APPENDIX C

FIELD FORMS, GROUNDWATER MONITORING



MONITORING WELL/PIEZOMETER NUMBER- KMW-02R

		MONI	OKING WE	LLIFIL	ZONL	LIVITO	<u></u>			
Project Na	ame: Ke	elly-Moore						3/21/2022		
								11 11	10 =	
Project No	umber: PS	S2120454	0.01		Wea	ather Co	nditions: <u> </u>	ainy, mid 40	10 1	
Location:	Seattle, V	VA			(*******					
Sampler:			idno		Win	d Speed	/Direction: _	(inside)		
•	(, , , ,						•		
				WELL		MOITAN				
Casing Di	ameter (i	n):	2"			Groundw	ater Elevatio	on (ft): <u>14,57</u>		
Top of Ca			21.63'			Janth of	Wall Casing	/ft\·	Α	
Initial Dep			7,42 7	<u> </u>	-	Actual Pu	irge Volume	(gal): 2 gallon	<u> </u>	
Wellhead	Conditio	n: <u> </u>	X							
		U	PU	RGING	MEASU	JREME	NTS ·		_	
		pН						,		
WL (ft		(std.	SC	Temp.	ORP	DO	Turbidity	Notes		
btoc)	Time	units)	(ms/cm)	(°C)	(mv)	(mg/L)	(NTUs)	Notes	4	
7.07	1243	6.35	0,199	15.0	133.4	0.33	13.9			
7.07	12:48	6.15	0.202	15.0	138.0	0.19	10.5		4	
7.08	12:53	6.15	0,194	14.9	138,2	0.17	9.02			
7.07	12:58	6.15	0.189	14.9	139.5	0.18	6.62			
7.07	13:03	6.14	0.185	14.9	141.5	0.18	4.81			
7.07	13:08	6,10	0.183	14.9	1429	0.15	10.3			
	13:13	6.10	0.182	14.9	143.6	0.16	10.3			
7:07	13:18	6.05	0.180	14.8	145.G		7.80			
7:07	13:23	6.05	0.180	14.8	144.7		6.50			
7.01	12/40	0.00	0-100	7	7 1 10 1	0,10			1	
			<u> </u>						1	
				1						
									1	
									J	
ORP/DO N	el Ind. Mo leter Mod	odel & No. lel & No.:	: Solinst Mode	Plus						
Purge Equ	ipment U	sed:	Peristaltic Pu		dedicate	d tubing				
Sampling	Equipme	nt Used:	YSI Pro Dss		_			ime: 13:35		
Purge Star			13:36	12:3	Z _		Collection T			
Purge Cor	npletion 7	Γime:	13:25			Purging	Method:	<u>Low-Flow</u> Used: <u>Lab Provided</u>		
Average P Analytical	urge Kate	e (mL/min): <u>160</u>				l Analyses:			
,			idya iiio.				,			
Other Field	d Observa	ations:								
	<u></u> ∧\\$	(WSD	sample							
			•							



MONITORING WELL/PIEZOMETER NUMBER- KMW-03R

Design Al	V-	lly Moore	·							
Project Na	arne: <u>Ke</u>	lly-Moore					Date: 3	21/2022		
Declare No	bom DC	204004540	.04		Was	ther Cor	nditions:			
1. The second se	umber: PS	100 x 100 x	0.01		****	attier Coi	iditions. <u>v</u>	/ / /		
	Seattle, W		ebing		Wind Speed/Direction: (MS)de)					
Sampler:	Jace	ma ro	cons		AAIII	u specu	Direction	Charles		
				WELL	INFOR	MOITAN	l			
Casing Di	iameter (ir	1):	2"		(Groundw	ater Elevatio	on (ft): <u>14,12'</u> (ft):		
	sing Elev		21.54'							
	oth to Wat		7,42		,	Actual Pu	irge volume	(gal): 7-5		
weiinead	Condition	1: <u>000</u>	<u>, </u>							
		O	PU	RGING	MEAS	JREME	NTS			
		рН								
WL (ft		(std.	SC	Temp.	ORP	DO	Turbidity	Notes		
btoc)	Time	units)	(ms/cm)	(°C)	(mv)	(mg/L)	(NTUs)	Notes		
7.48	10:48	7.64	6620.79	16,5	165.9	0,37	3.42			
7.54	10:53	7.41	075	16.6	80.8	0.31	2.66			
7.55	10:58	7.31	0.71	16.6	44.2	0.27	2.20			
7.55	10:03	7.27	0.69	16.7	32.3	0.30	2.75			
7.53	10:07	7.24	0.67	16.6	21.8	0.26	2.43			
7.54	10:12	7,23	0.65	16,7	14.1	0.25	2,79			
7.55	11:17	7.21	0,65	16,7	11.3	0.23	1.73			
7.54	11:22	7.21	6.63	0167	7.2	0.20	1.65			
7.54	11:27	7.21	0.61	16.7	4.5	0'18	1.54			
7.55	11:32	7.22	0.60	16.7	24	0,20	2.38			
					, 4 00.					
	Å.									
Sample II	No: KM	IW_03R_				12 (2)				
Water Lev	rel Ind. Mo	del & No.	: Solinst Mode	el 101						
ORP/DO M	Neter Mod	el & No.:	YSI-Pro Dss	- binz						
Purge Equ	uipment U	sed:	Peristaltic Pu		dedicate	ed tubing				
Sampling	Equipme	nt Used:	YSI Pro Dss					11100		
Purge Sta			10:43				Collection			
Purge Co	mpletion 1		11232				Method:	Low-Flow		
Average F							Containers al Analyses	Used: Lab Provided		
Analytical	Lab: Frie	eaman & B	ruya inc.		`	CHemic	ai Alidiyses	. 366 000		
Other Fiel	d Observa	ations:								



MONITORING WELL/PIEZOMETER NUMBER- KMW-04

		and the second	ORING WE	LL/FILA	LOME				
Project Na	ame: <u>Ke</u>	lly-Moore					Date: _ 3/	22/22	
						41 O	Date:	OF doudy	
Project Nu			.01		Wea	tner Cor	iditions: _ <u>_</u>	07,00009	
Location:									
Sampler:	Jackh	yn Pez	king		Win	d Speed	Direction: _		
		•		WELL	INFORM	ΙΔΤΙΩΝ	ı	36.	
				WELL !				13.78	
Casing Di			2"		G	roundw	ater Elevati Well Casing	on (ft): 13,78'	-
Top of Ca	sing Elev	ation (ft):				eptn or	rae Volume	(gal): 2.5 gal	
Initial Dep Wellhead			H.72			ictual r u	nge volume	(3)	
Weillieau	Condition	٠					NTO.		
			PU	RGING	MEASL	JREME	NIS		1
		рΗ		₹ ,	√	/	- 1114		
WL (ft	NO. 8520	(std.	SC	Temp.	ORP	DO	Turbidity	Notes	l
btoc)	Time	units)	(ms/cm)	(°C)	(mv)	(mg/L)	(NTUs)		ł
4,72	11:13	6.37	0.263	12.7	148.4	0.22	59.7	possible 0.01 NPL	2 2 2 2 2 2 4
4.72	81:11	6.34	0,269	12.6	144.1	0.22	87.8	timed pump or bottle	(Contractor Cardinad)
4,72	11:23	6.33	0.275	12.7	138.4	0,29			1
4.72	11:28	6.36	0.277	12.5	133.3	0.51	23.8		
10.12	11:33	6.30	0,277	12.6	134.5	0.63		-570P-	
pump k			ted for new	one to	be deliv		turbed fubs	ywhile dignosing iso	re
4.72	12:46	6,57	0.262	131	170.8	1.15	36.7	0	
	12:51	6.23	0.261	12.8	167.3	1.01	24.4		15.
4.72	12:55	6.19	0.263	12.8	162.6	0.98	28.1]
4.72		6.20	0.271	12.8	156.8	1.03	26.5		1
4.72	13:00		6.273	12.8	154,5	1.07	22,7		1
4.72	13:04	G.19	0.275	12.7	153.9	- 17	22.5		1
4.72	13:07	6.18		12.7	152.4	1.15	19.5	1	1
4.72	13:11	6,17	0.278	0.000.000.0000			15.0	Subbles on weter	1 _
4.72	13:15	6.152	0.279	12.7	1527	1.48	10.0	Some on week	
0	No. KA	Á\A/_O./_						See bac	E side for [contid
Sample ID	elind Ma	odel & No.	: Solinst Mod	el 101					
ORP/DO	Meter Mod	lel & No.:	YSI-Pro Ds	s pwg					
Purge Equ			Peristaltic P	ump with	dedicate	d tubing			
Sampling	Equipme	nt Used:	YSI Pro Dss					10	
Purge Sta			11:07/	12:43	3	Sample	Collection	Time: 1335	
Purge Col	mpletion '	Time:				Purging	Method:	Low-Flow	
Average F	Purge Rat	e (mL/min): 230			Sample	Containers	Used: Lab Provided	
Analytical	Lab: Frie	edman & B				Chemic	al Analyses	: See COC	
Other Fiel		O1 LNA	DI DO OWN	or D	with				
- A hos	815W C	- LUA	-0300	~ 7					

KMW-04 [continued] 3/22/22

WL	Time							
4.72	13:18	6.10	0.281	12.6	152.9	1.63	15.1	
4,72	13:22	6,06	0.282	12.6	154.6	2.60	11.7	
4.72	13.26	6.07	0.282	12,7	155.3	2.05	12.6	
4,72	13:29	6.07	0.282	12.7	155.8	2.19	[[,0	



		MON	ORING WI	ELLIPIE	ZUME	EK NU	MBEK- KI	<u> </u>			
Project N	ame: <u>K</u>	elly-Moore						3/2-/			
,		00400454	0.04		\A/ -	-tha- 0-	Date:	3/22/22 50°F, rahru			
-		<u>S2120454</u>	0.01		AAG	atner Co	naitions:	30°P, Jany			
	Seattle, V	yn Po	+ 400		- Wind Speed/Direction: Smale SE						
ampier.	Jack	416 40	LDN-3		Wind Speed/Direction: 3mph SE						
				WELL	INFORI	MATION	J				
op of Ca nitial Dep	iameter (i asing Eleventh to Wa Condition	ration (ft): ter (ft):	5.831		,	Actual Pu	irge Volum	on (ft): 13,921 g (ft): e (gal):	m		
			PU	RGING	MEAS	JREME	NTS				
WL (ft btoc)	Time	✓ pH (std. units)	SC (ms/cm)	Temp.	ORP (mv)	DO (mg/L)	Turbidity (NTUs)	Notes			
5.83	გ:5 3	6.45	0.492	13.9	138.5	0.38	36.9				
5.81	8:58	6.47	0,474	13.4	95.7	0.22		*pulled horny up 1#			
5,82	9:03	6,47	0.468	13:3	77.0			• • • •	- 7		
5.82	9:08	6.48	0,469	13.3	66.3	0.19	30.7				
₹5,82	9:13	6.48	0.469	13.4	58.3	0.17	32.2				
5,81	9:18	6.49	0,470	13.3	54.8	0.16	29,4				
ater Lev RP/DO N urge Equ	No.: <u>KN</u> vel Ind. Mo Meter Moo uipment U Equipme	odel & No lel & No.: Jsed:	: Solinst Mod YSI-Pro Dse Peristaltic P YSI Pro Dss	ump with							
urge Co verage F	rt Time: mpletion ^o urge Rat Lab: <u>Fri</u> e	Time: e (mL/min edman & B	08:47 09:18): 90 Iruya Inc.			Purging Sample (Collection T Method: Containers I Analyses:	Low-Flow Used: Lab Provided			
ther Fiel	d Observ	ations:	rated 1	VOA	disca	rded	sample y	Sand bottle, C	nlu		
	5	VOAS	total	for to	his we	ey	,		8		
dated 3/14	V22		•					Page _ 1_ of	1		



Page _1_ of _1_

GROUNDWATER SAMPLING LOG Low Flow Sampling

ocation:	umber: P: Seattle, V	VA			Weather Conditions:					
op of Ca itial De	iameter (insing Eleventh to Wate Condition	ation (ft):	2" 21.63' 7.09	WELL		Depth of	· .	(ft): <u>14,38'</u> i): al): <u>2,5</u>		
1	A	-11	PU	RGING	MEAS	UREME	NTS			
WL (ft btoc)	Time	pH (std. units)	SC (ms/cm)	Temp.	ORP (mv)	DO (mg/L)	Turbidity (NTUs)	Nata		
1.12	15:46	6.38	0.296	15.8	139.4	0.41	38.4	Notes		
7.12	15:51 15:56	6.23	0.283	15.8	131.8	0.41	43.2			
1.12	16:01	6.23	0.275	15.8	129.3	0.13	29.8			
1.12	16:06	6.23	0.264	15.9	1264		22.7			
:12	16:11	6.18	0.282	16,1	130,5		21.5			
1.12	16:16	6,14	0.298	16.0	132.9	0.16	23,2 19.5			
7.12	16:20	6.13	0.304	16.0	133.5		19.4			
7.12	16:24		0.315	16.0	134.9	0.15	16.9			
7.13	16:27		0,323	16.0	136.3		12.6			
7.13	16:33	6.08	0.327	16.0	137,9	0.13	9.58			
ter Lev P/DO M ge Equ npling ge Star ge Cor erage P	leter Modelipment Use Equipment Time: Time:	del & No. el & No.: sed: nt Used: ime: (mL/min)	: Solinst Mode YSI-Pro Dss Peristaltic Pt YSI Pro Dss 15:43 : 230 ruya Inc.	wmp with		Sample (Purging Sample (Collection Time Method: Containers Use Il Analyses: Se	Low-Flow		

Updated 3/14/22



MONITORING WELL/PIEZOMETER NUMBER- KMW-08

Project Na	ame: <u>K</u> e	elly-Moore						1 1	
Project No	umber: P	S21204540	0.01		Wes	ther Co	Date: <u>3</u>	121/2022	
Location:					*****		<u></u>		
Sampler:			n~^		\A/i	d Casad	/Direction:		
Jampier.	Sacra	n foce	V-3		win	a Speea	/Direction: _		
				WELL	INFORM				
Casing Di Top of Ca Initial Dep	sing Elev	ation (ft): er (ft):	7,24	_		ianth of	WAII (:aeina	on (ft): <u>14,54</u> (ft): (gal): <u>2gallens</u>	
Wellhead	Conditio	n: <u>9</u>		DOING					
			PU	RGING	MEASU	JREME	NTS		
WL (ft btoc)	Time	pH (std. units)	SC (ms/cm)	Temp.	ORP (mv)	DO (mg/L)	Turbidity (NTUs)	Notes	
7,30	14:14	6.17	0,734	15.8	116.9	0.15	246		
7:30	14:19	6,13					163		
			2.00	15.3	117.6	0.12			
7.30	14:24	6.12	0.621	15,4	117.3	0.15	78.		
7,30	14:29	6.10	0.583	15.6	118.3	0,20	50.5		
7.30	14:34	6.15	0.86	15,5	109,3		74.1		
7,30	14:39		0.68	15.5	105.2		124		
7.30	14:44	6.08	0.572	15.5	110.7	0.21	45,2		
7.30	14:49	6.07	0.68	15.5	109,7	0.2	45.0		
							, 0	*	
					,				
Sample ID Water Lev	el Ind. Mo	odel & No.	: Solinst Mod YSI-Pro Ds e			90	v		
Purge Equ			Peristaltic P		dedicate	d tubina			
Sampling			YSI Pro Dss			- 1001119			
Purge Sta			1404	9		Sample	Collection ⁻	Time: 14:55	5
Purge Co		Time:					Method:	Low-Flow	
Average F): 200					Used: Lab Provided	
Analytical	Lab: Frie	edman & B	ruya Inc.				al Analyses		
Other Fiel	d Observ	ations:				9			



Page _1_ of _1__

GROUNDWATER SAMPLING LOG Low Flow Sampling

MONITORING WELL/PIEZOMETER NUMBER- KMW-09

	lame: <u>K</u> e	elly-Moore						100 100			
					Date: <u>3/22 /22</u>						
roject N	lumber: PS	S2120454	0.01		Wea	ther Cor	nditions: <u></u>	sindy			
	: Seattle, V				. /						
ampler:	Jack	un Pe	rkins		Wind Speed/Direction:						
		1				p					
				WELL		MOITAN					
asing D	iameter (iı	n):	2"		0	Sroundwa	ater Elevation	on (ft): <u>13 • 86 °</u>			
op of Ca	asing Elev	ation (ft):	18.14'	*		Sandh of I	Mall Cooling	/ 4 4\-			
itial De	pth to Wat	er (ft):	4,18		A	Actual Pu	rge Volume	(gal): 1.5 gallons			
ellhead	Condition	n:						U			
			PU	RGING	MEASU	JREME	NTS				
		pH ✓	1	1 /							
WL (ft		(std.	sc	Temp.	ORP	DO	Turbidity				
btoc)	Time	units)	(ms/cm)	(°C)	(mv)	(mg/L)	(NTUs)	Notes			
4.18	14:37	6.36	0.392	14.7	156.5		90.2				
7.10	14:43	4134	0.012	1-1/	1365	0.22	7012				
1110		C 20		144.0		G to	100				
418	14:48	6,39	0.389	14.8			62.9				
4.18	14:53	6.41	0.383	14.7			63.8				
4.18	14:57	6.42	0.379		89,4	0.11	68.3				
4.18	15:01	6.45	0.375	14,7	73.8	0,09	<i>53.</i> 8				
4.18	15:04	6.45	0.373	14,7	67.1	0.09	48.3				
4.18	15:07		0.369	14.7		0.12	45.2				
4,18	15:10	6,47	0.368	14.6	55.2	0.09	40,2				
100	10 10	• • • • • • • • • • • • • • • • • • • •	07000	7 110	00	•	101-				
								4			
ater Lev RP/DO I urge Equ	O No.: <u>KM</u> vel Ind. Mo Meter Mod uipment U Equipme	odel & No. el & No.: sed:	: Solinst Mod YSI-Pro Oss Peristaltic P YSI Pro Dss	ump with	dedicate	d tubing					
						_		IEIOE			
urge Sta	rt Time: mpletion 1	Time:	14:33				Collection				
verane E	mpletion i Purge Rate	ime: a/mi/mi-): (70				Method:	Low-Flow			
nalytical	Lab: Frie	niniumin) s dman & p	ruva Inc					Used: Lab Provided			
			ii uya IIIU.			Cnemica	ai Analyses	: See COC			
ther Fiel	ld Observa	ations:									
								-			

Updated 3/14/22



Page _1_ of _1__

GROUNDWATER SAMPLING LOG Low Flow Sampling

MONITORING WELL/PIEZOMETER NUMBER- KMW-10

roject N	iame: <u>K</u>	elly-Moore					Date: 3/1	22/22			
roject N	lumber: <u>P</u>	S2120454	0.01		Date: 3/22/22 Weather Conditions:						
	: Seattle, V										
mpler:	Jacke	yn Per	king		Wir	id Speed	/Direction:				
				WELL	INFORI	MATION	J				
asina D	iameter (i	n):	2"					(ft): 13,51 ¹			
p of Ca	asing Elev	ration (ft):	20.39'		ì	Depth of	Well Casing (f	t): 3-get 2.5 g			
itiai De ellhead	oth to Wat Condition	ter (ft): n: ——	6.811		•	Actual Pu	ırge Volume (ç	jai): 3-321-2-8-9			
				RGING	MEASU	JREME	NTS				
		pH √	/			~	1	7			
WL (ft btoc)	Time	(std. units)	SC (ms/cm)	Temp.	ORP (mv)	DO (mg/L)	Turbidity (NTUs)	Notes			
			(morem)	(0,	(1117)	(g/_/	(11103)	110.00			
18.6	16:28	6.50	0.539	14,5	60.0	0,14	57.5				
6,81	16:32	6,48	0.530	14.4	46,4	0.13	52.2				
0.82	16:36	6.57	0,528	14.5	33.2	0.13	50,5				
.82	16:40		0.530	14,5	22.8		46.1				
6.82	16; 44	45	0,535	14.6	14.8	0.10	43.9				
6.82 6.82	16:52	6,57	0,535 0,534	14.5	7.7	0.09	38.0 28.4				
1.02	16.72	WIST	0,5 27	17.10	7.0	0.01	2017				
								x			
								2 2 2			
ter Lev P/DO N rge Equ	No.: <u>KM</u> el Ind. Mo leter Mod lipment Us Equipmer	del & No. el & No.: sed:	Solinst Mode YSI-Pro Des Peristaltic Pro YSI Pro Dss	ump with	dedicated	1 tubing					
	rt Time:		16:23				Collection Tim				
	npletion T urge Rate		: 200				Method:				
alytical	Lab: Frie	dman & Br	uya Inc.				Jontainers Us I Analyses: S	ed: <u>Lab Provided</u> ee COC			
er Field	d Observa WJ\≀W	tions:		KWM	- Dv						
	U		U	-		•					

GROUNDWATER SAMPLING LOG Low Flow Sampling

MONITORING WELL/PIEZOMETER NUMBER- KMW-02R

		MONIT	ORING WE	LL/PIE					
Project Na	ame: <u>K</u> e	elly-Moore					Date:	8/19/2022 inside	
					Wor	ther Cor	nditions:	0 11-1	
Project No			.01		****	111101 001			
Location:	Seattle, V	/A			Win	d Speed	Direction:	inside	
Sampler:	306	or Kill			44111	u opecu.			
				WELL	INFORM				
Casing Di	ameter (i	n):	2*	50 000	G	roundw	ater Elevati	on (ft):	
Top of Ca	sina Elev	ation (ft):	21.63'			epth of	Well Casing	(gal): 5 gal	
Initial Dep	oth to Wat	:er (ft):	9.30		P	Actual Pu	irge voluine	(gai)	
Wellhead	Condition	1: <u>9</u> 1	ood						
		. 0	PU	RGING	MEASL	JREME	NTS	,	
		pH✓	~	-			T ladida.e		
WL (ft	1	(std.	SC	Temp.	ORP (mv)	DO (mg/L)	Turbidity (NTUs)	Notes	
btoc)	Time	units)	(ms/cm)	(°C)	159.4	1.54	60.09	Colorless, seds	
9.39	9:43	5.59	214.9	14.6			56.04	Constitution and	
9.39	9:47	5.51	211.1	14.8	166.5	1.42			
9.39	9:50	5.60	201.8	15.1	176,3		13.67		
9.40	9:53	5.64	206.4	15.1	187.7				
9.40	9:56	5.66	208.6	15.1	193.5	200	30.92		
9,40	10:01	5.70	209.4	15.0	200.4		38.90		
9.40	10:04	5.71	209.4	14.9	203.7		13.55		
9.43	10:07	5.71	208.9	15.0	205.6		11,30		
9.43	10:11	5.72	209.7	15.0	202.9	1.21	15,67		
								<u> </u>	
3									
			1000						
Sample II Water Lev	vel Ind. M	odel & No	3819202 :: Solinst Mod YSI-Pro Dss	el 101	22				
Purge Eq	uipment l	Jsed:	Peristaltic P		dedicate	d tubing			
Sampling	Equipme	nt Used:	YSI Pro Dss	<u> </u>					
Purge Sta	rt Time:		9:40			Sample	Collection '		
Purge Co	mpletion	Time:					Method:	Low-Flow	
Average I	Purge Rat	e (mL/min): 400					Used: <u>Lab Provided</u> : See COC	
Analytica				_	_	OHEIIIC	ai Aiidiyəts	. 566 000	
Other Fiel	d Observ	ations: _C	ollect M	SIMED					
<u></u>									

