May 11, 2018

Mohsen Kourehdar Washington State Department of Ecology PO Box 47600 Olympia, Washington 98504-7600

SUBJECT: B&L WOODWASTE SITE APRIL 2018 COMPLIANCE MONITORING RESULTS

Dear Mr. Kourehdar:

On behalf of the B&L Woodwaste Custodial Trust, we are submitting the results of compliance monitoring completed at the B&L Woodwaste site in April 2018.

Groundwater sampling and analysis were completed in accordance with the 2013 Compliance Monitoring Plan and 2017 Compliance Monitoring Plan Addendum. A Compliance Screening Tier 1 data quality review was performed on arsenic data resulting from laboratory analysis. Data were determined to be of acceptable quality for use as reported by the laboratory. The results are presented in the attached table, figure, and time concentration plots.

We look forward to discussing the results with you.

Sincerely, FLOYD | SNIDER

Brett Beaulieu, LHG Senior Hydrogeologist

- Encl.: Table 1 Groundwater Arsenic Results Figure 1 April 2018 Groundwater Arsenic Results Attachment 1 Time Concentration Plots Attachment 2 Laboratory Analytical Reports
- Copies: Dan Silver, B&L Woodwaste Custodial Trustee

Table 1

Groundwater Arsenic Results¹

	Upper Sand Aquifer								Lower Sand Aquifer																
										Total Arse	enic (μg/L)									Total Arsenic (µg/L)				,
Sample Location	D-5U	D-6A	D-7A	D-8A	D-9A	D-10A	MW-13	MW-15	MW-30	MW-31A	MW-33	MW-34	MW-35	PD-141	PD-214	PZ-3A	PZ-4A	R-15	PZ-5A	W-1	D-5L	D-6B	D-7B	D-8B	MW-40B
Compliance Monitor	ing Events	s									•														
April 2018	26.6	NS	515	133	NS	NS	122	153	NS	NS	188	19.80	NS	194	10.8	170	7.0	392	317	10.5	NS	NS	NS	8.22	11.1
January 2018	NS	NS	NS	75.5	NS	NS	NS	NS	NS	NS	124	9.28	NS	NS	8.7	176	5.4	443	559	10.4	NS	NS	NS	8.23	9.8
October 2017	32.4	53.1	25	74.9	48.8	336	221	153	112	2.77	323	9.76	39.3	240	12.5	563	6.0	539	706	10.7	4	5	6	9.46	10.7
August 2017	NS	NS	NS	97.4	NS	NS	NS	NS	NS	NS	372	9.10	NS	NS	10.6	215	6.3	215	NS	13.7	NS	NS	NS	8.34	10.0
April 2017	23.7	NS	30	143	NS	NS	270	104	NS	NS	388	9.10	NS	324	13.3	NS	NS	NS	NS	12	NS	NS	NS	12.2	10.2
October 2016	43.6	NS	30	71.6	48.2	300	632	85.3	176	3.10	458	NS	31.4	451	NS	NS	NS	NS	643	18.6	4	NS	6	12.4	9.71
April 2016	22.8	50.2	34	108	41.0	273	1,200	183	170	2.7	431	NS	32.4	413	NS	NS	NS	NS	347	9	4	4	6	10.9	8.00
October 2015	21.1	60.3	37	87.9	43.0	300	1,220	752	139	2.4	423	NS	29.8	441	NS	NS	NS	NS	610	13.5	3	3	5	10.9	7.1
April 2015	22	47.8	45	342	42.0	354	1,580	1,070	204	4.1	399	NS	25.8	407	NS	NS	NS	NS	NS	10.1	4	4	5	9.3	8.4
October 2014	16.3	50.4	57	107	43.6	318	1,650	1,130	117	3.4	436	NS	23.2	323	NS	NS	NS	NS	NS	11.2	3	4	4	10.7	NS
April 2014	17.6	63.7	49	415	37.2	183	1,430	1,260	136	5.4	376	NS	23.2	326	NS	NS	NS	NS	NS	10.1	3	4	4	10.5	NS
October 2013	12.4	107	54	168	40	181	1,740	1,220	174	5.3	404	NS	21.9	302	NS	NS	NS	NS	NS	12	4	3.6	5	13.9	NS
