	mV	mS/cm	NTU	mg/L	feet	gallons	(Appe	arance, Odors, Etc.)
1611	± 3%	± 0.1	±10	±3%	±10%	±10%	<0.33		/	- Abo - la
1016	12.4	7.30	117 D	1.670	105.23	5.27	9.18			-, petro-odo
1018	12.4	6.93	-47.8	1,645	14.81	1. td	9.20		((	
620	12.3	6.75	38.6	1.583	58.39	1.20	9.23		13	
1022	12.3	6.68	-35.7	1,554	40.93	0.93	9.25	0.1	1.1	
024	12.4	6.65	-34.7	1.556	38.30	0.79	9.26		71	
1026	12.4	6.65	-35.6	1.562	37.16	0.70	9.20		l <sub>I</sub>	
028	12.4	664	-37.2	1.572	32.07	0.63	9.22	-	t (	
1030	124	10.117	-394	1.675	20.65	0.59	924	0.2	Clear	petro odor
1032	12.4	12/19	-41.5	1701	21018	0.54	9 2/2	-	li	10000000
1034	12.5	1.71	-4110	1720	22011	0.51	028	-	- 11	
	12.5	1. 72	-49	121.	2117	6.17	9.29	0.3	it	
1036	125	175	-F10	1.162	20.61	0.47	112	V. )	- 11	
038	12-5	6.75	-52.8	1.785	29-54	0.45	9.29	-	11	
1040	12.5	4. TT	-56.1	1.838	27.73	0.43	9.30	_	5.3	
				Casing Vol	ume in Gall	ons: 1" Diar	n = 0.041 g	al/ft, 2" Diar	n = 0.163 gal	ft, 4" Diam = 0.653 gal/l
1		10,700	Sa	mple	Collec	tion In	forma	tion		
Sample	Number	Sample			lytes		ontainers	T	vatives	Duplicate (Y/N)
TP		105				5 VOA 2 AW	5)	HC	1/	Λ/
11		100	0			2 AW	nevs	110	-1	/ (
								_		
					Tota	l Number o	of Sample (	Containers	Collected:	
Collection	Method: Ba	iler //Perista	Itic / Subm	ersible / Ot						
	ter Disposal									



			Grou	ındwa	ter Sar	mpling	Inforr			
Vell ID :	IP-7			Project	Number:	01-0410-	R	Samplin	g Date: ¿	1/25/23
otal Depth	(ft): 23				ıme in Casi		,45	Sampler: F		
Vell Screen	n Interval (ft)			Purge Meti	nod:Low	- Floi,	1	Equipment	: YSI, peri	-pump, interface
Vell Diame	eter (in):			End Depth	to Water (f	t): 14 35		probe		
ubing Inta	ke Depth: 2	2.75		Calculated	Purge Volu	me (gal): )	1.33.	Well Condi	tions:	13 haits hut
tarting De	pth to Water	(ft):14,14		Total Volur	me Purged	(gal): v ()	.8	Cacin	a has 1	13 buits but 10 holes, no s
	S. Maria		Grou	ndwat	er Par	amete	r Moni			
Time	TEMP	pH	ORP	COND	TURB	DO	DTW	Volume		Notes
	° C	SU	mV	mS/cm	NTU	mg/L	feet	gallons	(Appe	earance, Odors, Etc.)
10.00	± 3%	± 0.1	±10	± 3%	±10%	± 10%	<0.33			
138	13.9	6.68	-9.4	0.723	27.91	2.14	14.15		clear	, petro odor,
140	13.8	6.45	4.4	0.707	16.75	1.21	14.16		CT	
42	13.8	6.39	7.6	0.698	11.42	0.87	14.18		11	
44	13.8	637	10,9	0.685	874	0.71	1420		11	
14/2	13.8	6.36	5.4	0.684	le.90	0.63	14 70		11	
1110	13.9			U, WOT	10.90	0.60	17.20			· · · · · · · · · · · · · · · · · · ·
148	15.7	6.34	3.2	0. —					/ /	ump disconnec
50				4 0		4 -	1 17			unp stopped
52	13.4	4.35	-1,9	0.678	5,91	0.75	14.25		clear	vetro ador,
154	13.3	6.34	-3.4	0.678	6.73	0.65	14.26	0.3	11	,
156	13.3	6.33	-5,1	0.1078	5.98	0.57	14.27		71	
58	133	6.33	-75	0.478	507	153	14.30		11	
200	13.3	1.27	-1/1 3	11.78	528	A 40	1421	14	11	
2// 2	13.3	1 27	123	0.010	5 71	147	111.21	0,1	1,	
202	-	127	15.0	6.010	5111	0.11	111.25		L.	
204	13.3	6.32	15.5	0.679	5.41	0,45	14.30			
_		1								
				Casing Vol	ume in Gall	ons: 1" Diai	n = 0.041 g	al/ft, 2" Diar	n = 0.163 ga	l/ft, 4" Diam = 0.653 gal/i
			Sa	ample	Collec	tion In	forma	tion		
Sample	Number	Sample	Time	Ana	lytes		ontainers	Preser	vatives	Duplicate (Y/N)
IP.	-7	121	5			5 VOA	subers	HC	1	$\mathcal{N}$
					Tota	Il Number o	of Sample (	Containers	Collected:	7
ollection	Method: Ba	iler / Perista	ltig / Subm	ersible / Ot						
urge Wat	er Disposal	Method:								
	Comments:									

# July 2023

Т	
	7/19/23 Boeing Field Chevron 01-0410-R31
	0645 Hannah Onsite
	0654 Done Checking in with store staff
٠	and setting up truffic management
	bust Begin setting up decon station
•	set up n'en drum
4	0710 Begin opening wells in Specified
	Order -
	0732 All wells open, going to begin
	gauging water levels of interface prope
	U743 Proubleshooting interface probe
	0752 Tried new battery, did not solve,
	probe is not sounding in any water,
	call to Mike, will call Pine when
	they open at 8 AM to rent
	interface probe, will go pick up if they cannot deliver ASAP
	0757 Securing well lids
	0805 Hannah offsite to Pine
	08/6 Hannah back on site with interface
	probe from Pine
	0820 Keopen; gauge wells
	0855 Well gauging complete, decon
	between each usel, product only
	in ID-7, SVE-1 dry
	0856 Preparing for sampling -
	Scale: 1 square = Rete in the Rein.

37/19/23 Boeing Field Cherron 01-04/0-8 Boeing Field Chevron 01-04/6 0911 Begin purging TW-2 purned, so going to sample TW-5 Sampled, moving 0920 TN-2 ran dry 0930 Call to Mike about dry well, to TW-3 to sample says once well runs dry, wait Not able to get any water for it to recover, then sample from TW-3 after waiting 1.5 0942 Only able to fill ~ 1/3 of amber, recover for it to going to move to next well & return Contact Mike about well Begin purging TW-4 Tater TN-4 parameters stable, Begin purging TW-Done purging TW-1, prepping to to sample Sample, taking Duplicate 1418 Begin purging IP-5 Done sampling TW-1 Sampling IP-5 1450 up to go back to TW-2 1507 Done sampling IP-5, pack Able to get 3 was and, amber from TW-2, will the one closed, wells closed more time, moving to TW-3 how taking down Int packed 1113 Begin purging TW-3 management 1125 TW-3 randry, waiting for 1540 Hannah offsite to Issaguah it to recover before sampling Office 1146 Done Sampling TW-2, able to get 1.5 ambers - 8 VOAS 1152 Jetting up at TW-5 1159 Begin purging TW-5 1235 ORP & turbidity not quite Stabilized yet, but 3 well volumes Rete in Scale: 1 square = Scale: 1 square =



±	erval (ft): (in): 2"				· umber.	01-0410-		Sampling	Juace.	1110/12	
rell Screen Interell Diameter (in ubing Intake Dearting Depth to	erval (ft): (in): 2 '				The second second second			7/19/23			
rell Diameter (in ubing Intake Defined Intake Defin	(in): 2 '				ıme in Casiı	ng (gal): (	11.0	Sampler: H	VS		
arting Depth to	Depth: \((			Purge Meti	(-1)VI	Flow	)	Equipment:	YSI, Peri-	Pump, interface probe	
Time TE				End Depth	to Water (fi	DRY		1			
Time TE	10/0400	)		Calculated	Purge Volu	me (gal):		Well Condit	ions:		
Time TE	to vvater (	ft): 9 54		Total Volur	ne Purged (	(gal): ()	)				
±				undwater Parameter Moni				toring			
±	TEMP	рН	ORP	COND	TURB	DO	DTW	Volume		Notes	
2 2	°C	SU	mV	mS/cm	NTU	mg/L	feet	gallons	(Appe	earance, Odors, Etc.)	
713 98	± 3%	± 0.1	± 10	± 3%	± 10%	± 10%	<0.33			_	
1.7	\$19.La	6.98	5099	1.439	28 39	230	991				
1915 19	-		506.8	1.428	18/17	211	1.10				
		6.95		1,720	18.42	X.11	9.95				
	0.0	6.92	502.0	1.430	15.77	1.82	10.10		dea	r	
919 20	0.2	690	497.3	1.428	19.63	1.72	DRY	0.2	clony	-, well ran d	
								Ŭ	Clean	10001110011	
	_										
						4					
									-		
-											
				90 a							
-	-										
- 1	- 1										
							a.				
						7					
	-										
			į	Casing Vol	ume in Gallo	ons: 1" Dian	n = 0.041 ga	al/ft, 2" Diam	= 0.163 gai	/ft, 4" Diam = 0.653 gal/ft	
			Sa	mple	Collec	tion In	forma	tion		Mary Mary	
Sample Num	mber	Sample	Time	Anal	ytes	Sample C	ontainers	Preserv	atives	Duplicate (Y/N)	
TW-	2	104	45			5 VOA	S	HO	1		
1. 1. 24	~	, , ,				2 AV	(Her)	110	/1		
		<u></u>				1					
			7			l Number o	f Sample C	ontainers C	ollected:	7	
ollection Meth		-		ersible / Ot	her:						
irge Water Dis		lethod: DR	UM								
Iditional Comm	ments:			and-		1277		wate			



and the st			NE HOLD THE		SEOS		Carried .			
Well ID :	TW-1				Number:			nation Sampling	Date:	1/19/23
otal Donth	(ft): 10.18			Water Volu	ıme in Casir	og (gal): o	00	Sampler: H	The state of the s	111/25
	Interval (ft):				hod: Lov		,09	Equipment: YSI, Peri-Pump, interface prob		
Vell Diame				End Depth	to Water (ft	);		Equipment		amp, mondoc pro
Tubing Intal		^			Purge Volu			Well Condit	ions:	
	oth to Water	(ft): (1 1 -			ne Purged (			-		
		9.0			er Par		r Moni	toring		
Time	TEMP	pH	ORP	COND	TURB	DO	DTW	Volume	Notes	Notes
Ī	°C	SU	mV	mS/cm	NTU	mg/L	feet	gallons	(Appea	rance, Odors, Etc.)
$\dashv$	± 3%	± 0.1	±10	± 3%	± 10%	± 10%	<0.33			
0951	19.0	8.93	436.6	1.508	513.49	2.00	9.45		brown (	loudy
1953	18.7	8.39	445.9	1,501	345,40	1-50	9.82		\$1	/
0955	18.9	8.010	452.7	1.512	14186	1.20	9.84		clearin	00 410
1957	18.8	7.99	456.1	1.533	70.50	1.04	9.84	0.2	11	9.3
959	18.7	7910	457 8	1549	21.17	0.05	9.84		Clony	- no odor
1001	18.7	7 00	4570	156	501	190	9.84		11	110 0001
1001		0 00	157.0	1550	1/10	107	9.84	0.3	ti	
1005	18.5	0,00	LIFE	1.009	1,40	118.0	10	0.2		
1005	18.5	8.04	765.7	1.5 10	0.69	0.80	9.84			noodor
100 +	18.5	8.08	454.0	1.571	0.77	0.74	9.84		- 11	
1009	18.5	8.09	452.3	1.584	0.53	0.71	9.84		- (1	
1011	18.5	8.13	450,10	1.593	0.29	0.69	9.84	0.5	clear	no odor
			-							
				Casing Vo	lume in Gall	ons: 1" Dia	m = 0.041 g	gal/ft, 2" Dian	n = 0.163 gal/	ft, 4" Diam = 0.653 ga
			Sa	mnle	Collec	tion In	forma	tion		The same of the same of
Sample	Number	Sampl		[	lytes		Containers	T	vatives	Duplicate (Y/N)
T	1-1		15				mbers	H	71	V
Dur	V					5 VO.	AS mbers	HA	7	
DU	)-	0.9	0.0			2 P	mbers	110	/ (	
College!	Mother C	ilor /b	altia) Cont	arallele (C		l Number	of Sample	Containers (	Collected:	14
	Method: Ba	Method: DF	and the same of the same of	ersible / O	uier:					
Purge Wat										



Well ID: Total Depth Well Screen Well Diame								nation				
Well Screen	/#\· 10 17			Project i	Number:	01-0410-	R	Sampling Date: 7/19/2 3				
Well Screen	(11). 10.17			Water Volu	me in Casir	ng (gal): /	17	Sampler: HVS				
Nell Diame	n Interval (ft):			Purge Meth	nod: ZA	U-F101	1)	Equipment: YSI, Peri-Pump, interface probe				
	eter (in):			End Depth	to Water (ft		1					
Tubing Inta	ke Depth: /	0		Calculated	Purge Volu	me (gal):	1	Well Conditi	ons:			
Starting De	pth to Water			Total Volur	ne Purged (	gal):	-					
			Name and Address of the Owner, where the Owner, which is the Owner, where the Owner, which is the Owner, where the Owner, which is the Owner,	ndwat			r Moni	toring				
Time	TEMP	pH	ORP	COND	TURB	DO	DTW	Volume	() Pro-	Notes		
	°C	SU	mV	mS/cm	NTU	mg/L	feet	gallons	(App	earance, Odors, Etc.)		
	± 3%	± 0.1	± 10	± 3%	± 10%	± 10%	<0.33					
1115	20.8	7.82	5325	1.331	12.52	1.83	9.59		Clea	r		
1117	20.0	708	500 ()	1 208	17/10	111	971		11	-1		
1110	20.0	100	1111 5	1 210	0.70	0.8//	900	11 1	11			
1117	20.2	(0.84	741.0	1.010	0.50	0.07	1.07	0.1				
1121	20.5	6.77	281.60	1.315	0.50	0.12	10.05	-	cle	ar, no odor		
1123	20.7	6.75	325.5	1.318	0.55	0-59	10.16		te	** *** *** ** *** *** *** *** *** ***		
_									DRY	/		
									/			
								-				
-												
										- 2		
								-				
		1										
> 1 3 8 4			0-					42	= 0.163 ga	al/ft, 4" Diam = 0.653 gal/ft		
				mple								
Sample	Number	Sample	e Time	Ana	lytes	Sample C	ontainers	Preserv	atives	Duplicate (Y/N)		
TW	-3											
		11 11			Tota	l Number o	of Sample (	Containers C	ollected:	-		
Collection	Method: Bai	ler (Perista	iltic Subm	ersible / Ot			4,500,700					
Purge Wat	er DisposaL	Method: DR	MUM									
Additional (	Comments:	Dump e	on los.	pst b	retting	to a	still o	get o	vate	t water to S		
	i.	vell ri	and	71 . 1	waitil	in L	FVA	cham	×0 +	Sam - 10		
	4	1	1	9 / 0	Our ( )V	9 10	1 10	CVIUNC	10 11	o samp a		

	A SECTION AND ADDRESS OF	GIUU		ter Sar						
Well ID: TW-5			Project I	Number:	01-0410-	R	Samplin	g Date: 7	-119/23	
Total Depth (ft): 12			Water Volu	ıme in Casir	ng (gal): ^	37	Sampler: H	IVS	1.1120	
Well Screen Interval (	t):		Purge Met	nod: LOW	FIDW	13	Equipment	YSI, Peri-F	Pump, interface probe	
Well Diameter (in):			End Depth	to Water (ft	10.0	5				
Tubing Intake Depth:	11.75		Calculated	Purge Volu	me (gal):	.01	Well Condi	tions:		
Starting Depth to Wat	er (ft): Ma	2	Total Volur	ne Purged (	gal):   2	Б				
	9.9	3 Grou	ndwat	er Para	amete	r Moni	toring	A	H 5 7 19 5 19 5	
Time TEMP	pH	ORP	COND		DO	DTW	Volume	Notes		
° C	SU	mV	mS/cm	NTU	mg/L	feet	gallons	(Appea	arance, Odors, Etc.)	
± 3%	± 0.1	±10	±3%	±10%	± 10%	<0.33				
1204 17.7	9.30	460.3	1.818	85.94	1.43	10.23	_	Sligh		
1206 17.3	19.12	429.4	7.520	47.74	0.70	10.27		Bligh	todor shee	
1208 17.1	9.03	380.8	7.058	26.28	0.51	10.33		11 0	Į.	
1210 17.2	9.01	325.5	6,409	19.55	0.43	10.36	0.2	li.		
1212 17.2	8.99	2721	5 431	1271	0.38	10.39		cleari	00 110	
1714 177	893	20118	11 1272	974	135	10 40		Li	gap	
2110 17	8.88	100 1	4.010	1.97	0.31	10,10	0.4			
218 17.	8 011	109.	CFC.T	0112	10.07	10.12	0.3	clear		
210 17.1	0.84	-18.8	4.135	5.27	0.52	10.73				
220 17.0	8.82	-64.8	4.049	4.08	0.31	10.43	-	l i		
222 17.0	8.80	-122.1	3.492	2.78	0.30	10.44	0.7	H		
1224 17.0	8.81	-169.6	3.962	2.63	0.29	10.45		Clear		
226 16.8	8.82	-196,9	3,960	1.75	0.28	10.45		13		
228 110.7	8.84	-215.0	3.955	0.86	0.27	10.45	0.9	l i		
230 1/18	8.84	-2 29.5	3 962	0.41	0.27	10,45		n		
232 16.8	8.85	-)38/	3961	0.23	0.26	10.45		cloar		
234 16.8	8.87	- 241, 2	3958	1	-	10.45	1.1	11		
23110.0	5-0 /	X 10,	0,100	0.17	0.20	10.0	( )			
		Q.		ume in Gallo				n = 0.163 gal/	fft, 4" Diam = 0.653 gal/ft	
Sample Number	Sampl	e Time		lytes		ontainers	Preser	vetives	Durlingto (VAI)	
	Jampi	11.6	Alla	iyles		- 100 MI INC 100		,	Duplicate (Y/N)	
TW-5	10	40			DO A	Mbers	HC	2/		
	1									
									7	
Collection Mathew	Pailor Delic	altic hout	anallele ( S.		l Number o	of Sample C	containers	Collected:		
Collection Method: I			ersible / Ot	ner:						
Purge Water Dispos	di Mitalitata i in	CLIMI								

3 well volumes purged before sampling

			Grou	ındwat	er San	npling	Inform	nation				
Well ID :	TW-4			C115	Number:			Samplin	g Date: -	1/19/23		
Total Depth	(ft): 15			Water Volu	me in Casir	ng (gal): 0	2.80	Sampler: HVS				
Well Screen	n Interval (ft):			Purge Meth	nod: Low	-Flou	)	Equipment	YSI, Peri-F	Pump, interface probe		
Well Diame	ter (in):				to Water (ft	1 ( + (						
Tubing Intal	ke Depth:	1.75			Purge Volu		1	Well Condi	tions:			
Starting De	pth to Water	(ft): / ().C	19	Total Volur	ne Purged (	gal):						
			Grou	ndwat	er Par	amete	r Moni	toring	toring			
Time	TEMP	pН	ORP	COND	TURB	DO	DTW	Volume		Notes		
	° C	SU	mV	mS/cm	NTU 1.400/	mg/L	feet	gallons	(Appe	arance, Odors, Etc.)		
1222	± 3%	± 0.1	± 10	± 3%	± 10%	±10%	<0.33		1	ls /		
1000	19.0	10.00	188.+	2424	100.18	1.80	10.0x	***	brown	Cloudy		
1335	18. F	9.83	198.8	2.046	41241	1.17	10.13		1)			
1337	14.5	9.27	210.7	1.909	190.79	0.89	10.84		11			
1339	39 19.8 8.72 2210.			1.812	60.78	0.74	10.95	0.2	Clear	ing up		
1341	341 19.8 8.15 243.5				31.50	0.67	11.03	165	0120	ir no odor		
1343	343 19.10 7.83 258.0				14.21	0.102	11.10		V	· / · / · /		
345	19.3	7/10/0	2701	118/1	457	0.56	11.18	-	11			
1347	105	7 50	7788	1 681	177	050	11 76	_	11			
13401	240 10 5 751 2851				157	11 50	11 211	145	2/224			
1251	49 19.5 7.56 285.			1.66	1.57	0.00	11.04	0.45		Mooder		
1351	19.6	7.50	291.1	1.653	0.16	0.48	11.40	(1) (	11			
1353	19,6	1.52	294.0	1.646	0.+7	0.47	11.45	0.6				
1355	19.6	7.50	299.0	1.640	0.78	0.47	11.51	-	10			
									m = 0.163 gal	l/ft, 4" Diam = 0.653 gal/f		
10,1107				ample		Y		T	and great			
Sample	Number	Sampl	e Time	Ana	alytes		Containers	Preser	vatives	Duplicate (Y/N)		
Th	1-4	140	15			2 VO	As	H	C/			
		-		-				-				
					Tota	l Number	of Sample	Containers	Collected:	7		
	Method: Ba			nersible / O	ther:							
	ter Disposal											
Additional	Comments:	Pump o	n lowe	est s	etting	to s	till ge	t wa	ter			



				LAS C	THE PERSON NAMED IN	1000			WEST			
Well ID :	IP-5		Grot	CALL MAN TO SERVICE AND ADDRESS OF THE PARTY		<b>npling</b> 01-0410-		nation Samplin		7/10/22		
					ıme in Casiı					7/19/23		
Total Depth	(ft): <b>∠4</b> n Interval (ft):			Purge Meth		1.	06	Sampler: HVS  Equipment: YSI, Peri-Pump, interface probe				
Well Diamet				End Depth	Plow 17.4	$\alpha$	Equipment: 131, Peri-Pump, Interface probe					
	ke Depth: 2	2 7 5							tions:			
	oth to Water		^		ne Purged (	ن	5,18	Well Corlai	Well Conditions:			
Miller et al Cr		(ft): 17-51				1.0	Mani		A Landay Co			
Time	TEMP	-11	_	ndwat						Netes		
Time	° C	pH SU	ORP mV	mS/cm	TURB NTU	mg/L	DTW feet	Volume gallons	(Apr	Notes pearance, Odors, Etc.)		
	± 3%	± 0.1	± 10	± 3%	± 10%	±10%	<0.33					
1420	17.7	8,27	685.8	3,340	351.92	1.46	17-55		dark	brown claud		
422	17.4	7.93	733.5	3.315	28693	0.91	17.55		1(			
424	17.7	7.77	735.0	3,330	150.78	0.63	17.55	0.2	11			
4210	17.3	7.73	706.2	3,294	1010,01	0.52	17.54		clea	ring up petr		
428	17.0	771	6564	32/010	31,50	0.410	17.54		11	J THEIR		
1420	1100	7.70	51el.4	3 21/10	22 00	0.42	1752	15	11			
427	16.8	770	474 1	3 748	55 19	0.12	17.52		11			
424	1107	7100	2117	3 2/12	HU MI	(127	1750		и			
1421	121-11-9 71-7 200 9				11207	0.37	1767	0.8		11 - 1 - 1 -		
1129	36 16.9 7.6+ 388.9			3.152	70/17	0.27/	17.52	0.0		tly cloudy		
450	16.9	71.1	360.7	3.066	19.65	0.04	1162		1)			
440	14.8	7.66	316.6	3.027	200,15	0.33	17.00		71			
442	16.8	1.65	281.0	3.000	29192	0.32	17.50			,		
144	16.9	7.64	265.4	2.445	221.71	0.01	17.49		Clor	idy		
440	16.8	1.60	264.0	2.988	364.66	0.30	17.49	1.25	11	· ·		
1448	16.8	7.62	268.9	2.975	240.66	0.30	1749	1.25	Slight	Hy cloudy		
										<u> </u>		
	<u> </u>											
				Casing Vol	ume in Gall	ons: 1" Diar	n = 0.041 g	al/ft, 2" Dian	n = 0.163 g	al/ft, 4" Diam = 0.653 gal/ft		
				mple								
Sample	Number	Sample	e Time	Ana	lytes		ontainers	Presen	vatives	Duplicate (Y/N)		
IP	7-5	150	0			5 VOA	spers	HC	2/			
			-			l Number o	f Sample (	Containers (	Collected:	7		
	Method: Ba	iler (Perista	Itic/Subm	ersible / Ot	her:							
		Method: DR	are the same of th									

#### Groundwater Monitoring Well Sample Form

Project Name:	Boeing Field Chevron
Project Number:	01-0410-R Task 4
A	

g-logics

Address: 10805 East Marginal Way, Tukwila, WA

Date: 7/19/2023

Sampler: Hannah Spear

Well Identification	Time Opened	Time Measured		Depth to Product (feet)	Depth to Water (feet)	Product Thickness (feet)	Sheen Y/N	Observations/Notes
Lower Saturated Zone							1	
(7) AS-1	0723	0839	16'	NA	10.36	N/A		
(10) IP-4	0729	0845	14'	N/A	10.08	N/A	46	
SVE-1	0726	0840	1	N/A	DRY	N/A		DRYWELL
<ul><li>ТW-1</li></ul>	0714	0825	10.18	N/A	9.61	N/A		
<b>0</b> TW-2	0712	0822	10.2	N/A	9.54	N/A		
	0716	0878	10.17	NA	9.15	NA		
3 TW-3	V720	0834	15'	N/A	10.09	N/A		
(4) TW-5	0718	0831	12'	NIA	10.93	NIA		
Upper Saturated Zone					(9.93			
<b>9</b> IP-3	0728	0843	24'	N/A	14.22	N/A		
(1) IP-7	0721	0834	24'	N/A	1497	NIA		
(II) IP-7	0731	0849	23'	13.63	16.29	2.66		

Comments: Total depths taken from previous phase of work

34/20/23 Boeing Field Cherron (BFC) 01-0410-R	7/20/23 BFC 01-0410-R
Wells, Waiting for them to leave	purging/sampling equipment
Station set up, unpacking equipment,	1135 IP-7 parameters Stable, Setting
a truck is Still blocking well AS-1	up to sample
0713 Setting up at IP-3 - 0715 Driver of truck just returned,	1152 Done sampling IP-7, beginning to pack up for the day
will start at AS-1 instead as	1158 Wells closed -
planned	1223 Drum closed 1235 Hannah offsite to Pine to
0729 Begin purging AS-1	drop-off equipment, then to
0815 AS-1 parameters Stabilized, prepping to sample	Issagnah office
0838 Done sampling AS-1, setting up	
0845 Begin purging IP-3 ————————————————————————————————————	
orepping to sample	
0945 Done sampling IP-3, moving to	
0955 Begin purging IP-4	
1015 IP-4 paratheters stable,	
prepping to sample 1040 Setting up to bail IP-7 product	
before sampling	
Scale: 1 square =	Scale: 1 square =



	State L		Grou	ındwa						THE STREET	
Well ID:	AS-1			Project I	Number:	01-0410-	R	Samplin	g Date:	7/20/23	1
Total Depth	(ft): <b>16</b>			Water Volu	me in Casir	ng (gal):	0.92	Sampler: HVS			
Well Screen	Interval (ft):			Purge Meth	nod: Low	1- Flow	)	Equipment: YSI, Peri-Pump, interface probe			
Vell Diamet	er (in): 2	ų		End Depth	to Water (ft	t): 12.0	1	<i>!</i> -			
Tubing Intak		5.75		Calculated Purge Volume (gal): 2.75					tions:		ĺ
Starting Dep	th to Water	(ft): 10.31	g	Total Volume Purged (gal): 1.75							
		7.19		ndwat	er Par	amete	r Moni	toring	Hast		1
Time	TEMP	pН	ORP	COND	TURB	DO	DTW	Volume		1	
-	° C	SU	mV	mS/cm	NTU	mg/L	feet	gallons	(App	earance, Odors, Etc.)	
0.7.2.1	± 3%	± 0.1	± 10	±3%	± 10%	±10%	<0.33			- 4 4 1	1.
0731	16.6	8.85	540.6	4.123	244.30	2.37	11.02		greu	ish cloudy, or	dor
1733	16.4	8.67	508.4	4.036	3417	1.45	11.15		VI.	,	
J735	17.1	8.28	511.5	3.906	424.62	1.06	11.35		t <sub>1</sub>		
3737	17.4	8.15	6055	3.855	379.12	0.88	11.45	0.1	ιι		
1739	17.10	8.01	561.4	3.673	293.51	0.77	11.54		1.7		
0741	17.0	7.109	584.3	3,224	286.18	0,71	11.1.2		grey	cloudy, clear	100
7742	171	747	1000	7 187	35821	0.64	1131		9100	Towny 10 1800	J
1745	17/1	7 14	7167	2 761	212 12	0.07	1110	1) 15	11		1
2117	11.1.	710	1912	1 20 2	28211	0.02	11.10	0.20	11		1
0747	16.6	7.10	670.0	1.193	200.00	0.09	11.84		-		16 7
0749	16.6	7.16	694.4	1.934	254.35	0.56	11.87	0 =	Slight	ly grey cloudy	1h 7
0751	16.6	1.15	6264	1.997 238760.54 11.92 0.5				. 0			
1753	16.6	7.16	596.0	2.053	225,18	0.51	11.95		.Cr		
755	16.6	7.16	689.1	2.101	194.13	0.50	11.96		1.5		1
757	110.10	7.16	635.1	2.153	161.54	0.48	11.97	0.8	tı		1
759	16.6	7.18	596.7	2.235	152.86	0.47	11.99		1 (		
1080	16.5	7.19	578.0	2.284	105.62	0.46	12.00		Slight	ly cloudy or	lor
0803	16.5	7.19	562.1	2.353	103.62	0.45	12.00	1.0	- Uni	of Classification	COV
				Casing Vol	ume in Gallo				n = 0.163 ga	al/ft, 4" Diam = 0.653 gal/ft	
Sample I	Number	Sample		Anal		Sample C		Preserv	atives	Duplicate (Y/N)	
					,	5 VOF		11/	1	bupileate (1714)	
AS-	-1	083	20			2 Ami	pers	HC.	1		
		,				l Number o	f Sample C	ontainers (	Collected:	7	
		ler (Perista		ersible / Ot	her:						
Purge Wate Additional Co	r Disposal	Method: DR	n lones								ı

# (7)

			Grou	ındwa	ter Sar	npling	Inform	nation		
Well ID :	AS-	-1 (o			Number:	01-04		Sampling	g Date:	7/20/23
Total Depti			14.	Water Volu	ıme in Casi		10 10	Sampler:		1/20/2
Well Scree	n Interval (ft)	):		Purge Met	hod:			Equipment:		
Well Diame	eter (in):			End Depth	to Water (f	):		1		
Tubing Inta	ake Depth:			Calculated	Purge Volu	me (gal):		Well Condit	ions:	
Starting De	epth to Water	r (ft):		Total Volur	me Purged	(gal):		1		
			Grou	ndwat	er Par	amete	r Moni	toring		
Time	TEMP	pH	ORP	COND	TURB	DO	DTW	Volume		Notes
	* C	SU	mV	mS/cm	NTU	mg/L	feet	gallons	(App	earance, Odors, Etc.)
ACC	± 3%	± 0.1	± 10	± 3%	± 10%	± 10%	<0.33			
0805	16.4	7.20	548.9	2.403	83.04	0.44	12.00		Sligh	Hy grey douds
0807	16.4	7.21	538.4	2.463	71.45	0.45	12.01	1.25	11	'0'
0809	16.5	7-22	532.8	2.496	64.95	0.42	12.01		te	
0810	14.5	7.22	528.9	2.510	61.74	0.42	12.01		11	
0812	16.5	7.22	523.7	2.535		0.42	12.01	1.5	11	
0815	165	7.23	-	2.554	55.74		-	1,0	31	
0812	100	1.25	740.1	×.33 [	33,77	0.41	12.01			
		-								
				n i		9				
			1							
		-	-							
		-								
				Casing Vol	ume in Gallo	ons: 1" Diar	n = 0.041 ga	al/ft, 2" Diam	= 0.163 ga	l/ft, 4" Diam = 0.653 gal/ft
/			Sa	mple	Collec	tion In	forma	tion	120	
Sample	Number	Sample			ytes	-	ontainers	Preserv	atives	Duplicate (Y/N)
						Number o	of Sample C	ontainers C	ollected:	
	Method: Ba		Itic / Subme	ersible / Ot	her:					
	er Disposal Comments:	metrioa:								





À	ell ID: SVE-1			undwat				Sampling Date:			
Nell ID :	SVE-1			Project	Number:	01-0410-	R	Sampling	Date:		
1				Water Volu	ıme in Casi	ng (gal):		Sampler: HVS  Equipment: YSI, Peri-Pump, interface probe			
-	n Interval (ft)	):		Purge Meth	nod:						
Well Diame	1			End Depth	to Water (f	t):		Well Conditions:			
ubing Inta	ke Depth:			Calculated	Purge Volu	me (gal):					
Starting De	pth to Water	(ft):		Total Volun	ne Purged	(gal):		itoring			
70		1	Grou	undwat	er Par	amete	r Moni				
Time	TEMP	pH	ORP	COND	TURB	DO	DTW	Volume		Notes	
	° C	Én	mV	mS/cm	NTU	mg/L	feet	gallons	(App	pearance, Odors, Etc.)	
	± 3%	± 0.1	± 10	± 3%	± 10%	± 10%	<0.33				
								-		-	
			_								
		7 - 1			<u> </u>						
						1					
		1000	9	Casing Volu					= 0.163 g	al/ft, 4" Diam = 0.653 gal/ft	
Sample	Number	Sample		Anal			ontainers	Preserva	Nos.	Dunlingto (V/N)	
				7 41.61	y.co	oumpie o	ontainers	rieserva	lives	Duplicate (Y/N)	
				<del> </del>					$\rightarrow$		
				-							
			-								
. A						l Number o	f Sample (	Containers Co	llected:		
		iler / Perista		nersible / Ot	her:						
	Comments:	Method: DR	UM								

					mpling			Market .		
Well ID: TP-2	)		Project	Number:	01-041	0-R	Samplin	g Date:	7/20/23	
Total Depth (ft): 24			Water Volu	ıme in Casi	ng (gal):  ,	10)	Sampler: HVS			
Vell Screen Interval (ft	):		Purge Meti		U-Flou					
Vell Diameter (in): 🥎	41			to Water (f		0	interface probe			
ubing Intake Depth: 3	12 25		Calculated	Purge Volu	ime (gal): ;	105	Well Condi	tions:	Hace prope	
Starting Depth to Wate	r (ft): 14 ()(	9	Calculated Purge Volume (gal): 4.85  Total Volume Purged (gal): 1.75				ł			
			ndwat	er Par	amete		toring	toring		
Time TEMP	pH	ORP	COND	TURB	DO	DTW	Volume		Notes	
° C	SU	mV	mS/cm	NTU	mg/L	feet	gallons	(Ap	pearance, Odors, Etc.)	
± 3%	± 0.1	± 10	± 3%	± 10%	± 10%	<0.33				
0848 16.1	7.56	453.9	452.8	51.91	4.40	14.12		clea	ur, odor	
1850 15.9	7.51	441.0	3.424	27.50	2.47	14.20		11	, , , , , , , , , , , , , , , , , , , ,	
852 15.7	7.48	430.60	3411	13.47	1.73	14.21		13		
854 15.10	7.47	422.0	3390	7.108	1.30	14.22	0.25	X1		
1854 15.5	7.410	413,2	3 375	4.73	1.08	14.23	0123	A r		
858 15.5	7.46	401.8	3 375	5.08	0.93	14.04		i i		
900 15.5	7.45	391.4	2371	0.86	14 75		11			
0902 15.5	746	37.0	2 2 7/1	0.30	11.20	ΛE				
904 15.4	7115	2117	2 21 8 22 57 0 74 14 27				0.5	clea	r, petro odor	
2021	7.45	2417	3.368 33.570.74 14.27					)ı		
0906 15.4	7.45	344.5	3.365 3580 0.70 14.28 -				11			
15.4	7.45	2717	2.540	39.98	0.67	14.28		t)		
0910 154	1.45	300,9	3,356	45.33	0.63	14.29	0.75	clear	petro odor	
15.4	7.45	294,1	3.352	49.55	0.42	14.31		71		
0914 15.4	1.45	283.6	3.347	84.75	0.61	14.31		13		
1916 15.4	7.45	273.4		94.48	0.60	14.32		14		
918 15.4	1.45	265.0	3.344		0.59	14.32	1.0	**		
1920 15.4	7.45	256.3	3.343	133.49	0.58	14.32		١,		
			Casing Volu	ume in Gallo	ons: 1" Dian	n = 0.041 ga	al/ft, 2" Dian	n = 0.163 g	al/ft, 4" Diam = 0.653 gal	
		Sa	mple (	Collec	tion In	format	tion			
Sample Number	Sample	Time	Anal	ytes	Sample C		Preserv	atives	Duplicate (Y/N)	
IP-3	093	5			5 VOA	s bers	HC	1		
				Tota	l Number o	f Sample C	ontainers (	Collected:	7	
allection Method: Ba			ersible / Otl	her:						
Water Disposal	Method:	prum								
Pur	ip on le	owest :	setting	to st	till get	wa	ter.			