12

Page _1_ of _1__

GROUNDWATER SAMPLING LOG Low Flow Sampling

03R MONITORING WELL/PIEZOMETER NUMBER- KMW-9/1

Project Number: PS21204540.01 Weather Conditions:	0 20							
FIGHER MUMBER PSZIZUAGANIII TVEGUIGI GOIIGIGIGI —	Weather Conditions:							
Location: Seattle, WA								
Sampler: A. Perthy Wind Speed/Direction:	<u>de</u>							
Cumpier. B. (800 V)								
WELL INFORMATION								
Casing Diameter (in): 2* Groundwater Elevation (ft): Depth of Well Casing (ft): Depth of Well Casing (ft): Actual Purge Volume (gal): 3 Wellhead Condition:	gal							
PURGING MEASUREMENTS								
WL (ft std. SC Temp. ORP DO Turbidity								
btoc) Time units) (ms/cm) (°C) (mv) (mg/L) (NTUs) Note	inchal							
	, diesel offer							
9.73 14.30 6.93 35\$.5 17.5 -30.0 1.35 30.30 oder g	ne_							
9.74 14:34 6.99 340.1 17.5 -46.5 1.26 24.52								
9.74 14:38 7.00 342.9 17.5 -55.6 1.21 17.85								
9.74 14:41 7-02 335.4 17.5 -60.4 1.17 10.26	5 - N							
9.74 14:44 7.03 337.4 17.5 -64.2 1.13 8:50								
								
<u> </u>								
632 Sample ID No.: KMW-87- 08192022 Water Level Ind. Model & No.: Solinst Model 184 してこ								
DRP/DO Meter Model & No.: YSI-Pro Dss								
Purge Equipment Used: Peristaltic Pump with dedicated tubing Sampling Equipment Used: YSI Pro Dss	·							
17 00	· · · · · · · · · · · · · · · · · · ·							
	4:30							
verage Purge Rate (mL/min): 400 Purging Method: Low-F Sample Containers Used: Lab F	Flow							
nalytical Lab: Friedman & Bruya Inc. Chemical Analyses: See COC	Provided							
ther Field Observations:								

GROUNDWATER SAMPLING LOG Low Flow Sampling

MONITORING WELL/PIEZOMETER NUMBER- KMW-04

	_						Date: 0	8/17/2022	
		S2120454	10.01		We	ather Co		Sirny 80°F	
	: Seattle,							0	
Sampler	- 2-P	erting			Wir	nd Speed	d/Direction:		
				WELL	INFOR	MATIO	N		
op of C	iameter (i asing Elev pth to Wa	vation (ft):			1	Depth of	Well Casing		
Vellhead	Conditio	n: Roich		ive bizla	simb arm	Actual	urge Volum Should rea	e (gai):	
		()'''//		JRGING					
-		pH ✓	1	<u></u>		·	1	1	7
WL (ft btoc)	Time	(std. units)	SC (ms/cm)	Temp. (°C)	ORP (mv)	DO (mg/L)	Turbidity (NTUs)	Notes	
6.63	12:55	6.28	207.6	17.4	-23.3	1.30	36.75	grayish sediment	Jarganic ma
6.631	12:59	5.75	155.3	17.7	21.3	1.32	23.54		
3.631	13:02	5.70	155.1	17.6	37.9	1:24	12.66		
6.63	13:06	5.69	157.7	17.6	45.3	1.21	11.96	N 4997	
6.637	13:10	5.77	167.2	17.6	37.8	1.18	8.06]
6.43	13:14	5.73	163,3	17.6	43.6	1.20	6.895	47	
6,63	13-18	5.77	167.9	17.6	42.9	1.17	8.26] .
									1
								-	7
							i		1
									1
									1
	-			·					1
			.1					-	1
ater Leve RP/DO M	Ind. Mo	el & No.:	72022 Solinst Mode			tubing			1
	quipmen		YSI Pro Dss				_		
rge Start			12:50			Sample C	Collection T	ime: <u>13:30</u>	
ae Com	pletion Ti	me:			P	urging I	Method:	Low-Flow	
rage Pu	rge Rate	(mL/min):	<u> 450</u>					Jsed: Lab Provided	
ilytical L	.ab: Fried	lman & Bru	Jya Inc.		_ 0	nemical	Analyses:	See COC	
Ciald	Observat	ions: <u> </u>	xiter in	2 we	Uhead	<u></u>	by to	replace p	lety
er Fleiu									(1

Page _1_ of _1__

GROUNDWATER SAMPLING LOG Low Flow Sampling

miert &	lumber 5	00100454	0.04				Date: S	1/16/22			
	: <u>Seattle, \</u>	S2120454	0.01		Date: 8/16/22 Weather Conditions: nmc						
ampler	D Per	king.									
p.	<u> </u>	<u> </u>		-	WII	na Speed	//Direction:	sinny, 65°s			
				WELL		MATIO		O			
asing D	iameter (i	n):	2"		1	Groundw	ater Elevati	on (ft):			
op ot Ca	asing Eleve oth to Wa	ration (ft):			1	Depth of	Well Casino	(ft):			
elihead	Conditio	ter (π): n: <u> </u>	7.71	-	4	Actual Pu	rge Volume	(gal): 5 gal			
	001141110	<u>- 900</u>	<u>. </u>		-	-W	-				
			PU	RGING	MEAS	UREME	NTS				
WL (ft		pH √ (std.				Wind Market					
btoc)	Time	units)	SC (ms/cm)	Temp.	ORP (mv)	DO (ma/l.)	Turbidity				
1.84	8:18	6.12	517	17.5	-44.8	(mg/L)	(NTUs)	Notes			
.84	8:22	6.16	558	18.2	-58.3	1.45	70.53	darkgrey/sed			
.84	8:26	G.05	580	18.3	-54.9	1.17	80.63				
. 84	8.29	6,06	606		-56,1		99.56	bubbles			
.84	8-32	607	611	18.4	-57.5	1.13	46,40				
.84	8:35	6.09	GII	18.4	-59.1	1.07	39.08				
		<u> </u>		(0.7	- 5-1.1	1.07	44.62	end proge			
					-						
				_		_					
		62					-,				
											
	No : IO	W-06- Ø8/									
ter Lev	el Ind. Mo	del & No.:	Solinst Mode	1701	22						
P/DO M	eter Mode	el & No.:	YSI-Pro Dss	<u> </u>							
ge Equ	ipment Us	sed:	Peristaltic Pu		dedicated	tubina					
	quipmen	t Used:	YSI Pro Dss			1118					
je Star	t Time:		8=18			Sample C	Collection T	B-215			
e Con	pletion T	ime:			<u> </u>	Purging I	Method:	ime: 8:45 Low-Flow			
age P	urge Rate	(mL/min):	350		_	Sample C	ontainers l	Jsed: Lab Provided			
			uya Înc.		'	Chemical	Analyses:	See COC			
		0.20		10			151				
Field	Observa	tions: 🗸	placed.	tubin	•						

Page _1_ of _1__

GROUNDWATER SAMPLING LOG Low Flow Sampling

07

MONITORING WELL/PIEZOMETER NUMBER- KMW-6320

Project	Name	: <u>Ke</u>	ily-Moore					Date: O	3-19-2022			
Project Location			21204540 /A	.01				nditions:	•			
Sample						Wind Speed/Direction:						
					WELL	INFORM						
Initial	Casing Depth 1	g Eleva to Wate	ation (ft);	9.36 d	.63'		Depth of Notual Pu	Well Casing irge Volumo	on (ft): g (ft): e (gal):			
			J	PU	RGING	MEASL	JREME	NTS		l		
WL			pH / (std. units)	SC (ms/cm)	Temp.	ORP (mv)	DO (mg/L)	Turbidity (NTUs)	Notes			
btoo		ime):28	6.07	279,5	16.0	72.0	1.40	24.13	colorles, no seds			
9.4		:31	6.04	276.3	16.1	72.6	_	26.58				
9.4		1.36	6.02	272.0	16.1	7-3.9		1677				
9.4		1:41	5.98	272.6	16.2	76.5	1.20	11.23				
	9.48 10:45 5.95 276,1 16.2 77.4 1.18 12.54											
9.4	8 11	:49	5.93	278.1	16.2	76.9	1.17	11.40				
	_							-		· ·		
						<u> </u>						
-	-							3				
—	_											
	_ _											
	T .									* *		
							9					
Water ORP/I Purge	Level I OO Met Equip	Ind. Mo er Mod ment U	odel & No lel & No.: Jsed:	Peristaltic P	el 1 04-, \ s ump with		d tubing					
		- 50.07	nt Used:	YSI Pro Dss		_	•		Time: 12:00			
Purge	ge Pur	letion a	e (mL/min): <u>460</u> Bruya Inc.	. 28		Purging Sample		Low-Flow Used: Lab Provided : See COC			
Other	Field C	bserv	ations:							 _		
					·			<u> </u>				

Updated 8/15/22

GROUNDWATER SAMPLING LOG Low Flow Sampling

MONITORING WELL/PIEZOMETER NUMBER- KMW-08

Well Information: wind Speed/Direction: well information asing Diameter (in): port Casing Elevation (ft): 21.65 port Casing Elevation (ft): 9.56 relihead Condition: Condition: PURGING MEASUREMENTS WL (ft	Wind Speed/Direction:	roject N	ame: <u>re</u>	elly-Moore			· · · · · · · · · · · · · · · · · · ·		Date: _8	19/2022		
WELL INFORMATION WELL INFORMATION WELL INFORMATION Groundwater Elevation (ft): Depth of Well Casing (ft): Actual Purge Volume (gal): J. Sg. PURGING MEASUREMENTS PURGING MEASUREMENTS WL (ft (std. SC (ms/cm) (°C) (mv) (mg/L) (NTUs) (Wind Speed/Direction:	roject N	umber: PS	321204540	.01		Wea	ather Cor	iditions:			
### WELL INFORMATION ### asing Diameter (in): ### 21.65 ### pop of Casing Elevation (ft): ### 21.65 ### pop of Casing Elevation (ft): ### PURGING MEASUREMENTS ### PURG	WELL INFORMATION	ocation:	Seattle, W	/A			- was a small Direction: Lassible					
Groundwater Elevation (ft): 21.65	Section Sect	ampler:	J. Per	kmo			Wind Speed/Direction:					
Depth of Well Casing (ff): 21.65 Actual Purge Volume (gal): 3.5 gas Second Purge Volume (gas): 3.5 gas Second Purge Volume (gas): 3.5 gas Second Purge Volume (gas): 3.5 gas Second Purge	Depth of Well Casing (ff): Actual Purge Volume (gal): 3.5 gas					WELL	INFOR	OITAN	I			
po of Casing Elevation (ft): 21.65 Retital Depth to Water (ft): 9.56 PURGING MEASUREMENTS PURGING MEASUREMENTS WL (ft	Of Casing Elevation (ft): 21.65 Actual Purge Volume (gal): 3.5 gas 3	ooina D	iomotor (ir	.).	2"		(Groundw	ater Elevati	on (ft):		
PURGING MEASUREMENTS	PURGING MEASUREMENTS Purple Sc Temp. ORP CC (my) (mg/L) (NTUs) Notes	op of Ca itial De	asing Elevented to the second	ation (ft): er (ft):	9,55	<u> </u>	Į.	Depth of Natural Pu	Well Casing orge Volume	g (ft): e (gal): <u>3.5 ga</u>		
WL (ft toc) Time (std. SC Temp. ORP (my) (mg/L)	Column C	reimead	·	i. <u>(500</u>		JRGING	MEAS	JREME	NTS			
WL (ft toc) Time (std. SC Temp. ORP (my) (mg/L)	Column C		Γ .	nH V	<u> </u>	1 .2						
9.66	13:09 5.8 235.3 16.5 124.0 1.32 27.35 Colorlin, 28.44 16.6 13:12 5.83 240.2 16.5 122.6 1.27 26.47 16.6 13:19 5.82 242.7 16.5 121.0 1.22 27.29 16.6 13:19 5.82 244.6 16.5 119.2 1.20 26.93 26.93 26.93 26.93 26.93 26.93 26.93 26.93 26.93 26.93 26.93 26.93 26.93 26.93 26.93 26.93 26.93	WL (ft	Time	(std.					(NTUs)			
9.66 13:12 5.83 240.2 16.5 122.6 1.27 26.47 9.66 13:15 5.82 242.7 16.5 121.0 1.22 27.29 9.66 13:19 5.82 244.6 16.5 1192 1.20 26.93 26.93 26.93 26.93 26.93 26.93 26.93 26.93 26.93 26.93 26.93 26.93 26.93 26.93 26.93 26.93 26.93 26.93 26.93	13:17 5.87 240.2 16.5 122.6 1.27 26.47			5.81	235.3	16.5	124.0			colorles, seda		
131 5 5 82 242 7 16 5 121 0 122 27 27 27 27 27 27 2	13: 5 5.82 242.7 16.5 121.0 1.22 27.29											
Sample ID No.: KMW-08- 08 92622 Vater Level Ind. Model & No.: Solinst Model T64_) 92 Vater Level Ind. Model & No.: Vater Level In	mple ID No.: KMW-08- 08 92022 ter Level Ind. Model & No.: Solinst Model T64_) 22 P/DO Meter Model & No.: Solinst Model T64_) 22 ge Equipment Used: Peristaltic Pump with dedicated tubing mpling Equipment Used: YSI Pro Dss ge Start Time: YSI Pro Dss Ge Start Tim					16.5	121.0					
ample ID No.: KMW-08- 08 92022 Vater Level Ind. Model & No.: Solinst Model T04. 122 RP/DO Meter Model & No.: YSI-Pro Dss urge Equipment Used: Peristaltic Pump with dedicated tubing ampling Equipment Used: YSI Pro Dss urge Start Time: V3 05 urge Completion Time: Purging Method: Low-Flow verage Purge Rate (mL/min): 400 nalytical Lab: Friedman & Bruya Inc. / Chemical Analyses: See COC	mple ID No.: KMW-08- 08 92022 ter Level Ind. Model & No.: Solinst Model T04_ 122 P/DO Meter Model & No.: YSI-Pro Dss ge Equipment Used: Peristaltic Pump with dedicated tubing mpling Equipment Used: YSI Pro Dss ge Start Time: Purging Method: Low-Flow grage Purge Rate (mL/min): 400 galytical Lab: Friedman & Bruya Inc. / Sample Containers Used: Lab Provided Chemical Analyses: See COC			5.82	244.6	16.5	1192	1,20	26.93			
Vater Level Ind. Model & No.: Solinst Model TOL 1722 PRP/DO Meter Model & No.: YSI-Pro Dss Peristaltic Pump with dedicated tubing Peristaltic Pump with dedicated tubing YSI Pro Dss Purge Start Time: Purging Method: Verage Purge Rate (mL/min): Purging Method: Verage Purge Rate (mL/min): Sample Containers Used: Lab Provide Chemical Analyses: See COC Therefore Told Observations:	ter Level Ind. Model & No.: Solinst Model 1642 1722 P/DO Meter Model & No.: YSI-Pro Dss ge Equipment Used: Peristaltic Pump with dedicated tubing YSI Pro Dss ge Start Time: Purging Method: Low-Flow gerage Purge Rate (mL/min): Hoo Sample Containers Used: Lab Provided Chemical Analyses: See COC per Field Observations:											
Vater Level Ind. Model & No.: Solinst Model TOL 1722 PRP/DO Meter Model & No.: YSI-Pro Dss Peristaltic Pump with dedicated tubing Peristaltic Pump with dedicated tubing YSI Pro Dss Purge Start Time: Purging Method: Verage Purge Rate (mL/min): Purging Method: Verage Purge Rate (mL/min): Sample Containers Used: Lab Provide Chemical Analyses: See COC Therefore Told Observations:	ter Level Ind. Model & No.: Solinst Model 1642 1722 P/DO Meter Model & No.: YSI-Pro Dss ge Equipment Used: Peristaltic Pump with dedicated tubing YSI Pro Dss ge Start Time: Purging Method: Low-Flow gerage Purge Rate (mL/min): Hoo Sample Containers Used: Lab Provided Chemical Analyses: See COC per Field Observations:											
Vater Level Ind. Model & No.: Solinst Model TOL 1722 PRP/DO Meter Model & No.: YSI-Pro Dss Peristaltic Pump with dedicated tubing Peristaltic Pump with dedicated tubing YSI Pro Dss Purge Start Time: Purging Method: Verage Purge Rate (mL/min): Purging Method: Verage Purge Rate (mL/min): Sample Containers Used: Lab Provide Chemical Analyses: See COC Therefore Told Observations:	ter Level Ind. Model & No.: Solinst Model 1642 1722 P/DO Meter Model & No.: YSI-Pro Dss ge Equipment Used: Peristaltic Pump with dedicated tubing YSI Pro Dss ge Start Time: Purging Method: Low-Flow gerage Purge Rate (mL/min): Hoo Sample Containers Used: Lab Provided Chemical Analyses: See COC per Field Observations:											
Vater Level Ind. Model & No.: Solinst Model TOL 1722 PRP/DO Meter Model & No.: YSI-Pro Dss Peristaltic Pump with dedicated tubing Peristaltic Pump with dedicated tubing YSI Pro Dss Purge Start Time: Purging Method: Verage Purge Rate (mL/min): Purging Method: Verage Purge Rate (mL/min): Sample Containers Used: Lab Provide Chemical Analyses: See COC Therefore Told Observations:	ter Level Ind. Model & No.: Solinst Model 1642 1722 P/DO Meter Model & No.: YSI-Pro Dss ge Equipment Used: Peristaltic Pump with dedicated tubing YSI Pro Dss ge Start Time: Purging Method: Low-Flow gerage Purge Rate (mL/min): Hoo Sample Containers Used: Lab Provided Chemical Analyses: See COC per Field Observations:											
Vater Level Ind. Model & No.: Solinst Model TOL 1722 PRP/DO Meter Model & No.: YSI-Pro Dss Peristaltic Pump with dedicated tubing Peristaltic Pump with dedicated tubing YSI Pro Dss Purge Start Time: Purging Method: Verage Purge Rate (mL/min): Purging Method: Verage Purge Rate (mL/min): Sample Containers Used: Lab Provide Chemical Analyses: See COC Therefore Told Observations:	ter Level Ind. Model & No.: Solinst Model 1642 1722 P/DO Meter Model & No.: YSI-Pro Dss ge Equipment Used: Peristaltic Pump with dedicated tubing YSI Pro Dss ge Start Time: Purging Method: Low-Flow gerage Purge Rate (mL/min): Hoo Sample Containers Used: Lab Provided Chemical Analyses: See COC per Field Observations:											
Vater Level Ind. Model & No.: Solinst Model TOL 1722 PRP/DO Meter Model & No.: YSI-Pro Dss Peristaltic Pump with dedicated tubing Peristaltic Pump with dedicated tubing YSI Pro Dss Purge Start Time: Purging Method: Verage Purge Rate (mL/min): Purging Method: Verage Purge Rate (mL/min): Sample Containers Used: Lab Provide Chemical Analyses: See COC Therefore Told Observations:	ter Level Ind. Model & No.: Solinst Model 1642 1722 P/DO Meter Model & No.: YSI-Pro Dss ge Equipment Used: Peristaltic Pump with dedicated tubing YSI Pro Dss ge Start Time: Purging Method: Low-Flow gerage Purge Rate (mL/min): Hoo Sample Containers Used: Lab Provided Chemical Analyses: See COC per Field Observations:											
Water Level Ind. Model & No.: Solinst Model TOL 1722 PRP/DO Meter Model & No.: YSI-Pro Dss Purge Equipment Used: Peristaltic Pump with dedicated tubing Pampling Equipment Used: YSI Pro Dss Purge Start Time: Purging Method: Low-Flow Sample Containers Used: Lab Provide Chemical Analyses: See COC Purge Rate (mL/min): Too Sample Containers Used: Lab Provide Chemical Analyses: See COC	ter Level Ind. Model & No.: Solinst Model 1642 1722 P/DO Meter Model & No.: YSI-Pro Dss ge Equipment Used: Peristaltic Pump with dedicated tubing YSI Pro Dss ge Start Time: Purging Method: Low-Flow gerage Purge Rate (mL/min): Hoo Sample Containers Used: Lab Provided Chemical Analyses: See COC per Field Observations:		100									
Water Level Ind. Model & No.: Solinst Model TOL 1722 PRP/DO Meter Model & No.: YSI-Pro Dss Purge Equipment Used: Peristaltic Pump with dedicated tubing Pampling Equipment Used: YSI Pro Dss Purge Start Time: Purging Method: Low-Flow Sample Containers Used: Lab Provide Chemical Analyses: See COC Purge Rate (mL/min): Too Sample Containers Used: Lab Provide Chemical Analyses: See COC	ter Level Ind. Model & No.: Solinst Model 1642 1722 P/DO Meter Model & No.: YSI-Pro Dss ge Equipment Used: Peristaltic Pump with dedicated tubing YSI Pro Dss ge Start Time: Purging Method: Low-Flow gerage Purge Rate (mL/min): Hoo Sample Containers Used: Lab Provided Chemical Analyses: See COC per Field Observations:						<u> </u>					
Water Level Ind. Model & No.: Solinst Model TOL 1722 PRP/DO Meter Model & No.: YSI-Pro Dss Purge Equipment Used: Peristaltic Pump with dedicated tubing Pampling Equipment Used: YSI Pro Dss Purge Start Time: Purging Method: Low-Flow Sample Containers Used: Lab Provide Chemical Analyses: See COC Purge Rate (mL/min): Too Sample Containers Used: Lab Provide Chemical Analyses: See COC	ter Level Ind. Model & No.: Solinst Model 1642 1722 P/DO Meter Model & No.: YSI-Pro Dss ge Equipment Used: Peristaltic Pump with dedicated tubing YSI Pro Dss ge Start Time: Purging Method: Low-Flow gerage Purge Rate (mL/min): Hoo Sample Containers Used: Lab Provided Chemical Analyses: See COC per Field Observations:						_					
Water Level Ind. Model & No.: Solinst Model TOL 1722 PRP/DO Meter Model & No.: YSI-Pro Dss Purge Equipment Used: Peristaltic Pump with dedicated tubing Pampling Equipment Used: YSI Pro Dss Purge Start Time: Purging Method: Low-Flow Sample Containers Used: Lab Provide Chemical Analyses: See COC Purge Rate (mL/min): Too Sample Containers Used: Lab Provide Chemical Analyses: See COC	ter Level Ind. Model & No.: Solinst Model 1642 1722 P/DO Meter Model & No.: YSI-Pro Dss ge Equipment Used: Peristaltic Pump with dedicated tubing YSI Pro Dss ge Start Time: Purging Method: Low-Flow gerage Purge Rate (mL/min): Hoo Sample Containers Used: Lab Provided Chemical Analyses: See COC per Field Observations:					<u> </u>	<u> </u>			L		
rurge Equipment Used: Peristaltic Pump with dedicated tubing YSI Pro Dss Purge Start Time: VS:05 Sample Collection Time: Low-Flow Verage Purge Rate (mL/min): HOO Sample Containers Used: Lab Provide Chemical Analyses: See COC Sample Containers Used: Sample Containers Used: Lab Provide Chemical Analyses: See COC Sample Containers Used: Sam	rge Equipment Used: Peristaltic Pump with dedicated tubing YSI Pro Dss rge Start Time: Sample Collection Time: Purging Method: Sample Containers Used: Low-Flow Sample Containers Used: Low-Flow Sample Containers Used: Lab Provided Chemical Analyses: See COC Per Field Observations:	Water Le	evel Ind. M	odel & No	.: <u>Solinst Mod</u>	del 104 \	22	,				
rurge Start Time: urge Completion Time: verage Purge Rate (mL/min): 日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日日	rge Start Time: Sample Collection Time: Purging Method: Sample Containers Used: Low-Flow Sample Containers Used: Low-Flow Sample Containers Used: Low-Flow Sample Containers Used: Lab Provided Chemical Analyses: See COC				Peristaltic	Sump with	dedicate	d tubina		· ·		
rurge Start Time: Use Completion Time: 13:30 Use Completi	Sample Collection Time: 13:30 Purging Method: Low-Flow Sample Containers Used: Lab Provided Chemical Analyses: See COC Per Field Observations:	ampline	a Eauipme	ent Used:			godioate	- 1009	-			
rurge Completion Time: verage Purge Rate (mL/min): Purging Method: Sample Containers Used: Lab Provide Chemical Analyses: See COC Therefore Field Observations:	Purging Method: Low-Flow Sample Containers Used: Lab Provided Chemical Analyses: See COC Per Field Observations:	-			12:02			Sample	Collection	Time: 13:30		
Nerage Purge Rate (mL/min): 400 Sample Containers Used: Lab Provide Chemical Analyses: See COC See COC	Sample Containers Used: Lab Provided Chemical Analyses: See COC er Field Observations:	urge Co	ompletion	Time:			_	Purging	Method:	Low-Flow		
ther Field Observations:	er Field Observations:	Verane	Purge Raf	e (mL/mir	1): <u>400</u>	450						
D4		nalytica	al Lab: Fri	edman & l	Bruya Inc. /			Chemica	al Analyses	: See COC		
D4		ther Fie	eld Observ	rations: _	2							
dated 8/15/22 Page _ 1	Page _ 1_ o	(1101 1 1										
dated 8/15/22 Page 1	Page _1_ o											
dated 8/15/22 Page 1	Page _ 1_ o					***	ti 20 to					
dated 8/15/22 Page _ 1	Page _1_ o											
		dated 8/1	15/22							Page _1_ o		
			-									



