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Subject: Technical Memorandum, Everett Smelter Plume Groundwater Sampling

This technical memorandum summarizes data collected during the 2023 dry season and 2024 wet season groundwater sampling events at the Everett Smelter Plume (ESP) Site located in Everett, Washington (Figures 1 and 2). Work was performed in accordance with work assignment GEI052 under GeoEngineers, Inc. (GeoEngineers) master contract with the Washington State Department of Ecology (Ecology) (contract number C1900044). The sampling and analyses were performed in accordance with the project Sampling and Analysis Plan ([SAP]; GeoEngineers 2023a) and Quality Assurance Project Plan ([QAPP]; GeoEngineers 2023b).

Sampling Events

The 2023 dry season sampling was performed between August 16 and September 14, 2023. A total of 55 wells were sampled¹. Table 1 provides a list of 89 ESP wells; the 55 wells that were sampled during the 2023 dry season are shaded blue. Notes are provided for wells that were not sampled. The shallow and deep wells observed in 2023 are shown in Figures 3a and 4a, respectively.

The 2024 wet season sampling was performed between February 27 and March 21, 2024. A total of 70 wells were sampled (Table 1). The shallow and deep wells observed in 2024 are shown in Figures 3b and 4b, respectively.

Two SAP deviations for the sampling events included the following:

- Selected deep wells were sampled using bladder pumps rather than impeller pumps because of equipment availability and/or portability of equipment and accessibility of some of the deep wells. In our opinion, this change does not affect the sampling results because bladder pumps and impeller pumps are considered equivalent technologies when sampling for metals². The bladder pump sampling was performed using low flow techniques in the same way that impeller pump sampling would have been performed.
- Total and ferrous iron were to have been measured in selected priority wells as noted in the SAP. Due to an oversight, total and ferrous iron were not measured for all priority wells during the dry season sampling event. Of the 43 priority wells sampled during the dry season, 34 had total and ferrous iron

¹ Eighty-nine well locations were visited during the dry season sampling, and numerous wells were found to be missing, damaged, dry, or inaccessible after repeated sampling attempts (e.g., covered by equipment; blocked by construction activities). Figure 2 shows all wells located during a 2020 field inventory.

² If volatile organic compounds (VOCs) were a contaminant of concern, bladder pumps would be the preferred methodology for sampling. However, as metals are the contaminant of concern, either method is considered an industry standard.

measured. Total and ferrous iron were measured in all sampled priority wells during the 2024 wet season sampling event.

GROUNDWATER POTENTIOMETRIC MAPS

Groundwater potentiometric maps were created from groundwater depth-to-water measurements collected within approximately one half-day on September 7, 2023 (dry season) and March 29, 2024 (wet season). Tables 2 and 3 present the depth to water measurements for the 2023 and 2024 events, respectively. As noted in Table 1, some wells were missing, damaged, etc., and are not included in creating the potentiometric surface maps. Maps were created by converting depth-to-water measurements to North American Vertical Datum ([NAVD] 88) elevations based on historical surveyed well elevations and using geographic information system (GIS)-based software ("nearest-neighbor" method), with selected contours smoothed by hand using best professional judgement. The deep aquifer is known to be tidally influenced, as discussed for the Supplemental remedial investigation (RI) for the Site (GeoEngineers 2016a).

The shallow and deep groundwater potentiometric maps are shown in Figures 5a through 6b, and indicate a generally eastward groundwater flow direction towards the Snohomish River, similar to observations during the Supplemental RI in 2013 (GeoEngineers 2016a).

FIELD PARAMETERS

Field parameters for wells sampled in 2023 and 2024 are summarized in Table 4, and the minimum and maximum values are shown at the bottom of Table 4. Values were within ranges observed historically (i.e., as reported in the Supplemental RI; GeoEngineers 2016a).

ANALYTICAL DATA

A Stage 2A data validation was performed on all laboratory data, in accordance with the scope of the work assignment. No data were qualified. Data validation reports and laboratory reports are provided in Attachment A.

Data are summarized in Tables 5 through 7. All tables include results for total and dissolved (field filtered) arsenic, cadmium, lead and mercury. Results are screened against Everett Smelter groundwater cleanup levels in the Final Cleanup Action Plan (GeoEngineers 2016b). Table 5 includes all data collected from wells between 2012 and 2024. Data for shallow and deep aquifers are shown separately in Tables 6 and 7, respectively.

TREND PLOTS

Trend plots for total arsenic and total lead in selected wells are provided in Attachment B. The wells selected for plotting include "priority wells" identified in the project SAP in which there were any arsenic or lead exceedances. Total arsenic and lead are plotted because they provide useful indicators of Site conditions. Other analytes (i.e., dissolved metals, cadmium, mercury) were not plotted for the following reasons:

- In the wells chosen for plotting, dissolved arsenic is consistently 80 percent to 100 percent of the total arsenic concentration in many samples, and dissolved lead is rarely detected (see Table 5). Furthermore, cleanup levels are based on total arsenic.

- Total and dissolved cadmium and mercury are rarely detected and/or rarely exceed cleanup levels (there is no Site cleanup level for cadmium) (see Table 5).

REFERENCES

GeoEngineers, 2016a. Final Supplemental Remedial Investigation Report, Everett Smelter Lowland Area. March 31, 2016.

GeoEngineers, 2016b. Final Cleanup Action Plan, Everett Smelter Site, Lowland Area. November 10, 2016.

GeoEngineers, 2023a. Sampling and Analysis Plan, Everett Smelter Plume Uplands & Lowlands Sampling Project 2023-2024. August 11, 2023.

GeoEngineers, 2023b. Quality Assurance Project Plan, Everett Smelter Plume Uplands & Lowlands Sampling Project 2023-2024. August 11, 2023.

GRL:PDW:ch

Attachments:

Table 1. Well Inventory 2023-2024

Table 2. Depth to Water Snapshot Measurements September 7, 2023

Table 3. Depth to Water Snapshot Measurements March 29, 2024

Table 4. Groundwater Field Parameters

Table 5. All Groundwater Results 2012 – 2024

Table 6. Shallow Groundwater Results 2012 – 2024

Table 7. Deep Groundwater Results 2012 – 2024

Figure 1. Vicinity Map

Figure 2. Well Inventory 2020

Figure 3a. Shallow Monitoring Well Locations 2023

Figure 3b. Shallow Monitoring Well Locations 2024

Figure 4a. Deep Monitoring Well Locations 2023

Figure 4b. Deep Monitoring Well Locations 2024

Figure 5a. Shallow Groundwater Potentiometric Surface 2023

Figure 5b. Shallow Groundwater Potentiometric Surface 2024

Figure 6a. Deep Groundwater Potentiometric Surface 2023

Figure 6b. Deep Groundwater Potentiometric Surface 2024

Attachment A. Lab Reports and Data Validation Reports

Attachment B. Trend Plots for Selected Wells

Tables

Table 1
Well Inventory 2023-2024
Everett Smelter Plume Groundwater Sampling
Everett Washington

No.	Monitoring Well ID	Northing (Y) ¹	Easting (X) ¹	Top of Casing Elevation (feet NAVD88)	Well Completion Type	Total Well Depth (ft bTOC)	2023 Dry Season Sampling Notes	2024 Wet Season Sampling Notes
1	BP-01S	371977.62	1308726.82	17.78	Stick Up	12.30	Sampled 8/31/23	Sampled 3/20//24
2	BP-01D	371973.75	1308727.10	17.97	Stick Up	36.65	Sampled 8/31/23	Sampled 3/20//24
3	BP-02S	371826.48	1308735.18	18.85	Stick Up	11.22	Sampled 8/31/23	Sampled 3/20//24
4	BP-02D	371822.51	1308735.14	18.88	Stick Up	35.84	Sampled 8/31/23	Sampled 3/21//24
5	BP-03S	371659.42	1308766.22	18.26	Stick Up	11.64	Sampled 8/31/23	Sampled 3/20//24
6	BP-03D	371655.50	1308766.43	18.37	Stick Up	33.35	Sampled 8/31/23	Sampled 3/21//24
7	BP-04S	371545.12	1308782.62	18.36	Stick Up	10.74	Sampled 8/30/23	Sampled 3/21//24
8	BP-04D	371541.18	1308782.81	18.33	Stick Up	34.80	Sampled 8/30/23	Sampled 3/21//24
9	BP-04D2	371552.20	1308789.93	18.54	Stick Up	68.32	Sampled 8/30/23	Sampled 3/21//24
10	BP-05S	371481.49	1308791.42	18.56	Stick Up	12.73	Sampled 8/30/23	Sampled 3/13/2024
11	BP-05D	371477.27	1308791.56	18.65	Stick Up	37.42	Sampled 8/31/23	Sampled 3/13/2024
12	BP-05D2	371472.57	1308791.71	19.26	Stick Up	74.98	Sampled 8/31/23	Sampled 3/13/2024
13	BP-06S	371412.49	1308800.71	18.44	stick Up	11.61	Sampled 8/30/23	Sampled 3/12//24
14	BP-06D	371407.13	1308801.20	18.39	Stick Up	37.59	Sampled 8/30/23	Sampled 3/12//24
15	BP-07S	371337.29	1308811.40	18.41	Stick Up	14.12	Sampled 8/30/23	Sampled 3/12//24
16	BP-07D	371332.80	1308812.10	18.40	Stick Up	38.94	Sampled 8/30/23	Sampled 3/12//24
17	BP-07D2	371340.78	1308814.77	18.58	Stick Up	82.04	Sampled 8/30/23	Sampled 3/12//24
18	BP-08S	371143.35	1308839.02	18.73	Stick Up	10.81	Sampled 8/30/23	Sampled 3/13/2024
19	BP-08D	371139.58	1308839.54	18.59	Stick Up	35.09	Sampled 8/30/23	Sampled 3/13/2024
20	BP-09S	370793.37	1308889.88	18.91	Stick Up	17.70	Sampled 8/30/23	Sampled 3/13/2024
21	BP-09D	370788.62	1308890.47	19.03	Stick Up	31.61	Sampled 8/30/23	Sampled 3/13/2024
22	BP-10S	370519.50	1308928.87	18.83	Stick Up	4.34	Dry	Sampled 3/12//24
23	BP-10D	371725.43	1309359.41	18.86	Stick Up	–	Lid blocked; cannot open	Lid blocked; cannot open
24	LLMW-01D	373911.17	1307952.93	15.74	Flush Mount	37.14	Sampled 8/24/23	Sampled 3/20//24
25	LLMW-02D	372887.01	1307921.39	15.15	Flush Mount	31.98	Blocked by equipment	Sampled 3/21//24
26	LLMW-03S	372968.47	1308355.58	17.45	Stick Up	11.76	Dry	Sampled 3/6/2024
27	LLMW-03D	372965.57	1308351.51	17.45	Stick Up	34.08	Sampled 8/24/23	Sampled 3/6/2024
28	LLMW-04S	372644.25	1308249.76	21.91	Stick Up	17.53	Sampled 9/8/23	Sampled 3/7/2024
29	LLMW-04D	372642.84	1308246.25	21.98	Stick Up	34.73	Sampled 9/8/23	Sampled 3/7/2024
30	LLMW-05S	372938.02	1309084.80	14.05	Flush Mount	9.16	Sampled 8/17/23	Sampled 3/29/2024
31	LLMW-05D	372933.91	1309087.93	13.92	Flush Mount	24.13	Sampled 8/17/23	Sampled 3/29/2024
32	LLMW-06S	372477.27	1309132.50	12.49	Flush Mount	6.79	Dry	Sampled 3/5/2024
33	LLMW-06D	372472.48	1309133.82	12.29	Flush Mount	27.70	Sampled 8/16/23	Sampled 3/5/2024
34	LLMW-07S	372578.12	1309467.27	13.82	Flush Mount	8.97	Sampled 8/16/23	Sampled 3/29/2024
35	LLMW-07D	372580.66	1309464.94	13.81	Flush Mount	24.33	Sampled 8/16/23	Sampled 3/29/2024
36	LLMW-08S	372212.37	1309788.47	16.21	Stick Up	13.16	Dry	Sampled 3/7/2024
37	LLMW-08D	372208.78	1309789.05	16.26	Stick Up	27.81	Sampled 8/21/23	Sampled 3/7/2024
38	LLMW-10S	371721.78	1309357.97	15.91	Stick Up	9.18	Dry	Sampled 3/6/2024
39	LLMW-10D	371724.84	1309359.59	15.97	Stick Up	33.85	Sampled 8/21/23	Sampled 3/6/2024
40	LLMW-11S	371825.36	1310349.59	19.76	Flush Mount	8.31	Dry	Dry
41	LLMW-11D	371821.90	1310350.78	19.71	Flush Mount	22.10	Sampled 8/18/23	Sampled 3/18/2024
42	LLMW-12S	371520.09	1309412.66	15.61	Flush Mount	6.11	Dry	Dry
43	LLMW-12D	371523.02	1309414.26	15.71	Flush Mount	27.19	Sampled 8/21/23	Sampled 3/19/2024
44	LLMW-13S	371682.03	1309796.77	21.49	Flush Mount	–	Well no longer exists	Well no longer exists
45	LLMW-13D	371681.85	1309793.04	21.24	Flush Mount	–	Well no longer exists	Well no longer exists
46	LLMW-14S	371373.48	1309447.07	14.74	Stick Up	7.18	Dry	Dry
47	LLMW-14D	371375.60	1309449.15	14.80	Stick Up	32.02	Dry	Sampled 3/7/2024
48	LLMW-15S	371050.58	1309535.34	15.94	Flush Mount	13.91	Sampled 8/17/23	Sampled 3/5/2024
49	LLMW-15D	371052.59	1309536.68	16.07	Flush Mount	35.02	Sampled 8/17/23	Sampled 3/5/2024
50	LLMW-16S	371158.97	1310165.53	20.02	–	–	Well no longer exists	Well no longer exists
51	LLMW-16D	371157.65	1310161.37	20.14	–	–	Well no longer exists	Well no longer exists
52	LLMW-17S	371319.64	1310602.23	18.27	Flush Mount	7.82	Dry	Dry
53	LLMW-17D	371317.06	1310602.96	18.29	Flush Mount	24.50	Sampled 8/18/23	Sampled 3/18/2024
54	LLMW-18S	370388.76	1309715.20	15.70	Flush Mount	15.81	Sampled 8/17/23	Sampled 3/27/2024
55	LLMW-18D	370391.64	1309718.16	15.91	Flush Mount	39.81	Sampled 8/17/23	Sampled 3/27/2024
56	LLMW-19D	370188.56	1310224.93	14.22	Stick Up	29.60	Sampled 8/28/23	Sampled 3/27/2024
57	LLMW-20D	370541.86	1310748.34	14.92	Stick Up	24.09	No key; sampled in wet season	Sampled 3/27/2024
58	LLMW-21S	370010.70	1309884.89	16.04	Stick Up	9.57	Dry	Sampled 3/26/2024
59	LLMW-21D	370011.11	1309881.92	16.03	Stick Up	36.15	Sampled 8/23/23	Sampled 3/26/2024
60	LLMW-22S	369172.94	1310445.59	12.87	Flush Mount	–	Well no longer exists	Well no longer exists
61	LLMW-22D	369167.90	1310446.16	12.80	Flush Mount	–	Well no longer exists	Well no longer exists
62	LLMW-23S	368222.21	1310277.60	25.54	Flush Mount	24.14	Bee hive; sampled in wet season	Sampled 3/7/2024
63	LLMW-23D	368226.96	1310279.11	25.30	Flush Mount	37.87	Bee hive; sampled in wet season	Sampled 3/7/2024
64	LLMW-24D	371665.55	1308321.72	54.28	Flush Mount	52.59	Solid concrete in monument	Solid concrete in monument
65	LLMW-25D	371489.94	1308367.76	61.76	Flush Mount	61.81	Sampled 9/14/23	Sampled 3/6/2024
66	LLMW-27S	371254.37	1308467.35	61.46	Flush Mount	34.95	Dry	Dry
67	LLMW-27D	371259.27	1308465.44	61.71	Flush Mount	59.02	Sampled 9/1/23	Sampled 3/5/2024
68	LLMW-29S	370978.69	1308557.01	55.66	Flush Mount	15.13	Dry	Dry
69	LLMW-29D	370982.46	1308556.22	55.62	Flush Mount	59.03	Blocked at 43' bgs	Blocked at 43' bgs
70	LLMW-31D	370452.82	1308669.78	58.41	Flush Mount	65.01	Sampled 8/29/23	Sampled 3/6/2024
71	LLMW-33S	369957.83	1308912.96	37.42	Flush Mount	10.11	Blocked by construction	Sampled 3/4/2024

No.	Monitoring Well ID	Northing (Y) ¹	Easting (X) ¹	Top of Casing Elevation (feet NAVD88)	Well Completion Type	Total Well Depth (ft bTOC)	2023 Dry Season Sampling Notes	2024 Wet Season Sampling Notes
72	LLMW-33D	369961.95	1308914.53	37.24	Flush Mount	45.02	Blocked by construction	Sampled 3/4/2024
73	LLMW-34S	368693.84	1308931.77	52.71	Flush Mount	12.20	Sampled 8/16/23	Sampled 3/29/2024
74	LLMW-34D	368696.16	1308930.67	53.03	Flush Mount	91.22	Sampled 9/14/23	Sampled 3/4/2024
75	LLMW-35D	371239.05	1308164.39	90.98	Flush Mount	91.22	Sampled 9/14/23	Sampled 3/7/2024
76	LLMW-36D	371372.94	1308601.39	21.04	Stick Up	33.10	Sampled 8/28/23	Sampled 3/21/2024
77	LLMW-37S	372217.12	1309772.54	13.39	Flush Mount	10.61	Dry	Sampled 3/29/2024
78	LLMW-38S	372240.96	1309780.64	12.41	Flush Mount	11.01	Sampled 8/22/23	Sampled 3/1/2024
79	LLMW-39S	372237.87	1309790.31	12.68	Flush Mount	5.30	Sampled 8/22/23	Sampled 3/1/2024
80	LLMW-40S	372251.90	1309795.10	11.83	Flush Mount	11.19	Sampled 8/22/23	Sampled 3/1/2024
81	LLMW-41S	372172.37	1309794.63	14.92	Flush Mount	10.59	Dry	Sampled 3/29/2024
82	LLMW-42S	372195.50	1309756.28	14.84	Flush Mount	11.03	Sampled 8/21/23	Sampled 3/29/2024
83	EV-6A	371460.13	1308563.16	60.96	Flush Mount	54.64	Well no longer exists	Well no longer exists
84	EV-6B	371466.27	1308565.26	60.91	Flush Mount	66.53	Well no longer exists	Well no longer exists
85	EV-20B	371406.58	1308516.54	64.28	Stick Up	57.87	Sampled 9/14/23	Sampled 3/5/2024
86	EV-22A	372106.28	1308333.58	28.59	Stick Up	22.30	Sampled 9/8/23	Sampled 3/7/2024
87	EV-22B	372111.44	1308337.16	29.02	Stick Up	37.76	Sampled 9/8/23	Sampled 3/7/2024
88	MW-1203R	373910.15	1307960.38	15.7	--	--	Broken / no sample	Broken / no sample
89	MW-1701	--	--	Not surveyed	--	--	Well no longer exists	Well no longer exists

Notes:

¹ Northing (Y) and Easting (X) are in Washington State Plane North Coordinate System, 83/91 grid values.

Blue highlighting indicates the well was sampled

ft bTOC = feet below top of casing

NAVD88 = North American Vertical Datum of 1988

Table 2
Depth to Water Snapshot Measurements September 7, 2023
 Everett Smelter Plume Groundwater Sampling
 Everett, Washington

Monitoring Well ID	Top of Casing Elevation (feet NAVD88)	Snapshot DTW on 9/7/2023	NAVD88 Water Elevation on 9/7/2023	Used in Potentiometric Surface?
Shallow Wells				
BP-02S	18.85	6.7	12.15	Yes
BP-04S	18.36	4.75	13.61	Yes
BP-05S	18.56	5.65	12.91	Yes
BP-07S	18.41	5.16	13.25	Yes
BP-08S	18.73	4.05	14.68	Yes
LLMW-18S	15.70	11.19	4.51	Yes
LLMW-40S	11.83	5.68	6.15	Yes
LLMW-42S	14.84	8.82	6.02	Yes
Deep Wells				
BP-02D	18.88	12.97	5.91	Yes
BP-04D	18.33	12.32	6.01	No
BP-04D2	18.54	10.1	8.44	No
BP-05D	18.65	10.58	8.07	Yes
BP-05D2	19.26	7.04	12.22	No
BP-07D	18.40	12.9	5.50	No
BP-07D2	18.58	7.91	10.67	No
BP-08D	18.59	10.83	7.76	Yes
LLMW-10D	15.97	10.65	5.32	Yes
LLMW-11D	19.71	9.15	10.56	No
LLMW-17D	18.29	8.2	10.09	No
LLMW-18D	15.91	12.45	3.46	Yes
LLMW-25D	61.76	51.96	9.80	Yes

Notes:

DTW = Depth to water from north rim of casing

NAVD88 = North American Vertical Datum of 1988

Table 3
Depth to Water Snapshot Measurements March 29, 2024
Everett Smelter Plume Groundwater Sampling
Everett, Washington

Monitoring Well ID	Top of Casing Elevation (feet NAVD88)	Snapshot DTW on 3/29/2024	NAVD88 Water Elevation on 3/29/2024	Used in Potentiometric Surface?
Shallow Wells				
BP-02S	18.85	4.13	14.72	Yes
BP-04S	18.36	3.73	14.63	Yes
BP-05S	18.56	3.18	15.38	Yes
BP-07S	18.41	2.65	15.76	Yes
BP-08S	18.73	2.66	16.07	Yes
BP-10S	18.83	2.38	16.45	Yes
LLMW-08S	18.73	9.29	9.44	No
LLMW-15S	15.94	9.86	6.08	Yes
LLMW-18S	15.70	9.52	6.18	Yes
LLMW-40S	11.83	4.56	7.27	Yes
LLMW-41S	14.92	7.7	7.22	No
LLMW-42S	14.84	7.55	7.29	No
EV-22A	28.59	15.97	12.62	Yes
Deep Wells				
BP-02D	18.88	11.62	7.26	Yes
BP-04D	18.33	10.8	7.53	Yes
BP-04D2	18.54	9.63	8.91	Yes
BP-05D	18.65	11.14	7.51	Yes
BP-05D2	19.26	7.23	12.03	Yes
BP-07D	18.40	10.99	7.41	Yes
BP-07D2	18.58	6.76	11.82	Yes
BP-08D	18.59	11.21	7.38	Yes
LLMW-08D	16.26	10.55	5.71	Yes
LLMW-10D	15.97	8.89	7.08	Yes
LLMW-14D	14.80	7.99	6.81	Yes
LLMW-17D	18.29	11.49	6.80	No
LLMW-18D	15.91	10.97	4.94	Yes
LLMW-25D	61.76	51.46	10.30	Yes
EV-20B	64.28	50.54	13.74	No
EV-22B	29.02	20.09	8.93	Yes

Notes:

DTW = Depth to water from north rim of casing

NAVD88 = North American Vertical Datum of 1988

Table 4
Groundwater Field Parameters
Everett Smelter Plume Groundwater Sampling
Everett, Washington

Monitoring Well ID	Date	Depth to Water (ft bTOC)	Temperature (°C)	Dissolved Oxygen (mg/L)	Specific Conductance (µS/cm)	Salinity (parts per thousand)	pH	Oxidation-Reduction Potential (mV)	Turbidity (NTU)	Total Iron	Ferrous Iron Fe2+
BP-01S	8/31/23	7.21	16.1	0.38	802	0.40	6.49	-28.9	1.21	7	7
	3/20//24	5.15	8.95	1.77	816	0.40	6.53	-87.5	23.4	7	7
BP-01D	8/31/23	12.08	12.1	0.49	748	0.37	6.74	3.6	0.36	0	0.5
	3/20//24	9.91	11.26	0.14	717	0.35	6.70	-6.4	9.84	0	0
BP-02S	8/31/23	6.81	16.9	2.05	635	0.31	7.09	0.6	8.11	6.5	6.5
	3/20//24	5.21	9.72	0.35	500	0.24	6.88	-130.1	49.1	5	5
BP-02D	8/31/23	13.23	12.5	0.76	475.1	0.23	6.47	29.1	0.38	0	0
	3/21//24	11.21	12.02	0.51	417	0.20	6.38	-38.7	5.91	0	0
BP-03S	8/31/23	4.72	18.6	0.31	446.1	0.22	7.14	-18.6	6.14	6.5	7
	3/20//24	4.01	9.33	0.41	443	0.10	7.19	-104.8	8.98	5	5
BP-03D	8/31/23	11.32	12.3	0.49	348.6	0.17	6.91	-19.6	0.41	2.5	5
	3/21//24	10.02	11.34	0.51	311	0.15	6.92	-78.7	5.07	1.5	4.5
BP-04S	8/30/23	4.98	18.2	0.46	561.3	0.27	7.41	13.1	2.89	5	6.5
	3/21//24	4.12	9.26	0.79	383	0.18	7.36	33.6	3.6	0	0
BP-04D	8/30/23	12.76	12.3	0.54	491.3	0.24	6.70	-0.7	0.37	0	0
	3/21//24	10.50	12.07	1.35	580	0.28	6.74	-30.1	3.36	0	0
BP-04D2	8/30/23	10.76	12.1	0.26	274.9	0.13	7.56	21.4	6.04	0	0
	3/21//24	9.29	11.85	1.43	265	0.13	7.55	-61.6	17.9	0.5	0.5
BP-05S	8/30/23	5.70	17	0.84	486	0.20	7.46	-112	6.6	0	0
	3/13/24	3.20	8.21	1.19	357	0.17	7.51	-139.4	5.1	2	1.5
BP-05D	8/31/23	10.68	12.5	2.02	400.4	0.19	6.51	21.5	0.66	0	0.5
	3/13/24	10.33	12.01	0.60	353	0.17	6.54	-15.8	4.3	0.5	0
BP-05D2	8/31/23	7.41	13.1	0.55	298.1	0.14	7.57	24.1	0.88	0	0.5
	3/13/24	7.32	11.71	0.76	267	0.13	7.59	-67.1	3.3	1	0
BP-06S	8/30/23	5.68	17	0.63	485	0.23	6.71	-34.8	1.29	7	6.5
	3/12//24	3.44	8.89	0.87	397	0.19	6.69	-71.3	4.2	>7	3.5
BP-06D	8/30/23	11.87	12.5	0.48	446.1	0.22	6.40	21.7	0.84	NR	NR
	3/12//24	9.98	11.88	0.87	410	0.20	6.40	-38	6.31	0.5	0.5
BP-07S	8/30/23	4.74	15.2	0.90	155.9	0.90	7.44	-262	6.9	NR	NR
	3/12//24	2.72	9.56	1.36	1235	0.62	7.21	-243.8	5.1	2	0
BP-07D	8/30/23	12.40	12.1	0.38	424	0.20	6.90	-194	1.6	NR	NR
	3/12//24	9.19	12.15	0.72	398	0.19	6.45	-81.7	4.3	1.5	0
BP-07D2	8/30/23	7.22	13	0.62	296	0.15	7.84	-172	2	NR	NR
	3/12//24	6.53	11.54	1.10	266	0.13	7.44	-68.1	4.7	0.5	0
BP-08S	8/30/23	4.22	17.2	0.79	1814	0.92	6.66	-11.2	5.54	5.5	6
	3/13/24	2.78	9.18	1.28	1342	0.67	6.66	86.5	6.8	>7	3
BP-08D	8/30/23	11.21	12.8	0.37	1388	0.70	6.69	-4.8	0.71	0	0
	3/13/24	9.72	12.39	0.40	1165	0.58	6.68	-48.5	6.7	1	0.5
BP-09S	8/30/23	4.04	14.4	0.95	1,175	0.20	6.74	-76.5	31.3	NR	NR
	3/13/24	3.99	10.87	2.17	978	0.49	6.81	-117	5.2	>7	3.5
BP-09D	8/30/23	11.31	12.3	0.41	863	0.10	6.58	-20.4	3.2	NR	NR
	3/13/24	11.12	12.18	0.58	817	0.40	6.51	-70.8	4.3	>7	2.5
BP-10S	3/12//24	2.32	9.58	1.75	1248	0.63	6.43	-72.2	5.1	4	2.5
LLMW-01D	8/24/23	10.11	14	0.84	1631	0.80	6.73	-40.2	0.98	0	0
	3/20//24	9.90	12.77	5.70	1403	0.71	6.72	-124.2	1.17	7	7
LLMW-02D	3/21//24	8.21	12.28	0.55	335	0.16	6.91	-16.2	8.07	1	0
LLMW-03S	3/6/24	5.84	8.54	0.89	90	0.04	6.22	57.8	0.13	1.5	1.5
LLMW-03D	8/24/23	10.71	12.6	0.69	651	0.32	6.84	7.8	1.1	2.5	3
	3/6/24	9.43	11.79	0.60	516	0.25	6.87	25.7	1.66	0	0
LLMW-04S	9/8/23	10.99	15.5	0.09	1410	0.81	8.40	-200.9	3.49	NR	NR
	3/7/24	8.52	9.68	0.70	1010	0.50	6.77	-12.6	2.34	0	0
LLMW-04D	9/8/23	15.49	13.3	0.08	499	0.25	7.02	-194.6	0.02	NR	NR
	3/7/24	14.06	11.89	0.36	958	0.48	7.10	3.2	1.92	0	0
LLMW-05S	8/17/23	6.42	19.2	3.34	1051	0.52	6.13	51.5	0.16	6.5	5.5
	2/29/24	4.98	10.75	1.30	2492	1.31	6.12	-32.1	1.95	>7	2.5
LLMW-05D	8/17/23	7.80	14	0.42	818	0.40	6.50	93.9	0.02	6.5	7
	2/29/24	8.81	12.48	1.14	1605	0.84	6.41	-68.8	1.11	7	2
LLMW-06S	3/5/24	3.48	7.03	0.54	851	0.42	7.03	-34.9	1.71	4.5	1.5
LLMW-06D	8/16/23	8.17	13.6	0.46	615.3	0.30	6.76	58.8	1.14	2	0.5
	3/5/24	3.97	10.05	0.25	601	0.29	6.71	-22.7	12.5	1	0.5
LLMW-07S	8/16/23	6.01	18.9	0.24	36297	22.97	5.98	119.2	1.07	7	6.5
	2/29/24	4.93	10.22	1.27	10899	5.99	6.40	-2.8	2.1	2	1.5
LLMW-07D	8/16/23	12.61	14.8	0.39	4669	2.53	6.79	118.1	2.98	6.5	5
	2/29/24	9.78	13.28	0.45	1793	0.93	6.69	-102.7	1.5	4.5	4.5
LLMW-08S	3/7/24	8.83	9.67	1.2	1063	0.53	6.76	57.9	4.89	0	0
LLMW-08D	8/21/23	11.98	13.4	0.18	1321	0.66	6.74	22	2.04	4	2
	3/7/24	8.65	12.04	0.28	2439	1.26	6.65	1	3.55	5.5	4
LLMW-10S	3/6/24	6.65	8.36	2.03	983	0.49	6.57	78.4	4.31	0	0
LLMW-10D	8/21/23	11.09	12.7	0.41	419.3	0.20	6.72	101.4	7.49	1	5.5
	3/6/24	7.74	11.85	0.66	4600	0.20	6.78	-15.1	1.18	4.5	2.5
LLMW-11D	8/18/23	11.82	14.9	0.23	588.1	0.29	6.66	-53.1	0.08	7	7
	3/18/24	8.93	17.95	0.38	1606	0.82	6.51	-146.4	4.07	4.5	0
LLMW-12D	8/21/23	6.95	12.4	0.54	275.6	0.13	6.77	53.4	2.61	2.5	6.5
	3/19/24	6.02	12.23	0.55	322	0.16	6.79	-92.4	6.02	1	4.5
LLMW-14D	3/7/24	7.44	12.37	2.24	674	0.33	6.63	9.3	2.15	0.5	0
LLMW-15S	8/17/23	11.31	16.8	0.28	1126	0.56	6.32	-182.1	1.44	6.5	7
	3/5/24	9.63	11.49	2.32	953	0.47	6.37	-72.4	1.97	7	6
LLMW-15D	8/17/23	14.34	14.6	0.39	1018	0.51	6.75	-270.3	9.81	0	0

Monitoring Well ID	Date	Depth to Water (ft bTOC)	Temperature (°C)	Dissolved Oxygen (mg/L)	Specific Conductance (µS/cm)	Salinity (parts per thousand)	pH	Oxidation-Reduction Potential (mV)	Turbidity (NTU)	Total Iron	Ferrous Iron Fe2+
LLMW-15D	3/5/24	10.40	12.88	0.08	1187	0.60	6.67	-327.4	4.85	0	0
LLMW-17D	8/18/23	8.45	14.2	0.48	8140	0.40	6.53	25.4	8.52	3.5	5
	3/18/24	8.22	12.83	0.26	1150	0.58	6.6	-66.1	10	3.5	0
LLMW-18S	8/17/23	11.02	17.5	0.36	2210	1.14	6.36	20.4	0.38	>7.0	>7.0
	2/27/24	9.65	11	0.83	2097	1.08	6.19	-103.1	4.26	7	2.5
LLMW-18D	8/17/23	12.39	13.8	3.01	1009	0.50	6.74	-174.3	2.01	NR	NR
	2/27/24	10.30	12.04	0.72	1043	0.52	6.52	-285	6.16	0	0
LLMW-19D	8/28/23	11.31	13.5	0.71	1298	0.65	6.74	-14.1	0.55	0	0
	2/27/24	8.84	12.94	0.76	1167	0.59	6.58	-159	5.81	0	0
LLMW-20D	2/27/24	10.83	8.16	0.68	9661	5.44	6.04	41.4	1.03	0	0
LLMW-21S	2/26/24	8.24	9.94	2.41	310	0.15	5.79	89.1	0.89	0	0
LLMW-21D	8/23/23	10.08	13.4	0.39	686	0.34	6.79	-106.8	0.45	0	0
	2/26/24	8.94	12.32	0.58	692	0.34	6.57	-245.2	1.62	0	0
LLMW-23S	3/7/24	12.66	13.63	0.55	954	0.47	6.32	-133.4	4.8	>7	6
LLMW-23D	3/7/24	17.54	13.26	0.87	2258	1.17	6.46	-260.3	4.3	0	0
LLMW-25D	9/14/23	51.90	14	3.4	296	0.15	6.45	139.1	29.9	NR	NR
	3/6/24	51.49	11.82	3.81	310	0.15	6.21	-185.3	7.1	0	0
LLMW-27D	9/1/23	48.36	12.1	0.47	701	0.31	6.45	7.6	56.2	0	0
	3/5/24	48.17	11.78	6.33	446	0.22	7.41	91.7	7.16	0	0
LLMW-31D	8/29/23	44.96	13.8	0.79	644	0.32	6.46	24.9	2.81	0	0
	3/6/24	44.72	11.41	0.70	650	0.32	6.87	-242.6	8.7	0	0
LLMW-33S	3/4/24	7.97	10.03	2.48	920	0.46	5.68	92.1	6.1	2.5	0.5
LLMW-33D	3/4/24	26.24	12.22	2.86	327	0.16	6.15	125.9	7.3	0	0
LLMW-34S	8/16/23	11.21	17.2	1.12	451	0.22	6.07	127.3	11.8	0	0
	2/29/24	6.44	10.2	7.43	292	0.20	6.16	98.5	2.29	0	0
LLMW-34D	9/14/23	34.49	14.2	1.64	310	0.18	8.20	120.7	5.13	NR	NR
	3/4/24	31.48	11.82	1.29	329	0.16	7.51	52.4	5.2	0	0
LLMW-35D	9/14/23	77.01	13.5	0.88	359	0.20	7.46	147.1	18.5	NR	NR
	3/7/24	77.36	12.41	0.52	412	0.20	6.96	85.9	5.4	1.5	0
LLMW-36D	8/28/23	8.91	11.5	0.54	293.1	0.14	6.35	76.0	0.98	2.5	4
	3/21/24	8.15	11.27	0.95	288	0.14	6.45	33.2	4.88	1	1
LLMW-37S	2/29/24	5.59	10.44	0.61	825	0.43	6.29	-9.9	0.99	1	1
LLMW-38S	8/22/23	6.44	17.8	0.25	3501	1.84	5.97	76.0	0.89	6	3
	3/1/24	4.40	9.6	1.81	978	0.49	6.43	-40.6	1.53	0	0
LLMW-39S	8/22/23	6.29	17.9	0.49	979	0.49	6.53	67.3	2.9	6.5	2
	3/1/24	3.77	8.87	3.1	468	0.23	6.59	-55.8	1.21	0.5	0
LLMW-40S	8/22/23	5.85	17.6	3.79	2482	1.29	6.55	91.4	257	6.5	4
	3/1/24	3.69	7.79	3.08	1050	0.52	6.73	78.6	405	NR	NR
LLMW-41S	2/29/24	7.19	10.33	0.70	974	0.48	6.34	-14.6	3.26	1	1
LLMW-42S	8/21/23	8.31	14.9	0.92	5451	2.96	6.47	106.7	0.11	NR	NR
	2/29/24	7.24	10.26	1.27	846	0.42	6.60	23.2	0.46	0	0
EV-20B	9/14/23	50.95	14	7.23	333	0.10	6.24	165.7	12.7	NR	NR
	3/5/24	50.62	12.96	2.44	374	0.18	8.95	167.2	8.3	0	0
EV-22A	9/8/11	16.10	12.7	0.10	1400	0.85	6.48	-128.2	6.08	NR	NR
	3/7/24	14.29	10.31	0.54	1334	0.67	6.44	-173.7	6.1	7	5.5
EV-22B	9/8/11	20.09	12.3	0.77	3896	2.24	6.59	-124.4	1.79	NR	NR
	3/7/24	19.00	10.79	0.76	3711	1.97	6.80	-56.5	5.1	4	3.5
Minimum		2.32	7.03	0.08	90	0.04	5.68	-327.4	0.02	0	0
Upper 90th		–	16.96	2.46	2367	1.12	7.44	–	9.9	–	–
Maximum		77.36	19.20	7.43	36297	22.97	8.95	167.2	405	>7	>7

Notes:

°C = degree Celsius

ft bTOC = feet below top of casing

mg/L = milligram per liter

µS/cm = microsiemens per centimeter

mV = millivolt

NR = not recorded

NTU = nephelometric turbidity unit

Table 5
All Groundwater Results 2012 Through 2024
Everett Smelter Plume Groundwater Sampling
Everett, Washington