# ATLAS GEOSCIENCES NW cominued

			Grou	ındwa	ter Sar	npling	Inform	nation		
Well ID :	IP-3	Con	+	Project I	Number:	01-041	U-R	Sampling	Date:	7/20/23
Total Depth		COLL		Water Volu	ıme in Casir	ng (gal):	0 1-	Sampler:		110010
Well Scree	n Interval (ft)			Purge Meti	nod:			Equipment:		
Well Diame	eter (in):			End Depth	to Water (ft	):				
Tubing Inta	ike Depth:			Calculated Purge Volume (gal):				Well Condit	ions:	
Starting De	epth to Water	(ft):		Total Volume Purged (gal):						
		H. C.	Grou	ndwat	er Par	amete	r Moni	toring	12:38	
Time	TEMP	pH	ORP	COND	DO	DTW	Volume	Notes		
	° C	SU	mV	mS/cm	NTU	mg/L	feet	gallons	(App	pearance, Odors, Etc.)
2022	± 3%	± 0.1	± 10	± 3%	± 10%	± 10%	<0.33			
0922	15.4	7.45		3.342	94.61	0.56			71	
0924	15.4	7.45		3.342						
0926	15.4	7.44	237.2	3,342	121.39	0.55	14.34	-	1.	
		-			_					
			-							
				-	-					
									-	
										1
									= 0.163 ga	al/ft, 4" Diam = 0.653 gal/ft
Campula	Nonehaa						format			
Sample	Number	Sample	e Time	Ana	ytes	Sample C	ontainers	Preserv	atives	Duplicate (Y/N)
						Number o	of Sample C	ontainers C	ollected:	
	Method: Ba		ltic / Subm	ersible / Ot	her:					
	er Disposal	Method:								
Additional (	Comments:									



Well ID :	IP-4			Project I	Number:	01-0410-	R	Samplin	g Date: _	1/20/22	
Total Depti	n (ft): <b>14</b>			Water Volu	ıme in Casi	ng (gal): /\	. 64	Sampling Date: 7/20/23  Sampler: HVS			
	n Interval (ft)			Purge Meth		-Flow	. 67	Equipment: YSI, Peri-Pump, interface probe			
Well Diame	eter (in):			End Depth	to Water (fi		-				
Tubing Inta	ke Depth: j	3.75		Calculated	Purge Volu	me (gal): )	92	Well Condi	tions:		
Starting De	epth to Water	(ft): 10.0°	~	Total Volun	ne Purged (	gal): /	15				
- 12 7 6 1	No. of the last	10.0		ndwat		U	r Moni	toring			
Time	TEMP	рН	ORP	COND	TURB	DO			Notes		
	° C	SU	mV	mS/cm	NTU	mg/L	feet	Volume gallons	(Appe	earance, Odors, Etc.)	
	± 3%	± 0.1	± 10	± 3%	± 10%	± 10%	<0.33		(, 155.		
0957	14.3	7.02	377.8	1.038	76.08	374	10.33		nlon	r, odor	
0959	16.0	16.82	3805	1 001	72/1	7 27	10.35		11	r, Octor	
1001	11 11	1711	2018	1.001	1077	111	10.33				
1001	16.4	6. 14	384 3	1.00 3	10.12	1.01	10.36	0.0	11		
1003	16.5	(o. +1	380.7	1.005	12.07	1.25	10.38	0.2	١,		
1005	16.5	6.70	378.3	1.003	6.48	1.05	10.40	_	lt.		
1007	14.5	6.70	375.7	1.000	5.32	0.91	10.40		clear	petro odor	
1009	16.5	6.70	372.3	1.000	5.55	0.83	1040		11	1 00001	
1011	110.10	1,70	31.0 7	1000	370	1 Ila	10/10	0.4	11		
1 0	11.5	1.70	371.0	1.000	200	177	10,90	0.4	1,		
1010	16.5	6.70		1.000	240	0.12	10.41				
1015	16.4	6.70	368.4	1.000	2.94	0.70	10.42		Stight	sheen in buc	
							1				
							1			=	
				Casing Vol	ume in Gallo	ons: 1" Dian	n = 0.041 ga	al/ft, 2" Dian	n = 0.163 gai	l/ft, 4" Diam = 0.653 gal/ft	
			Sa	mple (	Collec	tion In	format	tion			
Sample	Number	Sample	Time	Anal	ytes	Sample C	ontainers	Preserv	atives	Duplicate (Y/N)	
TP	-4	102	5			15	NOAS AMBLYS	HC	/		
4-1		102	J			12	Amblers	nc	-1		
					Tota	l Number o	f Sample C	Containers (	Collected:	7	
	Method: Ba		-	ersible / Ot						1/	
Purge Wat	er Disposal	Method: DR	UM								



Well ID: IP-7				undwater Sampling Inforr Project Number: 01-0410-R								
					ıme in Casir			Sampling Date: 7/20/23				
Total Depth ( Well Screen	D032	-				100	.63	Sampler: HVS				
		4		Fud Danit	hod: Low	-How		Equipment: YSI, Peri-Pump, interface probe				
Well Diamete					to Water (ft							
Tubing Intak	00	417		2.00				Well Condi	tions:			
Starting Dep	th to Water	(ft): 16.7	0	Total Volume Purged (gal): 1, 2								
			Grou	ndwat	er Par	amete	r Moni	toring	toring			
Time	TEMP	pН	ORP	COND	TURB	DO	DTW	Volume		Notes		
	°C	SU	mV	mS/cm	NTU	mg/L	feet	gallons	(Appe	arance, Odors, Etc.)		
	± 3%	± 0.1	±10	± 3%	± 10%	± 10%	<0.33					
1112	21.3	6.75	390.0	0.651	8 3.95	4.40	15.91		clear	petro dor, s		
1114	17.3	6.59	407.3	0.578	67.54	208	15.860		)(	, , ,		
11110	173	6.57	4071	1578	6711	1.40	15.88		( /			
1110	172		11/7 1	1671	1 1 1 1	1.20	15.00	126		noth all		
1110	17.3	6.55	407.1	0.576	6176	1.20	15,90	0.25	Clear	petro odor she		
1120	1. t. L	6.54	406.6	0.575	le 2.85	1.00	15.95		), c			
1122	17.3	6.54	405.7	0.575	100.44	0.86	15.99		W			
1124	17.2	654	405.1)	0.574	1,9.25	0.710	16.00	1.5	11			
11210	17.)	1052	4045	05711	1.978	11 100	1500	0,0	11			
1120	170	1 = 2	1101,	0.019	71112	0.09	10.99		**			
1199	1 t. L	6.53	403.1	0.574	74.12	0.60	16.07		11			
1130	1 t.2	6.52	402.0	0.574	84.06	0.59	16.05	0.75	H			
1132	17.3	6.53	400.4	0.575	93,25	0.56	110.08		11			
1134	17.3	1,57	39810	0574	86.24	154	110.09		4			
1,71	11.7	02	010.0	0.011	770-21	0.01	10.01					
$\overline{}$												
			-									
9.4			Sa		ume in Galle	200			n = 0.163 gal	ft, 4" Diam = 0.653 gal/ft		
Sample I	Number	Sample	- 1		lytes	i————	ontainers	Preser	vatives	Duplicate (Y/N)		
TO	7	111	~			51	16AS	14	2./			
11-	+	114	)			\$7	Mybers	H				
0-11						l Number o	of Sample (	Containers	Collected:	7		
Collection N				ersible / Ot	ther:							
Purge Water	r Dienogal	Method: DD	LIM									

# **APPENDIX C**

# LABORATORY REPORTS



3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

G-Logics Tom Cammarata 40 Second Ave. SE Issaguah, WA 98027

RE: Boeing Field Chevron Work Order Number: 2208223

August 25, 2022

#### **Attention Tom Cammarata:**

Fremont Analytical, Inc. received 8 sample(s) on 8/16/2022 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Gasoline by NWTPH-Gx

Total Organic Carbon by EPA Method 9060

Volatile Organic Compounds by EPA Method 8260D

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes Project Manager

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Date: 08/31/2022



CLIENT: G-Logics Work Order Sample Summary

**Project:** Boeing Field Chevron

Work Order: 2208223

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2208223-001	AS-1	08/15/2022 2:08 PM	08/16/2022 12:53 PM
2208223-002	IP-3	08/15/2022 4:17 PM	08/16/2022 12:53 PM
2208223-003	IP-4	08/15/2022 5:07 PM	08/16/2022 12:53 PM
2208223-004	IP-5	08/15/2022 3:31 PM	08/16/2022 12:53 PM
2208223-005	IP-7	08/16/2022 9:15 AM	08/16/2022 12:53 PM
2208223-006	TW-4	08/15/2022 2:44 PM	08/16/2022 12:53 PM
2208223-007	TW-5	08/15/2022 1:35 PM	08/16/2022 12:53 PM
2208223-008	DUP-01	08/15/2022 8:00 AM	08/16/2022 12:53 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned



#### **Case Narrative**

WO#: **2208223**Date: **8/25/2022** 

**CLIENT:** G-Logics

Project: Boeing Field Chevron

#### I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

#### II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

#### III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

8/31/2022: Revision 1 includes correction to a sampling date.

Revision v1



#### **Qualifiers & Acronyms**

WO#: **220822** 

Date Reported: **8/25/2022** 

#### Qualifiers:

- \* Flagged value is not within established control limits
- B Analyte detected in the associated Method Blank
- D Dilution was required
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- I Analyte with an internal standard that does not meet established acceptance criteria
- J Analyte detected below Reporting Limit
- N Tentatively Identified Compound (TIC)
- Q Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S Spike recovery outside accepted recovery limits
- ND Not detected at the Reporting Limit
- R High relative percent difference observed

#### Acronyms:

%Rec - Percent Recovery

**CCB - Continued Calibration Blank** 

**CCV - Continued Calibration Verification** 

**DF** - Dilution Factor

**DUP - Sample Duplicate** 

**HEM - Hexane Extractable Material** 

ICV - Initial Calibration Verification

LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate

MCL - Maximum Contaminant Level

MB or MBLANK - Method Blank

MDL - Method Detection Limit

MS/MSD - Matrix Spike / Matrix Spike Duplicate

PDS - Post Digestion Spike

Ref Val - Reference Value

REP - Sample Replicate

RL - Reporting Limit

**RPD - Relative Percent Difference** 

SD - Serial Dilution

SGT - Silica Gel Treatment

SPK - Spike

Surr - Surrogate



Work Order: **2208223**Date Reported: **8/25/2022** 

Client: G-Logics Collection Date: 8/15/2022 2:08:00 PM

Project: Boeing Field Chevron

**Lab ID:** 2208223-001 **Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	- Da	ate Analyzed
Diesel and Heavy Oil by NWTPH	-Dx/Dx Ext.			Bato	h ID:	37453	Analyst: KJ
Diesel Range Organics	617	99.6		μg/L	1	8/18	/2022 12:07:05 PM
Heavy Oil	478	99.6		μg/L	1	8/18	/2022 12:07:05 PM
Surr: 2-Fluorobiphenyl	104	50 - 150		%Rec	1	8/18	/2022 12:07:05 PM
Surr: o-Terphenyl	84.3	50 - 150		%Rec	1	8/18	/2022 12:07:05 PM
Gasoline by NWTPH-Gx				Bato	h ID:	37495	Analyst: TN
Gasoline Range Organics	474	50.0		μg/L	1	8/20	/2022 9:55:22 AM
Surr: Toluene-d8	100	65 - 135		%Rec	1	8/20	/2022 9:55:22 AM
Surr: 4-Bromofluorobenzene	95.9	65 - 135		%Rec	1	8/20	/2022 9:55:22 AM
Volatile Organic Compounds by	EPA Method 8	3260D		Bato	h ID:	37495	Analyst: TN
Benzene	5.98	0.440		μg/L	1	8/20	/2022 9:55:22 AM
Toluene	ND	0.750		μg/L	1	8/20	/2022 9:55:22 AM
Ethylbenzene	31.8	0.400		μg/L	1	8/20	/2022 9:55:22 AM
m,p-Xylene	26.0	1.00		μg/L	1	8/20	/2022 9:55:22 AM
o-Xylene	0.675	0.500		μg/L	1	8/20	/2022 9:55:22 AM
Surr: Dibromofluoromethane	100	80 - 120		%Rec	1	8/20	/2022 9:55:22 AM
Surr: Toluene-d8	100	80 - 120		%Rec	1	8/20	/2022 9:55:22 AM
Surr: 1-Bromo-4-fluorobenzene	98.0	80 - 120		%Rec	1	8/20	/2022 9:55:22 AM



Work Order: **2208223**Date Reported: **8/25/2022** 

Client: G-Logics Collection Date: 8/15/2022 4:17:00 PM

Project: Boeing Field Chevron

**Lab ID:** 2208223-002 **Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH	-Dx/Dx Ext.			Bato	h ID: 37	453 Analyst: KJ
Diesel Range Organics	277	100		μg/L	1	8/18/2022 12:18:06 PM
Heavy Oil	612	100		μg/L	1	8/18/2022 12:18:06 PM
Surr: 2-Fluorobiphenyl	99.1	50 - 150		%Rec	1	8/18/2022 12:18:06 PM
Surr: o-Terphenyl	99.4	50 - 150		%Rec	1	8/18/2022 12:18:06 PM
Gasoline by NWTPH-Gx				Bato	h ID: 37	495 Analyst: TN
Gasoline Range Organics	4,450	1,000	D	μg/L	20	8/23/2022 2:00:19 PM
Surr: Toluene-d8	99.4	65 - 135	D	%Rec	20	8/23/2022 2:00:19 PM
Surr: 4-Bromofluorobenzene	90.1	65 - 135	D	%Rec	20	8/23/2022 2:00:19 PM
Volatile Organic Compounds by	EPA Method 8	3260D		Bato	h ID: 37	495 Analyst: TN
Benzene	1,080	8.80	DE	μg/L	20	8/23/2022 2:00:19 PM
Toluene	21.9	0.750		μg/L	1	8/20/2022 10:25:29 AM
Ethylbenzene	43.1	8.00	D	μg/L	20	8/23/2022 2:00:19 PM
m,p-Xylene	88.5	20.0	D	μg/L	20	8/23/2022 2:00:19 PM
o-Xylene	3.65	0.500		μg/L	1	8/20/2022 10:25:29 AM
Surr: Dibromofluoromethane	102	80 - 120		%Rec	1	8/20/2022 10:25:29 AM
Surr: Toluene-d8	106	80 - 120		%Rec	1	8/20/2022 10:25:29 AM
Surr: 1-Bromo-4-fluorobenzene	108	80 - 120		%Rec	1	8/20/2022 10:25:29 AM
Total Organic Carbon by EPA M	ethod 9060			Bato	h ID: R7	77748 Analyst: ALT
Total Organic Carbon	8.43	0.500		mg/L	1	8/23/2022 12:18:00 PM



Work Order: **2208223**Date Reported: **8/25/2022** 

Client: G-Logics Collection Date: 8/15/2022 5:07:00 PM

Project: Boeing Field Chevron

**Lab ID:** 2208223-003 **Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH	-Dx/Dx Ext.			Bato	h ID: 37	513 Analyst: KJ
Diesel Range Organics	9,500	1,110		μg/L	1	8/23/2022 1:41:40 PM
Heavy Oil	ND	1,110		μg/L	1	8/23/2022 1:41:40 PM
Surr: 2-Fluorobiphenyl	78.7	50 - 150		%Rec	1	8/23/2022 1:41:40 PM
Surr: o-Terphenyl	81.1	50 - 150		%Rec	1	8/23/2022 1:41:40 PM
Gasoline by NWTPH-Gx				Bato	h ID: 37	495 Analyst: TN
Gasoline Range Organics	126,000	2,500	DE	μg/L	50	8/23/2022 3:00:32 PM
Surr: Toluene-d8	98.9	65 - 135	D	%Rec	50	8/23/2022 3:00:32 PM
Surr: 4-Bromofluorobenzene	106	65 - 135	D	%Rec	50	8/23/2022 3:00:32 PM
Volatile Organic Compounds by	EPA Method 8	3260D		Bato	h ID: 37	495 Analyst: TN
Benzene	54.6	22.0	D	μg/L	50	8/23/2022 3:00:32 PM
Toluene	2,140	37.5	DE	μg/L	50	8/23/2022 3:00:32 PM
Ethylbenzene	5,100	20.0	DE	μg/L	50	8/23/2022 3:00:32 PM
m,p-Xylene	10,600	50.0	DE	μg/L	50	8/23/2022 3:00:32 PM
o-Xylene	3,930	25.0	DE	μg/L	50	8/23/2022 3:00:32 PM
Surr: Dibromofluoromethane	101	80 - 120	D	%Rec	50	8/23/2022 3:00:32 PM
Surr: Toluene-d8	99.5	80 - 120	D	%Rec	50	8/23/2022 3:00:32 PM
Surr: 1-Bromo-4-fluorobenzene	113	80 - 120	D	%Rec	50	8/23/2022 3:00:32 PM



Work Order: **2208223**Date Reported: **8/25/2022** 

Client: G-Logics Collection Date: 8/15/2022 3:31:00 PM

Project: Boeing Field Chevron

**Lab ID:** 2208223-004 **Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH	-Dx/Dx Ext.			Bato	h ID: 37	453 Analyst: KJ
Diesel Range Organics	625	95.7		μg/L	1	8/18/2022 12:40:08 PM
Heavy Oil	ND	95.7		μg/L	1	8/18/2022 12:40:08 PM
Surr: 2-Fluorobiphenyl	79.7	50 - 150		%Rec	1	8/18/2022 12:40:08 PM
Surr: o-Terphenyl	83.4	50 - 150		%Rec	1	8/18/2022 12:40:08 PM
Gasoline by NWTPH-Gx				Bato	h ID: 37	495 Analyst: TN
Gasoline Range Organics	13,200	2,500	D	μg/L	50	8/23/2022 3:30:40 PM
Surr: Toluene-d8	99.6	65 - 135	D	%Rec	50	8/23/2022 3:30:40 PM
Surr: 4-Bromofluorobenzene	92.2	65 - 135	D	%Rec	50	8/23/2022 3:30:40 PM
Volatile Organic Compounds by	EPA Method 8	3260D		Bato	h ID: 37	495 Analyst: TN
Benzene	1,940	22.0	D	μg/L	50	8/23/2022 3:30:40 PM
Toluene	346	37.5	D	μg/L	50	8/23/2022 3:30:40 PM
Ethylbenzene	358	20.0	D	μg/L	50	8/23/2022 3:30:40 PM
m,p-Xylene	846	50.0	D	μg/L	50	8/23/2022 3:30:40 PM
o-Xylene	69.8	25.0	D	μg/L	50	8/23/2022 3:30:40 PM
Surr: Dibromofluoromethane	104	80 - 120	D	%Rec	50	8/23/2022 3:30:40 PM
Surr: Toluene-d8	98.1	80 - 120	D	%Rec	50	8/23/2022 3:30:40 PM
Surr: 1-Bromo-4-fluorobenzene	98.3	80 - 120	D	%Rec	50	8/23/2022 3:30:40 PM
Total Organic Carbon by EPA M	ethod 9060			Bato	h ID: R7	77748 Analyst: ALT
Total Organic Carbon	7.94	0.500		mg/L	1	8/23/2022 1:07:00 PM



Work Order: **2208223**Date Reported: **8/25/2022** 

Client: G-Logics Collection Date: 8/16/2022 9:15:00 AM

Project: Boeing Field Chevron

**Lab ID:** 2208223-005 **Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH	I-Dx/Dx Ext.			Bato	:h ID: 374	453 Analyst: KJ
Diesel Range Organics	49,300	939	D	μg/L	10	8/19/2022 8:55:52 AM
Heavy Oil	ND	93.9		μg/L	1	8/18/2022 12:51:19 PM
Surr: 2-Fluorobiphenyl	2,240	50 - 150	S	%Rec	1	8/18/2022 12:51:19 PM
Surr: o-Terphenyl	71.7	50 - 150		%Rec	1	8/18/2022 12:51:19 PM
NOTES:						
S - Outlying surrogate recovery attribute	ed to TPH interferen	ce. O-terpheny	yl indicates	normal reco	very.	
Gasoline by NWTPH-Gx				Bato	h ID: 374	195 Analyst: TN
Gasoline Range Organics	111,000	10,000	D	μg/L	200	8/23/2022 5:31:21 PM
Surr: Toluene-d8	99.0	65 - 135	D	%Rec	200	8/23/2022 5:31:21 PM
Surr: 4-Bromofluorobenzene	97.7	65 - 135	D	%Rec	200	8/23/2022 5:31:21 PM
Volatile Organic Compounds by	EPA Method 8	3260D		Bato	h ID: 374	495 Analyst: TN
Benzene	1,040	88.0	D	μg/L	200	8/23/2022 5:31:21 PM
Toluene	3,620	150	D	μg/L	200	8/23/2022 5:31:21 PM
Ethylbenzene	2,920	80.0	D	μg/L	200	8/23/2022 5:31:21 PM
m,p-Xylene	11,400	200	D	μg/L	200	8/23/2022 5:31:21 PM
o-Xylene	3,920	100	D	μg/L	200	8/23/2022 5:31:21 PM
Surr: Dibromofluoromethane	104	80 - 120	D	%Rec	200	8/23/2022 5:31:21 PM
Surr: Toluene-d8	100	80 - 120	D	%Rec	200	8/23/2022 5:31:21 PM
Surr: 1-Bromo-4-fluorobenzene	104	80 - 120	D	%Rec	200	8/23/2022 5:31:21 PM
Total Organic Carbon by EPA M	ethod 9060			Bato	h ID: R7	7748 Analyst: ALT
Total Organic Carbon	20.7	0.500		mg/L	1	8/23/2022 1:58:00 PM



Work Order: **2208223**Date Reported: **8/25/2022** 

Client: G-Logics Collection Date: 8/15/2022 2:44:00 PM

Project: Boeing Field Chevron

**Lab ID:** 2208223-006 **Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	
Diesel and Heavy Oil by NWTPH	-Dx/Dx Ext.			Bato	h ID:	37453 Analyst: KJ	
Diesel Range Organics	561	94.7		μg/L	1	8/18/2022 1:02:21 PM	
Heavy Oil	ND	94.7		μg/L	1	8/18/2022 1:02:21 PM	
Surr: 2-Fluorobiphenyl	90.2	50 - 150		%Rec	1	8/18/2022 1:02:21 PM	
Surr: o-Terphenyl	94.8	50 - 150		%Rec	1	8/18/2022 1:02:21 PM	
Gasoline by NWTPH-Gx				Bato	h ID:	37495 Analyst: TN	
Gasoline Range Organics	139	50.0		μg/L	1	8/24/2022 3:03:58 AM	
Surr: Toluene-d8	99.1	65 - 135		%Rec	1	8/24/2022 3:03:58 AM	
Surr: 4-Bromofluorobenzene	90.0	65 - 135		%Rec	1	8/24/2022 3:03:58 AM	
Volatile Organic Compounds by	EPA Method 8	3260D		Bato	h ID:	37495 Analyst: TN	
Benzene	ND	0.440		μg/L	1	8/24/2022 3:03:58 AM	
Toluene	4.25	0.750		μg/L	1	8/24/2022 3:03:58 AM	
Ethylbenzene	0.811	0.400		μg/L	1	8/24/2022 3:03:58 AM	
m,p-Xylene	3.23	1.00		μg/L	1	8/24/2022 3:03:58 AM	
o-Xylene	1.65	0.500		μg/L	1	8/24/2022 3:03:58 AM	
Surr: Dibromofluoromethane	105	80 - 120		%Rec	1	8/24/2022 3:03:58 AM	
Surr: Toluene-d8	99.2	80 - 120		%Rec	1	8/24/2022 3:03:58 AM	
Surr: 1-Bromo-4-fluorobenzene	95.3	80 - 120		%Rec	1	8/24/2022 3:03:58 AM	



Work Order: **2208223**Date Reported: **8/25/2022** 

Client: G-Logics Collection Date: 8/15/2022 1:35:00 PM

Project: Boeing Field Chevron

Surr: 1-Bromo-4-fluorobenzene

**Lab ID:** 2208223-007 **Matrix:** Water

108

Client Sample ID: TW-5

Client Sample ID: TW-5						
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTP	H-Dx/Dx Ext.			Bato	ch ID: 374	453 Analyst: KJ
Diesel Range Organics	8,850	94.2		μg/L	1	8/18/2022 1:13:24 PM
Heavy Oil	ND	94.2		μg/L	1	8/18/2022 1:13:24 PM
Surr: 2-Fluorobiphenyl	228	50 - 150	S	%Rec	1	8/18/2022 1:13:24 PM
Surr: o-Terphenyl	96.3	50 - 150		%Rec	1	8/18/2022 1:13:24 PM
NOTES:						
S - Outlying surrogate recovery attribut	ted to TPH interferen	ice. O-terpheny	/l indicates	normal reco	very.	
Gasoline by NWTPH-Gx				Bato	ch ID: 374	495 Analyst: TN
Gasoline Range Organics	214,000	5,000	DE	μg/L	100	8/23/2022 5:01:14 PM
Surr: Toluene-d8	95.2	65 - 135	D	%Rec	100	8/23/2022 5:01:14 PM
Surr: 4-Bromofluorobenzene	102	65 - 135	D	%Rec	100	8/23/2022 5:01:14 PM
Volatile Organic Compounds b	y EPA Method 8	3260D		Bato	ch ID: 374	495 Analyst: TN
Benzene	351	44.0	D	μg/L	100	8/23/2022 5:01:14 PM
Toluene	38,400	75.0	DE	μg/L	100	8/23/2022 5:01:14 PM
Ethylbenzene	6,000	40.0	DE	μg/L	100	8/23/2022 5:01:14 PM
m,p-Xylene	16,400	100	DE	μg/L	100	8/23/2022 5:01:14 PM
o-Xylene	7,400	50.0	DE	μg/L	100	8/23/2022 5:01:14 PM
Surr: Dibromofluoromethane	102	80 - 120	D	%Rec	100	8/23/2022 5:01:14 PM
Surr: Toluene-d8	101	80 - 120	D	%Rec	100	8/23/2022 5:01:14 PM

80 - 120

D

%Rec

100

8/23/2022 5:01:14 PM



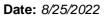
Work Order: **2208223**Date Reported: **8/25/2022** 

Client: G-Logics Collection Date: 8/15/2022 8:00:00 AM

Project: Boeing Field Chevron

**Lab ID:** 2208223-008 **Matrix:** Water

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH	-Dx/Dx Ext.			Bato	h ID: 37	453 Analyst: KJ
Diesel Range Organics	306	92.4		μg/L	1	8/18/2022 1:24:30 PM
Heavy Oil	ND	92.4		μg/L	1	8/18/2022 1:24:30 PM
Surr: 2-Fluorobiphenyl	105	50 - 150		%Rec	1	8/18/2022 1:24:30 PM
Surr: o-Terphenyl	102	50 - 150		%Rec	1	8/18/2022 1:24:30 PM
Gasoline by NWTPH-Gx				Bato	h ID: 37	495 Analyst: TN
Gasoline Range Organics	4,540	1,000	D	μg/L	20	8/23/2022 2:30:25 PM
Surr: Toluene-d8	100	65 - 135	D	%Rec	20	8/23/2022 2:30:25 PM
Surr: 4-Bromofluorobenzene	90.2	65 - 135	D	%Rec	20	8/23/2022 2:30:25 PM
Volatile Organic Compounds by	EPA Method 8	3260D		Bato	h ID: 37	495 Analyst: TN
Benzene	1,070	8.80	DE	μg/L	20	8/23/2022 2:30:25 PM
Toluene	20.9	15.0	D	μg/L	20	8/23/2022 2:30:25 PM
Ethylbenzene	43.3	8.00	D	μg/L	20	8/23/2022 2:30:25 PM
m,p-Xylene	88.4	20.0	D	μg/L	20	8/23/2022 2:30:25 PM
o-Xylene	17.9	0.500		μg/L	1	8/20/2022 1:56:18 PM
Surr: Dibromofluoromethane	91.6	80 - 120		%Rec	1	8/20/2022 1:56:18 PM
Surr: Toluene-d8	86.8	80 - 120		%Rec	1	8/20/2022 1:56:18 PM
Surr: 1-Bromo-4-fluorobenzene	97.5	80 - 120		%Rec	1	8/20/2022 1:56:18 PM
Total Organic Carbon by EPA M	ethod 9060			Bato	h ID: R7	7748 Analyst: ALT
Total Organic Carbon	9.56	0.500		mg/L	1	8/23/2022 2:48:00 PM





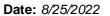
#### **QC SUMMARY REPORT**

**CLIENT:** G-Logics

#### **Total Organic Carbon by EPA Method 906**

Project: Boeing Field	d Chevron				Total Organic Carbon by EPA Method 906
Sample ID: <b>MB-77748</b>	SampType: MBLK			Units: mg/L	Prep Date: 8/23/2022 RunNo: 77748
Client ID: MBLKW	Batch ID: R77748				Analysis Date: <b>8/23/2022</b> SeqNo: <b>1597156</b>
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Organic Carbon	ND	0.500			
Sample ID: LCS-77748	SampType: <b>LCS</b>			Units: mg/L	Prep Date: 8/23/2022 RunNo: 77748
Client ID: LCSW	Batch ID: R77748				Analysis Date: 8/23/2022 SeqNo: 1597157
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Organic Carbon	4.93	0.500	5.000	0	98.5 90 110
Sample ID: 2208223-008CDUP	SampType: <b>DUP</b>			Units: mg/L	Prep Date: <b>8/23/2022</b> RunNo: <b>77748</b>
Client ID: DUP-01	Batch ID: R77748				Analysis Date: 8/23/2022 SeqNo: 1597162
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Organic Carbon	8.75	0.500			9.562 8.90 20
Sample ID: 2208223-008CMS	SampType: <b>MS</b>			Units: mg/L	Prep Date: 8/23/2022 RunNo: 77748
Client ID: DUP-01	Batch ID: R77748				Analysis Date: 8/23/2022 SeqNo: 1597163
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Organic Carbon	13.3	0.500	5.000	9.562	74.7 68.3 120
Sample ID: <b>2208223-008CMSD</b>	SampType: <b>MSD</b>			Units: mg/L	Prep Date: 8/23/2022 RunNo: 77748
Client ID: DUP-01	Batch ID: R77748				Analysis Date: 8/23/2022 SeqNo: 1597164
Analyte	Result	RL	SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual
Total Organic Carbon	13.4	0.500	5.000	9.562	76.3 68.3 120 13.30 0.585 20

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#### **QC SUMMARY REPORT**

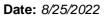
**CLIENT:** G-Logics

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

**Project:** Boeing Field Chevron

Sample ID: MB-37453	SampType: MBLK			Units: µg/L		Prep Dat	e: <b>8/16/2</b> 0	022	RunNo: <b>776</b>	33	
Client ID: MBLKW	Batch ID: 37453					Analysis Dat	te: <b>8/18/2</b> 0	022	SeqNo: <b>159</b>	4758	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Diesel Range Organics	ND	95.0									
Heavy Oil	ND	95.0									
Total Petroleum Hydrocarbons	ND	190									
Surr: 2-Fluorobiphenyl	12.7		23.76		53.5	50	150				
Surr: o-Terphenyl	13.2		23.76		55.5	50	150				
Sample ID: LCS-37453	SampType: <b>LCS</b>			Units: µg/L	Prep Date: <b>8/16/2022</b>			RunNo: <b>77633</b>			
Client ID: LCSW	Batch ID: 37453					Analysis Dat	te: <b>8/18/2</b> 0	022	SeqNo: 159	4759	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Total Petroleum Hydrocarbons	1,010	190	1,189	0	85.2	40	123				
Surr: 2-Fluorobiphenyl	16.5		23.79		69.2	50	150				
Surr: o-Terphenyl	20.6		23.79		86.8	50	150				
Sample ID: <b>2208227-001BMS</b>	SampType: <b>MS</b>			Units: µg/L		Prep Dat	te: <b>8/16/2</b> 0	)22	RunNo: 776	33	
Client ID: BATCH	Batch ID: 37453					Analysis Dat	te: <b>8/18/2</b> 0	)22	SeqNo: 159	4761	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Total Petroleum Hydrocarbons	1,080	187	1,169	135.8	80.5	40.5	128				
Surr: 2-Fluorobiphenyl	15.6		23.39		66.8	50	150				
Surr: o-Terphenyl	18.6		23.39		79.7	50	150				
Sample ID: <b>2208227-002BDUP</b>	SampType: <b>DUP</b>			Units: µg/L		Prep Dat	e: <b>8/16/2</b> 0	)22	RunNo: <b>776</b>	33	
Client ID: BATCH	Batch ID: 37453					Analysis Dat	te: <b>8/18/2</b> 0	)22	SeqNo: 159	4763	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Diesel Range Organics	ND	95.4						0		30	
Heavy Oil	ND	95.4						0		30	
								0		0.0	
Total Petroleum Hydrocarbons	ND	191						0		30	

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#### **QC SUMMARY REPORT**

**CLIENT:** G-Logics

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

**Project:** Boeing Field Chevron

Project: Boeing Field	d Chevron						Dieser	ilia ricavy	On by itt	11 11-07/1	
Sample ID: <b>2208227-002BDUP</b>	SampType: <b>DUP</b>			Units: µg/L		Prep Date	e: <b>8/16/20</b> 2	22	RunNo: <b>776</b>	33	
Client ID: BATCH	Batch ID: 37453					Analysis Date	e: <b>8/18/20</b> 2	22	SeqNo: <b>159</b>	94763	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: o-Terphenyl	17.6		23.84		73.9	50	150		0		
Sample ID: <b>2208227-003BDUP</b>	SampType: <b>DUP</b>			Units: µg/L		Prep Date	e: <b>8/16/20</b> 2	22	RunNo: <b>776</b>	33	
Client ID: BATCH	Batch ID: 37453					Analysis Date	e: <b>8/18/20</b> 2	22	SeqNo: <b>159</b>	4765	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics	ND	94.0						0		30	
Heavy Oil	ND	94.0						0		30	
Total Petroleum Hydrocarbons	ND	188						0		30	
Surr: 2-Fluorobiphenyl	17.3		23.50		73.4	50	150		0		
Surr: o-Terphenyl	18.0		23.50		76.4	50	150		0		
Sample ID: <b>MB-37513</b>	SampType: MBLK			Units: µg/L		Prep Date	e: <b>8/22/20</b> 2	22	RunNo: <b>777</b>	731	
Client ID: MBLKW	Batch ID: 37513					Analysis Date	e: <b>8/23/20</b> 2	22	SeqNo: 159	6936	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics	ND	93.1									
Heavy Oil	ND	93.1									
Total Petroleum Hydrocarbons	ND	186									
Surr: 2-Fluorobiphenyl	17.7		23.27		76.1	50	150				
Surr: o-Terphenyl	17.5		23.27		75.1	50	150				
Sample ID: LCS-37513	SampType: <b>LCS</b>			Units: µg/L		Prep Date	e: <b>8/22/20</b> 2	22	RunNo: <b>777</b>	<b>731</b>	
Client ID: LCSW	Batch ID: 37513					Analysis Date	e: <b>8/23/20</b> 2	22	SeqNo: 159	6937	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Petroleum Hydrocarbons	778	186	1,160	0	67.1	40	123				
Surr: 2-Fluorobiphenyl	16.3		23.19		70.2	50	150				
Suit. 2-Fluorobiphenyi	10.0		_0		10.2	30	100				

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Date: 8/25/2022



Work Order: 2208223

#### **QC SUMMARY REPORT**

**CLIENT:** G-Logics

Surr: o-Terphenyl

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

**Project:** Boeing Field Chevron

18.2

Troject. Doeing rien	a Onevion										
Sample ID: 2208308-003BDUP	308-003BDUP SampType: DUP			Units: µg/L Pre			te: <b>8/22/20</b>	22	RunNo: <b>77731</b>		
Client ID: BATCH	Batch ID: 37513				Analysis Date: 8/23/2022				SeqNo: <b>15</b> 9	96940	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics	ND	77.3						0		30	
Heavy Oil	ND	77.3						0		30	
Total Petroleum Hydrocarbons	ND	155						0		30	
Surr: 2-Fluorobiphenyl	14.9		19.33		77.3	50	150		0		
Surr: o-Terphenyl	15.4		19.33		79.9	50	150		0		
Sample ID: <b>2208308-002BMS</b>	SampType: <b>MS</b>			Units: µg/L		Prep Da	te: <b>8/22/20</b>	22	RunNo: 777	731	
Client ID: BATCH	Batch ID: 37513					Analysis Da	te: <b>8/23/20</b>	22	SeqNo: 159	97374	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Total Petroleum Hydrocarbons	818	163	1,022	133.0	67.1	40.5	128				
Surr: 2-Fluorobiphenyl	16.2		20.43		79.4	50	150				

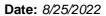
89.2

50

150

20.43

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**CLIENT:** G-Logics

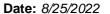
**Project:** Boeing Field Chevron

#### **QC SUMMARY REPORT**

#### Gasoline by NWTPH-Gx

Project: Boeing Fiel	a Cnevron									,	
Sample ID: LCS-37495	SampType: <b>LCS</b>			Units: µg/L		Prep Date	e: <b>8/19/20</b> 2	22	RunNo: <b>777</b>	'19	
Client ID: LCSW	Batch ID: 37495					Analysis Date	e: <b>8/20/20</b> 2	22	SeqNo: <b>159</b>	6638	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics	486	50.0	500.0	0	97.1	65	135				
Surr: Toluene-d8	25.5		25.00		102	65	135				
Surr: 4-Bromofluorobenzene	24.5		25.00		97.9	65	135				
Sample ID: <b>MB-37495</b>	SampType: MBLK			Units: µg/L		Prep Date	e: <b>8/19/20</b> 2	22	RunNo: 777	'19	
Client ID: MBLKW	Batch ID: 37495				Analysis Date: 8/20/2022			SeqNo: <b>1596637</b>			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics	ND	50.0									
Surr: Toluene-d8	23.9		25.00		95.6	65	135				
Surr: 4-Bromofluorobenzene	20.8		25.00		83.3	65	135				
Sample ID: <b>2208223-002ADUP</b>	SampType: <b>DUP</b>			Units: µg/L		Prep Date	e: <b>8/19/20</b> 2	22	RunNo: 777	'19	
Client ID: IP-3	Batch ID: 37495					Analysis Date	e: <b>8/20/20</b> 2	22	SeqNo: 159	6626	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics	3,590	50.0						3,428	4.52	30	Е
Surr: Toluene-d8	26.2		25.00		105	65	135		0		
Surr: 4-Bromofluorobenzene	25.4		25.00		102	65	135		0		
Sample ID: <b>2208245-001AMS</b>	SampType: <b>MS</b>			Units: µg/L		Prep Date	e: <b>8/19/20</b> 2	22	RunNo: 777	'19	
	, ,,		Analysis Date: 8/20/2022			SegNo: <b>1596634</b>					
Client ID: BATCH	Batch ID: <b>37495</b>					Analysis Date	e: 8/20/202	22	Seqivo: 159	0034	
Client ID: <b>BATCH</b> Analyte		RL	SPK value	SPK Ref Val	%REC	•		RPD Ref Val	%RPD	RPDLimit	Qua
	Batch ID: <b>37495</b>	RL 50.0	SPK value	SPK Ref Val	%REC	•			•		Qua
Analyte	Batch ID: 37495 Result					LowLimit	HighLimit		•		Qua

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#### **QC SUMMARY REPORT**

CLIENT: G-Logics

#### **Volatile Organic Compounds by EPA Method 8260D**

Project: Boeing Field	l Chevron					Volatile	Organio	Compoun	ds by EPA	Method	8260
Sample ID: LCS-37495	SampType: LCS			Units: µg/L		Prep Da	te: <b>8/19/2</b> 0	22	RunNo: <b>777</b>	718	
Client ID: LCSW	Batch ID: 37495				Analysis Date: 8/20/2022			SeqNo: <b>1596607</b>			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	21.1	0.440	20.00	0	106	80	120				
Toluene	20.4	0.750	20.00	0	102	80	120				
Ethylbenzene	20.1	0.400	20.00	0	101	80	120				
m,p-Xylene	40.5	1.00	40.00	0	101	80	120				
o-Xylene	19.6	0.500	20.00	0	98.0	80	120				
Surr: Dibromofluoromethane	26.7		25.00		107	80	120				
Surr: Toluene-d8	26.3		25.00		105	80	120				
Surr: 1-Bromo-4-fluorobenzene	26.6		25.00		106	80	120				
Sample ID: <b>MB-37495</b>	SampType: <b>MBLK</b>			Units: µg/L		Prep Da	te: <b>8/19/20</b>	)22	RunNo: 777	718	
Client ID: MBLKW	Batch ID: <b>37495</b>				Analysis Date: 8/20/2022			SeqNo: <b>1596606</b>			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.440									
Toluene	ND	0.750									
Ethylbenzene	ND	0.400									
m,p-Xylene	ND	1.00									
o-Xylene	ND	0.500									
Surr: Dibromofluoromethane	27.5		25.00		110	80	120				
Surr: Toluene-d8	25.5		25.00		102	80	120				
Surr: 1-Bromo-4-fluorobenzene	22.2		25.00		88.7	80	120				
Sample ID: <b>2208223-002ADUP</b>	SampType: <b>DUP</b>			Units: µg/L		Prep Da	te: <b>8/19/2</b> 0	)22	RunNo: 777	718	
Client ID: IP-3	Batch ID: 37495					Analysis Da	te: <b>8/20/20</b>	22	SeqNo: <b>159</b>	96595	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	466	0.440						491.8	5.36	30	Е
Toluene	21.8	0.750						21.87	0.218	30	
Ethylbenzene	48.6	0.400						48.41	0.374	30	Е
m,p-Xylene	82.4	1.00						81.71	0.843	30	Ε
o-Xylene	3.71	0.500						3.655	1.41	30	

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Date: 8/25/2022



**Work Order:** 2208223

## **QC SUMMARY REPORT**

**CLIENT:** G-Logics

## **Volatile Organic Compounds by EPA Method 8260D**

**Project:** Boeing Field Chevron

Sample ID: 2208223-002ADUP Client ID: IP-3	SampType: <b>DUP</b> Batch ID: <b>37495</b>			Units: µg/L		Prep Da	te: 8/19/20		RunNo: <b>777</b> SeqNo: <b>159</b>		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	•		RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	24.6		25.00		98.5	80	120		0		
Surr: Toluene-d8	26.0		25.00		104	80	120		0		
Surr: 1-Bromo-4-fluorobenzene	26.1		25.00		104	80	120		0		

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# Sample Log-In Check List

C	lient Name:	GL	Work Order Number	er: 2208223	
Lo	ogged by:	Gabrielle Coeuille	Date Received:	8/16/2022	12:53:00 PM
Cha	nin of Custo	odv			
		ustody complete?	Yes 🗸	No 🗌	Not Present
2.	How was the	sample delivered?	Client		
1.00	ı İn				
<u>Log</u>			Yes 🗸	No 🗆	NIA 🗔
3.	Coolers are p	oresent?	res 💌	No 🗀	NA 🗀
4.	Shipping conf	tainer/cooler in good condition?	Yes 🗸	No $\square$	
5.		ls present on shipping container/cooler? nments for Custody Seals not intact)	Yes 🗹	No 🗌	Not Present
6.	Was an atten	npt made to cool the samples?	Yes 🗸	No 🗌	NA 🗌
7.	Were all item	s received at a temperature of >2°C to 6°C *	Yes 🗸	No 🗌	na 🗆
8.	Sample(s) in	proper container(s)?	Yes 🗸	No 🗌	
9.	Sufficient san	nple volume for indicated test(s)?	Yes 🗸	No $\square$	
10.	Are samples	properly preserved?	Yes 🗸	No $\square$	
11.	Was preserva	ative added to bottles?	Yes	No 🗸	NA 🗆
40	Is there head	space in the VOA viols?	Yes	No 🗹	na 🗆
		space in the VOA vials? es containers arrive in good condition(unbroken)?		No $\square$	NA L
		ork match bottle labels?	Yes <b>✓</b>	No $\square$	
14.	Boco paperw	on mater settle lasele.	100	но 🗆	
15.	Are matrices	correctly identified on Chain of Custody?	Yes 🗸	No $\square$	
16.	Is it clear wha	at analyses were requested?	Yes 🗸	No $\square$	
17.	Were all hold	ing times able to be met?	Yes 🗸	No $\square$	
<u>Spe</u>	cial Handli	ing (if applicable)			
18.	Was client no	otified of all discrepancies with this order?	Yes	No $\square$	NA 🗸
	Person	Notified: Da	te:		
	By Who	m: Via	a: Pho	ne 🗌 Fax	In Person
	Regardi				
	_	nstructions:			
19.	Additional rer	marks:			
Item	<u>Information</u>				
		Item # Temp °C			

5.0

Sample 1

<sup>\*</sup> Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

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3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

**G-Logics**Mike Arnold
40 Second Ave. SE
Issaquah, WA 98027

RE: Boeing Field Chevron Work Order Number: 2208193

August 23, 2022

### **Attention Mike Arnold:**

Fremont Analytical, Inc. received 8 sample(s) on 8/12/2022 for the analyses presented in the following report.