•	Name: <u>K</u>	<u>elly-Moore</u>		*			Date: 8	116/2022			
oject N	Number: P	S2120454	0.01		Weather Conditions: Suny 65°F						
cation	: Seattle, V	NΑ						0			
mpler	J. Per	ztm			Wir	d Speed	/Direction:	South			
				WELL	INFORI	MATION	1				
sing [) iameter (i	n):	2"	_				on (ft):			
p of C	asing Elev	ration (ft):	18.14'		1	Depth of	Well Casino	ı (ft):			
ial De	pth to Wa	ter (ft):	6.091		-	Actual Pu	ırge Volume	(gal): 6 gal			
illitat	Condition	<u>- 3200</u>	<u> </u>					·			
			PU	RGING	MEAS	JREME	NTS				
		pH 🗸			7	/	~	1			
VL (ft otoc)	Time	(std. units)	SC (ms/cm)	Temp.	ORP	DO (ma/l.)	Turbidity	N-4			
	9:41				(mv)	(mg/L)	(NTUs)	Notes			
12	9:46	6.17	405.6	17.0	-19.1 -33.0	1.58	27.05	colorlus, some			
.13	9:49		<u> 363.9</u> 362.6		-35.5	1,000	44.69				
.13	9:52	6.18	364.5	17.5							
307 - 307 - 407	9:36	70.00	370.7	17.5	-38.6 -39.6		<i>52.56 56.87</i>				
.14	9,59	6.19	373.2	17.5	-41.3		53.39				
. 14	14, 54	4.19	373.2	17.5	71. 3	1.07	22.24	end arge			
	1										
	9				·						
		-		_							
						7007					
						Salves Into					
ple ID	No.: KM	W-09-	162022								
er Lev	el Ind. Mo	del & No.:	Solinst Mode	1781 12	22						
			YSI-Pro Dss								
	iipment U: Equipmer		Peristaltic Pu YSI Pro Dss		<u>dedicate</u>	<u>d tubing</u>					
	is in the control of	n osea:									
	rt Time:	•	45	:40			Collection '				
e Con	npletion T	Ime: (ml /min)	3504	<u>~</u>			Method:	Low-Flow			
	Lab: Frie			<u> </u>			containers al Analyses	Used: Lab Provided			
•	<u> </u>	700	<u> </u>		_	Oncinio	ii Allaiyses	. 000 000			
	d Observa	tions:									
	red 1	tubing									
eolo		σ									
epli	2 a a										

GROUNDWATER SAMPLING LOG Low Flow Sampling

MONITORING WELL/PIEZOMETER NUMBER- KMW-10

Project Name: Kelly-Moore

	: Seattle, I				Wind Speed/Direction:					
				WELL	INFOR	MATIO	V			
Top of C Initial De		vation (ft): ter (ft):	8,491					on (ft): g (ft): g (gal): <u>H gal</u>		
rvenneac	l Conditio	n: <u>fan</u>		IRGING	MEASI		-	~		
WL (ft btoc)	Time	pH ✓ (std. units)	SC (ms/cm)	Temp.	ORP (mv)	DO (mg/L)	Turbidity (NTUs)	Notes		
11:01	\$5.531	6.27	581	16.8	-22.6	1.45	148.04	greyish, sads		
11:05	8.53'	6.30	563	17.0	-45.7	1.25	21,45		1	
11:09	8,53	6.32	555	16.8	-53.2	1.18	19.92		Ī	
11:14	\$ 8.53	6.33	549	16.7	-60.8	1.13	21.78	,		
11:19	8.53	6.32	554	14.8	-63.6	7.71	26.56		7	
11:24	8.53	6.32	556	16.8	-66.0	1.09	14.79		7	
11:29	8.53	6.32	553	16.7	-67.0	1.09	16.33			
(I:33	8.53	G.31	538	16.8	-67.8	1.07	15,66			
ample ID	No.: KM	W-10-081	7207 DUP =	kww-	D/15- V	X17-20	12.7		_	
ater Lev	el Ind. Mo leter Mode	del & No.	Solinst Mode YSI-Pro Dss	1401 17	22					
ırge Equ	ipment U: Equipmen	sed:	Peristaltic Pu YSI Pro Dss	ump with	dedicated	d tubing				
erage Po alytical	ipletion T urge Rate Lab: <u>Fried</u>	(mL/min) dman & Br	uya Inc.		_	Purging Sample	Collection Method: Containers I Analyses	Low-Flow	Dap:	
ner Field	Observa	tions:	Duplic	ate		-				
_										

GROUNDWATER SAMPLING LOG Low Flow Sampling

MONITORING WELL/PIEZOMETER NUMBER- KMW-11

	Name:	<u>Kelly-Moor</u>	re				UMBER- <u>k</u>	
Location	Number: In: Seattle,	WA	40.01					17/2022 700F Sunny
•								45mph
Top of Conitial De	Diameter (Casing Ele epth to Wa d Conditio	vation (ft) eter (ft):	\$.671	=		Groundy Depth of Actual P	vater Elevat Well Casin urge Volum	
		T - 11 -/	PL	JRGING	MEAS	UREME	NTS	·
WL (ft btoc)	Time	pH (std. units)	SC (ms/cm)	Temp.	ORP (mv)	DO (mg/L)	Turbidity (NTUs)	Notes
-	10:04	6.47	165.0	14.3	1.6-8-0	1.50	72.59	Colorless "seds
8.73	10:07		162.6	14.3	-22.5		29.64	
8.72	10=10	G.38	162.0	14.4	-25.2	1.27	27.78	
0.70	(0.17	0.08	161.6	[4,4	-27.5	1.24	22.13	
ter Leve P/DO M rge Equi		del & No.: l & No.: ed:	672022 Solinst Model YSI-Pro Dss Peristaltic Pur YSI Pro Dss			tubing		
rage Pu	pletion Ti	mL/min):	10:00 10:15 475 ya Inc.		_ Po	urging Mample Co	ollection Tillethod: ontainers U Analyses: §	Low-Flow sed: Lab Provided
er Field	Observati	ons:	<u> </u>			<u> </u>		
			-					



MONITORING WELL/PIEZOMETER NUMBER- KMW-12

Project Na	ıme: <u>Ke</u>	lly-Moore									
Deele -4 M	h					=	Date: _\&/	16/2022 Suny 70°F			
Project Nu Location:			0.01		We	ather Co	nditions:	Sinny 70 F			
Location: _. Sampler:					Wind Speed/Direction: Sout NW <5mph						
ogmbiet.	<u> </u>				AAII	ia speeu	/Direction		- 		
	S .			WELL		MATION					
Casing Di			2"		(Groundw	ater Elevati	on (ft):			
Top of Ca Initial Dep			6,27		j	Depth of	Well Casing	(gal): 3,5gal			
Wellhead			W			MCtual FC	nge volume	(gai).			
				RGING	MEAS	UREME	NTS				
		pH 🗸	7	1 7		7	1				
WL (ft		(std.	sc	Temp.	ORP	DO	Turbidity				
btoc)	Time	units)	(ms/cm)	(°C)	(mv)	(mg/L)	(NTUs)	Notes			
10:33€	÷ 6.27	6.96	1105	15.5	8,2	1.89	6.78	colorless, no sed			
10:38		6.60	510	16.0	-42,4	1.26	11.34				
NO 10:4	6.36	6.42	489.6	16.3	-41.7	1.16	10.01				
6.36		6.23	474,7	16.8	-16.0		9.74				
6.36	10:52	6.20	472.6	17.0	-19.3	1.13	10.11				
6.36		6.21	472.3	17.)	-27.0	1.10	9.65				
6.36	10:59	6.21	467.9	17.1	-33.8	1.08	8.55				
6.36	11:04	6.22	467.6	17.2	-36.4	1.08	9.51				
							ļ				
-							-				
						<u> </u>					
					<u> </u>		- 22				
Cample II	No: KA	111/12- 1	8162022								
Water Lev	vel Ind. Me	odel & No	.: Solinst Mod	el 101-	122			only Initric poly,	Lamber		
ORP/DO	Meter Mod	tel & No.:	YSI-Pro Dss	S		nd tubing					
Purge Eq	uipment L	Jsed:	Peristaltic P		dedicate	a tubing					
_	Equipme	nt Useu.		1975		Sample	Collection	Time: 11:15			
Purge Sta	art Time:	Timor	10:34	<i></i>		Purging	Method:	Low-Flow			
Purge Co	mpletion	ı ime: e (mL/mir): 43 :	5 450		Sample	Containers	Used: Lab Provided			
Analytica	Lab: Frie	edman & E	Bruya Inc.		_	Chemic	al Analyses	: See COC			
Other Fie	ia Upserv	ations									
								Page _ 1_ of	_1		
Jpdated 8/15	V22								-		
Pugine -								0.●0			

GROUNDWATER SAMPLING LOG Low Flow Sampling

MONITORING WELL/PIEZOMETER NUMBER- BFK-926

Project Na	me: <u>Ke</u>	lly-Moore									
Project Nu	ımher: DS	21204540	01		Was	ther Con	Date:	17/202	nnu		
Location:	and the second s		.01		Date: 8/17/2022 Weather Conditions: 65°F, Suny						
Sampler:					Wind Speed/Direction: <5mph						
				WELLI	NFORM	MATION	l				
Casing Di	ameter (ir	a)·) "	***			ater Elevatio	on (ft):			
Top of Ca			<u>- </u>	_	D	epth of \	Nell Casing	(ft):			
Initial Dep	th to Wat	er (ft):	7.65		A	ctual Pu	rge Volume	(gal): <u></u>	gal_		
Wellhead	Condition	n: fair						*			
			PU	RGING	MEASU	JREME	NTS			•	
		pH✓	*				-	ĺ			
WL (ft btoc)	Time	(std. units)	SC (ms/cm)	Temp.	ORP (mv)	DO (mg/L)	Turbidity (NTUs)	No	tes		
7,65	8:31	6.26	474.3	16.2		1.86	82.15	reddish	yellow i	ed forganic	
7.66	8:35	6.24	463.4	16.2	-9.2	1.53	72.81		,	1	
7.66	8:39	6.24	462.6	16.3	-20.0	1.47	51.34]	
7.66	8=44	6.23	451.4	16.4	-24.9	1.91	55.69]	
7.66	8:49	6.23	437.9	16.5	-25.8	2.00	51.65]	
7.66	8:53	6.23	433,3	16,5	-25,9	1.94	38,33			_	
7.66	8:58	6.23	H29.1	16.5	-26.5		30.10	<u> </u>	-2	4	
7.66	9:01	6.23	- C.	16.5	-26.2		23.58			4	
7.66	9:04	6.23	430,1	16,5	-26.1	1.75	22,68			-1	
						 		1		-{	
				 	 			<u> </u>		-{	
						 	-	1		-	
						<u> </u>					
Sample II	D No.: B	FK-92 <u>6- (</u>	18172020								
Water Le	vei Ind. M	iodel & No	:: Solinst Mod	iel TOL	<u> </u>						
ORP/DO	Meter Mo	del & No.:	YSI-Pro Ds Peristaltic F		dedicate	ed tubina	-				
Purge Eq	Eauipme	ent Used:	YSI Pro Ds				-				
Purge Sta			R:30			Sample	Collection	Time:)9:0C	<u> </u>	
Purge Co	mpletion	Time:				Purging	Method:		w-Flow		
Average	Purge Ra	te (mL/mir	n): <u>475</u>				Containers				
			Bruya Inc.					V			
Other Fie	ld Obser	vations: _				-					
									-		
							-		D 4	-6.4	
Updated 8/1	5/22							i	Page <u>1</u>	or _1	
Obdaren or i	J										

GROUNDWATER SAMPLING LOG Low Flow Sampling

MONITORING WELL/PIEZOMETER NUMBER- BFK-927

Project Na	ame: Ke	elly-Moore								
							Date: _ 8	116/2022		
Project No	umber: <u>P</u> :	S21204540	0.01		Wea	ther Co	nditions:	Sinny 70°F		
Location:	Seattle, V	VA			•					
Sampler:	3. Ru	7kms			Wind Speed/Direction: <5mph W					
	,		•	WELL	INFORM	MOITAN	1			
Casing Di	iameter (i	n):	2"				ater Elevati			
Top of Ca	sing Elev	ration (ft):				epth of	Well Casing	g (ft):		
Initial Dep		ter (ft):	10.32	harri saa	Rair	Actual Pu	irge volume	e (gal): 7 god		
TTEIIIIGAU	Conditio	11. <u>2014) 10</u>	<u> </u>	*	U	IDENIE	NTO			
				RGING	MEASU	JREME	NIS		7	
18/1 /84	23	pH 🗡	sc	Temp.	ORP	DO	Turbidity			
WL (ft btoc)	Time	units)	(ms/cm)	(°C)	(mv)	(mg/L)	(NTUs)	Notes		
6.37	12:31	6.17	717,8	19.2	-64.2	200	65.39	greenth, some	fellowith	
6.37	12:35	6.18	718	18.8	-65.7	148	52,94		1	
6.38	12:40	6.18	682	18-3	-66.4	1.15	52.44	Sheen in butetw	.	
6.38	12:45		677	18.4	-64.8	1.13	25.43		4	
6.38	12:49	6.16	667	18.4	-63.9	1.10		chunky biofilm	1	
6.38	12:53	6.16	657	18-4	-62.7	1.10	23.89	same max 400	aganie	
	12:57 mped opague								Maish rede Un Listo	
	13:05	,	-				/ 6/	same max 400	Δ ν⊤υ	
6.38'	13:21	6.18	581	18.4	-41.5	1.22	68.37	<u> </u>	4	
6.381	13:24	G.18	581	18.4	-43.3	1.10	34.56			
6.38'	13:27	6.17	592	18-3	-44.7 -45.5		32:11		4	
6.38	13-30	6.17	581	18.3	-75.5	1.05	34.67		4	
									_	
Sample II	No.: <u>B</u> F	K-927- 08	162022							
			: Solinst Mode		12					
ORP/DO N		iel & No.:	YSI-Pro Dss Peristaltic P		dedicate	d tubina				
Sampling			YSI Pro Dss		dodioato	a tabing	•			
Purge Sta			12:28			Sample	Collection '	Time: 1300		
Purge Co		Time:	13:30				Method:	Low-Flow		
Average F	urge Rat	e (mL/min): <u>HOU</u>					Used: Lab Provided		
Analytical	Lab: Fri	edman & B	ruya Iric.				al Analyses	: See COC		
Other Fiel	d Observ	ations: 📝		bing	, wa	<u>ter i</u>	s brow	n/grey/yellow.		
correspond	c mat	erral c	mmen	0	<u>'</u>			000		
O						-				
										
Jpdated 8/15	722							Page <u>1</u> o	f_1_	

APPENDIX D

FIELD FORMS AND ANALYTICAL DATA, SVE MONITORING

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Vineta Mills, M.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

January 25, 2022

Scott Adamek, Project Manager Wood Environment & Infrastructure One Union Square 600 University Street, Suite 600 Seattle, WA 98101

Dear Mr Adamek:

Included are the results from the testing of material submitted on January 12, 2022 from the Kelly Moore, F&BI 201138 project. There are 6 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures

c: Christy Duitman

WEI0125R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on January 12, 2022 by Friedman & Bruya, Inc. from the Wood Environment & Infrastructure Kelly Moore, F&BI 201138 project. Samples were logged in under the laboratory ID's listed below.

201138 -01 Eff-1-12-2022 201138 -02 Inf-1-12-2022

The TO-15 gasoline range concentrations were quantified using a single point calibration at 80 ppbv.