Analyte				Arsenic		Cadmium		Lead		Mercury	
Fraction				Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Units				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Groundwater Cleanup Level ¹				5	5	NE	NE	2.2	2.2	0.025	0.025
Location ²	Sample ID	Sample Date	Sample Type								
BP-01D	BP1D-120126-W	1/26/2012	N	0.5	0.3	0.1 U	0.1 U	0.2	0.1 U	0.1 U	0.1 U
	BP01D-130114-W	1/14/2013	N	0.5 J	0.3	0.5	0.1 U	0.4	0.1 U	0.020 U	0.020 U
	BP01D-130515-W	5/15/2013	N	0.2	0.2	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	BP-01D-130821-W	8/21/2013	N	0.2	0.2 U	--	--	0.1 U	0.1 U	--	--
	BP-01D-131101-W	11/1/2013	N	0.3	0.4	--	--	0.1 U	0.1 U	--	--
	BP-01D_20230831	8/31/2023	N	1.3	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	20240320-BP-01D	3/20/2024	N	1 U	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
BP-01S	BP1S-120126-W	1/26/2012	N	125	116	0.1 U	0.1 U	8.8	0.1 U	0.1 U	0.1 U
	BP01S-130114-W	1/14/2013	N	88.4 J	83.8 J	0.2	0.1 U	11.9 J	0.1 U	0.020 U	0.020 U
	DUP02-130114-W	1/14/2013	FD	90.9 J	84.8 J	0.2	0.1 U	12.1 J	0.1 U	0.020 U	0.020 U
	BP01S-130515-W	5/15/2013	N	94	91.8	0.1 U	0.2	5.6	0.2	0.020 U	0.020 U
	BP-01S-130821-W	8/21/2013	N	208	116	--	--	287	0.1 U	--	--
	BP-01S-131101-W	11/1/2013	N	110	110	--	--	14.1	0.2	--	--
	BP-01S_20230831	8/31/2023	N	130	110	1 U	1 U	25	1 U	0.02 UJ	0.02 UJ
BP-02D	BP2D-120125-W	1/25/2012	N	0.5	0.4	0.1 U	0.1 U	0.2	0.1 U	0.1 U	0.1 U
	BP02D-130114-W	1/14/2013	N	1	0.3	0.1	0.1 U	0.5	0.1 U	0.020 U	0.020 U
	BP02D-130502-W	5/2/2013	N	0.6	0.6	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	BP-02D-130821-W	8/21/2013	N	0.2	0.2 U	--	--	0.1 U	0.1 U	--	--
	BP-02D-131030-W	10/30/2013	N	0.4	0.2 U	--	--	0.2	0.1 U	--	--
	BP-02D_20230831	8/31/2023	N	1 U	1 U	1.3	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	BP-02D-032124	3/21/2024	N	1 U	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
BP-02S	BP2S-120125-W	1/25/2012	N	96.6	97.9	0.1 U	0.1 U	22	0.1 U	0.1 U	0.1 U
	BP02S-130114-W	1/14/2013	N	132	94.5	0.1	0.1 U	10.1	0.1 U	0.020 U	0.020 U
	BP02S-130502-W	5/2/2013	N	104	101	0.1 U	0.1 U	1.8	0.1 U	0.020 U	0.020 U
	BP-02S-130822-W	8/22/2013	N	130	133	--	--	4.8	0.1 U	--	--
	BP-02S-131030-W	10/30/2013	N	122	114	--	--	2.6	0.1 U	--	--
	BP-02S_20230831	8/31/2023	N	170	150	1 U	1 U	5.7	1 U	0.02 UJ	0.02 UJ
	BP-02S-032124	3/21/2024	N	100	120	1 U	1 U	1 U	3.1	0.02 UJ	0.02 UJ
BP-03D	BP3D-120125-W	1/25/2012	N	1	0.8	0.1 U	0.1 U	0.2	0.1 U	0.1 U	0.1 U
	BP03D-130114-W	1/14/2013	N	0.9	0.3	0.7	0.1 U	0.6	0.1 U	0.020 U	0.020 U
	BP03D-130506-W	5/6/2013	N	0.2	0.2	0.1 U	0.1 U	0.1	0.1 U	0.020 U	0.020 U
	BP-03D-130820-W	8/20/2013	N	0.2	0.2 U	--	--	0.1	0.1 U	--	--
	BP-03D-131031-W	10/31/2013	N	0.2 U	0.2 U	--	--	0.1	0.1 U	--	--
	BP-03D_20230831	8/31/2023	N	1.1	1 U	1.2	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	BP-03D-032124	3/21/2024	N	1 U	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
BP-03S	BP3S-120125-W	1/25/2012	N	32.8	33.2	0.1 U	0.1 U	6.8	0.1 U	0.1 U	0.1 U
	BP03S-130114-W	1/14/2013	N	34.4	36.8	0.1 U	0.2	0.2	9.6	0.020 U	0.020 U
	BP03S-130506-W	5/6/2013	N	46.4	44.4	0.1 U	0.1 U	1.3	0.3	0.020 U	0.020 U
	BP-03S-130820-W	8/20/2013	N	67.2	69.5	--	--	1.4	0.1 U	--	--
	BP-03S-131031-W	10/31/2013	N	42.6	42.4	--	--	1.2	0.1	--	--
BP-03S	BP-03S_20230831	8/31/2023	N	64	67	1 U	1	1 U	1.1	0.02 UJ	0.02 UJ
	BP-03S-032024	3/20/2024	N	38	37	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
BP-04D	BP4D-120125-W	1/25/2012	N	5220	5490	0.1 U	0.1 U	1	0.1 U	0.1 U	0.1 U
	BP04D-130115-W	1/15/2013	N	3740	3620	0.5	0.1 U	3.8	0.1 U	0.020 U	0.020 U
	BP04D-130501-W	5/1/2013	N	3470	3820	0.1 U	0.1 U	0.4	0.1 U	0.020 U	0.020 U
	BP-04D-130820-W	8/20/2013	N	3940	4060	--	--	0.1	0.1 U	--	--
	BP-04D-131031-W	10/31/2013	N	3650	3880	--	--	0.2 U	0.1 U	--	--
	BP-04D_20230830	8/30/2023	N	2700	2200	1.4	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	20240321-BP-04D	3/21/2024	N	2500	2500	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
BP-04D2	BP-04D2-130905-W	9/5/2013	N	0.4	0.4	0.1 U	0.1 U	0.1	0.1 U	0.020 U	0.020 U
	BP-04D2-131112-W	11/12/2013	N	0.4	0.3	0.1 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	BP-04D2_20230830	8/30/2023	N	1 U	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	20240321-BP04D2	3/21/2024	N	1 U	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
BP-04S	BP4S-120125-W	1/25/2012	N	68	58.2	0.2	0.1 U	78.5	1.2	0.1 U	0.1 U
	BP04S-130115-W	1/15/2013	N	30.5	24.3	0.6	0.2	35.5	2.2	0.020 U	0.020 U
	BP04S-130501-W	5/1/2013	N	55.4	47.8	0.3	0.2	41.1	2	0.020 U	0.020 U
	BP-04S-130819-W	8/19/2013	N	116	113	--	--	9.1	1.9	--	--
	BP-04S-131031-W	10/31/2013	N	49.7	44.1	--	--	14.2	1.4	--	--
	BP-04S_20230830	8/30/2023	N	31	32	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	20240321-BP-04S	3/21/2024	N	15	7	1.6	1 U	8.4	1.5	0.02 UJ	0.02 UJ
BP-05D	BP5D-120127-W	1/27/2012	N	14900	14500	0.1 U	0.1 U	1.6	0.1 U	0.1 U	0.1 U
	BP05D-130115-W	1/15/2013	N	16400	14800	0.3	0.1 U	0.6	0.1 U	0.020 U	0.020 U
	DUP03-130115-W	1/15/2013	FD	16500	16100	0.2	0.2	0.8	0.1 U	0.020 U	0.020 U
	BP05D-130501-W	5/1/2013	N	15500	17100	0.1 U	0.1 U	0.2	0.2	0.020 U	0.020 U
	DUP-03-130501-W	5/1/2013	FD	15400	17200	0.1 U	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	BP-05D-130819-W	8/19/2013	N	17500	17300	--	--	1.3	0.1 U	--	--
	DUP-01-130819-W	8/19/2013	FD	18100	17500	--	--	1.4	0.1 U	--	--
	BP-05D-131101-W	11/1/2013	N	18900	18600	--	--	0.4 J	0.1 U	--	--
	DUP-01-131101-W	11/1/2013	FD	18500	18500	--	--	0.2 J	0.1 U	--	--
	BP-05D_20230831	8/31/2023	N	11000	11000	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	BP-05D-20240313	3/13/2024	N	11000	11000	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ

Analyte				Arsenic		Cadmium		Lead		Mercury	
Fraction				Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Units				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Groundwater Cleanup Level ¹				5	5	NE	NE	2.2	2.2	0.025	0.025
Location ²	Sample ID	Sample Date	Sample Type								
BP-05D2	BP05D2-130115-W	1/15/2013	N	25.3	25.6	0.6	0.1 U	1.2	0.1 U	0.020 U	0.020 U
	BP05D2-130502-W	5/2/2013	N	9.3	5.4	0.2	0.1 U	1.9	0.1 U	0.020 U	0.020 U
	BP-05D2-130904-W	9/4/2013	N	4.1	3.7	--	--	0.2	0.1 U	--	--
	BP-05D2-131112-W	11/12/2013	N	3.4	3.5	--	--	0.3	0.1 U	--	--
	BP-05D2_20230831	8/31/2023	N	2	1.9	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	BP-05D2-20240313	3/13/2024	N	2.5	2.5	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
BP-05S	BP5S-120127-W	1/27/2012	N	31	27.1	0.1 U	0.1 U	0.7	0.1 U	0.1 U	0.1 U
	BP05S-130115-W	1/15/2013	N	29.9	26.2	7.9	0.1 U	1.4	0.3	0.020 U	0.020 U
	BP05S-130501-W	5/1/2013	N	37.8	35.2	0.1 U	0.1 U	1.3	0.8	0.020 U	0.020 U
	BP-05S-130819-W	8/19/2013	N	69.4	69.5	--	--	1.4	0.1 U	--	--
	BP-05S-131101-W	11/1/2013	N	53.7	51.5	--	--	0.6	0.1 U	--	--
	BP-05S_20230830	8/30/2023	N	62	55	1 U	1 U	2.2	1.1	0.02 UJ	0.02 UJ
	BP-05S-20240313	3/13/2024	N	33	30	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
BP-06D	BP6D-120127-W	1/27/2012	N	2120	2070	0.1 U	0.1 U	0.2	0.1 U	0.1 U	0.1 U
	BP06D-130114-W	1/14/2013	N	1820	1780	0.2	0.1 U	0.4	0.1 U	0.020 U	0.020 U
	BP06D-130506-W	5/6/2013	N	1820	1850	0.1 U	0.1 U	0.1	0.1 U	0.020 U	0.020 U
	BP-06D-130820-W	8/20/2013	N	1810	1810	--	--	0.2	0.1 U	--	--
	BP-06D-131113-W	11/13/2013	N	1740	1750	--	--	0.4	0.1 U	--	--
	BP-06D_20230830	8/30/2023	N	3000	3000	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	DUP_2_20230830	8/30/2023	FD	3100	3200	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	BP-06D-20240312	3/12/2024	N	2900	3000	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
BP-06S	BP6S-120127-W	1/27/2012	N	43.7	38.1	0.1 U	0.1 U	6.1	0.1 U	0.1 U	0.1 U
	BP06S-130114-W	1/14/2013	N	59	52.3	0.3	0.1 U	1.1	0.1 U	0.020 U	0.020 U
	BP06S-130506-W	5/6/2013	N	50.7	54	0.1 U	0.1 U	1	0.1 U	0.020 U	0.020 U
	BP-06S-130820-W	8/20/2013	N	76.8	77	--	--	3.1	0.1 U	--	--
	BP-06S_20230830	8/30/2023	N	88	81	1.1	1 U	1.8	1 U	0.02 UJ	0.02 UJ
	BP-06S-20240312	3/12/2024	N	43	47	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
BP-07D	BP7D-120127-W	1/27/2012	N	6500	5760	0.1 U	0.1 U	0.3	0.1 U	0.1 U	0.1 U
	BP07D-130114-W	1/14/2013	N	4940	5020	0.1 U	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	BP07D-130501-W	5/1/2013	N	5140	4150	0.1 U	0.1 U	0.1	0.1 U	0.020 U	0.020 U
	BP-07D-130821-W	8/21/2013	N	6530	6610	--	--	0.1 U	0.1 U	--	--
	BP-07D-131113-W	11/13/2013	N	5670	5620	--	--	0.2	0.1 U	--	--
	BP-07D1_20230830	8/30/2023	N	2500	2500	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	BP-07D-20240312	3/12/2024	N	2700	2800	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
BP-07D2	BP-07D2-130906-W	9/6/2013	N	49.2	47.1	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	BP-07D2-131113-W	11/13/2013	N	33.2	32.9	0.1 U	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	BP-07D2_20230830	8/30/2023	N	42	39	1.8	1.1	26	22	0.02 UJ	0.02 UJ
	BP-07D2-20240312	3/12/2024	N	35	35	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
BP-07S	BP7S-120127-W	1/27/2012	N	114	127	0.1 U	0.1 U	1.9 J	0.1 UJ	0.1 U	0.1 U
	BPDUPE-120127-W	1/27/2012	FD	124	120	0.1 U	0.1 U	0.1 UJ	2 J	0.1 U	0.1 U
	BP07S-130114-W	1/14/2013	N	274	277	0.1 U	0.1 U	0.8	0.1 U	0.020 U	0.020 U
	BP07S-130501-W	5/1/2013	N	326	316	0.1 U	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	BP-07S-130820-W	8/20/2013	N	365	127	--	--	1	0.1 U	--	--
	BP-07S-131113-W	11/13/2013	N	243	227	--	--	0.3	0.1 U	--	--
	BP-07S_20230830	8/30/2023	N	650	630	1.1	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	BP-07S-20240312	3/12/2024	N	500	580	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
BP-08D	BP8D-120126-W	1/26/2012	N	1.7	1.3	0.1 U	0.1 U	0.3	0.1 U	0.1 U	0.1 U
	BP08D-130114-W	1/14/2013	N	0.9	0.8	0.1 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	BP08D-130501-W	5/1/2013	N	0.5	1.1	1	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	BP-08D-130828-W	8/28/2013	N	0.8	0.8	--	--	0.1 U	0.1 U	--	--
	BP-08D-131114-W	11/14/2013	N	0.6	0.7	--	--	0.1	0.1 U	--	--
	BP-08D_20230830	8/30/2023	N	1 U	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	BP-08D-20240313	3/13/2024	N	1.8	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
BP-08S	BP8S-120126-W	1/26/2012	N	63.1	55.5	0.1 U	0.1 U	0.3	0.1 U	0.1 U	0.1 U
	BP08S-130114-W	1/14/2013	N	71.7	57.5	0.1 U	0.1 U	0.1	0.1 U	0.020 U	0.020 U
	BP08S-130501-W	5/1/2013	N	85.2	80.7	0.6	0.1 U	0.1	0.1 U	0.020 U	0.020 U
	BP-08S-130828-W	8/28/2013	N	118	110	--	--	5.9	0.1 U	--	--
	BP-08S-131114-W	11/14/2013	N	105	101	--	--	2.6	0.1 U	--	--
	BP-08S_20230830	8/30/2023	N	97	90	1.1	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	DUP_1_20230830	8/30/2023	FD	97	94	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	BP-08S-20240313	3/13/2024	N	69	68	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
BP-09D	BP9D-120126-W	1/26/2012	N	14.1	14	0.1 U	0.1 U	0.2	0.1 U	0.1 U	0.1 U
	BP09D-130114-W	1/14/2013	N	23	22.4	0.7	0.1 U	0.5	0.1 U	0.020 U	0.020 U
	BP09D-130502-W	5/2/2013	N	27	26.1	0.2	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	BP-09D-130828-W	8/28/2013	N	25.5	25.3	--	--	0.1	0.1 U	--	--
	BP-09D-131113-W	11/13/2013	N	24	24.2	--	--	0.2	0.1 U	--	--
	BP-09D_20230830	8/30/2023	N	15	14	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	BP-09D-20240313	3/13/2024	N	10	10	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
BP-09S	BP9S-120126-W	1/26/2012	N	153	157	0.1 U	0.1 U	0.9	0.1 U	0.1 U	0.1 U
	BP09S-130114-W	1/14/2013	N	279	164	5.6	0.1 U	0.9	0.1 U	0.0394	0.02 U
	BP09S-130502-W	5/2/2013	N	164	160	0.1	0.1 U	0.4	0.1 U	0.020 U	0.020 U
	BP-09S-130828-W	8/28/2013	N	283	276	--	--	0.3	0.1 U	--	--
	BP-09S-131113-W	11/13/2013	N	499	289	--	--	4.9	0.1 U	--	--
	BP-09S_20230830	8/30/2023	N	460	440	1 U	1 U	2.1	2	0.08 J	0.02 UJ
	BP-09S-20240313	3/13/2024	N	280	260	3.6	1 U	1 U	1 U	0.02 UJ	0.02 UJ

Analyte				Arsenic		Cadmium		Lead		Mercury	
Fraction				Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Units				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Groundwater Cleanup Level ¹				5	5	NE	NE	2.2	2.2	0.025	0.025
Location ²	Sample ID	Sample Date	Sample Type								
BP-10D	BP10D-120126-W	1/26/2012	N	1.8	1.6	0.2	0.1	0.3	0.1 U	0.1 U	0.1 U
	BP10D-130114-W	1/14/2013	N	8.1	8.3	0.1	0.1 U	0.7	0.1	0.0239	0.02 U
	BP10D-130502-W	5/2/2013	N	8	7.7	0.2	0.1 U	0.7	0.1 U	0.020 U	0.020 U
	BP-10D-130828-W	8/28/2013	N	6.1	6	--	--	0.3	0.1 U	--	--
	BP-10D-131113-W	11/13/2013	N	5.7	5.8	--	--	0.2	0.1 U	--	--
BP-10S	BP10S-120126-W	1/26/2012	N	150	136	0.1 U	0.1 U	1.8	0.1 U	0.1 U	0.1 U
	BP10S-130114-W	1/14/2013	N	115	94.8	0.2	0.1 U	0.5	0.1 U	0.020 U	0.020 U
	BP10S-130502-W	5/2/2013	N	123	116	0.1 U	0.1 U	1.4	0.1 U	0.020 U	0.020 U
	BP-10S-130828-W	8/28/2013	N	204	201	--	--	1.2	0.1 U	--	--
	BP-10S-131113-W	11/13/2013	N	171	160	--	--	0.7	0.1 U	--	--
	BP-10S-20240312	3/12/2024	N	190	170	1 U	1 U	1.4	1 U	0.02 UJ	0.02 UJ
LLMW-01D	LLMW01D-130108-W	1/8/2013	N	24.5	23.8	0.1 U	0.1 U	2.1	0.1	0.020 U	0.020 U
	LLMW01D-130510-W	5/10/2013	N	22	21.2	0.1 U	0.1 U	0.1	0.3	0.020 U	0.020 U
	LLMW-01D-130821-W	8/21/2013	N	26.9	28.1	--	--	0.1 U	0.1 U	--	--
	LLMW-01D-131105-W	11/5/2013	N	28.9	29.6	--	--	0.1	0.1 U	--	--
	LLMW-01D_20230824	8/24/2023	N	29	27	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	20240320-LLMW01D	3/20/2024	N	38	38	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-02D	LLMW02D-130107-W	1/7/2013	N	2.6	2.4	0.1 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW02D-130422-W	4/22/2013	N	1.5	1.5	0.2	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-02D-130827-W	8/27/2013	N	1.4	1.4	--	--	0.1 U	0.1 U	--	--
	LLMW-02D-131030-W	10/30/2013	N	1.5	1.5	--	--	0.1 U	0.1 U	--	--
	LLMW-02D-032124	3/21/2024	N	2.4	1.7	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-03D	LLMW03D-130107-W	1/7/2013	N	1.1	0.6	0.1 U	0.1 U	0.6	0.1 U	0.020 U	0.020 U
	LLMW03D-130422W	4/22/2013	N	0.4	0.3	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-03D-130827-W	8/27/2013	N	0.4	0.4	--	--	0.1 U	0.1 U	--	--
	LLMW-03D-131030-W	10/30/2013	N	0.3	0.4	--	--	0.1 U	0.1 U	--	--
	LLMW-03D_20230824	8/24/2023	N	1 U	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	LL MW-03D-20240306	3/6/2024	N	1 U	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-03S	LLMW03S-130107-W	1/8/2013	N	2.4	1.8	0.2	0.1 U	1.5	0.1 U	0.020 U	0.020 U
	LLMW03S-130422W	4/22/2013	N	1.4	1.3	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-03S-130827-W	8/27/2013	N	2.3	2.4	--	--	0.1 U	0.1 U	--	--
	LLMW-03S-131030-W	10/30/2013	N	2	2	--	--	0.1 U	0.1 U	--	--
	LL MW-03S-20240306	3/6/2024	N	1.8	1.6	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-04D	LLMW04D-130110-W	1/10/2013	N	35	31.1	0.1 U	0.1 U	1.2	0.6	0.020 U	0.020 U
	LLMW04D-130423W	4/23/2013	N	4.7	5	0.1 U	0.1 U	0.2	0.1	0.020 U	0.020 U
	LLMW-04D-130829-W	8/29/2013	N	1.7	1.5	--	--	0.1 U	0.1 U	--	--
	LLMW-04D-131111-W	11/11/2013	N	9.5	9	--	--	0.2	0.1 U	--	--
	LLMW-04D_20230908	9/8/2023	N	1 U	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	LL MW-04D-20240307	3/7/2024	N	3.3	1.6	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-04S	LLMW04S-130110-W	1/10/2013	N	9.1	8.3	0.2 U	0.1 U	1.3	0.1 U	0.020 U	0.020 U
	LLMW04S-130423W	4/23/2013	N	7.2	7.2	0.1 U	0.1 U	0.4	0.1	0.020 U	0.020 U
	LLMW-04S-130829-W	8/29/2013	N	4.4	4.3	--	--	0.2	0.1	--	--
	LLMW-04S-131111-W	11/11/2013	N	8	8.2	--	--	0.1 U	0.1 U	--	--
	LLMW-04S_20230908	9/8/2023	N	3.2	2.1	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	LL MW-04S-20240307	3/7/2024	N	5.6	5.4	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-05D	LLMW05D-130109-W	1/9/2013	N	1.4	1.7	0.1 U	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	LLMW05D-130510-W	5/10/2013	N	1.7	1.2	0.5	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	LLMW-05D-130903-W	9/3/2013	N	1	1	--	--	0.1 U	0.1 U	--	--
	LLMW-05D-131106-W	11/6/2013	N	1.1	0.9	2.1	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW-05S_020817	2/8/2017	N	1.35	0.634	--	--	0.1 U	0.1 U	--	--
	LLMW_05D_052517	5/25/2017	N	0.447	0.378	--	--	0.1 U	0.1 U	--	--
	LLMW-05D_082217	8/22/2017	N	0.305	0.204	--	--	0.073 J	0.1 U	--	--
	LLMW-05D_120517	12/5/2017	N	1.79	1.74	--	--	0.1 U	0.1 U	--	--
	LLMW-05D_20230817	8/17/2023	N	1 U	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-05S	LLMW05S-130109-W	1/9/2013	N	8	8.4	0.1 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW05S-130510-W	5/10/2013	N	9.5	8.3	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-05S-130905-W	9/5/2013	N	18.2	17.7	--	--	0.1 U	0.1 U	--	--
	LLMW-05S-131106-W	11/6/2013	N	210	11.7	0.8	0.1 U	0.6	0.1 U	0.020 U	0.020 U
	LLMW_05S_052517	5/25/2017	N	2.54	1.87	--	--	0.074 J	0.1 U	--	--
	LLMW-05S_082217	8/22/2017	N	16.4	3.87	--	--	0.217	0.1 U	--	--
	LLMW-05S_120517	12/5/2017	N	7.19	7.2	--	--	0.1 U	0.1 U	--	--
	LLMW-05S_20230817	8/17/2023	N	16	17	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	LLMW-05S-20240229	2/29/2024	N	3.9	2.2	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-06D	LLMW06D-130201-W	2/1/2013	N	7	5.5	0.1 U	0.1 U	1	0.3	0.0232	0.02 U
	LLMW06D-130422W	4/22/2013	N	2.8	2	0.3	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	LLMW-06D-130826-W	8/26/2013	N	1.4	1.5	--	--	0.1	0.1 U	--	--
	LLMW-06D-131106-W	11/6/2013	N	1.4	1.3	1	0.1 U	0.1	0.1 U	0.020 U	0.020 U
	LLMW-06D_20230816	8/16/2023	N	1 U	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	LL MW-06D-20240305	3/5/2024	N	1.8	1.2	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-06S	LLMW06S-130109-W	1/9/2013	N	13.7	12.4	0.2	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	LLMW06S-130423W	4/23/2013	N	9.1	10.1	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-06S-130826-W	8/26/2013	N	6.1	6.4	--	--	0.1 U	0.1 U	--	--
	LLMW-06S-131106-W	11/6/2013	N	4.7	4.5	0.1	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-06S-131113-W	11/13/2013	N	61.1	54	--	--	2.6	0.1 U	--	--
	LLMW-06S_020817	2/8/2017	N	22.3	20.3	--	--	0.1 U	0.1 U	--	--
	LLMW_06S_052517	5/25/2017	N	28.1	29.2	--	--	0.119	0.1 U	--	--
	LLMW-06S_082217	8/22/2017	N	19.7	18.9	--	--	0.5 U	0.1 U	--	--
	LLMW-06S_120517	12/5/2017	N	14.1	--	--	--	0.1 U	--	--	--
LL MW-06S-20240305	LL MW-06S-20240305	3/5/2024	N	53	29	1.3	1 U	1 U	1 U	0.02 UJ	0.02 UJ

Analyte				Arsenic		Cadmium		Lead		Mercury	
Fraction				Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Units				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Groundwater Cleanup Level ¹				5	5	NE	NE	2.2	2.2	0.025	0.025
Location ²	Sample ID	Sample Date	Sample Type								
LLMW-07D	LLMW07D-130109-W	1/9/2013	N	6.9	5.9	0.1 U	0.2 U	1.5	0.2 U	0.020 U	0.020 U
	LLMW07D-130508-W	5/8/2013	N	9	9.9	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-07D-130905-W	9/5/2013	N	5.6	5	--	--	0.2	0.1 U	--	--
	LLMW-07D-131107-W	11/7/2013	N	7	4.5	--	--	0.2	0.1 U	--	--
	LLMW_07D_052517	5/25/2017	N	10.6	7.29	--	--	0.083 J	0.1 U	--	--
	LLMW-07D_082217	8/22/2017	N	5.3	4.99	--	--	0.102	0.1 U	--	--
	LLMW-07D_120517	12/5/2017	N	5.79	5.18	--	--	0.115	0.1 U	--	--
	LLMW-07D_20230816	8/16/2023	N	7.6	5.4	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	LLMW-07D-20240229	2/29/2024	N	6.3	5.3	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-07S	LLMW07S-130109-W	1/9/2013	N	17.2	15.6	0.6	0.1	0.3	0.1 U	0.020 U	0.020 U
	LLMW07S-130507-W	5/7/2013	N	24.5	24.4	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-07S-130905-W	9/5/2013	N	46	44	--	--	2 U	2 U	--	--
	LLMW-07S-131107-W	11/7/2013	N	13	17	--	--	1 U	1 U	--	--
	LLMW-07S_020817	2/8/2017	N	4.62	4.21	--	--	0.07 J	0.1 U	--	--
	LLMW_07S_052517	5/25/2017	N	10.8	10.2	--	--	0.104	0.1 U	--	--
	LLMW-07S_082217	8/22/2017	N	21.7	20.7	--	--	1 U	1 U	--	--
	LLMW-07S_120617	12/6/2017	N	6.85	6.72	--	--	0.1 U	0.1 U	--	--
	LLMW-07S_20230816	8/16/2023	N	13	12	5 U	5 U	5 U	5 U	0.02 UJ	0.02 UJ
	LLMW-07S-20240229	2/29/2024	N	8.8	8.1	1 U	1 U	1.4 U	1.4 U	0.02 UJ	0.02 UJ
LLMW-08D	LLMW08D-130108-W	1/8/2013	N	2	2	0.1 U	0.1 U	0.1	0.1 U	0.020 U	0.020 U
	LLMW08D-130430-W	4/30/2013	N	3.7	3.8	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-08D-130905-W	9/5/2013	N	1.2	1.4	--	--	0.1 U	0.1 U	--	--
	LLMW-08D-131107-W	11/7/2013	N	1.9	1.5	--	--	0.2 U	0.1 U	--	--
	LLMW_08D_052517	5/25/2017	N	1.35	1.36	--	--	0.1 U	0.1 U	--	--
	LLMW-08D_082217	8/22/2017	N	0.318 J	0.138 J	--	--	0.102	0.1 U	--	--
	LLMW-08D_120517	12/5/2017	N	1.78	1.22	--	--	0.124	0.1 U	--	--
	LLMW-08D_20230821	8/21/2023	N	1 U	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	LL MW-08D-20240307	3/7/2024	N	1 U	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-08S	LLMW08S-130108-W	1/8/2013	N	206	192	0.4	0.3	43.4	30.5	0.020 U	0.020 U
	LLMW08S-130430-W	4/30/2013	N	142	140	0.1 U	0.1 U	7	0.1 U	0.020 U	0.020 U
	LLMW-08S-130906-W	9/6/2013	N	206	187	--	--	104	0.2 U	--	--
	LLMW-08S-131107-W	11/7/2013	N	136	136	--	--	5.4	0.1 U	--	--
	LLMW-08S_102116	10/21/2016	N	37.9	32.1	--	--	1.33	0.295	--	--
	LLMW-08S_113016	11/30/2016	N	79.1	16.5	--	--	8.49	0.077 J	--	--
	LLMW-08S_020817	2/8/2017	N	65	24.5	--	--	21.6	0.387	--	--
	LLMW-DUP01_020817	2/8/2017	FD	42.2	25.1	--	--	15	0.372	--	--
	LLMW_08S_052517	5/25/2017	N	11.5	36.5	--	--	0.745	0.563	--	--
	DUP01_052517	5/25/2017	FD	51	36.5	--	--	3.23	0.583	--	--
	LLMW-08S_082217	8/22/2017	N	311	294	--	--	25.5	1.56	--	--
	DUP01_082217	8/22/2017	FD	318	301	--	--	22.5	1.29	--	--
	LLMW-08S_120517	12/5/2017	N	44.6	29.4	--	--	5.77	0.186	--	--
	DUP01_120517	12/5/2017	FD	41.2	29.9	--	--	4.55	0.191	--	--
	LL MW-08S-20240307	3/7/2024	N	41	24	1 U	1 U	7.5	1 U	0.02 UJ	0.02 UJ
LLMW-09D	LLMW09D-130116-W	1/16/2013	N	1.7	0.9	2	0.1 U	0.9	0.3	0.020 U	0.020 U
	LLMW09D-130423-W	4/23/2013	N	1.2	0.9	0.1 U	0.1 U	0.4	0.1	0.020 U	0.020 U
	LLMW-09D-130822-W	8/22/2013	N	0.8	0.7	--	--	0.2	0.1 U	--	--
	LLMW-09D-131112-W	11/12/2013	N	1	0.7	--	--	0.3	0.1 U	--	--
LLMW-09S	LLMW09S-130116-W	1/16/2013	N	61.5	59	2.2	0.1 U	0.6	0.1 U	0.020 U	0.020 U
	LLMW09S-130422-W	4/22/2013	N	62	60.2	0.1 U	0.1 U	0.4	0.1 U	0.020 U	0.020 U
	LLMW-09S-130822-W	8/22/2013	N	23.8	24.8	--	--	0.1 U	0.1 U	--	--
	LLMW-09S-131112-W	11/12/2013	N	14.2	14.4	--	--	0.1	0.1 U	--	--
	LLMW-09S_020817	2/8/2017	N	0.46	0.756	--	--	0.176	0.453	--	--
	LLMW_09S_052517	5/25/2017	N	0.411	0.356	--	--	0.152	0.104	--	--
	LLMW-09S_082217	8/22/2017	N	0.377	0.366	--	--	0.088 J	0.075 J	--	--
	LLMW-09S_120517	12/5/2017	N	0.602	0.443	--	--	0.271	0.084 J	--	--
LLMW-10D	LLMW10D-130116-W	1/16/2013	N	3	2.4	0.1 U	0.1 U	1.7	0.1 U	0.020 U	0.020 U
	LLMW10D-130503-W	5/3/2013	N	2.6	3.2	0.1 U	0.1 U	0.2	0.2	0.020 U	0.020 U
	LLMW-10D-130823-W	8/23/2013	N	3.2	2.3	--	--	1.2	0.1 U	--	--
	LLMW-10D-131119-W	11/19/2013	N	2.7	2.7	--	--	0.3	0.1 U	--	--
	LLMW-10D_20230823	8/23/2023	N	2.3	1 U	1 U	1 U	1.3	1 U	0.02 UJ	0.02 UJ
	LL MW-10D-20240306	3/6/2024	N	1.1	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-10S	LLMW10S-130116-W	1/16/2013	N	4.5	4.4	0.3	0.1 U	0.7	0.1	0.020 U	0.020 U
	LLMW10S-130503-W	5/3/2013	N	6.3	7.1	0.1 U	0.1 U	0.4	0.1 U	0.020 U	0.020 U
	LLMW-10S-130823-W	8/23/2013	N	31.5	30.1	--	--	25.6	0.3	--	--
	LLMW-10S-131119-W	11/19/2013	N	8.4	7.4	--	--	0.1	0.1 U	--	--
	LLMW-10S_020817	2/8/2017	N	1.17	0.749	--	--	0.341	0.1 U	--	--
	LLMW_10S_052517	5/25/2017	N	1.99	1.95	--	--	0.3	0.1 U	--	--
	LLMW-10S_120517	12/5/2017	N	1.77	1.57	--	--	0.365	0.1 U	--	--
	LL MW-10S-20240306	3/6/2024	N	5.2	1.1	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-11D	LLMW11D-130109-W	1/9/2013	N	1.7	1.7	0.5	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	LLMW11D-130430-W	4/30/2013	N	1.4	1.2 J	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-11D-130820-W	8/20/2013	N	7.8	8.1	--	--	0.2	0.1 U	--	--
	LLMW-11D-131030-W	10/30/2013	N	8.2	8.4	--	--	0.1	0.1	--	--
	LLMW_11D_052517	5/25/2017	N	4.3	4.34	--	--	0.1 U	0.1 U	--	--
	LLMW-11D_082217	8/22/2017	N	3.13	2.71	--	--	0.156	0.1	--	--
	LLMW-11D_120517	12/5/2017	N	5.99	5.72	--	--	0.141	0.1 U	--	--
	LLMW-11D_20230818	8/18/2023	N	14	13	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	LLMW-11D-031824	3/18/2024	N	7.1	6.2	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-11S	LLMW11S-130109-W	1/9/2013	N	1.1	1.1	0.2	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	LLMW11S-130430-W	4/30/2013	N	1.2	1.5 J	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U

Analyte				Arsenic		Cadmium		Lead		Mercury	
Fraction				Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Units				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Groundwater Cleanup Level ¹				5	5	NE	NE	2.2	2.2	0.025	0.025
Location ²	Sample ID	Sample Date	Sample Type								
LLMW-12D	LLMW12D-130116-W	1/16/2013	N	1880	1980	0.4	0.1 U	0.4	0.1 U	0.020 U	0.020 U
	LLMW12D-130503-W	5/3/2013	N	2020	2040	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	DUP-04-130503-W	5/3/2013	FD	2030	2040	0.1 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW-12D-130826-W	8/26/2013	N	1870	2120	--	--	0.1 U	0.1 U	--	--
	DUP-02-130826-W	8/26/2013	FD	1860	2050	--	--	0.1 U	0.1 U	--	--
	LLMW-12D-131119-W	11/19/2013	N	1580	1670	--	--	0.1	0.1 U	--	--
	DUP-02-131119-W	11/19/2013	FD	1610	1590	--	--	0.1	0.1 U	--	--
	LLMW_12D_052517	5/25/2017	N	2140	2100	--	--	0.073 J	0.1 U	--	--
	LLMW-12D_082217	8/22/2017	N	2910	2710	--	--	0.163	0.1 U	--	--
	LLMW-12D_120517	12/5/2017	N	2150	2390	--	--	0.186	0.1 U	--	--
	LLMW-12D_20230823	8/23/2023	N	1600	1600	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	LLMW-12D-031824	3/19/2024	N	1700	1600	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-12S	LLMW12S-130116-W	1/16/2013	N	20	16.6	5.5	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW12S-130503-W	5/3/2013	N	36.8	32.6	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-12S-130826-W	8/26/2013	N	62.5	61.1	--	--	0.1 U	0.2	--	--
	LLMW-12S-131119-W	11/19/2013	N	43.5	41.6	--	--	0.1 U	0.1 U	--	--
LLMW-13D	LLMW13D-130116-W	1/16/2013	N	25.4	22.4	0.1 U	0.1 U	0.6	0.1 U	0.020 U	0.020 U
	LLMW13D-130424-W	4/24/2013	N	68	79.8	0.1	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	DUP-01-130424-W	4/24/2013	FD	73.6	85.3	0.1 U	0.1 U	0.3	0.1	0.020 U	0.020 U
	LLMW-13D-130821-W	8/21/2013	N	73	82.7	--	--	0.3	0.1 U	--	--
	DUP-03-130821-W	8/21/2013	FD	66.6	81.2	--	--	0.3	0.1 U	--	--
	LLMW-13D-131114-W	11/14/2013	N	53.7	62.9	--	--	0.2	0.1	--	--
	DUP-03-131114-W	11/14/2013	FD	67.5	71.3	--	--	0.2	0.1 U	--	--
LLMW-13S	LLMW13S-130116-W	1/16/2013	N	27.1	25.5	0.1 U	0.1 U	0.4	0.1 U	0.020 U	0.020 U
	LLMW13S-130424-W	4/24/2013	N	22.6	22.8	0.4	0.1 U	0.1	0.1 U	0.020 U	0.020 U
	LLMW-13S-130821-W	8/21/2013	N	25.8	26.8	--	--	0.2	0.1 U	--	--
	LLMW-13S-131114-W	11/14/2013	N	24.1	23.7	--	--	0.1 U	0.1 U	--	--
	LLMW-13S_020817	2/8/2017	N	22.9	22.4	--	--	2.13	0.1 U	--	--
LLMW-14D	LLMW14D-130111-W	1/11/2013	N	274	313	0.4	0.1 U	0.6	0.2	0.020 U	0.020 U
	LLMW14D-130425W	4/25/2013	N	234	246	0.1 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	DUP-2-130425W	4/25/2013	FD	293	228	0.1 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW-14D-130909-W	9/9/2013	N	98.2	107	--	--	0.1 U	0.1 U	--	--
	DUP-04-130909-W	9/9/2013	FD	131	103	--	--	0.1 U	0.1 U	--	--
	LLMW-14D-131111-W	11/11/2013	N	158 J	179 J	--	--	1.8 J	0.1 UJ	--	--
	DUP-04-131111-W	11/11/2013	FD	128 J	174 J	--	--	0.1 UJ	0.1 UJ	--	--
	LL MW-14D-20240307	3/7/2024	N	33	31	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-14S	LLMW14S-130111-W	1/11/2013	N	2.8	2.7	0.3	0.1	2.3	2.3	0.020 U	0.020 U
	LLMW14S-130425W	4/25/2013	N	8.2	8.1	0.1 U	0.1	0.6	0.3	0.020 U	0.020 U
	LLMW-14S-130909-W	9/9/2013	N	22.5	20.8	--	--	0.7	0.3	--	--
	LLMW-14S-131111-W	11/11/2013	N	18.3 J	17.1 J	--	--	0.4 J	0.1 UJ	--	--
LLMW-15D	LLMW15D-130111-W	1/11/2013	N	0.9	0.5	0.2 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW15D-130425W	4/25/2013	N	0.5	0.5	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-15D-131111-W	11/11/2013	N	0.5	0.5	--	--	0.1 U	0.1 U	--	--
	LLMW-15D_20230817	8/17/2023	N	1 U	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	LL MW-15D-20240305	3/5/2024	N	1 U	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-15S	LLMW15S-130111-W	1/11/2013	N	4.5	4.6	0.2 U	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	LLMW15S-130424W	4/24/2013	N	4	3.8	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-15S-130909-W	9/9/2013	N	8.6	6.3	--	--	0.3	0.1 U	--	--
	LLMW-15S-131111-W	11/11/2013	N	9.2	9.3	--	--	0.1	0.1 U	--	--
	LLMW-15S_20230817	8/17/2023	N	19	18	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	LL MW-15S-20240305	3/5/2024	N	13	12	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-16D	LLMW16D-130111-W	1/11/2013	N	1.8	0.5 U	0.1 U	0.1 U	1.2	0.2	0.020 U	0.020 U
	LLMW16D-130423-W	4/23/2013	N	1	0.5	0.2	0.1 U	0.3	0.2	0.0250	0.02 U
	LLMW-16D-130826-W	8/26/2013	N	1.3	0.9	--	--	0.5	0.2	--	--
	LLMW-15D-130909-W	9/9/2013	N	0.6	0.5	--	--	0.1 U	0.1 U	--	--
	LLMW-16D-131113-W	11/13/2013	N	1	0.6	--	--	0.3	0.1 U	--	--
LLMW-16S	LLMW16S-130111-W	1/11/2013	N	1700	1700	0.1	0.1 U	0.8	0.1 U	0.020 U	0.020 U
	LLMW16S-130423-W	4/23/2013	N	2110	2070	0.1 U	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	LLMW-16S-130823-W	8/23/2013	N	497	386	--	--	54.7	0.1 U	--	--
	LLMW-16S-131113-W	11/13/2013	N	238	216	--	--	0.6	0.1 U	--	--
LLMW-17D	LLMW17D-130109-W	1/9/2013	N	15.8	14.9	0.2 U	0.1 U	0.5	0.1 U	0.020 U	0.020 U
	LLMW17D-130429-W	4/29/2013	N	6.8	6.4	0.4	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-17D-130820-W	8/20/2013	N	13	11.3	--	--	0.1 U	0.1 U	--	--
	LLMW-17D-131106-W	11/6/2013	N	13	8.9	--	--	0.1 U	0.1 U	--	--
	LLMW-17D_20230818	8/18/2023	N	15	8.3	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	LLMW-17D-031824	3/18/2024	N	8.1	7.6	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-17S	LLMW17S-130109-W	1/9/2013	N	2.8	2.6	0.2 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW17S-130429-W	4/29/2013	N	3.8	3.6	0.3	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-17S-130820-W	8/20/2013	N	3.7	2.4	--	--	0.4	0.1 U	--	--
	LLMW-17S-131106-W	11/6/2013	N	2.6	2.5	--	--	0.1 U	0.1 U	--	--
LLMW-18D	LLMW18D-130109-W	1/9/2013	N	1.4	0.7	0.1 U	0.1 U	0.5	0.1 U	0.020 U	0.020 U
	LLMW18D-130424W	4/24/2013	N	0.8	0.5 U	0.1 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW-18D-130904-W	9/4/2013	N	0.8	0.6	--	--	0.2	0.1 U	--	--
	LLMW-18D-131119-W	11/19/2013	N	0.7	0.6	--	--	0.1 U	0.1 U	--	--
	LLMW-18D_20230817	8/17/2023	N	1 U	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	LLMW-18D-20240227	2/27/2024	N	1 U	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-18S	LLMW18S-130108-W	1/8/2013	N	4.7	4.9	0.2	0.2	0.3	0.1 U	0.020 U	0.020 U
	LLMW18S-130424W	4/24/2013	N	6	6.8	0.1 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW-18S-130904-W	9/4/2013	N	20	19	--	--	0.1 U	0.1 U	--	--
	LLMW-18S-131119-W	11/19/2013	N	12.2	11.9	--	--	0.1 U	0.1 U	--	--
	LLMW-18S_20230817	8/17/2023	N	41	43	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	LLMW-18S-20240227	2/27/2024	N	44	49	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ

Analyte				Arsenic		Cadmium		Lead		Mercury	
Fraction				Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Units				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Groundwater Cleanup Level ¹				5	5	NE	NE	2.2	2.2	0.025	0.025
Location ²	Sample ID	Sample Date	Sample Type								
LLMW-19D	LLMW19D-130110-W	1/10/2013	N	8.7	4.9	1.8	0.1 U	0.9	0.1	0.020 U	0.020 U
	LLMW19D-130423W	4/23/2013	N	17.9	16.2	0.1 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW-19D-130823-W	8/23/2013	N	40.3	25.9	--	--	0.1 U	0.1 U		
	LLMW-19D-131106-W	11/6/2013	N	35.3	31.4	--	--	0.1 U	0.1 U		
	LLMW-19D_20230828	8/28/2023	N	1 U	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	LLMW-19D-20240227	2/27/2024	N	1 U	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-20D	LLMW20D-130110-W	1/10/2013	N	9.2	8.7	0.2 U	0.3 J	0.1 U	0.1 U	0.020 U	0.020 U
	LLMWDUP1-130110-W	1/10/2013	FD	11	8.6	0.5 U	0.1 UJ	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW20D-130425W	4/25/2013	N	20.7	20.7	0.1 U	0.1 U	0.7	0.6	0.0277	0.0262
	LLMW-20D-130828-W	8/28/2013	N	36.9	34.2	--	--	0.1 U	0.1 U	--	--
	LLMW-20D-131111-W	11/11/2013	N	36	14.9	--	--	0.6	0.4	--	--
	LLMW-20D-20240227	2/27/2024	N	6.6	6.9	1 U	1 U	1.4 U	1.4 U	0.02 UJ	0.02 UJ
LLMW-21D	LLMW21D-130108-W	1/8/2013	N	1.3	0.5	0.2	0.1 U	0.4	0.1 U	0.020 U	0.020 U
	LLMW21D-130424W	4/24/2013	N	0.7	0.3	0.1 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW-21D-130909-W	9/9/2013	N	0.4	0.4	--	--	0.1 U	0.1 U	--	--
	LLMW-21D-131119-W	11/19/2013	N	0.5	0.4	--	--	0.1 U	0.1 U	--	--
	LLMW-21D_20230823	8/23/2023	N	1 U	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	LLMW-21D-20240226	2/26/2024	N	1 U	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-21S	LLMW21S-030108-W	1/8/2013	N	31.1	--	0.1 U	--	0.3	--	--	--
	LLMW21S-130108-W	1/8/2013	N		28.9	--	0.1 U	--	0.1 U	0.020 U	0.020 U
	LLMW21S-130424W	4/24/2013	N	35.4	33.9	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-21S-130909-W	9/9/2013	N	90.2	91.3	--	--	0.1 U	0.1 U	--	--
	LLMW-21S-131119-W	11/19/2013	N	98.6	92.7	--	--	0.1 U	0.1 U	--	--
	LLMW-21S-20240226	2/26/2024	N	7.3	1.9	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-22D	LLMW22D-130108-W	1/8/2013	N	0.7	0.4	0.1 U	0.1 U	0.4	0.1 U	0.020 U	0.020 U
	LLMW22D-130429-W	4/29/2013	N	0.5 U	0.5 U	0.3	0.1 U	0.1 U	0.1 U	0.0229	0.02 U
	LLMW-22D-130823-W	8/23/2013	N	0.8	0.7	--	--	0.1	0.1 U	--	--
	LLMW-22D-131105-W	11/5/2013	N	0.8	1 U	--	--	0.1 U	0.1 U	--	--
LLMW-22S	LLMW22S-130108-W	1/8/2013	N	8	6	3	1 U	3	1 U	0.0351	0.02 U
	LLMW22S-130429-W	4/29/2013	N	3	3	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-22S-130823-W	8/23/2013	N	5	6	--	--	0.1 U	0.2	--	--
	LLMW-22S-131105-W	11/5/2013	N	7	7	--	--	1 U	1 U	--	--
LLMW-23D	LLMW23D-130108-W	1/8/2013	N	1.4	0.8	0.1 U	0.1 U	0.5	0.1 U	0.020 U	0.020 U
	LLMW23D-130425W	4/25/2013	N	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-23D-130822-W	8/22/2013	N	1.2	1	--	--	0.1 U	0.1 U	--	--
	LLMW-23D-131105-W	11/5/2013	N	0.8	0.7	--	--	0.1	0.1 U	--	--
	LL MW-23D-20240307	3/7/2024	N	2	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-23S	LLMW23S-130108-W	1/8/2013	N	15.4	15	0.1 U	0.1 U	1.8	0.7	0.020 U	0.020 U
	LLMW23S-130424W	4/24/2013	N	9.8	10	0.1	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	LLMW-23S-130822-W	8/22/2013	N	7.1	6.6	--	--	0.3	0.1 U	--	--
	LLMW-23S-131104-W	11/4/2013	N	5.5	5.3	--	--	0.2	0.1 UJ	--	--
	LL MW-23S-20240307	3/7/2024	N	6.5	6.6	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-24D	LLMW24D-130121-W	1/21/2013	N	2.6 J	0.8	0.2	0.4 J	2.1 J	0.1 U	0.020 U	0.020 U
	DUP04-130121-W	1/21/2013	FD	1.6 J	1.1	0.3	0.2 J	0.9 J	0.1 U	0.020 U	0.020 U
	LLMW24D-130423-W	4/23/2013	N	1	0.8	0.3	0.3	0.5	0.1 U	0.020 U	0.020 U
	LLMW-24D-130906-W	9/6/2013	N	0.9	0.8	--	--	0.1	0.1 U	--	--
	LLMW-24D-131115-W	11/15/2013	N	0.7	0.7	--	--	0.1 U	0.1 U	--	--
LLMW-25D	LLMW25D-130121-W	1/21/2013	N	1.5	0.9	0.3	0.7	0.9	0.1 U	0.020 U	0.020 U
	LLMW25D-130423-W	4/23/2013	N	1.6	1.5	0.4	0.3	0.2	0.1 U	0.020 U	0.020 U
	LLMW-25D-130905-W	9/5/2013	N	1.5	1.4	--	--	0.5	0.1 U	--	--
	LLMW-25D-131115-W	11/15/2013	N	1.6	1.5	--	--	0.1 U	0.1 U	--	--
	LLMW-25D_20230914	9/14/2023	N	3.2	1.7	1 U	1 U	1.4	1 U	0.02 UJ	0.02 UJ
	LL MW-25D-20240306	3/6/2024	N	2.6	2.5	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	DUP03-20240306-W	3/6/2024	FD	2.7	2.4	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-27D	LLMW27D-130121-W	1/21/2013	N	941	814	0.2	0.1	1	0.1 U	0.020 U	0.020 U
	LLMW27D-130508-W	5/8/2013	N	4380	4460	0.1	0.1 U	1.1	0.1 U	0.020 U	0.020 U
	DUPE-05-130508-W	5/8/2013	FD	4340	4380	0.1	0.1 U	1.3	0.1	0.020 U	0.020 U
	LLMW-27D-130830-W	8/30/2013	N	4610	4360	--	--	0.2	0.1 U	--	--
	DUP-05-130830-W	8/30/2013	FD	4540	4410	--	--	0.2	0.1 U	--	--
	LLMW-27D-131101-W	11/1/2013	N	4480	4460	0.1 U	0.1 U	0.6	0.1 U	0.020 U	0.020 U
	DUP-05-131101-W	11/1/2013	FD	4440	4460	0.1 U	0.1 U	0.6	0.1 U	0.020 U	0.020 U
	LLMW-27D_20230901	9/1/2023	N	5600	5200	19	1 U	4	1 U	0.02 UJ	0.02 UJ
	LL MW-27D-20240305	3/5/2024	N	5800	6100	2	1.2	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-29D	DUP02-20240305-W	3/5/2024	FD	5900	5800	2.2	1.2	1 U	1 U	0.02 UJ	0.02 UJ
	LLMW29D-130118-W	1/18/2013	N	7.1	4.5	0.2	0.1 U	0.9	0.1 U	0.020 U	0.020 U
	LLMW29D-130507-W	5/7/2013	N	8.4	6.5	0.2	0.1 U	0.7	0.1 U	0.020 U	0.020 U
	LLMW-29D-130828-W	8/28/2013	N	6.8	5.8	--	--	0.6	0.1 U	--	--
	LLMW-29D-131105-W	11/5/2013	N	5.7	5.1	--	--	0.2	0.1 U	--	--
LLMW-31D	LLMW31D-130201-W	2/1/2013	N	0.8	0.7	2.4	2.2	0.8	0.7	0.020 U	0.020 U
	LLMW31D-130507-W	5/7/2013	N	0.9	0.8	0.1	0.1	0.2	0.1 U	0.020 U	0.020 U
	LLMW-31D-130830-W	8/30/2013	N	1.4	1	--	--	0.5	0.1 U	--	--
	LLMW-31D-131106-W	11/6/2013	N	1.3	1.1	--	--	0.1	0.1 U	--	--
	LLMW-31D_20230829	8/29/2023	N	360	6.3	1 U	1 U	19	1 U	0.094 J	0.02 UJ
	LL MW-31D-20240306	3/6/2024	N	7.1	6.5	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-33D	LLMW33D-130117-W	1/17/2013	N	1.4	1.3	0.8	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW33D-130507-W	5/7/2013	N	1.3	1.2	0.1 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW-33D-130903-W	9/3/2013	N	1.3	1.2	--	--	0.1 U	0.1 U	--	--
	LLMW-33D-131101-W	11/1/2013	N	1.1	1.1	--	--	0.1	0.1 U	--	--
	LL MW-33D-20240304	3/4/2024	N	1	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ

Analyte				Arsenic		Cadmium		Lead		Mercury	
Fraction				Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Units				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Groundwater Cleanup Level ¹				5	5	NE	NE	2.2	2.2	0.025	0.025
Location ²	Sample ID	Sample Date	Sample Type								
LLMW33S	LLMW33S-130117-W	1/17/2013	N	3.1	0.3	0.4	0.1 U	3.5	0.1 U	0.0328	0.02 U
	LLMW33S-130506-W	5/6/2013	N	24.4	0.3	4.3	0.1 U	28.1	0.1 U	0.229	0.02 U
	LL MW-33S-20240304	3/4/2024	N	7.3	1 U	1 U	1 U	1.5	1 U	0.02 UJ	0.02 UJ
LLMW-34D	LLMW34D-130116-W	1/16/2013	N	3.1	2.2	0.1 U	0.1 U	0.4	0.1 U	0.020 U	0.020 U
	LLMW34D-130506-W	5/6/2013	N	1.6	1.5	0.2	0.1 U	5.6	0.1 U	0.020 U	0.020 U
	LLMW-34D-130826-W	8/26/2013	N	1.6	1.6	--	--	0.3	0.1 U	--	--
	LLMW-34D-131031-W	10/31/2013	N	4	1.5	--	--	5.9	0.1 U	--	--
	LLMW-34D_20230912	9/12/2023	N	7.9	6.9	1.2	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	LL MW-34D-20240304	3/4/2024	N	8.3	7.8	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	DUP01-20240304-W	3/4/2024	FD	8.3	7.9	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-34S	LLMW34S-130116-W	1/16/2013	N	0.5	0.5	0.2	0.1 U	0.2	0.1 U	0.0275	0.0222
	LLMW34S-130506-W	5/6/2013	N	0.8	0.7	0.1 U	0.1 U	0.2	0.1 U	0.0321	0.02 U
	LLMW-34S-130826-W	8/26/2013	N	1.5	0.6	--	--	2.4	0.1 U	--	--
	LLMW-34S-131031-W	10/31/2013	N	0.7	0.7	--	--	0.2	0.1 U	--	--
	LLMW-34S_20230816	8/16/2023	N	1 U	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	LLMW34S-20240229	2/29/2024	N	1 U	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-35D	LLMW-35D-130830-W	8/30/2013	N	2	2	0.1 U	0.1 U	0.1	0.1 U	0.020 U	0.020 U
	LLMW-35D-131108-W	11/8/2013	N	3.4	3.4	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-35D_20230912	9/12/2023	N	4.7	3.1	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	LL MW-35D-20240307	3/7/2024	N	5.4	3.5	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	DUP04-20240307-W	3/7/2024	FD	5.2	2.8	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-36D	LLMW-36D-130906-W	9/6/2013	N	10.6	10.4	0.1 U	0.1 U	3.2	3	0.020 U	0.020 U
	LLMW-36D-131114-W	11/14/2013	N	127	115	0.1 U	0.1 U	4.4	2.3	0.020 U	0.020 U
	LLMW-36D_20230828	8/28/2023	N	1100	570	1 U	1 U	110	5.9	0.26	0.02 UJ
	20240321-LLMW36D	3/21/2024	N	1300	600	1 U	1 U	4.9	1 U	0.052 J	0.02 UJ
LLMW-37S	LLMW-37S_082217	8/22/2017	N	20.6	19.8	--	--	0.209	0.1 U	--	--
	LLMW-37S_120517	12/5/2017	N	1.11	0.935	--	--	0.097 J	0.1 U	--	--
	LLMW37S-20240229	2/29/2024	N	5.2	5.2	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-38S	LLMW-38S_082217	8/22/2017	N	1.17	1.1	--	--	0.241	0.1 U	--	--
	LLMW-38S_120617	12/6/2017	N	1.04	0.809	--	--	0.125	0.1 U	--	--
	LLMW-38S_20230823	8/23/2023	N	1.2	1.2	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	LLMW38S- 20240301	3/1/2024	N	1 U	1 U	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-39S	LLMW-39S_102116	10/21/2016	N	1.57	0.714	--	--	2.95	0.094 J	--	--
	LLMW-39S_113016	11/30/2016	N	1.83	1.86	--	--	0.1 U	0.1 U	--	--
	DUP-01_113016	11/30/2016	FD	1.82	1.59	--	--	0.076 J	0.1 U	--	--
	LLMW-39S_020817	2/8/2017	N	1.48	1.68	--	--	0.146	0.1 U	--	--
	LLMW_39S_052517	5/25/2017	N	1.85	2.46	--	--	0.519	0.38	--	--
	LLMW-39S_082217	8/22/2017	N	6.99	5.16	--	--	8.83	0.1 U	--	--
	LLMW-39S_120617	12/6/2017	N	7.39	4.01	--	--	0.162	0.1 U	--	--
	LLMW-39S_20230822	8/22/2023	N	31	12	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	LLMW39S- 20240301	3/1/2024	N	29	35	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-40S	LLMW-40S_102116	10/21/2016	N	24.7	18.3	--	--	0.405 J	0.164	--	--
	DUP-01_102116	10/21/2016	FD	17.6	19.2	--	--	0.238 J	0.157	--	--
	LLMW-40S_113016	11/30/2016	N	144	51.6	--	--	17.4	1.26	--	--
	LLMW-40S_020817	2/8/2017	N	49.7	25.6	--	--	7.8	0.978	--	--
	LLMW_40S_052517	5/25/2017	N	81.3	70.5	--	--	12.1	6.28	--	--
	LLMW-40S_082217	8/22/2017	N	60.2	58.7	--	--	1.89	0.1 U	--	--
	LLMW-40S_120517	12/5/2017	N	93	32.7	--	--	14.7	1.76	--	--
	LLMW-40S_20230822	8/22/2023	N	170	40	1 U	1 U	24	1.1	0.13 J	0.02 UJ
	LLMW40S- 20240301	3/1/2024	N	390	110	1 U	1 U	44	1 U	0.6	0.11 J
LLMW-41S	LLMW-41S_102116	10/21/2016	N	0.94	0.924	--	--	0.2 U	0.2 U	--	--
	LLMW-41S_113016	11/30/2016	N	0.756	0.832	--	--	0.1 U	0.1 U	--	--
	LLMW41S-20240229	2/29/2024	N	4.2	6.8	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
LLMW-42S	LLMW-42S_102116	10/21/2016	N	4.57	3.4	--	--	0.2 U	0.2 U	--	--
	LLMW-42S_113016	11/30/2016	N	3.03	3.41	--	--	0.1 U	0.1 U	--	--
	LLMW-42S_020817	2/8/2017	N	2.14	2.17	--	--	0.102	0.1 U	--	--
	LLMW_42S_052517	5/25/2017	N	2.45	2.07	--	--	0.122	0.1 U	--	--
	LLMW-42S_082217	8/22/2017	N	41.9	68.6	--	--	0.422	0.1 U	--	--
	LLMW-42S_120517	12/5/2017	N	2.37	2.67	--	--	0.1 U	0.1 U	--	--
	LLMW-42S_20230821	8/21/2023	N	29	34	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	LLMW42S-20240229	2/29/2024	N	3	3.2	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
EV-6A	EV6A-130117-W	1/17/2013	N	136	28.4	27.4	27.1	291	67.8	0.0404	0.02 U
	EV6A-130508-W	5/8/2013	N	210	195	17.7	17.9	51.4	38.7	0.0478	0.0343
	EV6A-130828-W	8/28/2013	N	314	208	--	--	70.9	24.9	--	--
	EV-6A-131108-W	11/8/2013	N	176	33.5	--	--	396	103	--	--
EV-6B	EV6B-130117-W	1/17/2013	N	10.2	12.6	0.1 U	0.1 U	1.2	0.1	0.020 U	0.020 U
	EV6B-130507-W	5/7/2013	N	20.4	16.9	0.1 U	0.1 U	1.1	0.1 U	0.020 U	0.020 U
	EV6B-130827-W	8/27/2013	N	12.1	6.8	0.1 U	0.1 U	0.1	0.1 U	0.020 U	0.020 U
	EV-6B-131108-W	11/8/2013	N	15.9	13.9	0.1 U	0.1 U	0.8 J	0.1 U	0.020 U	0.020 U
EV-7B	EV-7B-130909-W	9/9/2013	N	2790	2680	0.2	0.1	0.2	0.1 U	0.020 U	0.020 U
	EV-7B-131114-W	11/14/2013	N	2980	2840	0.1 U	0.1 U	0.3	0.1 U	0.020 U	0.020 U
EV-19B	EV19B-130118-W	1/18/2013	N	4050	3970	0.3	0.1	0.1 U	0.1 U	0.020 U	0.020 U
	EV19B-130508-W	5/8/2013	N	3950	3720	0.2	0.3	2.1	0.1 U	0.020 U	0.020 U
	EV-19B-130903-W	9/3/2013	N	3090	3560	--	--	0.5	0.2 U	--	--
	EV-19B-131115-W	11/15/2013	N	3090	3080	--	--	8.8	0.1	--	--
EV-20B	EV20-120611-W	6/11/2012	N	15500	14500	0.1	0.1 U	1.4	0.1 U	0.1 U	0.1 U
	EV20B-130118-W	1/18/2013	N	13900	14000	0.1	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	EV20-130508-W	5/8/2013	N	14300	14300	0.1 U	0.1 U	1.7	0.1	0.020 U	0.020 U
	EV-20B-130904-W	9/4/2013	N	13000	13200	--	--	0.4	0.2 U	--	--
	EV-20B-131115-W	11/15/2013	N	13000	12800	--	--	0.1	0.1 U	--	--
	EV-20B_20230914	9/14/2023	N	12000	12000	1 U	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	EV-20B-20240305	3/5/2024	N	13000	13000	1.2	1 U	1.2	1 U	0.02 UJ	0.02 UJ

Analyte				Arsenic		Cadmium		Lead		Mercury	
Fraction				Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Units				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Groundwater Cleanup Level ¹				5	5	NE	NE	2.2	2.2	0.025	0.025
Location ²	Sample ID	Sample Date	Sample Type								
EV-22A	EV22A-120611-W	6/11/2012	N	8.9	3.5	0.1	0.1 U	5.3	0.1 U	0.1 U	0.1 U
	DUP-120611-W	6/11/2012	FD	9.1	4.3	0.1 U	0.1 U	5.1	0.4	0.1 U	0.1 U
	EV22A-130116-W	1/16/2013	N	11.9	11.8	0.1	0.1 U	6.5	5.2	0.0366	0.02 U
	EV22A-130508-W	5/8/2013	N	10.2	10.2	0.3	0.1 U	6.1	4.6	0.0213	0.02 U
	EV-22A-130829-W	8/29/2013	N	7.5	7.1	--	--	4	3.5	--	--
	EV-22A-131111-W	11/11/2013	N	6 J	3.1 J	--	--	3 J	0.1 UJ	--	--
	EV-22A_20230908	9/8/2023	N	1.3	1.1	1.8	1 U	1 U	1 U	0.02 UJ	0.02 UJ
	EV-22A-20240307	3/7/2024	N	5.1	2.7	1 U	1 U	3	1 U	0.02 UJ	0.02 UJ
EV-22B	EV22B-120611-W	6/11/2012	N	17.6	3.3	0.3	0.1 U	3.4	0.2	0.1 U	0.1 U
	EV22B-130116-W	1/16/2013	N	3.4	3.3	0.2 U	0.1 U	0.6	0.1 U	0.0518	0.0371
	EV22B-130508-W	5/8/2013	N	1.3	1.4	0.2 U	0.1	0.3	0.1 U	0.020 U	0.020 U
	EV-22B-130829-W	8/29/2013	N	7	5.1	--	--	3.6	0.3	--	--
	EV-22B-131111-W	11/11/2013	N	1.7 J	1.7 J	--	--	0.9 J	0.1 UJ	--	--
	EV-22B_20230908	9/8/2023	N	4.6	1.9	2.2	1 U	3.3	1 U	0.02 UJ	0.02 UJ
	EV-22B-20240307	3/7/2024	N	1.7	1.7	1.6	1 U	1 U	1 U	0.02 UJ	0.02 UJ

Notes:

¹ Groundwater cleanup levels from Everett Lowland Cleanup Action Plan (CAP) (GeoEngineers 2016).

² Bold font wells indicate a trend plot was prepared for the well in Appendix B.

N = Normal sample

FD = Field duplicate sample

NE = Not established

U = The analyte was not detected at the indicated reporting limit

J = The concentration is estimated

Gray shading indicates a cleanup level exceedance.

Blue shading indicates a non-detect with a reporting limit greater than the screening level.

Table 6
Shallow Groundwater Results 2012 Through 2024
Everett Smelter Plume Groundwater Sampling
Everett, Washington

Analyte				Arsenic		Cadmium		Lead		Mercury	
Fraction				Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Units				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Groundwater Cleanup Level ¹				5	5	NE	NE	2.2	2.2	0.025	0.025
Location ²	Sample ID	Sample Date	Sample Type								
BP-01S	BP1S-120126-W	1/26/2012	N	125	116	0.1 U	0.1 U	8.8	0.1 U	0.1 U	0.1 U
	BP01S-130114-W	1/14/2013	N	88.4 J	83.8 J	0.2	0.1 U	11.9 J	0.1 U	0.020 U	0.020 U
	DUP02-130114-W	1/14/2013	FD	90.9 J	84.8 J	0.2	0.1 U	12.1 J	0.1 U	0.020 U	0.020 U
	BP01S-130515-W	5/15/2013	N	94.0	91.8	0.1 U	0.2	5.6	0.2	0.020 U	0.020 U
	BP-01S-130821-W	8/21/2013	N	208	116	--	--	287	0.1 U	--	--
	BP-01S-131101-W	11/1/2013	N	110	110	--	--	14.1	0.2	--	--
	BP-01S_20230831	8/31/2023	N	130	110	1.0 U	1.0 U	25	1.0 U	0.02 UJ	0.02 UJ
	20240320-BP-01S	3/20/2024	N	85	76	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
BP-02S	BP2S-120125-W	1/25/2012	N	96.6	97.9	0.1 U	0.1 U	22.0	0.1 U	0.1 U	0.1 U
	BP02S-130114-W	1/14/2013	N	132	94.5	0.1	0.1 U	10.1	0.1 U	0.020 U	0.020 U
	BP02S-130502-W	5/2/2013	N	104	101	0.1 U	0.1 U	1.8	0.1 U	0.020 U	0.020 U
	BP-02S-130822-W	8/22/2013	N	130	133	--	--	4.8	0.1 U	--	--
	BP-02S-131030-W	10/30/2013	N	122	114	--	--	2.6	0.1 U	--	--
	BP-02S_20230831	8/31/2023	N	170	150	1.0 U	1.0 U	5.7	1.0 U	0.02 UJ	0.02 UJ
	BP-02S-032124	3/21/2024	N	100	120	1.0 U	1.0 U	1.0 U	3.1	0.02 UJ	0.02 UJ
BP-03S	BP3S-120125-W	1/25/2012	N	32.8	33.2	0.1 U	0.1 U	6.8	0.1 U	0.1 U	0.1 U
	BP03S-130114-W	1/14/2013	N	34.4	36.8	0.1 U	0.2	0.2	9.6	0.020 U	0.020 U
	BP03S-130506-W	5/6/2013	N	46.4	44.4	0.1 U	0.1 U	1.3	0.3	0.020 U	0.020 U
	BP-03S-130820-W	8/20/2013	N	67.2	69.5	--	--	1.4	0.1 U	--	--
	BP-03S-131031-W	10/31/2013	N	42.6	42.4	--	--	1.2	0.1	--	--
	BP-03S_20230831	8/31/2023	N	64	67	1.0 U	1.0	1.0 U	1.1	0.02 UJ	0.02 UJ
	BP-03S-032024	3/20/2024	N	38	37	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
BP-04S	BP4S-120125-W	1/25/2012	N	68.0	58.2	0.2	0.1 U	78.5	1.2	0.1 U	0.1 U
	BP04S-130115-W	1/15/2013	N	30.5	24.3	0.6	0.2	35.5	2.2	0.020 U	0.020 U
	BP04S-130501-W	5/1/2013	N	55.4	47.8	0.3	0.2	41.1	2.0	0.020 U	0.020 U
	BP-04S-130819-W	8/19/2013	N	116	113	--	--	9.1	1.9	--	--
	BP-04S-131031-W	10/31/2013	N	49.7	44.1	--	--	14.2	1.4	--	--
	BP-04S_20230830	8/30/2023	N	31	32	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	20240321-BP-04S	3/21/2024	N	15	7.0	1.6	1.0 U	8.4	1.5	0.02 UJ	0.02 UJ
BP-05S	BP5S-120127-W	1/27/2012	N	31.0	27.1	0.1 U	0.1 U	0.7	0.1 U	0.1 U	0.1 U
	BP05S-130115-W	1/15/2013	N	29.9	26.2	7.9	0.1 U	1.4	0.3	0.020 U	0.020 U
	BP05S-130501-W	5/1/2013	N	37.8	35.2	0.1 U	0.1 U	1.3	0.8	0.020 U	0.020 U
	BP-05S-130819-W	8/19/2013	N	69.4	69.5	--	--	1.4	0.1 U	--	--
	BP-05S-131101-W	11/1/2013	N	53.7	51.5	--	--	0.6	0.1 U	--	--
	BP-05S_20230830	8/30/2023	N	62	55	1.0 U	1.0 U	2.2	1.1	0.02 UJ	0.02 UJ
	BP-05S-20240313	3/13/2024	N	33	30	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
BP-06S	BP6S-120127-W	1/27/2012	N	43.7	38.1	0.1 U	0.1 U	6.1	0.1 U	0.1 U	0.1 U
	BP06S-130114-W	1/14/2013	N	59.0	52.3	0.3	0.1 U	1.1	0.1 U	0.020 U	0.020 U
	BP06S-130506-W	5/6/2013	N	50.7	54.0	0.1 U	0.1 U	1.0	0.1 U	0.020 U	0.020 U
	BP-06S-130820-W	8/20/2013	N	76.8	77.0	--	--	3.1	0.1 U	--	--
	BP-06S_20230830	8/30/2023	N	88	81	1.1	1.0 U	1.8	1.0 U	0.02 UJ	0.02 UJ
	BP-06S-20240312	3/12/2024	N	43	47	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
BP-07S	BP7S-120127-W	1/27/2012	N	114	127	0.1 U	0.1 U	1.9 J	0.1 UJ	0.1 U	0.1 U
	BPDUPE-120127-W	1/27/2012	FD	124	120	0.1 U	0.1 U	0.1 UJ	2.0 J	0.1 U	0.1 U
	BP07S-130114-W	1/14/2013	N	274	277	0.1 U	0.1 U	0.8	0.1 U	0.020 U	0.020 U
	BP07S-130501-W	5/1/2013	N	326	316	0.1 U	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	BP-07S-130820-W	8/20/2013	N	365	127	--	--	1.0	0.1 U	--	--
	BP-07S-131113-W	11/13/2013	N	243	227	--	--	0.3	0.1 U	--	--
	BP-07S_20230830	8/30/2023	N	650	630	1.1	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	BP-07S-20240312	3/12/2024	N	500	580	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
BP-08S	BP8S-120126-W	1/26/2012	N	63.1	55.5	0.1 U	0.1 U	0.3	0.1 U	0.1 U	0.1 U
	BP08S-130114-W	1/14/2013	N	71.7	57.5	0.1 U	0.1 U	0.1	0.1 U	0.020 U	0.020 U
	BP08S-130501-W	5/1/2013	N	85.2	80.7	0.6	0.1 U	0.1	0.1 U	0.020 U	0.020 U
	BP-08S-130828-W	8/28/2013	N	118	110	--	--	5.9	0.1 U	--	--
	BP-08S-131114-W	11/14/2013	N	105	101	--	--	2.6	0.1 U	--	--
	BP-08S_20230830	8/30/2023	N	97	90	1.1	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	DUP-1_20230830	8/30/2023	FD	97	94	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	BP-08S-20240313	3/13/2024	N	69	68	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
BP-09S	BP9S-120126-W	1/26/2012	N	153	157	0.1 U	0.1 U	0.9	0.1 U	0.1 U	0.1 U
	BP09S-130114-W	1/14/2013	N	279	164	5.6	0.1 U	0.9	0.1 U	0.0394	0.02 U
	BP09S-130502-W	5/2/2013	N	164	160	0.1	0.1 U	0.4	0.1 U	0.020 U	0.020 U
	BP-09S-130828-W	8/28/2013	N	283	276	--	--	0.3	0.1 U	--	--
	BP-09S-131113-W	11/13/2013	N	499	289	--	--	4.9	0.1 U	--	--
	BP-09S_20230830	8/30/2023	N	460	440	1.0 U	1.0 U	2.1	2.0	0.080 J	0.02 UJ
	BP-09S-20240313	3/13/2024	N	280	260	3.6	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
BP-10S	BP10S-120126-W	1/26/2012	N	150	136	0.1 U	0.1 U	1.8	0.1 U	0.1 U	0.1 U
	BP10S-130114-W	1/14/2013	N	115	94.8	0.2	0.1 U	0.5	0.1 U	0.020 U	0.020 U
	BP10S-130502-W	5/2/2013	N	123	116	0.1 U	0.1 U	1.4	0.1 U	0.020 U	0.020 U
	BP-10S-130828-W	8/28/2013	N	204	201	--	--	1.2	0.1 U	--	--
	BP-10S-131113-W	11/13/2013	N	171	160	--	--	0.7	0.1 U	--	--
	BP-10S-20240312	3/12/2024	N	190	170	1.0 U	1.0 U	1.4	1.0 U	0.02 UJ	0.02 UJ
LLMW-03S	LLMW03S-130107-W	1/8/2013	N	2.4	1.8	0.2	0.1 U	1.5	0.1 U	0.020 U	0.020 U
	LLMW03S-130422W	4/22/2013	N	1.4	1.3	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-03S-130827-W	8/27/2013	N	2.3	2.4	--	--	0.1 U	0.1 U	--	--
	LLMW-03S-131030-W	10/30/2013	N	2.0	2.0	--	--	0.1 U	0.1 U	--	--
	LL MW-03S-20240306	3/6/2024	N	1.8	1.6	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ

Analyte				Arsenic		Cadmium		Lead		Mercury	
Fraction				Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Units				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Groundwater Cleanup Level ¹				5	5	NE	NE	2.2	2.2	0.025	0.025
Location ²	Sample ID	Sample Date	Sample Type								
LLMW-04S	LLMW04S-130110-W	1/10/2013	N	9.1	8.3	0.2 U	0.1 U	1.3	0.1 U	0.020 U	0.020 U
	LLMW04S-130423W	4/23/2013	N	7.2	7.2	0.1 U	0.1 U	0.4	0.1	0.020 U	0.020 U
	LLMW-04S-130829-W	8/29/2013	N	4.4	4.3	--	--	0.2	0.1	--	--
	LLMW-04S-131111-W	11/11/2013	N	8.0	8.2	--	--	0.1 U	0.1 U	--	--
	LLMW-04S_20230908	9/8/2023	N	3.2	2.1	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LL MW-04S-20240307	3/7/2024	N	5.6	5.4	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-05S	LLMW05S-130109-W	1/9/2013	N	8.0	8.4	0.1 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW05S-130510-W	5/10/2013	N	9.5	8.3	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-05S-130905-W	9/5/2013	N	18.2	17.7	--	--	0.1 U	0.1 U	--	--
	LLMW-05S-131106-W	11/6/2013	N	210	11.7	0.8	0.1 U	0.6	0.1 U	0.020 U	0.020 U
	LLMW_05S_052517	5/25/2017	N	2.54	1.87	--	--	0.0740 J	0.100 U	--	--
	LLMW-05S_082217	8/22/2017	N	16.4	3.87	--	--	0.217	0.100 U	--	--
	LLMW-05S_120517	12/5/2017	N	7.19	7.20	--	--	0.100 U	0.100 U	--	--
	LLMW-05S_20230817	8/17/2023	N	16	17	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-06S	LLMW-05S-20240229	2/29/2024	N	3.9	2.2	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LLMW06S-130109-W	1/9/2013	N	13.7	12.4	0.2	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	LLMW06S-130423W	4/23/2013	N	9.1	10.1	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-06S-130826-W	8/26/2013	N	6.1	6.4	--	--	0.1 U	0.1 U	--	--
	LLMW-06S-131106-W	11/6/2013	N	4.7	4.5	0.1	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-06S-131113-W	11/13/2013	N	61.1	54.0	--	--	2.6	0.1 U	--	--
	LLMW-06S_020817	2/8/2017	N	22.3	20.3	--	--	0.100 U	0.100 U	--	--
	LLMW_06S_052517	5/25/2017	N	28.1	29.2	--	--	0.119	0.100 U	--	--
	LLMW-06S_082217	8/22/2017	N	19.7	18.9	--	--	0.500 U	0.100 U	--	--
	LLMW-06S_120517	12/5/2017	N	14.1		--	--	0.100 U	--	--	--
LLMW-07S	LL MW-06S-20240305	3/5/2024	N	53	29	1.3	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LLMW07S-130109-W	1/9/2013	N	17.2	15.6	0.6	0.1	0.3	0.1 U	0.020 U	0.020 U
	LLMW07S-130507-W	5/7/2013	N	24.5	24.4	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-07S-130905-W	9/5/2013	N	46	44	--	--	2 U	2 U	--	--
	LLMW-07S-131107-W	11/7/2013	N	13	17	--	--	1 U	1 U	--	--
	LLMW-07S_020817	2/8/2017	N	4.62	4.21	--	--	0.0700 J	0.100 U	--	--
	LLMW_07S_052517	5/25/2017	N	10.8	10.2	--	--	0.104	0.100 U	--	--
	LLMW-07S_082217	8/22/2017	N	21.7	20.7	--	--	1.00 U	1.00 U	--	--
	LLMW-07S_120617	12/6/2017	N	6.85	6.72	--	--	0.100 U	0.100 U	--	--
	LLMW-07S_20230816	8/16/2023	N	13	12	5.0 U	5.0 U	5.0 U	5.0 U	0.02 UJ	0.02 UJ
LLMW-08S	LLMW-07S-20240229	2/29/2024	N	8.8	8.1	1.0 U	1.0 U	1.4 U	1.4 U	0.02 UJ	0.02 UJ
	LLMW08S-130108-W	1/8/2013	N	206	192	0.4	0.3	43.4	30.5	0.020 U	0.020 U
	LLMW08S-130430-W	4/30/2013	N	142	140	0.1 U	0.1 U	7.0	0.1 U	0.020 U	0.020 U
	LLMW-08S-130906-W	9/6/2013	N	206	187	--	--	104	0.2 U	--	--
	LLMW-08S-131107-W	11/7/2013	N	136	136	--	--	5.4	0.1 U	--	--
	LLMW-08S_102116	10/21/2016	N	37.9	32.1	--	--	1.33	0.295	--	--
	LLMW-08S_113016	11/30/2016	N	79.1	16.5	--	--	8.49	0.0770 J	--	--
	LLMW-08S_020817	2/8/2017	N	65.0	24.5	--	--	21.6	0.387	--	--
	LLMW-DUP01_020817	2/8/2017	FD	42.2	25.1	--	--	15.0	0.372	--	--
	LLMW_08S_052517	5/25/2017	N	11.5	36.5	--	--	0.745	0.563	--	--
	DUP01_052517	5/25/2017	FD	51.0	36.5	--	--	3.23	0.583	--	--
	LLMW-08S_082217	8/22/2017	N	311	294	--	--	25.5	1.56	--	--
	DUP01_082217	8/22/2017	FD	318	301	--	--	22.5	1.29	--	--
	LLMW-08S_120517	12/5/2017	N	44.6	29.4	--	--	5.77	0.186	--	--
	DUP01_120517	12/5/2017	FD	41.2	29.9	--	--	4.55	0.191	--	--
LLMW-09S	LL MW-08S-20240307	3/7/2024	N	41	24	1.0 U	1.0 U	7.5	1.0 U	0.02 UJ	0.02 UJ
	LLMW09S-130116-W	1/16/2013	N	61.5	59.0	2.2	0.1 U	0.6	0.1 U	0.020 U	0.020 U
	LLMW09S-130422-W	4/22/2013	N	62.0	60.2	0.1 U	0.1 U	0.4	0.1 U	0.020 U	0.020 U
	LLMW-09S-130822-W	8/22/2013	N	23.8	24.8	--	--	0.1 U	0.1 U	--	--
	LLMW-09S-131112-W	11/12/2013	N	14.2	14.4	--	--	0.1	0.1 U	--	--
	LLMW-09S_020817	2/8/2017	N	0.460	0.756	--	--	0.176	0.453	--	--
	LLMW_09S_052517	5/25/2017	N	0.411	0.356	--	--	0.152	0.104	--	--
	LLMW-09S_082217	8/22/2017	N	0.377	0.366	--	--	0.0880 J	0.0750 J	--	--
LLMW-10S	LLMW-09S_120517	12/5/2017	N	0.602	0.443	--	--	0.271	0.0840 J	--	--
	LLMW10S-130116-W	1/16/2013	N	4.5	4.4	0.3	0.1 U	0.7	0.1	0.020 U	0.020 U
	LLMW10S-130503-W	5/3/2013	N	6.3	7.1	0.1 U	0.1 U	0.4	0.1 U	0.020 U	0.020 U
	LLMW-10S-130823-W	8/23/2013	N	31.5	30.1	--	--	25.6	0.3	--	--
	LLMW-10S-131119-W	11/19/2013	N	8.4	7.4	--	--	0.1	0.1 U	--	--
	LLMW-10S_020817	2/8/2017	N	1.17	0.749	--	--	0.341	0.100 U	--	--
	LLMW_10S_052517	5/25/2017	N	1.99	1.95	--	--	0.300	0.100 U	--	--
	LLMW-10S_120517	12/5/2017	N	1.77	1.57	--	--	0.365	0.100 U	--	--
LLMW-11S	LL MW-10S-20240306	3/6/2024	N	5.2	1.1	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LLMW11S-130109-W	1/9/2013	N	1.1	1.1	0.2	0.1 U	0.3	0.1 U	0.020 U	0.020 U
LLMW-12S	LLMW11S-130430-W	4/30/2013	N	1.2	1.5 J	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW12S-130116-W	1/16/2013	N	20.0	16.6	5.5	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW12S-130503-W	5/3/2013	N	36.8	32.6	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-12S-130826-W	8/26/2013	N	62.5	61.1	--	--	0.1 U	0.2	--	--
LLMW-13S	LLMW-12S-131119-W	11/19/2013	N	43.5	41.6	--	--	0.1 U	0.1 U	--	--
	LLMW13S-130116-W	1/16/2013	N	27.1	25.5	0.1 U	0.1 U	0.4	0.1 U	0.020 U	0.020 U
	LLMW13S-130424-W	4/24/2013	N	22.6	22.8	0.4	0.1 U	0.1	0.1 U	0.020 U	0.020 U
	LLMW-13S-130821-W	8/21/2013	N	25.8	26.8	--	--	0.2	0.1 U	--	--
	LLMW-13S-131114-W	11/14/2013	N	24.1	23.7	--	--	0.1 U	0.1 U	--	--
LLMW-14S	LLMW-13S_020817	2/8/2017	N	22.9	22.4	--	--	2.13	0.100 U	--	--
	LLMW14S-130111-W	1/11/2013	N	2.8	2.7	0.3	0.1	2.3	2.3	0.020 U	0.020 U
	LLMW14S-130425W	4/25/2013	N	8.2	8.1	0.1 U	0.1	0.6	0.3	0.020 U	0.020 U
	LLMW-14S-130909-W	9/9/2013	N	22.5	20.8	--	--	0.7	0.3	--	--
LLMW-14S	LLMW-14S-131111-W	11/11/2013	N	18.3 J	17.1 J	--	--	0.4 J	0.1 UJ	--	--