### Total Organic Carbon by EPA 9060

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes Project Manager CC:

Tom Cammarata

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Date: 08/23/2022



CLIENT: G-Logics Work Order Sample Summary

**Project:** Boeing Field Chevron

Work Order: 2208193

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2208193-001	TW-4:5.5-6	08/12/2022 11:58 AM	08/12/2022 3:50 PM
2208193-002	TW-4:8-8.5	08/12/2022 11:59 AM	08/12/2022 3:50 PM
2208193-003	TW-4:10-10.5	08/12/2022 12:00 PM	08/12/2022 3:50 PM
2208193-004	TW-4:14.5-15	08/12/2022 12:01 PM	08/12/2022 3:50 PM
2208193-005	TW-5:5.5-6	08/12/2022 11:20 AM	08/12/2022 3:50 PM
2208193-006	TW-5:8-8.5	08/12/2022 11:25 AM	08/12/2022 3:50 PM
2208193-007	TW-5:10-10.5	08/12/2022 11:26 AM	08/12/2022 3:50 PM
2208193-008	TW-5:11.5-12	08/12/2022 11:30 AM	08/12/2022 3:50 PM



### **Case Narrative**

WO#: **2208193**Date: **8/23/2022** 

**CLIENT:** G-Logics

Project: Boeing Field Chevron

#### I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

#### II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

#### III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.



## **Qualifiers & Acronyms**

WO#: **2208193** 

Date Reported: **8/23/2022** 

### Qualifiers:

- \* Flagged value is not within established control limits
- B Analyte detected in the associated Method Blank
- D Dilution was required
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- I Analyte with an internal standard that does not meet established acceptance criteria
- J Analyte detected below Reporting Limit
- N Tentatively Identified Compound (TIC)
- Q Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S Spike recovery outside accepted recovery limits
- ND Not detected at the Reporting Limit
- R High relative percent difference observed

### Acronyms:

%Rec - Percent Recovery

**CCB - Continued Calibration Blank** 

CCV - Continued Calibration Verification

DF - Dilution Factor

**DUP - Sample Duplicate** 

**HEM - Hexane Extractable Material** 

ICV - Initial Calibration Verification

LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate

MCL - Maximum Contaminant Level

MB or MBLANK - Method Blank

MDL - Method Detection Limit

MS/MSD - Matrix Spike / Matrix Spike Duplicate

PDS - Post Digestion Spike

Ref Val - Reference Value

REP - Sample Replicate

RL - Reporting Limit

RPD - Relative Percent Difference

SD - Serial Dilution

SGT - Silica Gel Treatment

SPK - Spike

Surr - Surrogate



Work Order: **2208193**Date Reported: **8/23/2022** 

**CLIENT:** G-Logics

Project: Boeing Field Chevron

**Lab ID:** 2208193-003 **Collection Date:** 8/12/2022 12:00:00 PM

Client Sample ID: TW-4:10-10.5 Matrix: Soil

Analyses Result RL Qual Units DF Date Analyzed

Total Organic Carbon by EPA 9060 Batch ID: 37461 Analyst: SS

Total Organic Carbon 0.377 0.150 %-dry 1 8/22/2022 2:31:00 PM

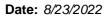
**Lab ID:** 2208193-007 **Collection Date:** 8/12/2022 11:26:00 AM

Client Sample ID: TW-5:10-10.5 Matrix: Soil

Analyses Result RL Qual Units DF Date Analyzed

Total Organic Carbon by EPA 9060 Batch ID: 37461 Analyst: SS

Total Organic Carbon ND 0.150 %-dry 1 8/22/2022 2:45:00 PM





Work Order: 2208193 **CLIENT:** 

G-Logics

Project: Boeing Field Chevron

## **QC SUMMARY REPORT**

## **Total Organic Carbon by EPA 9060**

Sample ID: LCS-37461 SampType: LCS Units: %-dry Prep Date: 8/17/2022 Client ID: LCSS Batch ID: 37461 Analysis Date: 8/22/2022 Analyte Result RL SPK value SPK Ref Val %REC LowLimit HighLimit RPI	RunNo: <b>77711</b> SegNo: <b>1596572</b>
•	
Analyte Result RL SPK value SPK Rei val %REC LowLimit HighLimit RPI	•
	PD Ref Val %RPD RPDLimit Qual
Total Organic Carbon 1.01 0.150 1.000 0 101 80 120	
Sample ID: MB-37461 SampType: MBLK Units: %-dry Prep Date: 8/17/2022	RunNo: <b>77711</b>
Client ID: MBLKS Batch ID: 37461 Analysis Date: 8/22/2022	SegNo: <b>1596574</b>
Analyte Result RL SPK value SPK Ref Val %REC LowLimit HighLimit RPI	·
Total Organic Carbon ND 0.150	
Sample ID: 2208193-007ADUP	RunNo: <b>77711</b>
Client ID: <b>TW-5:10-10.5</b> Batch ID: <b>37461</b> Analysis Date: <b>8/22/2022</b>	SeqNo: <b>1596577</b>
Analyte Result RL SPK value SPK Ref Val %REC LowLimit HighLimit RPI	PD Ref Val %RPD RPDLimit Qual
Total Organic Carbon ND 0.150	0 20
Sample ID: <b>2208193-007AMS</b> SampType: <b>MS</b> Units: <b>%-dry</b> Prep Date: <b>8/17/2022</b>	RunNo: <b>77711</b>
Client ID: TW-5:10-10.5 Batch ID: 37461 Analysis Date: 8/22/2022	SeqNo: <b>1596578</b>
Analyte Result RL SPK value SPK Ref Val %REC LowLimit HighLimit RPI	PD Ref Val %RPD RPDLimit Qual
Total Organic Carbon 0.976 0.150 1.000 0.05830 91.8 75 125	
	RunNo: <b>77711</b>
Sample ID: 2208193-007AMSD	
Sample ID:         2208193-007AMSD         SampType:         MSD         Units:         %-dry         Prep Date:         8/17/2022           Client ID:         TW-5:10-10.5         Batch ID:         37461         Analysis Date:         8/22/2022	SeqNo: <b>1596579</b>

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# Sample Log-In Check List

С	lient Name:	GL		Work Order Num	ber: 2208193		
L	ogged by:	Clare Griggs		Date Received:	8/12/2022	3:50:00 PM	
Cha	ain of Cust	ody					
		ustody complete?		Yes 🗸	No 🗌	Not Present	
		sample delivered?		Client			
	. In						
Loc				\	$\Box$		
3.	Coolers are p	oresent?		Yes 🗸	No 📙	NA 🗀	
4.	Shipping con	tainer/cooler in good condition	?	Yes 🗸	No 🗌		
5.	Custody Seal (Refer to com	s present on shipping containents for Custody Seals not i	er/cooler? intact)	Yes 🗸	No 🗆	Not Present	
6.	Was an atten	npt made to cool the samples?	?	Yes 🗸	No 🗌	NA $\square$	
7.	Were all item	s received at a temperature of	f >2°C to 6°C *	Yes 🗸	No 🗌	na 🗆	
8.	Sample(s) in	proper container(s)?		Yes 🗸	No $\square$		
9.	Sufficient sar	mple volume for indicated test(	(s)?	Yes 🗸	No $\square$		
10	Are samples	properly preserved?		Yes 🗸	No $\square$		
11	Was preserva	ative added to bottles?		Yes	No 🗹	NA 🗆	
12	Is there head	space in the VOA vials?		Yes	No 🗌	NA 🗸	
		es containers arrive in good co	ondition(unbroken)?	Yes 🗸	No 🗌		
14	Does paperw	ork match bottle labels?		Yes 🗸	No $\square$		
15	Are matrices	correctly identified on Chain o	f Custody?	Yes 🗸	No 🗌		
		at analyses were requested?	· Guotody :	Yes 🗹	No $\square$		
_		ing times able to be met?		Yes 🗹	No $\square$		
		-					
Spe	ecial Handl	ing (if applicable)					
18	Was client no	otified of all discrepancies with	this order?	Yes	No 🗆	NA 🗹	
	Person	Notified:	Da	te:			
	By Who	m:	Via	a: eMail Pr	none  Fax	In Person	
	Regardi	ng:					
	Client Ir	structions:					
19	Additional rer	marks:					
<u>Item</u>	<u>Information</u>						
		Item #	Temp °C				
	Sample		5.7				

Sample

<sup>\*</sup> Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

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Page 1 of 2

	THE PART OF THE PA	X		Social since				0.00	×
	Print Name	Received (Signature)		Date/Time		,	Print Name	Relinadished (Signature)	Relina
oate oate oate oate	6/12/2	X X Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y	088120	12/22	æ	Ž	Lucy baissy	x min for of	×
	Delay No.	0		Date/Time		Par comp and	Drine Name	niched (Signature)	Boling
7 nav	ed above, that I have ver	alf of the Client nam	t Analytical on beha	h Fremon	ment wit	his Agree of this Ag	enter into t	I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement	† I
☐ 3 Day ☐ Same Day		Nitrate+Nitrite	O-Phosphate Fluoride		Bromide	Sulfate	Chloride	***Anions (Circle): Nitrate Nitrite	***An
Se Sr Sn Ti Ti V Zn Standard Next Day	Mg Mn Mo Na Ni Pb Sb Se	Co Cr Cu Fe Hg K M	Ag Al As B Ba Be Ca Cd		Individual:	nts TAL	Priority Pollutants	**Metals (Circle): MTCA-5 RCRA-8	**Me
rm Water, WW = Waste Water Turn-ground Time:	GW = Ground Water, SW = Storm Water,	DW = Drinking Water, G	W = Water,	S = Soil, SD = Sediment, SL = Solid,	Soll, SD =		O = Other, P = Product,	A = Air, AQ = Aqueous, B = Bulk,	*Matrix:
									10
									9
				-	0	130	8/12/22	TN-5: 11.5-12	100
	×			-	S	1126	8/12/22	TW-5: 10-10.5	7
				-	S	1125	8/12/22	TW-5: 8-8.5	6+
				_	v	1120	8/12/22	TW-5:5:5-6	5
				-	S	1201	8/12/22	M-4: 14.5-15	4
	×			-	S	1200	8/12/22	TW-4:10-10.5	3
				-	S	1159	8/12/22	W-4:8-8.5	2
				-	S	1158	8/12/22	W-4:5.5-6	7
Comments		24. (60	See It Passes	# of Cont.	Sample Type (Matrix)*	Sample	Sample Date	Sample Name	Sam
		The Carlotter							<sub>17</sub> 2
mikea@g-logics.com	com cc	Catlasgeonw.	PM Email: Thomas CE	PM Email					Fax:
Sample Disposal: Return to client Disposal by lab (after 30 days)		Cammavata	Report To (PM): TOM (	Report To			4	Telephone: 425395 4764	Telep
		WA	TWEWIL WA	Location:		98027	WA 9	City, State, Zip: 1858 duein 1	City,
		Soliz	collected by: Jessica Soliz	Collected			C	Address: 40 2nd Ane SE	Addr
	ask 2A	R J	01-0410	Project No:				# (5-Logics	Client:
Special Remarks:		FIELD C	Project Name: BOCK	Project N	852-7178	Fax: 206-352-7178	RECEIPT	Analyti	
Laboratory Project No (internal): 220893	of: L	22 Page:	8/12/2022	Date: (	352-3790	Tel: 206-352-3790	-		
Laboratory Services Agreement	ф 8	Chain of Custody Recor	Chain of C		nt Ave N.	3600 Fremont Ave N	<b>1</b>	種「こうこう	Æ



3600 Fremont Ave. N. Seattle, WA 98103 T: (206) 352-3790 F: (206) 352-7178 info@fremontanalytical.com

**G-Logics** 

Tom Cammarata 40 Second Ave. SE Issaguah, WA 98027

**RE: Boeing Field Chevron** Work Order Number: 2209377

October 05, 2022

### **Attention Tom Cammarata:**

Fremont Analytical, Inc. received 6 sample(s) on 9/28/2022 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext. Gasoline by NWTPH-Gx Volatile Organic Compounds by EPA Method 8260D

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes

**Project Manager** 

CC: Mike Arnold

DoD-ELAP Accreditation #79636 by PJLA, ISO/IEC 17025:2017 and QSM 5.3 for Environmental Testing ORELAP Certification: WA 100009 (NELAP Recognized) for Environmental Testing Washington State Department of Ecology Accredited for Environmental Testing, Lab ID C910

Date: 10/05/2022



CLIENT: G-Logics Work Order Sample Summary

**Project:** Boeing Field Chevron

Work Order: 2209377

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2209377-001	AS-1	09/27/2022 1:19 PM	09/28/2022 8:35 AM
2209377-002	IP-4	09/27/2022 2:12 PM	09/28/2022 8:35 AM
2209377-003	TW-4	09/27/2022 11:48 AM	09/28/2022 8:35 AM
2209377-004	TW-5	09/27/2022 10:41 AM	09/28/2022 8:35 AM
2209377-005	DUP-1	09/27/2022 8:00 AM	09/28/2022 8:35 AM
2209377-006	Trip Blank	09/22/2022 9:05 AM	09/28/2022 8:35 AM



### **Case Narrative**

WO#: **2209377**Date: **10/5/2022** 

**CLIENT:** G-Logics

Project: Boeing Field Chevron

#### I. SAMPLE RECEIPT:

Samples receipt information is recorded on the attached Sample Receipt Checklist.

#### II. GENERAL REPORTING COMMENTS:

Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

#### III. ANALYSES AND EXCEPTIONS:

Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Original



## **Qualifiers & Acronyms**

WO#: **2209377** 

Date Reported: 10/5/2022

### Qualifiers:

- \* Flagged value is not within established control limits
- B Analyte detected in the associated Method Blank
- D Dilution was required
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- I Analyte with an internal standard that does not meet established acceptance criteria
- J Analyte detected below Reporting Limit
- N Tentatively Identified Compound (TIC)
- Q Analyte with an initial or continuing calibration that does not meet established acceptance criteria
- S Spike recovery outside accepted recovery limits
- ND Not detected at the Reporting Limit
- R High relative percent difference observed

### Acronyms:

%Rec - Percent Recovery

**CCB - Continued Calibration Blank** 

**CCV - Continued Calibration Verification** 

**DF** - Dilution Factor

**DUP - Sample Duplicate** 

**HEM - Hexane Extractable Material** 

ICV - Initial Calibration Verification

LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate

MCL - Maximum Contaminant Level

MB or MBLANK - Method Blank

MDL - Method Detection Limit

MS/MSD - Matrix Spike / Matrix Spike Duplicate

PDS - Post Digestion Spike

Ref Val - Reference Value

REP - Sample Replicate

RL - Reporting Limit

RPD - Relative Percent Difference

SD - Serial Dilution

SGT - Silica Gel Treatment

SPK - Spike

Surr - Surrogate



Work Order: **2209377**Date Reported: **10/5/2022** 

Client: G-Logics Collection Date: 9/27/2022 1:19:00 PM

Project: Boeing Field Chevron

**Lab ID:** 2209377-001 **Matrix:** Water

Client Sample ID: AS-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPI	H-Dx/Dx Ext.			Batc	h ID: 37	974 Analyst: KJ
Diesel Range Organics	3,610	93.0		μg/L	1	9/30/2022 5:42:09 PM
Heavy Oil	ND	93.0		μg/L	1	9/30/2022 5:42:09 PM
Surr: 2-Fluorobiphenyl	320	50 - 150	S	%Rec	1	9/30/2022 5:42:09 PM
Surr: o-Terphenyl NOTES:	72.6	50 - 150		%Rec	1	9/30/2022 5:42:09 PM
S - Outlying surrogate recovery attributed	to TPH interference	L.				
Detection is biased high by overlap with g						
Gasoline by NWTPH-Gx				Batc	h ID: 37	972 Analyst: SG
Gasoline Range Organics	5,780	500	D	μg/L	10	10/5/2022 6:22:01 AM
Surr: Toluene-d8	92.0	65 - 135		%Rec	1	9/30/2022 5:10:30 PM
Surr: 4-Bromofluorobenzene	101	65 - 135		%Rec	1	9/30/2022 5:10:30 PM
Volatile Organic Compounds b	y EPA Method	8260D		Batc	h ID: 37	972 Analyst: LAC
Benzene	104	4.40	D	μg/L	10	10/5/2022 6:22:01 AM
Toluene	14.8	7.50	D	μg/L	10	10/5/2022 6:22:01 AM
Ethylbenzene	464	4.00	D	μg/L	10	10/5/2022 6:22:01 AM
m,p-Xylene	177	10.0	D	μg/L	10	10/5/2022 6:22:01 AM
o-Xylene	63.3	5.00	D	μg/L	10	10/5/2022 6:22:01 AM
Surr: Dibromofluoromethane	100	80 - 120		%Rec	1	9/30/2022 5:10:30 PM
Surr: Toluene-d8	96.7	80 - 120		%Rec	1	9/30/2022 5:10:30 PM
Surr: 1-Bromo-4-fluorobenzene	108	80 - 120		%Rec	1	9/30/2022 5:10:30 PM



Work Order: **2209377**Date Reported: **10/5/2022** 

Client: G-Logics Collection Date: 9/27/2022 2:12:00 PM

Project: Boeing Field Chevron

**Lab ID:** 2209377-002 **Matrix:** Water

Client Sample ID: IP-4

Diesel Range Organics   17,300   92.7   μg/L   1   9/30/2022 6:03     Heavy Oil   ND   92.7   μg/L   1   9/30/2022 6:03     Surr: 2-Fluorobiphenyl   351   50 - 150   S   %Rec   1   9/30/2022 6:03     Surr: o-Terphenyl   86.0   50 - 150   %Rec   1   9/30/2022 6:03     NOTES:   S - Outlying surrogate recovery attributed to TPH interference. Detection is due to overlap with gasoline-range material     Gasoline by NWTPH-Gx   Batch ID:   37972   Analyst     Gasoline Range Organics   114,000   10,000   D   μg/L   200   10/5/2022 6:52     Surr: Toluene-d8   101   65 - 135   D   %Rec   200   10/5/2022 6:52     Surr: 4-Bromofluorobenzene   102   65 - 135   D   %Rec   200   10/5/2022 6:52     Volatile Organic Compounds by EPA Method 8260D   Batch ID:   37972   Analyst     Benzene   47.2   88.0   JD   μg/L   200   10/5/2022 6:52     Toluene   2,420   150   D   μg/L   200   10/5/2022 6:52     Ethylbenzene   4,110   80.0   D   μg/L   200   10/5/2022 6:52     Ethylbenzene   13,800   200   D   μg/L   200   10/5/2022 6:52     Surr: Dibromofluoromethane   95.3   80 - 120   %Rec   1   9/30/2022 6:10     Surr: Toluene-d8   96.4   80 - 120   %Rec   1   9/30/2022 6:10     Surr: Toluene-d8   96.4   80 - 120   %Rec   1   9/30/2022 6:10     Surr: Toluene-d8   96.4   80 - 120   %Rec   1   9/30/2022 6:10     Surr: Toluene-d8   96.4   80 - 120   %Rec   1   9/30/2022 6:10     Surr: Toluene-d8   96.4   80 - 120   %Rec   1   9/30/2022 6:10     Surr: Toluene-d8   96.4   80 - 120   %Rec   1   9/30/2022 6:10     Surr: Toluene-d8   96.4   80 - 120   %Rec   1   9/30/2022 6:10     Surr: Toluene-d8   96.4   80 - 120   %Rec   1   9/30/2022 6:10     Surr: Toluene-d8   96.4   80 - 120   %Rec   1   9/30/2022 6:10     Surr: Toluene-d8   96.4   80 - 120   %Rec   1   9/30/2022 6:10     Surr: Toluene-d8   96.4   80 - 120   %Rec   1   9/30/2022 6:10     Surr: Toluene-d8   96.4   80 - 120   %Rec   1   9/30/2022 6:10     Surr: Toluene-d8   96.4   80 - 120   %Rec   1   9/30/2022 6:10     Surr: Toluene-d8   96.4   80 - 120   %Rec   1   9/30/2022 6:10     Su	Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Heavy Oil   ND   92.7   μg/L   1   9/30/2022 6:03     Surr: 2-Fluorobiphenyl   351   50 - 150   S   %Rec   1   9/30/2022 6:03     Surr: o-Terphenyl   86.0   50 - 150   %Rec   1   9/30/2022 6:03     NOTES:   S - Outlying surrogate recovery attributed to TPH interference. Detection is due to overlap with gasoline-range material	Diesel and Heavy Oil by NWTP	H-Dx/Dx Ext.			Bato	h ID: 379	974 Analyst: KJ
Surr: 2-Fluorobiphenyl         351         50 - 150         S         %Rec         1         9/30/2022 6:03           Surr: o-Terphenyl         86.0         50 - 150         %Rec         1         9/30/2022 6:03           NOTES:           S - Outlying surrogate recovery attributed to TPH interference. Detection is due to overlap with gasoline-range material           Batch ID: 37972         Analy           Gasoline by NWTPH-Gx         Batch ID: 37972         Analy           Gasoline Range Organics         114,000         10,000         D         µg/L         200         10/5/2022 6:52           Surr: Toluene-d8         101         65 - 135         D         %Rec         200         10/5/2022 6:52           Volatile Organic Compounds by EPA Method 8260D         Batch ID: 37972         Analy           Benzene         47.2         88.0         JD         µg/L         200         10/5/2022 6:52           Volatile Organic Compounds by EPA Method 8260D         Batch ID: 37972         Analy           Benzene         47.2         88.0         JD         µg/L         200         10/5/2022 6:52           Toluene         2,420         150         D         µg/L         200         10/5/2022 6:52 <td>Diesel Range Organics</td> <td>17,300</td> <td>92.7</td> <td></td> <td>μg/L</td> <td>1</td> <td>9/30/2022 6:03:55 PM</td>	Diesel Range Organics	17,300	92.7		μg/L	1	9/30/2022 6:03:55 PM
Surr: o-Terphenyl         86.0         50 - 150         %Rec         1         9/30/2022 6:03           NOTES: S - Outlying surrogate recovery attributed to TPH interference. Detection is due to overlap with gasoline-range material           Batch ID: 37972 Analy           Gasoline by NWTPH-Gx         Batch ID: 37972 Analy           Gasoline Range Organics         114,000 10,000 D μg/L 200 10/5/2022 6:52           Surr: Toluene-d8         101 65 - 135 D %Rec 200 10/5/2022 6:52           Surr: 4-Bromofluorobenzene         102 65 - 135 D %Rec 200 10/5/2022 6:52           Volatile Organic Compounds by EPA Method 8260D         Batch ID: 37972 Analy           Benzene         47.2 88.0 JD μg/L 200 10/5/2022 6:52           Toluene         2,420 150 D μg/L 200 10/5/2022 6:52           Ethylbenzene         4,110 80.0 D μg/L 200 10/5/2022 6:52           m,p-Xylene         13,800 200 D μg/L 200 10/5/2022 6:52           o-Xylene         3,830 100 D μg/L 200 10/5/2022 6:52           Surr: Dibromofluoromethane         95.3 80 - 120 %Rec 1 9/30/2022 6:10           Surr: Toluene-d8         96.4 80 - 120 %Rec 1 9/30/2022 6:10	Heavy Oil	ND	92.7		μg/L	1	9/30/2022 6:03:55 PM
NOTES:           S - Outlying surrogate recovery attributed to TPH interference.           Detection is due to overlap with gasoline-range material           Batch ID: 37972 Analy           Gasoline Pange Organics         114,000 10,000 D μg/L 200 10/5/2022 6:52           Surr: Toluene-d8         101 65 - 135 D %Rec 200 10/5/2022 6:52           Surr: 4-Bromofluorobenzene         102 65 - 135 D %Rec 200 10/5/2022 6:52           Volatile Organic Compounds by EPA Method 8260D         Batch ID: 37972 Analy           Benzene         47.2 88.0 JD μg/L 200 10/5/2022 6:52           Toluene         2,420 150 D μg/L 200 10/5/2022 6:52           Ethylbenzene         4,110 80.0 D μg/L 200 10/5/2022 6:52           m,p-Xylene         13,800 200 D μg/L 200 10/5/2022 6:52           o-Xylene         3,830 100 D μg/L 200 10/5/2022 6:52           Surr: Dibromofluoromethane         95.3 80 - 120 %Rec 1 9/30/2022 6:10           Surr: Toluene-d8         96.4 80 - 120 %Rec 1 9/30/2022 6:10	Surr: 2-Fluorobiphenyl	351	50 - 150	S	%Rec	1	9/30/2022 6:03:55 PM
S - Outlying surrogate recovery attributed to TPH interference. Detection is due to overlap with gasoline-range material  Gasoline by NWTPH-Gx  Batch ID: 37972 Analysis and Surrice and	Surr: o-Terphenyl	86.0	50 - 150		%Rec	1	9/30/2022 6:03:55 PM
Detection is due to overlap with gasoline-range material	NOTES:						
Gasoline by NWTPH-Gx         Batch ID: 37972         Analyse           Gasoline Range Organics         114,000         10,000         D         μg/L         200         10/5/2022 6:52           Surr: Toluene-d8         101         65 - 135         D         %Rec         200         10/5/2022 6:52           Surr: 4-Bromofluorobenzene         102         65 - 135         D         %Rec         200         10/5/2022 6:52           Volatile Organic Compounds by EPA Method 8260D         Batch ID: 37972         Analyse           Benzene         47.2         88.0         JD         μg/L         200         10/5/2022 6:52           Toluene         2,420         150         D         μg/L         200         10/5/2022 6:52           Ethylbenzene         4,110         80.0         D         μg/L         200         10/5/2022 6:52           m,p-Xylene         13,800         200         D         μg/L         200         10/5/2022 6:52           o-Xylene         3,830         100         D         μg/L         200         10/5/2022 6:52           Surr: Dibromofluoromethane         95.3         80 - 120         %Rec         1         9/30/2022 6:10           Surr: Toluene-d8         9	S - Outlying surrogate recovery attributed	I to TPH interference	<b>).</b>				
Gasoline Range Organics         114,000         10,000         D         μg/L         200         10/5/2022 6:52           Surr: Toluene-d8         101         65 - 135         D         %Rec         200         10/5/2022 6:52           Surr: 4-Bromofluorobenzene         102         65 - 135         D         %Rec         200         10/5/2022 6:52           Volatile Organic Compounds by EPA Method 8260D         Batch ID:         37972         Analy           Benzene         47.2         88.0         JD         μg/L         200         10/5/2022 6:52           Toluene         2,420         150         D         μg/L         200         10/5/2022 6:52           Ethylbenzene         4,110         80.0         D         μg/L         200         10/5/2022 6:52           m,p-Xylene         13,800         200         D         μg/L         200         10/5/2022 6:52           o-Xylene         3,830         100         D         μg/L         200         10/5/2022 6:52           Surr: Dibromofluoromethane         95.3         80 - 120         %Rec         1         9/30/2022 6:10           Surr: Toluene-d8         96.4         80 - 120         %Rec         1         9/30/2022 6:10 <td>Detection is due to overlap with gasoline-</td> <td>range material</td> <td></td> <td></td> <td></td> <td></td> <td></td>	Detection is due to overlap with gasoline-	range material					
Surr: Toluene-d8         101         65 - 135         D         %Rec         200         10/5/2022 6:52           Volatile Organic Compounds by EPA Method 8260D           Benzene         47.2         88.0         JD         μg/L         200         10/5/2022 6:52           Toluene         2,420         150         D         μg/L         200         10/5/2022 6:52           Ethylbenzene         4,110         80.0         D         μg/L         200         10/5/2022 6:52           m,p-Xylene         13,800         200         D         μg/L         200         10/5/2022 6:52           o-Xylene         3,830         100         D         μg/L         200         10/5/2022 6:52           Surr: Dibromofluoromethane         95.3         80 - 120         %Rec         1         9/30/2022 6:10           Surr: Toluene-d8         96.4         80 - 120         %Rec         1         9/30/2022 6:10	Gasoline by NWTPH-Gx				Bato	h ID: 379	972 Analyst: SG
Surr: 4-Bromofluorobenzene         102         65 - 135         D         %Rec         200         10/5/2022 6:52           Volatile Organic Compounds by EPA Method 8260D           Benzene         47.2         88.0         JD         μg/L         200         10/5/2022 6:52           Toluene         2,420         150         D         μg/L         200         10/5/2022 6:52           Ethylbenzene         4,110         80.0         D         μg/L         200         10/5/2022 6:52           m,p-Xylene         13,800         200         D         μg/L         200         10/5/2022 6:52           o-Xylene         3,830         100         D         μg/L         200         10/5/2022 6:52           Surr: Dibromofluoromethane         95.3         80 - 120         %Rec         1         9/30/2022 6:10           Surr: Toluene-d8         96.4         80 - 120         %Rec         1         9/30/2022 6:10	Gasoline Range Organics	114,000	10,000	D	μg/L	200	10/5/2022 6:52:58 AM
Volatile Organic Compounds by EPA Method 8260D       Batch ID: 37972       Analyst         Benzene       47.2       88.0       JD       μg/L       200       10/5/2022 6:52       52         Toluene       2,420       150       D       μg/L       200       10/5/2022 6:52       6:52         Ethylbenzene       4,110       80.0       D       μg/L       200       10/5/2022 6:52       6:52         m,p-Xylene       13,800       200       D       μg/L       200       10/5/2022 6:52       6:52         o-Xylene       3,830       100       D       μg/L       200       10/5/2022 6:52       6:52         Surr: Dibromofluoromethane       95.3       80 - 120       %Rec       1       9/30/2022 6:10         Surr: Toluene-d8       96.4       80 - 120       %Rec       1       9/30/2022 6:10	Surr: Toluene-d8	101	65 - 135	D	%Rec	200	10/5/2022 6:52:58 AM
Benzene       47.2       88.0       JD       μg/L       200       10/5/2022 6:52         Toluene       2,420       150       D       μg/L       200       10/5/2022 6:52         Ethylbenzene       4,110       80.0       D       μg/L       200       10/5/2022 6:52         m,p-Xylene       13,800       200       D       μg/L       200       10/5/2022 6:52         o-Xylene       3,830       100       D       μg/L       200       10/5/2022 6:52         Surr: Dibromofluoromethane       95.3       80 - 120       %Rec       1       9/30/2022 6:10         Surr: Toluene-d8       96.4       80 - 120       %Rec       1       9/30/2022 6:10	Surr: 4-Bromofluorobenzene	102	65 - 135	D	%Rec	200	10/5/2022 6:52:58 AM
Toluene 2,420 150 D μg/L 200 10/5/2022 6:52 Ethylbenzene 4,110 80.0 D μg/L 200 10/5/2022 6:52 m,p-Xylene 13,800 200 D μg/L 200 10/5/2022 6:52 ο-Xylene 3,830 100 D μg/L 200 10/5/2022 6:52 Surr: Dibromofluoromethane 95.3 80 - 120 %Rec 1 9/30/2022 6:10 Surr: Toluene-d8 96.4 80 - 120 %Rec 1 9/30/2022 6:10	Volatile Organic Compounds b	y EPA Method	8260D		Bato	h ID: 379	Analyst: LAC
Ethylbenzene       4,110       80.0       D       μg/L       200       10/5/2022 6:52         m,p-Xylene       13,800       200       D       μg/L       200       10/5/2022 6:52         o-Xylene       3,830       100       D       μg/L       200       10/5/2022 6:52         Surr: Dibromofluoromethane       95.3       80 - 120       %Rec       1       9/30/2022 6:10         Surr: Toluene-d8       96.4       80 - 120       %Rec       1       9/30/2022 6:10	Benzene	47.2	88.0	JD	μg/L	200	10/5/2022 6:52:58 AM
m,p-Xylene       13,800       200       D       μg/L       200       10/5/2022 6:52         o-Xylene       3,830       100       D       μg/L       200       10/5/2022 6:52         Surr: Dibromofluoromethane       95.3       80 - 120       %Rec       1       9/30/2022 6:10         Surr: Toluene-d8       96.4       80 - 120       %Rec       1       9/30/2022 6:10	Toluene	2,420	150	D	μg/L	200	10/5/2022 6:52:58 AM
o-Xylene 3,830 100 D μg/L 200 10/5/2022 6:52 Surr: Dibromofluoromethane 95.3 80 - 120 %Rec 1 9/30/2022 6:10 Surr: Toluene-d8 96.4 80 - 120 %Rec 1 9/30/2022 6:10	Ethylbenzene	4,110	80.0	D	μg/L	200	10/5/2022 6:52:58 AM
Surr: Dibromofluoromethane       95.3       80 - 120       %Rec       1       9/30/2022 6:10         Surr: Toluene-d8       96.4       80 - 120       %Rec       1       9/30/2022 6:10	m,p-Xylene	13,800	200	D	μg/L	200	10/5/2022 6:52:58 AM
Surr: Toluene-d8 96.4 80 - 120 %Rec 1 9/30/2022 6:10	o-Xylene	3,830	100	D	μg/L	200	10/5/2022 6:52:58 AM
	Surr: Dibromofluoromethane	95.3	80 - 120		%Rec	1	9/30/2022 6:10:54 PM
Surr: 1-Bromo-4-fluorobenzene 120 80 - 120 %Rec: 1 9/30/2022 6:10	Surr: Toluene-d8	96.4	80 - 120		%Rec	1	9/30/2022 6:10:54 PM
755 1 0/00/E0EE 0.10	Surr: 1-Bromo-4-fluorobenzene	120	80 - 120		%Rec	1	9/30/2022 6:10:54 PM



Work Order: **2209377**Date Reported: **10/5/2022** 

Client: G-Logics Collection Date: 9/27/2022 11:48:00 AM

Project: Boeing Field Chevron

**Lab ID:** 2209377-003 **Matrix:** Water

Client Sample ID: TW-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPI	H-Dx/Dx Ext.			Batc	h ID:	37974 Analyst: KJ
Diesel Range Organics	381	91.9		μg/L	1	9/30/2022 6:25:53 PM
Heavy Oil	ND	91.9		μg/L	1	9/30/2022 6:25:53 PM
Surr: 2-Fluorobiphenyl	83.5	50 - 150		%Rec	1	9/30/2022 6:25:53 PM
Surr: o-Terphenyl	90.0	50 - 150		%Rec	1	9/30/2022 6:25:53 PM
NOTES:						
Detection is biased high by overlap with g	gasoline-range materi	al				
Gasoline by NWTPH-Gx				Batc	h ID:	37972 Analyst: SG
Gasoline Range Organics	133	50.0		μg/L	1	10/5/2022 4:49:06 AM
Surr: Toluene-d8	99.9	65 - 135		%Rec	1	10/5/2022 4:49:06 AM
Surr: 4-Bromofluorobenzene	104	65 - 135		%Rec	1	10/5/2022 4:49:06 AM
Volatile Organic Compounds b	y EPA Method	8260D		Batc	h ID:	37972 Analyst: LAC
Benzene	ND	0.440		μg/L	1	10/5/2022 4:49:06 AM
Toluene	6.35	0.750		μg/L	1	10/5/2022 4:49:06 AM
Ethylbenzene	0.978	0.400		μg/L	1	10/5/2022 4:49:06 AM
m,p-Xylene	2.95	1.00		μg/L	1	10/5/2022 4:49:06 AM
o-Xylene	1.25	0.500		μg/L	1	10/5/2022 4:49:06 AM
Surr: Dibromofluoromethane	101	80 - 120		%Rec	1	9/30/2022 6:41:06 PM
Surr: Toluene-d8	102	80 - 120		%Rec	1	9/30/2022 6:41:06 PM
Surr: 1-Bromo-4-fluorobenzene	105	80 - 120		%Rec	1	9/30/2022 6:41:06 PM