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Eff-1-12-2022	Client:	Wood Environment & Infrastructure
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Date Received: 01/12/22 Project: Kelly Moore, F&BI 201138

Lab ID: Date Collected: 201138-01 1/5 01/12/22 Date Analyzed: 01/20/22 Data File: $011929.\mathrm{D}$ Matrix: GCMS7 Air Instrument: Units: ug/m3 Operator: bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	100	70	130

	Concenti	ration
Compounds:	ug/m3	ppbv
_		
Benzene	<1.6	< 0.5
Toluene	<94	<25
Ethylbenzene	< 2.2	< 0.5
m,p-Xylene	<4.3	<1
o-Xylene	<2.2	< 0.5
Gasoline Range Organics	<1,600	< 400

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Inf-1-12-2022	Client:	Wood Environment & Infrastructure
-------------------	---------------	---------	-----------------------------------

Date Received: 01/12/22 Project: Kelly Moore, F&BI 201138

Lab ID: Date Collected: 201138-02 1/7.8 01/12/22 Date Analyzed: 01/20/22 Data File: $011930.\mathrm{D}$ Matrix: GCMS7 Air Instrument: Units: ug/m3 Operator: bat

	%	Lower	$_{ m Upper}$
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	97	70	130

	Concent	ration
Compounds:	ug/m3	ppbv
_		
Benzene	2.6	0.82
Toluene	<150	<39
Ethylbenzene	< 3.4	< 0.78
m,p-Xylene	<6.8	<1.6
o-Xylene	< 3.4	< 0.78
Gasoline Range Organics	11.000	2.700

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID: Method Blank Client: Wood Environment & Infrastructure

Date Received: Not Applicable Project: Kelly Moore, F&BI 201138

Lab ID: Date Collected: Not Applicable 02-126 MB 01/19/22 Date Analyzed: Data File: 011911.DMatrix: Air Instrument: GCMS7ug/m3 Units: Operator: bat

	%	Lower	$_{ m Upper}$
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	92	70	130

	Concent	ration
Compounds:	ug/m3	ppbv
Benzene	< 0.32	< 0.1
Toluene	<19	<5
Ethylbenzene	< 0.43	< 0.1
m,p-Xylene	< 0.87	< 0.2
o-Xylene	< 0.43	< 0.1
Gasoline Range Organics	<330	<80

ENVIRONMENTAL CHEMISTS

Date of Report: 01/25/22 Date Received: 01/12/22

Project: Kelly Moore, F&BI 201138

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 201228-01 1/5.3 (Duplicate)

	Reporting	Sample	Duplicate	RPD
Analyte	Units	Result	Result	(Limit 30)
Benzene	ug/m3	6.3	6.3	0
Toluene	ug/m3	<100	<100	nm
Ethylbenzene	ug/m3	3.3	3.3	0
m,p-Xylene	ug/m3	16	15	6
o-Xylene	ug/m3	8.7	8.6	1

Laboratory Code: Laboratory Control Sample

	Percent						
	Reporting	Spike	Recovery	Acceptance			
Analyte	Units	Level	LCS	Criteria			
Benzene	ug/m3	43	96	70-130			
Toluene	ug/m3	51	107	70-130			
Ethylbenzene	ug/m3	59	97	70-130			
m,p-Xylene	ug/m3	120	102	70-130			
o-Xylene	ug/m3	59	104	70-130			

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The analyte is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits due to sample matrix effects.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

201138 s	SAMPLE CHAIN OF CUSTODY	WE 1/12/22	
Report To Scott Alamek & Christy Ditman	SAMPLERS (signature)		Page # of TURNAROUND TIME
Company 10000 Environmental	PROJECT NAME & ADDRESS	PO#	KStandard RUSH
Address 600 University St. Soite 600	Lelly Moore		Rush charges authorized by:
City, State, ZIP Seattle, WA 98101 5023346551 christy diviting Cooxdele com Phone 2003421778 Emailsont aland Quicolik com	NOTES:	INVOICE TO	SAMPLE DISPOSAL Default: Clean after 3 days Archive (Fee may apply)
GAMDI E INFORMATION	L	LANAT VSIS RI	FOLLESTED

SAMPLE INFORMATION							<u>*************************************</u>			ANA	LYS	IS R	EQU			
	Lab	Canister	Flow Cont.	Reporting Level: IA=Indoor Air SG=Soil Gas	Date	Initial	Field Initial	Final Vac.	Field Final	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	АРН	- 1	14-Cous as Hexanul Exchautris	
Sample Name	ID	ID	ID ·	(Circle One)	Sampled	("Hg)	Time	("Hg)	Time						到	Notes
	0/			IA / (G)	1-12-22		9:42		9:50						Х	Dura: 8 mm SN: 8267
Eff_1-12-2022 Inf_1-12-2022	02	·		ia /(sg)	1-12-22	30"	10:00	^O"	80:01						X	Dva:8min 50:8530
				IA / SG	:									,		
				IA / SG			,									
				IA / SG												
44				IA / SG	,	-										
				IA / SG	•			·								
		70		IA / SG	÷							ļ				

Friedman & Bruya, Inc. 3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Gavin Klockeman	JMA	1-12-22	1415
Received by: MAKCUM	MyntPhan	FBI	1/12/22	1415
Relinquished by:	J 1			:
Received by:		Samples re	ceived at 2	2 O ∘C

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Vineta Mills, M.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

February 15, 2022

Scott Adamek , Project Manager Wood Environment & Infrastructure One Union Square 600 University Street, Suite 600 Seattle, WA 98101

Dear Mr Adamek:

Included are the results from the testing of material submitted on February 7, 2022 from the Kelly Moore, F&BI 202104 project. There are 6 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures

c: Christy Duitman

WEI0215R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on February 7, 2022 by Friedman & Bruya, Inc. from the Wood Environment & Infrastructure Kelly Moore, F&BI 202104 project. Samples were logged in under the laboratory ID's listed below.

202104 -01 Eff_2-7-2022 202104 -02 Inf_2-7-2022

The TO-15 calibration standard failed the acceptance criteria for several analytes. The data were flagged accordingly.

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Eff 2-7-2022	Client:	Wood Environment & Infrastructure
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Date Received: 02/07/22 Project: Kelly Moore, F&BI 202104

Date Collected: Lab ID: 02/07/22 202104-01 1/5.2 Date Analyzed: 020931.D02/10/22 Data File: Matrix: Air Instrument: GCMS8Units: ug/m3Operator: bat

	Concentration	
Compounds:	ug/m3	ppbv
Benzene	<1.7	< 0.52
Toluene	<98	<26
Ethylbenzene	< 2.3	< 0.52
m,p-Xylene	<4.5	<1
o-Xylene	< 2.3	< 0.52
Gasoline Range Organics	< 1.700	< 420

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Inf_2-7-2022	Client:	Wood Environment & Infrastructure
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Date Received: 02/07/22 Project: Kelly Moore, F&BI 202104

Lab ID: Date Collected: 202104-02 1/37 02/07/22 Date Analyzed: 02/10/22 Data File: 020932.DMatrix: GCMS8 Air Instrument: Units: ug/m3 Operator: bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	104	70	130

	Concentration	
Compounds:	ug/m3	ppbv
Benzene	<12	<3.7
Toluene	< 700	<180
Ethylbenzene	<16	<3.7
m,p-Xylene	<32	<7.4
o-Xylene	<16	<3.7
Gasoline Range Organics	15,000	3,700

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID: Method Blank Client: Wood Environment & Infrastructure

Date Received: Not Applicable Project: Kelly Moore, F&BI 202104

Lab ID: Date Collected: Not Applicable 02-0224 MB02/09/22 Date Analyzed: Data File: 020913.DMatrix: Air Instrument: GCMS8ug/m3 Units: Operator: bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	91	70	130

	Concentration	
Compounds:	ug/m3	ppbv
Benzene	< 0.32	< 0.1
Toluene	<19	<5
Ethylbenzene	< 0.43	< 0.1
m,p-Xylene	< 0.87	< 0.2
o-Xylene	< 0.43	< 0.1
Gasoline Range Organics	<330	<80

ENVIRONMENTAL CHEMISTS

Date of Report: 02/15/22 Date Received: 02/07/22

Project: Kelly Moore, F&BI 202104

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 202134-02 1/5.9 (Duplicate)

	Reporting	Sample	Duplicate	RPD
Analyte	Units	Result	Result	(Limit 30)
Benzene	ug/m3	<1.9	<1.9	nm
Toluene	ug/m3	<110	<110	nm
Ethylbenzene	ug/m3	< 2.6	< 2.6	nm
m,p-Xylene	ug/m3	< 5.1	< 5.1	nm
o-Xylene	ug/m3	< 2.6	< 2.6	nm

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	ug/m3	43	89	70-130
Toluene	ug/m3	51	91	70-130
Ethylbenzene	ug/m3	59	98	70-130
m,p-Xylene	ug/m3	120	98	70-130
o-Xylene	ug/m3	59	107	70-130

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The analyte is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits due to sample matrix effects.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

20404	SAMPLE CHAIN OF CUSTODY	0201.22	***************************************
Report to Sect Adamsk + Christy Dutman	SAMPLERS (signature)		Page # of TURNAROUND TIME
Company NOOD Environmental	PROJECT NAME & ADDRESS	PO#	☐ Standard ☐ RUSH
Address 600 University St. Suite 600	Kelly Moose		Rush charges authorized by:
City, State, ZIP South NA 98:01 Onisty dutman function of plants	NOTES:	INVOICE TO	SAMPLE DISPOSAL Default: Clean after 3 days
Phone 1185 305 8695 Email Scot . Slower Que Ade.	com		☐ Archive (Fee may apply)
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Friedman & Bruya, Inc. 3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

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2.	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
	Relinquished by:	Gabin Klockeman	JHA	7-7-22	_ 13:04
9	Received by: Sollake C.	Tokala Christensen	Fts	2.7.22	13:04
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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Vineta Mills, M.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

March 22, 2022

Scott Adamek, Project Manager Wood Environment & Infrastructure One Union Square 600 University Street, Suite 600 Seattle, WA 98101

Dear Mr Adamek:

Included are the results from the testing of material submitted on March 8, 2022 from the Kelly Moore, F&BI 203143 project. There are 6 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures

c: Christy Duitman

WEI0322R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 8, 2022 by Friedman & Bruya, Inc. from the Wood Environment & Infrastructure Kelly Moore, F&BI 203143 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Wood Environment & Infrastructure

203143 -01 Eff_3-8-2022 203143 -02 Inf_3-8-2022

The TO-15 gasoline range concentrations were quantified using a single point calibration at 80 ppbv.

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

bat

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Eff 3-8-2022	Client:	Wood Environment & Infrastructure
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Date Received: 03/08/22 Project: Kelly Moore, F&BI 203143

Date Collected: Lab ID: 03/08/22 203143-01 1/5.2 Date Analyzed: $031128.\mathrm{D}$ 03/12/22 Data File: Matrix: Air Instrument: GCMS7 Units: ug/m3Operator:

% Lower Upper Surrogates: Recovery: Limit: Limit: 4-Bromofluorobenzene 88 70 130

Compounds:	Concent ug/m3	ration ppbv
Benzene	<1.7	< 0.52
Toluene	<98	<26
Ethylbenzene	< 2.3	< 0.52
m,p-Xylene	< 4.5	<1
o-Xylene	< 2.3	< 0.52
Gasoline Range Organics	< 1.700	<420

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Inf_3-8-2022	Client:	Wood Environment & Infrastructure
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Date Received: 03/08/22 Project: Kelly Moore, F&BI 203143

Lab ID: Date Collected: 203143-02 1/8.0 03/17/22 $031732.\mathrm{D}$ Date Analyzed: 03/18/22 Data File: GCMS7 Matrix: Air Instrument: Units: ug/m3Operator: bat

Compounds:	Concentrug/m3	ration ppbv
Benzene	< 2.6	< 0.8
Toluene	<150	<40
Ethylbenzene	< 3.5	< 0.8
m,p-Xylene	< 6.9	<1.6
o-Xylene	< 3.5	< 0.8
Gasoline Range Organics	<2,600	<640

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID: Method Blank Client: Wood Environment & Infrastructure

Date Received: Not Applicable Project: Kelly Moore, F&BI 203143

Lab ID: Date Collected: Not Applicable $02\text{-}0564~\mathrm{MB}$ 03/11/22 Date Analyzed: Data File: 031112.DMatrix: Air Instrument: GCMS7ug/m3 Units: Operator: bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	89	70	130

	Concen	tration
Compounds:	ug/m3	ppbv
Benzene	< 0.32	< 0.1
Toluene	<19	<5
Ethylbenzene	< 0.43	< 0.1
m,p-Xylene	< 0.87	< 0.2
o-Xylene	< 0.43	< 0.1
Gasoline Range Organics	<330	<80

ENVIRONMENTAL CHEMISTS

Date of Report: 03/22/22 Date Received: 03/08/22

Project: Kelly Moore, F&BI 203143

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 203099-01 1/5.8 (Duplicate)

	Reporting	Sample	Duplicate	RPD
Analyte	Units	Result	Result	(Limit 30)
Benzene	ug/m3	<1.9	<1.9	nm
Toluene	ug/m3	<110	<110	nm
Ethylbenzene	ug/m3	< 2.5	< 2.5	nm
m,p-Xylene	ug/m3	<5	<5	nm
o-Xylene	ug/m3	< 2.5	< 2.5	nm

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	ug/m3	43	104	70-130
Toluene	ug/m3	51	105	70-130
Ethylbenzene	ug/m3	59	105	70-130
m,p-Xylene	ug/m3	120	109	70-130
o-Xylene	ug/m3	59	110	70-130

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The analyte is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits due to sample matrix effects.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

Z	0	3	1	4	3		

SAMPLE CHAIN OF CUSTODY 03/08/22 SAMPLERS (signature) Report To Scott Adamsk & Christy Distmen PROJECT NAME & ADDRESS PO# Company WWD Functionaltal Kelly Moore Address 600 University St. S. ste 600 City, State, ZIP Seattle, WiA NOTES: INVOICE TO · Christy. dutmane woodple. 40 m 5033346557 Phone 2063421778 Email Soft adamek provod ple com

Page # TURNAROUND TIME Standard □ RUSH_ Rush charges authorized by: SAMPLE DISPOSAL Default: Clean after 3 days ☐ Archive (Fee may apply)

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Friedman & Bruya, Inc. 3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	- Cowin Klockeman	JHA	3-8-22	1500
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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Vineta Mills, M.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

April 25, 2022

Scott Adamek, Project Manager Wood Environment & Infrastructure One Union Square 600 University Street, Suite 600 Seattle, WA 98101

Dear Mr Adamek:

Included are the results from the testing of material submitted on April 8, 2022 from the Kelly Moore, F&BI 204109 project. There are 7 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures

c: Christy Duitman

WEI0425R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 8, 2022 by Friedman & Bruya, Inc. from the Wood Environment & Infrastructure Kelly Moore, F&BI 204109 project. Samples were logged in under the laboratory ID's listed below.

204109 -01 Eff_4-8-2022 204109 -02 Inf_4-8-2022

The TO-15 gasoline range concentrations were quantified using a single point calibration at 80 ppbv.

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Eff_4-8-2022	Client:	Wood Environment & Infrastructure
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Date Received: 04/08/22 Project: Kelly Moore, F&BI 204109

Lab ID: Date Collected: 204109-01 1/5 04/19/22 Date Analyzed: Data File: $041917.\mathrm{D}$ 04/19/22 GCMS8 Matrix: Air Instrument: Units: ug/m3 Operator: bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	95	70	130

	Concentration			
Compounds:	ug/m3	ppbv		
D	~1 C	-0.5		
Benzene	<1.6	< 0.5		
Toluene	<94	<25		
Ethylbenzene	< 2.2	< 0.5		
m,p-Xylene	<4.3	<1		
o-Xylene	< 2.2	< 0.5		
Naphthalene	<1.3	< 0.25		
Gasoline Range Organics	<1700	<400		

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Inf_4-8-2022	Client:	Wood Environment & Infrastructure
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Date Received: 04/08/22 Project: Kelly Moore, F&BI 204109

Lab ID: Date Collected: 204109-02 1/7.6 04/19/22 Date Analyzed: Data File: $041918.\mathrm{D}$ 04/19/22 GCMS8 Matrix: Air Instrument: Units: ug/m3 Operator: bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	94	70	130

	Concentration			
Compounds:	ug/m3	ppbv		
Benzene	14	4.5		
Toluene	<140	<38		
Ethylbenzene	<3.3	< 0.76		
m,p-Xylene	<6.6	<1.5		
o-Xylene	<3.3	< 0.76		
Naphthalene	<2	< 0.38		
Gasoline Range Organics	6,800	1,700		

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	Wood Environment & Infrastructure
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Date Received: Not Applicable Project: Kelly Moore, F&BI 204109

Date Collected: 04/19/22 Lab ID: 02-0934 MB Date Analyzed: 04/19/22 Data File: 041915.DGCMS8 Matrix: Air Instrument: Units: ug/m3 Operator: bat

	%	Lower	$_{ m Upper}$
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	96	70	130

	Concen	tration
Compounds:	ug/m3	ppbv
Benzene	< 0.32	< 0.1
Toluene	<19	<5
Ethylbenzene	< 0.43	< 0.1
m,p-Xylene	< 0.87	< 0.2
o-Xylene	< 0.43	< 0.1
Naphthalene	< 0.26	< 0.05
Gasoline Range Organics	<330	<80

ENVIRONMENTAL CHEMISTS

Date of Report: 04/25/22 Date Received: 04/08/22

Project: Kelly Moore, F&BI 204109

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 204120-01 1/9 (Duplicate)

	Reporting	Sample	Duplicate	RPD
Analyte	Units	Result	Result	(Limit 30)
Benzene	ug/m3	< 2.9	< 2.9	nm
Toluene	ug/m3	<170	<170	nm
Ethylbenzene	ug/m3	<3.9	<3.9	nm
m,p-Xylene	ug/m3	<7.8	<7.8	nm
o-Xylene	ug/m3	<3.9	<3.9	nm
Naphthalene	ug/m3	< 2.4	< 2.4	nm

ENVIRONMENTAL CHEMISTS

Date of Report: 04/25/22 Date Received: 04/08/22

Project: Kelly Moore, F&BI 204109

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	ug/m3	43	106	70-130
Toluene	ug/m3	51	98	70-130
Ethylbenzene	ug/m3	59	99	70-130
m,p-Xylene	ug/m3	120	103	70-130
o-Xylene	ug/m3	59	105	70-130
Naphthalene	ug/m3	71	105	70-130

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
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- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The analyte is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits due to sample matrix effects.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

204109 S	AMPLE CHA	AIN OF CUSTODY	04.08.22	_
Report To Scott Alamek & Chasty Dustman	SAMPLERS (s	ignature)		Page#of TURNAROUND TIME
Company 1000) Environmental	1	ME & ADDRESS	PO#	XStandard □ RUSH
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Friedman & Bruya, Inc. 3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

Received by:

Samples received at 220 C

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ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Vineta Mills, M.S. Eric Young, B.S.

3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

May 19, 2022

Christy Duitman, Project Manager Wood Environment & Infrastructure One Union Square 600 University Street, Suite 600 Seattle, WA 98101

Dear Ms Duitman:

Included are the results from the testing of material submitted on May 10, 2022 from the Kelly Moore, F&BI 205151 project. There are 6 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

WEI0519R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on May 10, 2022 by Friedman & Bruya, Inc. from the Wood Environment & Infrastructure Kelly Moore, F&BI 205151 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID Wood Environment & Infrastructure

205151 -01 Eff_5-10-2022 205151 -02 Inf_5-10-2022

The TO-15 gasoline range concentrations were quantified using a single point calibration at 80 ppbv.

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Eff_5-10-2022	Client:	Wood Environment & Infrastructure
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Date Received: 05/10/22 Project: Kelly Moore, F&BI 205151

Lab ID: Date Collected: 205151-01 1/5.1 05/10/22 Date Analyzed: Data File: $051122.\mathrm{D}$ 05/12/22 GCMS8 Matrix: Air Instrument: Units: ug/m3 Operator: bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	93	70	130

	Concent	ration
Compounds:	ug/m3	ppbv
Dangana	~1 C	< 0.51
Benzene	<1.6	
Toluene	<96	<25
Ethylbenzene	< 2.2	< 0.51
m,p-Xylene	<4.4	<1
o-Xylene	< 2.2	< 0.51
Gasoline Range Organics	<1.700	<410

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Inf_5-10-2022	Client:	Wood Environment & Infrastructure
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Date Received: 05/10/22 Project: Kelly Moore, F&BI 205151

Lab ID: Date Collected: 205151-02 1/8.2 05/10/22 Date Analyzed: 05/12/22 Data File: $051123.\mathrm{D}$ GCMS8 Matrix: Air Instrument: Units: ug/m3 Operator: bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	92	70	130

	Concentration			
Compounds:	ug/m3	ppbv		
Benzene	<2.6	< 0.82		
Toluene	<150	<41		
Ethylbenzene	<3.6	< 0.82		
m,p-Xylene	< 7.1	<1.6		
o-Xylene	<3.6	< 0.82		
Gasoline Range Organics	3.300	810		

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	Wood Environment & Infrastructure
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Date Received: Project: Kelly Moore, F&BI 205151

Not Applicable Not Applicable 05/11/22 Lab ID: Date Collected: 02-1090 mb Date Analyzed: Data File: $051113.\mathrm{D}$ Matrix: GCMS8 Air Instrument: Units: ug/m3 Operator: bat

	%	Lower	$_{ m Upper}$
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	92	70	130

	Concen	tration
Compounds:	ug/m3	ppbv
Benzene	< 0.32	< 0.1
Toluene	<19	<5
Ethylbenzene	< 0.43	< 0.1
m,p-Xylene	< 0.87	< 0.2
o-Xylene	< 0.43	< 0.1
Gasoline Range Organics	<330	<80

ENVIRONMENTAL CHEMISTS

Date of Report: 05/19/22 Date Received: 05/10/22

Project: Kelly Moore, F&BI 205151

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 202156-01 1/6.2 (Duplicate)

	Reporting	Sample	Duplicate	RPD
Analyte	Units	Result	Result	(Limit 30)
Benzene	ug/m3	28	27	4
Toluene	ug/m3	130	140	7
Ethylbenzene	ug/m3	7.9	7.7	3
m,p-Xylene	ug/m3	27	26	4
o-Xylene	ug/m3	8.1	7.7	5

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	ug/m3	43	98	70-130
Toluene	ug/m3	51	112	70-130
Ethylbenzene	ug/m3	59	87	70-130
m,p-Xylene	ug/m3	120	93	70-130
o-Xylene	ug/m3	59	97	70-130

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The analyte is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits due to sample matrix effects.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

205151	
Report To Christy Dutman	
Company WOOD Environmental	
Address 600 University St. Suite 60)

City, State, ZIP Seattle.

Phone 5033346551 Email christy Autimen Quandole com

05-10-22 SAMPLERS (signature) PROJECT NAME & ADDRESS PO# Kelly Moore NOTES: INVOICE TO

SAMPLE CHAIN OF CUSTODY

Page# TURNAROUND TIME **Standard** O RUSH Rush charges authorized by: SAMPLE DISPOSAL 🕰 Default: Clean after 3 days ☐ Archive (Fee may apply)

SAMPLE INFORMATION ANALYSIS REQUESTED																
Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Initial	Final Vac. ("Hg)	Final	TO16 Full Scan	TO16 BTEXN	TO15 cVOCs	APH	Helium	THE CAS OF FEW	Notes
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Friedman & Bruya, Inc. 3012 16th Avenue West Seattle, WA 98119-2029 Ph. (206) 285-8282 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by	Gawin Klockeman	THA	5.10.22	133
Received to:	Michel Erlahl	FEBINE	5/10/12	1132
Relinquished by:				
Received by:	,			

FORMS\COC\COCTO-15.DOC

#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Vineta Mills, M.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

June 14, 2022

Christy Duitman, Project Manager Wood Environment & Infrastructure Lake Washington Blvd NE, Suite 200 Kirkland, WA 98033

Dear Ms Duitman:

Included are the results from the testing of material submitted on June 7, 2022 from the Kelly Moore PO C014104200, F&BI 206110 project. There are 6 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures WEI0614R.DOC

#### **ENVIRONMENTAL CHEMISTS**

#### CASE NARRATIVE

This case narrative encompasses samples received on June 7, 2022 by Friedman & Bruya, Inc. from the Wood Environment & Infrastructure Kelly Moore PO C014104200, F&BI 206110 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	Wood Environment & Infrastructure
206110 -01	Eff_6-7-2022
206110 -02	Inf_6-7-2022

The TO-15 gasoline range concentrations were quantified using a single point calibration at 80 ppbv.

All quality control requirements were acceptable.