Analyte				Arsenic		Cadmium		Lead		Mercury	
Fraction				Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Units				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Groundwater Cleanup Level ¹				5	5	NE	NE	2.2	2.2	0.025	0.025
Location ²	Sample ID	Sample Date	Sample Type								
LLMW-15S	LLMW15S-130111-W	1/11/2013	N	4.5	4.6	0.2 U	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	LLMW15S-130424W	4/24/2013	N	4.0	3.8	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-15S-130909-W	9/9/2013	N	8.6	6.3	--	--	0.3	0.1 U	--	--
	LLMW-15S-131111-W	11/11/2013	N	9.2	9.3	--	--	0.1	0.1 U	--	--
	LLMW-15S_20230817	8/17/2023	N	19	18	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LL MW-15S-20240305	3/5/2024	N	13	12	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-16S	LLMW16S-130111-W	1/11/2013	N	1700	1700	0.1	0.1 U	0.8	0.1 U	0.020 U	0.020 U
	LLMW16S-130423-W	4/23/2013	N	2110	2070	0.1 U	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	LLMW-16S-130823-W	8/23/2013	N	497	386	--	--	54.7	0.1 U	--	--
	LLMW-16S-131113-W	11/13/2013	N	238	216	--	--	0.6	0.1 U	--	--
LLMW-17S	LLMW17S-130109-W	1/9/2013	N	2.8	2.6	0.2 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW17S-130429-W	4/29/2013	N	3.8	3.6	0.3	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-17S-130820-W	8/20/2013	N	3.7	2.4	--	--	0.4	0.1 U	--	--
	LLMW-17S-131106-W	11/6/2013	N	2.6	2.5	--	--	0.1 U	0.1 U	--	--
LLMW-18S	LLMW18S-130108-W	1/8/2013	N	4.7	4.9	0.2	0.2	0.3	0.1 U	0.020 U	0.020 U
	LLMW18S-130424W	4/24/2013	N	6.0	6.8	0.1 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW-18S-130904-W	9/4/2013	N	20	19	--	--	0.1 U	0.1 U	--	--
	LLMW-18S-131119-W	11/19/2013	N	12.2	11.9	--	--	0.1 U	0.1 U	--	--
	LLMW-18S_20230817	8/17/2023	N	41	43	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LLMW-18S-20240227	2/27/2024	N	44	49	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-21S	LLMW21S-030108-W	1/8/2013	N	31.1		0.1 U	--	0.3	--	--	--
	LLMW21S-130108-W	1/8/2013	N		28.9	--	0.1 U	--	0.1 U	0.020 U	0.020 U
	LLMW21S-130424W	4/24/2013	N	35.4	33.9	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-21S-130909-W	9/9/2013	N	90.2	91.3	--	--	0.1 U	0.1 U	--	--
	LLMW-21S-131119-W	11/19/2013	N	98.6	92.7	--	--	0.1 U	0.1 U	--	--
	LLMW-21S-20240226	2/26/2024	N	7.3	1.9	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-22S	LLMW22S-130108-W	1/8/2013	N	8	6	3	1 U	3	1 U	0.0351	0.02 U
	LLMW22S-130429-W	4/29/2013	N	3.0	3	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-22S-130823-W	8/23/2013	N	5	6	--	--	0.1 U	0.2	--	--
	LLMW-22S-131105-W	11/5/2013	N	7	7	--	--	1 U	1 U	--	--
LLMW-23S	LLMW23S-130108-W	1/8/2013	N	15.4	15.0	0.1 U	0.1 U	1.8	0.7	0.020 U	0.020 U
	LLMW23S-130424W	4/24/2013	N	9.8	10.0	0.1	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	LLMW-23S-130822-W	8/22/2013	N	7.1	6.6	--	--	0.3	0.1 U	--	--
	LLMW-23S-131104-W	11/4/2013	N	5.5	5.3	--	--	0.2	0.1 UJ	--	--
	LL MW-23S-20240307	3/7/2024	N	6.5	6.6	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW33S	LLMW33S-130117-W	1/17/2013	N	3.1	0.3	0.4	0.1 U	3.5	0.1 U	0.0328	0.02 U
	LLMW33S-130506-W	5/6/2013	N	24.4	0.3	4.3	0.1 U	28.1	0.1 U	0.229	0.02 U
	LL MW-33S-20240304	3/4/2024	N	7.3	1.0 U	1.0 U	1.0 U	1.5	1.0 U	0.02 UJ	0.02 UJ
LLMW-34S	LLMW34S-130116-W	1/16/2013	N	0.5	0.5	0.2	0.1 U	0.2	0.1 U	0.0275	0.0222
	LLMW34S-130506-W	5/6/2013	N	0.8	0.7	0.1 U	0.1 U	0.2	0.1 U	0.0321	0.02 U
	LLMW-34S-130826-W	8/26/2013	N	1.5	0.6	--	--	2.4	0.1 U	--	--
	LLMW-34S-131031-W	10/31/2013	N	0.7	0.7	--	--	0.2	0.1 U	--	--
	LLMW-34S_20230816	8/16/2023	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LLMW34S-20240229	2/29/2024	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-37S	LLMW-37S_082217	8/22/2017	N	20.6	19.8	--	--	0.209	0.100 U	--	--
	LLMW-37S_120517	12/5/2017	N	1.11	0.935	--	--	0.0970 J	0.100 U	--	--
	LLMW37S-20240229	2/29/2024	N	5.2	5.2	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-38S	LLMW-38S_082217	8/22/2017	N	1.17	1.10	--	--	0.241	0.100 U	--	--
	LLMW-38S_120617	12/6/2017	N	1.04	0.809	--	--	0.125	0.100 U	--	--
	LLMW-38S_20230823	8/23/2023	N	1.2	1.2	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LLMW38S- 20240301	3/1/2024	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-39S	LLMW-39S_102116	10/21/2016	N	1.57	0.714	--	--	2.95	0.0940 J	--	--
	LLMW-39S_113016	11/30/2016	N	1.83	1.86	--	--	0.100 U	0.100 U	--	--
	DUP-01_113016	11/30/2016	FD	1.82	1.59	--	--	0.0760 J	0.100 U	--	--
	LLMW-39S_020817	2/8/2017	N	1.48	1.68	--	--	0.146	0.100 U	--	--
	LLMW_39S_052517	5/25/2017	N	1.85	2.46	--	--	0.519	0.380	--	--
	LLMW-39S_082217	8/22/2017	N	6.99	5.16	--	--	8.83	0.100 U	--	--
	LLMW-39S_120617	12/6/2017	N	7.39	4.01	--	--	0.162	0.100 U	--	--
	LLMW-39S_20230822	8/22/2023	N	31	12	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-40S	LLMW40S- 20240301	3/1/2024	N	29	35	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LLMW-40S_102116	10/21/2016	N	24.7	18.3	--	--	0.405 J	0.164	--	--
	DUP-01_102116	10/21/2016	FD	17.6	19.2	--	--	0.238 J	0.157	--	--
	LLMW-40S_113016	11/30/2016	N	144	51.6	--	--	17.4	1.26	--	--
	LLMW-40S_020817	2/8/2017	N	49.7	25.6	--	--	7.80	0.978	--	--
	LLMW_40S_052517	5/25/2017	N	81.3	70.5	--	--	12.1	6.28	--	--
	LLMW-40S_082217	8/22/2017	N	60.2	58.7	--	--	1.89	0.100 U	--	--
	LLMW-40S_120517	12/5/2017	N	93.0	32.7	--	--	14.7	1.76	--	--
	LLMW-40S_20230822	8/22/2023	N	170	40	1.0 U	1.0 U	24	1.1	0.13 J	0.02 UJ
LLMW-41S	LLMW40S- 20240301	3/1/2024	N	390	110	1.0 U	1.0 U	44	1.0 U	0.60	0.11 J
	LLMW-41S_102116	10/21/2016	N	0.940	0.924	--	--	0.200 U	0.200 U	--	--
	LLMW-41S_113016	11/30/2016	N	0.756	0.832	--	--	0.100 U	0.100 U	--	--
	LLMW41S-20240229	2/29/2024	N	4.2	6.8	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-42S	LLMW-42S_102116	10/21/2016	N	4.57	3.40	--	--	0.200 U	0.200 U	--	--
	LLMW-42S_113016	11/30/2016	N	3.03	3.41	--	--	0.100 U	0.100 U	--	--
	LLMW-42S_020817	2/8/2017	N	2.14	2.17	--	--	0.102	0.100 U	--	--
	LLMW_42S_052517	5/25/2017	N	2.45	2.07	--	--	0.122	0.100 U	--	--
	LLMW-42S_082217	8/22/2017	N	41.9	68.6	--	--	0.422	0.100 U	--	--
	LLMW-42S_120517	12/5/2017	N	2.37	2.67	--	--	0.100 U	0.100 U	--	--
	LLMW-42S_20230821	8/21/2023	N	29	34	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LLMW42S-20240229	2/29/2024	N	3.0	3.2	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ

Analyte				Arsenic		Cadmium		Lead		Mercury	
Fraction				Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Units				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Groundwater Cleanup Level ¹				5	5	NE	NE	2.2	2.2	0.025	0.025
Location ²	Sample ID	Sample Date	Sample Type								
EV-6A	EV6A-130117-W	1/17/2013	N	136	28.4	27.4	27.1	291	67.8	0.0404	0.02 U
	EV6A-130508-W	5/8/2013	N	210	195	17.7	17.9	51.4	38.7	0.0478	0.0343
	EV6A-130828-W	8/28/2013	N	314	208	--	--	70.9	24.9	--	--
	EV-6A-131108-W	11/8/2013	N	176	33.5	--	--	396	103	--	--
EV-22A	EV22A-120611-W	6/11/2012	N	8.9	3.5	0.1	0.1 U	5.3	0.1 U	0.1 U	0.1 U
	DUP-120611-W	6/11/2012	FD	9.1	4.3	0.1 U	0.1 U	5.1	0.4	0.1 U	0.1 U
	EV22A-130116-W	1/16/2013	N	11.9	11.8	0.1	0.1 U	6.5	5.2	0.0366	0.02 U
	EV22A-130508-W	5/8/2013	N	10.2	10.2	0.3	0.1 U	6.1	4.6	0.0213	0.02 U
	EV-22A-130829-W	8/29/2013	N	7.5	7.1	--	--	4.0	3.5	--	--
	EV-22A-131111-W	11/11/2013	N	6.0 J	3.1 J	--	--	3.0 J	0.1 UJ	--	--
	EV-22A_20230908	9/8/2023	N	1.3	1.1	1.8	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	EV-22A-20240307	3/7/2024	N	5.1	2.7	1.0 U	1.0 U	3.0	1.0 U	0.02 UJ	0.02 UJ

Notes:

¹ Groundwater cleanup levels from Everett Lowland Cleanup Action Plan (CAP) (GeoEngineers 2016).

² Bold font wells indicate a trend plot was prepared for the well in Appendix B.

N = Normal sample

FD = Field duplicate sample

NE = Not established

U = The analyte was not detected at the indicated reporting limit

J = The concentration is estimated

Gray shading indicates a cleanup level exceedance.

Blue shading indicates a non-detect with a reporting limit greater than the screening level.

Table 7
Deep Groundwater Results 2012 Through 2024
Everett Smelter Plume Groundwater Sampling
Everett, Washington

Analyte				Arsenic		Cadmium		Lead		Mercury	
Fraction				Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Units				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Groundwater Cleanup Level ¹				5	5	NE	NE	2.2	2.2	0.025	0.025
Location ²	Sample ID	Sample Date	Sample Type								
BP-01D	BP1D-120126-W	1/26/2012	N	0.5	0.3	0.1 U	0.1 U	0.2	0.1 U	0.1 U	0.1 U
	BP01D-130114-W	1/14/2013	N	0.5 J	0.3	0.5	0.1 U	0.4	0.1 U	0.020 U	0.020 U
	BP01D-130515-W	5/15/2013	N	0.2	0.2	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	BP-01D-130821-W	8/21/2013	N	0.2	0.2 U	--	--	0.1 U	0.1 U	--	--
	BP-01D-131101-W	11/1/2013	N	0.3	0.4	--	--	0.1 U	0.1 U	--	--
	BP-01D_20230831	8/31/2023	N	1.3	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	20240320-BP-01D	3/20/2024	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
BP-02D	BP2D-120125-W	1/25/2012	N	0.5	0.4	0.1 U	0.1 U	0.2	0.1 U	0.1 U	0.1 U
	BP02D-130114-W	1/14/2013	N	1.0	0.3	0.1	0.1 U	0.5	0.1 U	0.020 U	0.020 U
	BP02D-130502-W	5/2/2013	N	0.6	0.6	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	BP-02D-130821-W	8/21/2013	N	0.2	0.2 U	--	--	0.1 U	0.1 U	--	--
	BP-02D-131030-W	10/30/2013	N	0.4	0.2 U	--	--	0.2	0.1 U	--	--
	BP-02D_20230831	8/31/2023	N	1.0 U	1.0 U	1.3	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	BP-02D-032124	3/21/2024	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
BP-03D	BP3D-120125-W	1/25/2012	N	1.0	0.8	0.1 U	0.1 U	0.2	0.1 U	0.1 U	0.1 U
	BP03D-130114-W	1/14/2013	N	0.9	0.3	0.7	0.1 U	0.6	0.1 U	0.020 U	0.020 U
	BP03D-130506-W	5/6/2013	N	0.2	0.2	0.1 U	0.1 U	0.1	0.1 U	0.020 U	0.020 U
	BP-03D-130820-W	8/20/2013	N	0.2	0.2 U	--	--	0.1	0.1 U	--	--
	BP-03D-131031-W	10/31/2013	N	0.2 U	0.2 U	--	--	0.1	0.1 U	--	--
	BP-03D_20230831	8/31/2023	N	1.1	1.0 U	1.2	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	BP-03D-032124	3/21/2024	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
BP-04D	BP4D-120125-W	1/25/2012	N	5220	5490	0.1 U	0.1 U	1.0	0.1 U	0.1 U	0.1 U
	BP04D-130115-W	1/15/2013	N	3740	3620	0.5	0.1 U	3.8	0.1 U	0.020 U	0.020 U
	BP04D-130501-W	5/1/2013	N	3470	3820	0.1 U	0.1 U	0.4	0.1 U	0.020 U	0.020 U
	BP-04D-130820-W	8/20/2013	N	3940	4060	--	--	0.1	0.1 U	--	--
	BP-04D-131031-W	10/31/2013	N	3650	3880	--	--	0.2 U	0.1 U	--	--
	BP-04D_20230830	8/30/2023	N	2700	2200	1.4	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	20240321-BP-04D	3/21/2024	N	2500	2500	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
BP-04D2	BP-04D2-130905-W	9/5/2013	N	0.4	0.4	0.1 U	0.1 U	0.1	0.1 U	0.020 U	0.020 U
	BP-04D2-131112-W	11/12/2013	N	0.4	0.3	0.1 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	BP-04D2_20230830	8/30/2023	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	20240321-BP04D2	3/21/2024	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
BP-05D	BP5D-120127-W	1/27/2012	N	14900	14500	0.1 U	0.1 U	1.6	0.1 U	0.1 U	0.1 U
	BP05D-130115-W	1/15/2013	N	16400	14800	0.3	0.1 U	0.6	0.1 U	0.020 U	0.020 U
	DUP03-130115-W	1/15/2013	FD	16500	16100	0.2	0.2	0.8	0.1 U	0.020 U	0.020 U
	BP05D-130501-W	5/1/2013	N	15500	17100	0.1 U	0.1 U	0.2	0.2	0.020 U	0.020 U
	DUP-03-130501-W	5/1/2013	FD	15400	17200	0.1 U	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	BP-05D-130819-W	8/19/2013	N	17500	17300	--	--	1.3	0.1 U	--	--
	DUP-01-130819-W	8/19/2013	FD	18100	17500	--	--	1.4	0.1 U	--	--
	BP-05D-131101-W	11/1/2013	N	18900	18600	--	--	0.4 J	0.1 U	--	--
	DUP-01-131101-W	11/1/2013	FD	18500	18500	--	--	0.2 J	0.1 U	--	--
	BP-05D_20230831	8/31/2023	N	11000	11000	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	BP-05D-20240313	3/13/2024	N	11000	11000	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
BP-05D2	BP05D2-130115-W	1/15/2013	N	25.3	25.6	0.6	0.1 U	1.2	0.1 U	0.020 U	0.020 U
	BP05D2-130502-W	5/2/2013	N	9.3	5.4	0.2	0.1 U	1.9	0.1 U	0.020 U	0.020 U
	BP-05D2-130904-W	9/4/2013	N	4.1	3.7	--	--	0.2	0.1 U	--	--
	BP-05D2-131112-W	11/12/2013	N	3.4	3.5	--	--	0.3	0.1 U	--	--
	BP-05D2_20230831	8/31/2023	N	2.0	1.9	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	BP-05D2-20240313	3/13/2024	N	2.5	2.5	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
BP-06D	BP6D-120127-W	1/27/2012	N	2120	2070	0.1 U	0.1 U	0.2	0.1 U	0.1 U	0.1 U
	BP06D-130114-W	1/14/2013	N	1820	1780	0.2	0.1 U	0.4	0.1 U	0.020 U	0.020 U
	BP06D-130506-W	5/6/2013	N	1820	1850	0.1 U	0.1 U	0.1	0.1 U	0.020 U	0.020 U
	BP-06D-130820-W	8/20/2013	N	1810	1810	--	--	0.2	0.1 U	--	--
	BP-06D-131113-W	11/13/2013	N	1740	1750	--	--	0.4	0.1 U	--	--
	BP-06D_20230830	8/30/2023	N	3000	3000	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	DUP-2_20230830	8/30/2023	FD	3100	3200	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	BP-06D-20240312	3/12/2024	N	2900	3000	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
BP-07D	BP7D-120127-W	1/27/2012	N	6500	5760	0.1 U	0.1 U	0.3	0.1 U	0.1 U	0.1 U
	BP07D-130114-W	1/14/2013	N	4940	5020	0.1 U	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	BP07D-130501-W	5/1/2013	N	5140	4150	0.1 U	0.1 U	0.1	0.1 U	0.020 U	0.020 U
	BP-07D-130821-W	8/21/2013	N	6530	6610	--	--	0.1 U	0.1 U	--	--
	BP-07D-131113-W	11/13/2013	N	5670	5620	--	--	0.2	0.1 U	--	--
	BP-07D1_20230830	8/30/2023	N	2500	2500	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	BP-07D-20240312	3/12/2024	N	2700	2800	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
BP-07D2	BP-07D2-130906-W	9/6/2013	N	49.2	47.1	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	BP-07D2-131113-W	11/13/2013	N	33.2	32.9	0.1 U	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	BP-07D2_20230830	8/30/2023	N	42	39	1.8	1.1	26	22	0.02 UJ	0.02 UJ
	BP-07D2-20240312	3/12/2024	N	35	35	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
BP-08D	BP8D-120126-W	1/26/2012	N	1.7	1.3	0.1 U	0.1 U	0.3	0.1 U	0.1 U	0.1 U
	BP08D-130114-W	1/14/2013	N	0.9	0.8	0.1 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	BP08D-130501-W	5/1/2013	N	0.5	1.1	1.0	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	BP-08D-130828-W	8/28/2013	N	0.8	0.8	--	--	0.1 U	0.1 U	--	--
	BP-08D-131114-W	11/14/2013	N	0.6	0.7	--	--	0.1	0.1 U	--	--
	BP-08D_20230830	8/30/2023	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	BP-08D-20240313	3/13/2024	N	1.8	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ

Analyte				Arsenic		Cadmium		Lead		Mercury	
Fraction				Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Units				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Groundwater Cleanup Level ¹				5	5	NE	NE	2.2	2.2	0.025	0.025
Location ²	Sample ID	Sample Date	Sample Type								
BP-09D	BP9D-120126-W	1/26/2012	N	14.1	14.0	0.1 U	0.1 U	0.2	0.1 U	0.1 U	0.1 U
	BP09D-130114-W	1/14/2013	N	23.0	22.4	0.7	0.1 U	0.5	0.1 U	0.020 U	0.020 U
	BP09D-130502-W	5/2/2013	N	27.0	26.1	0.2	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	BP-09D-130828-W	8/28/2013	N	25.5	25.3	--	--	0.1	0.1 U	--	--
	BP-09D-131113-W	11/13/2013	N	24.0	24.2	--	--	0.2	0.1 U	--	--
	BP-09D_20230830	8/30/2023	N	15	14	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	BP-09D-20240313	3/13/2024	N	10	10	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
BP-10D	BP10D-120126-W	1/26/2012	N	1.8	1.6	0.2	0.1	0.3	0.1 U	0.1 U	0.1 U
	BP10D-130114-W	1/14/2013	N	8.1	8.3	0.1	0.1 U	0.7	0.1	0.0239	0.02 U
	BP10D-130502-W	5/2/2013	N	8.0	7.7	0.2	0.1 U	0.7	0.1 U	0.020 U	0.020 U
	BP-10D-130828-W	8/28/2013	N	6.1	6.0	--	--	0.3	0.1 U	--	--
	BP-10D-131113-W	11/13/2013	N	5.7	5.8	--	--	0.2	0.1 U	--	--
LLMW-01D	LLMW01D-130108-W	1/8/2013	N	24.5	23.8	0.1 U	0.1 U	2.1	0.1	0.020 U	0.020 U
	LLMW01D-130510-W	5/10/2013	N	22.0	21.2	0.1 U	0.1 U	0.1	0.3	0.020 U	0.020 U
	LLMW-01D-130821-W	8/21/2013	N	26.9	28.1	--	--	0.1 U	0.1 U	--	--
	LLMW-01D-131105-W	11/5/2013	N	28.9	29.6	--	--	0.1	0.1 U	--	--
	LLMW-01D_20230824	8/24/2023	N	29	27	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	20240320-LLMW01D	3/20/2024	N	38	38	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-02D	LLMW02D-130107-W	1/7/2013	N	2.6	2.4	0.1 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW02D-130422-W	4/22/2013	N	1.5	1.5	0.2	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-02D-130827-W	8/27/2013	N	1.4	1.4	--	--	0.1 U	0.1 U	--	--
	LLMW-02D-131030-W	10/30/2013	N	1.5	1.5	--	--	0.1 U	0.1 U	--	--
	LLMW-02D-032124	3/21/2024	N	2.4	1.7	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-03D	LLMW03D-130107-W	1/7/2013	N	1.1	0.6	0.1 U	0.1 U	0.6	0.1 U	0.020 U	0.020 U
	LLMW03D-130422W	4/22/2013	N	0.4	0.3	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-03D-130827-W	8/27/2013	N	0.4	0.4	--	--	0.1 U	0.1 U	--	--
	LLMW-03D-131030-W	10/30/2013	N	0.3	0.4	--	--	0.1 U	0.1 U	--	--
	LLMW-03D_20230824	8/24/2023	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LL MW-03D-20240306	3/6/2024	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-04D	LLMW04D-130110-W	1/10/2013	N	35	31.1	0.1 U	0.1 U	1.2	0.6	0.020 U	0.020 U
	LLMW04D-130423W	4/23/2013	N	4.7	5.0	0.1 U	0.1 U	0.2	0.1	0.020 U	0.020 U
	LLMW-04D-130829-W	8/29/2013	N	1.7	1.5	--	--	0.1 U	0.1 U	--	--
	LLMW-04D-131111-W	11/11/2013	N	9.5	9.0	--	--	0.2	0.1 U	--	--
	LLMW-04D_20230908	9/8/2023	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LL MW-04D-20240307	3/7/2024	N	3.3	1.6	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-05D	LLMW05D-130109-W	1/9/2013	N	1.4	1.7	0.1 U	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	LLMW05D-130510-W	5/10/2013	N	1.7	1.2	0.5	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	LLMW-05D-130903-W	9/3/2013	N	1.0	1.0	--	--	0.1 U	0.1 U	--	--
	LLMW-05D-131106-W	11/6/2013	N	1.1	0.9	2.1	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW-05S_020817	2/8/2017	N	1.35	0.634	--	--	0.100 U	0.100 U	--	--
	LLMW_05D_052517	5/25/2017	N	0.447	0.378	--	--	0.100 U	0.100 U	--	--
	LLMW-05D_082217	8/22/2017	N	0.305	0.204	--	--	0.0730 J	0.100 U	--	--
	LLMW-05D_120517	12/5/2017	N	1.79	1.74	--	--	0.100 U	0.100 U	--	--
	LLMW-05D_20230817	8/17/2023	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LLMW-05D-20240229	2/29/2024	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-06D	LLMW06D-130201-W	2/1/2013	N	7.0	5.5	0.1 U	0.1 U	1.0	0.3	0.0232	0.02 U
	LLMW06D-130422W	4/22/2013	N	2.8	2.0	0.3	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	LLMW-06D-130826-W	8/26/2013	N	1.4	1.5	--	--	0.1	0.1 U	--	--
	LLMW-06D-131106-W	11/6/2013	N	1.4	1.3	1.0	0.1 U	0.1	0.1 U	0.020 U	0.020 U
	LLMW-06D_20230816	8/16/2023	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LL MW-06D-20240305	3/5/2024	N	1.8	1.2	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-07D	LLMW07D-130109-W	1/9/2013	N	6.9	5.9	0.1 U	0.2 U	1.5	0.2 U	0.020 U	0.020 U
	LLMW07D-130508-W	5/8/2013	N	9.0	9.9	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-07D-130905-W	9/5/2013	N	5.6	5.0	--	--	0.2	0.1 U	--	--
	LLMW-07D-131107-W	11/7/2013	N	7.0	4.5	--	--	0.2	0.1 U	--	--
	LLMW_07D_052517	5/25/2017	N	10.6	7.29	--	--	0.0830 J	0.100 U	--	--
	LLMW-07D_082217	8/22/2017	N	5.30	4.99	--	--	0.102	0.100 U	--	--
	LLMW-07D_120517	12/5/2017	N	5.79	5.18	--	--	0.115	0.100 U	--	--
	LLMW-07D_20230816	8/16/2023	N	7.6	5.4	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LLMW-07D-20240229	2/29/2024	N	6.3	5.3	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-08D	LLMW08D-130108-W	1/8/2013	N	2	2	0.1 U	0.1 U	0.1	0.1 U	0.020 U	0.020 U
	LLMW08D-130430-W	4/30/2013	N	3.7	3.8	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-08D-130905-W	9/5/2013	N	1.2	1.4	--	--	0.1 U	0.1 U	--	--
	LLMW-08D-131107-W	11/7/2013	N	1.9	1.5	--	--	0.2 U	0.1 U	--	--
	LLMW_08D_052517	5/25/2017	N	1.35	1.36	--	--	0.100 U	0.100 U	--	--
	LLMW-08D_082217	8/22/2017	N	0.318 J	0.138 J	--	--	0.102	0.100 U	--	--
	LLMW-08D_120517	12/5/2017	N	1.78	1.22	--	--	0.124	0.100 U	--	--
	LLMW-08D_20230821	8/21/2023	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LL MW-08D-20240307	3/7/2024	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-09D	LLMW09D-130116-W	1/16/2013	N	1.7	0.9	2.0	0.1 U	0.9	0.3	0.020 U	0.020 U
	LLMW09D-130423-W	4/23/2013	N	1.2	0.9	0.1 U	0.1 U	0.4	0.1	0.020 U	0.020 U
	LLMW-09D-130822-W	8/22/2013	N	0.8	0.7	--	--	0.2	0.1 U	--	--
	LLMW-09D-131112-W	11/12/2013	N	1.0	0.7	--	--	0.3	0.1 U	--	--
LLMW-10D	LLMW10D-130116-W	1/16/2013	N	3.0	2.4	0.1 U	0.1 U	1.7	0.1 U	0.020 U	0.020 U
	LLMW10D-130503-W	5/3/2013	N	2.6	3.2	0.1 U	0.1 U	0.2	0.2	0.020 U	0.020 U
	LLMW-10D-130823-W	8/23/2013	N	3.2	2.3	--	--	1.2	0.1 U	--	--
	LLMW-10D-131119-W	11/19/2013	N	2.7	2.7	--	--	0.3	0.1 U	--	--
	LLMW-10D_20230823	8/23/2023	N	2.3	1.0 U	1.0 U	1.0 U	1.3	1.0 U	0.02 UJ	0.02 UJ
	LL MW-10D-20240306	3/6/2024	N	1.1	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ

Analyte				Arsenic		Cadmium		Lead		Mercury	
Fraction				Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Units				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Groundwater Cleanup Level ¹				5	5	NE	NE	2.2	2.2	0.025	0.025
Location ²	Sample ID	Sample Date	Sample Type								
LLMW-11D	LLMW11D-130109-W	1/9/2013	N	1.7	1.7	0.5	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	LLMW11D-130430-W	4/30/2013	N	1.4	1.2 J	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-11D-130820-W	8/20/2013	N	7.8	8.1	–	–	0.2	0.1 U	–	–
	LLMW-11D-131030-W	10/30/2013	N	8.2	8.4	–	–	0.1	0.1	–	–
	LLMW_11D_052517	5/25/2017	N	4.30	4.34	–	–	0.100 U	0.100 U	–	–
	LLMW-11D_082217	8/22/2017	N	3.13	2.71	–	–	0.156	0.100	–	–
	LLMW-11D_120517	12/5/2017	N	5.99	5.72	–	–	0.141	0.100 U	–	–
	LLMW-11D_20230818	8/18/2023	N	14	13	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LLMW-11D-031824	3/18/2024	N	7.1	6.2	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-12D	LLMW12D-130116-W	1/16/2013	N	1880	1980	0.4	0.1 U	0.4	0.1 U	0.020 U	0.020 U
	LLMW12D-130503-W	5/3/2013	N	2020	2040	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	DUP-04-130503-W	5/3/2013	FD	2030	2040	0.1 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW-12D-130826-W	8/26/2013	N	1870	2120	–	–	0.1 U	0.1 U	–	–
	DUP-02-130826-W	8/26/2013	FD	1860	2050	–	–	0.1 U	0.1 U	–	–
	LLMW-12D-131119-W	11/19/2013	N	1580	1670	–	–	0.1	0.1 U	–	–
	DUP-02-131119-W	11/19/2013	FD	1610	1590	–	–	0.1	0.1 U	–	–
	LLMW_12D_052517	5/25/2017	N	2140	2100	–	–	0.0730 J	0.100 U	–	–
	LLMW-12D_082217	8/22/2017	N	2910	2710	–	–	0.163	0.100 U	–	–
	LLMW-12D_120517	12/5/2017	N	2150	2390	–	–	0.186	0.100 U	–	–
	LLMW-12D_20230823	8/23/2023	N	1600	1600	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LLMW-12D-031824	3/19/2024	N	1700	1600	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-13D	LLMW13D-130116-W	1/16/2013	N	25.4	22.4	0.1 U	0.1 U	0.6	0.1 U	0.020 U	0.020 U
	LLMW13D-130424-W	4/24/2013	N	68.0	79.8	0.1	0.1 U	0.3	0.1 U	0.020 U	0.020 U
	DUP-01-130424-W	4/24/2013	FD	73.6	85.3	0.1 U	0.1 U	0.3	0.1	0.020 U	0.020 U
	LLMW-13D-130821-W	8/21/2013	N	73.0	82.7	–	–	0.3	0.1 U	–	–
	DUP-03-130821-W	8/21/2013	FD	66.6	81.2	–	–	0.3	0.1 U	–	–
	LLMW-13D-131114-W	11/14/2013	N	53.7	62.9	–	–	0.2	0.1	–	–
	DUP-03-131114-W	11/14/2013	FD	67.5	71.3	–	–	0.2	0.1 U	–	–
LLMW-14D	LLMW14D-130111-W	1/11/2013	N	274	313	0.4	0.1 U	0.6	0.2	0.020 U	0.020 U
	LLMW14D-130425W	4/25/2013	N	234	246	0.1 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	DUP-2-130425W	4/25/2013	FD	293	228	0.1 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW-14D-130909-W	9/9/2013	N	98.2	107	–	–	0.1 U	0.1 U	–	–
	DUP-04-130909-W	9/9/2013	FD	131	103	–	–	0.1 U	0.1 U	–	–
	LLMW-14D-131111-W	11/11/2013	N	158 J	179 J	–	–	1.8 J	0.1 UJ	–	–
	DUP-04-131111-W	11/11/2013	FD	128 J	174 J	–	–	0.1 UJ	0.1 UJ	–	–
	LL MW-14D-20240307	3/7/2024	N	33	31	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-15D	LLMW15D-130111-W	1/11/2013	N	0.9	0.5	0.2 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW15D-130425W	4/25/2013	N	0.5	0.5	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-15D-131111-W	11/11/2013	N	0.5	0.5	–	–	0.1 U	0.1 U	–	–
	LLMW-15D_20230817	8/17/2023	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LL MW-15D-20240305	3/5/2024	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-16D	LLMW16D-130111-W	1/11/2013	N	1.8	0.5 U	0.1 U	0.1 U	1.2	0.2	0.020 U	0.020 U
	LLMW16D-130423-W	4/23/2013	N	1.0	0.5	0.2	0.1 U	0.3	0.2	0.0250	0.02 U
	LLMW-16D-130826-W	8/26/2013	N	1.3	0.9	–	–	0.5	0.2	–	–
	LLMW-15D-130909-W	9/9/2013	N	0.6	0.5	–	–	0.1 U	0.1 U	–	–
	LLMW-16D-131113-W	11/13/2013	N	1.0	0.6	–	–	0.3	0.1 U	–	–
LLMW-17D	LLMW17D-130109-W	1/9/2013	N	15.8	14.9	0.2 U	0.1 U	0.5	0.1 U	0.020 U	0.020 U
	LLMW17D-130429-W	4/29/2013	N	6.8	6.4	0.4	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-17D-130820-W	8/20/2013	N	13.0	11.3	–	–	0.1 U	0.1 U	–	–
	LLMW-17D-131106-W	11/6/2013	N	13.0	8.9	–	–	0.1 U	0.1 U	–	–
	LLMW-17D_20230818	8/18/2023	N	15	8.3	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LLMW-17D-031824	3/18/2024	N	8.1	7.6	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-18D	LLMW18D-130109-W	1/9/2013	N	1.4	0.7	0.1 U	0.1 U	0.5	0.1 U	0.020 U	0.020 U
	LLMW18D-130424W	4/24/2013	N	0.8	0.5 U	0.1 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW-18D-130904-W	9/4/2013	N	0.8	0.6	–	–	0.2	0.1 U	–	–
	LLMW-18D-131119-W	11/19/2013	N	0.7	0.6	–	–	0.1 U	0.1 U	–	–
	LLMW-18D_20230817	8/17/2023	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LLMW-18D-20240227	2/27/2024	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-19D	LLMW19D-130110-W	1/10/2013	N	8.7	4.9	1.8	0.1 U	0.9	0.1	0.020 U	0.020 U
	LLMW19D-130423W	4/23/2013	N	17.9	16.2	0.1 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW-19D-130823-W	8/23/2013	N	40.3	25.9	–	–	0.1 U	0.1 U		
	LLMW-19D-131106-W	11/6/2013	N	35.3	31.4	–	–	0.1 U	0.1 U		
	LLMW-19D_20230828	8/28/2023	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LLMW-19D-20240227	2/27/2024	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-20D	LLMW20D-130110-W	1/10/2013	N	9.2	8.7	0.2 U	0.3 J	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW D U P 1-130110-W	1/10/2013	FD	11	8.6	0.5 U	0.1 UJ	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW20D-130425W	4/25/2013	N	20.7	20.7	0.1 U	0.1 U	0.7	0.6	0.0277	0.0262
	LLMW-20D-130828-W	8/28/2013	N	36.9	34.2	–	–	0.1 U	0.1 U	–	–
	LLMW-20D-131111-W	11/11/2013	N	36	14.9	–	–	0.6	0.4	–	–
	LLMW-20D-20240227	2/27/2024	N	6.6	6.9	1.0 U	1.0 U	1.4 U	1.4 U	0.02 UJ	0.02 UJ
LLMW-21D	LLMW21D-130108-W	1/8/2013	N	1.3	0.5	0.2	0.1 U	0.4	0.1 U	0.020 U	0.020 U
	LLMW21D-130424W	4/24/2013	N	0.7	0.3	0.1 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW-21D-130909-W	9/9/2013	N	0.4	0.4	–	–	0.1 U	0.1 U	–	–
	LLMW-21D-131119-W	11/19/2013	N	0.5	0.4	–	–	0.1 U	0.1 U	–	–
	LLMW-21D_20230823	8/23/2023	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LLMW-21D-20240226	2/26/2024	N	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-22D	LLMW22D-130108-W	1/8/2013	N	0.7	0.4	0.1 U	0.1 U	0.4	0.1 U	0.020 U	0.020 U
	LLMW22D-130429-W	4/29/2013	N	0.5 U	0.5 U	0.3	0.1 U	0.1 U	0.1 U	0.0229	0.02 U
	LLMW-22D-130823-W	8/23/2013	N	0.8	0.7	–	–	0.1	0.1 U	–	–
	LLMW-22D-131105-W	11/5/2013	N	0.8	1 U	–	–	0.1 U	0.1 U	–	–