April 2013	16.5	163	30	363	38.0	199	1,910	1,580	252	6.6	398	NS	23.8	296	NS	NS	NS	NS	NS	10.9	3	5	5	16.6	NS
October 2012	40.8	184	17	196	40	231	2,350	1,580	261	12.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4	3.0	5	155	NS
April 2012	43.8	287	61	137	38	107	2,180	1,480	305	18.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4	4	5	370	NS
September 2011	86.3	885	23	99.6	38	213	2,520	1,520	640	21.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4	4	5	28.2	NS
April 2011	90	1,170	32	126	39	203	2,720	1,610	854	5.7	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3	3	5	21.2	NS
October 2010	86.4	1,290	41	34	37	211	2,220	1,460	1,580	5.9	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3	3	5	6.1	NS
April 2010	100	1,370	27	31.1	37	159	2,450	1,610	2,410	15.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4	4	5	12.8	NS
October 2009	113	1,320	38	39.8	37	202	2,220	1,390	2,060	16.3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3	2	5	11	NS
April 2009	144	1,490	331	68.2	38	175	2,340	1,630	2,190	22.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3	3	5	11.1	NS
October 2008	143	1,430	98	37.7	38	204	2,510	1,720	2,270	22.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3	2	5	12.2	NS
Historical Events																									
March 2007	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5	3	5	18	NS
August 2006	89	1,900	56	450	38	200	3,800	3,700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
September 2005	132	1,790	50 U	86.1	50 U	266	3,530	1,810	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
March 2005	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	7	2.5 U	5	21.2	NS
December 2003	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	6	5 U	6	21	NS
September 2003	190	1,900	5	110	31	300	4,600	2,800	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	6	5	8	20	NS
June 2003	240	1,800	5 U	370	38	270	4,600	2,600	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5	5 U	6	30	NS
March 2003	230	1,700	5 U	330	38	240	4,300	2,500	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	5 U	30	NS
December 2002	230	1,600	5 U	58	36	310	4,500	2,500	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	5 U	20	NS
September 2002	220	1,600	5 U	97	35	280	4,500	2,300	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	5	20	NS
June 2002	240	1,800	5		38	260	4,700	2,500	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	6	30	NS
April 2002	300	1,800	5 U	400	50	300	4,300	2,500	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	5	30	NS
December 2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	8	8	5 U	30	NS
June 2001	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4	4	6	30	NS
March 2001	280	1,800	3	130	39	230	4,300	2,700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3	3	6	30	NS
December 2000	280	2,100	3	62	39	270	5,300	3,100	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4	4	6	20	NS