## ENVIRONMENTAL CHEMISTS

# Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Eff_6-7-2022	Client:	Wood Environment & Infrastructure
Date Received:	06/07/22	Project:	Kelly Moore PO C014104200

Project: Date Collected: 06/07/22 Lab ID: 206110-01 1/4 Date Analyzed: 06/09/22 Data File:  $060830.\mathrm{D}$ Matrix: Air Instrument: GCMS7 Units: ug/m3 Operator: bat

	%	Lower	$_{ m Upper}$
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	84	70	130

	Concenti	ration
Compounds:	ug/m3	ppbv
_		
Benzene	<1.3	< 0.4
Toluene	<75	<20
Ethylbenzene	<1.7	< 0.4
m,p-Xylene	< 3.5	< 0.8
o-Xylene	<1.7	< 0.4
Gasoline Range Organics	<1,300	<320

## ENVIRONMENTAL CHEMISTS

# Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Inf_6-7-2022	Client:	Wood Environment & Infrastructure
Date Received:	06/07/22	Project:	Kelly Moore PO C014104200

Date Collected: 06/07/22 Lab ID: 206110-02 1/5 Date Analyzed: 06/09/22 Data File: 060831.DMatrix: GCMS7 Air Instrument: Units: ug/m3 Operator: bat

	%	Lower	$_{ m Upper}$
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	105	70	130

	Concentration					
Compounds:	ug/m3	ppbv				
Benzene	6.1	1.9				
Toluene	<94	<25				
Ethylbenzene	< 2.2	< 0.5				
m,p-Xylene	<4.3	<1				
o-Xylene	< 2.2	< 0.5				
Gasoline Range Organics	11,000	2,800				

## ENVIRONMENTAL CHEMISTS

# Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	Wood Environment & Infrastructure

Date Received: Not Applicable Project: Kelly Moore PO C014104200

Date Collected: Not Applicable Lab ID: 02-1355 MB
Date Analyzed: 06/08/22 Data File: 060821.D
Matrix: Air Instrument: GCMS7
Units: ug/m3 Operator: bat

	%	Lower	$_{ m Upper}$
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	80	70	130

	Concen	tration
Compounds:	ug/m3	ppbv
Benzene	< 0.32	< 0.1
Toluene	<19	<5
Ethylbenzene	< 0.43	< 0.1
m,p-Xylene	< 0.87	< 0.2
o-Xylene	< 0.43	< 0.1
Gasoline Range Organics	<330	<80

#### **ENVIRONMENTAL CHEMISTS**

Date of Report: 06/14/22 Date Received: 06/07/22

Project: Kelly Moore PO C014104200, F&BI 206110

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 206117-01 1/4.6 (Duplicate)

	Reporting	Sample	Duplicate	RPD
Analyte	Units	Result	Result	(Limit 30)
Benzene	ug/m3	<1.5	<1.5	nm
Toluene	ug/m3	<87	<87	nm
Ethylbenzene	ug/m3	<2	<2	nm
m,p-Xylene	ug/m3	<4	<4	nm
o-Xylene	ug/m3	<2	<2	nm

Laboratory Code: Laboratory Control Sample

	Percent						
	Reporting	Spike	Recovery	Acceptance			
Analyte	Units	Level	LCS	Criteria			
Benzene	ug/m3	43	97	70-130			
Toluene	ug/m3	51	104	70-130			
Ethylbenzene	ug/m3	59	98	70-130			
m,p-Xylene	ug/m3	120	108	70-130			
o-Xylene	ug/m3	59	111	70-130			

#### **ENVIRONMENTAL CHEMISTS**

#### **Data Qualifiers & Definitions**

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The analyte is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits due to sample matrix effects.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

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Friedman & Bruya, Inc. 3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Grain Klockeman	THA	6-7-22	4:24
Received by:	Anniebrus	FAD	6/1/22	1124
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#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Vineta Mills, M.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

July 19, 2022

Christy Duitman, Project Manager Wood Environment & Infrastructure Lake Washington Blvd NE, Suite 200 Kirkland, WA 98033

Dear Ms Duitman:

Included are the results from the testing of material submitted on July 5, 2022 from the Kelly Moore, F&BI 207037 project. There are 6 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures WEI0719R.DOC

#### **ENVIRONMENTAL CHEMISTS**

## CASE NARRATIVE

This case narrative encompasses samples received on July 5, 2022 by Friedman & Bruya, Inc. from the Wood Environment & Infrastructure Kelly Moore, F&BI 207037 project. Samples were logged in under the laboratory ID's listed below.

207037 -01 Eff_7-5-2022 207037 -02 Inf_7-5-2022

The TO-15 gasoline range concentrations were quantified using a single point calibration at  $80~\mathrm{ppbv}$ .

All quality control requirements were acceptable.

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Eff 7-5-2022	Client:	Wood Environment & Infrastructure
-------------------	--------------	---------	-----------------------------------

Operator:

bat

Date Received: 07/05/22 Project: Kelly Moore, F&BI 207037

 Date Collected:
 07/05/22
 Lab ID:
 207037-01 1/5.2

 Date Analyzed:
 07/14/22
 Data File:
 071328.D

 Matrix:
 Air
 Instrument:
 GCMS7

Surrogates: Recovery: Limit: Limit: 4-Bromofluorobenzene 83 70 130

Compounds:	Concent ug/m3	ration ppbv
Benzene	<1.7	< 0.52
Toluene	<98	<26
Ethylbenzene	< 2.3	< 0.52
m,p-Xylene	< 4.5	<1
o-Xylene	< 2.3	< 0.52
Gasoline Range Organics	< 1.700	<420

ug/m3

Units:

# ENVIRONMENTAL CHEMISTS

# Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Inf_7-5-2022	Client:	Wood Environment & Infrastructure
-------------------	--------------	---------	-----------------------------------

Date Received: 07/05/22 Project: Kelly Moore, F&BI 207037

Lab ID: Date Collected: 207037-02 1/8.3 07/05/22 Date Analyzed: 07/14/22 Data File:  $071329.\mathrm{D}$ Matrix: GCMS7 Air Instrument: Units: ug/m3 Operator: bat

	%	Lower	$_{ m Upper}$
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	103	70	130

	Concent	ration
Compounds:	ug/m3	ppbv
_		
Benzene	6.8	2.1
Toluene	<160	<41
Ethylbenzene	<3.6	< 0.83
m,p-Xylene	< 7.2	<1.7
o-Xylene	<3.6	< 0.83
Gasoline Range Organics	15,000	3,500

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By Method TO-15

Client Sample ID: Method Blank Client: Wood Environment & Infrastructure

Date Received: Not Applicable Project: Kelly Moore, F&BI 207037

Lab ID: Date Collected: Not Applicable 02-1631 MB07/13/22 Date Analyzed: Data File: 071313.DMatrix: Air Instrument: GCMS7ug/m3 Units: Operator: bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	81	70	130

	Concenti	ration
Compounds:	ug/m3	ppbv
-		
Benzene	< 0.32	< 0.1
Toluene	<19	<5
Ethylbenzene	< 0.43	< 0.1
m,p-Xylene	< 0.87	< 0.2
o-Xylene	< 0.43	< 0.1
Gasoline Range Organics	<330	<80

## **ENVIRONMENTAL CHEMISTS**

Date of Report: 07/19/22 Date Received: 07/05/22

Project: Kelly Moore, F&BI 207037

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 207121-01 1/10 (Duplicate)

	Reporting	Sample	Duplicate	RPD
Analyte	Units	Result	Result	(Limit 30)
Benzene	ug/m3	4.1	4.0	2
Toluene	ug/m3	<190	<190	nm
Ethylbenzene	ug/m3	<4.3	<4.3	nm
m,p-Xylene	ug/m3	<8.7	<8.7	nm
o-Xylene	ug/m3	<4.3	<4.3	nm
Naphthalene	ug/m3	2.9	3.7	24

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	ug/m3	43	92	70-130
Toluene	ug/m3	51	101	70-130
Ethylbenzene	ug/m3	59	92	70-130
m,p-Xylene	ug/m3	120	100	70-130
o-Xylene	ug/m3	59	105	70-130
Naphthalene	ug/m3	71	126	70-130

#### **ENVIRONMENTAL CHEMISTS**

## **Data Qualifiers & Definitions**

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The analyte is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits due to sample matrix effects.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

	SAMPLE CHAIN OF CUSTODY	7/5/77	
207057 Report To Christy Duitman	SAMPLERS (signature)		Page # TURNAR(
Company WOOD Environmental	PROJECT NAME & ADDRESS	PO#	ZStandard □ RUSH
Address 600 University St. Soute 600	Kelly Moore		Rush charges at
City, State, ZIP Seattle, WA 98101	NOTES:	INVOICE TO	SAMPLE Default: Clear
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SAMPLE INFORMATION ANALYSIS REQUESTED																
Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Final	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium	ATH CLISICS HOWEN	Notes
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Friedman & Bruya, Inc. 3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Gow 11 Klockemen	THA	7.522	12:19
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Received by:		Samples recei	vec at LUC	

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#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Vineta Mills, M.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

August 29, 2022

Christy Duitman, Project Manager Wood Environment & Infrastructure 600 University St. Suite 600 Seattle, WA 98101

Dear Ms Duitman:

Included are the results from the testing of material submitted on August 17, 2022 from the Kelly Moore, F&BI 208249 project. There are 6 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures WEI0829R.DOC

#### **ENVIRONMENTAL CHEMISTS**

#### CASE NARRATIVE

This case narrative encompasses samples received on August 17, 2022 by Friedman & Bruya, Inc. from the Wood Environment & Infrastructure Kelly Moore, F&BI 208249 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID W	Vood Environment & Infrastructure
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208249 -01 Eff_8-17-2022 208249 -02 Inf_8-17-2022

The TO-15 gasoline range concentrations were quantified using a single point calibration at 80 ppbv.

All quality control requirements were acceptable.

# ENVIRONMENTAL CHEMISTS

# Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Eff_8-17-2022	Client:	Wood Environment & Infrastructure
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Date Received: 08/17/22 Project: Kelly Moore, F&BI 208249

Lab ID: Date Collected: 208249-01 1/5.4 08/17/22 Date Analyzed: Data File: 082319.D08/24/22 Matrix: GCMS8 Air Instrument: Units: ug/m3 Operator: bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	90	70	130

	Concentration			
Compounds:	ug/m3	ppbv		
Benzene	<1.7	< 0.54		
Toluene	<100	<27		
Ethylbenzene	< 2.3	< 0.54		
m,p-Xylene	5.1	1.2		
o-Xylene	< 2.3	< 0.54		
Gasoline Range Organics	<1,800	<430		

# ENVIRONMENTAL CHEMISTS

# Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Inf_8-17-2022	Client:	Wood Environment & Infrastructure
-------------------	---------------	---------	-----------------------------------

Date Received: 08/17/22 Project: Kelly Moore, F&BI 208249

Lab ID: Date Collected: 208249-02 1/8.3 08/17/22 Date Analyzed: Data File:  $082320.\mathrm{D}$ 08/24/22 Matrix: GCMS8 Air Instrument: Units: ug/m3 Operator: bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	93	70	130

	Concent	ntration		
Compounds:	ug/m3	ppbv		
_				
Benzene	<2.7	< 0.83		
Toluene	<160	<41		
Ethylbenzene	<3.6	< 0.83		
m,p-Xylene	< 7.2	<1.7		
o-Xylene	<3.6	< 0.83		
Gasoline Range Organics	3.500	850		

## **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By Method TO-15

Client Sample ID: Method Blank Client: Wood Environment & Infrastructure

Date Received: Not Applicable Project: Kelly Moore, F&BI 208249

Lab ID: Date Collected: Not Applicable 02-1934 mb 08/23/22 Date Analyzed: Data File:  $082314.\mathrm{D}$ Matrix: Instrument: GCMS8Air ug/m3 Operator: Units: bat

	%	Lower	$_{ m Upper}$
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	93	70	130

	Concentration			
Compounds:	ug/m3	ppbv		
Benzene	< 0.32	< 0.1		
Toluene	<19	<5		
Ethylbenzene	< 0.43	< 0.1		
m,p-Xylene	< 0.87	< 0.2		
o-Xylene	< 0.43	< 0.1		
Gasoline Range Organics	<330	<80		

## ENVIRONMENTAL CHEMISTS

Date of Report: 08/29/22 Date Received: 08/17/22

Project: Kelly Moore, F&BI 208249

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 208227-02 1/5.6 (Duplicate)

	Reporting	Sample	Duplicate	RPD
Analyte	Units	Result	Result	(Limit 30)
Benzene	ug/m3	<1.8	<1.8	nm
Toluene	ug/m3	<110	<110	nm
Ethylbenzene	ug/m3	< 2.4	< 2.4	nm
m,p-Xylene	ug/m3	<4.9	<4.9	nm
o-Xylene	ug/m3	< 2.4	< 2.4	nm

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	ug/m3	43	87	70-130
Toluene	ug/m3	51	101	70-130
Ethylbenzene	ug/m3	59	92	70-130
m,p-Xylene	ug/m3	120	94	70-130
o-Xylene	ug/m3	59	96	70-130

#### **ENVIRONMENTAL CHEMISTS**

## **Data Qualifiers & Definitions**

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The analyte is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits due to sample matrix effects.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

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	IOVASE .		

Address 600 Oriversity St. Site 600

Phone 533+6557 Email christy duitman Rossadpil. Con

City, State, ZIP Scattle WA

SAMPLE CHAIN OF CUSTODY

8/11/22 SAMPLERS (signature) PROJECT NAME & ADDRESS PO# Moore INVOICE TO NOTES:

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	Page #_	ſ	of _	1	
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SAMPLE INFORMATION ANALYSIS REQUESTED															
Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	BTEX by TOIS	Notes
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Friedman & Bruya, Inc. 3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Gain Wodeman	JHA	8-17-22	件30
Received by:	Nhut TRUNG	FB7	8/17/22	1432
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Received by:	* 2	Samples rece	ived at 27°C	

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#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Vineta Mills, M.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

October 12, 2022

Christy Duitman, Project Manager Wood Environment & Infrastructure 3500 188th St SW, Suite 601 Lynnwood, WA 98037

Dear Ms Duitman:

Included are the results from the testing of material submitted on September 27, 2022 from the Kelly Moore, F&BI 209428 project. There are 7 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures WEI1012R.DOC

#### **ENVIRONMENTAL CHEMISTS**

## CASE NARRATIVE

This case narrative encompasses samples received on September 27, 2022 by Friedman & Bruya, Inc. from the Wood Environment & Infrastructure Kelly Moore, F&BI 209428 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Wood Environment & Infrastructure
Laboratory ID	wood Environment & Infrastructure

209428 -01 Eff_9-27-2022 209428 -02 Inf_9-27-2022

The TO-15 gasoline range concentrations were quantified using a single point calibration at 80 ppbv.

All quality control requirements were acceptable.

## ENVIRONMENTAL CHEMISTS

# Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Eff_9-27-2022	Client:	Wood Environment & Infrastructure
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Date Received: 09/27/22 Project: Kelly Moore, F&BI 209428

Lab ID: Date Collected: 209428-01 1/5 09/27/22 Date Analyzed: Data File:  $092929.\mathrm{D}$ 09/30/22 Matrix: GCMS8 Air Instrument: Units: ug/m3 Operator: bat

	%	Lower	$_{ m Upper}$
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	95	70	130

	Concentration			
Compounds:	ug/m3	ppbv		
2-Propanol	<43	<17		
Benzene	<1.6	< 0.5		
Toluene	<94	<25		
Ethylbenzene	< 2.2	< 0.5		
m,p-Xylene	<4.3	<1		
o-Xylene	< 2.2	< 0.5		
Gasoline Range Organics	<1,600	<400		

## ENVIRONMENTAL CHEMISTS

# Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Inf_9-27-2022	Client:	Wood Environment & Infrastructure
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Date Received: 09/27/22 Project: Kelly Moore, F&BI 209428

Lab ID: Date Collected: 209428-02 1/15 09/27/22 Date Analyzed: Data File:  $092930.\mathrm{D}$ 09/30/22 GCMS8 Matrix: Air Instrument: Units: ug/m3 Operator: bat

	%	Lower	$_{ m Upper}$
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	119	70	130

	Concentration			
Compounds:	ug/m3	ppbv		
2-Propanol	<130	<52		
Benzene	<4.8	<1.5		
Toluene	<280	<75		
Ethylbenzene	< 6.5	<1.5		
m,p-Xylene	<13	<3		
o-Xylene	< 6.5	<1.5		
Gasoline Range Organics	62,000	15,000		

## **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By Method TO-15

Client Sample ID: Method Blank Client: Wood Environment & Infrastructure

Date Received: Not Applicable Project: Kelly Moore, F&BI 209428

Lab ID: Date Collected: Not Applicable 02-2298 mb 09/29/22 Date Analyzed: Data File: 092912.DMatrix: Air Instrument: GCMS8ug/m3 Units: Operator: bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	94	70	130

	Concenti	ration
Compounds:	ug/m3	ppbv
2-Propanol	<8.6	<3.5
Benzene	< 0.32	< 0.1
Toluene	<19	<5
Ethylbenzene	< 0.43	< 0.1
m,p-Xylene	< 0.87	< 0.2
o-Xylene	< 0.43	< 0.1
Gasoline Range Organics	<330	<80

## ENVIRONMENTAL CHEMISTS

Date of Report: 10/12/22 Date Received: 09/27/22

Project: Kelly Moore, F&BI 209428

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 209363-10 1/6.4 (Duplicate)

	Reporting	Sample	Duplicate	RPD
Analyte	Units	Result	Result	(Limit 30)
Benzene	ug/m3	<2	<2	nm
Toluene	ug/m3	<120	<120	nm
Ethylbenzene	ug/m3	< 2.8	< 2.8	nm
m,p-Xylene	ug/m3	8.7	8.5	2
o-Xylene	ug/m3	3.6	3.4	6

## ENVIRONMENTAL CHEMISTS

Date of Report: 10/12/22 Date Received: 09/27/22

Project: Kelly Moore, F&BI 209428

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	ug/m3	43	92	70-130
Toluene	ug/m3	51	106	70-130
Ethylbenzene	ug/m3	59	87	70-130
m,p-Xylene	ug/m3	120	91	70-130
o-Xylene	ug/m3	59	99	70-130

#### **ENVIRONMENTAL CHEMISTS**

## **Data Qualifiers & Definitions**

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The analyte is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits due to sample matrix effects.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

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Report To hristy Duttman	SAMPLERS (signature)		Page # of TURNAROUND TIME
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Friedman & Bruya, Inc. 3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	- Gain Plocheman	THA	9-27-22	1137
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#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Vineta Mills, M.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

October 21, 2022

Christy Duitman, Project Manager Wood Environment & Infrastructure 3500 188th St SW, Suite 601 Lynnwood, WA 98037

Dear Ms Duitman:

Included are the results from the testing of material submitted on October 11, 2022 from the Kelly Moore, F&BI 210142 project. There are 6 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures WEI1021R.DOC

#### **ENVIRONMENTAL CHEMISTS**

## CASE NARRATIVE

This case narrative encompasses samples received on October 11, 2022 by Friedman & Bruya, Inc. from the Wood Environment & Infrastructure Kelly Moore, F&BI 210142 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	Wood Environment & Infrastructure
210142 -01	EFF_10-11-2022

210142 -02 INF_10-11-2022

The TO-15 gasoline range concentrations were quantified using a single point calibration at 80 ppbv.

All quality control requirements were acceptable.

# ENVIRONMENTAL CHEMISTS

# Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	EFF 10-11-2022	Client:	Wood Environment & Infrastructure
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Date Received: 10/11/22 Project: Kelly Moore, F&BI 210142

Date Collected: 10/11/22 Lab ID: 210142-01 1/4.5 Date Analyzed: 10/14/22 Data File: 101330.D

	%	Lower	$_{ m Upper}$
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	99	70	130

	Concent	ration
Compounds:	ug/m3	ppbv
Benzene	7.5	2.3
Toluene	<85	<22
Ethylbenzene	<2	< 0.45
m,p-Xylene	<3.9	< 0.9
o-Xylene	<2	< 0.45
Gasoline Range Organics	<330	<80

## ENVIRONMENTAL CHEMISTS

bat

130

# Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	INF 10-11-2022	Client:	Wood Environment & Infrastructure
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Date Received: 10/11/22 Project: Kelly Moore, F&BI 210142

70

Lab ID: Date Collected: 10/11/22 210142-02 1/6.7 Date Analyzed: 101331.D10/14/22 Data File: GCMS7 Matrix: Air Instrument: Units: ug/m3 Operator:

% Lower Upper Surrogates: Recovery: Limit: Limit:

105

	Concent	cration
Compounds:	ug/m3	ppbv
Benzene	<2.1	< 0.67
Toluene	<130	<33
Ethylbenzene	< 2.9	< 0.67
m,p-Xylene	< 5.8	<1.3
o-Xylene	< 2.9	< 0.67
Gasoline Range Organics	49,000	12,000

4-Bromofluorobenzene

# ENVIRONMENTAL CHEMISTS

# Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	Wood Environment & Infrastructure
Chem Sample 1D.	memou biank	Chent.	wood Environment & Imrastructure

Date Received: Not Applicable Project: Kelly Moore, F&BI 210142

Date Collected: Not Applicable Lab ID: 02-2481 mb
Date Analyzed: 10/13/22 Data File: 101311.D
Matrix: Air Instrument: GCMS7
Units: ug/m3 Operator: bat

	%	Lower	$_{ m Upper}$
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	96	70	130

	Concentration				
Compounds:	ug/m3	ppbv			
Benzene	< 0.32	< 0.1			
Toluene	<19	<5			
Ethylbenzene	< 0.43	< 0.1			
m,p-Xylene	< 0.87	< 0.2			
o-Xylene	< 0.43	< 0.1			
Gasoline Range Organics	<330	<80			

## **ENVIRONMENTAL CHEMISTS**

Date of Report: 10/21/22 Date Received: 10/11/22

Project: Kelly Moore, F&BI 210142

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 210130-01 1/8.7 (Duplicate)

	Reporting	Sample	Duplicate	RPD
Analyte	Units	Result	Result	(Limit 30)
Benzene	ug/m3	< 2.8	< 2.8	nm
Toluene	ug/m3	<160	<160	nm
Ethylbenzene	ug/m3	5.4	5.5	2
m,p-Xylene	ug/m3	26	27	4
o-Xylene	ug/m3	14	14	0
Naphthalene	ug/m3	4.9	4.8	2

Laboratory Code: Laboratory Control Sample

	Percent						
	Reporting	Spike	Recovery	Acceptance			
Analyte	Units	Level	LCS	Criteria			
Benzene	ug/m3	43	98	70-130			
Toluene	ug/m3	51	105	70-130			
Ethylbenzene	ug/m3	59	102	70-130			
m,p-Xylene	ug/m3	120	99	70-130			
o-Xylene	ug/m3	59	100	70-130			
Naphthalene	ug/m3	71	106	70-130			

#### **ENVIRONMENTAL CHEMISTS**

## **Data Qualifiers & Definitions**

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
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- dv Insufficient sample volume was available to achieve normal reporting limits.
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- jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

0	SAMPLE CHAIN OF CUSTODY	10-11-2	77 —
210142 Report To Listy Duitman	SAMPLERS (signature)		Page # of TURNAROUND TIME
Company NOOD Environmental Address 600 University St Svite 600	PROJECT NAME & ADDRESS	PO#	✓ Standard     □ RUSH Rush charges authorized by:
City, State, ZIP Scattle WA 98101	NOTES:	INVOICE TO	SAMPLE DISPOSAL
Phone 533346551 Email christy du Fran Quedo	ic com	LANAL VOIC DI	final report delivery  ☐ Hold (Fee may apply):

SAMPLE INFORMATION				*		in the				ANA	LYS.	IS R	EQU	ESTE	D_		
Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac.	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO 15 BTEXN	TO15 cVOCs	APH	Helium	STEX by TOIS	Notes	
EFF_10-11-2022	01				10-11-22	1	(0:3)	Ø	10:38			-		×		5N: 3429 Dura: 7 min	
Inf_10-11-2022	02			IA / 🚱	10-11-52	30"	10:42	Ø	10:48					>	2	Dura: 7 min SN: 5677 Dura: 6 min	
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Friedman & Bruya, Inc. 3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	= Gain Hochemen	JHA	10-11-22	11:35
Received by:	ANHPHAN	F8B	10/11/22	11:35
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FORMS\COC\COCTO-15.DOC

#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Vineta Mills, M.S. Eric Young, B.S. 3012 16th Avenue West Seattle, WA 98119-2029 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

November 18, 2022

Christy Duitman, Project Manager Wood Environment & Infrastructure 3500 188th St SW, Suite 601 Lynnwood, WA 98037

Dear Ms Duitman:

Included are the results from the testing of material submitted on November 8, 2022 from the Kelly Moore, F&BI 211127 project. There are 7 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures WEI1118R.DOC

#### **ENVIRONMENTAL CHEMISTS**

## CASE NARRATIVE

This case narrative encompasses samples received on November 8, 2022 by Friedman & Bruya, Inc. from the Wood Environment & Infrastructure Kelly Moore, F&BI 211127 project. Samples were logged in under the laboratory ID's listed below.