Analyte				Arsenic		Cadmium		Lead		Mercury	
Fraction				Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Units				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Groundwater Cleanup Level ¹				5	5	NE	NE	2.2	2.2	0.025	0.025
Location ²	Sample ID	Sample Date	Sample Type								
LLMW-23D	LLMW23D-130108-W	1/8/2013	N	1.4	0.8	0.1 U	0.1 U	0.5	0.1 U	0.020 U	0.020 U
	LLMW23D-130425W	4/25/2013	N	0.5 U	0.5 U	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-23D-130822-W	8/22/2013	N	1.2	1.0	--	--	0.1 U	0.1 U	--	--
	LLMW-23D-131105-W	11/5/2013	N	0.8	0.7	--	--	0.1	0.1 U	--	--
	LL MW-23D-20240307	3/7/2024	N	2.0	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-24D	LLMW24D-130121-W	1/21/2013	N	2.6 J	0.8	0.2	0.4 J	2.1 J	0.1 U	0.020 U	0.020 U
	DUP04-130121-W	1/21/2013	FD	1.6 J	1.1	0.3	0.2 J	0.9 J	0.1 U	0.020 U	0.020 U
	LLMW24D-130423-W	4/23/2013	N	1.0	0.8	0.3	0.3	0.5	0.1 U	0.020 U	0.020 U
	LLMW-24D-130906-W	9/6/2013	N	0.9	0.8	--	--	0.1	0.1 U	--	--
	LLMW-24D-131115-W	11/15/2013	N	0.7	0.7	--	--	0.1 U	0.1 U	--	--
LLMW-25D	LLMW25D-130121-W	1/21/2013	N	1.5	0.9	0.3	0.7	0.9	0.1 U	0.020 U	0.020 U
	LLMW25D-130423-W	4/23/2013	N	1.6	1.5	0.4	0.3	0.2	0.1 U	0.020 U	0.020 U
	LLMW-25D-130905-W	9/5/2013	N	1.5	1.4	--	--	0.5	0.1 U	--	--
	LLMW-25D-131115-W	11/15/2013	N	1.6	1.5	--	--	0.1 U	0.1 U	--	--
	LLMW-25D_20230914	9/14/2023	N	3.2	1.7	1.0 U	1.0 U	1.4	1.0 U	0.02 UJ	0.02 UJ
	LL MW-25D-20240306	3/6/2024	N	2.6	2.5	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	DUP03-20240306-W	3/6/2024	FD	2.7	2.4	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-27D	LLMW27D-130121-W	1/21/2013	N	941	814	0.2	0.1	1.0	0.1 U	0.020 U	0.020 U
	LLMW27D-130508-W	5/8/2013	N	4380	4460	0.1	0.1 U	1.1	0.1 U	0.020 U	0.020 U
	DUPE-05-130508-W	5/8/2013	FD	4340	4380	0.1	0.1 U	1.3	0.1	0.020 U	0.020 U
	LLMW-27D-130830-W	8/30/2013	N	4610	4360	--	--	0.2	0.1 U	--	--
	DUP-05-130830-W	8/30/2013	FD	4540	4410	--	--	0.2	0.1 U	--	--
	LLMW-27D-131101-W	11/1/2013	N	4480	4460	0.1 U	0.1 U	0.6	0.1 U	0.020 U	0.020 U
	DUP-05-131101-W	11/1/2013	FD	4440	4460	0.1 U	0.1 U	0.6	0.1 U	0.020 U	0.020 U
	LLMW-27D_20230901	9/1/2023	N	5600	5200	19	1.0 U	4.0	1.0 U	0.02 UJ	0.02 UJ
	LL MW-27D-20240305	3/5/2024	N	5800	6100	2.0	1.2	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-29D	DUP02-20240305-W	3/5/2024	FD	5900	5800	2.2	1.2	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LLMW29D-130118-W	1/18/2013	N	7.1	4.5	0.2	0.1 U	0.9	0.1 U	0.020 U	0.020 U
	LLMW29D-130507-W	5/7/2013	N	8.4	6.5	0.2	0.1 U	0.7	0.1 U	0.020 U	0.020 U
	LLMW-29D-130828-W	8/28/2013	N	6.8	5.8	--	--	0.6	0.1 U	--	--
LLMW-31D	LLMW-29D-131105-W	11/5/2013	N	5.7	5.1	--	--	0.2	0.1 U	--	--
	LLMW31D-130201-W	2/1/2013	N	0.8	0.7	2.4	2.2	0.8	0.7	0.020 U	0.020 U
	LLMW31D-130507-W	5/7/2013	N	0.9	0.8	0.1	0.1	0.2	0.1 U	0.020 U	0.020 U
	LLMW-31D-130830-W	8/30/2013	N	1.4	1.0	--	--	0.5	0.1 U	--	--
	LLMW-31D-131106-W	11/6/2013	N	1.3	1.1	--	--	0.1	0.1 U	--	--
	LLMW-31D_20230829	8/29/2023	N	360	6.3	1.0 U	1.0 U	19	1.0 U	0.094 J	0.02 UJ
	LL MW-31D-20240306	3/6/2024	N	7.1	6.5	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-33D	LLMW33D-130117-W	1/17/2013	N	1.4	1.3	0.8	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW33D-130507-W	5/7/2013	N	1.3	1.2	0.1 U	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	LLMW-33D-130903-W	9/3/2013	N	1.3	1.2	--	--	0.1 U	0.1 U	--	--
	LLMW-33D-131101-W	11/1/2013	N	1.1	1.1	--	--	0.1	0.1 U	--	--
	LL MW-33D-20240304	3/4/2024	N	1.0	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-34D	LLMW34D-130116-W	1/16/2013	N	3.1	2.2	0.1 U	0.1 U	0.4	0.1 U	0.020 U	0.020 U
	LLMW34D-130506-W	5/6/2013	N	1.6	1.5	0.2	0.1 U	5.6	0.1 U	0.020 U	0.020 U
	LLMW-34D-130826-W	8/26/2013	N	1.6	1.6	--	--	0.3	0.1 U	--	--
	LLMW-34D-131031-W	10/31/2013	N	4.0	1.5	--	--	5.9	0.1 U	--	--
	LLMW-34D_20230912	9/12/2023	N	7.9	6.9	1.2	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LL MW-34D-20240304	3/4/2024	N	8.3	7.8	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	DUP01-20240304-W	3/4/2024	FD	8.3	7.9	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-35D	LLMW-35D-130830-W	8/30/2013	N	2.0	2.0	0.1 U	0.1 U	0.1	0.1 U	0.020 U	0.020 U
	LLMW-35D-131108-W	11/8/2013	N	3.4	3.4	0.1 U	0.1 U	0.1 U	0.1 U	0.020 U	0.020 U
	LLMW-35D_20230912	9/12/2023	N	4.7	3.1	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	LL MW-35D-20240307	3/7/2024	N	5.4	3.5	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	DUP04-20240307-W	3/7/2024	FD	5.2	2.8	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
LLMW-36D	LLMW-36D-130906-W	9/6/2013	N	10.6	10.4	0.1 U	0.1 U	3.2	3.0	0.020 U	0.020 U
	LLMW-36D-131114-W	11/14/2013	N	127	115	0.1 U	0.1 U	4.4	2.3	0.020 U	0.020 U
	LLMW-36D_20230828	8/28/2023	N	1100	570	1.0 U	1.0 U	110	5.9	0.26	0.02 UJ
	20240321-LLMW36D	3/21/2024	N	1300	600	1.0 U	1.0 U	4.9	1.0 U	0.052 J	0.02 UJ
EV-6B	EV6B-130117-W	1/17/2013	N	10.2	12.6	0.1 U	0.1 U	1.2	0.1	0.020 U	0.020 U
	EV6B-130507-W	5/7/2013	N	20.4	16.9	0.1 U	0.1 U	1.1	0.1 U	0.020 U	0.020 U
	EV6B-130827-W	8/27/2013	N	12.1	6.8	0.1 U	0.1 U	0.1	0.1 U	0.020 U	0.020 U
	EV-6B-131108-W	11/8/2013	N	15.9	13.9	0.1 U	0.1 U	0.8 J	0.1 U	0.020 U	0.020 U
EV-7B	EV-7B-130909-W	9/9/2013	N	2790	2680	0.2	0.1	0.2	0.1 U	0.020 U	0.020 U
	EV-7B-131114-W	11/14/2013	N	2980	2840	0.1 U	0.1 U	0.3	0.1 U	0.020 U	0.020 U
EV-19B	EV19B-130118-W	1/18/2013	N	4050	3970	0.3	0.1	0.1 U	0.1 U	0.020 U	0.020 U
	EV19B-130508-W	5/8/2013	N	3950	3720	0.2	0.3	2.1	0.1 U	0.020 U	0.020 U
	EV-19B-130903-W	9/3/2013	N	3090	3560	--	--	0.5	0.2 U	--	--
	EV-19B-131115-W	11/15/2013	N	3090	3080	--	--	8.8	0.1	--	--
EV-20B	EV20-120611-W	6/11/2012	N	15500	14500	0.1	0.1 U	1.4	0.1 U	0.1 U	0.1 U
	EV20B-130118-W	1/18/2013	N	13900	14000	0.1	0.1 U	0.2	0.1 U	0.020 U	0.020 U
	EV20-130508-W	5/8/2013	N	14300	14300	0.1 U	0.1 U	1.7	0.1	0.020 U	0.020 U
	EV-20B-130904-W	9/4/2013	N	13000	13200	--	--	0.4	0.2 U	--	--
	EV-20B-131115-W	11/15/2013	N	13000	12800	--	--	0.1	0.1 U	--	--
	EV-20B_20230914	9/14/2023	N	12000	12000	1.0 U	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ
	EV-20B-20240305	3/5/2024	N	13000	13000	1.2	1.0 U	1.2	1.0 U	0.02 UJ	0.02 UJ

Analyte				Arsenic		Cadmium		Lead		Mercury	
Fraction				Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Units				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Groundwater Cleanup Level ¹				5	5	NE	NE	2.2	2.2	0.025	0.025
Location ²	Sample ID	Sample Date	Sample Type								
EV-22B	EV22B-120611-W	6/11/2012	N	17.6	3.3	0.3	0.1 U	3.4	0.2	0.1 U	0.1 U
	EV22B-130116-W	1/16/2013	N	3.4	3.3	0.2 U	0.1 U	0.6	0.1 U	0.0518	0.0371
	EV22B-130508-W	5/8/2013	N	1.3	1.4	0.2 U	0.1	0.3	0.1 U	0.020 U	0.020 U
	EV-22B-130829-W	8/29/2013	N	7.0	5.1	–	–	3.6	0.3	–	–
	EV-22B-131111-W	11/11/2013	N	1.7 J	1.7 J	–	–	0.9 J	0.1 UJ	–	–
	EV-22B_20230908	9/8/2023	N	4.6	1.9	2.2	1.0 U	3.3	1.0 U	0.02 UJ	0.02 UJ
	EV-22B-20240307	3/7/2024	N	1.7	1.7	1.6	1.0 U	1.0 U	1.0 U	0.02 UJ	0.02 UJ

Notes:

¹ Groundwater cleanup levels from Everett Lowland Cleanup Action Plan (CAP) (GeoEngineers 2016).

² Bold font wells indicate a trend plot was prepared for the well in Appendix B.

- N = Normal sample
- FD = Field duplicate sample
- NE = Not established
- U = The analyte was not detected at the indicated reporting limit
- J = The concentration is estimated

Gray shading indicates a cleanup level exceedance.

Blue shading indicates a non-detect with a reporting limit greater than the screening level.

Figures

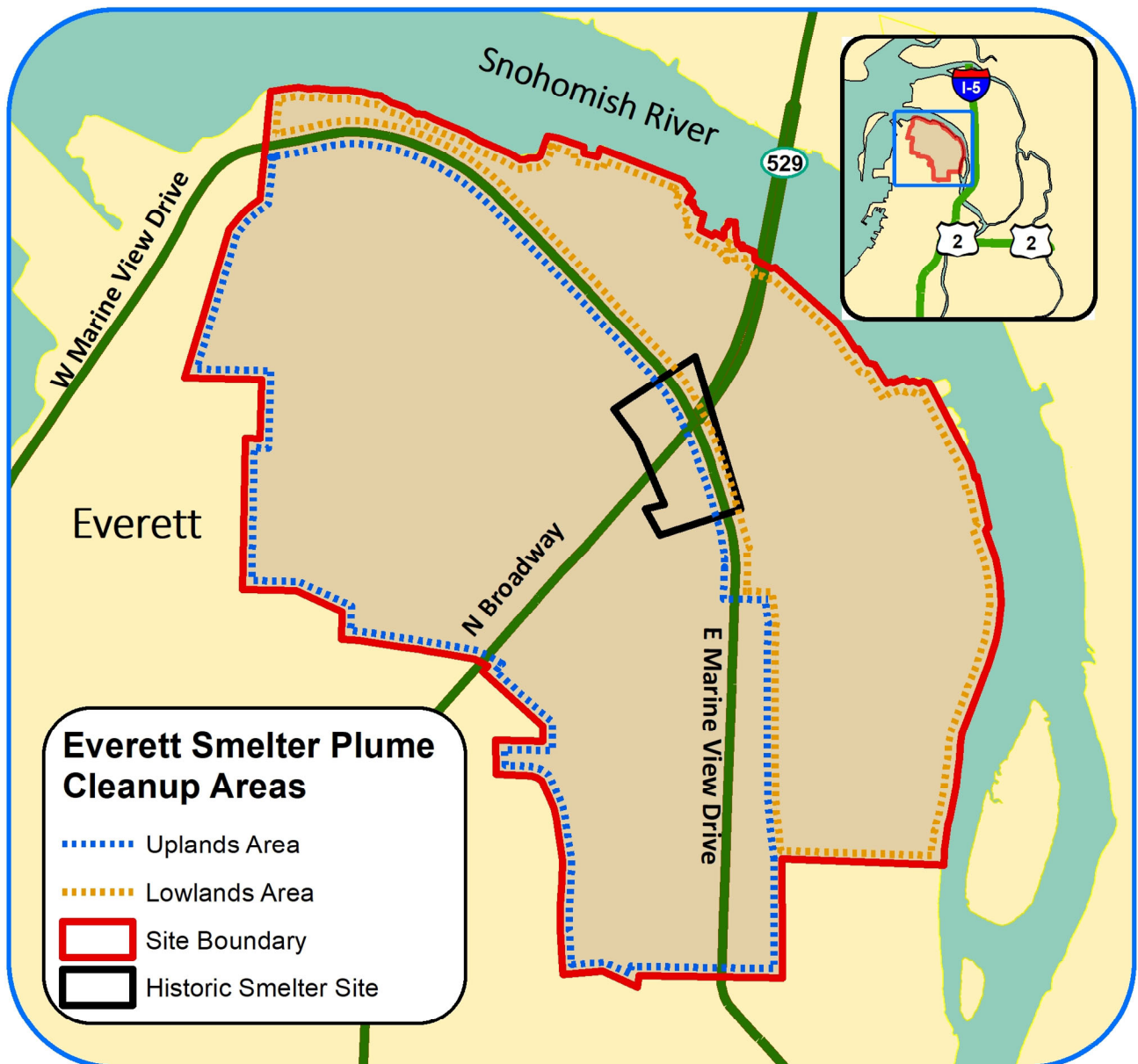
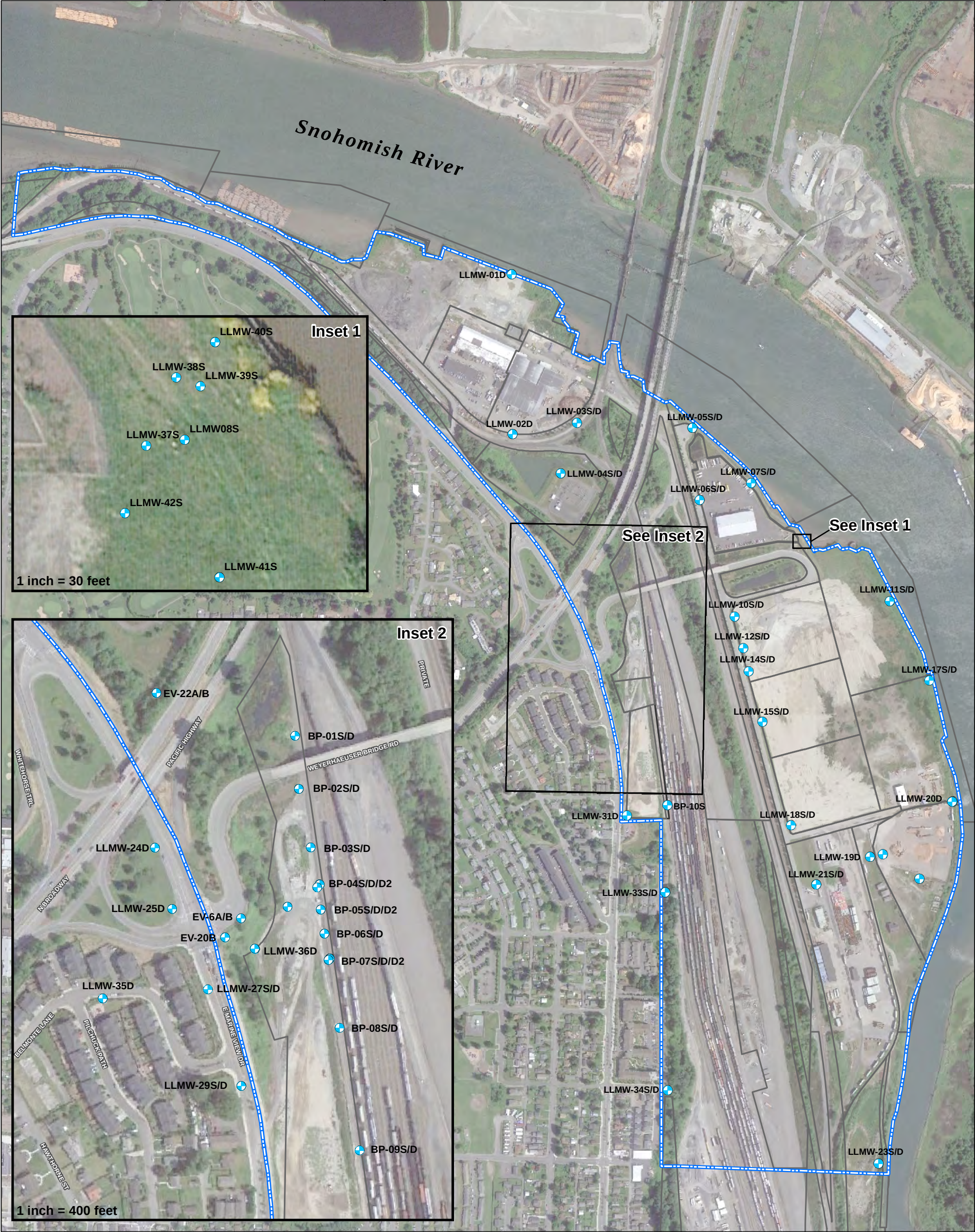


Figure 1. Everett Smelter Site



Lowland Area

Snohomish County Parcel Boundary

BP-05S/D/D2

Monitoring Well Located During August 2020 Well Inventory Site Visit

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: GoogleEarth Pro, 2013. Snohomish County GIS, 2012.

600

0

600

Feet

Monitoring Well Inventory

Everett Smelter - Lowland Area

GEOENGINEERS

Figure 2



- Lowland Area

Snohomish County Parcel Boundary

BP-05S

Monitoring Well Sampled in 2023

LLMW-11S

Monitoring Well Not Sampled in 2023
(dry unless otherwise noted)
- Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
- Data Source: ESRI World Imagery, 2022. Snohomish County GIS, 2012.
- Shallow Monitoring Well Locations 2023

Everett Smelter Plume

GEOENGINEERS

Figure 3a



- Legend**
- Lowland Area
 - Snohomish County Parcel Boundary
 - BP-02S Monitoring Well Sampled in 2024
 - LLMW-11S Monitoring Well Not Sampled in 2024 (dry)

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: ESRI World Imagery, 2022. Snohomish County GIS, 2012.

600 0 600
Feet

Shallow Monitoring Well Locations 2024

Everett Smelter Plume

GEOENGINEERS

Figure 3b



- Legend**

 - Lowland Area
 - Snohomish County Parcel Boundary
- BP-05D/D2 Monitoring Well Sampled in 2023
 - LLMW-14D Monitoring Well Not Sampled in 2023 (dry unless otherwise noted)

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: ESRI World Imagery, 2022. Snohomish County GIS, 2012.

Deep Monitoring Well Locations 2023

Everett Smelter Plume

GEOENGINEERS

Figure 4a



- Legend

Lowland Area

Snohomish County Parcel Boundary

BP-05D/D2

Monitoring Well Sampled in 2023

LLMW-14D

Monitoring Well Not Sampled in 2023
(dry unless otherwise noted)

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: ESRI World Imagery, 2022. Snohomish County GIS, 2012.

N

W

E

S

600

0

600

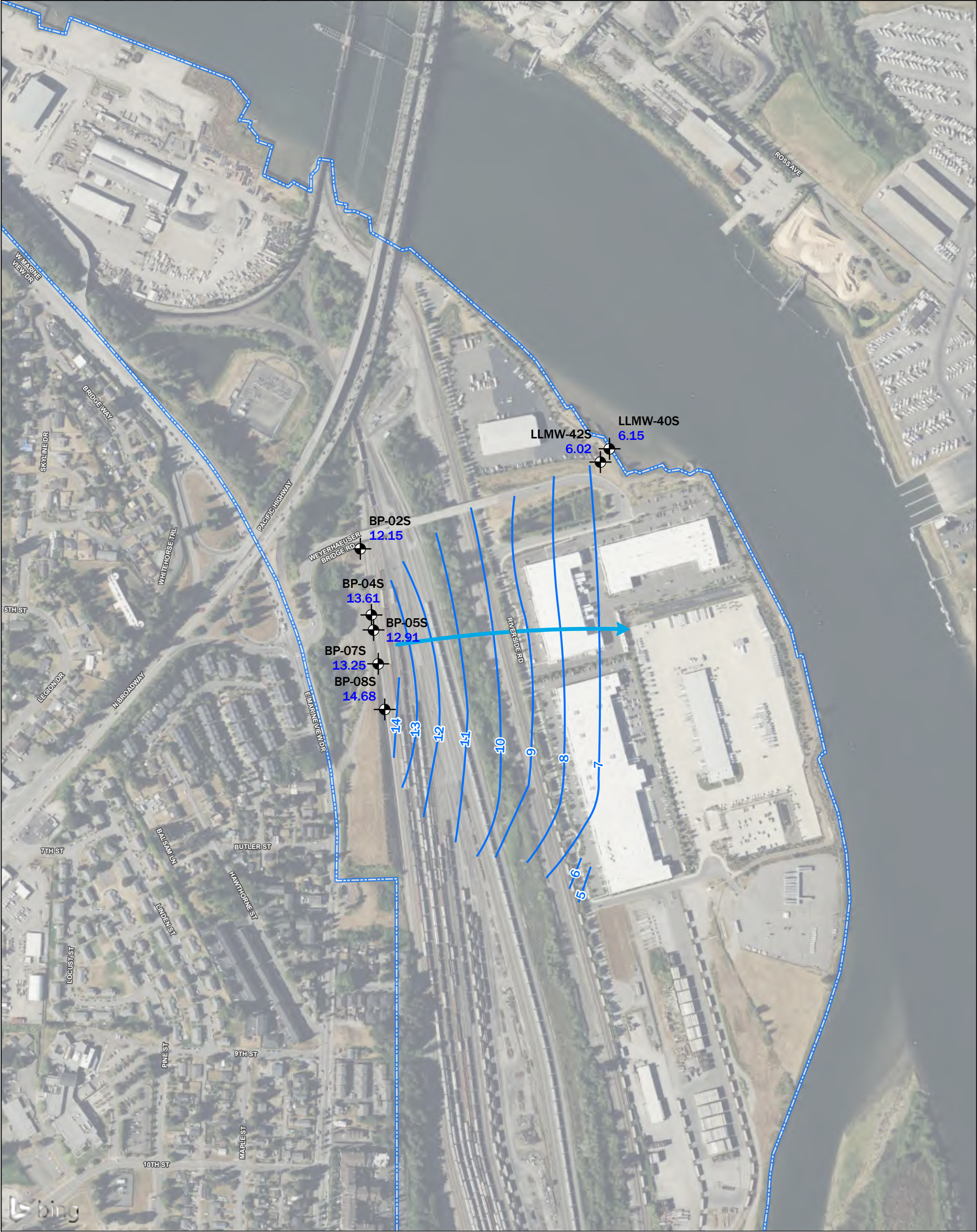
Feet

Deep Monitoring Well Locations 2024

Everett Smelter Plume

GEOENGINEERS

Figure 4b



- Legend**
- BP-02S
12.15

Monitoring well designation and groundwater elevation (NAVD 88) on September 13, 2023.

Lowland Area

Estimated Groundwater Elevation Contour, ft

Inferred Groundwater Flow Direction

1. The locations of all features shown are approximate.
2. Red overlay box on tidal prediction chart represents the time period for groundwater measurements on September 4, 2013.
3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document.

GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

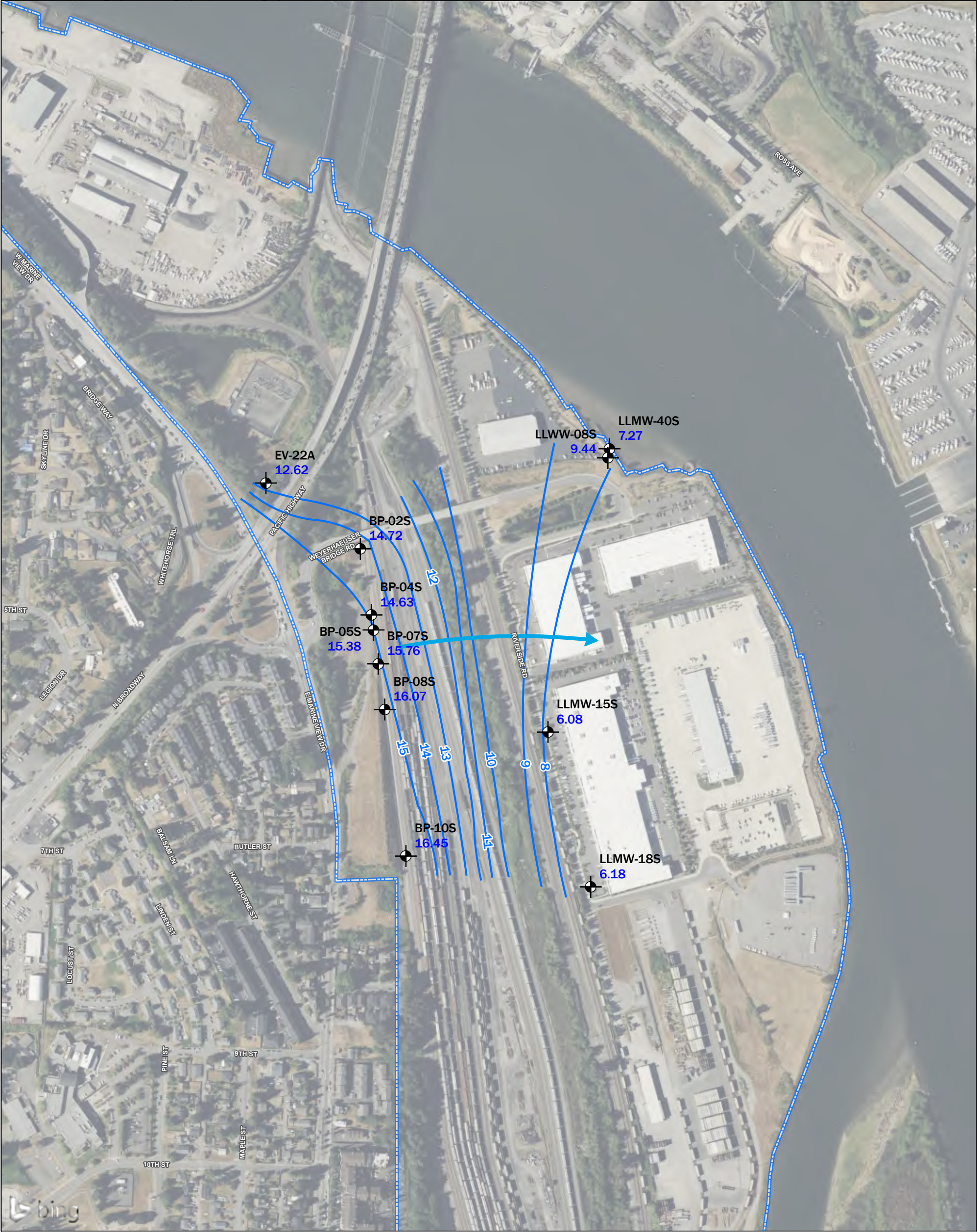
Data Source: GoogleEarth Pro, 2013. Snohomish County GIS, 2012.

0

400

Feet

Shallow Groundwater Potentiometric Surface 2023	
Everett Smelter Plume	
GEOENGINEERS	Figure 5a

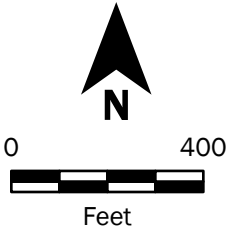


- Legend**
- Monitoring well designation and groundwater elevation (NAVD 88) on March 29, 2024.
 - Lowland Area
 - Estimated Groundwater Elevation Contour, ft
 - Inferred Groundwater Flow Direction

1. The locations of all features shown are approximate.
2. Red overlay box on tidal prediction chart represents the time period for groundwater measurements on September 4, 2013.
3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document.

GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: GoogleEarth Pro, 2013. Snohomish County GIS, 2012.



Shallow Groundwater Potentiometric Surface 2024	
Everett Smelter Plume	
GEOENGINEERS	Figure 5b

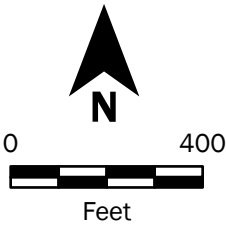


Legend

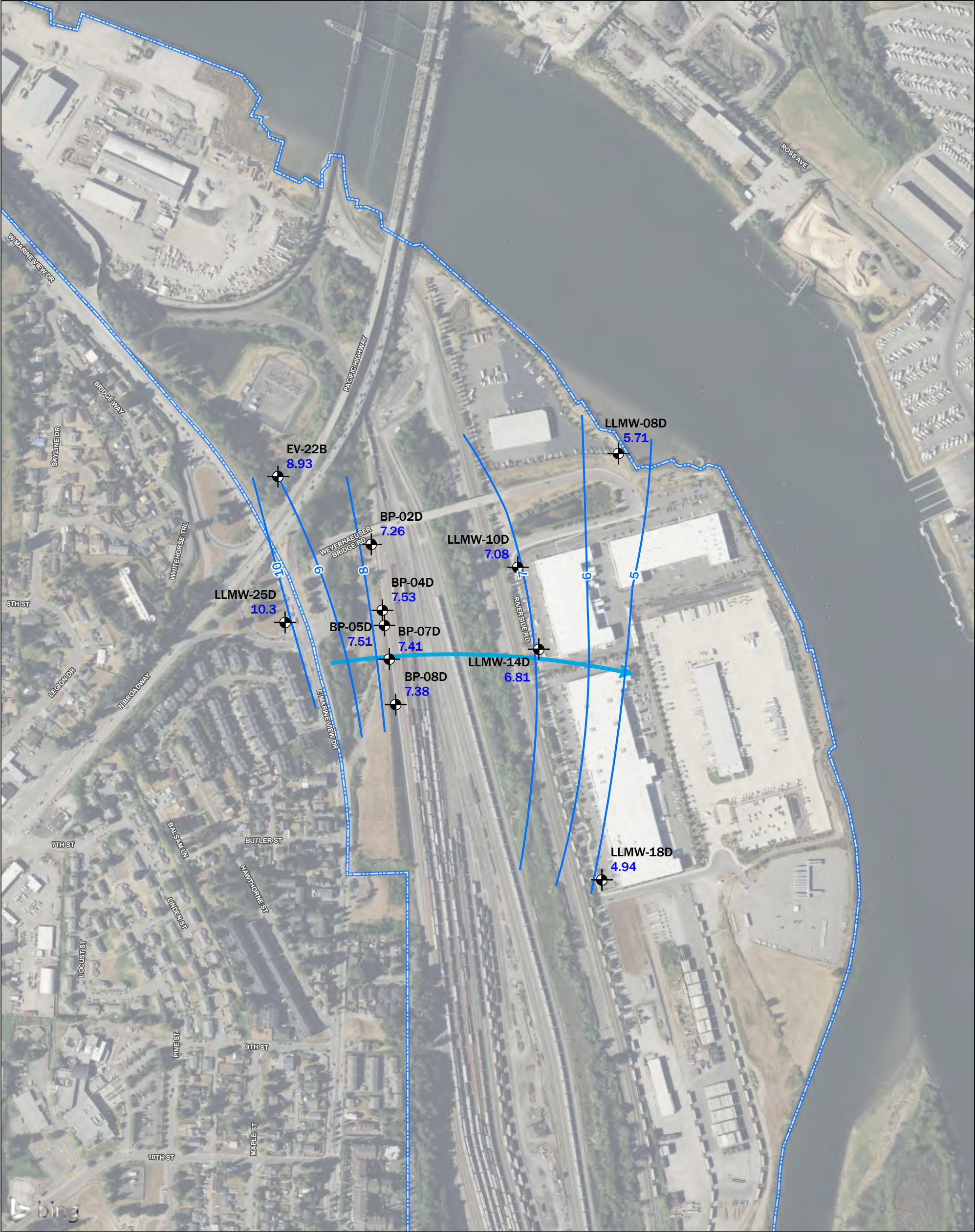
- BP-02D 5.9**  Monitoring well designation and groundwater elevation (NAVD 88) on September 13, 2023.
-  Lowland Area
-  Estimated Groundwater Elevation Contour, ft
-  Inferred Groundwater Flow Direction

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Imagery.



Deep Groundwater Potentiometric Surface 2023	
Everett Smelter Plume	
GEOENGINEERS 	Figure 6a

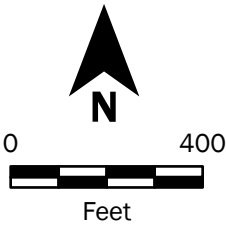


Legend

- BP-02D 7.26 Monitoring well designation and groundwater elevation (NAVD 88) on March 29, 2024.
- Lowland Area
- Estimated Groundwater Elevation Contour, ft
- Inferred Groundwater Flow Direction

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Bing Imagery.



Deep Groundwater Potentiometric Deep 2024	
Everett Smelter Plume	
GEOENGINEERS	Figure 6b

Attachment A

Lab Reports and Data Validation Reports

2024



April 16, 2024

Mr. Garrett Leque
Geoengineers, Inc.
600 DuPont St.
Bellingham, WA 98225

Dear Mr. Leque ,

On March 1st, 7 samples were received by our laboratory and assigned our laboratory project number EV24030018. The project was identified as your Everett Smelter / 0504-197-00. The sample identification and requested analyses are outlined on the attached chain of custody record.

Report is being re-issued with corrected MDL/PQL values for Hg. No other abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030018
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV24030018-01
CLIENT PROJECT:	Everett Smelter / 0504-197-00	DATE RECEIVED:	03/01/24
CLIENT SAMPLE ID	LLMW34S-20240229	COLLECTION DATE:	2/29/2024 10:40:00 AM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/05/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/05/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030018
		ALS SAMPLE#:	EV24030018-02
CLIENT CONTACT:	Garrett Leque	DATE RECEIVED:	03/01/24
CLIENT PROJECT:	Everett Smelter / 0504-197-00	COLLECTION DATE:	2/29/2024 12:10:00 PM
CLIENT SAMPLE ID	LLMW41S-20240229	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/05/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/05/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030018
		ALS SAMPLE#:	EV24030018-03
CLIENT CONTACT:	Garrett Leque	DATE RECEIVED:	03/01/24
CLIENT PROJECT:	Everett Smelter / 0504-197-00	COLLECTION DATE:	2/29/2024 1:10:00 PM
CLIENT SAMPLE ID	LLMW42S-20240229	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/05/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/05/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030018
		ALS SAMPLE#:	EV24030018-04
CLIENT CONTACT:	Garrett Leque	DATE RECEIVED:	03/01/24
CLIENT PROJECT:	Everett Smelter / 0504-197-00	COLLECTION DATE:	2/29/2024 2:35:00 PM
CLIENT SAMPLE ID	LLMW37S-20240229	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/05/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/05/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030018
		ALS SAMPLE#:	EV24030018-05
CLIENT CONTACT:	Garrett Leque	DATE RECEIVED:	03/01/24
CLIENT PROJECT:	Everett Smelter / 0504-197-00	COLLECTION DATE:	3/1/2024 10:50:00 AM
CLIENT SAMPLE ID	LLMW38S- 20240301	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/05/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/05/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030018
		ALS SAMPLE#:	EV24030018-06
CLIENT CONTACT:	Garrett Leque	DATE RECEIVED:	03/01/24
CLIENT PROJECT:	Everett Smelter / 0504-197-00	COLLECTION DATE:	3/1/2024 1:00:00 PM
CLIENT SAMPLE ID	LLMW40S- 20240301	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	0.60		UG/L	1	0.20	0.018	03/05/24	RAL
Mercury (Dissolved)	SW7470	0.11	J	UG/L	1	0.20	0.018	03/05/24	RAL

J - Analyte was positively identified. Reported result is an estimate below the associated reporting limit but above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030018
		ALS SAMPLE#:	EV24030018-07
CLIENT CONTACT:	Garrett Leque	DATE RECEIVED:	03/01/24
CLIENT PROJECT:	Everett Smelter / 0504-197-00	COLLECTION DATE:	3/1/2024 11:40:00 AM
CLIENT SAMPLE ID	LLMW39S- 20240301	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/05/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/05/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.



CERTIFICATE OF ANALYSIS

CLIENT: Geoengineers, Inc.
600 DuPont St.
Bellingham, WA 98225

DATE: 4/16/2024
ALS SDG#: EV24030018
WDOE ACCREDITATION: C601

CLIENT CONTACT: Garrett Leque
CLIENT PROJECT: Everett Smelter / 0504-197-00

LABORATORY BLANK RESULTS

MBLK-R460748 - Batch R460748 - Water by SW7470 Prepared 03/05/24 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		ANALYSIS DATE	ANALYSIS BY
						MDL	PQL		
Mercury	SW7470	ND	UT	UG/L	0.20	0.018	0.054	03/05/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT: Geoengineers, Inc.
 600 DuPont St.
 Bellingham, WA 98225
CLIENT CONTACT: Garrett Leque
CLIENT PROJECT: Everett Smelter / 0504-197-00

DATE: 4/16/2024
ALS SDG#: EV24030018
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS
ALS Test Batch ID: R460748 - Water by SW7470 Prepared 03/05/24 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury - BS	SW7470	104			100	104	80.6	118		03/05/24	RAL
Mercury - BSD	SW7470	101	3		100	101	80.6	118	7.94	03/05/24	RAL

APPROVED BY



Rob Greer
 Laboratory Director



ALS Job# (Laboratory Use Only)

EV24030018

<http://www.alsglobal.com>

Date 3/1/24 Page 1 Of 1

PROJECT ID:	Everett smelter 0504-1977-00
REPORT TO COMPANY:	Geo Engineers
PROJECT COMPANY:	Garrett Leque
ADDRESS:	654 W: Bakerview Rd Bellingham WA 98226
PHONE:	253-312-7958 o. #.
E-MAIL:	gleque@geoengineers.com
INVOICE TO COMPANY:	
ATTENTION:	
ADDRESS:	

SAMPLE I.D.	DATE	TIME	TYPE	LAB#
1. LLMW345-20240229	2/29/24	1040	6W	1
2. LLMW415-20240229		1210		2
3. LLMW425-20240229		1310		3
4. LLMW375-20240229		1435		4
5. LLMW385-20240301	3/1/24	1050		5
6. LLMW405-20240301		1140		6
7. LLMW395-20240301		1300		7
8.				
9.				
10.				

[illegible]

SPECIAL INSTRUCTIONS email Garrett w/ questions

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Carrie G. Brown 5-BL 1530 3/1/24

DATE	DESCRIPTION	AMOUNT	BALANCE
3/1/24	415	1536	

Received By: Mr. J. W. Smith 20

2. Relinquished By: _____

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis

OTHER:

SAME DAY	1	2	3	5	10

Fuels & Hydrocarbon Analysis

5	3	1	SAME DAY
---	---	---	----------

Standard

*Turnaround request less than standard may incur Rush Charges

ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Geo Engineers

ALS Job#: EV24030018

Project: Everett Smelter 0504-197-00

Login Date: 3/1/24

Login Time: 1525 / 1530

Login By: AV

Type of Shipping Container: Cooler ☒

Box ☐

Other ☐

Shipped via: FedEx Ground ☐

UPS ☐

Courier ☐

Hand Delivered ☒

ALS Courier ☐

FedEx Express ☐

Yes

No

N/A

Were custody seals on outside of shipping container?

If yes, how many? Where?

Custody seal date: Seal name:

✓

Was Chain of Custody properly filled out (ink, signed, dated, etc.)?

✓

Did all bottles have labels?

✓

Did all bottle labels and tags agree with Chain of Custody?

✓

Were samples received within hold time?

✓

Did all bottles arrive in good condition (unbroken, etc.)?

✓

Was sufficient amount of sample sent for the tests indicated?

✓

Was correct preservation added to samples?

✓

Subcontract test containers added to Subcontract Bin?

✓

Wetchem test containers marked with required Tests?

✓

Short hold time test containers delivered to analysts?

✓

Were VOA vials checked for absence of air bubbles?

✓

Bubbles present in sample #:

5035A kits received?

Low Kits:

High Kits:

✓

5035A kits returned?

Low Kits:

High Kits:

Temperature of cooler upon receipt: 9.8°C

On ice?

✓

Explain any discrepancies:

Was client contacted?

Who was called?

By whom?

Date:

Outcome of call:



April 16, 2024

Mr. Garrett Leque
Geoengineers, Inc.
600 DuPont St.
Bellingham, WA 98225

Dear Mr. Leque ,

On March 1st, 10 samples were received by our laboratory and assigned our laboratory project number EV24030020. The project was identified as your Everett Smelter Plume Groundwater / 0504-197-00. The sample identification and requested analyses are outlined on the attached chain of custody record.