Work Order: **2209377**Date Reported: **10/5/2022** 

Client: G-Logics Collection Date: 9/27/2022 10:41:00 AM

Project: Boeing Field Chevron

**Lab ID**: 2209377-004 **Matrix**: Water

**Client Sample ID: TW-5** 

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTP	H-Dx/Dx Ext.			Bato	h ID: 379	74 Analyst: KJ
Diesel Range Organics	8,520	94.2		μg/L	1	9/30/2022 6:36:47 PM
Heavy Oil	ND	94.2		μg/L	1	9/30/2022 6:36:47 PM
Surr: 2-Fluorobiphenyl	370	50 - 150	S	%Rec	1	9/30/2022 6:36:47 PM
Surr: o-Terphenyl	94.8	50 - 150		%Rec	1	9/30/2022 6:36:47 PM
NOTES:						
S - Outlying surrogate recovery attributed						
Detection is due to overlap with gasoline	range material					
Gasoline by NWTPH-Gx				Bato	h ID: 379	72 Analyst: SG
Gasoline Range Organics	178,000	50,000	D	μg/L	1000	10/5/2022 7:55:02 AM
Surr: Toluene-d8	101	65 - 135	D	%Rec	1000	10/5/2022 7:55:02 AM
Surr: 4-Bromofluorobenzene	103	65 - 135	D	%Rec	1000	10/5/2022 7:55:02 AM
Volatile Organic Compounds b	y EPA Method	8260D		Bato	h ID: 379	72 Analyst: LAC
Benzene	258	440	JD	μg/L	1000	10/5/2022 7:55:02 AM
Toluene	30,600	750	D	μg/L	1000	10/5/2022 7:55:02 AM
Ethylbenzene	3,890	400	D	μg/L	1000	10/5/2022 7:55:02 AM
m,p-Xylene	14,600	1,000	D	μg/L	1000	10/5/2022 7:55:02 AM
o-Xylene	6,270	500	D	μg/L	1000	10/5/2022 7:55:02 AM
Surr: Dibromofluoromethane	88.0	80 - 120		%Rec	1	9/30/2022 7:11:12 PM
Surr: Toluene-d8	102	80 - 120	D	%Rec	1000	10/5/2022 7:55:02 AM
Surr: 1-Bromo-4-fluorobenzene	102	80 - 120	D	%Rec	1000	10/5/2022 7:55:02 AM



Work Order: **2209377**Date Reported: **10/5/2022** 

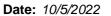
Client: G-Logics Collection Date: 9/27/2022 8:00:00 AM

Project: Boeing Field Chevron

**Lab ID:** 2209377-005 **Matrix:** Water

Client Sample ID: DUP-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Allalyses	Nesuit	NL	Quai	Ullits	וט	Date Allalyzeu
Diesel and Heavy Oil by NWTP	H-Dx/Dx Ext.			Bato	h ID: 3	37974 Analyst: KJ
Diesel Range Organics	3,990	92.6		μg/L	1	9/30/2022 6:47:41 PM
Heavy Oil	ND	92.6		μg/L	1	9/30/2022 6:47:41 PM
Surr: 2-Fluorobiphenyl	322	50 - 150	S	%Rec	1	9/30/2022 6:47:41 PM
Surr: o-Terphenyl	71.3	50 - 150		%Rec	1	9/30/2022 6:47:41 PM
NOTES:						
S - Outlying surrogate recovery attributed	to TPH interference	<b>).</b>				
Detection is biased high by overlap with o	gasoline-range mater	ial				
Gasoline by NWTPH-Gx				Bato	h ID: 3	Analyst: SG
Gasoline Range Organics	5,960	500	D	μg/L	10	10/5/2022 8:57:00 AM
Surr: Toluene-d8	100	65 - 135	D	%Rec	10	10/5/2022 8:57:00 AM
Surr: 4-Bromofluorobenzene	102	65 - 135	D	%Rec	10	10/5/2022 8:57:00 AM
Volatile Organic Compounds b	y EPA Method	8260D		Bato	h ID: 3	Analyst: LAC
Benzene	109	4.40	D	μg/L	10	10/5/2022 8:57:00 AM
Toluene	15.1	7.50	D	μg/L	10	10/5/2022 8:57:00 AM
Ethylbenzene	486	4.00	DE	μg/L	10	10/5/2022 8:57:00 AM
m,p-Xylene	184	10.0	D	μg/L	10	10/5/2022 8:57:00 AM
o-Xylene	65.9	5.00	D	μg/L	10	10/5/2022 8:57:00 AM
Surr: Dibromofluoromethane	105	80 - 120	D	%Rec	10	10/5/2022 8:57:00 AM
Surr: Toluene-d8	101	80 - 120	D	%Rec	10	10/5/2022 8:57:00 AM
Surr: 1-Bromo-4-fluorobenzene	102	80 - 120	D	%Rec	10	10/5/2022 8:57:00 AM





## **QC SUMMARY REPORT**

**CLIENT:** G-Logics

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

**Project:** Boeing Field Chevron

Sample ID: MB-37974	SampType: MBLK			Units: µg/L		Prep Dat	e: <b>9/29/2</b> 0	22	RunNo: <b>786</b>	83	
Client ID: MBLKW	Batch ID: 37974					Analysis Dat	e: <b>9/30/2</b> 0	)22	SeqNo: <b>16</b> 1	8900	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics	ND	94.2									
Heavy Oil	ND	94.2									
Total Petroleum Hydrocarbons	ND	188									
Surr: 2-Fluorobiphenyl	18.4		23.56		77.9	50	150				
Surr: o-Terphenyl	20.6		23.56		87.4	50	150				
Sample ID: LCS-37974	SampType: LCS			Units: µg/L		Prep Dat	e: <b>9/29/20</b>	)22	RunNo: <b>786</b>	683	
Client ID: LCSW	Batch ID: 37974					Analysis Dat	e: <b>9/30/2</b> 0	)22	SeqNo: <b>16</b> 1	8901	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Petroleum Hydrocarbons	998	191	1,193	0	83.6	44.4	125				
Surr: 2-Fluorobiphenyl	18.6		23.85		77.9	50	150				
Surr: o-Terphenyl	25.4		23.85		106	50	150				
Sample ID: LCSD-37974	SampType: LCSD			Units: µg/L		Prep Dat	e: <b>9/29/20</b>	)22	RunNo: <b>786</b>	683	
Client ID: LCSW02	Batch ID: 37974					Analysis Dat	e: <b>9/30/2</b> 0	)22	SeqNo: 161	8902	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Petroleum Hydrocarbons	955	189	1,184	0	80.6	44.4	125	997.5	4.40	30	
Surr: 2-Fluorobiphenyl	17.4		23.67		73.5	50	150		0		
Surr: o-Terphenyl	23.0		23.67		97.1	50	150		0		
Sample ID: <b>2209375-004BDUP</b>	SampType: <b>DUP</b>			Units: µg/L		Prep Dat	e: <b>9/29/20</b>	)22	RunNo: <b>786</b>	683	
Client ID: BATCH	Batch ID: 37974					Analysis Dat	e: <b>9/30/2</b> 0	)22	SeqNo: 161	8908	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Diesel Range Organics	ND	96.5						0		30	
Heavy Oil	ND	96.5						0		30	
rieavy Oil											
Total Petroleum Hydrocarbons	ND	193						0		30	

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Date: 10/5/2022



**Work Order:** 2209377

**QC SUMMARY REPORT** 

**CLIENT:** G-Logics

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

**Project:** Boeing Field Chevron

Sample ID: 2209375-004BDUP SampType: **DUP** Prep Date: 9/29/2022 RunNo: 78683 Units: µg/L Client ID: BATCH Analysis Date: 9/30/2022 Batch ID: 37974 SeqNo: 1618908 LowLimit HighLimit RPD Ref Val Analyte Result RL SPK value SPK Ref Val %RPD RPDLimit Qual Surr: o-Terphenyl 50 0 23.8 24.12 150 98.5

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**CLIENT:** G-Logics

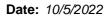
**Project:** Boeing Field Chevron

## **QC SUMMARY REPORT**

## Gasoline by NWTPH-Gx

Project: Boeing Field	d Chevron								<b>-</b>	,,	
Sample ID: LCS-37972	SampType: LCS			Units: µg/L		Prep Date	9/29/202	22	RunNo: <b>786</b>	698	
Client ID: LCSW	Batch ID: 37972					Analysis Date	9/29/202	22	SeqNo: <b>16</b> 1	19309	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics	474	50.0	500.0	0	94.9	65	135				
Surr: Toluene-d8	26.1		25.00		105	65	135				
Surr: 4-Bromofluorobenzene	23.8		25.00		95.1	65	135				
Sample ID: <b>MB-37972</b>	SampType: MBLK			Units: µg/L		Prep Date	9/29/202	22	RunNo: <b>786</b>	698	
Client ID: MBLKW	Batch ID: 37972					Analysis Date	9/29/202	22	SeqNo: 162	20359	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Gasoline Range Organics	ND	50.0									
Surr: Toluene-d8	26.0		25.00		104	65	135				
Surr: 4-Bromofluorobenzene	24.1		25.00		96.5	65	135				
Sample ID: <b>2209377-001ADUP</b>	SampType: <b>DUP</b>			Units: µg/L		Prep Date	: 9/29/202	22	RunNo: <b>786</b>	698	
Client ID: AS-1	Batch ID: 37972					Analysis Date	9/30/202	22	SeqNo: 162	20353	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Gasoline Range Organics	4,160	50.0						4,197	0.929	30	Е
Surr: Toluene-d8	25.8		25.00		103	65	135		0		
Surr: 4-Bromofluorobenzene	24.3		25.00		97.2	65	135		0		
Sample ID: LCS-37972	SampType: <b>LCS</b>			Units: µg/L		Prep Date	9/29/202	22	RunNo: <b>787</b>	765	
Client ID: LCSW	Batch ID: 37972					Analysis Date	: 10/4/202	22	SeqNo: 162	20477	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit I	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Gasoline Range Organics	563	50.0	500.0	0	113	65	135				
							405				
Surr: Toluene-d8	24.9		25.00		99.7	65	135				

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**CLIENT:** G-Logics

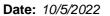
**Project:** Boeing Field Chevron

## **QC SUMMARY REPORT**

## Gasoline by NWTPH-Gx

Troject. Boeing rier	d Chevion								
Sample ID: MB-37972	SampType: MBLK			Units: µg/L		Prep Date	e: <b>9/29/2022</b>	RunNo: <b>78765</b>	
Client ID: MBLKW	Batch ID: 37972					Analysis Date	e: <b>10/4/2022</b>	SeqNo: <b>1620476</b>	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	%RPD RPDLimit	Qua
Gasoline Range Organics	ND	50.0							
Surr: Toluene-d8	24.8		25.00		99.3	65	135		
Surr: 4-Bromofluorobenzene	25.5		25.00		102	65	135		
Sample ID: <b>2209375-004AMS</b>	SampType: MS			Units: µg/L		Prep Date	e: <b>9/29/2022</b>	RunNo: <b>78765</b>	
Client ID: BATCH	Batch ID: 37972					Analysis Date	e: <b>10/4/2022</b>	SeqNo: <b>1620472</b>	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	%RPD RPDLimit	Qua
Gasoline Range Organics	459	50.0	500.0	35.39	84.7	65	135		
Surr: Toluene-d8	25.1		25.00		100	65	135		
Surr: 4-Bromofluorobenzene	25.8		25.00		103	65	135		
Sample ID: <b>MB-37972</b>	SampType: <b>mblk</b>			Units: µg/L		Prep Date	e: <b>9/29/2022</b>	RunNo: <b>78698</b>	
Client ID: MBLKW	Batch ID: 37972					Analysis Date	e: <b>10/4/2022</b>	SeqNo: <b>1620800</b>	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	%RPD RPDLimit	Qua
Gasoline Range Organics	ND	50.0							
Surr: Toluene-d8	25.1		25.00		100	65	135		
Surr: 4-Bromofluorobenzene	25.8		25.00		103	65	135		

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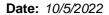
## **QC SUMMARY REPORT**

**CLIENT:** G-Logics

## **Volatile Organic Compounds by EPA Method 8260D**

Project: Boeing Field	l Chevron					Volatile	Organic	Compoun	ds by EPA	Method	826
Sample ID: LCS-37972	SampType: LCS			Units: µg/L		Prep Dat	e: <b>9/29/202</b>	22	RunNo: <b>786</b>	54	
Client ID: LCSW	Batch ID: 37972					Analysis Dat	e: <b>9/29/202</b>	22	SeqNo: 161	8328	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Benzene	20.5	0.440	20.00	0	103	80	120				
Toluene	21.6	0.750	20.00	0	108	80	120				
Ethylbenzene	19.9	0.400	20.00	0	99.4	80	120				
m,p-Xylene	40.5	1.00	40.00	0	101	80	120				
o-Xylene	20.2	0.500	20.00	0	101	80	120				
Surr: Dibromofluoromethane	25.6		25.00		102	80	120				
Surr: Toluene-d8	26.9		25.00		107	80	120				
Surr: 1-Bromo-4-fluorobenzene	26.7		25.00		107	80	120				
Sample ID: <b>MB-37972</b>	SampType: MBLK			Units: µg/L		Prep Dat	e: <b>9/29/202</b>	22	RunNo: <b>786</b>	54	
Client ID: MBLKW	Batch ID: 37972					Analysis Dat	e: <b>9/29/202</b>	22	SeqNo: 161	8315	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qu
Benzene	ND	0.440									
Toluene	ND	0.750									
Ethylbenzene	ND	0.400									
m,p-Xylene	ND	1.00									
o-Xylene	ND	0.500									
Surr: Dibromofluoromethane	25.5		25.00		102	80	120				
Surr: Toluene-d8	25.9		25.00		103	80	120				
Surr: 1-Bromo-4-fluorobenzene	25.0		25.00		100	80	120				
Sample ID: <b>2209393-001AMS</b>	SampType: MS			Units: µg/L		Prep Dat	e: <b>9/29/202</b>	22	RunNo: <b>786</b>	54	
Client ID: BATCH	Batch ID: 37972					Analysis Dat	e: <b>9/29/202</b>	22	SeqNo: 161	8312	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Benzene	99.2	0.440	20.00	63.57	178	78.5	133				S
Toluene	1,120	0.750	20.00	866.3	1,280	77	133				S
Ethylbenzene	375	0.400	20.00	283.4	459	77.9	133				S
m,p-Xylene	587	1.00	40.00	487.7	249	74.8	133				S
o-Xylene	364	0.500	20.00	304.9	296	81.2	126				S

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## **QC SUMMARY REPORT**

**CLIENT:** G-Logics

## **Volatile Organic Compounds by EPA Method 8260D**

**Project:** Boeing Field Chevron

Sample ID: 2209393-001AMS	SampType: MS			Units: µg/L		Prep Da	te: <b>9/29/20</b>	)22	RunNo: <b>786</b>	654	
Client ID: BATCH	Batch ID: 37972					Analysis Da	te: <b>9/29/20</b>	)22	SeqNo: 161	18312	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	24.2		25.00		96.9	80	120				
Surr: Toluene-d8	25.7		25.00		103	80	120				
Surr: 1-Bromo-4-fluorobenzene	30.9		25.00		124	80	120				S

#### NOTES:

S - Spiked amount was low relative to sample concentration. Outlying spike recoveries may be expected.

Sample ID: 2209377-001ADUP	SampType: <b>DUP</b>			Units: µg/L		Prep Da	te: <b>9/29/20</b>	)22	RunNo: <b>786</b>	654	
Client ID: AS-1	Batch ID: 37972					Analysis Da	te: <b>9/30/20</b>	)22	SeqNo: <b>16</b> 1	19160	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	85.0	0.440						86.80	2.13	30	Е
Toluene	13.4	0.750						12.51	7.15	30	
Ethylbenzene	307	0.400						311.5	1.55	30	E
m,p-Xylene	138	1.00						141.5	2.35	30	E
o-Xylene	53.2	0.500						54.48	2.43	30	E
Surr: Dibromofluoromethane	24.0		25.00		95.9	80	120		0		
Surr: Toluene-d8	25.8		25.00		103	80	120		0		
Surr: 1-Bromo-4-fluorobenzene	25.9		25.00		104	80	120		0		

Original Page 15 of 17



# Sample Log-In Check List

CI	ient Name:	GL	Work Order Number	er: 2209377	
Lo	gged by:	Elisabeth Samoray	Date Received:	9/28/2022	8:35:00 AM
Cha	in of Custo	ody			
		ustody complete?	Yes 🗸	No $\square$	Not Present
2.	How was the	sample delivered?	<u>Client</u>		
Log	In				
_		recent?	Yes 🗸	No 🗆	na 🗆
3.	Coolers are p	nesent?	res 💌	NO 🗀	NA L
4.	Shipping con	tainer/cooler in good condition?	Yes 🗸	No 🗌	
5.		s present on shipping container/cooler? ments for Custody Seals not intact)	Yes 🗸	No 🗌	Not Present
6.	Was an atten	npt made to cool the samples?	Yes 🗸	No 🗌	na 🗆
7.	Were all item	s received at a temperature of >2°C to 6°C *	Yes 🗸	No 🗆	na 🗆
8.	Sample(s) in	proper container(s)?	Yes 🗸	No 🗆	
9.	Sufficient san	nple volume for indicated test(s)?	Yes 🗹	No $\square$	
10.	Are samples	properly preserved?	Yes 🗹	No $\square$	
11.	Was preserva	ative added to bottles?	Yes	No 🗸	NA 🗆
12.	Is there head	space in the VOA vials?	Yes	No 🗸	na 🗆
		es containers arrive in good condition(unbroken)?	Yes 🗹	No $\square$	
14.	Does paperw	ork match bottle labels?	Yes 🗹	No 🗌	
15.	Are matrices	correctly identified on Chain of Custody?	Yes 🗸	No 🗌	
16.	Is it clear wha	at analyses were requested?	Yes 🗹	No 🗌	
17.	Were all hold	ing times able to be met?	Yes 🗸	No $\square$	
Sne	cial Handli	ing (if applicable)			
-		otified of all discrepancies with this order?	Yes	No $\square$	NA 🗹
	Person	Notified: Dat	e·		
	By Who		•	ne Fax	In Person
	Regardi				
	_	structions:			
19.	Additional rer	,			
	Information				
		Item # Temp °C			

3.6

Sample 1

<sup>\*</sup> Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

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Print Name

Date/Time

3	ont Ave N.	Chain of	Chain of Custody Record	20	horatory Con	iiooo Aaroor	
	Seattle, WA 98103 Tel: 206-352-3790 Date:		22 Page:	s. 1	Laboratory Project No (Internal): 220927	(internal): 220937	
rax; zup	rax: 200-352-/1/8 Pro	Project Name: BORING FIELD			Special Remarks:		17 o
Client: (3-)091CS	Pro	Project No: 01-0410-P	4	L <sub>A</sub>			age
Address: 40 2nd Ave SE	Coll	collected by: Nessica Soliz	a Soliz		***************************************		P
CITY, State, Zip: 1550/ WAN MA 98027	Loca	Location: TWKWiln WA	NA.		***************************************		THE RESERVE OF THE PARTY OF THE
Telephone: 425 - 391-4876	Rep	<b>T</b>		A LA	Sample Disposal: Return to client		
Fax: 425-313-3074	PM I	PM Email: Thomas Co	2	CAT TO THE PARTY OF THE PARTY O	a Ray mire	Colon of man former of man	(ekan or main)
The course of th	k H						
Sample Name Sample Sample Time	Sample Type # of (Matrix)* Cont.	A CO GO A OF	14. C. 30				
AS-1 9/27/22 1319	3	×				Comments	
117-4 9/27/22 1412	h N	*	*		<b>*</b>	H: GKU, UK	0
TW-4 3/27/12 1148	× 00	*	*			and bir	×
IW-5 9/27/22 1041	N H	X X	X				
DUP-1 9/27/12 0800	N L	×	*				
					- 10		
ous, B=Bulk, (	Soil, SD = Sediment,	;, SL = Solid, W = Water, DW = Drinking Water,		GW = Ground Water, SW:	SW = Storm Water, WW = Waste Water		Turn-around Time:
**Anions (Circle): Nitrate Nitrite Chloride Sulfate	Individual: Ag	Be Ca	o Cr Cu Fe Hg K	Mg Mn Mo Na Ni Pb	Sb Se Sr Sn Ti Tl V Zn	X Standard [	□ Next Day
this	nent with Fremo	ont Analytical on beha	alf of the Client name	d above, that I hav	that I have verified Client's agreement	□ з рау	Same Day
linquished (Signature) Print Name	Date/Time	ne	Received (Simples)			☐ 2 Day	(specify)
linguished (Signature)  Jessica Soliz	9/28/20	128/2022 0700	"Once Oca	mor Clare	Print Name	9/28/27 8	8:35
rink wame	Date/Time	ře	Received (Signature)		lame		



14648 NE 95<sup>th</sup> Street, Redmond, WA 98052 • (425) 883-3881

March 3, 2023

Tom Commarata G-Logics an Atlas Geoscience NW Company 40 2nd Avenue SE Issaquah, WA 98027-3452

Re: Analytical Data for Project 01-0410-R

Laboratory Reference No. 2302-283

Dear Tom:

Enclosed are the analytical results and associated quality control data for samples submitted on February 24, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister Project Manager

**Enclosures** 

Date of Report: March 3, 2023

Samples Submitted: February 24, 2023 Laboratory Reference: 2302-283

Project: 01-0410-R

#### **Case Narrative**

Samples were collected on February 22 and 23, 2023 and received by the laboratory on February 24, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

#### **NWTPH-Dx Analysis**

The surrogate percent recovery (43%) for sample TW-5 was below the control limit of 50% due to matrix effects. The sample was re-extracted with the same result.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Project: 01-0410-R

### GASOLINE RANGE ORGANICS NWTPH-Gx

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	TW-1					
Laboratory ID:	02-283-01					
Gasoline	ND	100	NWTPH-Gx	2-28-23	2-28-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	103	65-122				
Client ID:	TW-2					
Laboratory ID:	02-283-02					
Gasoline	100	100	NWTPH-Gx	2-28-23	2-28-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	99	65-122				
Client ID:	TW-5					
Laboratory ID:	02-283-03					
Gasoline	140000	5000	NWTPH-Gx	2-28-23	2-28-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	108	65-122				
Client ID:	TW-4					
Laboratory ID:	02-283-04					
Gasoline	ND	100	NWTPH-Gx	2-28-23	2-28-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	101	65-122				
Client ID:	IP-5					
Laboratory ID:	02-283-05					
Gasoline	21000	5000	NWTPH-Gx	2-28-23	2-28-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	105	65-122				
Client ID:	TW-3					
Laboratory ID:	02-283-06					
Gasoline	14000	5000	NWTPH-Gx	2-28-23	2-28-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	107	65-122				
Client ID:	AS-1					
Laboratory ID:	02-283-07					
Gasoline	6000	500	NWTPH-Gx	3-1-23	3-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	93	65-122				

Date of Report: March 3, 2023

Samples Submitted: February 24, 2023 Laboratory Reference: 2302-283

Project: 01-0410-R

### GASOLINE RANGE ORGANICS NWTPH-Gx

			Date	Date	
Result	PQL	Method	Prepared	Analyzed	Flags
IP-3					
02-283-08					
29000	5000	NWTPH-Gx	2-28-23	2-28-23	
Percent Recovery	Control Limits				
108	65-122				
IP-4					
02-283-09					
63000	5000	NWTPH-Gx	2-28-23	2-28-23	
Percent Recovery	Control Limits				
99	65-122				
IP-7					
02-283-10					
82000	5000	NWTPH-Gx	2-28-23	2-28-23	
Percent Recovery	Control Limits				
105	65-122				
Dup-1					
02-283-11					
9200	5000	NWTPH-Gx	2-28-23	2-28-23	
Percent Recovery	Control Limits				
104	65-122				
	IP-3 02-283-08 29000 Percent Recovery 108 IP-4 02-283-09 63000 Percent Recovery 99 IP-7 02-283-10 82000 Percent Recovery 105 Dup-1 02-283-11 9200 Percent Recovery	P-3	IP-3	Result         PQL         Method         Prepared           IP-3         02-283-08	Result         PQL         Method         Prepared         Analyzed           IP-3         02-283-08         302-283-08         302-283-08         3000         NWTPH-Gx         2-28-23         2-28-

Project: 01-0410-R

### GASOLINE RANGE ORGANICS NWTPH-Gx QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0228W1					
Gasoline	ND	100	NWTPH-Gx	2-28-23	2-28-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	97	65-122				
Laboratory ID:	MB0228W2					
Gasoline	ND	100	NWTPH-Gx	2-28-23	2-28-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	97	65-122				
Laboratory ID:	MB0301W1					
Gasoline	ND	100	NWTPH-Gx	3-1-23	3-1-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	95	65-122				

					Source	Perce	ent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Recov	ery/	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	02-26	66-01									
	ORIG	DUP									
Gasoline	ND	ND	NA	NA		NA	١	NA	NA	30	
Surrogate:											
Fluorobenzene						98	97	65-122			
Laboratory ID:	02-26	66-02									
	ORIG	DUP									
Gasoline	ND	ND	NA	NA		NA	١	NA	NA	30	
Surrogate:		•	•		•	•			•	•	
Fluorobenzene						104	98	65-122			

Project: 01-0410-R

# DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx

Analyte Result		DOL	Method	Date	Date	Elogo		
Analyte Client ID:	TW-1	PQL	wethou	Prepared	Analyzed	Flags		
Laboratory ID:	02-283-01							
Diesel Range Organics	130	110	NWTPH-Dx	2-28-23	2-28-23			
Lube Oil Range Organics	350	210	NWTPH-Dx	2-28-23	2-28-23			
Surrogate:	Percent Recovery	Control Limits	INVITITEDA	2-20-20	2-20-20			
o-Terphenyl	84	50-150						
c i cipiiciiy.	<b>.</b>	00 700						
Client ID:	TW-2							
Laboratory ID:	02-283-02							
Diesel Range Organics	110	110	NWTPH-Dx	2-28-23	2-28-23	M		
Lube Oil Range Organics	310	210	NWTPH-Dx	2-28-23	2-28-23			
Surrogate:	Percent Recovery	Control Limits						
o-Terphenyl	89	50-150						
011 4 ID								
Client ID:	TW-5							
Laboratory ID:	02-283-03	440	NIM/TOLL D	0.00.00	0.00.00			
Diesel Range Organics	9200	110	NWTPH-Dx	2-28-23	2-28-23	M		
Lube Oil Range Organics	Dorsont Dossyon	220 Control Limits	NWTPH-Dx	2-28-23	2-28-23			
Surrogate: o-Terphenyl	Percent Recovery 43	50-150				Q		
0-Terprienyi	43	30-130				Q		
Client ID:	TW-4							
Laboratory ID:	02-283-04							
Diesel Range Organics	ND	120	NWTPH-Dx	2-28-23	3-1-23			
Lube Oil Range Organics	310	230	NWTPH-Dx	2-28-23	3-1-23			
Surrogate:	Percent Recovery	Control Limits						
o-Terphenyl	93	50-150						
Client ID:	IP-5							
Laboratory ID:	02-283-05							
Diesel Range Organics	3400	110	NWTPH-Dx	2-28-23	2-28-23	M		
Lube Oil Range Organics	550	210	NWTPH-Dx	2-28-23	2-28-23			
Surrogate:	Percent Recovery	Control Limits						
o-Terphenyl	55	50-150						
Client ID:	TW-3							
Laboratory ID:	02-283-06							
Diesel Range Organics	4800	150	NWTPH-Dx	2-28-23	2-28-23	M		
Lube Oil Range Organics	620	300	NWTPH-Dx	2-28-23	2-28-23	IVI		
Surrogate:	Percent Recovery	Control Limits	. TOTAL TIEDA	2 20-20	2 20-20			
o-Terphenyl	94	50-150						
o respiretly:	J <del>-7</del>	00 100						

Project: 01-0410-R

# DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	AS-1					
Laboratory ID:	02-283-07					
Diesel Range Organics	2900	100	NWTPH-Dx	2-28-23	2-28-23	M
Lube Oil Range Organics	620	200	NWTPH-Dx	2-28-23	2-28-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	63	50-150				
Client ID:	IP-3					
Laboratory ID:	02-283-08					
Diesel Range Organics	2100	110	NWTPH-Dx	2-28-23	2-28-23	М
Lube Oil Range Organics	480	220	NWTPH-Dx	2-28-23	2-28-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	74	50-150				
o roiphonyi	, ,	00 700				
Client ID:	IP-4					
Laboratory ID:	02-283-09					
Diesel Range Organics	3300	110	NWTPH-Dx	2-28-23	3-1-23	M
Lube Oil Range Organics	530	220	NWTPH-Dx	2-28-23	3-1-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	79	50-150				
Client ID:	IP-7					
Laboratory ID:	02-283-10					
Diesel Range Organics	16000	110	NWTPH-Dx	2-28-23	3-1-23	М
Lube Oil Range Organics	680	210	NWTPH-Dx	2-28-23	3-1-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	93	50-150				
, ,						
Client ID:	Dup-1					
Laboratory ID:	02-283-11					
Diesel Range Organics	4400	120	NWTPH-Dx	2-28-23	3-1-23	M
Lube Oil Range Organics	740	230	NWTPH-Dx	2-28-23	3-1-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	74	50-150				

Date of Report: March 3, 2023

Samples Submitted: February 24, 2023 Laboratory Reference: 2302-283

Project: 01-0410-R

### DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx QUALITY CONTROL

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0228W1					
Diesel Range Organics	ND	67	NWTPH-Dx	2-28-23	2-28-23	
Lube Oil Range Organics	ND	130	NWTPH-Dx	2-28-23	2-28-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	93	50-150				

					Source	Percent	Recovery		RPD	
Analyte	Result		Spike Level		Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	02-283-01									
	ORIG	DUP								
Diesel Range Organics	129	138	NA	NA		NA	NA	7	NA	
Lube Oil Range Organics	352	341	NA	NA		NA	NA	3	NA	
Surrogate:										
o-Terphenyl						84 90	50-150			
Laboratory ID:	SB02	28W1								
	ORIG	DUP								
Diesel Fuel #2	448	439	NA	NA		NA	NA	2	NA	
Surrogate:										
o-Terphenyl						99 95	50-150			

Date of Report: March 3, 2023 Samples Submitted: February 24, 2023 Laboratory Reference: 2302-283

Project: 01-0410-R

### **VOLATILE ORGANICS EPA 8260D**

-				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	TW-1					
Laboratory ID:	02-283-01					
Benzene	ND	0.20	EPA 8260D	2-27-23	2-27-23	
Toluene	ND	1.0	EPA 8260D	2-27-23	2-27-23	
Ethylbenzene	ND	0.20	EPA 8260D	2-27-23	2-27-23	
m,p-Xylene	ND	0.40	EPA 8260D	2-27-23	2-27-23	
o-Xylene	ND	0.20	EPA 8260D	2-27-23	2-27-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	105	75-127				
Toluene-d8	103	80-127				
4-Bromofluorobenzene	100	78-125				
Client ID:	TW-2					
Laboratory ID:	02-283-02					
Benzene	0.24	0.20	EPA 8260D	2-27-23	2-27-23	
Toluene	9.3	1.0	EPA 8260D	2-27-23	2-27-23	
Ethylbenzene	7.5	0.20	EPA 8260D	2-27-23	2-27-23	
m,p-Xylene	30	0.40	EPA 8260D	2-27-23	2-27-23	
o-Xylene	12	0.20	EPA 8260D	2-27-23	2-27-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	105	75-127				
Toluene-d8	105	80-127				
4-Bromofluorobenzene	102	78-125				
Client ID:	TW-5					
Laboratory ID:	02-283-03					
Benzene	220	100	EPA 8260D	2-27-23	2-27-23	
Toluene	24000	500	EPA 8260D	2-27-23	2-27-23	
Ethylbenzene	4200	100	EPA 8260D	2-27-23	2-27-23	
m,p-Xylene	15000	200	EPA 8260D	2-27-23	2-27-23	
o-Xylene	6000	100	EPA 8260D	2-27-23	2-27-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	105	75-127				
Toluene-d8	103	80-127				
4-Bromofluorobenzene	102	78-125				

Date of Report: March 3, 2023 Samples Submitted: February 24, 2023 Laboratory Reference: 2302-283

Project: 01-0410-R

### **VOLATILE ORGANICS EPA 8260D**

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	TW-4					
Laboratory ID:	02-283-04					
Benzene	ND	0.20	EPA 8260D	2-27-23	2-27-23	
Toluene	1.1	1.0	EPA 8260D	2-27-23	2-27-23	
Ethylbenzene	0.30	0.20	EPA 8260D	2-27-23	2-27-23	
m,p-Xylene	0.95	0.40	EPA 8260D	2-27-23	2-27-23	
o-Xylene	0.33	0.20	EPA 8260D	2-27-23	2-27-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	105	75-127				
Toluene-d8	103	80-127				
4-Bromofluorobenzene	102	78-125				
Client ID:	IP-5					
Laboratory ID:	02-283-05					
Benzene	3000	20	EPA 8260D	2-27-23	2-27-23	
Toluene	350	100	EPA 8260D	2-27-23	2-27-23	
Ethylbenzene	1100	20	EPA 8260D	2-27-23	2-27-23	
m,p-Xylene	2700	40	EPA 8260D	2-27-23	2-27-23	
o-Xylene	290	20	EPA 8260D	2-27-23	2-27-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	107	75-127				
Toluene-d8	102	80-127				
4-Bromofluorobenzene	101	78-125				
Client ID:	TW-3					
Laboratory ID:	02-283-06					
Benzene	2800	20	EPA 8260D	2-27-23	2-27-23	
Toluene	ND	100	EPA 8260D	2-27-23	2-27-23	
Ethylbenzene	1500	20	EPA 8260D	2-27-23	2-27-23	
m,p-Xylene	1100	40	EPA 8260D	2-27-23	2-27-23	
o-Xylene	100	20	EPA 8260D	2-27-23	2-27-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	107	75-127				
Toluene-d8	102	80-127				
4-Bromofluorobenzene	102	78-125				

Date of Report: March 3, 2023 Samples Submitted: February 24, 2023 Laboratory Reference: 2302-283

Project: 01-0410-R

### **VOLATILE ORGANICS EPA 8260D**

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	AS-1					
Laboratory ID:	02-283-07					
Benzene	32	4.0	EPA 8260D	2-27-23	2-27-23	
Toluene	36	20	EPA 8260D	2-27-23	2-27-23	
Ethylbenzene	310	4.0	EPA 8260D	2-27-23	2-27-23	
m,p-Xylene	480	8.0	EPA 8260D	2-27-23	2-27-23	
o-Xylene	230	4.0	EPA 8260D	2-27-23	2-27-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	105	75-127				
Toluene-d8	103	80-127				
4-Bromofluorobenzene	101	78-125				
Client ID:	IP-3					
Laboratory ID:	02-283-08					
Benzene	3100	40	EPA 8260D	2-27-23	2-27-23	
Toluene	4700	200	EPA 8260D	2-27-23	2-27-23	
Ethylbenzene	1200	40	EPA 8260D	2-27-23	2-27-23	
m,p-Xylene	2600	80	EPA 8260D	2-27-23	2-27-23	
o-Xylene	810	40	EPA 8260D	2-27-23	2-27-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	106	75-127				
Toluene-d8	101	80-127				
4-Bromofluorobenzene	102	78-125				
Client ID:	IP-4					
Laboratory ID:	02-283-09					
Benzene	27	10	EPA 8260D	3-2-23	3-2-23	
Toluene	81	50	EPA 8260D	3-2-23	3-2-23	
Ethylbenzene	1600	40	EPA 8260D	2-27-23	2-27-23	
m,p-Xylene	4300	80	EPA 8260D	2-27-23	2-27-23	
o-Xylene	2300	10	EPA 8260D	3-2-23	3-2-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	98	75-127				
Toluene-d8	103	80-127				
4-Bromofluorobenzene	103	78-125				

Date of Report: March 3, 2023

Samples Submitted: February 24, 2023 Laboratory Reference: 2302-283

Project: 01-0410-R

### **VOLATILE ORGANICS EPA 8260D**

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	IP-7					
Laboratory ID:	02-283-10					
Benzene	850	100	EPA 8260D	2-27-23	2-27-23	
Toluene	6700	500	EPA 8260D	2-27-23	2-27-23	
Ethylbenzene	2600	100	EPA 8260D	2-27-23	2-27-23	
m,p-Xylene	9900	200	EPA 8260D	2-27-23	2-27-23	
o-Xylene	3700	100	EPA 8260D	2-27-23	2-27-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	104	75-127				
Toluene-d8	102	80-127				
4-Bromofluorobenzene	102	78-125				
Client ID:	Dup-1					
Laboratory ID:	02-283-11					
Benzene	43	4.0	EPA 8260D	2-27-23	2-27-23	
Toluene	44	20	EPA 8260D	2-27-23	2-27-23	
Ethylbenzene	390	4.0	EPA 8260D	2-27-23	2-27-23	
m,p-Xylene	590	8.0	EPA 8260D	2-27-23	2-27-23	
o-Xylene	280	4.0	EPA 8260D	2-27-23	2-27-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	105	75-127				
Toluene-d8	104	80-127				
4-Bromofluorobenzene	101	78-125				

Date of Report: March 3, 2023 Samples Submitted: February 24, 2023

Laboratory Reference: 2302-283

Project: 01-0410-R

### VOLATILE ORGANICS EPA 8260D QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0227W1					
Benzene	ND	0.20	EPA 8260D	2-27-23	2-27-23	
Toluene	ND	1.0	EPA 8260D	2-27-23	2-27-23	
Ethylbenzene	ND	0.20	EPA 8260D	2-27-23	2-27-23	
m,p-Xylene	ND	0.40	EPA 8260D	2-27-23	2-27-23	
o-Xylene	ND	0.20	EPA 8260D	2-27-23	2-27-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	103	75-127				
Toluene-d8	104	80-127				
4-Bromofluorobenzene	101	78-125				
Laboratory ID:	MB0302W1					
Benzene	ND	0.20	EPA 8260D	3-2-23	3-2-23	
Toluene	ND	1.0	EPA 8260D	3-2-23	3-2-23	
Ethylbenzene	ND	0.20	EPA 8260D	3-2-23	3-2-23	
m,p-Xylene	ND	0.40	EPA 8260D	3-2-23	3-2-23	
o-Xylene	ND	0.20	EPA 8260D	3-2-23	3-2-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	101	75-127				
Toluene-d8	101	80-127				
4-Bromofluorobenzene	101	78-125				

Date of Report: March 3, 2023

Samples Submitted: February 24, 2023 Laboratory Reference: 2302-283

Project: 01-0410-R

### VOLATILE ORGANICS EPA 8260D QUALITY CONTROL

					Per	cent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Rec	overy	Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB02	27W1								
	SB	SBD	SB	SBD	SB	SBD				
Benzene	9.34	9.51	10.0	10.0	93	95	80-121	2	16	
Toluene	9.07	9.26	10.0	10.0	91	93	80-120	2	18	
Ethylbenzene	8.95	9.05	10.0	10.0	90	91	80-125	1	18	
m,p-Xylene	17.8	18.0	20.0	20.0	89	90	80-127	1	18	
o-Xylene	8.94	9.06	10.0	10.0	89	91	80-126	1	18	
1,2,3-Trichlorobenzene	8.95	8.92	10.0	10.0	90	89	75-146	0	28	
Surrogate:										
Dibromofluoromethane					101	101	75-127			
Toluene-d8					103	103	80-127			
4-Bromofluorobenzene					105	104	78-125			
Laboratory ID:	SB03	02W1								
	SB	SBD	SB	SBD	SB	SBD				
Benzene	10.5	10.9	10.0	10.0	105	109	80-121	4	16	
Toluene	10.0	10.1	10.0	10.0	100	101	80-120	1	18	
Ethylbenzene	9.73	9.76	10.0	10.0	97	98	80-125	0	18	
m,p-Xylene	19.0	18.9	20.0	20.0	95	95	80-127	1	18	
o-Xylene	9.34	9.47	10.0	10.0	93	95	80-126	1	18	
1,2,3-Trichlorobenzene	8.87	9.80	10.0	10.0	89	98	75-146	10	28	
Surrogate:										
Dibromofluoromethane					101	106	75-127			
Toluene-d8					102	104	80-127			
4-Bromofluorobenzene					104	106	78-125			



### **Data Qualifiers and Abbreviations**

- A Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B The analyte indicated was also found in the blank sample.
- C The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E The value reported exceeds the quantitation range and is an estimate.
- F Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I Compound recovery is outside of the control limits.
- J The value reported was below the practical quantitation limit. The value is an estimate.
- K Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L The RPD is outside of the control limits.
- M Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 Hydrocarbons in diesel range are impacting lube oil range results.
- O Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P The RPD of the detected concentrations between the two columns is greater than 40.
- Q Surrogate recovery is outside of the control limits.
- S Surrogate recovery data is not available due to the necessary dilution of the sample.
- T The sample chromatogram is not similar to a typical .
- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 The practical quantitation limit is elevated due to interferences present in the sample.
- V Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X Sample extract treated with a mercury cleanup procedure.
- X1 Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 Sample extract treated with a silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.