211127 -01 EFF_11-8-2022 211127 -02 INF_11-8-2022

The TO-15 gasoline range concentrations were quantified using a single point calibration at 80 ppbv.

All quality control requirements were acceptable.

#### **ENVIRONMENTAL CHEMISTS**

# Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	EFF 11-8-2022	Client:	Wood Environment & Infrastructure
-------------------	---------------	---------	-----------------------------------

Date Received: 11/08/22 Project: Kelly Moore, F&BI 211127

 Date Collected:
 11/08/22
 Lab ID:
 211127-01 1/4.5

 Date Analyzed:
 11/11/22
 Data File:
 111117.D

 Matrix:
 Air
 Instrument:
 GCMS7

Matrix: Air Instrument: GCM Units: ug/m3 Operator: bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	89	70	130
	Concer	ntration	
Compounds:	ug/m3	ppbv	

Benzene <1.4 < 0.45 Toluene <85 <22 Ethylbenzene <2 < 0.45 m,p-Xylene <3.9 < 0.9 o-Xylene <2 < 0.45 Gasoline Range organics <1,500 <360

### ENVIRONMENTAL CHEMISTS

## Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	INF 11-	8-2022 Client:	Wood Environment & Infrastructure
-------------------	---------	----------------	-----------------------------------

Date Received: 11/08/22 Project: Kelly Moore, F&BI 211127

Lab ID: Date Collected: 211127-02 1/7 11/08/22 Date Analyzed: 11/11/22 Data File: 111118.D Matrix: GCMS7 Air Instrument: Units: ug/m3 Operator: bat

	%	Lower	$_{ m Upper}$
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	97	70	130

	Concentration		
Compounds:	ug/m3	ppbv	
Benzene	<2.2	< 0.7	
Toluene	<130	<35	
Ethylbenzene	<3	< 0.7	
m,p-Xylene	< 6.1	<1.4	
o-Xylene	<3	< 0.7	
Gasoline Range organics	37,000	9,000	

### ENVIRONMENTAL CHEMISTS

## Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	Wood Environment & Infrastructure
-------------------	--------------	---------	-----------------------------------

Date Received: Not Applicable Project: Kelly Moore, F&BI 211127

Date Collected:

Date Collected:

Lab ID:

02-2754 MB

Date Analyzed:

11/11/22

Data File:

111112.D

Matrix:

Air

Instrument:

GCMS7

Units:

ug/m3

Operator:

bat

	%	$\operatorname{Lower}$	$_{ m Upper}$
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	89	70	130

	Conce	entration
Compounds:	ug/m3	ppbv
_		
Benzene	< 0.32	< 0.1
Toluene	<19	<5
Ethylbenzene	< 0.43	< 0.1
m,p-Xylene	< 0.87	< 0.2
o-Xylene	< 0.43	< 0.1
Gasoline Range organics	<330	<80

### ENVIRONMENTAL CHEMISTS

Date of Report: 11/18/22 Date Received: 11/08/22

Project: Kelly Moore, F&BI 211127

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 211161-02 1/5.7 (Duplicate)

	Reporting	Sample	Duplicate	RPD
Analyte	Units	Result	Result	(Limit 30)
Benzene	ug/m3	13	13	0
Toluene	ug/m3	<110	<110	nm
Ethylbenzene	ug/m3	< 2.5	< 2.5	nm
m,p-Xylene	ug/m3	13	13	0
o-Xylene	ug/m3	< 2.5	< 2.5	nm

### ENVIRONMENTAL CHEMISTS

Date of Report: 11/18/22 Date Received: 11/08/22

Project: Kelly Moore, F&BI 211127

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	ug/m3	43	91	70-130
Toluene	ug/m3	51	98	70-130
Ethylbenzene	ug/m3	59	89	70-130
m,p-Xylene	ug/m3	120	96	70-130
o-Xylene	ug/m3	59	100	70-130

#### **ENVIRONMENTAL CHEMISTS**

### **Data Qualifiers & Definitions**

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
- cf The sample was centrifuged prior to analysis.
- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv Insufficient sample volume was available to achieve normal reporting limits.
- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The analyte is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits due to sample matrix effects.
- j The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- $\rm jl$  The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc The presence of the analyte is likely due to laboratory contamination.
- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

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SAMPLE CHAIN OF CUSTODY

11/08/22

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Report To Christy Outman	SAMPLERS (signature)	1 (00	Page # of
Company (DOD) Francouncertal	PROJECT NAME & ADDRESS	T 00 #	TURNAROUND TIME
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City, State, ZIP Seattle, WA 98101	Nome		Rush charges authorized by:
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Phone 5033346551 Email christy dutwer Procedole Co	of the second se		Default: Clean following final report delivery
SAMPLE INFORMATION			□Hold (Fee may apply):
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Sample Name  Lab Canister ID ID ID (Circle One)  Lab Canister Cont. SG=Soil Gas Circle One)  Sampled ("Hg) Time ("Hg) Time  ANALYSIS REQUESTED  ANALYSIS REQUESTED  Level:  IA=Indoor Air SG=Soil Gas Circle One)  Sampled ("Hg) Time ID ("Hg) Time  Notes  Not
IA / SG

Friedman & Bruya, Inc. 3012 16th Avenue West

Seattle, WA 98119-2029

Ph. (206) 285-8282

Fax (206) 283-5044 FORMS\COC\COCTO-15.DOC

•	SIGNATURE Relinquished by:	PRINT NAME	COMPANY	DATE	TIME
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{			Samples received	at <u> </u>	<u> </u>

#### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Yelena Aravkina, M.S. Michael Erdahl, B.S. Vineta Mills, M.S. Eric Young, B.S. 5500 4th Avenue South Seattle, WA 98108 (206) 285-8282 fbi@isomedia.com www.friedmanandbruya.com

December 20, 2022

Christy Duitman, Project Manager Wood Environment & Infrastructure 3500 188th St SW, Suite 601 Lynnwood, WA 98037

Dear Ms Duitman:

Included are the results from the testing of material submitted on December 6, 2022 from the Kelly Moore, F&BI 212062 project. There are 6 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl Project Manager

Enclosures WEI1220R.DOC

#### **ENVIRONMENTAL CHEMISTS**

### CASE NARRATIVE

This case narrative encompasses samples received on December 6, 2022 by Friedman & Bruya, Inc. from the Wood Environment & Infrastructure Kelly Moore, F&BI 212062 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID WOOD Environment & initiastructure	Laboratory ID	Wood Environment & Infrastructure
--------------------------------------------------	---------------	-----------------------------------

212062 -01 Eff_12-6-2022 212062 -02 Inf_12-6-2022

The TO-15 gasoline range concentrations were quantified using a single point calibration at 80 ppbv.

All quality control requirements were acceptable.

### ENVIRONMENTAL CHEMISTS

## Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Eff 12-6-2022	Client:	Wood Environment & Infrastructure
-------------------	---------------	---------	-----------------------------------

Date Received: 12/06/22 Project: Kelly Moore, F&BI 212062

 Date Collected:
 12/06/22
 Lab ID:
 212062-01 1/4.6

 Date Analyzed:
 12/14/22
 Data File:
 121330.D

 Matrix:
 Air
 Instrument:
 GCMS7

Matrix: Air Instrument: GCM Units: ug/m3 Operator: bat

	%	Lower	$_{ m Upper}$
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	85	70	130

	Concentration		
Compounds:	ug/m3	ppbv	
Benzene	<1.5	< 0.46	
Toluene	<87	<23	
Ethylbenzene	<2	< 0.46	
m,p-Xylene	<4	< 0.92	
o-Xylene	<2	< 0.46	
Gasoline Range Organics	<1,500	<370	

### **ENVIRONMENTAL CHEMISTS**

## Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Inf 12-6-2022	Client:	Wood Environment & Infrastructure
-------------------	---------------	---------	-----------------------------------

Date Received: 12/06/22 Project: Kelly Moore, F&BI 212062

Lab ID: Date Collected: 212062-02 1/33 12/06/22 Date Analyzed: Data File: 121331.D12/14/22 GCMS7 Matrix: Air Instrument: Units: ug/m3 Operator: bat

	%	Lower	Upper
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	91	70	130

	Concer	Concentration		
Compounds:	ug/m3	ppbv		
Benzene	<11	<3.3		
Toluene	<620	<160		
Ethylbenzene	<14	<3.3		
m,p-Xylene	<29	<6.6		
o-Xylene	<14	<3.3		
Gasoline Range Organics	22,000	5,400		

### ENVIRONMENTAL CHEMISTS

## Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	Wood Environment & Infrastructure
-------------------	--------------	---------	-----------------------------------

Date Received: Not Applicable Project: Kelly Moore, F&BI 212062

Date Collected: Not Applicable Lab ID: 02-2958 MB
Date Analyzed: 12/13/22 Data File: 121312.D
Matrix: Air Instrument: GCMS7
Units: ug/m3 Operator: bat

	%	Lower	$_{ m Upper}$
Surrogates:	Recovery:	Limit:	Limit:
4-Bromofluorobenzene	85	70	130

	Concentration		
Compounds:	ug/m3	ppbv	
Dammana	< 0.32	<0.1	
Benzene	<0.52	<0.1	
Toluene	<19	<5	
Ethylbenzene	< 0.43	< 0.1	
m,p-Xylene	< 0.87	< 0.2	
o-Xylene	< 0.43	< 0.1	
Gasoline Range Organics	<330	<80	

### **ENVIRONMENTAL CHEMISTS**

Date of Report: 12/20/22 Date Received: 12/06/22

Project: Kelly Moore, F&BI 212062

# QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 212012-01 1/5.0 (Duplicate)

	Reporting	Sample	Duplicate	RPD
Analyte	Units	Result	Result	(Limit 30)
Benzene	ug/m3	<1.6	<1.6	nm
Toluene	ug/m3	<94	<94	nm
Ethylbenzene	ug/m3	< 2.2	< 2.2	nm
m,p-Xylene	ug/m3	<4.3	<4.3	nm
o-Xylene	ug/m3	< 2.2	< 2.2	nm

Laboratory Code: Laboratory Control Sample

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Benzene	ug/m3	43	102	70-130
Toluene	ug/m3	51	99	70-130
Ethylbenzene	ug/m3	59	93	70-130
m,p-Xylene	ug/m3	120	94	70-130
o-Xylene	ug/m3	<b>5</b> 9	96	70-130

#### **ENVIRONMENTAL CHEMISTS**

### **Data Qualifiers & Definitions**

- a The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c The presence of the analyte may be due to carryover from previous sample injections.
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- d The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
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- f The sample was laboratory filtered prior to analysis.
- fb The analyte was detected in the method blank.
- fc The analyte is a common laboratory and field contaminant.
- hr The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs Headspace was present in the container used for analysis.
- ht The analysis was performed outside the method or client-specified holding time requirement.
- ip Recovery fell outside of control limits due to sample matrix effects.
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- J The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
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- L The reported concentration was generated from a library search.
- nm The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo The value reported fell outside the control limits established for this analyte.
- x The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

City, State, ZIP Seattle, WA 98101

# SAMPLE CHAIN OF CUSTODY

12/06/22

SAMPLERS (signature)	12/06/	Page # of \
PROJECT NAME & ADDRESS	PO#	TURNAROUND TIME
Kelly Moore		RUSH
NOTES:	INVOICE TO	SAMPLE DISPOSAL
ld.com		⊁Default:Clean following final report delivery Hold (Fee may apply):

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Sample Name EFF - 12-6-2022	Lab	Canister ID	Flow Cont. ID	IA / SG	Date Sampled 126-22	30"	Initial Time	Ø	Final	TO15 Full Scan	TO15 BTEXN SAT	TO15 cVOCs	EQUI		Notes  Notes  No.: 8099
	SAC			IA / SG											

Friedman & Bruya, Inc. 5500 4th Avenue South

Seattle, WA 98108

Ph. (206) 285-8282

Fax (206) 283-5044

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# **APPENDIX E**

FIELD FORMS, SVE-AS OPERATIONS & MONITORING

# SVE System Monthly Inspection Log. Kelly Moore. Date: 01-12-2022

Visual/Audio Inspection. Located at; 5400 Airport Way South Seattle, WA

Item	Inspected (Y/N)	Condition (Cracks, leaks, non-operational gauges, etc.)
Above Ground Piping	ني	6 Guar
Control Pump (Regenerative Blower)	45	((On ) Off)
Entrainment Pump (Transfer Pump)	LS.	(Auto)/ Hand / Off)
Pressure Gauges/Flow Meters	3	Good
Knockout Tank (record level)	7	% full 51, C 3 appl
Knockout Water Tote (record level)	3	% full 50% @ 125 gel
Dilution Valve Status	3	100'/. Closee
Recirculation Valve Status	ч	open 60%

FE-2

**CATOX Screen Readings** 

Item	Units	Reading	Operating Range
Hour Meter	H-M	19,208	
Catox In (T ₁ )	۰F	739°F	>650
Catox Out (T ₂ )	۰F	649 F	600 - 650
Heat Ex (T ₃ )	۰F	407 F	300 - 400
Flow	SCFM	24 CFM	<300
LEL	%	N JA	5-15

System Gaug	ge Readings	<u> </u>
Item	Units	Reading
FE – 1	"WC	ON WE EZGEFM
PI – 1	"WC (vacuum)	34" 420 VAC
TI – 1	°F	50'F

"WC

**FID Measurements** 

West Many de	Time	FID Reading (ppm)	Valve Position (record notch)	Vacuum ("WC)	Differential Pressure ("WC)	
Western Manifold	OFF	OFF				
SVE – 13	i	1	1	SFF	NIA	
SVE - 12		1	1	1	1	
SVE - 11						
SVE - 10						
SVE - 09	1	1	1	1	1	
Eastern manifold	tooc. His	No PID, IN				
SVE - 01	OFF	FAULT MODE	ON1.1 -			
SVE - 03	OFF	1	off -1 -			
SVE - 05	OFF		df-12 -			
SVE - 07	1002-His		7	346	0.031 @ 12	SO CFM
SVE - 08	1005-ity		4	34"	0.001 @	7. CFM
SVE - 06	86.		Ah-1 -			
SVE - 04	100		off-1 -		+	
SVE - 02	7		04-1-			
SVE Influent	al la		$\omega$			
SVE Effluent	7	1				

Influent Sample ID: TNF 1-12-2022
Influent Sample Time: 1000-449

Effluent Sample ID: Eff. 1-12-20-2-

Field Representative (Print and Sign): 6 meg Hagam Date of Visit: 1.12-2022

# AS System Monthly Inspection Log, Kelly Moore. Date: 61-12-22

### Visual/Audio Inspection

Item	Inspected (Y/N)	Condition (Cracks, leaks, non-operational gauges, etc.)
Above Ground Piping	S	
Regenerative Blower	23	(Auto / Hand / Off)
Heat Exchanger	3	(Auto / Hand / Off)
Pressure Gauges/Flow Meters	7	
Vent Valve Status	3	100/, Classel

An Spage System off. High Ground water

### System Gauge Readings

Before Heat Exchanger

Item	Units	Reading	Operating Range
Hour Meter Sparge Blower	Hour's / Minutes	12,709	
PI – 3	psi	off	0 - 30
TI – 3	۰F	1	150 – 200

### After Heat Exchanger

Item	Units	Reading	Operating Range
Hour Meter Heat Exchanger	Hour's / Minutes	12,710	0
PI – 4	psi	off	0 - 30
TI – 4	°F	2	150 – 200

### Air Flow Monitoring

Location	Time	Valve Pos (record a angle	аррх		essure (psi)		Flow
AS – 1	alen	AIA		N	la	N	A
AS - 2	1						
AS - 3							
AS – 4							
AS - 5		1		_	-		7

Additional Notes.

System operational Cour arrived, upon screening a Vopor stream Vin PIP for Voc's we pulled water to the PID making it inoperable, No VOC Values Will be talled today. We Called The January 2022 System samples of Data. We howrapped Heat tope of insulation on the Water Storage tale, Conveyance line 9 H.O. Tour Site Tube, We Changed oil on the Sporge & CATOX Blower, CATOX Blower Maxing a loud Metal to Metal poise, FASCURE
IMMINENT! D'Ordered a new P.D. Blower forche CATOX. The CATOX Blower Makes hers noise under a local CATOX is operational thanged that Paper. Delivered new Botch of Chart Paper & ink to the Site. Heaved Site, Removed deliver a trasy.

# SVE System Monthly Inspection Log. Kelly Moore. Date: 2-7-2022

Visual/Audio Inspection. Located at: 5400 Airport Way South Seattle, WA

	Inspected	Condition (Cracks, leaks, non-operational
Item	(Y/N)	gauges, etc.)
Above Ground Piping	425	OU
Control Pump (Regenerative Blower)	Jes	(On) Off)
Entrainment Pump (Transfer Pump)	Jes	(Auto / Hand / Off)
Pressure Gauges/Flow Meters	yes	04
Knockout Tank (record level)	40	% full & agol
Knockout Water Tote (record level)	70	% full 175 cpl
Dilution Valve Status	125 100/cle	roed
Recirculation Valve Status	nes	70% open

**CATOX Screen Readings** 

Item	Units	Reading	Operating Range
Hour Meter	H-M	19827.79	
Catox In (T ₁ )	۰F	693	>650
Catox Out (T ₂ )	°F	650	600 - 650
Heat Ex (T ₃ )	of 41	1-44+9K	300 – 400
Flow	SCFM	68 CEM	<300
LEL	%	NA	5-15

Sy	/stem	Gauge	Reac	lings

Item	Units	Reading
FE – 1	"WC	0,000 420
PI – 1	"WC (vacuum)	44" H20
TI – 1	°F	44"
FE-2	"WC	0.4" H20

### **FID Measurements**

Location	Ti	ime	FID Reading (ppm)	Valve Position (record notch)	Vacuum (''WC)	Differential Pressure ("WC)
Western Manifold	اكد	4	NIA			
SVE - 13			West manufol	NIA	NA	NIA
SVE - 12			of line			
SVE - 11			00			
SVE - 10						
SVE - 09		_			1	T
Eastern manifold	11:	50	1.0			
SVE - 01	of					
SVE - 03	الح	) ·_				1
SVE - 05	ca	<b>P</b>				
SVE - 07	11:	مال	3.0	7		
SVE - 08	ne	13	7.2	4		
SVE - 06	0	J				
SVE - 04	co	M -				
SVE - 02	tole	Vool	~			
SVE Influent \\'	P	011	<del>-0, 0 -</del> 9	FUFC1.8 APM	vac's	64
SVE Effluent 1	00		10gh	EFF @ 0:0 pp	vocs	Gist

Influent Sample ID:	In	f_2:	7-2022
Influent Sample Time	e:	11:2	0

Field Representative (Print and Sign):

Date of Visit: 2-7-2022

Cowin Klockemen G. Hayen

# AS System Monthly Inspection Log, Kelly Moore. Date: 2-7-2022 <u>Visual/Audio Inspection</u>

Inspected (Y/N)	Condition (Cracks, leaks, non-operational gauges, etc.)
yes	
yes	(Auto / Hand / Off)
yes	(Auto / Hand / Off)
yes	
Nen	
	(Y/N) Ses Yes Yes

* Ar Sporge System Gauge Readings	Corrently	Offline
--------------------------------------	-----------	---------

System Gauge Readings

Before Heat Exchanger

Item	Units	Reading	Operating Range
Hour Meter Sparge Blower	Hour's / Minutes	127116	
PI – 3	psi	NIA	0 - 30
TI – 3	۰F	NIA	150 – 200

Item	Units	Reading	Operating Range
Hour Meter Heat Exchanger	Hour's / Minutes	12712.5	
PI – 4	psi	NA	0 - 30
TI – 4	۰F	NIA	150 – 200

After Heat Exchanger

## **Air Flow Monitoring**

Location	Time	Valve Position (record appx angle)	Pressure (psi)	Air Flow (SCFM)
AS – 1	NA	NIA	NIA	N/A
AS - 2		ı		
AS - 3				
AS – 4				
AS - 5				2