Report is being re-issued with corrected MDL/PQL values for Hg. No other abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030020
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV24030020-01
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	03/01/24
		COLLECTION DATE:	2/29/2024 10:30:00 AM
CLIENT SAMPLE ID	LLMW-05S	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/06/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/06/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030020
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030020-02
		DATE RECEIVED:	03/01/24
		COLLECTION DATE:	2/29/2024 12:15:00 PM
CLIENT SAMPLE ID	LLMW-05D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/06/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/06/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030020
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030020-03
		DATE RECEIVED:	03/01/24
		COLLECTION DATE:	2/29/2024 2:40:00 PM
CLIENT SAMPLE ID	LLMW-07S	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/06/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/06/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030020
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030020-04
		DATE RECEIVED:	03/01/24
		COLLECTION DATE:	2/29/2024 3:30:00 PM
CLIENT SAMPLE ID	LLMW-07D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/06/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/06/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030020
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030020-05
		DATE RECEIVED:	03/01/24
		COLLECTION DATE:	2/27/2024 8:45:00 AM
CLIENT SAMPLE ID	LLMW-18S	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/06/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/06/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030020
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030020-06
		DATE RECEIVED:	03/01/24
		COLLECTION DATE:	2/27/2024 10:10:00 AM
CLIENT SAMPLE ID	LLMW-18D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/06/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/06/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030020
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030020-07
		DATE RECEIVED:	03/01/24
		COLLECTION DATE:	2/27/2024 3:15:00 PM
CLIENT SAMPLE ID	LLMW-19D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/06/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/06/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030020
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030020-08
		DATE RECEIVED:	03/01/24
		COLLECTION DATE:	2/27/2024 12:30:00 PM
CLIENT SAMPLE ID	LLMW-20D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/06/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/06/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030020
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030020-09
		DATE RECEIVED:	03/01/24
		COLLECTION DATE:	2/26/2024 9:20:00 AM
CLIENT SAMPLE ID	LLMW-21S	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/06/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/06/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030020
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030020-10
		DATE RECEIVED:	03/01/24
		COLLECTION DATE:	2/26/2024 10:25:00 AM
CLIENT SAMPLE ID	LLMW-21D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/06/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/06/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS SDG#:	EV24030020
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Garrett Leque		
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00		

LABORATORY BLANK RESULTS

MBLK-R461419 - Batch R461419 - Water by SW7470 Prepared 03/06/24 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS MDL	PQL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	0.20	0.018	0.054	03/06/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT: Geoengineers, Inc.
 600 DuPont St.
 Bellingham, WA 98225
CLIENT CONTACT: Garrett Leque
CLIENT PROJECT: Everett Smelter Plume Groundwater /
 0504-197-00

DATE: 4/16/2024
ALS SDG#: EV24030020
WDOE ACCREDITATION: C601

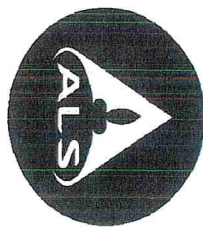
LABORATORY CONTROL SAMPLE RESULTS
ALS Test Batch ID: R461419 - Water by SW7470 Prepared 03/06/24 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury - BS	SW7470	93.0			100	93.0	80.6	118		03/06/24	RAL
Mercury - BSD	SW7470	94.0	1		100	94.0	80.6	118	7.94	03/06/24	RAL

APPROVED BY



 Rob Greer
 Laboratory Director



ALS Environmental

Laboratory location:

Chain of Custody Form

Page 1 of 1

EV24030020

Customer Information				ALS Project Manager:				Work Order #:									
Project Information				Parameter/Method Request for Analysis													
Purchase Order	--	Project Name	Everett Smelter Plume Groundwater	Tot/Diss As, Cd, Pb, Hg (report Hg down to DL of 0.02 ppm; "J" flag) Note: All samples for dissolved analysis were field-filtered													
Work Order	--	Project Number	0504-197-00														
Company Name	GeoEngineers	Bill To Company	GeoEngineers														
Send Report To	Garrett Leque	Invoice Attn.	Garrett Leque														
Address	554 West Bakerview Road	Address	Email garrett														
City/State/Zip	Bellingham WA 98226	City/State/Zip	--	G													
Phone	253.312.7958	Phone	--	H													
Fax	--	Fax	--	I													
e-Mail Address: gleeque@geoengineers.com				e-Mail Address: gleeque@geoengineers.com				J									
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	LC MW-055	2-29-21	1030	W	HNO ₃	2	X										
2	LC MW-055	2-28-21	1215	W	HNO ₃	2	X										
3	LC MW-075	2-29-24	1440	W	HNO ₃	2	X										
4	LC MW-075	2-29-24	1530	W	HNO ₃	2	X										
5	LC MW-185	2-27-24	0845	W	HNO ₃	2	X										
6	LC MW-185	2-27-24	1010	W	HNO ₃	2	X										
7	LC MW-190	2-27-24	1515	W	HNO ₃	2	X										
8	LC MW-200	2-27-24	1230	W	HNO ₃	2	X										
9	LC MW-215	2-26-24	0920	W	HNO ₃	2	X										
10	LC MW-210	2-26-24	1025	W	HNO ₃	2	X										
Sampler(s): Please Print & Sign Shipment Method:				Required Turnaround Time:				Results Due Date:									
Relinquished by: <i>Shelley Anderson</i>				☒ STD 10 WK Days ☐ 5 WK Days ☐ 2 WK Days ☐ 24 Hour													
Relinquished by: <i>Shelley Anderson</i>				Received by: <i>Shelley Anderson</i>				Notes:									
Date: 3-1-21				Time: 4:42				3/1/24									
Date: 3-1-21				Time: 4:42				16:42									
Logged by (Laboratory):				Checked by (Laboratory):				Cooler Temp.									
Preservative Key: 1-HCL 2-HNO ₃ 3-H ₂ SO ₄ 4-NH ₄ OH 5-Na ₂ SO ₃ 6-NaHSO ₄ 7-Other 8-4 degrees C 9-5035				QC Package: (Check Box Below)				TRRP Checklist									
				☒ Level II: Standard QC													
				☐ Level III: Std QC + Raw Data													
				☐ Level IV: SW846 CLP-Like													
				Other:													

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.

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ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: GeoEngineers ALS Job#: EV24030020

Project: Everett Smelter Plume Groundwater

Login Date: 3/1/24 Login Time: 1642 Login By: AV

Type of Shipping Container: Cooler ☒ Box ☐ Other ☐

Shipped via: FedEx Ground ☐ UPS ☐ Courier ☐ Hand Delivered ☒ ALS Courier ☐
FedEx Express ☐

	Yes	No	N/A
Were custody seals on outside of shipping container?	☐	☐	☒
If yes, how many? <u> </u> Where? <u> </u>			
Custody seal date: <u> </u> Seal name: <u> </u>			
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	☒	☐	☐
Did all bottles have labels?	☒	☐	☐
Did all bottle labels and tags agree with Chain of Custody?	☒	☐	☐
Were samples received within hold time?	☒	☐	☐
Did all bottles arrive in good condition (unbroken, etc.)?	☒	☐	☐
Was sufficient amount of sample sent for the tests indicated?	☒	☐	☐
Was correct preservation added to samples?	☒	☐	☐
Subcontract test containers added to Subcontract Bin?	☐	☐	☒
Wetchem test containers marked with required Tests?	☐	☐	☒
Short hold time test containers delivered to analysts?	☐	☐	☒
Were VOA vials checked for absence of air bubbles?	☐	☐	☒
Bubbles present in sample #: <u> </u>			

5035A kits received? ☐ ☐ ☒
 # Low Kits: # High Kits:

5035A kits returned? ☐ ☐ ☐
 # Low Kits: # High Kits:

Temperature of cooler upon receipt: 4.4°C On ice? ☒ ☐ ☐

Explain any discrepancies:

Was client contacted? Who was called? By whom? Date:

Outcome of call:



April 17, 2024

Mr. Garrett Leque
Geoengineers, Inc.
600 DuPont St.
Bellingham, WA 98225

Dear Mr. Leque ,

On March 8th, 29 samples were received by our laboratory and assigned our laboratory project number EV24030066. The project was identified as your Everett Smelter Plume Groundwater / 0504-197-00. The sample identification and requested analyses are outlined on the attached chain of custody record.

Report is being re-issued with corrected MDL/PQL values for Hg. No other abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
		ALS JOB#:	EV24030066
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV24030066-01
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/5/2024 1:50:00 PM
CLIENT SAMPLE ID	EV-20B	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/11/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/11/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
		ALS JOB#:	EV24030066
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV24030066-02
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/7/2024 10:20:00 AM
CLIENT SAMPLE ID	EV-22A	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/11/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/11/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-03
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/7/2024 9:25:00 AM
CLIENT SAMPLE ID	EV-22B	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/11/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/11/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-04
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/7/2024 3:45:00 PM
CLIENT SAMPLE ID	LL MW-23S	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/11/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/11/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-05
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/7/2024 2:30:00 PM
CLIENT SAMPLE ID	LL MW-23D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/11/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/11/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-06
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/6/2024 12:40:00 PM
CLIENT SAMPLE ID	LL MW-25D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/11/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/11/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-07
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/5/2024 10:55:00 AM
CLIENT SAMPLE ID	LL MW-27D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/11/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/11/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-08
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/6/2024 9:20:00 AM
CLIENT SAMPLE ID	LL MW-31D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/11/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/11/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-09
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/7/2024 12:15:00 PM
CLIENT SAMPLE ID	LL MW-35D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/11/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/11/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-10
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/5/2024 12:10:00 PM
CLIENT SAMPLE ID	DUP02-20240305-W	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/11/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/11/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-11
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/6/2024 8:00:00 AM
CLIENT SAMPLE ID	DUP03-20240306-W	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/12/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/12/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-12
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/7/2024 12:30:00 PM
CLIENT SAMPLE ID	DUP04-20240307-W	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/12/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/12/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-13
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/6/2024 1:50:00 PM
CLIENT SAMPLE ID	LL MW-03S	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/12/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/12/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-14
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/6/2024 2:45:00 PM
CLIENT SAMPLE ID	LL MW-03D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/12/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/12/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-15
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/7/2024 10:00:00 AM
CLIENT SAMPLE ID	LL MW-04S	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/12/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/12/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-16
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/7/2024 10:45:00 AM
CLIENT SAMPLE ID	LL MW-04D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/12/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/12/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-17
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/5/2024 10:05:00 AM
CLIENT SAMPLE ID	LL MW-06S	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/12/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/12/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-18
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/5/2024 11:20:00 AM
CLIENT SAMPLE ID	LL MW-06D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/12/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/12/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-19
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/7/2024 1:10:00 PM
CLIENT SAMPLE ID	LL MW-08S	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/12/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/12/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-20
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/7/2024 2:10:00 PM
CLIENT SAMPLE ID	LL MW-08D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/12/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/12/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-21
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/6/2024 10:50:00 AM
CLIENT SAMPLE ID	LL MW-10S	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/15/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/15/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-22
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/6/2024 11:50:00 AM
CLIENT SAMPLE ID	LL MW-10D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/15/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/15/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-23
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/7/2024 12:25:00 PM
CLIENT SAMPLE ID	LL MW-14D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/15/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/15/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-24
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/5/2024 12:40:00 PM
CLIENT SAMPLE ID	LL MW-15S	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/15/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/15/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-25
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/5/2024 1:55:00 PM
CLIENT SAMPLE ID	LL MW-15D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/15/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/15/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-26
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/4/2024 2:20:00 PM
CLIENT SAMPLE ID	LL MW-33S	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/15/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/15/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-27
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/4/2024 1:40:00 PM
CLIENT SAMPLE ID	LL MW-33D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/15/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/15/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-28
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/4/2024 10:55:00 AM
CLIENT SAMPLE ID	LL MW-34D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/15/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/15/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030066
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030066-29
		DATE RECEIVED:	03/08/24
		COLLECTION DATE:	3/4/2024 11:30:00 AM
CLIENT SAMPLE ID	DUP01-20240304-W	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/15/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/15/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/17/2024
		ALS SDG#:	EV24030066
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Garrett Leque		
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00		

LABORATORY BLANK RESULTS
MBLK-R461947 - Batch R461947 - Water by SW7470 Prepared 03/15/24 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Mercury	SW7470	ND	UT	UG/L	0.20	0.018		0.054	03/15/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

MBLK-R461975 - Batch R461975 - Water by SW7470 Prepared 03/11/24 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Mercury	SW7470	ND	UT	UG/L	0.20	0.018		0.054	03/11/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

MBLK-R461977 - Batch R461977 - Water by SW7470 Prepared 03/12/24 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Mercury	SW7470	ND	UT	UG/L	0.20	0.018		0.054	03/12/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

MBLK-R461976 - Batch R461976 - Water by SW7470 Prepared 03/11/24 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Mercury (Dissolved)	SW7470	ND	UT	UG/L	0.20	0.018		0.054	03/11/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

MBLK-R461978 - Batch R461978 - Water by SW7470 Prepared 03/12/24 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Mercury (Dissolved)	SW7470	ND	UT	UG/L	0.20	0.018		0.054	03/12/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.



CERTIFICATE OF ANALYSIS

CLIENT: Geoengineers, Inc.
600 DuPont St.
Bellingham, WA 98225

DATE: 4/17/2024
ALS SDG#: EV24030066
WDOE ACCREDITATION: C601

CLIENT CONTACT: Garrett Leque
CLIENT PROJECT: Everett Smelter Plume Groundwater /
0504-197-00

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: R461947 - Water by SW7470 Prepared 03/15/24 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury - BS	SW7470	105			100	105	80.6	118		03/15/24	RAL
Mercury - BSD	SW7470	104	1		100	104	80.6	118	7.94	03/15/24	RAL

ALS Test Batch ID: R461975 - Water by SW7470 Prepared 03/11/24 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury - BS	SW7470	106			2.50	2.65	80.6	118		03/11/24	RAL
Mercury - BSD	SW7470	106	0		2.50	2.64	80.6	118	7.94	03/11/24	RAL

ALS Test Batch ID: R461977 - Water by SW7470 Prepared 03/12/24 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury - BS	SW7470	106			2.50	2.65	80.6	118		03/12/24	RAL
Mercury - BSD	SW7470	106	0		2.50	2.64	80.6	118	7.94	03/12/24	RAL

ALS Test Batch ID: R461976 - Water by SW7470 Prepared 03/11/24 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury (Dissolved) - BS	SW7470	106			2.50	2.65	80.6	118		03/11/24	RAL
Mercury (Dissolved) - BSD	SW7470	106	0		2.50	2.64	80.6	118	7.94	03/11/24	RAL

ALS Test Batch ID: R461978 - Water by SW7470 Prepared 03/12/24 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury (Dissolved) - BS	SW7470	106			2.50	2.65	80.6	118		03/12/24	RAL
Mercury (Dissolved) - BSD	SW7470	106	0		2.50	2.64	80.6	118	7.94	03/12/24	RAL

APPROVED BY

Rob Greer
Laboratory Director



ALS Environmental

Laboratory location:

Chain of Custody Form

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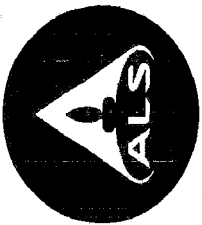
1 of 4

EV24030066

Customer Information				ALS Project Manager:				Work Order #:											
Project Information				Parameter/Method Request for Analysis															
Purchase Order --	Project Name	Project Number	Bill To Company	Invoice Attn.	Address	City/State/Zip --	Phone --	Fax --	A	B	C	D	E	F	G	H	I	J	Hold
Work Order --	Everett Smelter Plume Groundwater	0504-197-00	GeoEngineers	Garrett Leque	Email garrett	--	--	--	X	X	X	X	X	X	X	X	X	X	
Company Name	GeoEngineers								X	X	X	X	X	X	X	X	X	X	
Send Report To	Garrett Leque								X	X	X	X	X	X	X	X	X	X	
Address	554 West Bakerview Road								X	X	X	X	X	X	X	X	X	X	
City/State/Zip	Bellingham WA 98226								X	X	X	X	X	X	X	X	X	X	
Phone	253.312.7958								X	X	X	X	X	X	X	X	X	X	
Fax --									X	X	X	X	X	X	X	X	X	X	
e-Mail Address	gleque@geoengineers.com								X	X	X	X	X	X	X	X	X	X	
e-Mail Address	gleque@geoengineers.com								X	X	X	X	X	X	X	X	X	X	
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold		
1	EV-20B	3-5-24	1350	W	HNO ₃	2	X												
2	EV-22A	3-7-24	1020	W	HNO ₃	2	X												
3	EV-22B	3-7-24	0925	W	HNO ₃	2	X												
4	LLMW-23s	3-7-24	1545	W	HNO ₃	2	X												
5	LLMW-23D	3-7-24	1430	W	HNO ₃	2	X												
6	LLMW-25D	3-6-24	1240	W	HNO ₃	2	X												
7	LLMW-27D	3-5-24	1055	W	HNO ₃	2	X												
8	LLMW-31D	3-6-24	0920	W	HNO ₃	2	X												
9	LLMW-35D	3-7-24	1215	W	HNO ₃	2	X												
10				W	HNO ₃	2	X												
Sampler(s): Please Print & Sign				Shipment Method:				Required Turnaround Time:				Results Due Date:							
Brian Anderson								☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour				☐ Other							
Relinquished by: <i>Blair</i>				Received by:				Notes:											
Date: 3-8-24 1140				Received by (Laboratory): 3/8/24 11:41				Cooler Temp.											
Relinquished by:				Checked by (Laboratory):				QC Package: (Check Box Below)											
Date:				Date:				☒ Level II: Standard QC				TRRP-Checklist							
Date:				Date:				☐ Level III: Std QC + Raw Data				TRRP Level IV							
Date:				Date:				☐ Level IV: SW846 CLP-Like											
Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035				Other:															

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.

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ALS Environmental

Laboratory location:

Chain of Custody Form

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AV24030066

Customer Information				ALS Project Manager:				Work Order #:											
Project Information				Parameter/Method Request for Analysis															
Project Name				Tot/Diss As, Cd, Pb, Hg (report Hg down to DL of 0.02 ppm; "J" flag)															
Project Number				Note: All samples for dissolved analysis were field-filtered															
Bill To Company																			
Invoice Attn.																			
Address																			
City/State/Zip																			
Phone																			
Fax																			
e-Mail Address																			
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold		
1	DUP02-20240305-W	3-5-24	1210	W	HNO ₃	2	X												
2	DUP03-20240306-W	3-6-24	0800	W	HNO ₃	2	X												
3	DUP04-20240307-W	3-7-24	1230	W	HNO ₃	2	X												
4				W	HNO ₃	2	X												
5				W	HNO ₃	2	X												
6				W	HNO ₃	2	X												
7				W	HNO ₃	2	X												
8				W	HNO ₃	2	X												
9				W	HNO ₃	2	X												
10				W	HNO ₃	2	X												
Sampler(s): Please Print & Sign				Shipment Method:				Required Turnaround Time:				Results Due Date:							
BRIAN ANDERSON								☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour											
Relinquished by:				Received by:				Notes:											
B. Anderson				3-8-24 1140															
Relinquished by:				Received by (Laboratory):				Cooler Temp.				QC Package: (Check Box Below)							
B. Anderson				3/8/24 11:41								☒ Level II: Standard QC ☐ TRRP-Checklist							
Logged by (Laboratory):				Checked by (Laboratory):								☐ Level III: Std QC + Raw Data ☐ TRRP Level IV							
												☐ Level IV: SW846 CLP-Like ☐ Other:							
Preservative Key: 1-HCL 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ SO ₃ 6-NaHSO ₄ 7-Other 8-4 degrees C 9-5035																			

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ALS Environmental

Laboratory location:

Chain of Custody Form

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EV24030066
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Customer Information				ALS Project Manager:				Work Order #:									
Project Information				Parameter/Method Request for Analysis													
Purchase Order	Project Name	Project Number	Project Number	Tot/Diss As, Cd, Pb, Hg (report Hg down to DL of 0.02 ppm; "J" flag)													
Work Order	Bill To Company	Invoice Attn.	Address	Note: All samples for dissolved analysis were field-filtered													
Company Name	GeoEngineers	Garrett Leque	554 West Bakerview Road														
Send Report To	Garrett Leque	Address	City/State/Zip														
Address	554 West Bakerview Road	Phone	253.312.7958														
City/State/Zip	Bellingham WA 98226	Fax															
Phone	253.312.7958	Fax															
Fax		Fax															
e-Mail Address	gleque@geoengineers.com	e-Mail Address	gleque@geoengineers.com														
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
131	LL MW-035	3/6/24	1350	W	HNO ₃	2	X										
142	LL MW-030	3/6/24	1445	W	HNO ₃	2	X										
153	LL MW-045	3/7/24	1000	W	HNO ₃	2	X										
164	LL MW-040	3/7/24	1045	W	HNO ₃	2	X										
175	LL MW-065	3/8/24	1005	W	HNO ₃	2	X										
186	LL MW-060	3/8/24	1100	W	HNO ₃	2	X										
197	LL MW-085	3/7/24	1310	W	HNO ₃	2	X										
208	LL MW-080	3/7/24	1410	W	HNO ₃	2	X										
219	LL MW-105	3/6/24	1050	W	HNO ₃	2	X										
220	LL MW-100	3/6/24	1150	W	HNO ₃	2	X										
Sampler(s): Please Print & Sign JAE				Shipment Method:				Required Turnaround Time:				Results Due Date:					
								☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ Other				☐ 24 Hour					
Relinquished by:				Received by:				Notes:									
Relinquished by:				Received by (Laboratory):				Cooler Temp.				QC Package: (Check Box Below)					
Logged by (Laboratory):				Checked by (Laboratory):				Level II: Standard QC				Level III: Std QC + Raw Data					
								Level IV: SW846 CLP-Like				Other:					
Preservative Key: 1-HCL 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ SO ₃ 6-NaHSO ₄ 7-Other 8-4 degrees C 9-5035																	

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.

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ALS Environmental

Laboratory location:

Chain of Custody Form

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Customer Information				ALS Project Manager:				Work Order #:									
Project Information				Parameter/Method Request for Analysis				Tot/Diss As, Cd, Pb, Hg (report Hg down to DL of 0.02 ppm; "J" flag)									
Project Name				Project Number				Note: All samples for dissolved analysis were field-filtered									
Project Number				Bill To Company				Invoice Attn.									
Company Name				GeoEngineers				Garrett Leque									
Send Report To				Address				City/State/Zip									
554 West Bakerview Road				Bellingham WA 98226				Phone									
253.312.7958				Fax				e-Mail Address									
gleque@geoengineers.com				gleque@geoengineers.com				e-Mail Address									
gleque@geoengineers.com				gleque@geoengineers.com				gleque@geoengineers.com									
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	LLMW-140	3/7/24	1225	W	HNO ₃	2	X										
2	LLMW-155	3/5/24	1240	W	HNO ₃	2	X										
3	LLMW-160	3/5/24	1255	W	HNO ₃	2	X										
4				W	HNO ₃	2											
5	LLMW-33S	3/4/24	1420	W	HNO ₃	2	X										
6	LLMW-33D	3/4/24	1340	W	HNO ₃	2	X										
7	LLMW-34D	3/4/24	1055	W	HNO ₃	2	X										
8	DUP 01-20240304-W	3/4/24	1130	W	HNO ₃	2	X										
9				W	HNO ₃	2											
10				W	HNO ₃	2											

Sampler(s): Please Print & Sign		Shipment Method:		Required Turnaround Time:		Results Due Date:	
JAV				☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ Other		☐ 24 Hour	

Relinquished by:		Received by:		Notes:	
	Date: 3-7-24		Time: 1600		
	Date: 3-8-24		Time: 1140		
	Date: 3-8-24		Time: 1141		

Relinquished by:		Received by (Laboratory):		Cooler Temp.		QC Package: (Check Box Below)	
	Date: 3-8-24		Time: 1140				
	Date: 3-8-24		Time: 1141				

Preservative Key:		1-HCL 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ SO ₃ 6-NaHSO ₄ 7-Other 8-4 degrees C 9-5035	

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.

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ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: GeoEngineers ALS Job#: EV24030066

Project: Everett Smelter Plume Groundwater

Login Date: 3/8/24 Login Time: 1141 Login By: AV

Type of Shipping Container: Cooler ☒ Box ☐ Other ☐

Shipped via: FedEx Ground ☐ UPS ☐ Courier ☐ Hand Delivered ☒ ALS Courier ☐
FedEx Express ☐

Yes No N/A

Were custody seals on outside of shipping container? ☐ ☐ ☒
If yes, how many? Where?
Custody seal date: Seal name:

Was Chain of Custody properly filled out (ink, signed, dated, etc.)? ☒ ☐ ☐

Did all bottles have labels? ☒ ☐ ☐

Did all bottle labels and tags agree with Chain of Custody? ☒ ☐ ☐

Were samples received within hold time? ☒ ☐ ☐

Did all bottles arrive in good condition (unbroken, etc.)? ☒ ☐ ☐

Was sufficient amount of sample sent for the tests indicated? ☒ ☐ ☐

Was correct preservation added to samples? ☒ ☐ ☐

Subcontract test containers added to Subcontract Bin? ☐ ☐ ☒

Wetchem test containers marked with required Tests? ☐ ☐ ☒

Short hold time test containers delivered to analysts? ☐ ☐ ☒

Were VOA vials checked for absence of air bubbles? ☐ ☐ ☒

Bubbles present in sample #:

5035A kits received? ☐ ☐ ☒
Low Kits: # High Kits:

5035A kits returned? ☐ ☐ ☐
Low Kits: # High Kits:

Temperature of cooler upon receipt: 7.6°C, 7.7°C On ice? ☒ ☐ ☐

Explain any discrepancies:

4 samples added to chain (26A, 26B, 27A, 27B, 28A, 28B, 29A, 29B) that weren't included prior

Was client contacted? ☒ Who was called? Gallert By whom? RG Date: 3/8/24

Outcome of call: LEQUE



April 16, 2024

Mr. Garrett Leque
Geoengineers, Inc.
600 DuPont St.
Bellingham, WA 98225

Dear Mr. Leque ,

On March 13th, 13 samples were received by our laboratory and assigned our laboratory project number EV24030109. The project was identified as your Everett Smelter Plume Groundwater / 0504-197-00. The sample identification and requested analyses are outlined on the attached chain of custody record.

Report is being re-issued with corrected MDL/PQL values for Hg. No other abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030109
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV24030109-01
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	03/13/24
		COLLECTION DATE:	3/13/2024 2:45:00 PM
CLIENT SAMPLE ID	BP-05S	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/18/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/18/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030109
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030109-02
		DATE RECEIVED:	03/13/24
		COLLECTION DATE:	3/13/2024 2:00:00 PM
CLIENT SAMPLE ID	BP-05D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/18/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/18/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030109
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030109-03
		DATE RECEIVED:	03/13/24
		COLLECTION DATE:	3/13/2024 1:25:00 PM
CLIENT SAMPLE ID	BP-05D2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/18/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/18/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030109
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030109-04
		DATE RECEIVED:	03/13/24
		COLLECTION DATE:	3/12/2024 2:15:00 PM
CLIENT SAMPLE ID	BP-06S	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/18/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/18/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030109
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030109-05
		DATE RECEIVED:	03/13/24
		COLLECTION DATE:	3/12/2024 1:50:00 PM
CLIENT SAMPLE ID	BP-06D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/18/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/18/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030109
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030109-06
		DATE RECEIVED:	03/13/24
		COLLECTION DATE:	3/12/2024 12:00:00 PM
CLIENT SAMPLE ID	BP-07S	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/18/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/18/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030109
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030109-07
		DATE RECEIVED:	03/13/24
		COLLECTION DATE:	3/12/2024 11:30:00 AM
CLIENT SAMPLE ID	BP-07D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/18/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/18/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030109
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030109-08
		DATE RECEIVED:	03/13/24
		COLLECTION DATE:	3/12/2024 1:00:00 PM
CLIENT SAMPLE ID	BP-07D2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/18/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/18/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030109
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030109-09
		DATE RECEIVED:	03/13/24
		COLLECTION DATE:	3/13/2024 11:15:00 AM
CLIENT SAMPLE ID	BP-08S	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/18/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/18/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030109
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV24030109-10
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	03/13/24
		COLLECTION DATE:	3/13/2024 12:00:00 PM
CLIENT SAMPLE ID	BP-08D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/18/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/18/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030109
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030109-11
		DATE RECEIVED:	03/13/24
		COLLECTION DATE:	3/13/2024 10:00:00 AM
CLIENT SAMPLE ID	BP-09S	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/21/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/21/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV24030109
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV24030109-12
		DATE RECEIVED:	03/13/24
		COLLECTION DATE:	3/13/2024 10:45:00 AM
CLIENT SAMPLE ID	BP-09D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/21/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/21/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030109
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV24030109-13
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	03/13/24
		COLLECTION DATE:	3/12/2024 10:15:00 AM
CLIENT SAMPLE ID	BP-10S	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/21/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/21/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS SDG#:	EV24030109
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Garrett Leque		
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00		

LABORATORY BLANK RESULTS

MBLK-R461897 - Batch R461897 - Water by SW7470 Prepared 03/21/24 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Mercury	SW7470	ND	UT	UG/L	0.20	0.018		0.054	03/21/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

MBLK-R462289 - Batch R462289 - Water by SW7470 Prepared 03/18/24 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Mercury	SW7470	ND	UT	UG/L	0.20	0.018		0.054	03/18/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

MBLK-R462290 - Batch R462290 - Water by SW7470 Prepared 03/18/24 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Mercury (Dissolved)	SW7470	ND	UT	UG/L	0.20	0.018		0.054	03/18/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT: Geoengineers, Inc.
 600 DuPont St.
 Bellingham, WA 98225
CLIENT CONTACT: Garrett Leque
CLIENT PROJECT: Everett Smelter Plume Groundwater /
 0504-197-00

DATE: 4/16/2024
ALS SDG#: EV24030109
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS
ALS Test Batch ID: R461897 - Water by SW7470 Prepared 03/21/24 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury - BS	SW7470	105			100	105	80.6	118		03/21/24	RAL
Mercury - BSD	SW7470	103	2		100	103	80.6	118	7.94	03/21/24	RAL

ALS Test Batch ID: R462289 - Water by SW7470 Prepared 03/18/24 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury - BS	SW7470	109			100	109	80.6	118		03/18/24	RAL
Mercury - BSD	SW7470	110	1		100	110	80.6	118	7.94	03/18/24	RAL

ALS Test Batch ID: R462290 - Water by SW7470 Prepared 03/18/24 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury (Dissolved) - BS	SW7470	109			100	109	80.6	118		03/18/24	RAL
Mercury (Dissolved) - BSD	SW7470	110	1		100	110	80.6	118	7.94	03/18/24	RAL

APPROVED BY



 Rob Greer
 Laboratory Director



ALS Environmental

Laboratory location:

Chain of Custody Form

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EV24030109

pg 1 of 2

Customer Information		ALS Project Manager:		Work Order #:													
Project Information		Parameter/Method Request for Analysis															
Purchase Order --	Project Name	Everett Smelter Plume Groundwater	Tot/Diss As, Cd, Pb, Hg (report Hg down to DL of 0.02 ppm; "J" flag)														
Work Order --	Project Number	0504-197-00	Note: All samples for dissolved analysis were field-filtered														
Company Name	Bill To Company	GeoEngineers															
Send Report To	Invoice Attn.	Garrett Leque															
Address	Address	Email garrett															
City/State/Zip	City/State/Zip --																
Phone	Phone --																
Fax --	Fax --																
e-Mail Address	e-Mail Address	gleque@geoengineers.com															
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	BP-05s	3/13/24	1445	W	HNO ₃	2	X										
2	BP-05D	3/13/24	1400	W	HNO ₃	2	X										
3	BP-05D2	3/13/24	1325	W	HNO ₃	2	X										
4	BP-06s	3/12/24	1415	W	HNO ₃	2	X										
5	BP-06D	3/12/24	1350	W	HNO ₃	2	X										
6	BP-070S	3/12/24	1200	W	HNO ₃	2	X										
7	BP-07 D	3/12/24	1130	W	HNO ₃	2	X										
8	BP-07 D2	3/12/24	1300	W	HNO ₃	2	X										
9	BP-08s	3/13/24	1115	W	HNO ₃	2	X										
10	BP-08D	3/13/24	1200	W	HNO ₃	2	X										
Sampler(s): Please Print & Sign		Shipment Method:		Required Turnaround Time:		Results Due Date:											
BAIAN ANDERSON				☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour													
Relinquished by:		Date:	Received by:		Notes:												
B. Anderson		3-13-24	ALS 3/13/24														
Relinquished by:		Date:	Checked by (Laboratory):		Cooler Temp.												
			1020														
Logged by (Laboratory):		Date:	QC Package: (Check Box Below)		X												
			Level II: Standard QC														
			Level III: Std QC + Raw Data														
			Level IV: SW846 CLP-Like														
Preservative Key:		1-HCL	2-HNO3	3-H2SO4	4-NaOH	5-Na2SO3	6-NaHSO4	7-Other	8-4 degrees C	9-5035	Other:						

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.

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Chain of Custody Form

pg 2 of 2

Laboratory location:

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~~EV2403019~~ EV2430109

Customer Information			Project Information			ALS Project Manager:			Work Order #:								
Parameter/Method Request for Analysis			Tot/Diss As, Cd, Pb, Hg (report Hg down to DL of 0.02 ppm; "J" flag)			Note: All samples for dissolved analysis were field-filtered											
Purchase Order	--	Project Name	Everett Smelter Plume Groundwater	A													
Work Order	--	Project Number	0504-197-00														
Company Name	GeoEngineers	Bill To Company	GeoEngineers	C													
Send Report To	Garrett Leque	Invoice Attn.	Garrett Leque	D													
Address	554 West Bakerview Road	Address	Email garrett	E													
City/State/Zip	Bellingham WA 98226	City/State/Zip	--	G													
Phone	253.312.7958	Phone	--	H													
Fax	--	Fax	--	I													
e-Mail Address	gleque@geoengineers.com	e-Mail Address	gleque@geoengineers.com	J													
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	BP-095	3/13/24	1000	W	HNO3	2	X										
2	BP-09D	3/13/24	1045	W	HNO3	2	X										
3	BP-105	3/12/24	1015	W	HNO3	2	X										
4				W	HNO3	2	X										
5				W	HNO3	2	X										
6				W	HNO3	2	X										
7				W	HNO3	2	X										
8				W	HNO3	2	X										
9				W	HNO3	2	X										
10				W	HNO3	2	X										
Sampler(s): Please Print & Sign			Shipment Method:			Required Turnaround Time:			Results Due Date:								
BRIAN ANDERSON						☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other											
Relinquished by:			Received by:			Notes:											
BRIAN ANDERSON			ALS 3/13/24														
Relinquished by:			Checked by (Laboratory):			Cooler Temp.			QC Package: (Check Box Below)								
									X Level II: Standard QC								
									Level III: Std QC + Raw Data								
									Level IV: SW846 CLP-Like								
Logged by (Laboratory):									Other:								
Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NAOH 5-NA2S2O3 6-NAHSO4 7-Other 8-4 degrees C 9-5035																	

Note: Any changes must be made in writing once samples and CUC Form have been submitted to ALS Laboratory Group.

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ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: GeoEngineers ALS Job#: EV24030109

Project: Everett Smelter Plume Groundwater

Login Date: 3/13/24 Login Time: 1620 Login By: AV

Type of Shipping Container: Cooler ☒ Box ☐ Other ☐

Shipped via: FedEx Ground ☐ UPS ☐ Courier ☐ Hand Delivered ☒ ALS Courier ☐
FedEx Express ☐

	Yes	No	N/A
Were custody seals on outside of shipping container?			☒
If yes, how many? <u> </u> Where? <u> </u>			
Custody seal date: <u> </u> Seal name: <u> </u>			
Was Chain of Custody properly filled out (ink, signed, dated, etc.)?	☒		
Did all bottles have labels?	☒		
Did all bottle labels and tags agree with Chain of Custody?	☒		
Were samples received within hold time?	☒		
Did all bottles arrive in good condition (unbroken, etc.)?	☒		
Was sufficient amount of sample sent for the tests indicated?	☒		
Was correct preservation added to samples?	☒		
Subcontract test containers added to Subcontract Bin?			☒
Wetchem test containers marked with required Tests?			☒
Short hold time test containers delivered to analysts?			☒
Were VOA vials checked for absence of air bubbles?			☒
Bubbles present in sample #: <u> </u>			

5035A kits received? ☒
 # Low Kits: # High Kits:

5035A kits returned?
 # Low Kits: # High Kits:

Temperature of cooler upon receipt: 10.3 °C On ice? ☒

Explain any discrepancies:

Was client contacted? Who was called? By whom? Date:

Outcome of call:



April 16, 2024

Mr. Garrett Leque
Geoengineers, Inc.
600 DuPont St.
Bellingham, WA 98225

Dear Mr. Leque ,

On March 22nd, 15 samples were received by our laboratory and assigned our laboratory project number EV24030184. The project was identified as your 0504-197-00. The sample identification and requested analyses are outlined on the attached chain of custody record.

Report is being re-issued with corrected MDL/PQL values for Hg. No other abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030184
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV24030184-01
CLIENT PROJECT:	0504-197-00	DATE RECEIVED:	03/22/24
CLIENT SAMPLE ID	20240320-LLMW01D	COLLECTION DATE:	3/20/2024 12:15:00 PM
		WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/25/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/25/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030184
		ALS SAMPLE#:	EV24030184-02
CLIENT CONTACT:	Garrett Leque	DATE RECEIVED:	03/22/24
CLIENT PROJECT:	0504-197-00	COLLECTION DATE:	3/20/2024 3:15:00 PM
CLIENT SAMPLE ID	20240320-BP-01S	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/25/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/25/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030184
		ALS SAMPLE#:	EV24030184-03
CLIENT CONTACT:	Garrett Leque	DATE RECEIVED:	03/22/24
CLIENT PROJECT:	0504-197-00	COLLECTION DATE:	3/20/2024 4:30:00 PM
CLIENT SAMPLE ID	20240320-BP-01D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/25/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/25/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030184
		ALS SAMPLE#:	EV24030184-04
CLIENT CONTACT:	Garrett Leque	DATE RECEIVED:	03/22/24
CLIENT PROJECT:	0504-197-00	COLLECTION DATE:	3/21/2024 12:40:00 PM
CLIENT SAMPLE ID	20240321-BP04D2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/25/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/25/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030184
		ALS SAMPLE#:	EV24030184-05
CLIENT CONTACT:	Garrett Leque	DATE RECEIVED:	03/22/24
CLIENT PROJECT:	0504-197-00	COLLECTION DATE:	3/21/2024 1:55:00 PM
CLIENT SAMPLE ID	20240321-BP-04S	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/25/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/25/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030184
		ALS SAMPLE#:	EV24030184-06
CLIENT CONTACT:	Garrett Leque	DATE RECEIVED:	03/22/24
CLIENT PROJECT:	0504-197-00	COLLECTION DATE:	3/21/2024 2:50:00 PM
CLIENT SAMPLE ID	20240321-BP-04D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/25/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/25/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030184
		ALS SAMPLE#:	EV24030184-07
CLIENT CONTACT:	Garrett Leque	DATE RECEIVED:	03/22/24
CLIENT PROJECT:	0504-197-00	COLLECTION DATE:	3/21/2024 4:00:00 PM
CLIENT SAMPLE ID	20240321-LLMW36D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	0.052	J	UG/L	1	0.20	0.018	03/25/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/25/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

J - Analyte was positively identified. Reported result is an estimate below the associated reporting limit but above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030184
		ALS SAMPLE#:	EV24030184-08
CLIENT CONTACT:	Garrett Leque	DATE RECEIVED:	03/22/24
CLIENT PROJECT:	0504-197-00	COLLECTION DATE:	3/18/2024 12:30:00 PM
CLIENT SAMPLE ID	LLMW-11D-031824	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/25/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/25/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030184
		ALS SAMPLE#:	EV24030184-09
CLIENT CONTACT:	Garrett Leque	DATE RECEIVED:	03/22/24
CLIENT PROJECT:	0504-197-00	COLLECTION DATE:	3/18/2024 3:55:00 PM
CLIENT SAMPLE ID	LLMW-17D-031824	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/25/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/25/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030184
		ALS SAMPLE#:	EV24030184-10
CLIENT CONTACT:	Garrett Leque	DATE RECEIVED:	03/22/24
CLIENT PROJECT:	0504-197-00	COLLECTION DATE:	3/19/2024 1:10:00 PM
CLIENT SAMPLE ID	LLMW-12D-031824	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/25/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/25/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030184
		ALS SAMPLE#:	EV24030184-11
CLIENT CONTACT:	Garrett Leque	DATE RECEIVED:	03/22/24
CLIENT PROJECT:	0504-197-00	COLLECTION DATE:	3/20/2024 10:30:00 AM
CLIENT SAMPLE ID	BP-03S-032024	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/26/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/26/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030184
		ALS SAMPLE#:	EV24030184-12
CLIENT CONTACT:	Garrett Leque	DATE RECEIVED:	03/22/24
CLIENT PROJECT:	0504-197-00	COLLECTION DATE:	3/21/2024 2:50:00 PM
CLIENT SAMPLE ID	BP-02S-032124	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/26/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/26/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030184
		ALS SAMPLE#:	EV24030184-13
CLIENT CONTACT:	Garrett Leque	DATE RECEIVED:	03/22/24
CLIENT PROJECT:	0504-197-00	COLLECTION DATE:	3/21/2024 10:40:00 AM
CLIENT SAMPLE ID	BP-03D-032124	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/26/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/26/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030184
		ALS SAMPLE#:	EV24030184-14
CLIENT CONTACT:	Garrett Leque	DATE RECEIVED:	03/22/24
CLIENT PROJECT:	0504-197-00	COLLECTION DATE:	3/21/2024 1:00:00 PM
CLIENT SAMPLE ID	LLMW-02D-032124	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/26/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/26/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
		ALS JOB#:	EV24030184
		ALS SAMPLE#:	EV24030184-15
CLIENT CONTACT:	Garrett Leque	DATE RECEIVED:	03/22/24
CLIENT PROJECT:	0504-197-00	COLLECTION DATE:	3/21/2024 2:15:00 PM
CLIENT SAMPLE ID	BP-02D-032124	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	03/26/24	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	03/26/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.