Z -

ND - Not Detected at PQL

PQL - Practical Quantitation Limit

RPD - Relative Percent Difference





## **Chain of Custody**

Laboratory Number: 02-283

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Page

Concentration				T	T	T	Т	92	1	T				T		T	T	1	-		_	_	_	_		
Reviewed Date  Review	Reviewed/Date	Received	Relinquished	Received	Relinquished	Received	Relinquished		61	_\$	~	7	6.		2	2	12		Lab ID	sampled by:		Project Manager:	()	Project Number:	>	14
Check One)   Che					Van	Van	Canal L	Signature	IP-7	IP-4	TP-3	AS-	TW-3	IP-5	HA-19-10-1	TW-5	TW-2	TW-	Sample Identification	5	om Cammarata	ng Field C	1-0410-R	Schen NIM 10-Log	nois, (423) 003-0001 - www.orisite-eriv.com	4648 NE 95th Street • Redmond, WA 98052
Chromatograms with final report	Reviewed/Date			0	588	Spa	sear Atlas E	Company	12/23/235	2011848	23/23/0955	2180		-	0541 ex/cc/r	25 66	20 CC	ਹੈਂ =		(other)		3	2 Days	ICS Same Day	(Check One)	(in working days
Chromatograms with final report    Comments/Special Instructions   Chlorinated Acid Herbicides 8151				26	3	2	036		4 MG	GW 7	7 W			6W 7	6W 7	SW 7	T WE	4 MG	Numb	H-HCI	)			1 Day		
Halogenated Volatiles 8260				7 EGINAR	24/23 /	124 23		, 11	×	×	$\times$	×	X	×	×	×	×	×	NWTP	H-Gx H-Dx (	Acid /			)		DOIGIOI Y IN
PAHS 8270/SIM (low-level)  PCBs 8082  Organochlorine Pesticides 8081  Organophosphorus Pesticides 8270/SIM  Chlorinated Acid Herbicides 8151  Total RCRA Metals	Chr	Dat		040	040	150	120												EDB E	PA 801	1 (Wai	ters Only	)			ullibel.
		Package: Standard 🗌 Level III 🗎 Level IV						Comments/Special Instructions											(with let PAHs and PA	ow-leve 8270/S 8082 ochlorir ophosp nated A RCRA M //TCA M	el PAH: IM (lov ne Pes horus cid He letals	s) v-level) sticides 8 Pesticides erbicides	es 8270	0)/SIM		10



# Chain of Custody

Page 2 of 2

Reviewed/Date	Received	Relinquished	Received	Relinquished	Received	Relinquished Rahmah Spen	Signature				11 Dup-	Lab ID Sample Identification	Sampled by:	Manager Cammaratu	Boeing Field Chevron	01-0410-2	Atlas GeoNW/6-Logics		Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052
Reviewed/Date			- 008E	PAGS	200	n Attas Grea	Company				2)23/25/0800 GW	Date Time Sampled Sampled Matrix	(other)		Standard-(7-Days)	2 Days 3 Days	Same Day 1 Day	(Check One)	Turnaround Request (in working days)
			7/24/23 1040	0401 22/124	424/23 950	2/24/23 950	Date Time				* *	NWTP NWTP NWTP Volatile	PH-Gx PH-Dx (A es 8260 enated \	TEX (8  Acid / S	021∏ 82 6G Clear	n-up []			Laboratory Number:
Chromatograms with final report   Electronic Data Deliverables (EDDs)	Data Package: Standard   Level III   Level IV						Comments/Special Instructions					(with let PAHs and PCBs Organic Chlorin Total F Total M TCLP)	ochlorin ophospi nated Ac RCRA M MTCA M Metals oil and c	I PAHs) M (low- lee Pesti horus F cid Her etals	licides 8(	es 8270	)/SIM		02-283



May 3, 2023

Tom Cammarata Atlas GeoSciences NW PO Box 1009 Sumner, WA 98390

Re: Analytical Data for Project 01-0410-R

Laboratory Reference No. 2304-287

Dear Tom:

Enclosed are the analytical results and associated quality control data for samples submitted on April 26, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister Project Manager

**Enclosures** 

Date of Report: May 3, 2023 Samples Submitted: April 26, 2023 Laboratory Reference: 2304-287

Project: 01-0410-R

### **Case Narrative**

Samples were collected on April 24 and 25, 2023 and received by the laboratory on April 26, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

### NWTPH-Dx

In samples AS-1 and IP-3, the surrogate percent recovery was below the control limit of 50% due to matrix effects.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: May 3, 2023 Samples Submitted: April 26, 2023 Laboratory Reference: 2304-287

Project: 01-0410-R

### GASOLINE RANGE ORGANICS NWTPH-Gx

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	TW-2					
Laboratory ID:	04-287-01					
Gasoline	330	100	NWTPH-Gx	5-2-23	5-2-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	85	65-122				
Client ID:	TW-1					
Laboratory ID:	04-287-02					
Gasoline	ND	100	NWTPH-Gx	4-28-23	4-28-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	89	65-122				
Client ID:	TW-3					
Laboratory ID:	04-287-03					
Gasoline	13000	500	NWTPH-Gx	5-2-23	5-2-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	99	65-122				
Client ID:	TW-5					
Laboratory ID:	04-287-04					
Gasoline	150000	10000	NWTPH-Gx	4-28-23	4-28-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	88	65-122				
Client ID:	TW-4					
Laboratory ID:	04-287-05					
Gasoline	ND	100	NWTPH-Gx	5-2-23	5-2-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	65-122				
Client ID:	IP-5					
Laboratory ID:	04-287-06					
Gasoline	14000	500	NWTPH-Gx	5-2-23	5-2-23	
Surrogate:	Percent Recovery	Control Limits	-			
Fluorobenzene	103	65-122				
Client ID:	Dup-1					
Laboratory ID:	04-287-07					
Gasoline	ND	100	NWTPH-Gx	4-28-23	4-28-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	65-122				

### **GASOLINE RANGE ORGANICS NWTPH-Gx**

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	AS-1					
Laboratory ID:	04-287-08					
Gasoline	3000	500	NWTPH-Gx	4-28-23	4-28-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	87	65-122				
Client ID:	IP-3					
Laboratory ID:	04-287-09					
Gasoline	21000	5000	NWTPH-Gx	4-28-23	4-28-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	91	65-122				
Client ID:	IP-4					
Laboratory ID:	04-287-10					
Gasoline	57000	5000	NWTPH-Gx	4-28-23	4-28-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	89	65-122				
Client ID:	IP-7					
Laboratory ID:	04-287-11					
Gasoline	53000	5000	NWTPH-Gx	4-28-23	4-28-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	89	65-122				

Date of Report: May 3, 2023 Samples Submitted: April 26, 2023 Laboratory Reference: 2304-287

Project: 01-0410-R

### GASOLINE RANGE ORGANICS NWTPH-Gx QUALITY CONTROL

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0502W1					
Gasoline	ND	100	NWTPH-Gx	5-2-23	5-2-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	65-122				
Laboratory ID:	MB0428W2					
Gasoline	ND	100	NWTPH-Gx	4-28-23	4-28-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	88	65-122				

					Source	Per	cent	Recovery		RPD	
Analyte	Res	ult	Spike	Level	Result	Reco	overy	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	04-31	6-02									
	ORIG	DUP									
Gasoline	ND	ND	NA	NA		N	IA	NA	NA	30	
Surrogate:											
Fluorobenzene						85	78	65-122			
Laboratory ID:	05-01	2-02									
	ORIG	DUP									
Gasoline	ND	ND	NA	NA		N	IA	NA	NA	30	
Surrogate:			•		•						
Fluorobenzene						83	84	65-122			

Date of Report: May 3, 2023 Samples Submitted: April 26, 2023 Laboratory Reference: 2304-287

Project: 01-0410-R

### **VOLATILE ORGANICS EPA 8260D**

Office. dg/L				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	TW-2					
Laboratory ID:	04-287-01					
Benzene	ND	0.40	EPA 8260D	4-27-23	4-27-23	
Toluene	7.1	2.0	EPA 8260D	4-27-23	4-27-23	
Ethylbenzene	5.6	0.40	EPA 8260D	4-27-23	4-27-23	
m,p-Xylene	22	0.80	EPA 8260D	4-27-23	4-27-23	
o-Xylene	8.7	0.40	EPA 8260D	4-27-23	4-27-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	90	75-127				
Toluene-d8	96	80-127				
4-Bromofluorobenzene	91	78-125				
011						
Client ID:	TW-1					
Laboratory ID:	04-287-02					
Benzene	ND	0.20	EPA 8260D	4-27-23	4-27-23	
Toluene	ND	1.0	EPA 8260D	4-27-23	4-27-23	
Ethylbenzene	ND	0.20	EPA 8260D	4-27-23	4-27-23	
m,p-Xylene	ND	0.40	EPA 8260D	4-27-23	4-27-23	
o-Xylene	ND	0.20	EPA 8260D	4-27-23	4-27-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	91	75-127				
Toluene-d8	95	80-127				
4-Bromofluorobenzene	90	78-125				
Client ID:	TW-3					
Laboratory ID:	04-287-03					
Benzene	2400	10	EPA 8260D	4-27-23	4-27-23	
Toluene	96	50	EPA 8260D	4-27-23	4-27-23	
Ethylbenzene	1600	10	EPA 8260D	4-27-23	4-27-23	
m,p-Xylene	1500	20	EPA 8260D	4-27-23	4-27-23	
o-Xylene	400	10	EPA 8260D	4-27-23	4-27-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	79	75-127				
Toluene-d8	93	80-127				
4-Bromofluorobenzene	88	78-125				
T-DIOMONUOIODENZENE	00	70-120				

### **VOLATILE ORGANICS EPA 8260D**

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	TW-5					
Laboratory ID:	04-287-04					
Benzene	220	100	EPA 8260D	4-27-23	4-27-23	
Toluene	25000	1000	EPA 8260D	4-27-23	4-27-23	
Ethylbenzene	5400	100	EPA 8260D	4-27-23	4-27-23	
m,p-Xylene	19000	200	EPA 8260D	4-27-23	4-27-23	
o-Xylene	7700	100	EPA 8260D	4-27-23	4-27-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	82	75-127				
Toluene-d8	94	80-127				
4-Bromofluorobenzene	90	78-125				
Client ID:	TW-4					
Laboratory ID:	04-287-05					
Benzene	ND	0.40	EPA 8260D	4-27-23	4-27-23	
Toluene	ND	2.0	EPA 8260D	4-27-23	4-27-23	
Ethylbenzene	0.86	0.40	EPA 8260D	4-27-23	4-27-23	
m,p-Xylene	3.1	0.80	EPA 8260D	4-27-23	4-27-23	
o-Xylene	1.3	0.40	EPA 8260D	4-27-23	4-27-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	89	75-127				
Toluene-d8	95	80-127				
4-Bromofluorobenzene	89	78-125				
Client ID:	IP-5					
Laboratory ID:	04-287-06					
Benzene	1700	10	EPA 8260D	4-27-23	4-27-23	
Toluene	190	50	EPA 8260D	4-27-23	4-27-23	
Ethylbenzene	860	10	EPA 8260D	4-27-23	4-27-23	
m,p-Xylene	1800	20	EPA 8260D	4-27-23	4-27-23	
o-Xylene	250	10	EPA 8260D	4-27-23	4-27-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	82	75-127				
Toluene-d8	94	80-127				
4-Bromofluorobenzene	90	78-125				

### **VOLATILE ORGANICS EPA 8260D**

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	Dup-1					
Laboratory ID:	04-287-07					
Benzene	ND	0.20	EPA 8260D	4-27-23	4-27-23	
Toluene	ND	1.0	EPA 8260D	4-27-23	4-27-23	
Ethylbenzene	ND	0.20	EPA 8260D	4-27-23	4-27-23	
m,p-Xylene	ND	0.40	EPA 8260D	4-27-23	4-27-23	
o-Xylene	ND	0.20	EPA 8260D	4-27-23	4-27-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	91	75-127				
Toluene-d8	96	80-127				
4-Bromofluorobenzene	87	78-125				
Client ID:	AS-1					
Laboratory ID:	04-287-08					
Benzene	16	1.0	EPA 8260D	4-27-23	4-27-23	
Toluene	15	5.0	EPA 8260D	4-27-23	4-27-23	
Ethylbenzene	150	1.0	EPA 8260D	4-27-23	4-27-23	
m,p-Xylene	240	2.0	EPA 8260D	4-27-23	4-27-23	
o-Xylene	110	1.0	EPA 8260D	4-27-23	4-27-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	81	75-127				
Toluene-d8	94	80-127				
4-Bromofluorobenzene	91	78-125				
Oli A ID	15.6					
Client ID:	IP-3					
Laboratory ID:	04-287-09			4.07.00	4.07.00	
Benzene	2100	20	EPA 8260D	4-27-23	4-27-23	
Toluene	3700	100	EPA 8260D	4-27-23	4-27-23	
Ethylbenzene	1200	20	EPA 8260D	4-27-23	4-27-23	
m,p-Xylene	2800	40	EPA 8260D	4-27-23	4-27-23	
o-Xylene	920	20	EPA 8260D	4-27-23	4-27-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	80	75-127				
Toluene-d8	93	80-127				
4-Bromofluorobenzene	89	78-125				

### **VOLATILE ORGANICS EPA 8260D**

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	IP-4					
Laboratory ID:	04-287-10					
Benzene	26	20	EPA 8260D	4-27-23	4-27-23	
Toluene	110	100	EPA 8260D	4-27-23	4-27-23	
Ethylbenzene	3100	20	EPA 8260D	4-27-23	4-27-23	
m,p-Xylene	8100	40	EPA 8260D	4-27-23	4-27-23	
o-Xylene	2700	20	EPA 8260D	4-27-23	4-27-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	79	75-127				
Toluene-d8	93	80-127				
4-Bromofluorobenzene	91	78-125				
Client ID:	IP-7					
Laboratory ID:	04-287-11					
Benzene	450	30	EPA 8260D	4-27-23	4-27-23	
Toluene	4400	150	EPA 8260D	4-27-23	4-27-23	
Ethylbenzene	2300	30	EPA 8260D	4-27-23	4-27-23	
m,p-Xylene	8700	60	EPA 8260D	4-27-23	4-27-23	
o-Xylene	3200	30	EPA 8260D	4-27-23	4-27-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	79	75-127				
Toluene-d8	93	80-127				
4-Bromofluorobenzene	90	78-125				

## **VOLATILE ORGANICS EPA 8260D QUALITY CONTROL**

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0427W1					
Benzene	ND	0.20	EPA 8260D	4-27-23	4-27-23	
Toluene	ND	1.0	EPA 8260D	4-27-23	4-27-23	
Ethylbenzene	ND	0.20	EPA 8260D	4-27-23	4-27-23	
m,p-Xylene	ND	0.40	EPA 8260D	4-27-23	4-27-23	
o-Xylene	ND	0.20	EPA 8260D	4-27-23	4-27-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	91	75-127				
Toluene-d8	96	80-127				
4-Bromofluorobenzene	89	78-125				

					Pe	rcent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Rec	overy	Limits	RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB042	27W1								
	SB	SBD	SB	SBD	SB	SBD				
Benzene	9.96	10.0	10.0	10.0	100	100	80-121	0	16	
Toluene	9.82	9.81	10.0	10.0	98	98	80-120	0	18	
Ethylbenzene	11.1	11.2	10.0	10.0	111	112	80-125	1	18	
m,p-Xylene	22.2	22.4	20.0	20.0	111	112	80-127	1	18	
o-Xylene	11.1	11.2	10.0	10.0	111	112	80-126	1	18	
Surrogate:										
Dibromofluoromethane					89	90	75-127			
Toluene-d8					97	97	80-127			
4-Bromofluorobenzene					95	95	78-125			

## **DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx**

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TW-2	. 42	Motriou	Tropulou	Analyzou	i lugo
Laboratory ID:	04-287-01					
Diesel Range Organics	ND	210	NWTPH-Dx	4-27-23	4-27-23	
Lube Oil Range Organics	ND	220	NWTPH-Dx	4-27-23	4-27-23	
Surrogate:	Percent Recovery	Control Limits		·		
o-Terphenyl	92	50-150				
Client ID:	TW-1					
Laboratory ID:	04-287-02					
Diesel Range Organics	ND	210	NWTPH-Dx	4-27-23	4-27-23	
Lube Oil Range Organics	ND	220	NWTPH-Dx	4-27-23	4-27-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	80	50-150				
Client ID:	TW-3					
Laboratory ID:	04-287-03					
Diesel Range Organics	ND	3700	NWTPH-Dx	4-27-23	4-27-23	M1,U1
Lube Oil Range Organics	350	220	NWTPH-Dx	4-27-23	4-27-23	,-
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	87	50-150				
Client ID:	TW-5					
Laboratory ID:	04-287-04					
Diesel Range Organics	ND	4400	NWTPH-Dx	4-27-23	4-27-23	M1,U1
Lube Oil Range Organics	330	220	NWTPH-Dx	4-27-23	4-27-23	WII,OI
Surrogate:	Percent Recovery	Control Limits	INVVII II-DX	4-21-20	4-21-20	
o-Terphenyl	62	50-150				
o respiration	02	00 700				
Client ID:	TW-4					
Laboratory ID:	04-287-05					
Diesel Range Organics	ND	230	NWTPH-Dx	4-27-23	4-27-23	
Lube Oil Range Organics	ND	230	NWTPH-Dx	4-27-23	4-27-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	69	50-150				
Client ID:	IP-5					
Laboratory ID:	04-287-06					
Diesel Range Organics	ND	2000	NWTPH-Dx	4-27-23	4-27-23	M1,U1
Lube Oil Range Organics	460	220	NWTPH-Dx	4-27-23	4-27-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	59	50-150				

### **DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx**

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	Dup-1					
Laboratory ID:	04-287-07					
Diesel Range Organics	ND	210	NWTPH-Dx	4-27-23	4-27-23	
Lube Oil Range Organics	ND	220	NWTPH-Dx	4-27-23	4-27-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	72	50-150				
Client ID:	AS-1					
Laboratory ID:	04-287-08					
Diesel Range Organics	ND	450	NWTPH-Dx	4-27-23	4-27-23	M1,U1
Lube Oil Range Organics	ND	220	NWTPH-Dx	4-27-23	4-27-23	•
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	26	50-150				Q
Client ID:	IP-3					
Laboratory ID:	04-287-09					
Diesel Range Organics	ND	930	NWTPH-Dx	4-27-23	4-27-23	M1,U1
Lube Oil Range Organics	ND	210	NWTPH-Dx	4-27-23	4-27-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	48	50-150				Q
Client ID:	IP-4					
Laboratory ID:	04-287-10					
Diesel Range Organics	ND	4500	NWTPH-Dx	4-27-23	4-27-23	M1,U1
Lube Oil Range Organics	320	220	NWTPH-Dx	4-27-23	4-27-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	75	50-150				
Olicant ID:	ID 7					
Client ID:	IP-7					
Laboratory ID:	04-287-11	2022	NA/TE:: =	4.0=.00	4.0=.00	
Diesel Range Organics	ND	2200	NWTPH-Dx	4-27-23	4-27-23	M1,U1
Lube Oil Range Organics	260	210	NWTPH-Dx	4-27-23	4-27-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	69	50-150				

## **DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx QUALITY CONTROL**

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						_
Laboratory ID:	MB0427W1					
Diesel Range Organics	ND	160	NWTPH-Dx	4-27-23	4-27-23	
Lube Oil Range Organics	ND	160	NWTPH-Dx	4-27-23	4-27-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	108	50-150				

					Source	Percent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	04-28	37-01								
	ORIG	DUP								
Diesel Range	ND	ND	NA	NA		NA	NA	NA	NA	
Lube Oil Range	ND	ND	NA	NA		NA	NA	NA	NA	
Surrogate:										
o-Terphenyl						92 74	50-150			



### **Data Qualifiers and Abbreviations**

- A Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B The analyte indicated was also found in the blank sample.
- C The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E The value reported exceeds the quantitation range and is an estimate.
- F Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I Compound recovery is outside of the control limits.
- J The value reported was below the practical quantitation limit. The value is an estimate.
- K Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L The RPD is outside of the control limits.
- M Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 Hydrocarbons in diesel range are impacting lube oil range results.
- O Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P The RPD of the detected concentrations between the two columns is greater than 40.
- Q Surrogate recovery is outside of the control limits.
- S Surrogate recovery data is not available due to the necessary dilution of the sample.
- T The sample chromatogram is not similar to a typical
- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 The practical quantitation limit is elevated due to interferences present in the sample.
- V Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X Sample extract treated with a mercury cleanup procedure.
- X1 Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 Sample extract treated with a silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.

Z -

ND - Not Detected at PQL

PQL - Practical Quantitation Limit

RPD - Relative Percent Difference





# **Chain of Custody**

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Reviewed/Date			OK	Spen	Spar	~ Attas Open No	Company	4/25/23/1050 GW	4/25/23 0950 GW	4/25/23/0835 GW	MD 0080 CM	42 1515 GW	4/24/13 1355 CM	4/W/23/1255 GW	4 24 12 1140 GW	4/24/23 1030 GM	M3 040 CAHCH	Date Time Sampled Sampled Matrix	(other)		Standard (LDaye) 5 Days	☐ 2 Days ☐ 3 Days	☐ Same Day ☐ 1 Day	(Check One)	(in working days)
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## **Chain of Custody**

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July 28, 2023

Tom Commarata G-Logics an Atlas Geoscience NW Company 40 2nd Avenue SE Issaquah, WA 98027-3452

Re: Analytical Data for Project 01-0410-R Laboratory Reference No. 2307-174

Dear Tom:

Enclosed are the analytical results and associated quality control data for samples submitted on July 21, 2023.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister Project Manager

**Enclosures** 

Date of Report: July 28, 2023 Samples Submitted: July 21, 2023 Laboratory Reference: 2307-174

Project: 01-0410-R

### **Case Narrative**

Samples were collected on July 19 and 20, 2023 and received by the laboratory on July 21, 2023. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

### NWTPH-Dx Analysis

The surrogate percent recovery in samples TW-5 and AS-1 were below the control limit of 50% due to matrix effects.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

### **GASOLINE RANGE ORGANICS NWTPH-Gx**

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	DUP-1					
Laboratory ID:	07-174-01					
Gasoline	ND	100	NWTPH-Gx	7-24-23	7-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	89	65-122				
Client ID:	TW-1					
Laboratory ID:	07-174-02					
Gasoline	ND	100	NWTPH-Gx	7-24-23	7-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	83	65-122				
Client ID:	TW-2					
Laboratory ID:	07-174-03					
Gasoline	7400	1000	NWTPH-Gx	7-25-23	7-25-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	83	65-122				
Client ID:	TW-5					
Laboratory ID:	07-174-04					
Gasoline	150000	5000	NWTPH-Gx	7-24-23	7-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	65-122				
Client ID:	TW-4					
Laboratory ID:	07-174-05					
Gasoline	ND	100	NWTPH-Gx	7-24-23	7-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	84	65-122				
Client ID:	IP-5					
Laboratory ID:	07-174-06					
Gasoline	25000	5000	NWTPH-Gx	7-24-23	7-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	90	65-122				
Client ID:	AS-1					
Laboratory ID:	07-174-07					
Gasoline	2900	500	NWTPH-Gx	7-24-23	7-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	85	65-122				

### **GASOLINE RANGE ORGANICS NWTPH-Gx**

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	IP-3					
Laboratory ID:	07-174-08					
Gasoline	20000	1000	NWTPH-Gx	7-24-23	7-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	92	65-122				
Client ID:	IP-4					
Laboratory ID:	07-174-09					
Gasoline	66000	5000	NWTPH-Gx	7-24-23	7-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	65-122				
Client ID:	IP-7					
Laboratory ID:	07-174-10					
Gasoline	54000	5000	NWTPH-Gx	7-24-23	7-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	65-122				

### **GASOLINE RANGE ORGANICS NWTPH-Gx QUALITY CONTROL**

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0724W3					
Gasoline	ND	100	NWTPH-Gx	7-24-23	7-24-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	83	65-122				
Laboratory ID:	MB0725W1					
Gasoline	ND	100	NWTPH-Gx	7-25-23	7-25-23	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	83	65-122				

					Source	Perd	cent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Reco	very	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	07-17	74-02									
	ORIG	DUP									
Gasoline	ND	ND	NA	NA		N	Α	NA	NA	30	
Surrogate:											_
Fluorobenzene						83	77	65-122			
Laboratory ID:	07-17	74-03									
	ORIG	DUP									
Gasoline	741	699	NA	NA		N	Α	NA	6	30	
Surrogate:											
Fluorobenzene						83	79	65-122			

Date of Report: July 28, 2023 Samples Submitted: July 21, 2023 Laboratory Reference: 2307-174

Project: 01-0410-R

### **VOLATILE ORGANICS EPA 8260D**

Offits. ug/L				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	Dup-1					
Laboratory ID:	07-174-01					
Benzene	0.33	0.20	EPA 8260D	7-24-23	7-24-23	
Toluene	1.2	1.0	EPA 8260D	7-24-23	7-24-23	
Ethylbenzene	0.99	0.20	EPA 8260D	7-24-23	7-24-23	
m,p-Xylene	3.9	0.40	EPA 8260D	7-24-23	7-24-23	
o-Xylene	1.6	0.20	EPA 8260D	7-24-23	7-24-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	97	75-127				
Toluene-d8	102	80-127				
4-Bromofluorobenzene	99	78-125				
Client ID:	TW-1					
Laboratory ID:	07-174-02					
Benzene	0.30	0.20	EPA 8260D	7-24-23	7-24-23	
Toluene	1.1	1.0	EPA 8260D	7-24-23	7-24-23	
Ethylbenzene	0.89	0.20	EPA 8260D	7-24-23	7-24-23	
m,p-Xylene	3.5	0.40	EPA 8260D	7-24-23	7-24-23	
o-Xylene	1.4	0.20	EPA 8260D	7-24-23	7-24-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	95	75-127				
Toluene-d8	101	80-127				
4-Bromofluorobenzene	98	78-125				
<b></b>						
Client ID:	TW-2					
Laboratory ID:	07-174-03					
Benzene	1.3	1.0	EPA 8260D	7-24-23	7-24-23	
Toluene	28	5.0	EPA 8260D	7-24-23	7-24-23	
Ethylbenzene	18	1.0	EPA 8260D	7-24-23	7-24-23	
m,p-Xylene	66	2.0	EPA 8260D	7-24-23	7-24-23	
o-Xylene	24	1.0	EPA 8260D	7-24-23	7-24-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	99	75-127				
Toluene-d8	100	80-127				
4-Bromofluorobenzene	99	78-125				

### **VOLATILE ORGANICS EPA 8260D**

Offits. ug/L				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	TW-5				-	
Laboratory ID:	07-174-04					
Benzene	340	200	EPA 8260D	7-25-23	7-25-23	
Toluene	41000	1000	EPA 8260D	7-25-23	7-25-23	
Ethylbenzene	5800	200	EPA 8260D	7-25-23	7-25-23	
m,p-Xylene	20000	400	EPA 8260D	7-25-23	7-25-23	
o-Xylene	9000	200	EPA 8260D	7-25-23	7-25-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	110	75-127				
Toluene-d8	107	80-127				
4-Bromofluorobenzene	97	78-125				
Client ID:	TW-4					
Laboratory ID:	07-174-05					
Benzene	ND	0.20	EPA 8260D	7-24-23	7-24-23	
Toluene	ND	1.0	EPA 8260D	7-24-23	7-24-23	
Ethylbenzene	ND	0.20	EPA 8260D	7-24-23	7-24-23	
m,p-Xylene	0.41	0.40	EPA 8260D	7-24-23	7-24-23	
o-Xylene	ND	0.20	EPA 8260D	7-24-23	7-24-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	99	75-127				
Toluene-d8	103	80-127				
4-Bromofluorobenzene	99	78-125				
Client ID:	IP-5					
Laboratory ID:	07-174-06					
Benzene	4900	50	EPA 8260D	7-24-23	7-24-23	
Toluene	3000	250	EPA 8260D	7-24-23	7-24-23	
Ethylbenzene	1400	50	EPA 8260D	7-24-23	7-24-23	
m,p-Xylene	2700	100	EPA 8260D	7-24-23	7-24-23	
o-Xylene	540	50	EPA 8260D	7-24-23	7-24-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	102	75-127				
Toluene-d8	102	80-127				
4-Bromofluorobenzene	101	78-125				

Date of Report: July 28, 2023 Samples Submitted: July 21, 2023 Laboratory Reference: 2307-174

Project: 01-0410-R

### **VOLATILE ORGANICS EPA 8260D**

offits. ug/L				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	AS-1					
Laboratory ID:	07-174-07					
Benzene	25	2.0	EPA 8260D	7-24-23	7-24-23	
Toluene	18	10	EPA 8260D	7-24-23	7-24-23	
Ethylbenzene	150	2.0	EPA 8260D	7-24-23	7-24-23	
m,p-Xylene	270	4.0	EPA 8260D	7-24-23	7-24-23	
o-Xylene	110	2.0	EPA 8260D	7-24-23	7-24-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	98	75-127				
Toluene-d8	101	80-127				
4-Bromofluorobenzene	102	78-125				
Client ID:	IP-3					
Laboratory ID:	07-174-08					
Benzene	1100	20	EPA 8260D	7-24-23	7-24-23	
Toluene	1600	100	EPA 8260D	7-24-23	7-24-23	
Ethylbenzene	1300	20	EPA 8260D	7-24-23 7-24-23	7-24-23 7-24-23	
m,p-Xylene	2800	40		7-24-23 7-24-23	7-24-23 7-24-23	
• •	400	20	EPA 8260D			
o-Xylene		Control Limits	EPA 8260D	7-24-23	7-24-23	
Surrogate:	Percent Recovery 102	75-127				
Dibromofluoromethane						
Toluene-d8	103	80-127				
4-Bromofluorobenzene	100	78-125				
Client ID:	IP-4					
Laboratory ID:	07-174-09					
Benzene	41	20	EPA 8260D	7-25-23	7-25-23	
Toluene	340	100	EPA 8260D	7-25-23	7-25-23	
Ethylbenzene	4800	20	EPA 8260D	7-25-23	7-25-23	
m,p-Xylene	8900	200	EPA 8260D	7-24-23	7-24-23	
o-Xylene	3200	20	EPA 8260D	7-25-23	7-25-23	
Surrogate:	Percent Recovery	Control Limits		·	·	
Dibromofluoromethane	116	75-127				
Toluene-d8	109	80-127				
4-Bromofluorobenzene	109	78-125				
T-DIOINONUOIODENZENE	1 U <del>4</del>	70-120				

### **VOLATILE ORGANICS EPA 8260D**

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	IP-7					_
Laboratory ID:	07-174-10					
Benzene	840	100	EPA 8260D	7-24-23	7-24-23	
Toluene	5300	500	EPA 8260D	7-24-23	7-24-23	
Ethylbenzene	2500	100	EPA 8260D	7-24-23	7-24-23	
m,p-Xylene	9200	200	EPA 8260D	7-24-23	7-24-23	
o-Xylene	3300	100	EPA 8260D	7-24-23	7-24-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	100	75-127				
Toluene-d8	102	80-127				
4-Bromofluorobenzene	101	78-125				

## **VOLATILE ORGANICS EPA 8260D QUALITY CONTROL**

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0724W1					
Benzene	ND	0.20	EPA 8260D	7-24-23	7-24-23	
Toluene	ND	1.0	EPA 8260D	7-24-23	7-24-23	
Ethylbenzene	ND	0.20	EPA 8260D	7-24-23	7-24-23	
m,p-Xylene	ND	0.40	EPA 8260D	7-24-23	7-24-23	
o-Xylene	ND	0.20	EPA 8260D	7-24-23	7-24-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	96	75-127				
Toluene-d8	100	80-127				
4-Bromofluorobenzene	98	78-125				
Laboratory ID:	MB0725W2					
Benzene	ND	0.20	EPA 8260D	7-25-23	7-25-23	
Toluene	ND	1.0	EPA 8260D	7-25-23	7-25-23	
Ethylbenzene	ND	0.20	EPA 8260D	7-25-23	7-25-23	
m,p-Xylene	ND	0.40	EPA 8260D	7-25-23	7-25-23	
o-Xylene	ND	0.20	EPA 8260D	7-25-23	7-25-23	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	112	75-127				
Toluene-d8	107	80-127				
4-Bromofluorobenzene	98	78-125				

### **VOLATILE ORGANICS EPA 8260D QUALITY CONTROL**

	Perce Result Spike Level Recov		cent	Recovery		RPD				
Analyte			Spike Level		Reco	Recovery		RPD	Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0724W1									
	SB	SBD	SB	SBD	SB	SBD				
Benzene	9.66	9.59	10.0	10.0	97	96	80-121	1	16	
Toluene	9.36	9.28	10.0	10.0	94	93	80-120	1	18	
Ethylbenzene	9.54	9.55	10.0	10.0	95	96	80-125	0	18	
m,p-Xylene	19.4	19.4	20.0	20.0	97	97	80-127	0	18	
o-Xylene	9.36	9.42	10.0	10.0	94	94	80-126	1	18	
Surrogate:										
Dibromofluoromethane					96	95	75-127			
Toluene-d8					100	100	80-127			
4-Bromofluorobenzene					101	100	78-125			
Laboratory ID:	SB0725W2									
	SB	SBD	SB	SBD	SB	SBD				
Benzene	11.5	10.7	10.0	10.0	115	107	80-121	7	16	
Toluene	10.7	10.2	10.0	10.0	107	102	80-120	5	18	
Ethylbenzene	10.8	10.8	10.0	10.0	108	108	80-125	0	18	
m,p-Xylene	21.8	21.9	20.0	20.0	109	110	80-127	0	18	
o-Xylene	11.1	11.1	10.0	10.0	111	111	80-126	0	18	
Surrogate:										
Dibromofluoromethane					122	112	75-127			
Toluene-d8					107	105	80-127			
4-Bromofluorobenzene					100	98	78-125			

Date of Report: July 28, 2023 Samples Submitted: July 21, 2023 Laboratory Reference: 2307-174 Project: 01-0410-R

### **DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx**

Matrix: Water Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DUP-1	1 W.L	MENION	i iepaieu	Allalyzeu	ı ıayə
Laboratory ID:	07-174-01					
Diesel Range Organics	230	110	NWTPH-Dx	7-25-23	7-25-23	
Lube Oil Range Organics	570	210	NWTPH-Dx	7-25-23	7-25-23	
Surrogate:	Percent Recovery	Control Limits	INVVII II-DX	7-20-20	1-20-20	
o-Terphenyl	92	50-150				
c respinents	02	00 700				
Client ID:	TW-1					
Laboratory ID:	07-174-02					
Diesel Range Organics	170.00	110.00	NWTPH-Dx	7-25-23	7-25-23	
Lube Oil Range Organics	300.00	210.00	NWTPH-Dx	7-25-23	7-25-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	77	50-150				
Client ID:	TW-2					
Laboratory ID:	07-174-03					
Diesel Range Organics	170	140	NWTPH-Dx	7-25-23	7-25-23	
Lube Oil Range Organics	600	280	NWTPH-Dx	7-25-23	7-25-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	74	50-150				
Client ID:	TW-5					
Laboratory ID:	07-174-04					
Diesel Range Organics	3400	10	NWTPH-Dx	7-25-23	7-25-23	М
Lube Oil Range Organics	440	210	NWTPH-Dx	7-25-23	7-25-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	36	50-150				Q
Client ID:	TW-4					
Laboratory ID:	07-174-05					
Diesel Range Organics	120	110	NWTPH-Dx	7-25-23	7-25-23	
Lube Oil Range Organics	300	220	NWTPH-Dx	7-25-23	7-25-23	
Surrogate:	Percent Recovery	Control Limits		. = <b>, =,</b>	<b>, _,</b>	
o-Terphenyl	74	50-150				
, ,						
Client ID:	IP-5					
Laboratory ID:	07-174-06					
Diesel Range Organics	2600	110	NWTPH-Dx	7-25-23	7-25-23	М
Lube Oil Range Organics	430	220	NWTPH-Dx	7-25-23	7-25-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	51	50-150				

Date of Report: July 28, 2023 Samples Submitted: July 21, 2023 Laboratory Reference: 2307-174 Project: 01-0410-R

#### **DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx**

Matrix: Water Units: ug/L (ppb)

,				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	AS-1					
Laboratory ID:	07-174-07					
Diesel Range Organics	720	110	NWTPH-Dx	7-25-23	7-25-23	M
Lube Oil Range Organics	ND	220	NWTPH-Dx	7-25-23	7-25-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	44	50-150				Q
Client ID:	IP-3					
Laboratory ID:	07-174-08					
Diesel Range Organics	1600	100	NWTPH-Dx	7-25-23	7-25-23	М
Lube Oil Range Organics	400	210	NWTPH-Dx	7-25-23	7-25-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	65	50-150				
Client ID:	IP-4					
Laboratory ID:	07-174-09					
Diesel Range Organics	6300	110	NWTPH-Dx	7-25-23	7-25-23	М
Lube Oil Range Organics	570	210	NWTPH-Dx	7-25-23	7-25-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	83	50-150				
Client ID:	IP-7					
Laboratory ID:	07-174-10					
Diesel Range Organics	4000	110	NWTPH-Dx	7-25-23	7-25-23	М
Lube Oil Range Organics	380	210	NWTPH-Dx	7-25-23	7-25-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	80	50-150				
• •						

Date of Report: July 28, 2023 Samples Submitted: July 21, 2023 Laboratory Reference: 2307-174 Project: 01-0410-R

#### **DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx QUALITY CONTROL**

Matrix: Water Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK		·		•	•	
Laboratory ID:	MB0725W1					
Diesel Range Organics	ND	80	NWTPH-Dx	7-25-23	7-25-23	
Lube Oil Range Organics	ND	160	NWTPH-Dx	7-25-23	7-25-23	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	95	50-150				

				Source	Percent	Recovery	RPD			
Analyte	Res	sult	Spike	Spike Level		Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	07-17	74-01								
	ORIG	DUP								
Diesel Range Organics	226	195	NA	NA		NA	NA	15	40	
Lube Oil Range Organics	573	545	NA	NA		NA	NA	5	40	
Surrogate:										
o-Terphenyl						92 91	50-150			



#### **Data Qualifiers and Abbreviations**

- A Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B The analyte indicated was also found in the blank sample.
- C The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E The value reported exceeds the quantitation range and is an estimate.
- F Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I Compound recovery is outside of the control limits.
- J The value reported was below the practical quantitation limit. The value is an estimate.
- K Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L The RPD is outside of the control limits.
- M Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 Hydrocarbons in diesel range are impacting lube oil range results.
- O Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P The RPD of the detected concentrations between the two columns is greater than 40.
- Q Surrogate recovery is outside of the control limits.
- S Surrogate recovery data is not available due to the necessary dilution of the sample.
- T The sample chromatogram is not similar to a typical .
- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 The practical quantitation limit is elevated due to interferences present in the sample.
- V Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X Sample extract treated with a mercury cleanup procedure.
- X1 Sample extract treated with a sulfuric acid/silica gel cleanup procedure.
- X2 Sample extract treated with a silica gel cleanup procedure.
- Y The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Y1 Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.