Changed that paper. System Starts to pull water at 48" H2O Hover vacuum. Laured vacuum to around 44" H2O to quad that, bystem Vac C+2"H2O Collected Feb. 2022 System's vapor samples & system date teday. Realigned SVE Blower Belt goord. Ban air Sparge Blower tightened 4" union's on East Manifold. Off site @ 1300 for

# SVE System Monthly Inspection Log. Kelly Moore. Date: 03-08-2022

Visual/Audio Inspection. Located at; 5400 Airport Way South Seattle, WA

Item	Inspected (Y/N)	Condition (Cracks, leaks, non-operational gauges, etc.)
Above Ground Piping	.9	0
Control Pump (Regenerative Blower)	4	(Op)/ Off)
Entrainment Pump (Transfer Pump)	y	(Auto) Hand / Off) Cheaved. Working O.K
Pressure Gauges/Flow Meters	9	
Knockout Tank (record level)	9	% full 8 gol
Knockout Water Tote (record level)	4	% full 175 gal - unchanged from 2-7-22
Dilution Valve Status	4	100% Closed
Recirculation Valve Status	3	40% Closee

**CATOX Screen Readings** 

Item	Units	Reading	Operating Range
Hour Meter	H-M	20,488	
Catox In (T ₁ )	۰F	739 F	>650
Catox Out (T ₂ )	۰F	617'F	600 - 650
Heat Ex (T ₃ )	۰F	384 6	300 - 400
Flow	SCFM	30 CFM	<300
LEL	%	NIA	5-15

**System Gauge Readings** 

Item	Units	Reading
FE – 1	"WC	Orceo "H2D
PI – 1	"WC (vacuum)	424 420
TI – 1	°F	45.F
FE-2	"WC	0.001

### **FID Measurements**

Location	Time	FID Reading (ppm)	Valve Position (record notch)	Vacuum (''WC)	Differential Pressure ("WC)
Western Manifold	NIA	off			
SVE – 13	1	W C	NIA	15/4	NIA
SVE – 12					
SVE - 11					
SVE - 10		}			
SVE - 09	1		1	7	1
Eastern manifold	1103	0.00 FAM	0:000 H2003	BOCFM	
SVE - 01	13/A -				-1
SVE - 03	W (A -				
SVE - 05	N/A -				1
SVE - 07	1100	0,00 PPM	7-100/1000	42" \$20	0 - 000 420
SVE - 08	1055	0,00 991	5- 60/1 open	42" Hzo	0,000 " N2
SVE - 06	N/A -				
SVE - 04	N/A -				
SVE - 02	15 H -			-	
SVE Influent	1015	0.00 PPM			
SVE Effluent	1010	0,00 fpm			

Influent Sample ID: ZNF- 3-8-2022
Influent Sample Time: 1045

Effluent Sample ID: EFF 3-3-2022 Effluent Sample Time: 1034-Hz

Field Representative (Print and Sign): George Hogen Date of Visit: 3-3-22

PID was California 3-7-22-01. PID FIELD Bump TEST Via 1 of 2

100 April Cal gas - PID Read 98-3ppm - 01K.

# AS System Monthly Inspection Log, *Kelly Moore*. Date: <u>03-08-2022</u> Visual/Audio Inspection

ltem	Inspected (Y/N)	Condition (Cracks, leaks, non-operational gauges, etc.)
Above Ground Piping	4	
Regenerative Blower	ري ع	(Auto / Hand /Off)
Heat Exchanger	y.	(Auto / Hand ) Off)
Pressure Gauges/Flow Meters	3	
Vent Valve Status	3	

**System Gauge Readings** 

Before Heat Exchanger

Item	Units	Reading	Operating Range
Hour Meter Sparge Blower	Hour's / Minutes	12,714.0	
PI – 3	psi	OFF	0 - 30
TI – 3	۰F	OFF	150 – 200

After Heat Exchanger

Item	Units	Reading	Operating Range
Hour Meter Heat Exchanger	Hour's / Minutes	12,714.9	
PI – 4	psi	off	0 - 30
TI – 4	°F	OFF	150 – 200

### **Air Flow Monitoring**

Location	Time	Valve Position (record appx angle)	Pressure (psi)	Air Flow (SCFM)	
AS - 1	OFF	as i st	NIA	NIA	
AS - 2	1				
AS - 3					
AS - 4					
AS - 5	2			1	

Additional Notes.

SUE-CATOX operational upon arrival. The Honeyword DPR-100D chart recorder is broken and no longer recording parameters. We Screened the System Vapor streams Via PID + Record Values, Recorded system dates Collected the March 2022 System's Vapor samples. No VOC'S to the Australy Via PID, notified Scott with WOOD. Ran Air Sparge Chower while on site.

Field Representative (Print and Sign): Ginge Hagen Date of Visit: 3-8-22

# SVE System Monthly Inspection Log. Kelly Moore. Date: 4-8-2022

Visual/Audio Inspection. Located at: 5400 Airport Way South Seattle, WA

ltem	Inspected (Y/N)	Condition (Cracks, leaks, non-operational gauges, etc.)
Above Ground Piping	7	
Control Pump (Regenerative Blower)	4	(On / Off)
Entrainment Pump (Transfer Pump)	7	(Auto / Hand / Off)
Pressure Gauges/Flow Meters	7	
Knockout Tank (record level)	4	% full 81/ 6 6 gel 011
Knockout Water Tote (record level)	7	% full 80% C-180 gol 190 gol
Dilution Valve Status	4	100% Closes
Recirculation Valve Status	3	60% open

**CATOX Screen Readings** 

Item	Units	Reading	Operating Range
Hour Meter	H-M	20,801	
Catox In (T ₁ )	۰F	738 F	>650
Catox Out (T ₂ )	٥F	655'F	600 - 650
Heat Ex (T ₃ )	۰F	410.E	300 – 400
Flow	SCFM	32.00	<300
LEL	%	214	5-15

SI	/stem	Gauge	Read	linas
$\sim$	JULI	auage	. icuc	90

Item	Units	Reading
FE – 1	"WC	0,001 PHZD
PI – 1	"WC (vacuum)	44" 420
TI – 1	°F	48.E
FE-2	"WC	0.01 4 H20

Post Blower Temp 115 F

### FID Measurements

Location	Time	FID Reading (ppm)	Valve Position (record notch)	Vacuum ("WC)	Differential Pressure ("WC)	
Western Manifold	West Mi	mile				
SVE - 13	100% 0		NA	NIA	211	
SVE - 12	N/A	AIA				
SVE - 11						
SVE - 10						
SVE - 09	7	-	1	1	1	
Eastern manifold	1029	211 ppm			4	-32CFM
SVE - 01	0952	Value Closed	f	6	Nla	
SVE - 03	0952	Value Closed	1	42" Hzc	es lot	
SVE - 05	0952	Value Closed	1	42"420	15 /tr	
SVE - 07	0953	1.4 ppm	7	44" H20	0,001 HED @17	Com
SVE - 08	0953	2.01pm	4	4411 H20	0,000 HOU @ M	CFM
SVE - 06	0953	Value Closed	1	-0-	2/4	<u> </u>
SVE - 04	0954	Value Closed	· ·	.0	N lot	
SVE - 02	0954	Value Clased	1	.0	NIA	
SVE Influent	0939	0,4PPM	DEC 1001	6		
SVE Effluent	0935	0:0 900				

Influent Sample ID: INFLUENCE Sample Time: ID: 10

Effluent Sample ID: <u>EFF. 4-8-2022</u> Effluent Sample Time: <u>9:54</u>

Field Representative (Print and Sign): Gorge House Date of Visit: 4-8-2022

# AS System Monthly Inspection Log, Kelly Moore. Date: 4-8-2022 Visual/Audio Inspection

ltem	Inspected (Y/N)	Condition (Cracks, leaks, non-operational gauges, etc.)
Above Ground Piping	7	
Regenerative Blower	.9	(Auto / Hand / Off)
Heat Exchanger	7	(Auto / Hand / Off)
Pressure Gauges/Flow Meters	7	
Vent Valve Status	3	100% closed air Sporge off.

Air Sparge System of o due to High Grownswater

**System Gauge Readings** 

Before Heat Exchanger

Item	Units	Reading	Operating Range
Hour Meter Sparge Blower	Hour's / Minutes	12,714.7	
PI – 3	psi	SIA	0 - 30
TI – 3	°F		150 – 200

After Heat Exchanger

Item	Units	Reading	Operating Range
Hour Meter Heat Exchanger	Hour's / Minutes	12,715,6	
PI – 4	psi	N I A	0 - 30
TI – 4	۰F	7	150 – 200

### **Air Flow Monitoring**

Location		Time	(reco	Position rd appx igle)		ssure osi)		r Flow GCFM)
AS – 1	N	IA	M	A	N	IA	٨	A
AS - 2								
AS - 3								
AS – 4								
AS – 5	1	_			1		1	

Additional Notes. O900 As on site.

SUE-CATOX operational Courarrival, Ran air sporage Clower
While on site, shut it down @ our departure, Today we
Collected The April 2002 System's Vagor samples, and recorder
The System data. Conducted House Keeping in the ores
removing weeds & Trash- C1055-Ars off Site

Field Representative (Print and Sign): Cronge Hagain Date of Visit: 4-8-2022

### SVE System Monthly Inspection Log. Kelly Moore. Date: 5-10 - 2022

Visual/Audio Inspection. Located at: 5400 Airport Way South Seattle, WA

	Inspected	Condition (Cracks, leaks, non-operational
Item	(Y/N)	gauges, etc.)
Above Ground Piping	Y	
Control Pump (Regenerative Blower)	7	((On) Off)
Entrainment Pump (Transfer Pump)	7	((Auto) Hand / Off)
Pressure Gauges/Flow Meters	9	
Knockout Tank (record level)	9	% full 75%, @190 Gel
Knockout Water Tote (record level)	3	% full 01/1 No H20
Dilution Valve Status	7	Closed (00%.
Recirculation Valve Status	3	open 60%.

**CATOX Screen Readings** 

Item	Units	Reading	Operating Range
Hour Meter	H-M	20,801,	
Catox In (T ₁ )	۰F	742 F	>650
Catox Out (T ₂ )	٥F	651 F	600 - 650
Heat Ex (T ₃ )	۰F	420 /	300 – 400
Flow	SCFM	48	<300
LEL	%	NIA	5-15

Svet	em	Gam	ne l	Read	inas
<b>0 7 3</b> 1	CIII	uuu	gc :	loud	11190

Item	Units	Reading
FE – 1	"WC	0.002"A=0
PI – 1	"WC (vacuum)	50" H20
TI – 1	°F	52°F
FE-2	"WC	0.01 " H20

### **FID Measurements**

Location	Time	FID Reading (ppm)	Valve Position (record notch)	Vacuum (''WC)	Differential Pressure ("WC)
Western Manifold	NIA -				
SVE - 13	1	A) LA		\ /	\ /
SVE - 12	West V	narifold of	line		
SVE - 11	1	o w		$\vee$	
SVE - 10					
SVE - 09		1			
Eastern manifold	10:36	0.26bw			
SVE - 01	412		i off -		7
SVE - 03	N/4 -	<del></del>	1 27 -		7
SVE - 05	ula -		1 0/10 -		+
SVE - 07	10:31	O. 9 ppm	7	50"H20	0,002"Azo
SVE - 08	10:33	O. SPPM	4	50 420	0,001" AZD
SVE - 06	- 4/h	1	1 4 -		
SVE - 04	W/A -		1 310 -		~ ·
SVE - 02	NIA -	4	1 01 -		1
SVE Influent	1019	0,2 PPM	00		
SVE Effluent	1003	O.O PPM			

Influent Sample ID: INF_ 5-10-22 Influent Sample Time: 1019-ibs 7Effluent Sample ID: 1003 FMS
G# Effluent Sample Time: EFF 5 10 22

Field Representative (Print and Sign): Date of Visit: 5 10-2022

# AS System Monthly Inspection Log, *Kelly Moore*. Date: 5~10~20.22 <u>Visual/Audio Inspection</u>

Item	Inspected (Y/N)	Condition (Cracks, leaks, non-operational gauges, etc.)
Above Ground Piping	9	
Regenerative Blower	7	(Auto / Hand (Off))
Heat Exchanger	У	(Auto / Hand Off))
Pressure Gauges/Flow Meters	<u>''</u>	
Vent Valve Status	\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sq}}}}}}}}}}}} \sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sq}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}	

EXERCISED AIR SPARGE BLOWER WALLE ON SITE.

**System Gauge Readings** 

Before Heat Exchanger

Item	Units	Reading	Operating Range
Hour Meter Sparge Blower	Hour's / Minutes	12,216.1	
PI – 3	psi	14   V	0 - 30
TI – 3	۰F		150 – 200

After Heat Exchanger

Item	Units	Reading	Operating Range
Hour Meter Heat Exchanger	Hour's / Minutes	12,717.0	
PI – 4	psi	Ajh	0 - 30
TI – 4	℉	1	150 – 200

ARR Spares - Sustain off due to High HED.

### **Air Flow Monitoring**

Location	Time	Valve Position (record appx angle)	Pressure (psi)	Air Flow (SCFM )
AS – 1	4/4			
AS - 2	1/3/4			
AS - 3	414 -			
AS - 4	N/4			
AS - 5	114 -			

Additional Notes. High gramed water has the west Manifold & Air spange System off line. Sue CATOX operational ( our arrival. Changed Chart paper, enercised air Spange System. Local VOC'S due to high groundwater. Recorded system date. Collected the May 2022 System's Vapor samples of Tried to increase the applied Vocaum, anything above 50" A2O The system starts to pull water.

Cleaned area, SVE-CATOX down Meter is Defeative, Will Replace ASAP.

Field Representative (Print and Sign): George Housen Date of Visit: 5-10-2022

# SVE System Monthly Inspection Log. Kelly Moore. Date: 1 -7 2022

Visual/Audio Inspection. Located at; 5400 Airport Way South Seattle, WA

-	Inspected	The second contract the second contract to the second contract to the second contract to the second contract to	
Item	(Y/N)	gauges, etc.)	
Above Ground Piping	3		
Control Pump (Regenerative Blower)	7	(On)/ Off)	
Entrainment Pump (Transfer Pump)	7	(Auto/ Hand / Off)	
Pressure Gauges/Flow Meters	9		
Knockout Tank (record level)	4	% full Emply	
Knockout Water Tote (record level)	9	% full 801/ Fred 6 195 gcd	
Dilution Valve Status	4	100% Closed	
Recirculation Valve Status	4	40% Closed	

**CATOX Screen Readings** 

Item	Units	Reading	Operating Range
Hour Meter	H-M	576.33	
Catox In (T ₁ )	°F	694 F	>650
Catox Out (T ₂ )	٥F	652 F	600 - 650
Heat Ex (T ₃ )	۰F	420 F	300 – 400
Flow	SCFM	49	<300
LEL	%	NIA	5-15

**System Gauge Readings** 

Item	Units	Reading	
FE – 1	"WC	0,001" HZD	
PI – 1	"WC (vacuum)	5211 H20	
TI – 1	°F	53 F	
FE-2	"WC	0.03 " HZO	

### **FID Measurements**

Location	Time	FID Reading FM (ppm)	Valve Position (record notch)	Vacuum (''WC)	Differential Pressure ("WC)
Western Manifold	of do	e to high			
SVE – 13	Ground		ergine the Su	E Wells.	NIA
SVE – 12	NIA	NIA	NIA	NIA	
SVE - 11					
SVE - 10					
SVE - 09	1	1		1	2
Eastern manifold	1035	1.3199			
SVE - 01	N/A C	4			——
SVE - 03	off -	$\omega$			
SVE - 05	off -				
SVE - 07	1031	0.8 fpm	7	46.5 HX	0.0
SVE - 08	1028	11.0 PFM	4	51 Hzo	0.0
SVE - 06	de -				
SVE - 04	off -				-1
SVE - 02	011 -				
SVE Influent	0936	1.6PPM			
SVE Effluent	0930	0.000			

Influent Sample ID: 6-7-2022 94
Influent Sample Time: 1007-Hus

Effluent Sample ID: EFF 16-7-2023 Effluent Sample Time: 0952-45

Field Representative (Print and Sign): Corase Head

Date of Visit: 6.7.2022

AS System Monthly Inspection Log, Kelly Moore. Date: 6-7-2022

Visual/Audio Inspection Air Spores System + West Manifold of time due to

Item	Inspected (Y/N)	Condition (Cracks, leaks, Hon-operational gauges, etc.)		
Above Ground Piping	4	Sanger, etc.,		
Regenerative Blower	4	(Auto / Hand (Off))		
Heat Exchanger	P	(Auto / Hand /Off)		
Pressure Gauges/Flow Meters	9			
Vent Valve Status	u			

**System Gauge Readings** 

	<b>Exchar</b>	

Item	Units	Reading	Operating Range
Hour Meter Sparge Blower	Hour's / Minutes	12,717.8	
PI – 3	psi	N/A	0 - 30
TI – 3	℉	1	150 – 200

After Heat Exchanger

ltem	Units	Reading	Operating Range
Hour Meter Heat Exchanger	Hour's / Minutes	12,718.8	
PI – 4	psi	NIV	0 - 30
TI – 4	℉	7	150 – 200

### **Air Flow Monitoring**

Location	Time	Valve Position (record appx angle)	Pressure (psi)	Air Flow (SCFM)
AS - 1	MA	NIA	NIA	N/A
AS - 2				
AS - 3				
AS – 4				
AS - 5	1	d	1	<del></del>

Additional Notes. SUE - CATOX operational @ our arrival (6900-Ms) Started and nan The Air Spange System to exercise The blower, Recorded the System's Late. Collected the June 2022 SUE-CATOX Systems bopon Samples today. Measured Depth To Water in 3- on site Monitor Wells - KM-O4: 5.50' BC5. KM-O6: 6.63'BGS. KM-O9: 5.02'BGS
The average G.W. elevation drop is 0.80' from 3.21.22 up to today. The SUE Wells are submerged in G.W. until the elevation is below 7'BGS @ Wells 04+09.

Field Representative (Print and Sign): Cronge Hosgern Date of Visit: 6-7.2022

### SVE System Monthly Inspection Log. Kelly Moore. Date: 3-5-22

Visual/Audio Inspection. Located at; 5400 Airport Way South Seattle, WA

ltem	Inspected (Y/N)	Condition (Cracks, leaks, non-operational gauges, etc.)
Above Ground Piping	¥	
Control Pump (Regenerative Blower)	7	(On Off)
Entrainment Pump (Transfer Pump)	7	(Auto / Hand / Off)
Pressure Gauges/Flow Meters	7	
Knockout Tank (record level)	7	% full 11/, - Fall
Knockout Water Tote (record level)	7	% full 75% Full @ 195 gal
Dilution Valve Status	5	
Recirculation Valve Status	7	

**CATOX Screen Readings** 

Item	Units	Reading	Operating Range
Hour Meter	H-M	1,247.76-	عطا
Catox In (T ₁ )	٥F	693'F	>650
Catox Out (T ₂ )	۰F	632 F	600 – 650
Heat Ex (T ₃ )	۰F	423 F	300 – 400
Flow	SCFM	52-CFM	<300
LEL	%	NA	5-15

System Gauge Readings

Item	Units	Reading
FE – 1	"WC	0.001"HZD
PI – 1	"WC (vacuum)	51 "HED
TI – 1	°F	52'F
FE-2	"WC	0.02" 420

### **FID Measurements**

Location	Time	FID Reading (ppm)	Valve Position (record notch)	Vacuum (''WC)	Differential Pressure ("WC)
Western Manifold	NIA	9H			
SVE – 13		70	NA	NA	MA
SVE - 12					
SVE - 11					
SVE - 10					
SVE - 09	1	1			
Eastern manifold	0958	1.0999			
SVE - 01	OFF -				
SVE - 03	OFF -				
SVE - 05	OFF -				
SVE - 07	0956	1.0PPM	7	50"	0,0 "HED
SVE - 08	0953	10.4 PPM	4	52"	0.0 "620
SVE - 06	OFF -			-	7
SVE - 04	OFF -				1
SVE - 02	OFF -				
SVE Influent	0910	1.5 PPM			
SVE Effluent	0900	0.0 PPM			

Influent Sample ID: INF 7-5-22
Influent Sample Time: 09 44

Effluent Sample ID: EFF_ 7-5-22
Effluent Sample Time: 0922

Field Representative (Print and Sign):_

_ Date of Visit: 7-5.22

1 of 2

# AS System Monthly Inspection Log, Kelly Moore. Date: 7-5-2022

### Visual/Audio Inspection

ltem	Inspected (Y/N)	Condition (Cracks, leaks, non-operational gauges, etc.)
Above Ground Piping	ч	
Regenerative Blower	· G	(Auto / Hand / Off)
Heat Exchanger	49	(Auto / Hand / Off)
Pressure Gauges/Flow Meters	3	
Vent Valve Status	5	

Air Sparge Sustem OFF LINE DUE TO High ground Water Toble Sub marging - west UF Wells

System Gauge Readings

Before Heat Exchanger

Item	Units	Rea	ding	Operating Range
Hour Meter Sparge Blower	Hour's / Minutes	12,7	18	
PI – 3	psi	N	IA	0 - 30
TI – 3	°F	-		150 – 200

After Heat Exchanger

Item	Units	Re	ading	Operating Range
Hour Meter Heat Exchanger	Hour's / Minutes	12,	719	
PI – 4	psi	N	IA	0 - 30
TI – 4	٥F	_		150 – 200

**Air Flow Monitoring** 

G. W. Elevations

Location	-Time	/	ngle)	Pressure (psi)	Air Flow (SCFM)
AS – 1	Well	6.7-22	7.5.22	NIA	NIT
AS - 2	04	5.50'	5.79'		
AS - 3	06	6.63'	6.94'		
AS – 4	09	5.02'	5 .33'		
AS – 5	N/A -				1

Additional Notes.

SUE CATOX operational Cour 0845. Hrs arrival. Today we Collected The July 2022 Systems Vapor sample of Late Collection.

Ran air Sparl Skid for /2. Hr. Measured D. T. W in Monitor Wells

4, 6+9 and recorded Values above. The ideal Water level to operate the West Manifold is >7.50'865. We Conducted Systems Maintenance Today.

Changed aid, Cleaned Filters, General Site Houskeeping.