CERTIFICATE OF ANALYSIS

CLIENT: Geoengineers, Inc. DATE: 4/16/2024
600 DuPont St. ALS SDG#: EV24030184
Bellingham, WA 98225 WDOE ACCREDITATION: C601
CLIENT CONTACT: Garrett Leque
CLIENT PROJECT: 0504-197-00

LABORATORY BLANK RESULTS

MBLK-R462655 - Batch R462655 - Water by SW7470 Prepared 03/26/24 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Mercury	SW7470	ND	UT	UG/L	0.20	0.018		0.054	03/26/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

MBLK-R463249 - Batch R463249 - Water by SW7470 Prepared 03/25/24 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Mercury	SW7470	ND	UT	UG/L	0.20	0.018		0.054	03/25/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

MBLK-R462656 - Batch R462656 - Water by SW7470 Prepared 03/26/24 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Mercury (Dissolved)	SW7470	ND	UT	UG/L	0.20	0.018		0.054	03/26/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

MBLK-R463251 - Batch R463251 - Water by SW7470 Prepared 03/25/24 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Mercury (Dissolved)	SW7470	ND	UT	UG/L	0.20	0.018		0.054	03/25/24	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	4/16/2024
CLIENT CONTACT:	Garrett Leque	ALS SDG#:	EV24030184
CLIENT PROJECT:	0504-197-00	WDOE ACCREDITATION:	C601

LABORATORY CONTROL SAMPLE RESULTS
ALS Test Batch ID: R462655 - Water by SW7470 Prepared 03/26/24 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury - BS	SW7470	110			100	110	80.6	118		03/26/24	RAL
Mercury - BSD	SW7470	107	3		100	107	80.6	118	7.94	03/26/24	RAL

ALS Test Batch ID: R463249 - Water by SW7470 Prepared 03/25/24 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury - BS	SW7470	116			100	116	80.6	118		03/25/24	RAL
Mercury - BSD	SW7470	117	1		100	117	80.6	118	7.94	03/25/24	RAL

ALS Test Batch ID: R462656 - Water by SW7470 Prepared 03/26/24 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury (Dissolved) - BS	SW7470	110			100	110	80.6	118		03/26/24	RAL
Mercury (Dissolved) - BSD	SW7470	107	3		100	107	80.6	118	7.94	03/26/24	RAL

ALS Test Batch ID: R463251 - Water by SW7470 Prepared 03/25/24 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury (Dissolved) - BS	SW7470	116			100	116	80.6	118		03/25/24	RAL
Mercury (Dissolved) - BSD	SW7470	117	1		100	117	80.6	118	7.94	03/25/24	RAL

APPROVED BY



 Rob Greer
Laboratory Director



ALS Job# (Laboratory Use Only)

Date 3/21/24 Page 1 of 2

[illegible]

SIGNATURES (Name, Company, Date, Time):

SIGNATURES (Name, Company, Date, Time):
1. Relinquished By: Carlyle C. E. B. M. S. 3/21/24, 1810

Received By: KEP CEI 3/2/24 1030

2. Relinquished By: W. C. / G. E. / 3/22/24 1145

Received By: Hand Hill ALS 3/22/24 1145

TURNAROUND REQUESTED in Business Days*
Organic, Metals & Inorganic Analysis OTHER:

Specify:

OTHER:

Organic, Metals & Inorganic Analysis

☒ 10 ☐ 5 ☐ 3 ☐ 2 ☐ 1 ☐ SAME DAY

Fuels & Hydrocarbon Analysis

Standard 5 3 1 SAME DAY

**Turnaround request less than standard may incur Rush Charges*



2017

Date 3.22.24 Page 2 of 2

SPECIAL INSTRUCTIONS

1. Relinquished By: Mr. L 3/22/21 11/45

Received By: Shanika 3/22/24 1145

2. Relinquished By: _____

Received By:

Organic, Metals & Inorganic Analysis

OTHER:

Specificity:

Fuels & Hydrocarbon Analysis

Standard	5	3	1	SAME DAY
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*Turnaround request less than standard may incur Rush Charges

Sample Receiving Checklist

ALS Job#: EV24030184

Login Date: 3/22/24

Login Time: 1145

Login By: AV

Type of Shipping Container: Cooler ✓

Box

Other

Shipped via: FedEx Ground _____
FedEx Express _____

UPS _____

Courier

Hand Delivered

ALS Courier

Yes

No

N/A

Were custody seals on outside of shipping container?

If yes, how many? _____ Where? _____

Custody seal date: _____ Seal name: _____

Was Chain of Custody properly filled out (ink, signed, dated, etc.)?

Did all bottles have labels?

Did all bottle labels and tags agree with Chain of Custody?

Were samples received within hold time?

Did all bottles arrive in good condition (unbroken, etc.)?

Was sufficient amount of sample sent for the tests indicated?

Was correct preservation added to samples?

Subcontract test containers added to Subcontract Bin?

Wetchem test containers marked with required Tests?

Short hold time test containers delivered to analysts?

Were VOA vials checked for absence of air bubbles?

Bubbles present in sample #: _____

5035A kits received?

Low Kits: _____

High Kits:

5035A kits returned?

Low Kits: _____

High Kits: _____

Temperature of cooler upon receipt: 13.2°C On ice?

On ice?

Explain any discrepancies:

Was client contacted? _____ Who was called? _____ By whom? _____ Date: _____

Outcome of call:

Project:	Washington State Department of Ecology – Everett Smelter Plume Uplands and Lowlands Groundwater Sampling Project (2023-2024), February-March 2024 Groundwater Sampling Event
File:	0504-197-00
Date:	April 11, 2024

This report documents the results of a United States Environmental Protection Agency (USEPA)-defined Stage 2A data validation (USEPA Document 540-R-08-005; USEPA, 2009) of analytical data from the analyses of groundwater samples collected as part of the February-March 2024 sampling event, and the associated laboratory and field quality control (QC) samples. The samples were obtained from the Everett Smelter Plume site located in Everett, Washington.

Objective and Quality Control Elements

GeoEngineers, Inc. (GeoEngineers) completed the data validation consistent with the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA 2020) (National Functional Guidelines) to determine if the laboratory analytical results meet the project objectives and are usable for their intended purpose. Data usability was assessed by determining if:

- The samples were analyzed using well-defined and acceptable methods that provide reporting limits below applicable regulatory criteria;
- The precision and accuracy of the data are well-defined and sufficient to provide defensible data; and
- The quality assurance/quality control (QA/QC) procedures utilized by the laboratory meet acceptable industry practices and standards.

In accordance with the Quality Assurance Project Plan (QAPP) (GeoEngineers 2023), the data validation included review of the following QC elements:

- Data Package Completeness
- Chain-of-Custody Documentation
- Holding Times and Sample Preservation
- Method Blanks
- Matrix Spikes/Matrix Spike Duplicates
- Laboratory Control Samples/Laboratory Control Sample Duplicates
- Field Duplicates

Validated Sample Delivery Groups

This data validation included review of the sample delivery groups (SDGs) listed below in Table 1.

TABLE 1. SUMMARY OF VALIDATED SAMPLE DELIVERY GROUPS

LABORATORY SDG	SAMPLES VALIDATED
EV24030018	LLMW34S-20240229, LLMW37S-20240229, LLMW38S- 20240301, LLMW39S- 20240301, LLMW40S- 20240301, LLMW41S-20240229, LLMW42S-20240229
EV24030020	LLMW-05S, LLMW-05D, LLMW-07S, LLMW-07D, LLMW-18S, LLMW-18D, LLMW-19D, LLMW-20D, LLMW-21S, LLMW-21D
EV24030066	EV-20B, EV-22A, EV-22B, LL MW-03S, LL MW-03D, LL MW-04S, LL MW-04D, LL MW-06S, LL MW-06D, LL MW-08S, LL MW-08D, LL MW-10S, LL MW-10D, LL MW-14D, LL MW-15S, LL MW-15D, LL MW-23S, LL MW-23D, LL MW-25D, DUP03-20240306-W, LL MW-27D, DUP02-20240305-W, LL MW-31D, LL MW-33S, LL MW-33D, LL MW-34D, DUP01-20240304-W, LL MW-35D, DUP04-20240307-W
EV24030109	BP-05S, BP-05D, BP-05D2, BP-06S, BP-06D, BP-07S, BP-07D, BP-07D2, BP-08S, BP-08D, BP-09S, BP-09D, BP-10S
EV24030184	20240320-BP-01S, 20240320-BP-01D, BP-02S-032124, BP-02D-032124, BP-03S-032024, BP-03D-032124, 20240321-BP-04S, 20240321-BP-04D, 20240321-BP04D2, 20240320-LLMW01D, LLMW-02D-032124, LLMW-11D-031824, LLMW-12D-031824, LLMW-17D-031824, 20240321-LLMW36D

Chemical Analysis Performed

ALS Environmental, Inc. (ALS), located in Everett, Washington, performed laboratory analyses on the samples using the following methods:

- Total and Dissolved Metals by Methods EPA200.8 and SW7470

Data Validation Summary

The results for each of the QC elements are summarized below.

DATA PACKAGE COMPLETENESS

ALS provided the required deliverables for the data validation according to the National Functional Guidelines. The laboratory followed adequate corrective action processes and the identified anomalies were discussed in the relevant laboratory case narrative.

CHAIN-OF-CUSTODY DOCUMENTATION

Chain-of-custody (COC) forms were provided with the laboratory analytical reports. The COCs were accurate and complete when submitted to the laboratory.

HOLDING TIMES AND SAMPLE PRESERVATION

The sample holding time is defined as the time that elapses between sample collection and sample analysis. Maximum holding time criteria exist for each analysis to help ensure that the analyte

concentrations found at the time of analysis reflect the concentration present at the time of sample collection. Established holding times and sample preservation requirements were met for each analysis.

METHOD BLANKS

Method blanks are analyzed to ensure that laboratory procedures and reagents do not introduce measurable concentrations of the analytes of interest. A method blank was analyzed with each batch of samples, at a frequency of 1 per 20 samples. For each sample batch, method blanks for the applicable methods were analyzed at the required frequency. None of the analytes of interest were detected in the method blanks.

MATRIX SPIKES/MATRIX SPIKE DUPLICATES

Since the actual analyte concentration in an environmental sample is not known, the accuracy of a particular analysis is usually inferred by performing a matrix spike (MS) analysis on one sample from the associated batch, known as the parent sample. One aliquot of the sample is analyzed in the normal manner and then a second aliquot of the sample is spiked with a known amount of analyte concentration and analyzed. From these analyses, a percent recovery is calculated. Matrix spike duplicate (MSD) analyses are generally performed for organic analyses as a precision check and analyzed in the same sequence as a matrix spike. Using the result values from the MS and MSD, the relative percent difference (RPD) is calculated. The percent recovery control limits for MS and MSD analyses are specified in the laboratory documents, as are the RPD control limits for MS/MSD sample sets.

One MS/MSD analysis should be performed for every analytical batch or every 20 field samples, whichever is more frequent. The frequency requirements were met for each analysis and the percent recovery and RPD values were within the proper control limits.

LABORATORY CONTROL SAMPLES/LABORATORY CONTROL SAMPLE DUPLICATES

A laboratory control sample (LCS) is a blank sample that is spiked with a known amount of analyte and then analyzed. An LCS is similar to an MS, but without the possibility of matrix interference. Given that matrix interference is not an issue, the LCS/LCSD control limits for accuracy and precision are usually more rigorous than for MS/MSD analyses. Additionally, data qualification based on LCS/LCSD analyses would apply to all samples in the associated batch, instead of just the parent sample. The percent recovery control limits for LCS and LCSD analyses are specified in the laboratory documents, as are the RPD control limits for LCS/LCSD sample sets.

One LCS/LCSD analysis should be performed for every analytical batch or every 20 field samples, whichever is more frequent. The frequency requirements were met for all analyses and the percent recovery and RPD values were within the proper control limits, with the following exceptions:

SDG EV24030018: (Dissolved Metals) The RPD for dissolved cadmium was greater than the control limit in the LCS/LCSD sample set digested on March 4, 2024. There were no positive results for this target analyte in the associated field samples; therefore, no qualifications were required.

SDG EV24030109: (Dissolved Metals) The RPD values for dissolved cadmium and dissolved lead were greater than the control limits in the LCS/LCSD sample set digested on March 20, 2024. There were no

positive results for these target analytes in the associated field samples; therefore, no qualifications were required.

FIELD DUPLICATES

In order to assess precision, field duplicate samples were collected and analyzed along with the reviewed sample batches. The duplicate samples were analyzed for the same parameters as the associated parent samples. Precision is determined by calculating the RPD between each pair of samples. If one or more of the sample analytes has a concentration less than five times the reporting limit for that sample, then the absolute difference is used instead of the RPD. The RPD control limit for water samples is 35 percent.

SDG EV24030066: Four field duplicate sample pairs, LL MW-25D/DUP03-20240306-W, LL MW-27D/DUP02-20240305-W, LL MW-34D/DUP01-20240304-W, and LL MW-35D/DUP04-20240307-W, were submitted with this SDG. The precision criteria for the target analytes were met for these sample pairs.

Overall Assessment

As was determined by this data validation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the surrogate, LCS/LCSD, and MS/MSD percent recovery values. Precision was acceptable, as demonstrated by the LCS/LCSD, MS/MSD, and field duplicate RPD values, with the exceptions noted above.

No analytical results were qualified. The data are acceptable for the intended use.

References

United States Environmental Protection Agency (USEPA). "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use," EPA-540-R-08-005. January 2009.

United States Environmental Protection Agency (USEPA). "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review," EPA-542-R-20-006. November 2020.

GeoEngineers, Inc. (GeoEngineers). "Quality Assurance Project Plan (QAPP), Everett Smelter Plume Uplands and Lowlands," prepared for Washington State Department of Ecology. August 11, 2023.

Disclaimer: Any electronic form, facsimile or hard copy of the original document (email, text, table, and/or figure), if provided, and any attachments are only a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

2023



August 31, 2023

Mr. Garrett Leque
Geoengineers, Inc.
600 DuPont St.
Bellingham, WA 98225

Dear Mr. Leque ,

On August 18th, 12 samples were received by our laboratory and assigned our laboratory project number EV23080082. The project was identified as your Everett Smelter Plume Groundwater / 0504-197-00. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
		ALS JOB#:	EV23080082
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23080082-01
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	08/18/23
		COLLECTION DATE:	8/16/2023 12:00:00 PM
CLIENT SAMPLE ID	LLMW-34S_20230816	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	08/22/23	EBS
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	08/22/23	EBS

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23080082
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23080082-02
		DATE RECEIVED:	08/18/23
		COLLECTION DATE:	8/16/2023 2:00:00 PM
CLIENT SAMPLE ID	LLMW-07D_20230816	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	08/22/23	EBS
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	08/22/23	EBS

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23080082
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23080082-03
		DATE RECEIVED:	08/18/23
		COLLECTION DATE:	8/16/2023 2:45:00 PM
CLIENT SAMPLE ID	LLMW-07S_20230816	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	08/22/23	EBS
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	08/22/23	EBS

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23080082
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23080082-04
		DATE RECEIVED:	08/18/23
		COLLECTION DATE:	8/16/2023 4:25:00 PM
CLIENT SAMPLE ID	LLMW-06D_20230816	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	08/22/23	EBS
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	08/22/23	EBS

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23080082
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23080082-05
		DATE RECEIVED:	08/18/23
		COLLECTION DATE:	8/17/2023 8:05:00 AM
CLIENT SAMPLE ID	LLMW-05D_20230817	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	08/22/23	EBS
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	08/22/23	EBS

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23080082
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23080082-06
		DATE RECEIVED:	08/18/23
		COLLECTION DATE:	8/17/2023 8:50:00 AM
CLIENT SAMPLE ID	LLMW-05S_20230817	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	08/22/23	EBS
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	08/22/23	EBS

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23080082
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23080082-07
		DATE RECEIVED:	08/18/23
		COLLECTION DATE:	8/17/2023 12:25:00 PM
CLIENT SAMPLE ID	LLMW-18S_20230817	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	08/22/23	EBS
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	08/22/23	EBS

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23080082
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23080082-08
		DATE RECEIVED:	08/18/23
		COLLECTION DATE:	8/17/2023 1:30:00 PM
CLIENT SAMPLE ID	LLMW-18D_20230817	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	08/22/23	EBS
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	08/22/23	EBS

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23080082
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23080082-09
		DATE RECEIVED:	08/18/23
		COLLECTION DATE:	8/17/2023 3:55:00 PM
CLIENT SAMPLE ID	LLMW-15D_20230817	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	08/22/23	EBS
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	08/22/23	EBS

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23080082
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23080082-10
		DATE RECEIVED:	08/18/23
		COLLECTION DATE:	8/17/2023 4:40:00 PM
CLIENT SAMPLE ID	LLMW-15S_20230817	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	08/22/23	EBS
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	08/22/23	EBS

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
		ALS JOB#:	EV23080082
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23080082-11
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	08/18/23
		COLLECTION DATE:	8/18/2023 9:25:00 AM
CLIENT SAMPLE ID	LLMW-17D_20230818	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	08/30/23	EBS
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	08/30/23	EBS

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23080082
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23080082-12
		DATE RECEIVED:	08/18/23
		COLLECTION DATE:	8/18/2023 11:20:00 AM
CLIENT SAMPLE ID	LLMW-11D_20230818	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	08/30/23	EBS
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	08/30/23	EBS

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
		ALS SDG#:	EV23080082
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Garrett Leque		
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00		

LABORATORY BLANK RESULTS

MBLK-R445299 - Batch R445299 - Water by SW7470 Prepared 08/22/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Mercury	SW7470	ND	UT	UG/L	0.20	0.018		0.054	08/22/23	EBS

UT - Analyte analyzed for but not detected at level above the MDL.

MBLK-R445300 - Batch R445300 - Water by SW7470 Prepared 08/30/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Mercury	SW7470	ND	UT	UG/L	0.20	0.018		0.054	08/30/23	EBS

UT - Analyte analyzed for but not detected at level above the MDL.

MBLK-R445302 - Batch R445302 - Water by SW7470 Prepared 08/22/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Mercury (Dissolved)	SW7470	ND	UT	UG/L	0.20	0.018		0.054	08/22/23	EBS

UT - Analyte analyzed for but not detected at level above the MDL.

MBLK-R445304 - Batch R445304 - Water by SW7470 Prepared 08/30/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Mercury (Dissolved)	SW7470	ND	UT	UG/L	0.20	0.018		0.054	08/30/23	EBS

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT: Geoengineers, Inc.
 600 DuPont St.
 Bellingham, WA 98225
CLIENT CONTACT: Garrett Leque
CLIENT PROJECT: Everett Smelter Plume Groundwater /
 0504-197-00

DATE: 8/31/2023
ALS SDG#: EV23080082
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS
ALS Test Batch ID: R445299 - Water by SW7470 Prepared 08/22/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury - BS	SW7470	96.8			2.50	2.42	80.6	118		08/22/23	EBS
Mercury - BSD	SW7470	96.8	0		2.50	2.42	80.6	118	7.94	08/22/23	EBS

ALS Test Batch ID: R445300 - Water by SW7470 Prepared 08/30/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury - BS	SW7470	107			2.50	2.67	80.6	118		08/30/23	EBS
Mercury - BSD	SW7470	107	0		2.50	2.67	80.6	118	7.94	08/30/23	EBS

ALS Test Batch ID: R445302 - Water by SW7470 Prepared 08/22/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury (Dissolved) - BS	SW7470	96.8			2.50	2.42	80.6	118		08/22/23	EBS
Mercury (Dissolved) - BSD	SW7470	96.8	0		2.50	2.42	80.6	118	7.94	08/22/23	EBS

ALS Test Batch ID: R445304 - Water by SW7470 Prepared 08/30/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury (Dissolved) - BS	SW7470	107			2.50	2.67	80.6	118		08/30/23	EBS
Mercury (Dissolved) - BSD	SW7470	107	0		2.50	2.67	80.6	118	7.94	08/30/23	EBS

APPROVED BY



 Rob Greer
 Laboratory Director



ALS Environmental

Laboratory location:

Chain of Custody Form

Page 1 of 2

EV23080082

Customer Information		ALS Project Manager:		Work Order #:													
Project Information		Parameter/Method Request for Analysis															
Purchase Order	Project Name	Everett Smelter Plume Groundwater	Tot/Diss As, Cd, Pb, Hg (report Hg down to DL of 0.02 ppm; "J" flag)														
Work Order	Project Number	0504-197-00	Note: All samples for dissolved analysis were field-filtered														
Company Name	Bill To Company	GeoEngineers	FIELD FILTERED SAMPLE = F/F ON BOTTLE														
Send Report To	Invoice Attn.	Garrett Leque															
Address	Address	Email garrett															
City/State/Zip	City/State/Zip	--															
Phone	Phone	--															
Fax	Fax	--															
e-Mail Address	e-Mail Address	gleque@geoengineers.com															
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	LL MW - 34S - 20230810	8/16/23	1200	W	HNO ₃	2	X										
2	LL MW - 07D - 20230816	8/16/23	1400	W	HNO ₃	2	X										
3	LL MW - 07S - 20230816	8/16/23	1445	W	HNO ₃	2	X										
4	LL MW - 06D - 20230816	8/16/23	1625	W	HNO ₃	2	X										
5	LL MW - 05D - 20230817	8/17/23	0805	W	HNO ₃	2	X										
6	LL MW - 05S - 20230817	8/17/23	0850	W	HNO ₃	2	X										
7	LL MW - 18S - 20230817	8/17/23	1225	W	HNO ₃	2	X										
8	LL MW - 18D - 20230817	8/17/23	1330	W	HNO ₃	2	X										
9	LL MW - 15D - 20230817	8/17/23	1555	W	HNO ₃	2	X										
10	LL MW - 15S - 20230817	8/17/23	1640	W	HNO ₃	2	X										
Sampler(s): Please Print & Sign		Shipment Method:		Required Turnaround Time:		Results Due Date:											
NATHAN SOLOMON		PDR - OFF		☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour		☐ Other											
Relinquished by:		Date:	Time:	Received by:		Notes:											
NATHAN SOLOMON		8/18/23	1420	NATHAN SOLOMON		8/18/23 1420											
Relinquished by:		Date:	Time:	Received by (Laboratory):		Cooler Temp.											
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):		QC Package: (Check Box Below)											
						☒ Level II: Standard QC ☐ Level III: Std QC + Raw Data ☐ Level IV: SW846 CLP-Like ☐ Other:											
Preservative Key:		1-HCL	2-HNO3	3-H2SO4	4-NAOH	5-NA2S2O3	6-NAHSO4	7-Other	8-4 degrees C	9-5035							

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.

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ALS Environmental

Laboratory location:

Chain of Custody Form

Page 2 of 2

EV23080082

Customer Information				ALS Project Manager:				Work Order #:									
Project Information				Parameter/Method Request for Analysis				Tot/Diss As, Cd, Pb, Hg (report Hg down to DL of 0.02 ppm; "J" flag)									
Project Name				Project Number				Note: All samples for dissolved analysis were field-filtered									
Project Number				Bill To Company				A									
Company Name				GeoEngineers				C									
Send Report To				Garrett Leque				D									
Address				554 West Bakerview Road				E									
City/State/Zip				Bellingham WA 98226				F									
Phone				253.312.7958				G									
Fax								H									
e-Mail Address				gleque@geoengineers.com				I									
e-Mail Address				gleque@geoengineers.com				J									
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	LLMW-17D-20230818	8/18/23	0925	W	HNO ₃	2	X										
2	LLMW-11D-20230818	8/18/23	1120	W	HNO ₃	2	X										
3		8/1/23		W	HNO ₃	2	X										
4		8/1/23		W	HNO ₃	2	X										
5		8/1/23		W	HNO ₃	2	X										
6		8/1/23		W	HNO ₃	2	X										
7		8/1/23		W	HNO ₃	2	X										
8		8/1/23		W	HNO ₃	2	X										
9		8/1/23		W	HNO ₃	2	X										
10		8/1/23		W	HNO ₃	2	X										

Shipments Method:		Required Turnaround Time:		Results Due Date:	
Drop-off		STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour ☐ Other ☐			
Sampler(s): Please Print & Sign	Received by:	Time:	8/18/23 1420	Notes: FF ON LABELS = FIELD FILTER USED	
Relinquished by:	Received by (Laboratory):	Time:		Cooler Temp. X	
Relinquished by:	Checked by (Laboratory):	Time:		Level II: Standard QC	
Logged by (Laboratory):				Level III: Std QC + Raw Data	
Preservative Key:	1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035			Level IV: SW846 CLP-Like	
				Other:	

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.

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Sample Receiving Checklist

Outcome of call:



August 31, 2023

Mr. Garrett Leque
Geoengineers, Inc.
600 DuPont St.
Bellingham, WA 98225

Dear Mr. Leque ,

On August 18th, 12 samples were received by our laboratory and assigned our laboratory project number EV23080082. The project was identified as your Everett Smelter Plume Groundwater / 0504-197-00. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director



CERTIFICATE OF ANALYSIS

CLIENT: Geoengineers, Inc.
600 DuPont St.
Bellingham, WA 98225

CLIENT CONTACT: Garrett Leque
CLIENT PROJECT: Everett Smelter Plume Groundwater /
0504-197-00

CLIENT SAMPLE ID LLMW-34S_20230816

DATE: 8/31/2023
ALS JOB#: EV23080082
ALS SAMPLE#: EV23080082-01
DATE RECEIVED: 08/18/23
COLLECTION DATE: 8/16/2023 12:00:00 PM

WDOE ACCREDITATION: C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	ND	U	UG/L	1	1.0	0.15	08/22/23	RAL
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	08/22/23	RAL
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	08/22/23	RAL
Arsenic (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.15	08/22/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	08/22/23	RAL
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	08/22/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
		ALS JOB#:	EV23080082
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23080082-02
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	08/18/23
		COLLECTION DATE:	8/16/2023 2:00:00 PM
CLIENT SAMPLE ID	LLMW-07D_20230816	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	7.6		UG/L	1	1.0	0.15	08/22/23	RAL
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	08/22/23	RAL
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	08/22/23	RAL
Arsenic (Dissolved)	E200.8	5.4		UG/L	1	1.0	0.15	08/22/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	08/22/23	RAL
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	08/22/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23080082
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23080082-03
		DATE RECEIVED:	08/18/23
		COLLECTION DATE:	8/16/2023 2:45:00 PM
CLIENT SAMPLE ID	LLMW-07S_20230816	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	13		UG/L	5	5.0	0.75	08/22/23	RAL
Cadmium	E200.8	ND	U	UG/L	5	5.0	0.60	08/22/23	RAL
Lead	E200.8	ND	U	UG/L	5	5.0	0.45	08/22/23	RAL
Arsenic (Dissolved)	E200.8	12		UG/L	5	5.0	0.75	08/22/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	5	5.0	0.60	08/22/23	RAL
Lead (Dissolved)	E200.8	ND	U	UG/L	5	5.0	0.45	08/22/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23080082
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23080082-04
		DATE RECEIVED:	08/18/23
		COLLECTION DATE:	8/16/2023 4:25:00 PM
CLIENT SAMPLE ID	LLMW-06D_20230816	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	ND	U	UG/L	1	1.0	0.15	08/22/23	RAL
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	08/22/23	RAL
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	08/22/23	RAL
Arsenic (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.15	08/22/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	08/22/23	RAL
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	08/22/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23080082
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23080082-05
		DATE RECEIVED:	08/18/23
		COLLECTION DATE:	8/17/2023 8:05:00 AM
CLIENT SAMPLE ID	LLMW-05D_20230817	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	ND	U	UG/L	1	1.0	0.15	08/22/23	RAL
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	08/22/23	RAL
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	08/22/23	RAL
Arsenic (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.15	08/22/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	08/22/23	RAL
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	08/22/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
		ALS JOB#:	EV23080082
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23080082-06
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	08/18/23
		COLLECTION DATE:	8/17/2023 8:50:00 AM
CLIENT SAMPLE ID	LLMW-05S_20230817	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	16		UG/L	1	1.0	0.15	08/22/23	RAL
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	08/22/23	RAL
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	08/22/23	RAL
Arsenic (Dissolved)	E200.8	17		UG/L	1	1.0	0.15	08/22/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	08/22/23	RAL
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	08/22/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
		ALS JOB#:	EV23080082
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23080082-07
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	08/18/23
		COLLECTION DATE:	8/17/2023 12:25:00 PM
CLIENT SAMPLE ID	LLMW-18S_20230817	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	41		UG/L	1	1.0	0.15	08/22/23	RAL
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	08/22/23	RAL
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	08/22/23	RAL
Arsenic (Dissolved)	E200.8	43		UG/L	1	1.0	0.15	08/22/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	08/22/23	RAL
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	08/22/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
		ALS JOB#:	EV23080082
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23080082-08
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	08/18/23
		COLLECTION DATE:	8/17/2023 1:30:00 PM
CLIENT SAMPLE ID	LLMW-18D_20230817	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	ND	U	UG/L	1	1.0	0.15	08/22/23	RAL
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	08/22/23	RAL
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	08/22/23	RAL
Arsenic (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.15	08/22/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	08/22/23	RAL
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	08/22/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23080082
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23080082-09
		DATE RECEIVED:	08/18/23
		COLLECTION DATE:	8/17/2023 3:55:00 PM
CLIENT SAMPLE ID	LLMW-15D_20230817	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	ND	U	UG/L	1	1.0	0.15	08/22/23	RAL
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	08/22/23	RAL
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	08/22/23	RAL
Arsenic (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.15	08/22/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	08/22/23	RAL
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	08/22/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23080082
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23080082-10
		DATE RECEIVED:	08/18/23
		COLLECTION DATE:	8/17/2023 4:40:00 PM
CLIENT SAMPLE ID	LLMW-15S_20230817	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	19		UG/L	1	1.0	0.15	08/22/23	RAL
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	08/22/23	RAL
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	08/22/23	RAL
Arsenic (Dissolved)	E200.8	18		UG/L	1	1.0	0.15	08/22/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	08/22/23	RAL
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	08/22/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23080082
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23080082-11
		DATE RECEIVED:	08/18/23
		COLLECTION DATE:	8/18/2023 9:25:00 AM
CLIENT SAMPLE ID	LLMW-17D_20230818	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	15		UG/L	1	1.0	0.15	08/24/23	RAL
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	08/24/23	RAL
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	08/24/23	RAL
Arsenic (Dissolved)	E200.8	8.3		UG/L	1	1.0	0.15	08/24/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	08/24/23	RAL
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	08/24/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
		ALS JOB#:	EV23080082
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23080082-12
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	08/18/23
		COLLECTION DATE:	8/18/2023 11:20:00 AM
CLIENT SAMPLE ID	LLMW-11D_20230818	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	14		UG/L	1	1.0	0.15	08/24/23	RAL
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	08/24/23	RAL
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	08/24/23	RAL
Arsenic (Dissolved)	E200.8	13		UG/L	1	1.0	0.15	08/24/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	08/24/23	RAL
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	08/24/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT: Geoengineers, Inc.
600 DuPont St.
Bellingham, WA 98225

DATE: 8/31/2023
ALS SDG#: EV23080082
WDOE ACCREDITATION: C601

CLIENT CONTACT: Garrett Leque
CLIENT PROJECT: Everett Smelter Plume Groundwater /
0504-197-00

LABORATORY BLANK RESULTS

MB-082123W - Batch 199416 - Water by E200.8 Prepared 08/22/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Arsenic	E200.8	ND	U	UG/L	1.0	0.050		0.15	08/22/23	RAL
Cadmium	E200.8	ND	U	UG/L	1.0	0.040		0.12	08/22/23	RAL
Lead	E200.8	ND	U	UG/L	1.0	0.036		0.11	08/22/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-082323W - Batch 199420 - Water by E200.8 Prepared 08/23/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Arsenic	E200.8	ND	U	UG/L	1.0	0.050		0.15	08/24/23	RAL
Cadmium	E200.8	ND	U	UG/L	1.0	0.040		0.12	08/24/23	RAL
Lead	E200.8	ND	U	UG/L	1.0	0.036		0.11	08/24/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-082123W - Batch 199417 - Water by E200.8 Prepared 08/22/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Arsenic (Dissolved)	E200.8	ND	U	UG/L	1.0	0.050		0.15	08/22/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1.0	0.040		0.12	08/22/23	RAL
Lead (Dissolved)	E200.8	ND	U	UG/L	1.0	0.036		0.11	08/22/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-082323W - Batch 199479 - Water by E200.8 Prepared 08/23/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Arsenic (Dissolved)	E200.8	ND	U	UG/L	1.0	0.050		0.15	08/24/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1.0	0.040		0.12	08/24/23	RAL
Lead (Dissolved)	E200.8	ND	U	UG/L	1.0	0.036		0.11	08/24/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT: Geoengineers, Inc.
600 DuPont St.
Bellingham, WA 98225

DATE: 8/31/2023
ALS SDG#: EV23080082
WDOE ACCREDITATION: C601

CLIENT CONTACT: Garrett Leque
CLIENT PROJECT: Everett Smelter Plume Groundwater /
0504-197-00

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 199416 - Water by E200.8 Prepared 08/22/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Arsenic - BS	E200.8	95.2			125	119	89.1	110		08/22/23	RAL
Arsenic - BSD	E200.8	96.5	1		125	121	89.1	110	10	08/22/23	RAL
Cadmium - BS	E200.8	100			125	126	89.4	110		08/22/23	RAL
Cadmium - BSD	E200.8	102	2		125	128	89.4	110	2.7	08/22/23	RAL
Lead - BS	E200.8	93.5			125	117	87.5	107		08/22/23	RAL
Lead - BSD	E200.8	95.4	2		125	119	87.5	107	2.43	08/22/23	RAL

ALS Test Batch ID: 199420 - Water by E200.8 Prepared 08/23/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Arsenic - BS	E200.8	95.0			125	119	89.1	110		08/24/23	RAL
Arsenic - BSD	E200.8	95.6	1		125	119	89.1	110	10	08/24/23	RAL
Cadmium - BS	E200.8	101			125	126	89.4	110		08/24/23	RAL
Cadmium - BSD	E200.8	101	0		125	127	89.4	110	10	08/24/23	RAL
Lead - BS	E200.8	93.6			125	117	87.5	107		08/24/23	RAL
Lead - BSD	E200.8	94.9	1		125	119	87.5	107	10	08/24/23	RAL

ALS Test Batch ID: 199417 - Water by E200.8 Prepared 08/22/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Arsenic (Dissolved) - BS	E200.8	95.2			125	119	89.1	110		08/22/23	RAL
Arsenic (Dissolved) - BSD	E200.8	96.5	1		125	121	89.1	110	10	08/22/23	RAL
Cadmium (Dissolved) - BS	E200.8	100			125	126	89.4	110		08/22/23	RAL
Cadmium (Dissolved) - BSD	E200.8	102	2		125	128	89.4	110	2.7	08/22/23	RAL
Lead (Dissolved) - BS	E200.8	93.5			125	117	87.5	107		08/22/23	RAL
Lead (Dissolved) - BSD	E200.8	95.4	2		125	119	87.5	107	2.43	08/22/23	RAL

ALS Test Batch ID: 199479 - Water by E200.8 Prepared 08/23/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Arsenic (Dissolved) - BS	E200.8	95.0			125	119	89.1	110		08/24/23	RAL
Arsenic (Dissolved) - BSD	E200.8	95.6	1		125	119	89.1	110	10	08/24/23	RAL
Cadmium (Dissolved) - BS	E200.8	101			125	126	89.4	110		08/24/23	RAL
Cadmium (Dissolved) - BSD	E200.8	101	0		125	127	89.4	110	2.7	08/24/23	RAL
Lead (Dissolved) - BS	E200.8	93.6			125	117	87.5	107		08/24/23	RAL
Lead (Dissolved) - BSD	E200.8	94.9	1		125	119	87.5	107	2.43	08/24/23	RAL

CERTIFICATE OF ANALYSIS

APPROVED BY

Rob Greer
Laboratory Director



ALS Environmental

Laboratory location:

Chain of Custody Form

Page 1 of 2

EV23080082

Customer Information		ALS Project Manager:		Work Order #:													
Project Information		Parameter/Method Request for Analysis															
Purchase Order	Project Name	Everett Smelter Plume Groundwater	Tot/Diss As, Cd, Pb, Hg (report Hg down to DL of 0.02 ppm; "J" flag)														
Work Order	Project Number	0504-197-00	Note: All samples for dissolved analysis were field-filtered														
Company Name	Bill To Company	GeoEngineers	FIELD FILTERED SAMPLE = F/F ON BOTTLE														
Send Report To	Invoice Attn.	Garrett Leque															
Address	Address	Email garrett															
City/State/Zip	City/State/Zip	--															
Phone	Phone	--															
Fax	Fax	--															
e-Mail Address	e-Mail Address	gleque@geoengineers.com															
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	LL MW - 34S - 20230810	8/16/23	1200	W	HNO ₃	2	X										
2	LL MW - 07D - 20230816	8/16/23	1400	W	HNO ₃	2	X										
3	LL MW - 07S - 20230816	8/16/23	1445	W	HNO ₃	2	X										
4	LL MW - 06D - 20230816	8/16/23	1625	W	HNO ₃	2	X										
5	LL MW - 05D - 20230817	8/17/23	0805	W	HNO ₃	2	X										
6	LL MW - 05S - 20230817	8/17/23	0850	W	HNO ₃	2	X										
7	LL MW - 18S - 20230817	8/17/23	1225	W	HNO ₃	2	X										
8	LL MW - 18D - 20230817	8/17/23	1330	W	HNO ₃	2	X										
9	LL MW - 15D - 20230817	8/17/23	1555	W	HNO ₃	2	X										
10	LL MW - 15S - 20230817	8/17/23	1640	W	HNO ₃	2	X										
Sampler(s): Please Print & Sign		Shipment Method:		Required Turnaround Time:		Results Due Date:											
NATHAN SOLOMON		PDR - OFF		☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour													
Relinquished by:		Date:	Time:	Received by:		Notes:											
[Signature]		8/18/23	1420	[Signature]		8/18/23 1420											
Relinquished by:		Date:	Time:	Received by (Laboratory):													
[Signature]				[Signature]													
Logged by (Laboratory):		Date:	Time:	Checked by (Laboratory):													
[Signature]				[Signature]													
Preservative Key:		1-HCL	2-HNO3	3-H2SO4	4-NaOH	5-Na2S2O3	6-NaHSO4	7-Other	8-4 degrees C	9-5035							
Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.																	



Laboratory location:

Chain of Custody Form

Page 2 of 2

EV23080082

ALS Project Manager:			Work Order #:														
Customer Information			Project Information														
Purchase Order --	Project Name		Everett Smelter Plume Groundwater														
Work Order --	Project Number		0504-197-00														
Company Name	GeoEngineers		GeoEngineers														
Send Report To	Garrett Leque		Garrett Leque														
Address	554 West Bakerview Road		Email garrett														
City/State/Zip	Bellingham WA 98226																
Phone	253.312.7958																
Fax --																	
e-Mail Address	gleque@ggeengineers.com		e-Mail Address gleque@ggeengineers.com														
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	LL-MW-17D-20230818	8/18/23	0925	W	HNO ₃	2	X										
2	LL-MW-11D-20230818	8/18/23	1120	W	HNO ₃	2	X										
3		8/1/23		W	HNO ₃	2	X										
4		8/1/23		W	HNO ₃	2	X										
5		8/1/23		W	HNO ₃	2	X										
6		8/1/23		W	HNO ₃	2	X										
7		8/1/23		W	HNO ₃	2	X										
8		8/1/23		W	HNO ₃	2	X										
9		8/1/23		W	HNO ₃	2	X										
10		8/1/23		W	HNO ₃	2	X										

Sampler(s): Please Print & Sign

NATHAN SORVON

Relinquished by:

110

Relinquished by:

Logged by (Laboratory):

Preservative Key:

1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2SO3 6-NaHSO4 7-Other 8-4 degrees C 9-5035

Shipment Method:

Drop-off

Required Turnaround Time:

☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour

Results Due Date:

Notes:

FF ON LABELS = FIELD FILTER USED

QC Package: (Check Box Below)

☒ Level II: Standard QC ☐ TRRP-Checklist

Cooler Temp.