Table 1

Groundwater Arsenic Results¹

										Upper Sa	nd Aquife	r									Lower Sand Aquifer				
										Total Arse	enic (µg/L	.)										Total Arsenic (μg/L)			
Sample Location	D-5U	D-6A	D-7A	D-8A	D-9A	D-10A	MW-13	MW-15	MW-30	MW-31A	MW-33	MW-34	MW-35	PD-141	PD-214	PZ-3A	PZ-4A	R-15	PZ-5A	W-1	D-5L	D-6B	D-7B	D-8B	MW-40B
Historical Events (con	ıt.)																								
September 2000	260	2,000	5	68	58	350	4,600	2,700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4	5	6	20	NS
June 2000	180	1,500	5 U	96	40	250	3,200	2,500	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	5 U	20	NS
March 2000	310	1,600	5 U	150	39	220	6,200	2,300	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	5 U	20	NS
January 2000	300	1,400	5 U	130	40	240	4,300	2,600	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	6	30	NS
September 1999	300	1,900	5 U	140	47	310	5,600	3,400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4	5	6	20	NS
June 1999	300	1,800	5 U	180	38	260	4,600	2,600	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	5 U	20	NS
March 1999	340	2,000	5 U	200	39	260	4,600	3,000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	6	30	NS
December 1998	320	980	6	100	38	260	5,700	3,200	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	7	30	NS
September 1998	290	1,800	5 U	150	52	340	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	5 U	20	NS
June 1998	320	1,900	5 U	69	42	360	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	5 U	20	NS
March 1998	380	2,400	5 U	97	38	350	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	5 U	40	NS
December 1997	480	2,600	5 U	130	41	490	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	7	60	NS
September 1997	340	2,400	5 U	210	56	390	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	5 U	60	NS
June 1997	390	2,200	5 U	200	49	350	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	5	60	NS
March 1997	360	1,900	5	110	36	340	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	7	60	NS
January 1997	310	2,000	5 U	130	39	310	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	5 U	90	NS
September 1996	300	2,000	5 U	260	73	470	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5	6	5	100	NS
June 1996	NS	NS	5 U	130	49	470	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5	100	NS
March 1996	NS	NS	5 U	150	39	420	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	100	NS
December 1995	NS	NS	5 U	270	44	540	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5	100	NS
June 1995	300	2,200	5 U	170	55	540	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	5 U	200	NS
March 1995	350	2,400	5 U	180	34	320	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	5 U	200	NS
December 1994	312	2,494	5 U	130	42	492	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	5 U	300	NS
August 1994	314	3,252	5 U	145	84	542	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	5 U	400	NS
May 1994	307	2,745	5 U	133	39	363	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	9	700	NS
January 1994	284	2,505	5 U	165	64	402	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5 U	5 U	5 U	800	NS
May 1993	170	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	20 U	NS	NS	NS	NS
August 1990	22	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
December 1989	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
September 1989	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Note:

1 Reported value is the maximum concentration per location, per sampling date.

Abbreviations:

µg/L Micrograms per liter

NS Not sampled

Qualifier:

U Analyte is undetected at given reporting limit.



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Compliance Monitoring Report B&L Woodwaste Site Pierce County, Washington

April 2018 Groundwater Arsenic Results

Path: I:\GIS\Projects\B&L-O&M\MXD\Compliance Monitoring Report\April 2018\April 2018 Groundwater Arsenic Results.mxd Date: 5/10/2018

Attachment 1 Time-Concentration Plots

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Attachment 1 **Time-Concentration Plots**



D-6A

D-8A

Dec-04



Attachment 1 **Time-Concentration Plots**









Attachment 1 Time-Concentration Plots





Attachment 1 **Time-Concentration Plots**



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Attachment 1 **Time-Concentration Plots**









Attachment 1 Time-Concentration Plots





Attachment 1 Time-Concentration Plots







Attachment 2 Laboratory Analytical Reports

ENVIRONMENTAL CHEMISTS

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

April 23, 2018

Brett Beaulieu, Project Manager Floyd-Snider Two Union Square, Suite 600 601 Union St Seattle, WA 98101

Dear Mr Beaulieu:

Included are the results from the testing of material submitted on April 17, 2018 from the B+L Woodwaste, F&BI 804292 project. There are 14 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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.

Colo

Michael Erdahl Project Manager

Enclosures

FDS0423R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 17, 2018 by Friedman & Bruya, Inc. from the Floyd-Snider B+L Woodwaste, F&BI 804292 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Floyd-Snider</u>
804292 -01	BLW-GW-W1
804292 -02	BLW-GW-D7A
804292 -03	BLW-GW-PZ3A
804292 -04	BLW-GW-MW29
804292 -05	BLW-GW-D8A
804292 -06	BLW-GW-D8B
804292 -07	BLW-GW-MW40B
804292 -08	BLW-GW-PD214
804292 -09	BLW-GW-MW34
804292 -10	BLW-GW-MW33