Z -

ND - Not Detected at PQL

PQL - Practical Quantitation Limit

RPD - Relative Percent Difference





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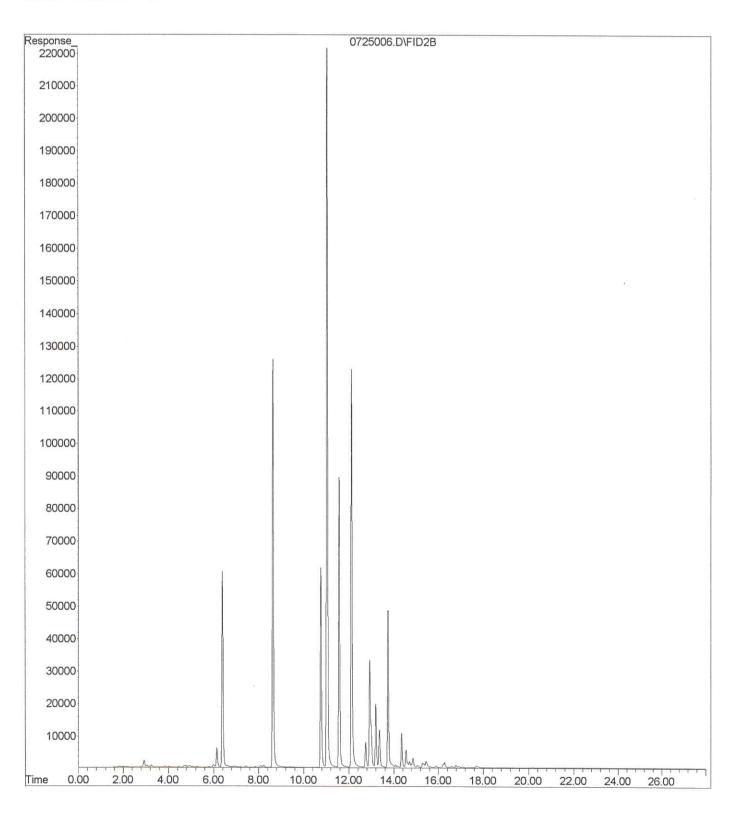
Operator

Acquired : 25 Jul 2023 13:56

using AcqMethod 230606G.M

Instrument : Hope

Sample Name: 07-174-03f RR



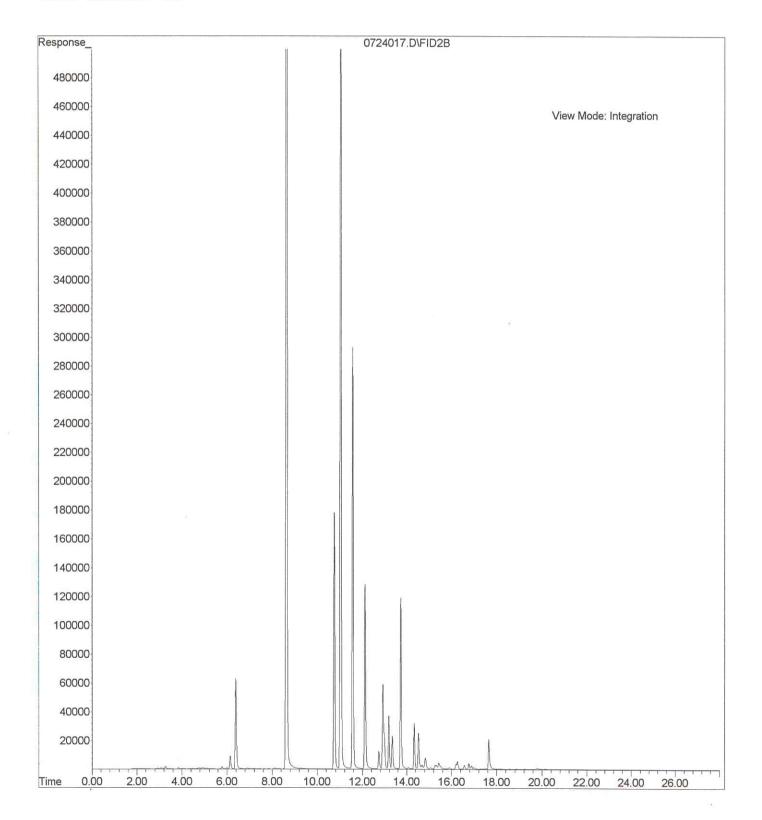
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Operator

Acquired : 24 Jul 2023 21:49 using AcqMethod 230606G.M

Instrument: Hope

Sample Name: 07-174-04g 1:50



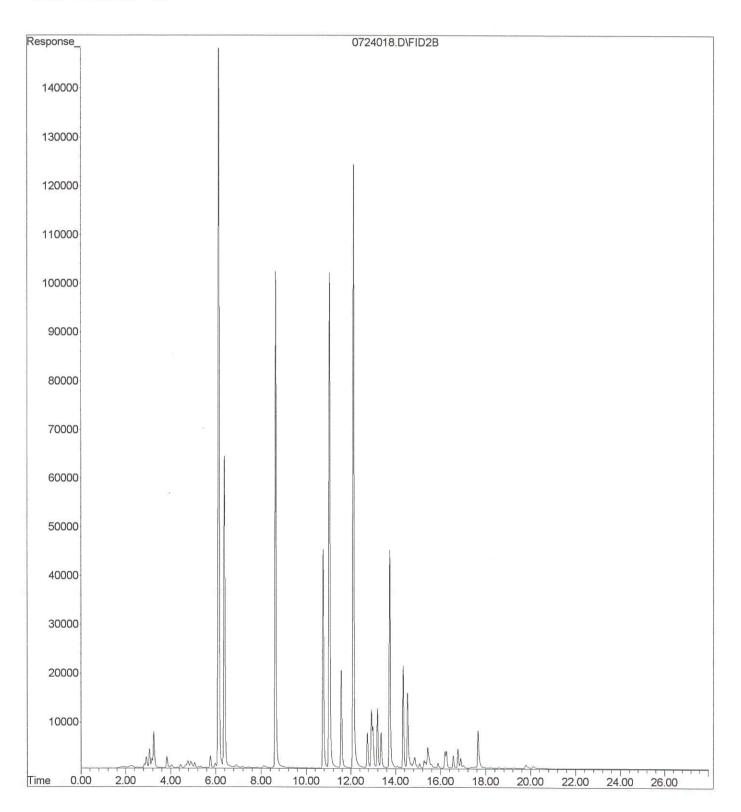
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Operator

Acquired : 24 Jul 2023 22:19 using AcqMethod 230606G.M

Instrument : Hope

Sample Name: 07-174-06g 1:50



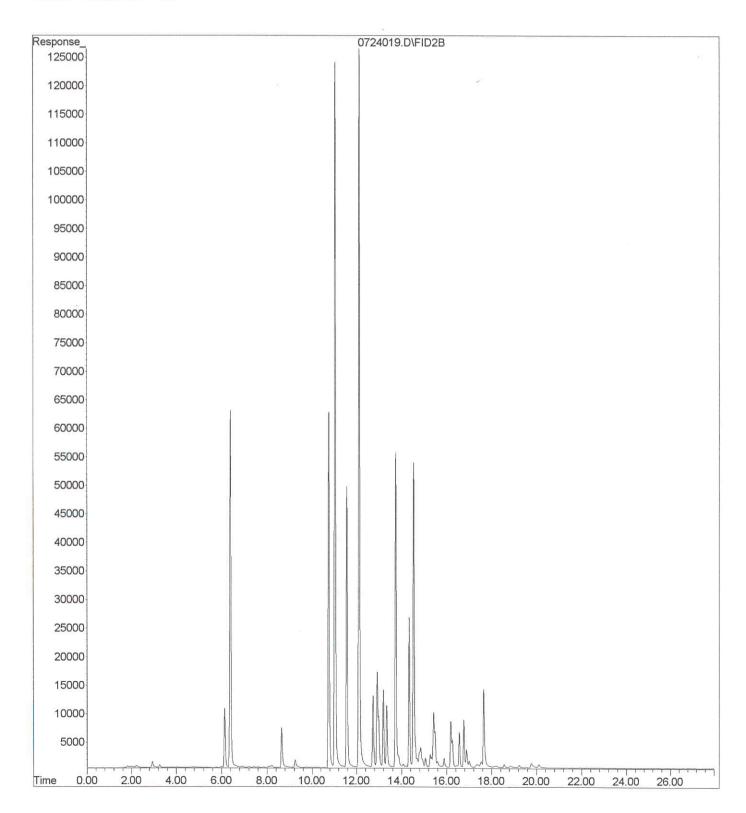
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Operator :

Acquired : 24 Jul 2023 22:50 using AcqMethod 230606G.M

Instrument: Hope

Sample Name: 07-174-07g 1:5



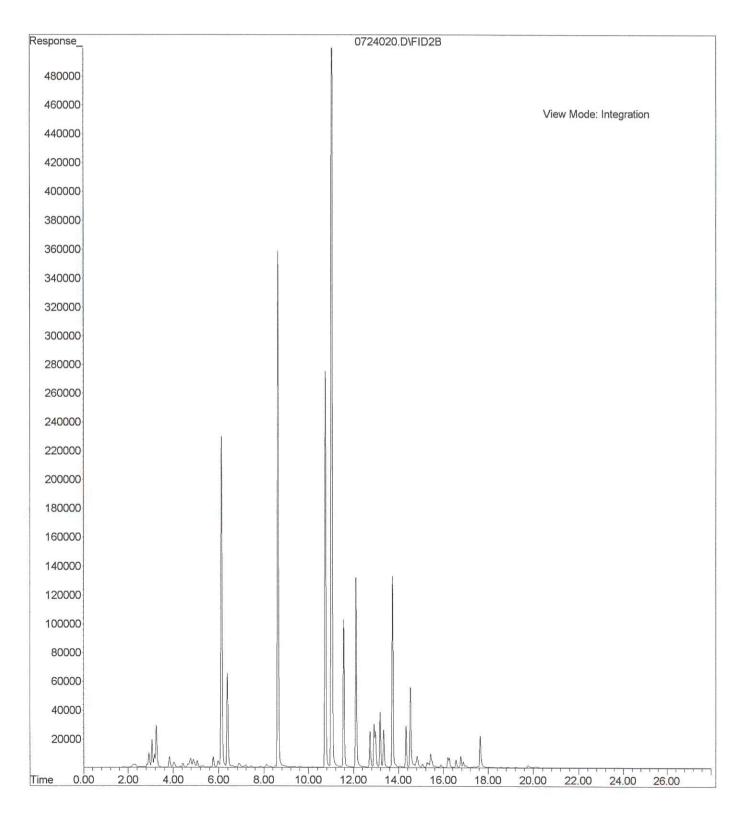
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Operator

Acquired : 24 Jul 2023 23:20 using AcqMethod 230606G.M

Instrument: Hope

Sample Name: 07-174-08g 1:10



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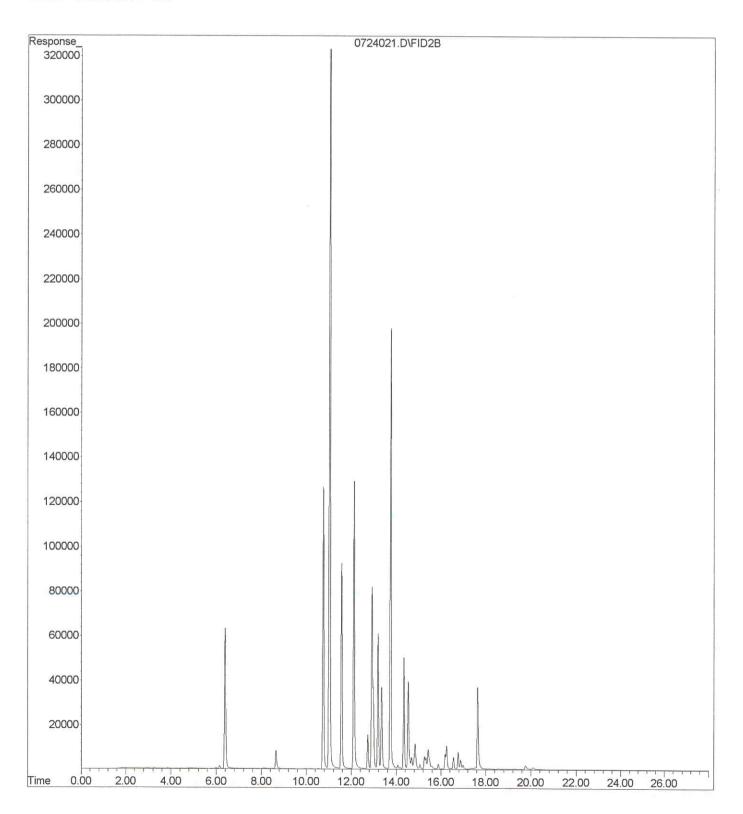
Operator

Acquired : 24 Jul 2023 23:50

using AcqMethod 230606G.M

Instrument : Hope

Sample Name: 07-174-09g 1:50



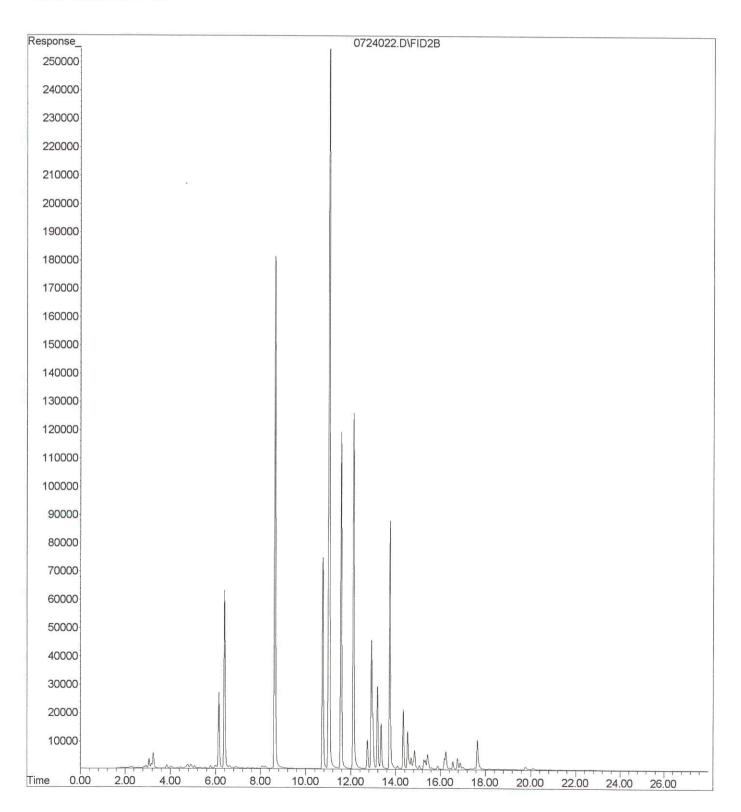
File : X:\BTEX\HOPE\DATA\H230724\0724022.D

Operator

Acquired : 25 Jul 2023 00:35 using AcqMethod 230606G.M

Instrument : Hope

Sample Name: 07-174-10g 1:50



File :C:\msdchem\2\data\V230725.SEC\0725-V53.D

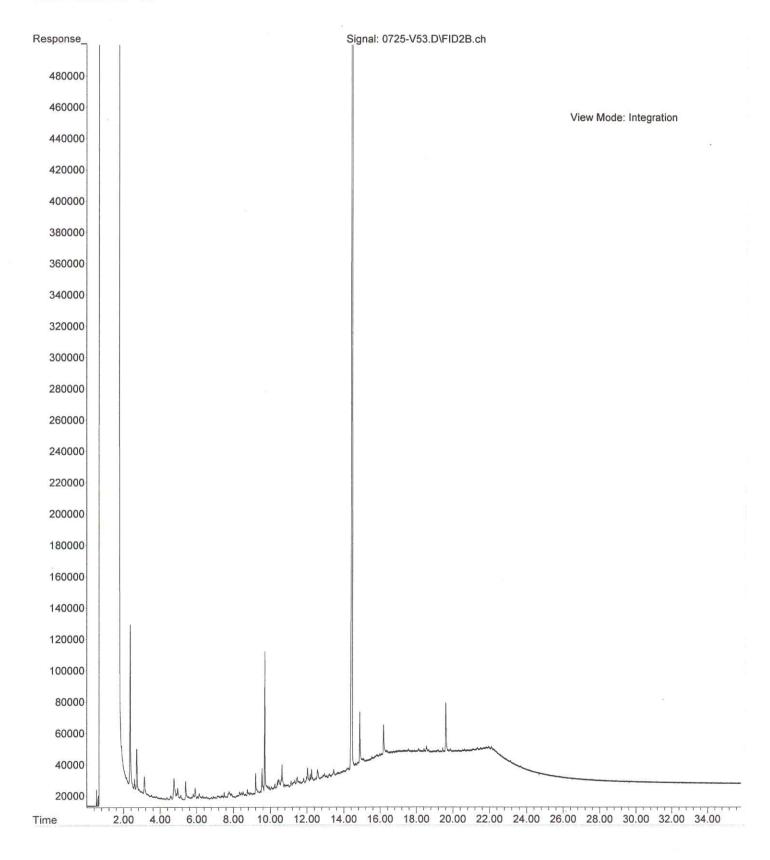
Operator : LW

Acquired: 25 Jul 2023 11:06 using AcqMethod V230113F.M

Instrument: Vigo

Sample Name: 07-174-01

Misc Info : RearSamp

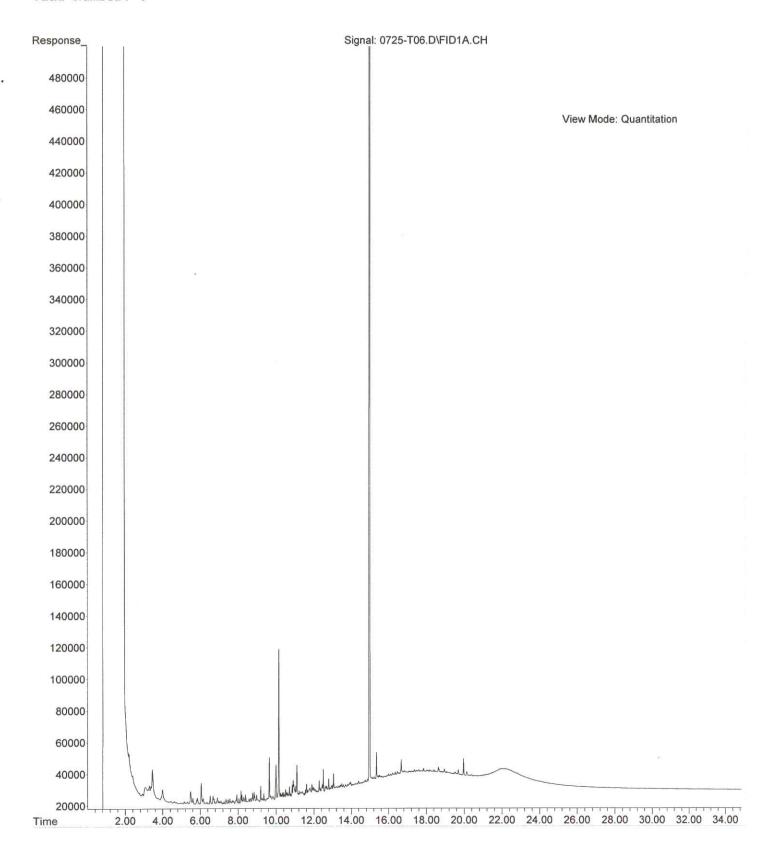


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Operator : LW

Acquired: 25 Jul 2023 14:57 using AcqMethod T230712F.M

Instrument : Teri Sample Name: 07-174-02 Misc Info : Sample

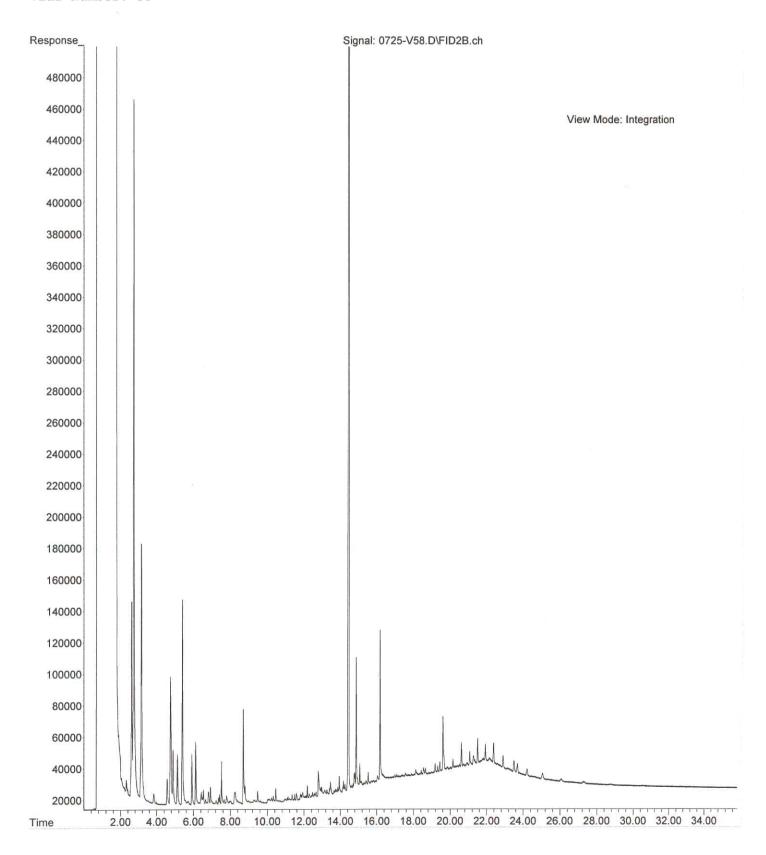


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Operator : LW

Acquired : 25 Jul 2023 14:58 using AcqMethod V230113F.M

Instrument : Vigo Sample Name: 07-174-03 Misc Info : RearSamp

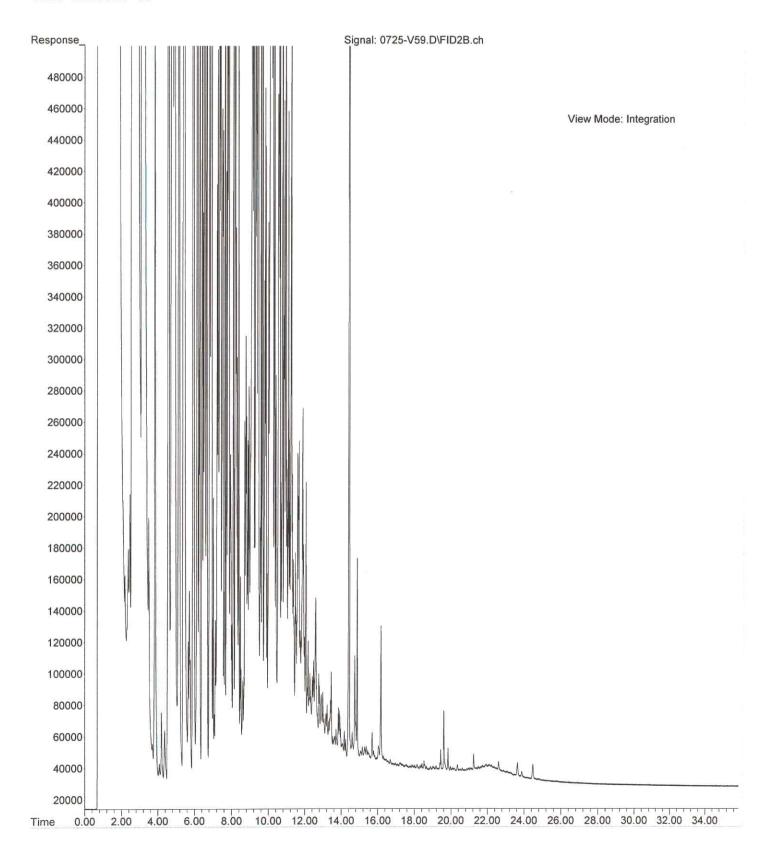


File :C:\msdchem\2\data\V230725.SEC\0725-V59.D

Operator : LW

Acquired: 25 Jul 2023 15:38 using AcqMethod V230113F.M

Instrument : Vigo Sample Name: 07-174-04 Misc Info : RearSamp



File :C:\msdchem\2\data\V230725\0725-V08.D

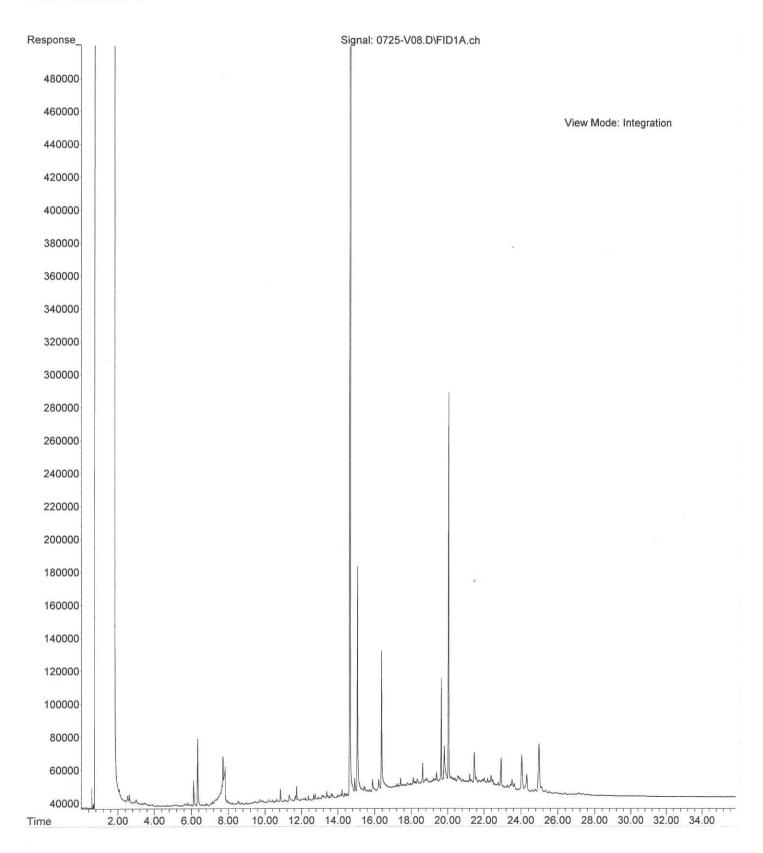
Operator : LW

Acquired: 25 Jul 2023 14:58 using AcqMethod V230113F.M

Instrument: Vigo

Sample Name: 07-174-05

Misc Info : Sample

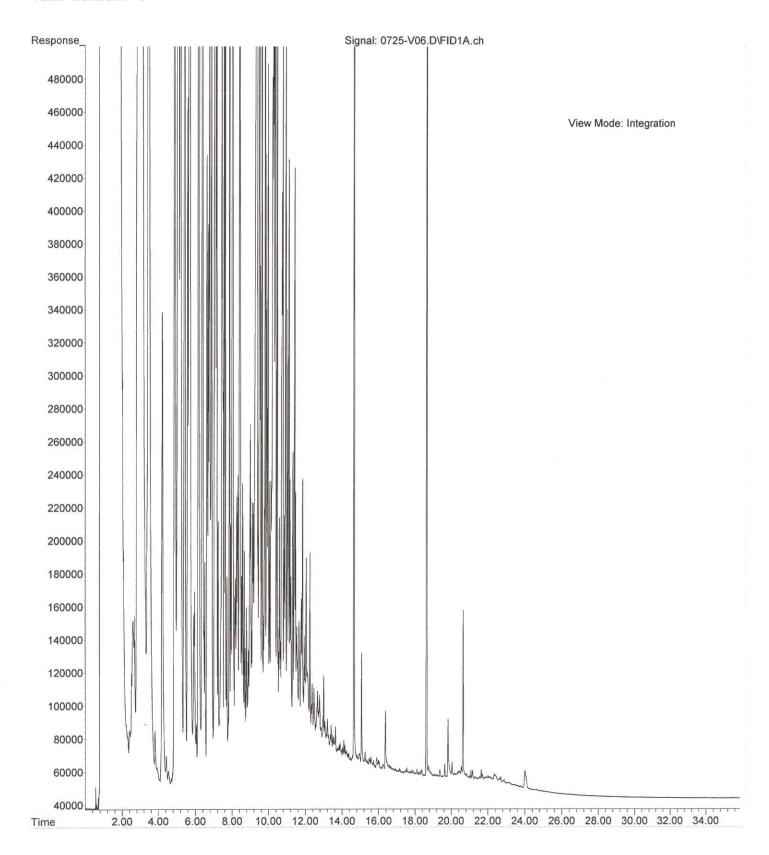


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Operator : LW

Acquired: 25 Jul 2023 13:35 using AcqMethod V230113F.M

Instrument : Vigo Sample Name: 07-174-06 Misc Info : Sample

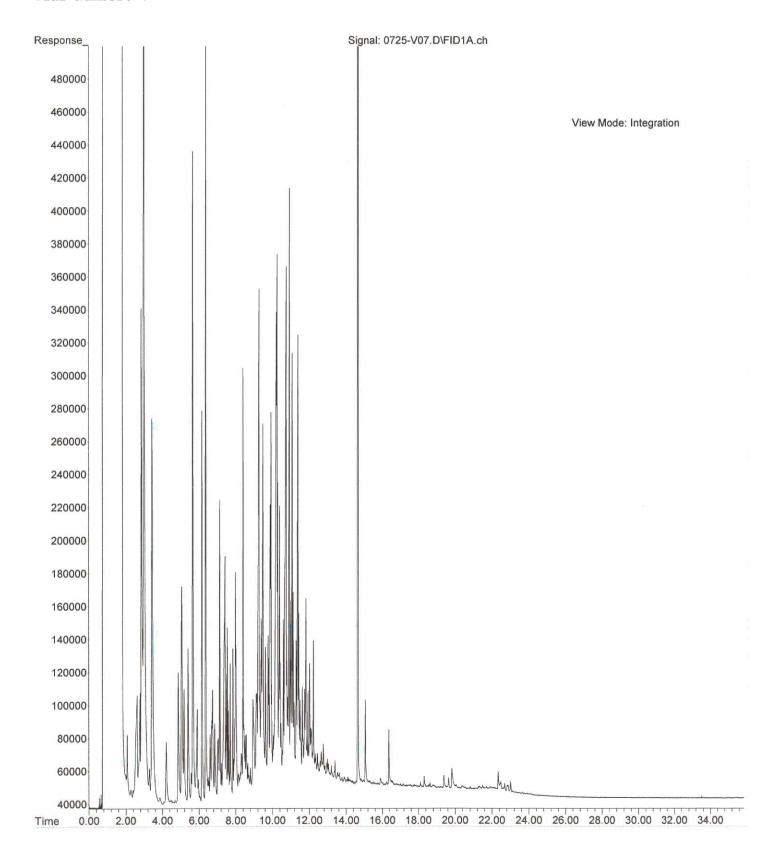


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Operator : LW

Acquired : 25 Jul 2023 14:16 using AcqMethod V230113F.M

Instrument: Vigo Sample Name: 07-174-07 Misc Info : Sample

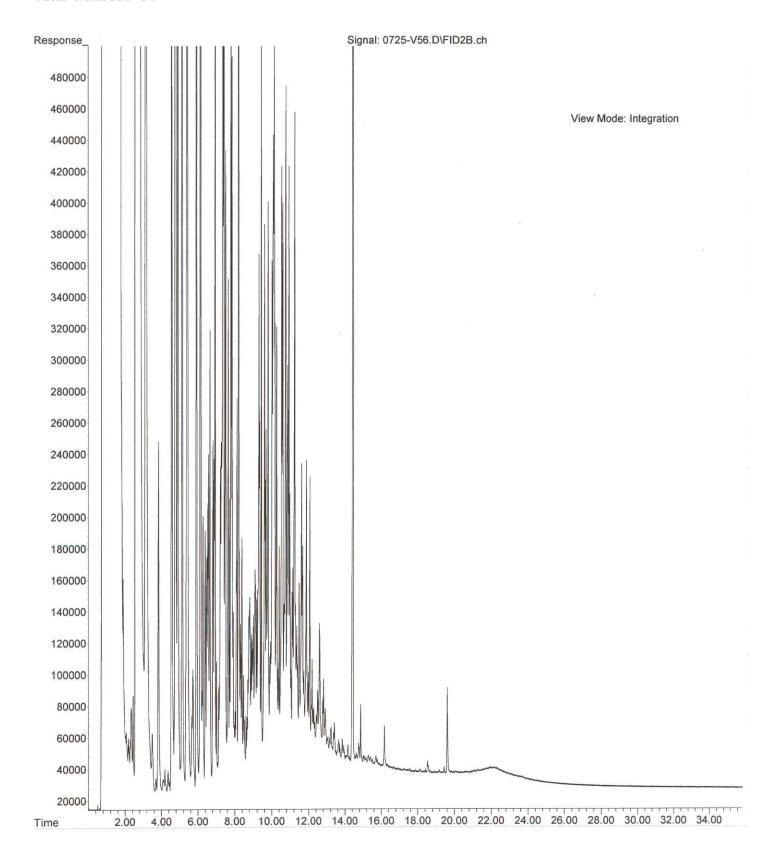


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Operator : LW

Acquired : 25 Jul 2023 13:35 using AcqMethod V230113F.M

Instrument : Vigo Sample Name: 07-174-08 Misc Info : RearSamp

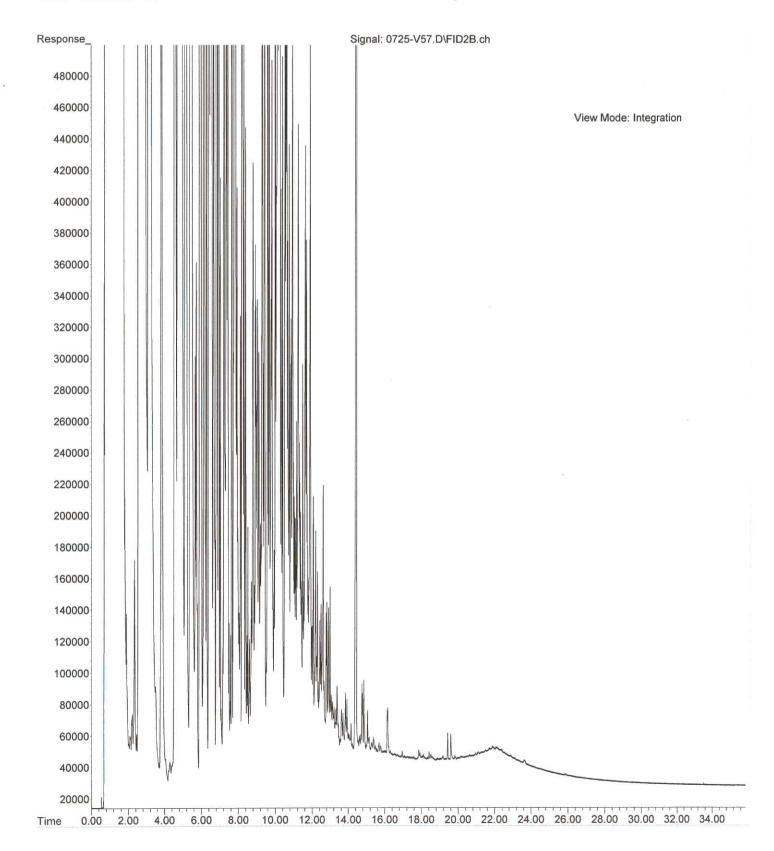


File :C:\msdchem\2\data\V230725.SEC\0725-V57.D

Operator : LW

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Instrument : Vigo Sample Name: 07-174-09 Misc Info : RearSamp