Field Representative (Print and Sign): Croqe Negar Date of Visit: 7-5.27

# SVE System Monthly Inspection Log. Kelly Moore. Date: 8-2-2022

Visual/Audio Inspection. Located at; 5400 Airport Way South Seattle, WA

	Inspected	Condition (Cracks, leaks, non-operational
Item	(Y/N)	gauges, etc.)
Above Ground Piping	4	
Control Pump (Regenerative Blower)	7	(On) Off)
Entrainment Pump (Transfer Pump)	A	(Auto/ Hand / Off)
Pressure Gauges/Flow Meters	7	
Knockout Tank (record level)	4	% full 15% C 10 - Cool.
Knockout Water Tote (record level)	4	% full 10%. @ 20-6al.
Dilution Valve Status	y	100% Closed
Recirculation Valve Status	7	100% Closed

**CATOX Screen Readings** 

Item	Units	Reading	Operating Range
Hour Meter	H-M	1,904 15	
Catox In (T ₁ )	۰F	694'F	>650
Catox Out (T ₂ )	۰F	659'F	600 - 650
Heat Ex (T ₃ )	°F	359'F	300 - 400
Flow	SCFM	246	<300

System Gauge Readings

Item	Units	Reading
FE – 1	"WC	0.0" H20
PI – 1	"WC (vacuum)	20" H20
TI – 1	°F	75'F
FE-2	"WC	4.3" H2D

### PID CA.

### FID Measurements

Location	Time	PェD FID Reading らい(ppm)	Valve Position (record notch)	Vacuum (''WC)	Pres	ential sure /C)
Western Manifold	1245	109.7			11 HZO	CFM
SVE – 13	1	118.7	7	811 1420	0.00	95
SVE - 12		217.9	7	10" H20	0.01	35
SVE - 11		58.4	7	8" H20	0.02	115
SVE - 10		237.7	7	9" 1420	0.00	42
SVE - 09	1	2.8	2	3" #20	0.01	13
Eastern manifold	OFF	1				
SVE - 01	East ma	mitaled Produ	ces Wester and r	o Voc's	From	The
SVE - 03	SUE	1	ne.	C 4 4 4 6	- T	
SVE - 05		, 0				
SVE - 07						
SVE - 08	( · · · · · · · · · · · · · · · · · · ·		_ / = 1		er2 - /	
SVE - 06						
SVE - 04				100		
SVE - 02			- F	to the W		•
SVE Influent	1300	124.2 ppm				
SVE Effluent	1256	3.9 PPM	D.E. 96.9%			

Influent Sample ID: | K | A | Effluent Sample ID: | K | A | Effluent Sample Time: | K | A | Effluent Sample Time: | K | A | A | Effluent Sample Time: | K | A | A | Effluent Sample Time: | K | A | A | Effluent Sample Time: | K | A | A | Effluent Sample Time: | K | A | A | Effluent Sample Time: | K | A | A | Effluent Sample Time: | K | A | A | Effluent Sample Time: | K | Effluent Sample Time: | Effluent S

Field Representative (Print and Sign): 6 Hogam Date of Visit: 8 - 2 - 2022

# AS System Monthly Inspection Log, Kelly Moore. Date: 8.2.2022 Visual/Audio Inspection

ltem	Inspected (Y/N)	Condition (Cracks, leaks, non-operational gauges, etc.)
Above Ground Piping	4	
Regenerative Blower	9	(Auto) Hand / Off)
Heat Exchanger	4	(Auto) Hand / Off)
Pressure Gauges/Flow Meters	9	
Vent Valve Status	7	

System Gauge Readings

Before Heat Exchanger

Item	Units	Reading	Operating Range
Hour Meter Sparge Blower	Hour's / Minutes	12,722.7	the I min
PI – 3	psi	8.0 P5I	0 - 30
TI – 3	°F	220'F	150 – 200

After Heat Exchanger

Item	Units	Reading	Operating Range
Hour Meter Heat Exchanger	Hour's / Minutes	12,723.6	HR/min
PI – 4	psi	6.0 PSI	0 - 30
TI – 4	°F	91'F	150 – 200

### **Air Flow Monitoring**

Location	Time	Valve Position (record appx angle)	Pressure (psi)	Air Flow (SCFM)
AS - 1	1250 - His	25% open	3.5	11.0
AS - 2	1	1	2.0	11,0
AS - 3			3.5	11.5
AS - 4			4.0	11.5
AS - 5	1	1	3.5	11.0

Additional Notes. Activated air Sparge + West Manigold. East Manigold Shut off as it produces a thingh Volume of the O (wells 7+8C3.0ppm-voc's 665 "Heo-Voc), Toon Water levels C Wells 4 - 6.26, 6-7.45 t 9-5.82. West Manifold Producing thingher VOC'S C124.2 PPM + No H2D To the system @ 20" H2O Vac). No system samples today, Samples scheduled for 8-17.2022. Changed chart Paper.

Field Representative (Print and Sign):	C. Hogan	Date of Visit:	8.2-2022

# SVE System Monthly Inspection Log. Kelly Moore. Date: 8-17.2022

Visual/Audio Inspection. Located at; 5400 Airport Way South Seattle, WA

	Inspected	Condition (Cracks, leaks, non-operational
Item	(Y/N)	gauges, etc.)
Above Ground Piping	4	5
Control Pump (Regenerative Blower)	ч	(On) Off)
Entrainment Pump (Transfer Pump)	9	(Auto)/ Hand / Off)
Pressure Gauges/Flow Meters	4	
Knockout Tank (record level)	4	% full 8 gal 40/, Full
Knockout Water Tote (record level)	4	% full 5.10%. Free @ 50 or so exel
Dilution Valve Status	4	150%. Clared
Recirculation Valve Status	4	100% Closed

**CATOX Screen Readings** 

Item	Units	Reading	i i a i i g c	G
Hour Meter	H-M	GOT DISTRACTED	DID NOT TAK	Ε,
Catox In (T ₁ )	۰F	694 F	>650	
Catox Out (T ₂ )	۰F	649'F	600 - 650	
Heat Ex (T ₃ )	۰F	351.E	300 – 400	
Flow	SCFM	297	<300	
LEL	%	NIA	5-15	

Sı	/stem	Gauge	Read	lings
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Item	Units	Reading
FE – 1	"WC	0.000 "H20
PI – 1	"WC (vacuum)	2011/20
TI – 1	°F	69'F
FE-2	"WC	3.3"420

### **FID Measurements**

Location	Time	FID Reading (ppm)	Valve Position (record notch)	Vacuum (''WC)	Differential Pressure ("WC)
Western Manifold	1017	5.1			
SVE – 13	1	2.2 PPM	2	2.5" 1320	0.001 120
SVE – 12		2.6 PPM	7	8,5 h=0	0.001 11 H20
SVE - 11		0.2 PPM	7	6.5" HED	0,000"HZD
SVE - 10		4.0 PPM	7	(0,0) 1870	0,000 "450
SVE - 09	1	0.0 PPM	7	8.0 "AZO	0.000 "H20
Eastern manifold	06F -				
SVE - 01	)	1	NIA	NIA	N A
SVE - 03					
SVE - 05					
SVE - 07				1	
SVE - 08					
SVE - 06					
SVE - 04					
SVE - 02		4.7 gh	1	1	7
SVE Influent		4.7			
SVE Effluent		0.1			

Influent Sample ID:	47 GH	INF_	8.17.22
Influent Sample Time:	11.32		

Effluent Sample ID: FF _ 0817-22 Effluent Sample Time: 1/22-140

Field Representative (Print and Sign):_

Date of Visit: 8-17-23

# AS System Monthly Inspection Log, *Kelly Moore*. Date: 8.17-2027 Visual/Audio Inspection

ltem	Inspected (Y/N)	Condition (Cracks, leaks, non-operational gauges, etc.)
Above Ground Piping	7	
Regenerative Blower	7	(Auto) Hand / Off)
Heat Exchanger	7	(Auto) Hand / Off)
Pressure Gauges/Flow Meters	Les .	
Vent Valve Status	Le	open 20%.

### System Gauge Readings

Before Heat Exchanger

Item	Units	Reading	Operating Range
Hour Meter Sparge Blower	Hour's / Minutes	13,079.8	Han
PI – 3	psi	8.0	0 - 30
TI – 3	۰F	220 F	150 – 200

#### After Heat Exchanger

Item	Units	Reading	Operating Range
Hour Meter Heat Exchanger	Hour's / Minutes	13,080.7	His midd.
PI – 4	psi	8.0	0 - 30
TI – 4	۰F	90°F	150 – 200

### Air Flow Monitoring

Location	Time	Valve Position (record appx angle)	Pressure (psi)	Air Flow (SCFM)
AS – 1	1015 - Idry	401/, open	4.0	9.0 CFM
AS - 2	1		3,0	\
AS - 3			3.5	
AS – 4			4.0	
AS - 5	2	2	3.75	

Additional Notes. On site ( 6850. Also on Site Chirsty from wood. Tood to Morey From Kelly Moore. Covin, Neil & John from JAA. Today We Calleded the Systems data of August 2022 System Voyor samples.

Reviewled Systems operations With Tood from Kelly Moore.

Low Voc's from the West Manifold, No Voc's from the East Manifold.

West Manifold & Air Sponge Wells, I necessed Sporge Air flow from 11 To 13 CFn, Values dropped, Decrease Sporge air flow from 15 to 9 CFM.

Value decreased by a few PPM. We made no additional adjustments.

Field Representative (Print and Sign): Gange Hayer Date of Visit: 8.17-2022

# SVE System Monthly Inspection Log. Kelly Moore. Date: 4-13-2-2-2

Visual/Audio Inspection. Located at: 5400 Airport Way South Seattle, WA

ltem	Inspected (Y/N)	Condition (Cracks, leaks, non-operational gauges, etc.)
Above Ground Piping	3	
Control Pump (Regenerative Blower)	7	(On) / Off)
Entrainment Pump (Transfer Pump)	7	(Auto / Hand / Off)
Pressure Gauges/Flow Meters	7	
Knockout Tank (record level)	4	% full 1/3 Full 8-cgel
Knockout Water Tote (record level)	2	% full 50 gel, 1/5 TH Full
Dilution Valve Status	4	100% Clares
Recirculation Valve Status	3	100% Closed

**CATOX Screen Readings** 

Item	Units	Reading	Operating Range
Hour Meter	H-M	2,889.51	
Catox In (T ₁ )	۰F	693	>650
Catox Out (T ₂ )	۰F	646	600 – 650
Heat Ex (T ₃ )	۰F	634	300 – 400
Flow	SCFM	300	<300
LEL	%	NIA	5-15

**System Gauge Readings** 

ltem	Units	Reading
FE – 1	"WC	0,001 "Hz0
PI – 1	"WC (vacuum)	19" Hz0
TI – 1	°F	64°F
FE-2	"WC	5.05 " HZO

### **FID Measurements**

Location	Time	FID Reading (ppm)	Valve Position (record notch)	Vacuum (''WC)	Differential Pressure ("WC)
Western Manifold	1045	No vocis via		8,011	
SVE - 13	1	PID, PID	ght 7	7.25 gly	0.00 8 97 CFM
SVE - 12		LAMP FAILED	3 7	9,0 110	0,00" @ 37 CFM
SVE - 11		WATLE ON	7	6.01	DOON CIOG CFN
SVE - 10		SITE,	7	8,0"	0,001 E 43 CFM
SVE - 09		Summa Vessel	9KT 2	2.251	0.000 CICFM
Eastern manifold		Samples	9		
SVE - 01		COULTED	EAST MANJFOLD	OFF	LINE
SVE - 03		TOPAG	1		
SVE - 05		1			
SVE - 07					
SVE - 08					
SVE - 06					
SVE - 04					A
SVE - 02			1	1	1
SVE Influent					
SVE Effluent	1	2			

Influent Sample ID: INF 9-13-22
Influent Sample Time: 1104-143

Effluent Sample ID: EFF 9-13-2022 Effluent Sample Time: 1047-44

Field Representative (Print and Sign):

Hogam Date of Visit: 9-13-2022

Govin Klackeman

# AS System Monthly Inspection Log, *Kelly Moore*. Date: 9-13-2022 Visual/Audio Inspection

Item	Inspected (Y/N)	Condition (Cracks, leaks, non-operational gauges, etc.)
Above Ground Piping	7	
Regenerative Blower	4	(Auto) Hand / Off)
Heat Exchanger	9	(Auto) Hand / Off)
Pressure Gauges/Flow Meters	7	
Vent Valve Status	9	open 30%

### System Gauge Readings

Before Heat Exchanger

Item	Units	Reading	Operating Range
Hour Meter Sparge Blower	Hour's / Minutes	13,708.0	H/m
PI – 3	psi	7.0	0 - 30
TI – 3	۰F	194 F	150 – 200

#### After Heat Exchanger

Item	Units	Reading	Operating Range
Hour Meter Heat Exchanger	Hour's / Minutes	13,709.3	H/m
PI – 4	psi	6,0	0 - 30
TI – 4	۰F	82 F	150 – 200

### **Air Flow Monitoring**

Location	Time	Valve Position (record appx angle)	Pressure (psi)	Air Flow (SCFM)
AS – 1	1040 - Hrs	25% open	3.25	9.5
AS - 2	)	25% open	2.50	9,0
AS - 3		25% open	3.00	9.0
AS – 4		25%. Open	3:75	9.0
AS - 5	1	25% open	3.00	9.5

Additional Notes.

System sperational-No issues. Measured Water levels-KMO4-6.90 KMO16-8.10, KMO9-6.47. The hamp in our RAE-3000 PSD Failed While on site today, No Field VOC Values Were Collected Taday. We did Collect Vapor samples for lab analysis today, We Recorded the Systems data.

Field Representative (Print and Sign): Garin Klockenny Date of Visit: 9-13. 2022

## SVE System Monthly Inspection Log. Kelly Moore. Date: 10-11-2022

Visual/Audio Inspection, Located at: 5400 Airport Way South Seattle, WA

Inspected (Y/N)	Condition (Cracks, leaks, non-operational gauges, etc.)
3	
3	(Op// Off)
E	(Auto) Hand / Off)
Y	
y	% full co/ full c 6-get
J	% full 40% Free @ 115gd
7	
4	
	(A/N)

**CATOX Screen Readings** 

Item	Units	Reading	Operating Range
Hour Meter	H-M	3,561,9	
Catox In (T ₁ )	٥F	688 F	>650
Catox Out (T ₂ )	۰F	640 F	600 – 650
Heat Ex (T ₃ )	۰F	355 F	300 – 400
Flow	SCFM	295	<300
LEL	%	NIA	5-15

**System Gauge Readings** 

Item	Units	Reading
FE – 1	"WC	0,001 "AZO
PI – 1	"WC (vacuum)	624 HZO
TI – 1	°F	57" H20
FE-2	"WC	5.2

### **FID Measurements**

Location	Time	FID Reading (ppm)	Valve Position (record notch)	Vacuum (''WC)	Differential Pressure ("WC)
Western Manifold	6919	GO PAM			
SVE – 13	0919	.O.O PPM	2,0	2 ,000	6.000 il H20
SVE - 12	0916	D.O PPM	2,0	3,00"	0.200 H H20
SVE - 11	0916	ero ffm	2.0	2,001	0,001 H20
SVE - 10	0915	DIO PPM	2,0	2 .60"	0,000" Hz0
SVE - 09	0915	B. O PPM	2,0	2.50"	0,002" H20
Eastern manifold	1025	5 . 8 PP4			
SVE - 01	Closed -				7
SVE - 03	Closed -			20" #20	closed
SVE - 05	Closed -			26" N20	Closed
SVE - 07	1023	9,0 PPM	7-100/10pen	54" H20	0:0010 420
SVE - 08	1020	3.5 PPM	7-100/1 open	56 "AZD	0,001" HZD
SVE - 06	Closed -				
> SVE – 04	Closed -				1
SVE - 02	Closed -				-1
SVE Influent	1029	9,4 PPM			
SVE Effluent	1027	0,0 PP,M			

Influent Sample ID: INF 16.11.2022 Influent Sample Time:

Effluent Sample ID: FF 10.11 - 2022 Effluent Sample Time: 10.31 - 425

Field Representative (Print and Sign): 6 2012

___ Date of Visit: 10 - 11 - 2022

# AS System Monthly Inspection Log, Kelly Moore. Date: <u>io-11-2022</u> Visual/Audio Inspection

Item	Inspected (Y/N)	Condition (Cracks, leaks, non-operational gauges, etc.)
Above Ground Piping	y	
Regenerative Blower	Ś	(Auto) Hand / Off)
Heat Exchanger	9	(Auto/ Hand / Off)
Pressure Gauges/Flow Meters	3	
Vent Valve Status	5	

### System Gauge Readings

Before Heat Exchanger

Item	Units	Reading	Operating Range
Hour Meter Sparge Blower	Hour's / Minutes	14,378,7	
PI – 3	psi	5,5	0 - 30
TI – 3	۰F	173°F	150 – 200

Additional Notes. on sale @0895. Als.

### After Heat Exchanger

Item	Units	Reading	Operating Range
Hour Meter Heat Exchanger	Hour's / Minutes	14,379.6	
PI – 4	psi	5.0	0 - 30
TI – 4	°F	72°F	150 – 200

### **Air Flow Monitoring**

Location	Time	Valve Position (record appx angle)	Pressure (psi)	Air FI (SCF	
AS - 1	1009	20% open	2:0 PSI	5.50	CFM
AS - 2	1	1	1,50 PSZ	5.50	1
AS - 3			2,50 PS.7	6.0	
AS – 4			3.50 PSI	5.0	
AS – 5	1		2.50 PSI	510	1

Source areas, adjusted the System to achewe the Highest influent VOC Values: Colleged the October 2022 System's Vapor samples and feconded the Systems date. Changed chart paper.

Reprogramed + tested Auto dialer. Pulled Water to K.O. Tomk. Opened Well SVE-OH to position 3 to reduce Water to the System System Vaccount row @ 54" H2D. All operational @ our 1115 departure,

Field Representative (Print and Sign): Grove Hogen Date of Visit: 10-11-2022

Cowin Kleckemon

## SVE System Monthly Inspection Log. Kelly Moore. Date: 12-4-2022

Visual/Audio Inspection. Located at: 5400 Airport Way South Seattle, WA

- 1 43 0 8	Inspected	Condition (Cracks, leaks, non-operational
ltem	(Y/N)	gauges, etc.)
Above Ground Piping	4	
Control Pump (Regenerative Blower)	Ä	(On)/ Off)
Entrainment Pump (Transfer Pump)	7	(Auto / Hand / Off)
Pressure Gauges/Flow Meters	у	
Knockout Tank (record level)	y	% full
Knockout Water Tote (record level)	y	% full 75aal - 35% Full
Dilution Valve Status	7	100% closed
Recirculation Valve Status	۲	100%. Closed

**CATOX Screen Readings** 

Item	Units	Reading	Operating Range
Hour Meter	H-M	4,906	
Catox In (T ₁ )	°F	667	>650
Catox Out (T ₂ )	۰F	669	600 – 650
Heat Ex (T ₃ )	°F	3/8	300 – 400
Flow	SCFM	284	<300
	2.5		

**System Gauge Readings** 

Item	Units	Reading
FE – 1	"WC	0.001
PI – 1	"WC (vacuum)	25"420
TI – 1	°F	48.E
FE-2	"WC	5,5 "420

### **FID Measurements**

Location	Time	PrA FID Reading (ppm)	Valve Position (record notch)	Vacuum ("WC)	Differential Pressure ("WC)
Western Manifold	1015	12.0			
SVE - 13	1	24.6	4	7" HZO	0.000 HaD
SVE - 12		16.5	4	11"Hz0	0,000 HED
SVE - 11		2.9	4	3 "HED	0.001 "HEO
SVE - 10		2.7	4	10,75 HED	0.000" HaD
SVE - 09	7	0.0	3	7.75"H20	0.000 HZD
Eastern manifold	1025	0,6			
SVE - 01	1	Closed	1	N/4 -	
SVE - 03	1 mg 1	Closed	1	NIA -	
SVE - 05		Closed	V	N/4 -	
SVE - 07		0.0	4	16 " HED	U. 000 /120
SVE - 08		7.8	7	18 "H=0	0.001 1/4e0
SVE - 06		Closed	1	N/A -	
SVE - 04		Closed	1	N/A -	1
SVE - 02	1	Closed	F 1 2 F 1	N/4 -	1
SVE Influent	0948	1.2			
SVE Effluent	0942	0.0			

Influent Sample ID: TNF 12.6,2022
Influent Sample Time: 1012 - MR5

Effluent Sample ID: <u>EFF. 12-6-2022</u> Effluent Sample Time: <u>1000 - Hrs</u>

Field Representative (Print and Sign):

___ Date of Visit: 12.6.26>2

Davin Klockerson

# AS System Monthly Inspection Log, Kelly Moore. Date: 12-6-2022 Visual/Audio Inspection

ltem	Inspected (Y/N)	Condition (Cracks, leaks, non-operational gauges, etc.)
Above Ground Piping	4	
Regenerative Blower	4	(Auto)/ Hand / Off)
Heat Exchanger	4	(Auto/ Hand / Off)
Pressure Gauges/Flow Meters	y	
Vent Valve Status	4	10% open

System Gauge Readings

Before Heat Exchanger

Item	Units	Reading	Operating Range
Hour Meter Sparge Blower	Hour's / Minutes	15,723.6	
PI – 3	psi	8.0	0 - 30
TI – 3	۰F	188.E	150 - 200

After Heat Exchanger

Item	Units	Reading	Operating Range
Hour Meter Heat Exchanger	Hour's / Minutes	15,724.6	
PI – 4	psi	7.75	0 - 30
TI – 4	°F	55 F	150 – 200

### **Air Flow Monitoring**

Location	Time	Valve Position (record appx angle)	Pressure (psi)	Air Flow (SCFM)
AS – 1	1010 - HRS	25% open	3.5	10.5
AS - 2	1	1	2.5	10.0
AS - 3			3.0	10.25
AS – 4	314 71 3		4.0	10.0
AS - 5	1	1	3,5	10.25

Additional Notes. December 2022 systems Vapor samples and data Collected Today. No influent Voc's C first Screening. System adjusted as follows!.

ADDED, air flow from 5 CFM To 10 CFM C Air Expange Wells 1 through S.

West Manifold Vacuum opened from position 2 to I C Wells 10, 11, 12 #13 C Well 09

Position 2 To 3. East Manifold Well 8 open Position 7 Well 7 from position

7 to 4. Tota Now C 85 gal. Air dilution and recirculation Valves

100'/. Clored

Field Representative (Print and Sign): Date of Visit: 12-6-2022