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Client ID:	BLW-GW-W1	Client:	Floyd-Snider
Date Received:	04/17/18	Project:	B+L Woodwaste, F&BI 804292
Date Extracted:	04/18/18	Lab ID:	804292-01
Date Analyzed:	04/18/18	Data File:	804292-01.091
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP
	Concentration		
Analyte:	ug/L (ppb)		
Arsenic	10.5		

ENVIRONMENTAL CHEMISTS

Client ID:	BLW-GW-D7A	Client:	Floyd-Snider
Date Received:	04/17/18	Project:	B+L Woodwaste, F&BI 804292
Date Extracted:	04/18/18	Lab ID:	804292-02
Date Analyzed:	04/18/18	Data File:	804292-02.092
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP
	Concentration		
Analyte:	ug/L (ppb)		
Arsenic	515		

ENVIRONMENTAL CHEMISTS

Client ID:	BLW-GW-PZ3A	Client:	Floyd-Snider
Date Received:	04/17/18	Project:	B+L Woodwaste, F&BI 804292
Date Extracted:	04/18/18	Lab ID:	804292-03
Date Analyzed:	04/18/18	Data File:	804292-03.093
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP
	Concentration		
Analyte:	ug/L (ppb)		
Arsenic	165		

ENVIRONMENTAL CHEMISTS

Client ID:	BLW-GW-MW29	Client:	Floyd-Snider
Date Received:	04/17/18	Project:	B+L Woodwaste, F&BI 804292
Date Extracted:	04/18/18	Lab ID:	804292-04
Date Analyzed:	04/18/18	Data File:	804292-04.094
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP
	Concentration		
Analyte:	ug/L (ppb)		
Arsenic	170		

ENVIRONMENTAL CHEMISTS

Client ID:	BLW-GW-D8A	Client:	Floyd-Snider
Date Received:	04/17/18	Project:	B+L Woodwaste, F&BI 804292
Date Extracted:	04/18/18	Lab ID:	804292-05
Date Analyzed:	04/18/18	Data File:	804292-05.095
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP
	Concentration		
Analyte:	ug/L (ppb)		
Arsenic	133		

ENVIRONMENTAL CHEMISTS

Client ID:	BLW-GW-D8B	Client:	Floyd-Snider
Date Received:	04/17/18	Project:	B+L Woodwaste, F&BI 804292
Date Extracted:	04/18/18	Lab ID:	804292-06
Date Analyzed:	04/18/18	Data File:	804292-06.096
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP
	Concentration		
Analyte:	ug/L (ppb)		
Arsenic	8.22		

ENVIRONMENTAL CHEMISTS

Client ID:	BLW-GW-MW40B	Client:	Floyd-Snider
Date Received:	04/17/18	Project:	B+L Woodwaste, F&BI 804292
Date Extracted:	04/18/18	Lab ID:	804292-07
Date Analyzed:	04/18/18	Data File:	804292-07.097
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP
	Concentration		
Analyte:	ug/L (ppb)		
Arsenic	11.1		

ENVIRONMENTAL CHEMISTS

Client ID:	BLW-GW-PD214	Client:	Floyd-Snider
Date Received:	04/17/18	Project:	B+L Woodwaste, F&BI 804292
Date Extracted:	04/18/18	Lab ID:	804292-08
Date Analyzed:	04/18/18	Data File:	804292-08.098
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP
	Concentration		
Analyte:	ug/L (ppb)		
Arsenic	10.8		

ENVIRONMENTAL CHEMISTS

Client ID:	BLW-GW-MW34	Client:	Floyd-Snider
Date Received:	04/17/18	Project:	B+L Woodwaste, F&BI 804292
Date Extracted:	04/18/18	Lab ID:	804292-09
Date Analyzed:	04/18/18	Data File:	804292-09.099
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP
	Concentration		
Analyte:	ug/L (ppb)		
Arsenic	19.8		

ENVIRONMENTAL CHEMISTS

Client ID:	BLW-GW-MW33	Client:	Floyd-Snider
Date Received:	04/17/18	Project:	B+L Woodwaste, F&BI 804292
Date Extracted:	04/18/18	Lab ID:	804292-10
Date Analyzed:	04/18/18	Data File:	804292-10.100
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP
	Concentration		
Analyte:	ug/L (ppb)		
Arsenic	188		