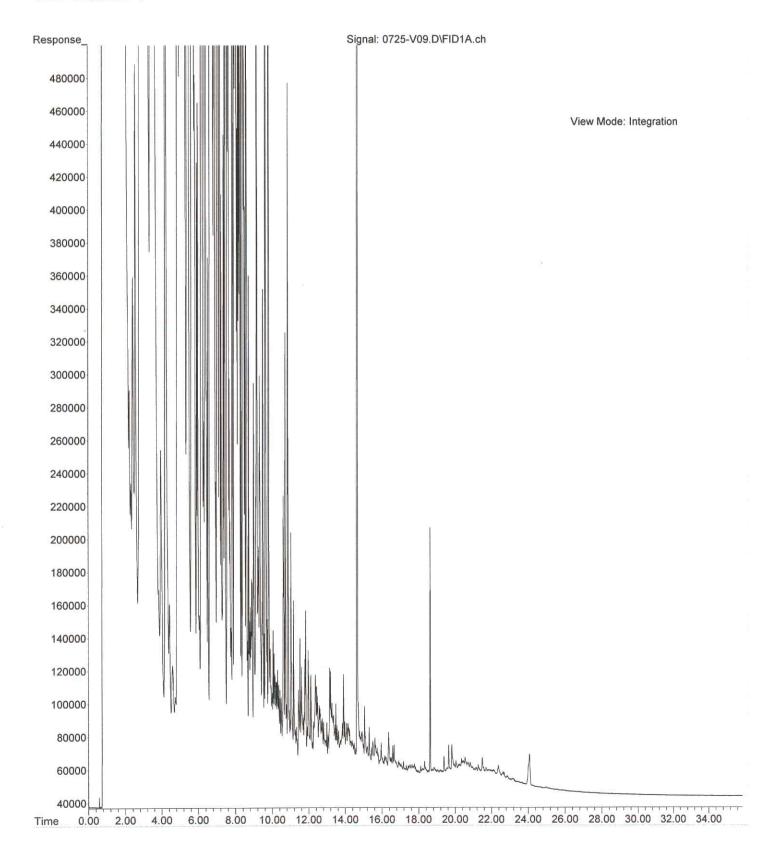


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Operator : LW

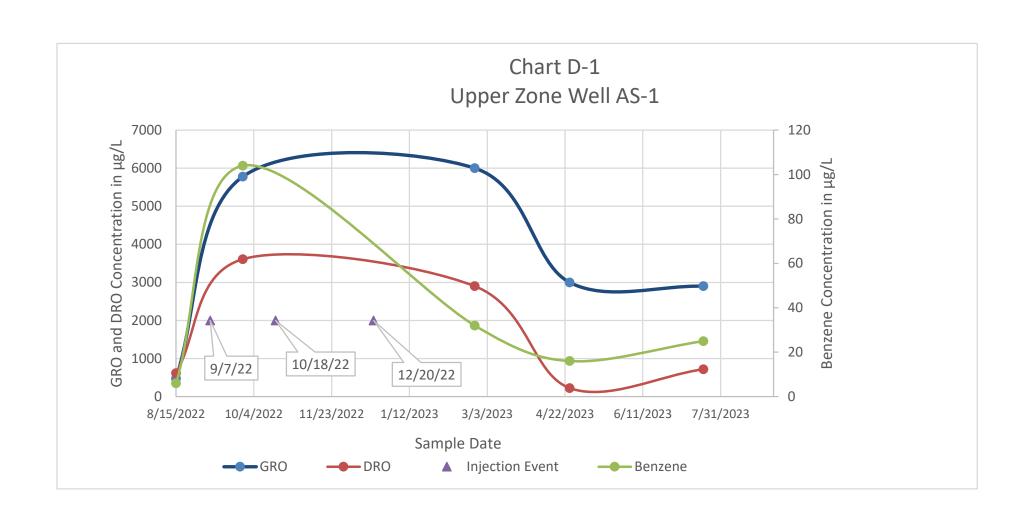
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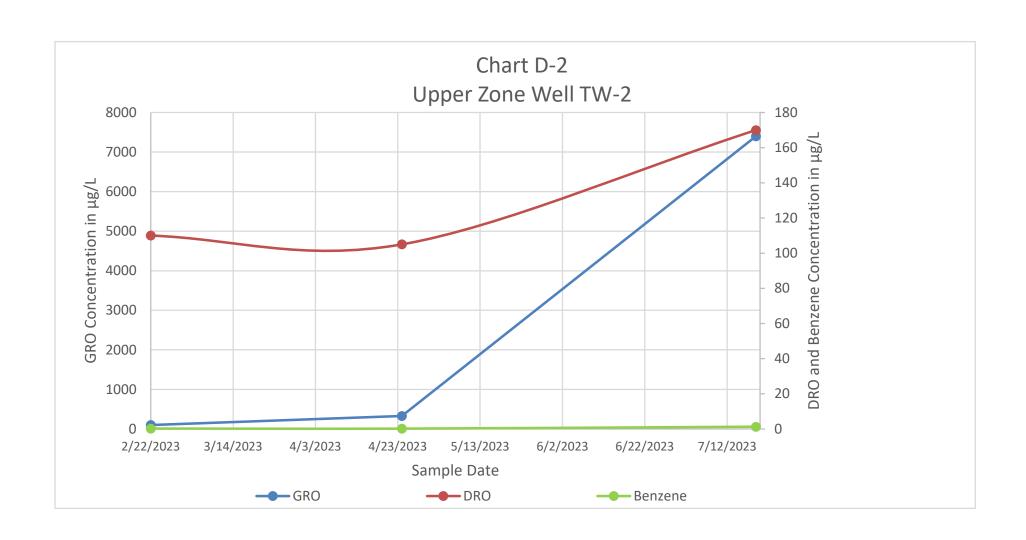
Instrument : Vigo Sample Name: 07-174-10 Misc Info : Sample

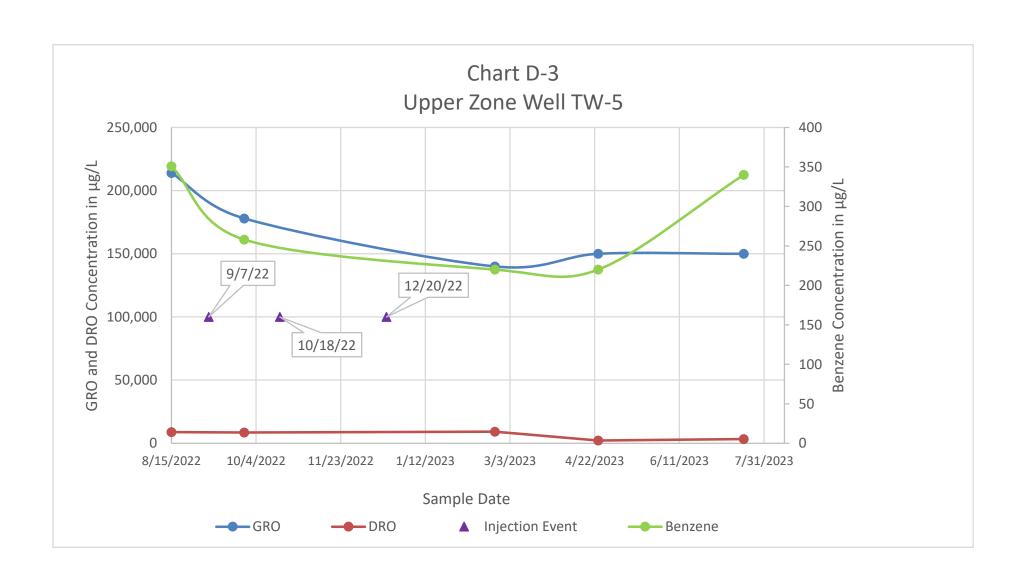


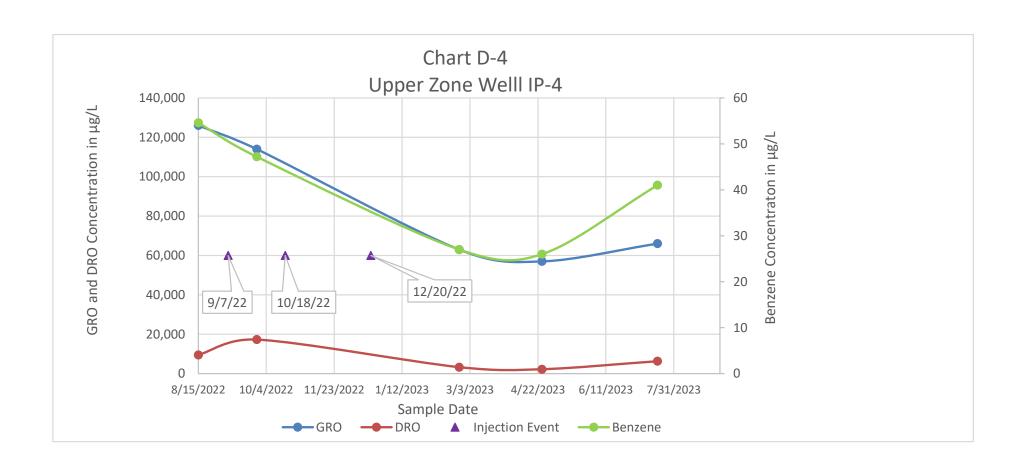
## **APPENDIX D**

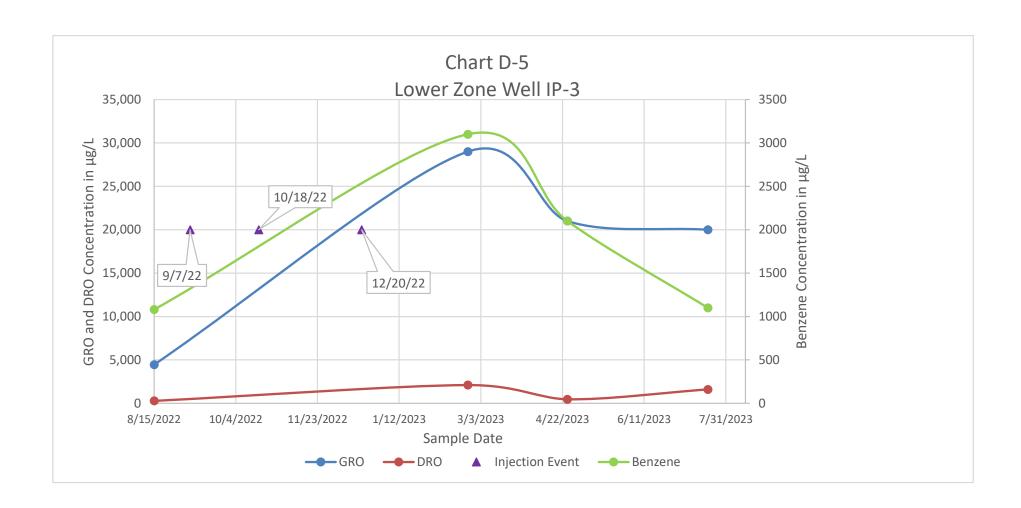
# PETROLEUM HYDROCARBON AND FIELD PARAMETER CHARTS

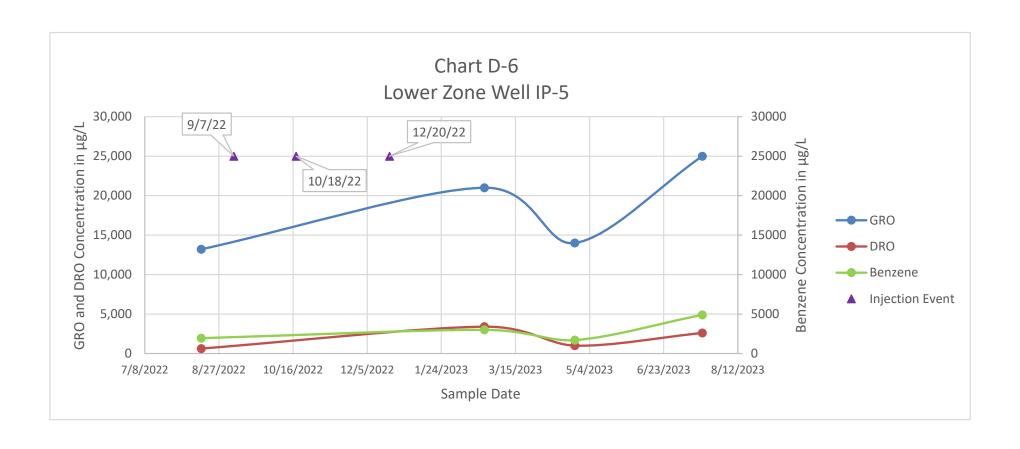


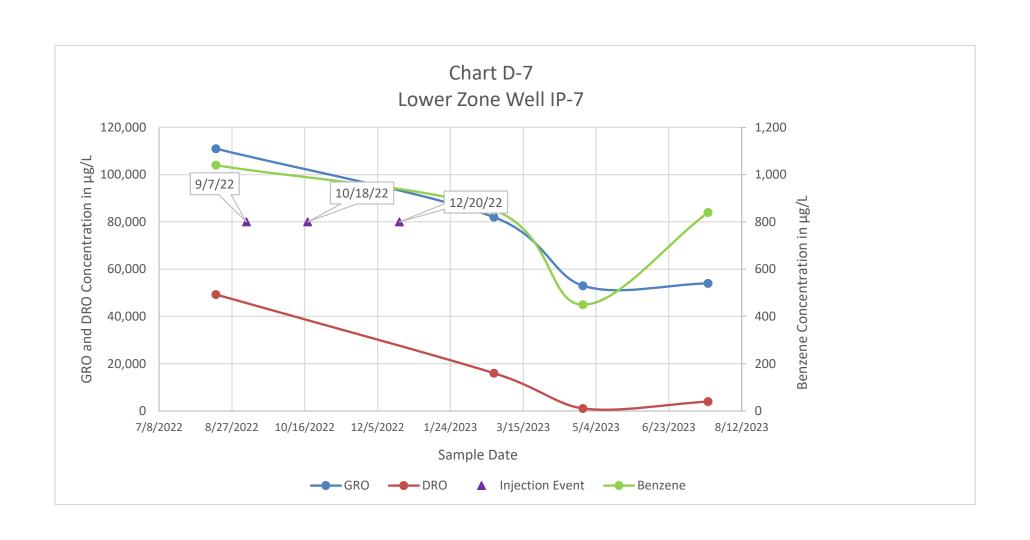


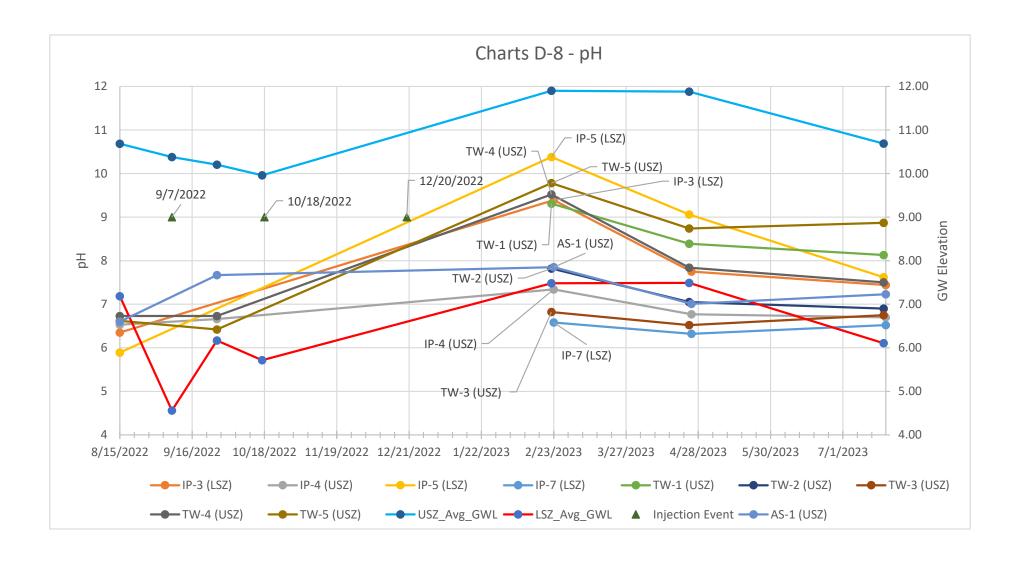


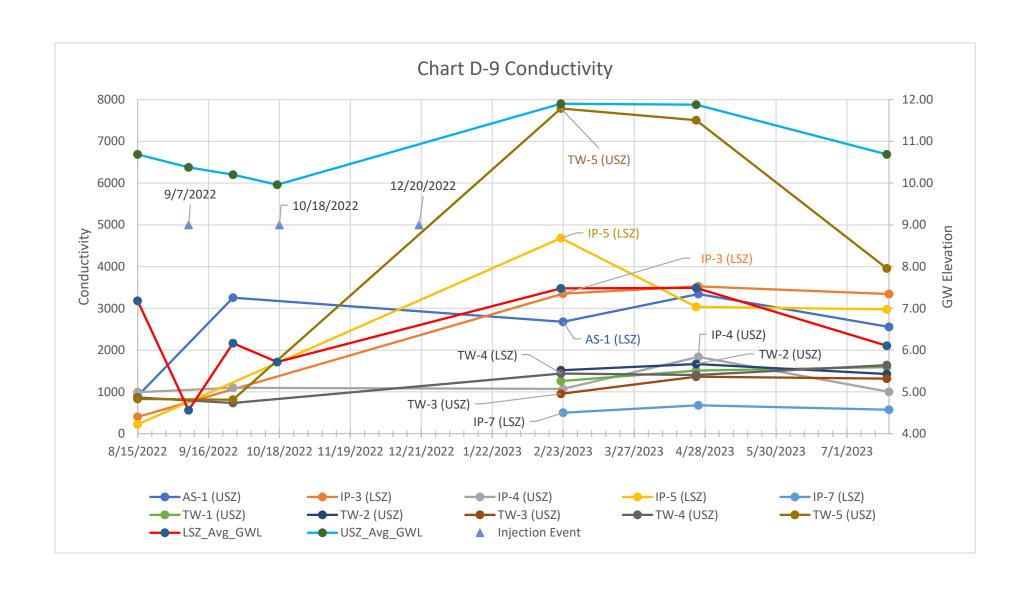


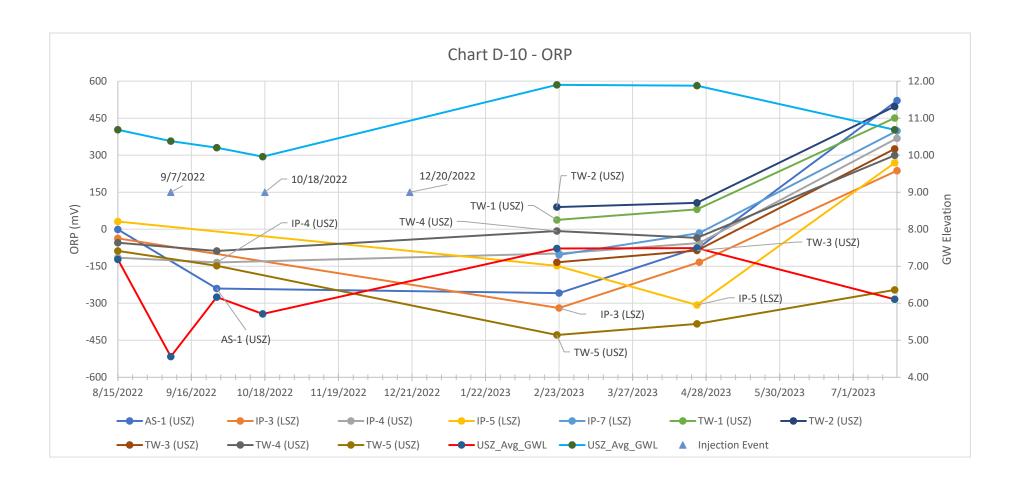


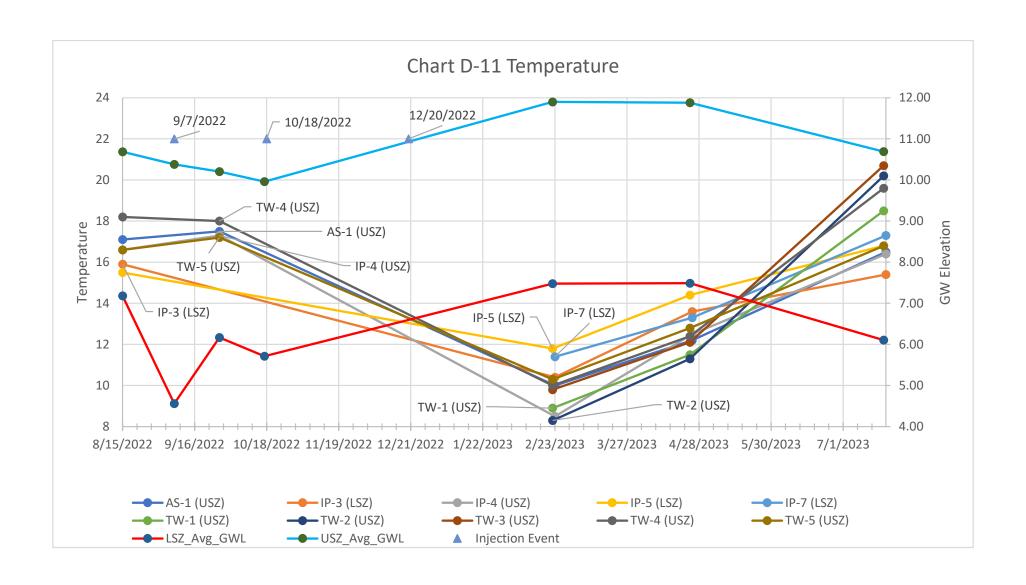


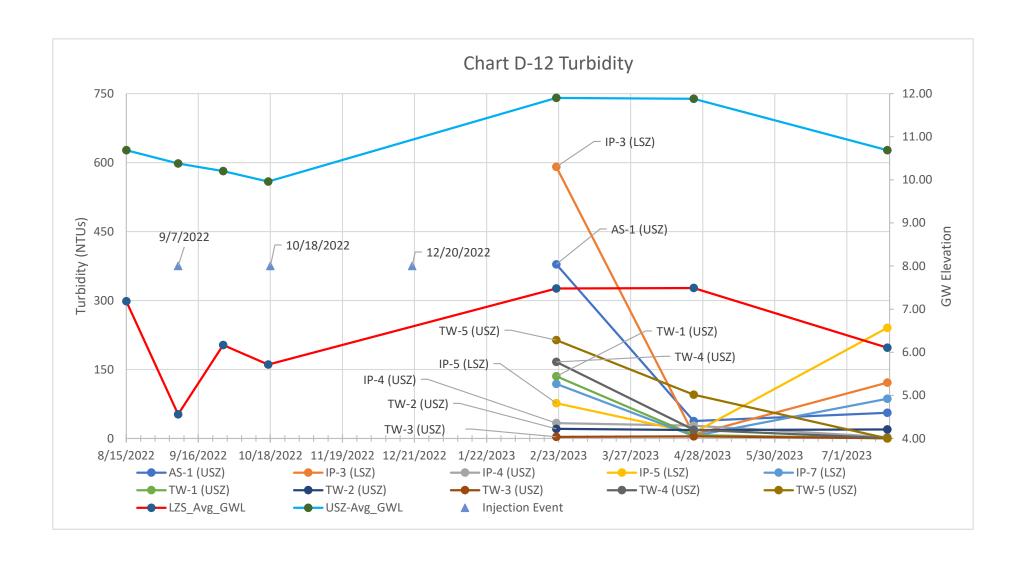


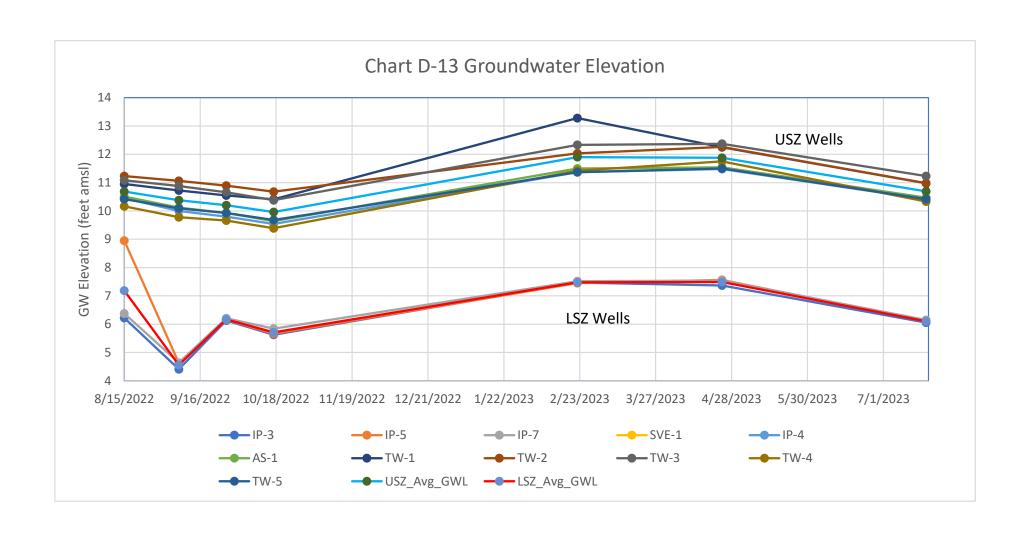












## **APPENDIX E**

## STATISTICAL TREND ANALYSES

## Statistical Trend Analysis for Pilot Test Groundwater Performance Monitoring 8/22 to 7/23 Boeing Field Chevron Site 10805 East Marginal Way South Tukwila, Washington

Well Number	GRO	DRO	Benzene	Last Sample Date	GRO	DRO	Benzene	Comments
Well Hallinger		ume Stability	Delizene	p -	με		Delizenc	Comments
			Upper Saturated	Zone	FC	–		
AS-1 (1)	Stable	Undetermined	Undetermined (3)	07/20/23	2,900	720	25	Well located outside of ISCO treatment and suspected LNAPL areas.
IP-4 (2)	Shinking	Stable	Shrinking	07/20/23	66,000	6,300	41	Well located inside ISCO treatment and suspected LNAPL areas.
SVE-1	NS	NS	NS					Well dry at each sampling event.
TW-1	NA NA	Expanding	Stable	07/19/23	< 100	800	0.33	All results over three sampling events not detected above the lab reporting limit and/or cleanup level. Well located outside of the ISCO treatment area.
TW-2 (1)	Expanding	Stable	Undetermined	07/19/23	7,400	170	1.3	Well located outside of the ISCO treatment area.
	-xpanamg	o table	- Chacterinica	07,13,13	7,.00	170		Trend analysis not applicable with two only two results during the pilot test. Well located outside ISCO
TW-3	NA	NA	NA	04/24/23	13,000	< 3,700/350	96	treatment area.
TW-4	NA	NA	NA	07/19/23	< 100	420	< 0.20	All results over three sampling events not detected above the lab reporting limit and/or cleanup level.
TW-5 <sup>(1)</sup>	Stable	Stable	Stable	07/19/23	150,000	3,400	340	Well located in the ISCO treatment area.
			Lower Saturated	Zone				
IP-3 (1)	Stable	Stable	Stable	07/20/23	20,000	1,600	1,100	Well located inside the ISCO treatment and suspected LNAPL areas.
IP-5 (1)	Stable	Stable	Stable	07/20/23	25,000	2,600	4,900	Well located in the ISCO treatment area.
IP-7 (1)	Stable	Stable	Stable	07/20/23	54,000	3,840	840	Well contained LNAPL during each sampling event. Well located outside plume at the time the pilot test was implemented.

#### Notes

GRO = Gasoline Range Petroleum Hydrocarbons

DRO = Diesel Range Petroleum Hydrocarbons

ug/L = micrograms per liter

NA = Concentration of analyte not detected above the laboratory reporting limit or did not exceed the cleanup level, or a trend analysis was not performed if there was insufficient data to perform analysis (i.e., there were less than three sample results).

NS = Not Sampled

LNAPL = Light Non Aqueous Phase Liquid

ISCO = In-Situ Chemical Oxidation

- (1) = Trend analysis performed using Mann-Kendell nonparametric test
- (2) = Trend Analysis performed using linear regression because Mann-Kendall an N =/> 4
- (3) = Undetermined is defined as insufficient evidence to identify a significant trend at the specified level of significance

#### **Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)**

Site Name: Boeing Field Chevron

Site Address: 10805 East Marginal Way South, Tukila, WA

Additional Description: Commerical Gasoline Service Station

Well (Sampling) Location? AS-1
Level of Confidence (Decision Criteria)? 85%

1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.

		Hazardous Substances (unit is ug/L)			
Sampling Event	Date Sampled	GRO	DRO	Benzene	
#1	8/15/22	474	617	5.98	
#2	9/27/22	5930	3990	104	
#3	2/23/23	9200	4400	32	
#4	4/25/23	3000	225	16	
#5	7/20/23	2900	720	25	
#6					
# <i>7</i>					
#8					
#9					
#10					
#11					
#12					
#13					
#14					
#15					
#16					

2. Mann-Kendall Non-parametric Statistical Test Results

Hazardous Substance?	GRO	DRO	Benzene			
Confidence Level Calculated?	40.80%	40.80%	40.80%	NA	NA	NA
Plume Stability?	Stable	Undetermined	Undetermined	NA	NA	NA
Coefficient of Variation?	CV <= 1	CV > 1	CV > 1	n<4	n<4	n<4
Mann-Kendall Statistic "S" value?	0	0	0	0	0	0
Number of Sampling Rounds?	5	5	5	0	0	0
Average Concentration?	4300.80	1990.40	36.60	NA	NA	NA
Standard Deviation?	3352.43	2026.16	38.92	NA	NA	NA
Coefficient of Variation?	0.78	1.02	1.06	NA	NA	NA
Blank if No Errors found				n<4	n<4	n<4

3. Temporal Trend: Plot of Concentration vs. Sampling Time

Hazardous substance? GRPH
Plume Stability? #VALUE!

#### **Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)**

Site Name: Boeing Field Chevron

Site Address: 10805 East Marginal Way South, Tukila, WA

Additional Description: Commerical Gasoline Service Station

Well (Sampling) Location? IP-4
Level of Confidence (Decision Criteria)? 85%

1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.

			Ha	zardous Substa	ances (unit is ug/L)
Sampling Event	Date Sampled	GRO	DRO	Benzene	
#1	8/15/2022	126000	9500	54.6	
#2	9/27/2022	114000	17303	47.2	
#3	2/23/2023	63000	3300	27	
#4	4/25/2023	57000	2,250	26	
#5	7/20/2023	66000	6300	41	
#6					
# <i>7</i>					
#8					
#9					
#10					
#11					
#12					
#13					
#14					
#15					
#16					

2. Mann-Kendall Non-parametric Statistical Test Results

Hazardous Substance?	GRO	DRO	Benzene			
Confidence Level Calculated?	88.30%	75.80%	88.30%	NA	NA	NA
Plume Stability?	Shrinking	Stable	Shrinking	NA	NA	NA
Coefficient of Variation?		CV <= 1		n<4	n<4	n<4
Mann-Kendall Statistic "S" value?	-6	-4	-6	0	0	0
Number of Sampling Rounds?	5	5	5	0	0	0
Average Concentration?	85200.00	7730.60	39.16	NA	NA	NA
Standard Deviation?	32213.35	6051.35	12.52	NA	NA	NA
Coefficient of Variation?	0.38	0.78	0.32	NA	NA	NA
Blank if No Errors found				n<4	n<4	n<4

3. Temporal Trend: Plot of Concentration vs. Sampling Time

Hazardous substance? GRPH
Plume Stability? #VALUE!

Site Name: Boeing Field Chevron

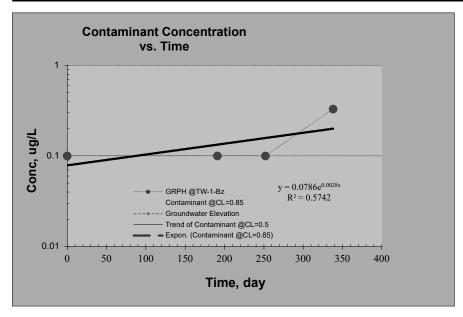
Site Address: 10805 East Marginal Way South, Tukwila, Washingotn

Additional Description: Comerical gasoline station

Hazardous Substance GRPH

#### 1. Temporal Trend at a Well (Concentration vs. Time & Groundwater Elevation : well-to-well analysis)

Name of Sampling Well?	TW-1-Bz	Confidence Level (Decision	n Criteria)?	85.0%
Confidence Level calculated with	log-linear regression is?	66.339%		
Plume Stability?	Stable	; Decision Criter	ia is 85%.	
Slope: Point decay rate constant $(k_{point})$ , yr <sup>-1</sup>		1.008 @50% C.L.;	0.003	@85% C.L.
Half Life for $k_{point}$ , yr		0.688 @50% C.L.;	215.860	@85% C.L.



Plot #1:	Sampling date #1	
Plot #2:	Sampling date #2	
Plot #3:	Sampling date #3	
Plot #4:	Sampling date #4	
Plot #5:	Sampling date #5	
Plot #6:	Sampling date #6	

Site Name: Boeing Field Chevron

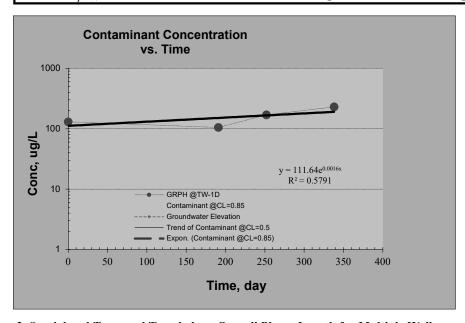
Site Address: 10805 East Marginal Way South, Tukwila, Washingotn

Additional Description: Comerical gasoline station

Hazardous Substance GRPH

#### 1. Temporal Trend at a Well (Concentration vs. Time & Groundwater Elevation : well-to-well analysis)

Name of Sampling Well?	TW-1D	Confidence Level (Decision	Criteria)?	85.0%
Confidence Level calculated with log-linear regression is? 66.823%				
Plume Stability?	Stable	; Decision Criteri	a is 85%.	
Slope: Point decay rate constant (	$(\mathbf{k}_{point}), \text{yr}^{-1}$	0.577 @50% C.L.;	0.009	@85% C.L.
Half Life for $k_{point}$ , yr		1.202 @50% C.L.;	74.514	@85% C.L.



_	_	_
Plot #1:	Sampling date #1	
Plot #2:	Sampling date #2	
Plot #3:	Sampling date #3	
Plot #4:	Sampling date #4	
Plot #5:	Sampling date #5	
Plot #6:	Sampling date #6	

Site Name: Boeing Field Chevron

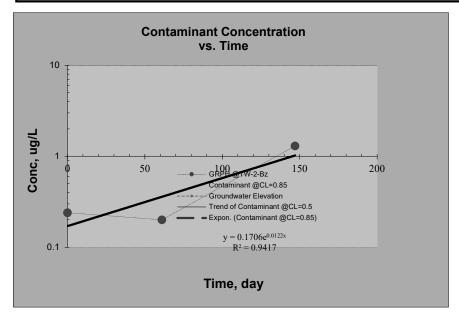
Site Address: 10805 East Marginal Way South, Tukwila, Washingotn

Additional Description: Comerical gasoline station

Hazardous Substance GRPH

#### 1. Temporal Trend at a Well (Concentration vs. Time & Groundwater Elevation : well-to-well analysis)

Name of Sampling Well?	TW-2-Bz	Confidence Level (Decision	Criteria)?	85.0%
Confidence Level calculated with log-linear regression is? 67.267%				
Plume Stability?	UD	; Decision Criteria	is 85%.	
Slope: Point decay rate constant (	<b>k</b> point), yr <sup>-1</sup>	NA @50% C.L.;	NA	@85% C.L.
Half Life for $k_{point}$ , yr		NA @50% C.L.;	NA	@85% C.L.



_	_	_
Plot #1:	Sampling date #1	
Plot #2:	Sampling date #2	
Plot #3:	Sampling date #3	
Plot #4:	Sampling date #4	
Plot #5:	Sampling date #5	
Plot #6:	Sampling date #6	

Site Name: Boeing Field Chevron

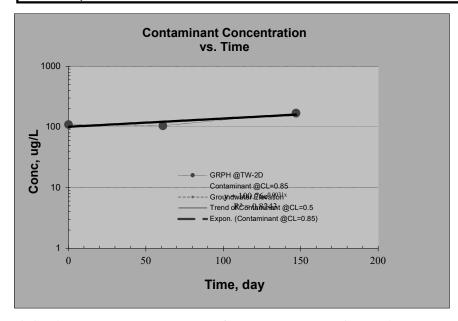
Site Address: 10805 East Marginal Way South, Tukwila, Washingotn

Additional Description: Comerical gasoline station

Hazardous Substance GRPH

#### 1. Temporal Trend at a Well (Concentration vs. Time & Groundwater Elevation : well-to-well analysis)

Name of Sampling Well?	TW-2D	Confidence Level (Decision Cr	riteria)?	85.0%
Confidence Level calculated with log-linear regression is? 67.319%				
Plume Stability?	Stable	; Decision Criteria is	85%.	
Slope: Point decay rate constant (	<b>k</b> point), yr <sup>-1</sup>	1.144 @50% C.L.;	0.250	@85% C.L.
Half Life for $k_{point}$ , yr		0.606 @50% C.L.;	2.772	@85% C.L.



•	-	
Plot #1:	Sampling date #1	
Plot #2:	Sampling date #2	
Plot #3:	Sampling date #3	
Plot #4:	Sampling date #4	
Plot #5:	Sampling date #5	
Plot #6:	Sampling date #6	

Site Name: Boeing Field Chevron

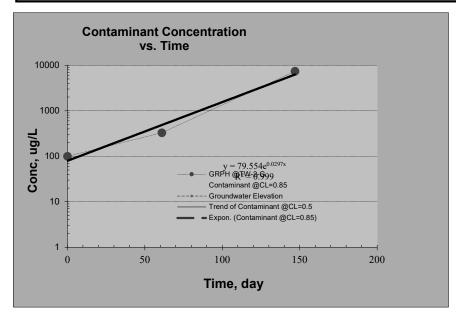
Site Address: 10805 East Marginal Way South, Tukwila, Washingotn

Additional Description: Comerical gasoline station

Hazardous Substance GRPH

#### 1. Temporal Trend at a Well (Concentration vs. Time & Groundwater Elevation : well-to-well analysis)

Name of Sampling Well?	TW-2-G	Confidence Level (Dec	cision Criteria)?	85.0%
Confidence Level calculated with	log-linear regression is?	90.214%		
Plume Stability?	Expanding	; Decision C	Criteria is 85%.	
Slope: Point decay rate constant (	<b>k</b> point), yr <sup>-1</sup>	NA @50% C.L.	; NA	@85% C.L.
Half Life for $k_{point}$ , yr		NA @50% C.L.	; NA	@85% C.L.



•	-	
Plot #1:	Sampling date #1	
Plot #2:	Sampling date #2	
Plot #3:	Sampling date #3	
Plot #4:	Sampling date #4	
Plot #5:	Sampling date #5	
Plot #6:	Sampling date #6	

#### **Module1: Mann-Kendall Trend Test for Plume Stability (Non-parametric Statistical Test)**

Site Name: Boeing Field Chevron

Site Address: 10805 East Marginal Way South, Tukila, WA

Additional Description: Commerical Gasoline Service Station

Well (Sampling) Location? TW-5
Level of Confidence (Decision Criteria)? 85%

1. Monitoring Well Information: Contaminant Concentration at a well: Quarterly sampling recommended.

			Haz	zardous Substa	ances (unit is ug/L)
Sampling Event	Date Sampled	GRO	DRO	Benzene	
#1	8/15/2022	214000	8850	351	
#2	9/27/2022	178000	8520	258	
#3	2/22/2023	140000	9200	220	
#4	4/24/2023	150000	2200	220	
#5	7/19/2023	150000	3400	340	
#6					
# <i>7</i>					
#8					
#9					
#10					
#11					
#12					
#13					
#14					
#15					
#16					

2. Mann-Kendall Non-parametric Statistical Test Results

Hazardous Substance?	GRO	DRO	Benzene			
Confidence Level Calculated?	75.80%	75.80%	59.20%	NA	NA	NA
Plume Stability?	Stable	Stable	Stable	NA	NA	NA
Coefficient of Variation?	CV <= 1	CV <= 1	CV <= 1	n<4	n<4	n<4
Mann-Kendall Statistic "S" value?	-5	-4	-3	0	0	0
Number of Sampling Rounds?	5	5	5	0	0	0
Average Concentration?	166400.00	6434.00	277.80	NA	NA	NA
Standard Deviation?	30146.31	3353.03	63.84	NA	NA	NA
Coefficient of Variation?	0.18	0.52	0.23	NA	NA	NA
Blank if No Errors found				n<4	n<4	n<4

3. Temporal Trend: Plot of Concentration vs. Sampling Time

Hazardous substance? GRPH
Plume Stability? #VALUE!