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Method Blank	Client:	Floyd-Snider
Not Applicable	Project:	B+L Woodwaste, F&BI 804292
04/18/18	Lab ID:	I8-243 mb2
04/18/18	Data File:	I8-243 mb2.079
Water	Instrument:	ICPMS2
ug/L (ppb)	Operator:	SP
Concentration		
ug/L (ppb)		
	Viethod Blank Not Applicable)4/18/18)4/18/18 Water 1g/L (ppb) Concentration ug/L (ppb)	Method BlankClient:Not ApplicableProject:)4/18/18Lab ID:)4/18/18Data File:)4/18/18Data File:WaterInstrument:.g/L (ppb)Operator:Concentration.ug/L (ppb)

Arsenic

<1

ENVIRONMENTAL CHEMISTS

Date of Report: 04/23/18 Date Received: 04/17/18 Project: B+L Woodwaste, F&BI 804292

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code:	804185-03	(Matrix Sp	ike)					
		C 11	C I	Percent	Percent	A .		
	Reporting	S ріке	Sample	Recovery	Recovery	Acceptance	RPD	
Analyte	Units	Level	Result	MS	MSD	Criteria	(Limit 20)	
Arsenic	ug/L (ppb)	10	9.54	90	97	70-130	7	
Laboratory Code: Laboratory Control Sample								

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Arsenic	ug/L (ppb)	10	102	85-115

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.

 ${\bf b}$ - 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.

 ${\rm d}$ - 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 compound 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. Compounds in the sample matrix interfered with the quantitation of the analyte.

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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ſ	Ph. (206) 285-8282	Seattle, WA 98119-2029	3012 16 th Avenue West	Friedman & Bruya, Inc.		BLW-GW-MW13	BLW- GW- MW34	BLW-GW-PD214	BLW-GW-NW401	BLV-GU-D8B	BLW-GW-D8A	BLW-GW- MUD9	BLW-GW-PZ3A	BLW-GW-DHA	BLW-GW-WI	Sample ID		Phone 306. 292. 2078 Ems	City, State, ZIP Seattle	Address 6al Union St	Commany Hoyd Shio	Report To Breft Peau	CLEDRS
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ENVIRONMENTAL CHEMISTS

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

May 4, 2018

Brett Beaulieu, Project Manager Floyd-Snider Two Union Square, Suite 600 601 Union St Seattle, WA 98101

Dear Mr Beaulieu:

Included are the results from the testing of material submitted on April 27, 2018 from the B&L Woodwaste 1507.1, F&BI 804501 project. There are 11 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

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.

Cale

Michael Erdahl Project Manager

Enclosures FDS0504R.DOC

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on April 27, 2018 by Friedman & Bruya, Inc. from the Floyd-Snider B&L Woodwaste 1507.1, F&BI 804501 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Floyd-Snider</u>
804501 -01	BLW-GW-PZ5A
804501 -02	BLW-GW-PZ4A
804501 -03	BLW-GW-5U
804501 -04	BLW-GW-PD141
804501 -05	BLW-GW-MW13
804501 -06	BLW-GW-MW15
804501 -07	BLW-GW-R15

All quality control requirements were acceptable.

ENVIRONMENTAL CHEMISTS

Client ID:	BLW-GW-PZ5A	Client:	Floyd-Snider
Date Received:	04/27/18	Project:	B&L Woodwaste 1507.1
Date Extracted:	05/01/18	Lab ID:	804501-01
Date Analyzed:	05/02/18	Data File:	804501-01.110
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP
Analyte:	Concentration ug/L (ppb)		
Arsenic	317		

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	BLW-GW-PZ4A	Client:	Floyd-Snider
Date Received:	04/27/18	Project:	B&L Woodwaste 1507.1
Date Extracted:	05/01/18	Lab ID:	804501-02
Date Analyzed:	05/02/18	Data File:	804501-02.111
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP
	Concentration		
Analyte:	ug/L (ppb)		
Arsenic	6.98		

3

ENVIRONMENTAL CHEMISTS

Client ID:	BLW-GW-5U	Client:	Floyd-Snider
Date Received:	04/27/18	Project:	B&L Woodwaste 1507.1
Date Extracted:	05/01/18	Lab ID:	804501-03
Date Analyzed:	05/02/18	Data File:	804501-03.112
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP
Analyte:	Concentration ug/L (ppb)		
Arsenic	26.6		

ENVIRONMENTAL CHEMISTS

Client ID:	BLW-GW-PD141	Client:	Floyd-Snider
Date Received:	04/27/18	Project:	B&L Woodwaste 1507.1
Date Extracted:	05/01/18	Lab ID:	804501-04
Date Analyzed:	05/02/18	Data File:	804501-04.113
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP
	Concentration		
Analyte:	ug/L (ppb)		
Arsenic	194		

ENVIRONMENTAL CHEMISTS

Client ID:	BLW-GW-MW13	Client:	Floyd-Snider
Date Received:	04/27/18	Project:	B&L Woodwaste 1507.1
Date Extracted:	05/01/18	Lab ID:	804501-05
Date Analyzed:	05/02/18	Data File:	804501-05.114
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP
	Concentration		
Analyte:	ug/L (ppb)		
Arsenic	122		

ENVIRONMENTAL CHEMISTS

Client ID:	BLW-GW-MW15	Client:	Floyd-Snider
Date Received:	04/27/18	Project:	B&L Woodwaste 1507.1
Date Extracted:	05/01/18	Lab ID:	804501-06
Date Analyzed:	05/02/18	Data File:	804501-06.115
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP
	Concentration		
Analyte:	ug/L (ppb)		
Arsenic	153		

ENVIRONMENTAL CHEMISTS

Client ID:	BLW-GW-R15	Client:	Floyd-Snider
Date Received:	04/27/18	Project:	B&L Woodwaste 1507.1
Date Extracted:	05/01/18	Lab ID:	804501-07
Date Analyzed:	05/02/18	Data File:	804501-07.120
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP
	Concentration		
Analyte:	ug/L (ppb)		
Arsenic	392		

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	Floyd-Snider
Date Received:	Not Applicable	Project:	B&L Woodwaste 1507.1
Date Extracted:	05/01/18	Lab ID:	I8-269 mb2
Date Analyzed:	05/02/18	Data File:	I8-269 mb2.039
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP
	Concentration		
Analyte:	ug/L (ppb)		
Arsenic	<1		

ENVIRONMENTAL CHEMISTS

Date of Report: 05/04/18 Date Received: 04/27/18 Project: B&L Woodwaste 1507.1, F&BI 804501

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code:	804506-01	(Matrix Sp	ike)								
	Reporting	Spike	Sample	Percent Recovery	Percent Recovery	Acceptance	RPD				
Analyte	Units	Level	Result	MS	MSD	Criteria	(Limit 20)				
Arsenic	ug/L (ppb)	10	12.1	94	106	70-130	12				
Laboratory Code: Laboratory Control Sample											

			Percent	
	Reporting	Spike	Recovery	Acceptance
Analyte	Units	Level	LCS	Criteria
Arsenic	ug/L (ppb)	10	106	85-115

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.

 ${\bf b}$ - 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.

 ${\rm d}$ - 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 compound is a common laboratory and field contaminant.

 $hr\ \text{-}\ The\ sample\ and\ duplicate\ were\ reextracted\ and\ reanalyzed.\ RPD\ results\ were\ still\ outside\ of\ control\ limits.\ Variability\ is\ attributed\ to\ sample\ inhomogen\ eity.$

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

 $\ensuremath{\text{ip}}$ - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

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J - The internal standard associated with the analyte is out of control limits. The reported concentration is 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.

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