### **APPENDIX F**

# TABLE 5-1 REMEDIAL INVESTIGATION REPORT

TABLE 5-1
Groundwater Sample Analyses, Active Monitoring Wells (1)
Boeing Field Chevron
Tukwila, Washington

					anics		/	/ //		' /		/	MIBE			/		/ /	· //
Exploration Location	Sample Name	Sample Date	Water Depth (ft)	Cascalla	Range Organics	Range Organi	cs doils Bente	Tollers	s Ethyl	Jerzene Tylenes	Meth	y Tex Bury Eth	artement on A.2.0	Ethorostrans (	and Madri	tratere 2.Met	Whadhhalene .	trachtraterie	Totall Lead II
MTCA Cleanup	Level (2, 3)			800(a)/1,000(b)	500	500	1.6	130	31	1,000	20	0.01	5	**	1.4	32*	1.51*	15	15
(units in μg/L)																			
<b>ACTIVE WELL</b>	LS																		
IP-3	IP-3	5/8/2006	NR**	28			1,800	13,000	1,400	8,300									
	IP-3	3/27/2008	NR**	62,900			6,120	8,850	968	4,420									
	IP-3 GW-L	7/17/2015	17.44	4,200	460 X	<250	1,200	11	70	38.5	1.2	0.10	<1	38	28	13	8.7	<1	<1
	IP-3 GW-H	7/23/2015	14.97	4,700	510 X	<250	1,300	13	71	41.0	<10	0.04	<5	35	3.1	7.7	5.5	<1	<1
	IP-3-3232017	3/23/2017	12.96	4,840 D	<49.9	<99.8	783 D	105 D	127 D	139 D	<1.00	<0.00976	<1.00		2.52	6.09	3.30	<0.500	<0.500
	IP-3-7272017	7/27/2017	14.16	5,800 D	<50.2	<100	862 D	20.5	136 D	61.6 D	<1.00	<0.00952	<1.00		0.789	6.10	3.56	<0.500	<0.500
	IP-3-1042017	10/4/2017	15.32	3,740 D	<50.3	<101	1,270 D	80.7	214 D	458.3 D	<1.00	<0.0100	<1.00	72.7 D	1.37	6.5	4.13	<0.500	<0.500
	DUP	1/12/2018	12.01	4,980 D	77.7	<99.9	950 D	45.7 D	100 D	91.62 D	<1.00	<0.250	<1.00		8.77				<0.500
	IP-3	1/12/2018	12.01	4,610 D	74.3	<99.6	895 D	42.9 D	94.3 D	88.93 D	<1.00	<0.250	<1.00		15.7				
	MW-B (dup)	5/29/2018	14.55	4,520 D	<49.8	<99.6	832 D	31.4 D	101 D	114.21 D		<0.00981			2.56	9.79	5.38		
	IP-3	5/29/2018	14.55	4,870 D	<49.9	<99.8	971 D	34.5 D	106 D	107.29 D		<0.00984			2.37	9.85 D	5.57		
	IP-3	8/24/2018	16.23	6,160 D	111	101	1,390 D	27.1	125 D	141.33 D		<0.00987			8.19 Q			<0.500	
	MW-A	8/24/2018	16.23	5,750 D	113	<99.9	1,300 D	29.4	129 D	154.98 D		<0.00979			6.70			0.551	
	IP-3	11/28/2018	12.53	3,710 D	63.9	<99.7	865 D	18.8	53.0 D	52.4		<0.00997			1.95			1.92	
IP-4	IP-4	5/8/2006	NR**	110			15,000	48,000	3,700	23,000									
	IP-4	3/27/2008	NR**	84,400			14,600	22,100	4,920	17,600									
	IP-4 GW-L	7/17/2015	11.41	170,000	6,800 X	<250	4,100	29,000	4,800	26,900	1.4	0.12	<1	87	550	96	56	<1	<1
	IP-4 GW-H	7/24/2015	11.46	150,000	8,700 X	<250	4,200	27,000	4,300	24,400	<10	0.04	<5	64	440	82	47	<1	<1
	IP-4	11/30/2016	10.10	93,400D	1,410	<99.6	1,070 D	15,600 D	3,300 D	19,950 D	<1.00	<0.00986	<1.00	127 EQ	504 D	85.2 D	47.3 D	0.974	<0.500
	IP-4-3232017	3/23/2017	8.01	209,000 D	1,570	<99.6	1,360 D	16,200 D	5,090 D	30,440 D	<1.00	<0.00953	<1.00		757 D	119 D	66.6 D	<0.500	<0.500
	IP-4-7272017	7/27/2017	9.96	213,000 D	1,180	<99.4	1,170 D	19,600 D	5,500 D	19,200 D	<1.00	<0.00971	<1.00		447 D	80.8 D	37.6 D	<0.500	<0.500
	IP-4-1042017	10/4/2017	10.75	212,000 D	1,110	<101	2,030 D	18,400 D	5,320 D	25,190 D	<1.00	<0.00960	<1.00	48.0	604 D	89.9 D	71.3 D	0.546	<0.500
	IP-4	1/12/2018	9.23	162,000 D	1,250	<99.9	939 D	18,600 D	5,180 D	27,980 D	<1.00	<0.250	<1.00		1,150 D				
	IP-4	5/29/2018	9.67	199,000 D	1,250	138	687 D	17,200 D	6,090 D	32,200 D		<0.00998			661 D	101 D	<0.0999		
	IP-4	8/24/2018	9.98	131,000 D	584	<99.9	421 D	11,400 D	5,550 D	29,340 D					748 D				
	IP-4	11/28/2018	10.00	123,000 D	471	<99.9	246 D	7,380 D	5,170 D	27,120 D		< 0.00962			867 D			<0.500	

TABLE 5-1
Groundwater Sample Analyses, Active Monitoring Wells (1)
Boeing Field Chevron
Tukwila, Washington

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					ne*	cange /	ails //	. /		Aylene Aylene		(ert.bt/	OMOET	Joroet		tralene 2.Met	Inaphi	Inaph.	Total Lead
Exploration	Sample	Sample	Water	(35 <sup>0</sup> )			NOIS Benten	Tollier	ne / will	Jeni Lylene	5 / X	M' Di	3rc / 25	jich! Lan	· // ×	ina. Net	netri		do/ 29/
Location	Name	Date	Depth (ft)		Die	Her	// ¢er.	1016	Eth.	/ +4/r	Mer		\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Her	// Hab	2.M	\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	// 🔅	/ \signature {
MTCA Cleanup	Level (2, 3)			800(a)/1,000(b)	) 500	500	1.6	130	31	1,000	20	0.01	5	**	1.4	32*	1.51*	15	15
(units in μg/L)																			
IP-5	IP-5	5/9/2006	NR**	48			2,100	18,000	3,500	20,000									
	IP-5	3/27/2008	NR**	13,300			711	1,260	363	1,370									
	IP-5 GW-L	7/20/2015	16.58	35,000	3,900 X	<250	5,200	1,400	2,400	2,800	<10	0.32	<5	160	90	15	15.0	1.02	<1
	IP-5 GW-H	7/24/2015	15.50	27,000	2,700 X	<250	4,500	1,100	2,200	2,580	<10	0.24	<5	170	86	18	13.0	<1	<1
	IP-5	11/30/2016	13.00	15,200 D	321	<99.1	3,450 DE	212 D	774 D	1,789 D	<1.00	<0.00987	<1.00	57.1 DQ	108 D	33.7 D	19.5 D	<0.500	<0.500
	MW-B (IP-5 Dup)	11/30/2016	13.00	15,400 D	313	<99.1	3,440 DE	256 D	795 D	1,824 D	<1.00	<0.00996		63.1 DQ	104 D	31.6 D	18.4 D	<0.500	<0.500
	IP-5-3232017	3/23/2017	13.80	18,400 D	209	<99.2	1,740 D	141 D	665 D	1,637 D	<1.00	<0.00980			60.4 D	25.1 D	15.1 D	<0.500	<0.500
	FD-1 (IP-5 Dup)	3/23/2017	13.80	15,700 D	273	<99.9	1,420 D	136 D	670 D	1,634 D	<1.00	<0.00981	<1.00		73.4 D	27.6 D	18.4 D	0.785	<0.500
	IP5-7272017	7/27/2017	13.76	15,800 D	102	<99.9	1,660 D	164 D	491 D	936 D	<1.00	<0.00901			38.0 D	28.4 D	12.0 D	<0.500	<0.500
	FD-2-7272017	7/27/2017	13.76	11,900	207	<99.9	1,610 D	148 D	499 D	1032 D	<1.00	< 0.00984			36.9 D	27.2 D	9.25 D	0.660	<0.500
	IP-5-1042017	10/4/2017	16.17	30,700 D	175	<100	4,360 D	583 D	1,060 D	2,792 D	<1.00	< 0.00971		137	81.4 D	20.7 D	31.2 D	<0.500	<0.500
	IP-5	1/12/2018	13.42	13,000 D	222	<100	1,500 D	240 D	462 D	1,195 D	<1.00	<0.250	<1.00		61.1 D				
	IP-5	5/29/2018	16.82	10,900 D	161	<100	1,300 D	149 D	402 D 415 D	806.6 D		<0.230			31.6 D	20.3 D	4.57		
	IP-5	8/24/2018	17.08	36,200 D	471	<99.9	5,670 D	2,200 D	1,190 D	2,773 D		~0.00301							
	IP-5	11/28/2018		16,500 D	251	<101	2,590 D	490 D	633 D	*		<0.00994			74.4 DQ			 -0 500	
	IF-0	11/20/2010	13.29	16,500 D	231	<101	2,590 D	490 D	633 D	1,105 D		<0.00994			48.1 JD			<0.500	
MW-18	MW-18	4/18/2008	NR**	<100			<1	<2	<1	<3									
	MW-18 GW-L	7/15/2015	12.38	<100	<50	<250	<0.35	<1	<1	<3	<1	< 0.01	<1	<1	< 0.05	< 0.05	< 0.05	<1	<1
	MW-18 GW-H	7/21/2015	12.57	<100	66 X	<250	<0.35	<1	<1	<3	<1	< 0.01	<1	<1	<0.1	< 0.1	< 0.1	<1	<1
	MW-18	11/30/2016	7.88	<50.0	<49.6	<99.3	1.01	<1.00	1.19	<1.00	<1.00	<0.00970	<1.00	<1.00	<0.0994	<0.0994	<0.0994	<0.500	<0.500
	MW-18-3232017	3/23/2017	6.96	<50.0	<50.0	<100	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00979	<1.00		<0.0998	<0.0998	<0.0998	<0.500	<0.500
	MW-18-7272017	7/27/2017	8.96	<50.0	<50.0	<100	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00955	<1.00		<0.0999	<0.0999	<0.0999	0.501	<0.500
	MW-18-1052017	10/5/2017	9.80	<50.0	<49.8	<99.6	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00950		<1.00	<0.0997	<0.0997	<0.0997	<0.500	<0.500
	MW-18	1/16/2018	7.79	<50.0			<1.00	<1.00	<1.00	<1.00									
	MW-18	5/25/2018	8.62	<50.0			<1.00	<1.00	<1.00	<1.00		<0.00975							
	MW-18	8/23/2018	10.40	<50.0			<1.00	<1.00	<1.00	<1.00									
	MW-18	11/28/2018		<50.0	<49.9	138	<1.00	<1.00	<1.00	<1.00								0.656	
							_								_				
MW-19	MW-19	4/18/2008	NR**	<100			<1	<2	<1	<3									
	MW-19 GW-L	7/15/2015	17.95	<100	74 X	<350	<0.35	<1	<1	<3	<1	<0.01	<1	<1	<0.1	<0.1	<0.1	2.31	<1
	MW-19 GW-H	7/21/2015	12.57	<100	74 X	<250	<0.35	<1	<1	<3	<1	<0.01	<1	<1	<0.1	<0.1	<0.1	<1	<1
	MW-19	11/30/2016		<50.0	<49.9	<99.7	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00983		<1.00	<0.0994		<0.0994	<0.500	<0.500
	MW-19-3232017	3/23/2017	10.31	<50.0	<49.6	<99.2	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00961				<0.0998		<0.500	<0.500
	MW-19-7272017	7/27/2017	10.64	<50.0	<50.1	<100	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00977			<0.0998		<0.0998	<0.500	<0.500
	MW-19-1052017	10/5/2017	13.58	<50.0	<49.7	<99.4	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00985	<1.00	<1.00	<0.0988	<0.0988	<0.0988	1.33	<0.500
	MW-19	8/23/2018	15.80	<50.0			<1.00	<1.00	<1.00	<1.00									
	MW-19	11/27/2018	8.50	<50.0	<50.2	111	<1.00	<1.00	<1.00	<1.00								<0.500	
MW-20	MW-20	4/18/2008	NR**	<100			<1	<2	<1	<3									
<b></b> -	MW-20 GW-L	7/15/2015	18.36	<100	<50	<250	<0.35	<1	<1	<3	1.4	< 0.01	<1	<1	<0.05	< 0.05	<0.05	<1	<1
	MW-20 GW-H	7/21/2015	14.88	<100	92 X	<250	<0.35	<1	<1	<3	1.6	<0.01	<1	<1	<0.1	<0.1	<0.1	<1	<1
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TABLE 5-1
Groundwater Sample Analyses, Active Monitoring Wells (1)
Boeing Field Chevron
Tukwila, Washington

Boeing Field C	Chevron																		
Tukwila, Wash	nington																		
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					ange	Organ	`///	/	/ ,			/ with	, sane	s \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	/	//	halent	halent	//
					A Rande Ordanic	Learne Organi	/.s //			Bentana Tylene		ny Test Bury Eth	aronoestare	Julion of the sand		thatene 2.Met	ndraghtratere	Whaththaters Lead	(Total) Les
Exploration	Sample	Sample	Water	casoli.		1 43r	N Oils Benzer	Toller	,ic / ,ic	tylene	8 / 1	w <sup>76</sup> / 51	prov /	ichil an	e // 5	thale st	mil.	AII. // Y	(Total) Lea
Location	Name	Date	Depth (ft)		/ Dies	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Berlin .	/ Toll	Ethy	/ +Ale.	Met	132	1	Hete	Mab	2.110	1.116	// \s <sub>0</sub>	/ \$ <sup>2</sup>
MTCA Cleanup	Level (2, 3)			800(a)/1,000(b)	500	500	1.6	130	31	1,000	20	0.01	5	**	1.4	32*	1.51*	15	15
(units in μg/L)				( ).				.00	•	1,000		0.0.				<b>0</b> 2			.0
	MW-20	11/30/2016	3 11.43	<50.0	<49.8	<99.8	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00973	<1.00	<1.00	<0.0995	<0.0995	<0.0995	<0.500	<0.500
	MW-20-3232017	3/23/2017	11.89	<50.0	<49.7	<99.4	<1.00	<1.00	<1.00	<1.00	<1.00	< 0.00969			<0.0998		<0.0998	<0.500	<0.500
	MW-20-7272017	7/27/2017	12.35	<50.0	<50.1	<100	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00993			<0.0998		<0.0998	<0.500	<0.500
	MW-20-1042017	10/4/2017	14.16	<50.0	<49.7	<99.4	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00991		<1.00	0.119	<0.0998	<0.0998	<0.500	<0.500
	MW-20-10-2017	8/23/2018		117			<1.00	<1.00	3.6	10.4					<1.00 Q				
	MW-20	11/27/2018		94.6	<49.9	<99.8	<1.00	<1.00	5.18	16.1								<0.500	
					~ <del>4</del> 3.3	>55.0	~1.00	~1.00	J. 10	10.1								~0.000	
/IW-21	MW-21	4/18/2008		<100			<1	<2	<1	<3									
	MW-21 Dup	4/18/2008		<100			<1	<2	<1	<3									
	MW-21 GW-L	7/15/2015	21.27	<100	220 X	<250	<0.35	<1	<1	<3	<1	<0.01	<1	<1	<0.05	< 0.05	< 0.05	<1	<1
	MW-21 GW-H	7/21/2015	14.47	<100	260 X	<250	<0.35	<1	<1	<3	<1	< 0.01	<1	<1	<0.1	<0.1	< 0.1	1.14	<1
	MW-21 GW-H Dup	7/21/2015	14.47	<100	260 X	<250	<0.35	<1	<1	<3	<1	< 0.01	<1	<1	<0.1	<0.1	< 0.1	<1	<1
	MW-21	11/30/2016	3 12.00	<50.0	<49.8	210	2.61	<1.00	<1.00	<1.00	<1.00	0.00973	<1.00	<1.00	<0.0992	<0.0992	< 0.0992	0.986	< 0.500
	MW-21-3232017	3/23/2017	12.67	<50.0	<49.9	<99.9	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00980	<1.00		<0.0996	<0.0996	< 0.0996	4.96	< 0.500
	MW-21-7272017	7/27/2017	12.35	<50.0	<50.1	331	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00983	<1.00		<1.00	<1.00	<1.00	<0.500	< 0.500
	MW-21-1052017	10/5/2017	13.65	<50.0	<49.3	<98.7	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00993	<1.00	<1.00	<0.0993	<0.0993	< 0.0993	<0.500	< 0.500
	MW-21	1/16/2018	11.80	<50.0	<49.8	<99.7	<1.00	<1.00	<1.00	<1.00									
	MW-21	5/25/2018	14.04	<50.0	<49.5	<98.9	<1.00	<1.00	<1.00	<1.00		<0.00993							
	MW-21	8/23/2018	17.48	<50.0	<49.9	228	<1.00	<1.00	<1.00	<1.00									
	MW-21	11/28/2018	8.52	<50.0	<49.9	316	<1.00	<1.00	<1.00	<1.00								<0.500	
N-22	MW-22	12/6/2016	7.09	<50.0	<50.4	197	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00981	<1.00	<1.00	<0.0996	<0.0996	<0.0996	<0.500	<0.500
VV-22	MW-22-3232017	3/23/2017	8.92	<50.0	<49.8	<99.8	<1.00	<1.00	<1.00	<1.00	<1.00	<0.0100				<0.0996	<0.0996	<0.500	<0.500
	MW-22-7262017	7/26/2017	10.55	<50.0	<50.2	<100	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00978				<0.0997	<0.0997	0.761	<0.500
	MW-22-7202017 MW-22-1052017	10/5/2017	11.16	<50.0	<49.6	<99.3	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00978		<1.00	<0.0986		<0.0986	<0.500	<0.500
	MW-22	1/12/2018																	
	MW-22	8/23/2018		<50.0	<49.9	131	<1.00	<1.00	<1.00	<1.00									
	MW-22	11/27/2018		<50.0	<b>62.7</b>	243	<1.00	2.26	1.39	7.02								0.515	
IW-23	MW-23	12/6/2016		848	94.2	<100	19.8	<1.00	<1.00	133.5 D	<1.00			<1.00		0.615 Q	0.653	<0.500	<0.500
	MW-C (MW-23 Dup)	12/6/2016		1,080	87.3	<100	25.1	<1.00	<1.00	165.8 D	<1.00	<0.00979		<1.00		0.531 Q	0.564	<0.500	<0.500
	MW-23-3232017	3/23/2017	8.63	<50.0	<49.9	<99.8	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00983				<0.0999	<0.0999	<0.500	< 0.500
	MW-23-7262017	7/26/2017	10.36	<50.0	<49.7	<99.5	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00995			<0.0996	<0.0996	<0.0996	0.686	< 0.500
	MW-23-1052017	10/5/2017	11.08	<50.0	<49.5 FLA	<b>G</b> <99.0	<1.00	<1.00	<1.00	1.27	<1.00	<0.00997		<1.00	0.169	<0.0997	<0.0997	<0.500	< 0.500
	MW-23	1/12/2018	9.38	<50.0	<50.0	<100	<1.00	<1.00	<1.00	<1.00	<1.00	<0.250	<1.00		<1.00				< 0.500
	MW-23	5/25/2018	10.04	<50.0	<50.0	<99.9	<1.00	<1.00	<1.00	<1.00		<0.00970			<0.0991	<0.0991	<0.0991	0.688	< 0.500
	MW-23	8/23/2018	10.73	<50.0	<49.7	<99.5	<1.00	<1.00	<1.00	<1.00					<1.00			0.964	
	MW-23	11/27/2018	10.49	<50.0	<49.9	<99.8	<1.00	<1.00	<1.00	<1.00								5.69	
W-24	MW-24	12/6/2016	10.34	<50.0	<50.2	328	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00993	<1.00	<1.00	<0.0996	<0.0996	<0.0996	0.606	<0.500
<del>-</del> -	MW-24-3232017	3/23/2017		<50.0	<49.7	307	<1.00	<1.00	<1.00	<1.00	<1.00	< 0.00965				< 0.0999	< 0.0999	0.956	<0.500
	MW-24-7272017	7/27/2017	10.71	<50.0	73.6	313	<1.00	<1.00	<1.00	<1.00	<1.00							2.55	<0.500
	IVIVY ATTICIOUII	1/21/2011	10.71	-50.0	, 0.0	0.0	- 1.00	- 1.00	-1.00	- 1.00	- 1.00	-0.00000	-1.00					2.00	-0.000

TABLE 5-1
Groundwater Sample Analyses, Active Monitoring Wells (1)
Boeing Field Chevron
Tukwila, Washington

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					inge (	Range Organi	•////	// /	/	/ /		TY ETT	Nane	, le sane le			Whathhatele to	machinalene Lead	//
					ine ka.	ange	is //			Enzene Tylene		or But!	amoeti.	Joroetti		lene /	'naphti.	maphti.	dotall read
Exploration	Sample	Sample	Water	G3501		Range Heav	A City Bertet	Tollen	e / hyli	tylene	5 / 3	HIT SON	, s	ichi zan	Madri	nat net	Meth	N' // 20	Totall Lead I
Location	Name	Date	Depth (ft)		<u> </u>	/ Her	// 🍫	<u> </u>	/ Ett.	14,	Me	\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	/ KV	/ He,	// Hall	2,18	/ \ <sup>,,K</sup> 1	<u>// 🖑 </u>	<u> </u>
MTCA Cleanup	Level (2, 3)			800(a)/1,000(b	) 500	500	1.6	130	31	1,000	20	0.01	5	**	1.4	32*	1.51*	15	15
(units in μg/L)																			
	MW-24-1052017	10/5/2017	11.69	<50.0	63.6 FLAG		<1.00	<1.00	<1.00	<1.00	<1.00	<0.00945	<1.00	<1.00	<0.100	<0.100	<0.100		
	MW-24	1/11/2018	8.89	<50.0	<49.9	117	<1.00	<1.00	<1.00	<1.00	<1.00	<0.250	<1.00		<0.100				
	MW-24 MW-24	5/25/2018 8/23/2018	11.99 11.35	<50.0	57. <b>4</b>	324	<1.00	<1.00	<1.00	<1.00		<0.00995							
	MW-24	11/27/2018		<50.0	<b>57.4</b> <50.3	306	<1.00	<1.00	<1.00	<1.00									
															_				
MW-24D	MW-24D MW-24D	1/12/2018	10.34	841	<50.0 <50.0	<99.9 <99.9	9.29	1.37 1.38	<1.00 <1.00	6.15 4.22	<1.00	<0.250 <0.00991	<1.00		1.42		0.440	<0.500 <0.500	<0.500
	MW-24D	5/25/2018 8/23/2018	15.15 15.97	481 97.2	<50.0 <50.4	<101	<b>33.5</b> <1.00	<1.00	<1.00	4.22 1.17		<0.00991			<0.0998	<0.0998	0.110	0.930	
	MW-24D	11/27/2018		<50.0	<49.7	<99.4	<1.00	<1.00	<1.00	<1.00		<0.0100			<0.100			<0.500	
MANA/ OF											-14.00		-14.00			10.0044			
MW-25	MW-25 MW-25-3232017	12/6/2016	8.94	<50.0 <50.0	<49.8	128	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00984	<1.00	<1.00	<0.0994	<0.0944	<0.0944	2.21	<0.500
	MW-25-7262017	3/23/2017 7/26/2017	7.38 9.31	<50.0 <50.0	<49.9 <50.3	<99.7 <101	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<0.00967 <0.00993	<1.00 <1.00		<0.0998	<0.0998	<0.0998 <0.0999	0.568 0.573	<0.500 <0.500
	MW-25-1052017	10/5/2017	10.33	<50.0	<49.9	<99.8	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00993	<1.00		<0.0999	<0.0999	<0.0998	<0.500	<0.500
	MW-25	1/12/2018	8.32																
	MW-25	8/23/2018	9.93	<50.0	<49.9	<99.9	<1.00	<1.00	<1.00	<1.00									
	MW-25	11/27/2018		<50.0	<49.9	<99.9	<1.00	<1.00	<1.00	<1.00								<0.500	
MW-26S	MW-26	11/30/2016	8.09	<50.0	<49.8	<99.6	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00996	<1.00	<1.00	<0.0993	<0.0993	<0.0993	2.15	<0.500
200	MW-26S-3242017	3/24/2017	6.92	<50.0	<49.9	<99.8	<1.00	<1.00	<1.00	<1.00	<1.00		<1.00		<0.0995		<0.0995	1.48	<0.500
	MW-26S-7262017	7/26/2017	8.98	<50.0	<50.2	<100	<1.00	<1.00	<1.00	<1.00	<1.00		<1.00		<0.0997	<0.0997	<0.0997	0.800	<0.500
	MW-26S-1042017	10/4/2017	9.57	<50.0	<49.6	<99.2	<1.00	<1.00	<1.00	<1.00	<1.00	< 0.00971	<1.00	<1.00	<0.0999	<0.0999	<0.0999	<0.500	<0.500
	MW-26S	1/11/2018	7.27																
	MW-26S	8/24/2018	8.80	<50.0	<49.7	<99.4	<1.00	<1.00	<1.00	<1.00					<1.00 Q				
	MW-26S	11/28/2018	7.85	<50.0	<50.1	<100	<1.00	<1.00	<1.00	<1.00								<0.500	
MW-26D	MW-26D	11/30/2016	12.19	<50.0	<49.9	<99.8	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00997	<1.00	<1.00	<0.0997	<0.0997	<0.0997	0.0633	<0.500
	MW-26D-3242017	3/24/2017	12.24	<50.0	<49.6	<99.1	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00952	<1.00		<0.0998	<0.0998	<0.0998	4.48	<0.500
	MW-26D-7262017	7/26/2017	13.49	<50.0	<49.9	<99.8	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00976	<1.00		<0.0997	<0.0997	<0.0997	0.800	<0.500
	MW-26D-1042017	10/4/2017	14.66	<50.0	<50.0	<100	<1.00	<1.00	<1.00	<1.00	<1.00	< 0.0100	<1.00	<1.00	<0.0989	<0.0989	<0.0989	0.729	<0.500
	MW-26D	1/11/2018	11.46																
	MW-26D	8/24/2018	15.65	<50.0	<49.7	<99.5	<1.00	<1.00	<1.00	<1.00					<1.00 Q				
	MW-26D	11/28/2018	12.07	<50.0	<49.8	<99.7	<1.00	<1.00	<1.00	<1.00								0.785	
MW-27S	MW-27S	11/28/2016	8.25	<50.0	<50.1	<100	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00987	<1.00	<1.00	<0.0997	<0.0997	<0.0997	<0.500	<0.500
	MW-27S-3242017	3/24/2017	7.23	<50.0	<49.9	<99.8	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00994	<1.00		<0.0996	<0.0996	<0.0996	10.4	<0.500
	MW-27S-7262017	7/26/2017	9.08	<50.0	<50.2	<100	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00971				<0.0993	<0.0993	0.535	<0.500
	MW-27S-1042017	10/4/2017	9.68	<50.0	<49.9	<99.8	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00997	<1.00	<1.00	<0.0995	<0.0995	<0.0995	1.38	<0.500
	MW-27S	1/16/2018	8.05	<50.0	<49.9	<99.9	<1.00	<1.00	<1.00	<1.00									
	MW-27S	5/25/2018	8.27	<50.0	<49.8	<99.6	<1.00	<1.00	<1.00	<1.00		<0.00989							
	MW-27S	8/23/2018	7.50	<50.0	<49.7	<99.5	<1.00	<1.00	<1.00	<1.00									

TABLE 5-1
Groundwater Sample Analyses, Active Monitoring Wells (1)
Boeing Field Chevron
Tukwila, Washington

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						, /	/	/ //				/	ABEL	/ ,	/ /	<i>'</i> //			
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					Ve <sub>O</sub>	gani		//				WI ETT	ane	de la meil	9/		alene	alene	//
				/ .,,e	Range Organic	Range Ordanii	/, //			teue /		y Text Sury Ethy	artemet A. 2. Co.	Elde) Herar	/	one /	THIRAPHTA BETE	Whathia ene	(Ida) 182
Exploration	Sample	Sample	Water	gasolii		Range	A CHIS BENTE	ne Toller	ie / "ii	Aylene Aylene	5 / 5	Alze. Oil	orot.	Hexar	e // 2	thalene 2 Met	.rylite .g.tr	Alle /	(Total) Lea
Location	Name	Date	Depth (ft)	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	/ Dies	Hea	// Bern	Toll	Eins	14/le	Met	1 13.	\ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Here	Hath	2.M.	1.Me	// \s <sup>x</sup>	/ \&s
ITCA Cleanup	Level (2, 3)			800(a)/1,000(b)	500	500	1.6	130	31	1,000	20	0.01	5	**	1.4	32*	1.51*	15	15
units in μg/L)																			
	MW-27S	11/28/2018	8.92	<50.0	<49.6	<99.2	<1.00	<1.00	<1.00	<1.00								<0.500	
/IW-27D	MW-27D	11/28/2016	11.48	<50.0	<50.0	<100	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00990	<1.00	<1.00	<0.0998	<0.0998	<0.0998	<0.500	<0.500
	MW-27D-3242017	3/24/2017	11.94	165	<50.0	<100	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00993	<1.00		<0.0998	<0.0998	<0.0998	<0.500	<0.500
	MW-27D-7262017	7/26/2017	13.44	384	<50.4	<101	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00988	<1.00		<0.0993	<0.0993	<0.0993	0.589	< 0.500
	FD-1-7262017	7/26/2017	13.34	266	<49.9	<99.9	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00949	<1.00		<0.0998	<0.0998	<0.0998	0.610	< 0.500
	MW-27D-1042017	10/4/2017	15.39	268	<49.8	<99.6	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00997	<1.00	32.3	<0.0985	<0.0985	<0.0985	<0.500	<0.500
	DUP-2	1/16/2018	12.04	696	<49.9	<99.8	<1.00	<1.00	<1.00	<1.00	<1.00	<0.250	<1.00		<1.00				<0.500
	MW-27D	1/16/2018	12.04	723	<49.8	<99.5	<1.00	<1.00	<1.00	<1.00									
	MW-A (dup)	5/25/2018	13.98	499	<49.8	<99.6	<1.00	<1.00	<1.00	<1.00		<0.00976							
	MW-27D	5/25/2018	13.98	663	<50.0	<100	<1.00	<1.00	<1.00	<1.00		<0.00967							
	MW-27D MW-27D	8/24/2018 11/28/2018	16.12 12.07	1,360 425	<b>441</b> <49.7	<b>608</b> <99.3	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00								0.522	
/IW-28S	MW-28S	11/28/2016	8.14	<50.0	<49.9	<99.8	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00978		<1.00	<0.100	<0.100	<0.100	<0.500	<0.500
	MW-28S-3242017	3/24/2017	6.66	<50.0	<49.9	<99.9	<1.00	<1.00	<1.00	<1.00	<1.00	<0.0100	<1.00		<0.0999			<0.500	<0.500
	MW-28S-7262017	7/26/2017	8.54	<50.0	<50.3	<101	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00925	<1.00		<0.0999			<0.500	< 0.500
	MW-28S-1042017 MW-28S	10/4/2017	9.51	<50.0	<49.3	<98.6	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00997	<1.00	<1.00	<0.0985	<0.0985	<0.0985	<0.500	<0.500
	MW-28S	1/11/2018 8/23/2018	7.91 9.03	<50.0	<49.8	<99.6	<1.00	<1.00	<1.00	<1.00					<1.00 Q				
	MW-28S	11/27/2018	9.03 8.75	<50.0	<49.8	<99.6	<1.00	<1.00	<1.00	<1.00					<1.00 Q				
						_													
1W-28D	MW-28D	11/28/2016	12.00	<50.0	<49.5	<99.1	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00995		<1.00	<0.100	<0.100	<0.100	<0.500	<0.500
	MW-28D-3242017	3/24/2017	11.93	<50.0	<49.7 <49.7	<99.4	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00989 <0.00984			<0.0993			<0.500	<0.500
	FD-2 (MW-28D Dup) MW-28D-7262017	3/24/2017 7/26/2017	11.93 13.34	<50.0 <50.0	<49.7 <49.9	<99.5 <99.8	<1.00 <1.00	<1.00 <1.00	<1.00 <1.00	<b>2.19</b> <1.00	<1.00 <1.00	<0.00984			<0.0995	<0.0995 <0.0998		<0.500 <0.500	<0.500 <0.500
	MW-28D-1262017	10/4/2017	15.44	<50.0	<49.9 <49.6	<99.1	<1.00	<1.00	<1.00	<1.00	<1.00	<0.00982		<1.00	<0.0998			0.872	<0.500
	MW-28D	1/11/2018	12.29																
	MW-28D	8/23/2018	15.65	<50.0	<49.8	<99.7	<1.00	<1.00	<1.00	<1.00					<1.00 Q				
	MW-28D	11/27/2018	11.96	<50.0	<49.6	<99.1	<1.00	<1.00	<1.00	<1.00								<0.500	
1W-29S	MW-29S	1/16/2018	9.78	113	<49.9	<99.8	<1.00	<1.00	<1.00	13.8	<1.00	<0.250	<1.00		1.67				<0.500
111-233	MW-29S	5/29/2018	9.78 10.60	130	<49.9 <49.9	<99.7	<1.00	<1.00	<1.00	8.80		<0.00990			0.576	<0.0996	<0.0996	<0.500	<0.500
	MW-29S	8/24/2018		201	106	<99.6	<1.00	<1.00	<1.00	15.20		<0.00990			1.66			1.02	
	MW-29S	11/28/2018	10.73	73.3	<50.1	<100	<1.00	<1.00	<1.00	4.10		<0.00888			<1.00			<0.500	
1W-29D	MW-29D	1/12/2018	13.42	<50.0	<50.0	<100	<1.00	<1.00	<1.00	<1.00	<1.00	<0.250	<1.00		<1.00			<0.500	
	MW-29D	5/29/2018	16.73	<50.0	<50.0	<100	<1.00	<1.00	<1.00	<1.00		<0.230			<0.0991	<0.0991	<0.0991	2.48	<0.500
	MW-DUP2	8/24/2018	17.85	<50.0			<1.00	<1.00	<1.00	<1.00		<0.00985			<1.00			0.781	
	MW-29D	8/24/2018	17.85	<50.0	<49.9	<99.8	<1.00	<1.00	<1.00	<1.00		< 0.0100			<1.00			0.780	
	MW-29D	11//28/2018		<50.0	<49.9	<99.7	<1.00	<1.00	<1.00	<1.00		<0.00948			<1.00			<0.500	

TABLE 5-1
Groundwater Sample Analyses, Active Monitoring Wells (1)
Boeing Field Chevron
Tukwila, Washington

Exploration Location	Sample Name	Sample Date	Water Depth (ft)	Gasolite	Range Organia	S Agarde Organi	Oils /	ne roue	are Liny	Aylene Aylene	s Next	y Text Bury Eth	ar unitati	Editor Hereit	and the state of t	thaters 2 Met	yrraditratere, west,	J. Lead Lead	Lordi Lead (C)
<b>MTCA Cleanup</b>	Level (2, 3)			800(a)/1,000(b)	500	500	1.6	130	31	1,000	20	0.01	5	**	1.4	32*	1.51*	15	15
(units in μg/L)																			
MW-30	MW-30	1/12/2018	13.09	719	<49.9	<99.9	53.6	1.87	<1.00	12.1	<1.00	<0.250	<1.00		<1.00			<0.500	
	MW-30	5/25/2018	16.94	311	<49.9	<99.7	55.5 D	1.41	<1.00	7.53		<0.00999			<0.0996	<0.0996	<0.0996	0.687	<0.500
	MW-30	8/23/2018	17.31	161	<49.7	115	<1.00	<1.00	<1.00	4.89		<0.0100			<1.00			0.752	
	MW-30	11/27/2018	13.06	150	<49.8	<99.6	1.90	<1.00	<1.00	5.13		<0.00988			<1.00			5.71	
AS-1	AS-1	4/17/2019	9.60	4,150	270	<101	702	224	138	141.9	<1.00	<0.0100	<1.00					<0.500	
AS-2	AS-2	4/17/2019	15.03	1,560	<50.0	<100	20.8	78.4	22.4	128.4	<1.00	<0.00994	<1.00					0.804	<0.500
	DUP	4/17/2019	15.03	1,500	<50.0	<99.9	19.6	85.3D	22.3	130.7D	<1.00	<0.00989	<1.00					<0.500	<0.500

#### Notes:

- (1) Refer to site diagram(s) for sampling locations. Refer to laboratory reports for analytical methods.
- (2) Method A groundwater cleanup levels used as surface water cleanup levels per WAC 173-340-730(3)(b)(iii)(C).
- (3) Gasoline Analyses by Method NWTPH-Gx, Diesel and Heavy Oil by NWTPH-Dx/Dx Ext., Lead by EPA 200.8, EDB by EPA 8011, PAH by 8270 (SIM), VOCs by 8260C.
- a Benzene present in groundwater/site.
- Benzene not present in groundwater/site
- \* Method B Cleanup Level.
- \* Not researched, no available data.
- Sample not analyzed.
- nd Not Detected (Data gathered from historical reports, lab analysis reporting limits not available).
- NS Sample not collected (Undefined datum from Terracon's 2015 report).
- NA Not Applicable (Undefined datum from Terracon's 2015 report).
- NR\*\* Water Level not reported, no available data.
- Dup Duplicate Sample for QA/QC.
- D The Sample was diluted. Detection Limits were raised nad surrogate recoveries my not be meaningful.
- Value above quantitation range.
- J Analyte detected below reporting limit.
- Q Analyte with an initial calibration that does not meet established acceptance criteria.
- X The sample chromatographic pattern does not resemble the fuel standard used for quantification.
- < 50.0 Sample concentration below laboratory reporting limit.
- 27 Bold number(s) indicates contaminant detected, below cleanup level.
- 160 Bold number(s) and yellow shading indicates concentration exceeds MTCA Cleanup Level.
- 250 Reporting limits exceeds cleanup level.
- Peach shading indicates most recent sampling event data.
- **FLAG** Sample result flagged, see validation report for further information.