Other:

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.

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ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Geo Engineers

ALS Job #: Ev 23080082

Project: Eversett Smelter Plume Groundwater

Received Date: 8-18-23 Received Time: 14:20 By: MH

Type of shipping container: Cooler ☒ Box ☐ Other ☐

Shipped via: FedEx Ground ☐ UPS ☐ Mail ☐ Courier ☐ Hand Delivered ☒
FedEx Express ☐

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Were custody seals on outside of shipping container?	☐	☒	☐
If yes, how many? <u> </u> Where? <u> </u>			
Custody seal date: <u> </u> Seal name: <u> </u>			

Was Chain of Custody properly filled out (ink, signed, dated, etc.)? ☒ ☐ ☐

Did all bottles have labels? ☒ ☐ ☐

Did all bottle labels and tags agree with Chain of Custody? ☒ ☐ ☐

Were samples received within hold time? ☒ ☐ ☐

Did all bottles arrive in good condition (unbroken, etc.)? ☒ ☐ ☐

Was sufficient amount of sample sent for the tests indicated? ☒ ☐ ☐

Was correct preservation added to samples? ☒ ☐ ☐

If no, Sample Control added preservative to the following:

<u>Sample Number</u>	<u>Reagent</u>	<u>Analyte</u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>

Were VOA vials checked for absence of air bubbles? ☒ ☐ ☒

Bubbles present in sample #:

Temperature of cooler upon receipt: 23.6 Ice Cold Cool Ambient N/A

Explain any discrepancies:

Was client contacted? ☐ Who was called? By whom? Date:

Outcome of call:



August 31, 2023

Mr. Garrett Leque
Geoengineers, Inc.
600 DuPont St.
Bellingham, WA 98225

Dear Mr. Leque ,

On August 25th, 10 samples were received by our laboratory and assigned our laboratory project number EV23080112. The project was identified as your Everett Smelter Plume Groundwater / 0504-197-00. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
		ALS JOB#:	EV23080112
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23080112-01
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	08/25/23
		COLLECTION DATE:	8/21/2023 11:30:00 AM
CLIENT SAMPLE ID	LLMW-42S_20230821	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	08/28/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	08/28/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23080112
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23080112-02
		DATE RECEIVED:	08/25/23
		COLLECTION DATE:	8/21/2023 3:15:00 PM
CLIENT SAMPLE ID	LLMW-08D_20230821	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	08/28/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	08/28/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23080112
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23080112-03
		DATE RECEIVED:	08/25/23
		COLLECTION DATE:	8/22/2023 8:10:00 AM
CLIENT SAMPLE ID	LLMW-39S_20230822	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	08/28/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	08/28/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23080112
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23080112-04
		DATE RECEIVED:	08/25/23
		COLLECTION DATE:	8/22/2023 10:00:00 AM
CLIENT SAMPLE ID	LLMW-40S_20230822	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	0.13	J	UG/L	1	0.20	0.018	08/28/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	08/28/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

J - Analyte was positively identified. Reported result is an estimate below the associated reporting limit but above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23080112
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23080112-05
		DATE RECEIVED:	08/25/23
		COLLECTION DATE:	8/23/2023 8:40:00 AM
CLIENT SAMPLE ID	LLMW-10D_20230823	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	08/28/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	08/28/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
		ALS JOB#:	EV23080112
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23080112-06
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	08/25/23
		COLLECTION DATE:	8/23/2023 12:25:00 PM
CLIENT SAMPLE ID	LLMW-12D_20230823	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	08/28/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	08/28/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
		ALS JOB#:	EV23080112
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23080112-07
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	08/25/23
		COLLECTION DATE:	8/23/2023 9:05:00 AM
CLIENT SAMPLE ID	LLMW-38S_20230823	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	08/28/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	08/28/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23080112
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23080112-08
		DATE RECEIVED:	08/25/23
		COLLECTION DATE:	8/24/2023 1:15:00 PM
CLIENT SAMPLE ID	LLMW-03D_20230824	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	08/28/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	08/28/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
		ALS JOB#:	EV23080112
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23080112-09
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	08/25/23
		COLLECTION DATE:	8/23/2023 2:45:00 PM
CLIENT SAMPLE ID	LLMW-21D_20230823	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	08/28/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	08/28/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
		ALS JOB#:	EV23080112
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23080112-10
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	08/25/23
		COLLECTION DATE:	8/24/2023 11:15:00 AM
CLIENT SAMPLE ID	LLMW-01D_20230824	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.018	08/28/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.018	08/28/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
		ALS SDG#:	EV23080112
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Garrett Leque		
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00		

LABORATORY BLANK RESULTS

MBLK-R445270 - Batch R445270 - Water by SW7470 Prepared 08/28/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		ANALYSIS DATE	ANALYSIS BY
						MDL	PQL		
Mercury	SW7470	ND	UT	UG/L	0.20	0.018	0.054	08/28/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

MBLK-R445272 - Batch R445272 - Water by SW7470 Prepared 08/28/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		ANALYSIS DATE	ANALYSIS BY
						MDL	PQL		
Mercury (Dissolved)	SW7470	ND	UT	UG/L	0.20	0.018	0.054	08/28/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT: Geoengineers, Inc.
 600 DuPont St.
 Bellingham, WA 98225
CLIENT CONTACT: Garrett Leque
CLIENT PROJECT: Everett Smelter Plume Groundwater /
 0504-197-00

DATE: 8/31/2023
ALS SDG#: EV23080112
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS
ALS Test Batch ID: R445270 - Water by SW7470 Prepared 08/28/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury - BS	SW7470	104			100	104	80.6	118		08/28/23	RAL
Mercury - BSD	SW7470	103	1		100	103	80.6	118	7.94	08/28/23	RAL

ALS Test Batch ID: R445272 - Water by SW7470 Prepared 08/28/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury (Dissolved) - BS	SW7470	104			100	104	80.6	118		08/28/23	RAL
Mercury (Dissolved) - BSD	SW7470	103	1		100	103	80.6	118	7.94	08/28/23	RAL

APPROVED BY



Rob Greer
 Laboratory Director



ALS Environmental

Laboratory location:

Chain of Custody Form

Page 1 of 1

EV23080112

Customer Information				ALS Project Manager:				Work Order #:									
Project Information				Parameter/Method Request for Analysis													
Purchase Order --	Project Name	Project Number	Bill To Company	Invoice Attn.	Address	City/State/Zip --	Phone --	Fax --	Tot/Diss As, Cd, Pb, Hg (report Hg down to DL of 0.02 ppm; "J" flag)								
Work Order --	GeoEngineers	0504-197-00	GeoEngineers	Garrett Leque	Email garrett				Note: All samples for dissolved analysis were field-filtered								
Company Name	GeoEngineers	0504-197-00	GeoEngineers	Garrett Leque	Email garrett												
Send Report To	Garrett Leque	554 West Bakerview Road	Garrett Leque	Garrett Leque	Email garrett												
Address	554 West Bakerview Road		Garrett Leque	Garrett Leque	Email garrett												
City/State/Zip	Bellingham WA 98226		Garrett Leque	Garrett Leque	Email garrett												
Phone	253.312.7958		Garrett Leque	Garrett Leque	Email garrett												
Fax --			Garrett Leque	Garrett Leque	Email garrett												
e-Mail Address	gleque@geoengineers.com		Garrett Leque	Garrett Leque	Email garrett												
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	LLMW - 425 - 20230821	8/21/23	1130	W	HNO ₃	2	X										
2	LLMW - 080 - 20230821	8/21/23	1515	W	HNO ₃	2	X										
3	LLMW - 395 - 20230822	8/22/23	0810	W	HNO ₃	2	X										
4	LLMW - 405 - 20230822	8/22/23	1600	W	HNO ₃	2	X										
5	LLMW - 100 - 20230823	8/23/23	0840	W	HNO ₃	2	X										
6	LLMW - 120 - 20230823	8/23/23	1225	W	HNO ₃	2	X										
7	LLMW - 385 - 20230823	8/23/23	0905	W	HNO ₃	2	X										
8	LLMW - 030 - 20230824	8/24/23	1315	W	HNO ₃	2	X										
9	LLMW - 210 - 20230823	8/23/23	1445	W	HNO ₃	2	X										
10	LLMW - 010 - 20230824	8/24/23	1115	W	HNO ₃	2	X										
Sampler(s): Please Print & Sign		Shipment Method:		Required Turnaround Time:		Results Due Date:											
NATHAN SOLOMON		STD 10 Wk Days		5 Wk Days		24 Hour											
Relinquished by:		Received by:		Notes:													
Date: 8/25/23		Time: 13:07		FF = FIELD FILTERED													
Relinquished by:		Received by (Laboratory):		Cooler Temp.													
Date:		Time:		Level II: Standard QC													
Date:		Time:		Level III: Std QC + Raw Data													
Date:		Time:		Level IV: SW846 CLP-Like													
Logged by (Laboratory):		Checked by (Laboratory):		Other:													
Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035																	

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.

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Sample Receiving Checklist

ALS Job #: Ev23080113

Received Date: 8-25-23 Received Time: 13107 By: MH

Shipped via: FedEx Ground _____ UPS _____ Mail _____ Courier ~~✗~~ Hand Delivered ✗
 FedEx Express _____ ALS

Outcome of call: _____



August 31, 2023

Mr. Garrett Leque
Geoengineers, Inc.
600 DuPont St.
Bellingham, WA 98225

Dear Mr. Leque ,

On August 25th, 10 samples were received by our laboratory and assigned our laboratory project number EV23080112. The project was identified as your Everett Smelter Plume Groundwater / 0504-197-00. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director



CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23080112
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23080112-01
		DATE RECEIVED:	08/25/23
		COLLECTION DATE:	8/21/2023 11:30:00 AM
CLIENT SAMPLE ID	LLMW-42S_20230821	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	29		UG/L	1	1.0	0.15	08/28/23	RAL
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	08/28/23	RAL
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	08/28/23	RAL
Arsenic (Dissolved)	E200.8	34		UG/L	1	1.0	0.15	08/28/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	08/28/23	RAL
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	08/28/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23080112
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23080112-02
		DATE RECEIVED:	08/25/23
		COLLECTION DATE:	8/21/2023 3:15:00 PM
CLIENT SAMPLE ID	LLMW-08D_20230821	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	ND	U	UG/L	1	1.0	0.15	08/28/23	RAL
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	08/28/23	RAL
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	08/28/23	RAL
Arsenic (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.15	08/28/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	08/28/23	RAL
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	08/28/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
		ALS JOB#:	EV23080112
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23080112-03
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	08/25/23
		COLLECTION DATE:	8/22/2023 8:10:00 AM
CLIENT SAMPLE ID	LLMW-39S_20230822	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	31		UG/L	1	1.0	0.15	08/28/23	RAL
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	08/28/23	RAL
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	08/28/23	RAL
Arsenic (Dissolved)	E200.8	12		UG/L	1	1.0	0.15	08/28/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	08/28/23	RAL
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	08/28/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
		ALS JOB#:	EV23080112
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23080112-04
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	08/25/23
		COLLECTION DATE:	8/22/2023 10:00:00 AM
CLIENT SAMPLE ID	LLMW-40S_20230822	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	170		UG/L	1	1.0	0.15	08/28/23	RAL
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	08/28/23	RAL
Lead	E200.8	24		UG/L	1	1.0	0.090	08/28/23	RAL
Arsenic (Dissolved)	E200.8	40		UG/L	1	1.0	0.15	08/28/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	08/28/23	RAL
Lead (Dissolved)	E200.8	1.1		UG/L	1	1.0	0.090	08/28/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
		ALS JOB#:	EV23080112
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23080112-05
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	08/25/23
		COLLECTION DATE:	8/23/2023 8:40:00 AM
CLIENT SAMPLE ID	LLMW-10D_20230823	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	2.3		UG/L	1	1.0	0.15	08/28/23	RAL
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	08/28/23	RAL
Lead	E200.8	1.3		UG/L	1	1.0	0.090	08/28/23	RAL
Arsenic (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.15	08/28/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	08/28/23	RAL
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	08/28/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
		ALS JOB#:	EV23080112
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23080112-06
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	08/25/23
		COLLECTION DATE:	8/23/2023 12:25:00 PM
CLIENT SAMPLE ID	LLMW-12D_20230823	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	1600		UG/L	1	1.0	0.15	08/28/23	RAL
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	08/28/23	RAL
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	08/28/23	RAL
Arsenic (Dissolved)	E200.8	1600		UG/L	1	1.0	0.15	08/28/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	08/28/23	RAL
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	08/28/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
		ALS JOB#:	EV23080112
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23080112-07
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	08/25/23
		COLLECTION DATE:	8/23/2023 9:05:00 AM
CLIENT SAMPLE ID	LLMW-38S_20230823	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	1.2		UG/L	1	1.0	0.15	08/28/23	RAL
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	08/28/23	RAL
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	08/28/23	RAL
Arsenic (Dissolved)	E200.8	1.2		UG/L	1	1.0	0.15	08/28/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	08/28/23	RAL
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	08/28/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
		ALS JOB#:	EV23080112
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23080112-08
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	08/25/23
		COLLECTION DATE:	8/24/2023 1:15:00 PM
CLIENT SAMPLE ID	LLMW-03D_20230824	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	ND	U	UG/L	1	1.0	0.15	08/28/23	RAL
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	08/28/23	RAL
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	08/28/23	RAL
Arsenic (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.15	08/28/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	08/28/23	RAL
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	08/28/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23080112
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23080112-09
		DATE RECEIVED:	08/25/23
		COLLECTION DATE:	8/23/2023 2:45:00 PM
CLIENT SAMPLE ID	LLMW-21D_20230823	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	ND	U	UG/L	1	1.0	0.15	08/28/23	RAL
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	08/28/23	RAL
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	08/28/23	RAL
Arsenic (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.15	08/28/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	08/28/23	RAL
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	08/28/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
		ALS JOB#:	EV23080112
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23080112-10
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	08/25/23
		COLLECTION DATE:	8/24/2023 11:15:00 AM
CLIENT SAMPLE ID	LLMW-01D_20230824	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	29		UG/L	1	1.0	0.15	08/28/23	RAL
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	08/28/23	RAL
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	08/28/23	RAL
Arsenic (Dissolved)	E200.8	27		UG/L	1	1.0	0.15	08/28/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	08/28/23	RAL
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	08/28/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	8/31/2023
		ALS SDG#:	EV23080112
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Garrett Leque		
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00		

LABORATORY BLANK RESULTS
MB-082523W - Batch 199555 - Water by E200.8 Prepared 08/25/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS			ANALYSIS DATE	ANALYSIS BY
						MDL	PQL			
Arsenic	E200.8	ND	U	UG/L	1.0	0.050	0.15		08/28/23	RAL
Cadmium	E200.8	ND	U	UG/L	1.0	0.040	0.12		08/28/23	RAL
Lead	E200.8	ND	U	UG/L	1.0	0.036	0.11		08/28/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-082523W - Batch 199556 - Water by E200.8 Prepared 08/25/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS			ANALYSIS DATE	ANALYSIS BY
						MDL	PQL			
Arsenic (Dissolved)	E200.8	ND	U	UG/L	1.0	0.050	0.15		08/28/23	RAL
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1.0	0.040	0.12		08/28/23	RAL
Lead (Dissolved)	E200.8	ND	U	UG/L	1.0	0.036	0.11		08/28/23	RAL

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT: Geoengineers, Inc.
600 DuPont St.
Bellingham, WA 98225

DATE: 8/31/2023
ALS SDG#: EV23080112
WDOE ACCREDITATION: C601

CLIENT CONTACT: Garrett Leque
CLIENT PROJECT: Everett Smelter Plume Groundwater /
0504-197-00

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 199555 - Water by E200.8 Prepared 08/25/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Arsenic - BS	E200.8	96.6			125	121	89.1	110		08/28/23	RAL
Arsenic - BSD	E200.8	96.3	0		125	120	89.1	110	10	08/28/23	RAL
Cadmium - BS	E200.8	101			125	126	89.4	110		08/28/23	RAL
Cadmium - BSD	E200.8	101	0		125	126	89.4	110	10	08/28/23	RAL
Lead - BS	E200.8	93.3			125	117	87.5	107		08/28/23	RAL
Lead - BSD	E200.8	94.1	1		125	118	87.5	107	10	08/28/23	RAL

ALS Test Batch ID: 199556 - Water by E200.8 Prepared 08/25/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Arsenic (Dissolved) - BS	E200.8	96.6			125	121	89.1	110		08/28/23	RAL
Arsenic (Dissolved) - BSD	E200.8	96.3	0		125	120	89.1	110	10	08/28/23	RAL
Cadmium (Dissolved) - BS	E200.8	101			125	126	89.4	110		08/28/23	RAL
Cadmium (Dissolved) - BSD	E200.8	101	0		125	126	89.4	110	2.7	08/28/23	RAL
Lead (Dissolved) - BS	E200.8	93.3			125	117	87.5	107		08/28/23	RAL
Lead (Dissolved) - BSD	E200.8	94.1	1		125	118	87.5	107	2.43	08/28/23	RAL

APPROVED BY

Rob Greer
Laboratory Director



ALS Environmental

Laboratory location:

Chain of Custody Form

Page 1 of 1

EV23080112

Customer Information				ALS Project Manager:				Work Order #:											
Project Information				Parameter/Method Request for Analysis															
Purchase Order --	Project Name	Project Number	Bill To Company	Invoice Attn.	Address	City/State/Zip --	Phone --	Fax --	A	B	C	D	E	F	G	H	I	J	Hold
Work Order --	Everett Smelter Plume Groundwater	0504-197-00	GeoEngineers	Garrett Leque	Email garrett				X										
Company Name	GeoEngineers								X										
Send Report To	Garrett Leque																		
Address	554 West Bakerview Road																		
City/State/Zip	Bellingham WA 98226																		
Phone	253.312.7958																		
Fax --																			
e-Mail Address	gleque@geoengineers.com																		
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold		
1	LLMW - 42S - 20230821	8/21/23	1130	W	HNO ₃	2	X												
2	LLMW - 08D - 20230821	8/21/23	1515	W	HNO ₃	2	X												
3	LLMW - 39S - 20230822	8/22/23	0810	W	HNO ₃	2	X												
4	LLMW - 46S - 20230822	8/22/23	1600	W	HNO ₃	2	X												
5	LLMW - 10D - 20230823	8/23/23	0840	W	HNO ₃	2	X												
6	LLMW - 12D - 20230823	8/23/23	1225	W	HNO ₃	2	X												
7	LLMW - 38S - 20230823	8/23/23	0905	W	HNO ₃	2	X												
8	LLMW - 03D - 20230824	8/24/23	1315	W	HNO ₃	2	X												
9	LLMW - 21D - 20230823	8/23/23	1445	W	HNO ₃	2	X												
10	LLMW - 01D - 20230824	8/24/23	1115	W	HNO ₃	2	X												
Sampler(s): Please Print & Sign				Shipment Method:				Required Turnaround Time:				Results Due Date:							
NATHAN SOLOMON				STD 10 Wk Days				5 Wk Days				2 Wk Days				Other			
Relinquished by:				Received by:				Notes:				QC Package: (Check Box Below)							
Relinquished by:				Received by (Laboratory):				Cooler Temp.				Level II: Standard QC							
Level III: Std QC + Raw Data				Level IV: SW846 CLP-Like				Other:				TRRP-Checklist							
Logged by (Laboratory):				Checked by (Laboratory):				Preservative Key:				1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035							
Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.				Copyright 2008 by ALS Laboratory Group.															

Sample Receiving Checklist

Outcome of call: _____



September 20, 2023

Mr. Garrett Leque
Geoengineers, Inc.
600 DuPont St.
Bellingham, WA 98225

Dear Mr. Leque ,

On September 1st, 27 samples were received by our laboratory and assigned our laboratory project number EV23090003. The project was identified as your Everett Smelter Plume Groundwater / 0504-197-00. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
		ALS JOB#:	EV23090003
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23090003-01
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/28/2023 10:50:00 AM
CLIENT SAMPLE ID	LLMW-36D_20230828	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	0.26		UG/L	1	0.20	0.036	09/05/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/05/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-02
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/28/2023 1:55:00 PM
CLIENT SAMPLE ID	LLMW-19D_20230828	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/05/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/05/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-03
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/29/2023 4:00:00 PM
CLIENT SAMPLE ID	LLMW-31D_20230829	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	0.094	J	UG/L	1	0.20	0.036	09/05/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/05/23	RAL

J - Analyte was positively identified. Reported result is an estimate below the associated reporting limit but above the MDL.

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
		ALS JOB#:	EV23090003
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23090003-04
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 10:00:00 AM
CLIENT SAMPLE ID	BP-08S_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/05/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/05/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-05
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 10:20:00 AM
CLIENT SAMPLE ID	BP-09D_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/05/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/05/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-06
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 11:00:00 AM
CLIENT SAMPLE ID	BP-08D_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/05/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/05/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-07
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 11:10:00 AM
CLIENT SAMPLE ID	BP-09S_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	0.080	J	UG/L	1	0.20	0.036	09/05/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/05/23	RAL

J - Analyte was positively identified. Reported result is an estimate below the associated reporting limit but above the MDL.

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-08
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 11:40:00 AM
CLIENT SAMPLE ID	BP-06S_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/05/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/05/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-09
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 12:30:00 PM
CLIENT SAMPLE ID	BP-06D_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/05/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/05/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-10
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 12:30:00 PM
CLIENT SAMPLE ID	BP-07S_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/05/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/05/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-11
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 1:30:00 PM
CLIENT SAMPLE ID	BP-07D1_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/06/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/06/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-12
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 2:20:00 PM
CLIENT SAMPLE ID	BP-04D_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/06/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/06/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-13
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 2:50:00 PM
CLIENT SAMPLE ID	BP-04S_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/06/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/06/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
		ALS JOB#:	EV23090003
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23090003-14
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 2:55:00 PM
CLIENT SAMPLE ID	BP-07D2_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/06/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/06/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-15
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 3:35:00 PM
CLIENT SAMPLE ID	BP-05S_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/06/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/06/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-16
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 4:25:00 PM
CLIENT SAMPLE ID	BP-04D2_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/06/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/06/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
		ALS JOB#:	EV23090003
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23090003-17
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/31/2023 10:15:00 AM
CLIENT SAMPLE ID	BP-05D2_20230831	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/06/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/06/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-18
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/31/2023 11:10:00 AM
CLIENT SAMPLE ID	BP-05D_20230831	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/06/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/06/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
		ALS JOB#:	EV23090003
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23090003-19
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/31/2023 12:40:00 PM
CLIENT SAMPLE ID	BP-03D_20230831	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/06/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/06/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-20
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/31/2023 1:20:00 PM
CLIENT SAMPLE ID	BP-03S_20230831	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/06/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/06/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-21
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/31/2023 2:35:00 PM
CLIENT SAMPLE ID	BP-01D_20230831	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/07/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/07/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-22
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/31/2023 3:35:00 PM
CLIENT SAMPLE ID	BP-01S_20230831	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/07/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/07/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-23
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/31/2023 5:20:00 PM
CLIENT SAMPLE ID	BP-02D_20230831	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/07/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/07/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-24
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/31/2023 6:10:00 PM
CLIENT SAMPLE ID	BP-02S_20230831	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/07/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/07/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-25
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	9/1/2023 10:05:00 AM
CLIENT SAMPLE ID	LLMW-27D_20230901	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/07/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/07/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-26
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 12:00:00 PM
CLIENT SAMPLE ID	DUP-1	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/07/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/07/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-27
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 12:05:00 PM
CLIENT SAMPLE ID	DUP-2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/07/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/07/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.



CERTIFICATE OF ANALYSIS

CLIENT: Geoengineers, Inc.
600 DuPont St.
Bellingham, WA 98225

DATE: 9/20/2023
ALS SDG#: EV23090003
WDOE ACCREDITATION: C601

CLIENT CONTACT: Garrett Leque
CLIENT PROJECT: Everett Smelter Plume Groundwater /
0504-197-00

LABORATORY BLANK RESULTS

MBLK-R445924 - Batch R445924 - Water by SW7470 Prepared 09/07/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Mercury	SW7470	ND	UT	UG/L	0.20	0.018		0.054	09/07/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

MBLK-R446172 - Batch R446172 - Water by SW7470 Prepared 09/05/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Mercury	SW7470	ND	UT	UG/L	0.20	0.018		0.054	09/05/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

MBLK-R446174 - Batch R446174 - Water by SW7470 Prepared 09/06/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Mercury	SW7470	ND	UT	UG/L	0.20	0.018		0.054	09/06/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

MBLK-R445927 - Batch R445927 - Water by SW7470 Prepared 09/07/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Mercury (Dissolved)	SW7470	ND	UT	UG/L	0.20	0.018		0.054	09/07/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

MBLK-R446173 - Batch R446173 - Water by SW7470 Prepared 09/05/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Mercury (Dissolved)	SW7470	ND	UT	UG/L	0.20	0.018		0.054	09/05/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

MBLK-R446175 - Batch R446175 - Water by SW7470 Prepared 09/06/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Mercury (Dissolved)	SW7470	ND	UT	UG/L	0.20	0.018		0.054	09/06/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT: Geoengineers, Inc.
 600 DuPont St.
 Bellingham, WA 98225
CLIENT CONTACT: Garrett Leque
CLIENT PROJECT: Everett Smelter Plume Groundwater /
 0504-197-00

DATE: 9/20/2023
ALS SDG#: EV23090003
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS
ALS Test Batch ID: R445924 - Water by SW7470 Prepared 09/07/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury - BS	SW7470	105			100	105	80.6	118		09/07/23	RAL
Mercury - BSD	SW7470	105	0		100	105	80.6	118	7.94	09/07/23	RAL

ALS Test Batch ID: R446172 - Water by SW7470 Prepared 09/05/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury - BS	SW7470	100			100	100	80.6	118		09/05/23	RAL
Mercury - BSD	SW7470	100	0		100	100	80.6	118	7.94	09/05/23	RAL

ALS Test Batch ID: R446174 - Water by SW7470 Prepared 09/06/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury - BS	SW7470	108			100	108	80.6	118		09/06/23	RAL
Mercury - BSD	SW7470	109	1		100	109	80.6	118	7.94	09/06/23	RAL

ALS Test Batch ID: R445927 - Water by SW7470 Prepared 09/07/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury (Dissolved) - BS	SW7470	105			100	105	80.6	118		09/07/23	RAL
Mercury (Dissolved) - BSD	SW7470	105	0		100	105	80.6	118	7.94	09/07/23	RAL

ALS Test Batch ID: R446173 - Water by SW7470 Prepared 09/05/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury (Dissolved) - BS	SW7470	100			100	100	80.6	118		09/05/23	RAL
Mercury (Dissolved) - BSD	SW7470	100	0		100	100	80.6	118	7.94	09/05/23	RAL

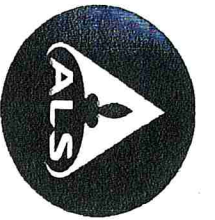
ALS Test Batch ID: R446175 - Water by SW7470 Prepared 09/06/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury (Dissolved) - BS	SW7470	108			100	108	80.6	118		09/06/23	RAL
Mercury (Dissolved) - BSD	SW7470	109	1		100	109	80.6	118	7.94	09/06/23	RAL

CERTIFICATE OF ANALYSIS

APPROVED BY

Rob Greer
Laboratory Director



ALS Environmental

Chain of Custody Form

Laboratory location:

Page 1 of 3

Customer Information				ALS Project Manager:				ALS Project Manager:				Work Order #:					
Project Information				Parameter/Method Request for Analysis													
Purchase Order	--	Project Name	Everett Smelter Plume Groundwater	A				Tot/Diss As, Cd, Pb, Hg (report Hg down to DL of 0.02 ppm; "J" flag)									
Work Order	--	Project Number	0504-197-00	C				Note: All samples for dissolved analysis were field-filtered									
Company Name	GeoEngineers	Bill To Company	GeoEngineers	D													
Send Report To	Garrett Leque	Invoice Attn.	Garrett Leque	E													
Address	554 West Bakerview Road	Address	Email garrett	F													
City/State/Zip	Bellingham WA 98226	City/State/Zip	--	G													
Phone	253.312.7958	Phone	--	H													
Fax	--	Fax	--	I													
e-Mail Address	gleque@geoengineers.com	e-Mail Address	gleque@geoengineers.com	J													
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	LLMW-36D-20230828	8/28/23	1050	W	HNO ₃	2	X										
2	LLMW-19D-20230828	8/28/23	1355	W	HNO ₃	2	X										
3	LLMW-31D-20230829	8/29/23	1600	W	HNO ₃	2	X										
4	BP-08S-20230830	8/30/23	1000	W	HNO ₃	2	X										
5	BP-09D-20230830	8/30/23	1020	W	HNO ₃	2	X										
6	BP-08D-20230830	8/30/23	1100	W	HNO ₃	2	X										
7	BP-09S-20230830	8/30/23	1110	W	HNO ₃	2	X										
8	BP-06S-20230830	8/30/23	1140	W	HNO ₃	2	X										
9	BP-06D-20230830	8/30/23	1230	W	HNO ₃	2	X										
10	BP-07S-20230830	8/30/23	1230	W	HNO ₃	2	X										
Sampler(s): Please Print & Sign				Shipment Method:				Required Turnaround Time:				Results Due Date:					
Nathan Saxson				STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ Other ☐ 24 Hour ☐													
Relinquished by: <i>[Signature]</i>				Received by: <i>[Signature]</i>				Notes:									
Date: 9/1/2023				Time: 1333				Received by (Laboratory):				9/1/23 1333					
Relinquished by:				Time:				Received by (Laboratory):									
Logged by (Laboratory):				Date:				Time:				Checked by (Laboratory):					
Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035				Cooler Temp.				OC Package: (Check Box Below)				Level II: Standard OC ☒ Level III: Std OC + Raw Data ☐ Level IV: SW846 CLP-Like ☐ Other: ☐					
												TRRP Checklist					
												TRRP Level IV					

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.



ALS Environmental

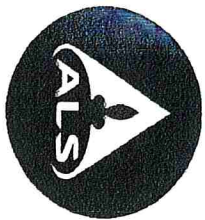
Laboratory location:

Chain of Custody Form

Page 2 of 3

Customer Information				ALS Project Manager:				Work Order #									
Project Information				Parameter/Method Request for Analysis													
Purchase Order	--	Project Name	Everett Smelter Plume Groundwater	Tot/Diss As, Cd, Pb, Hg (report Hg down to DL of 0.02 ppm; "J" flag) Note: All samples for dissolved analysis were field-filtered													
Work Order	--	Project Number	0504-197-00														
Company Name	GeoEngineers	Bill To Company	GeoEngineers	A													
Send Report To	Garrett Leque	Invoice Attn.	Garrett Leque	C													
Address	554 West Bakerview Road	Address	Email garrett	D													
City/State/Zip	Bellingham WA 98226	City/State/Zip	--	E													
Phone	253.312.7958	Phone	--	F													
Fax	--	Fax	--	G													
e-Mail Address gleague@geoengineers.com				H													
e-Mail Address gleague@geoengineers.com				I													
e-Mail Address gleague@geoengineers.com				J													
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	BP-07D1-20230830	8/30/23	1330	W	HNO ₃	2	X										
2	BP-04D-20230830	8/30/23	1420	W	HNO ₃	2	X										
3	BP-04S-20230830	8/30/23	1450	W	HNO ₃	2	X										
4	BP-07D2-20230830	8/30/23	1455	W	HNO ₃	2	X										
5	BP-05S-20230830	8/30/23	1535	W	HNO ₃	2	X										
6	BP-04D2-20230830	8/30/23	1625	W	HNO ₃	2	X										
7	BP-05D2-20230831	8/31/23	1015	W	HNO ₃	2	X										
8	BP-05D-20230831	8/31/23	1110	W	HNO ₃	2	X										
9	BP-03D-20230831	8/31/23	1240	W	HNO ₃	2	X										
10	BP-03S-20230831	8/31/23	1320	W	HNO ₃	2	X										
Sampler(s): Please Print & Sign				Shipment Method:				Required Turnaround Time:				Results Due Date:					
								☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour									
Relinquished by:				Date: 9/1 Time: 1333				Received by:				Notes:					
Refiniquished by:				Date: 9/1 Time: 1333				Received by (Laboratory):				Cooler Temp.					
Logged by (Laboratory):				Date: Time:				Checked by (Laboratory):				QC Package: (Check Box Below)					
Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035												☒ Level II: Standard QC ☐ Level III: Std QC + Raw Data ☐ Level IV: SW846 CLP-Like ☐ Other:					
												TRRP-Checklist ☐ TRRP Level IV ☐					

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.



ALS Environmental

Laboratory location:

Chain of Custody Form

Page 3 of 3

Customer Information				ALS Project Manager:				Work Order #:									
Project Information				Parameter/Method Request for Analysis													
Purchase Order	--	Project Name	Everett Smelter Plume Groundwater	A Tot/Diss As, Cd, Pb, Hg (report Hg down to DL of 0.02 ppm; "J" flag) Note: All samples for dissolved analysis were field-filtered													
Work Order	--	Project Number	0504-197-00														
Company Name	GeoEngineers	Bill To Company	GeoEngineers	C													
Send Report To	Garrett Leque	Invoice Attn.	Garrett Leque	D													
Address	554 West Bakerview Road	Address	Email garrett	E													
City/State/Zip	Bellingham WA 98226	City/State/Zip	--	F													
Phone	253.312.7958	Phone	--	G													
Fax	--	Fax	--	H													
e-Mail Address	gleague@geoengineers.com	e-Mail Address	gleague@geoengineers.com	I													
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	BP-01D-20230831	8/31/23	1435	W	HNO ₃	2	X										
2	BP-01B-20230831	8/31/23	1535	W	HNO ₃	2	X										
3	BP-02D-20230831	8/31/23	1720	W	HNO ₃	2	X										
4	BP-02S-20230831	8/31/23	1810	W	HNO ₃	2	X										
5	LLMW-27D-20230901	9/1/23	1005	W	HNO ₃	2	X										
6	DUP-1	8/30/23	1200	W	HNO ₃	2	X										
7	DUP-2	8/30/23	1205	W	HNO ₃	2	X										
8		8/1/23		W	HNO ₃	2	X										
9		8/1/23		W	HNO ₃	2	X										
10		8/1/23		W	HNO ₃	2	X										
Sampler(s): Please Print & Sign				Shipment Method:				Required Turnaround Time:				Results Due Date:					
								☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour									
Relinquished by:				Received by:				Notes:									
Date: 9/1/23 Time: 1333																	
Relinquished by:				Received by (Laboratory):				Cooler Temp.				QC Package: (Check Box Below)					
Date:				Time:				X				Level II: Standard QC					
Logged by (Laboratory):				Checked by (Laboratory):								Level III: Std QC + Raw Data					
Date:				Time:								Level IV: SW846 CLP-Like					
Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035												Other:					

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.

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Sample Receiving Checklist

ALS Job #: EV23090003

Received Date: 9/1/23 Received Time: 13:33 By: RA

Shipped via: FedEx Ground _____ UPS _____ Mail _____ Courier _____ Hand Delivered ☒
 FedEx Express _____ *on file*

<u>Yes</u>	<u>No</u>	<u>N/A</u>
	X	

Did all bottles have labels? x

Did all bottle labels and tags agree with Chain of Custody? ☒

Were samples received within hold time? ☒

Did all bottles arrive in good condition (unbroken, etc.)? 8

Was sufficient amount of sample sent for the tests indicated? x

Was correct preservation added to samples? ☒

If no, Sample Control added preservative to the following:

<u>Sample Number</u>	<u>Reagent</u>	<u>Analyte</u>
_____	_____	_____
_____	_____	_____

Were VOA vials checked for absence of air bubbles? _____ X
 Bubbles present in sample #: _____

Temperature of cooler upon receipt: 21.2°C, 21.3°C Cold Cool Ambient N/A
REC

Explain any discrepancies: one on ICE
one bar on top of Cooley

Was client contacted? _____ Who was called? _____ By whom? _____ Date: _____

Outcome of call:



September 21, 2023

Mr. Garrett Leque
Geoengineers, Inc.
600 DuPont St.
Bellingham, WA 98225

Dear Mr. Leque ,

On September 1st, 27 samples were received by our laboratory and assigned our laboratory project number EV23090003. The project was identified as your Everett Smelter Plume Groundwater / 0504-197-00. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director



CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-01
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/28/2023 10:50:00 AM
CLIENT SAMPLE ID	LLMW-36D_20230828	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	1100		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead	E200.8	110		UG/L	1	1.0	0.090	09/06/23	EBS
Arsenic (Dissolved)	E200.8	570		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead (Dissolved)	E200.8	5.9		UG/L	1	1.0	0.090	09/06/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-02
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/28/2023 1:55:00 PM
CLIENT SAMPLE ID	LLMW-19D_20230828	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	ND	U	UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS
Arsenic (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-03
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/29/2023 4:00:00 PM
CLIENT SAMPLE ID	LLMW-31D_20230829	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	360		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead	E200.8	19		UG/L	1	1.0	0.090	09/06/23	EBS
Arsenic (Dissolved)	E200.8	6.3		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-04
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 10:00:00 AM
CLIENT SAMPLE ID	BP-08S_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	97		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium	E200.8	1.1		UG/L	1	1.0	0.12	09/06/23	EBS
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS
Arsenic (Dissolved)	E200.8	90		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-05
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 10:20:00 AM
CLIENT SAMPLE ID	BP-09D_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	15		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS
Arsenic (Dissolved)	E200.8	14		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-06
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 11:00:00 AM
CLIENT SAMPLE ID	BP-08D_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	ND	U	UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS
Arsenic (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-07
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 11:10:00 AM
CLIENT SAMPLE ID	BP-09S_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	460		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead	E200.8	2.1		UG/L	1	1.0	0.090	09/06/23	EBS
Arsenic (Dissolved)	E200.8	440		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead (Dissolved)	E200.8	2.0		UG/L	1	1.0	0.090	09/06/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-08
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 11:40:00 AM
CLIENT SAMPLE ID	BP-06S_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	88		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium	E200.8	1.1		UG/L	1	1.0	0.12	09/06/23	EBS
Lead	E200.8	1.8		UG/L	1	1.0	0.090	09/06/23	EBS
Arsenic (Dissolved)	E200.8	81		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
		ALS JOB#:	EV23090003
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23090003-09
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 12:30:00 PM
CLIENT SAMPLE ID	BP-06D_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	3000		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS
Arsenic (Dissolved)	E200.8	3000		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
		ALS JOB#:	EV23090003
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23090003-10
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 12:30:00 PM
CLIENT SAMPLE ID	BP-07S_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	650		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium	E200.8	1.1		UG/L	1	1.0	0.12	09/06/23	EBS
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS
Arsenic (Dissolved)	E200.8	630		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
		ALS JOB#:	EV23090003
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23090003-11
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 1:30:00 PM
CLIENT SAMPLE ID	BP-07D1_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	2500		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS
Arsenic (Dissolved)	E200.8	2500		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-12
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 2:20:00 PM
CLIENT SAMPLE ID	BP-04D_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	2700		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium	E200.8	1.4		UG/L	1	1.0	0.12	09/06/23	EBS
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS
Arsenic (Dissolved)	E200.8	2200		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-13
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 2:50:00 PM
CLIENT SAMPLE ID	BP-04S_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	31		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS
Arsenic (Dissolved)	E200.8	32		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-14
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 2:55:00 PM
CLIENT SAMPLE ID	BP-07D2_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	42		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium	E200.8	1.8		UG/L	1	1.0	0.12	09/06/23	EBS
Lead	E200.8	26		UG/L	1	1.0	0.090	09/06/23	EBS
Arsenic (Dissolved)	E200.8	39		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium (Dissolved)	E200.8	1.1		UG/L	1	1.0	0.12	09/06/23	EBS
Lead (Dissolved)	E200.8	22		UG/L	1	1.0	0.090	09/06/23	EBS

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-15
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 3:35:00 PM
CLIENT SAMPLE ID	BP-05S_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	62		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead	E200.8	2.2		UG/L	1	1.0	0.090	09/06/23	EBS
Arsenic (Dissolved)	E200.8	55		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead (Dissolved)	E200.8	1.1		UG/L	1	1.0	0.090	09/06/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-16
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 4:25:00 PM
CLIENT SAMPLE ID	BP-04D2_20230830	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	ND	U	UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS
Arsenic (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-17
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/31/2023 10:15:00 AM
CLIENT SAMPLE ID	BP-05D2_20230831	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	2.0		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS
Arsenic (Dissolved)	E200.8	1.9		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
		ALS JOB#:	EV23090003
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23090003-18
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/31/2023 11:10:00 AM
CLIENT SAMPLE ID	BP-05D_20230831	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	11000		UG/L	5	5.0	0.75	09/06/23	EBS
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS
Arsenic (Dissolved)	E200.8	11000		UG/L	5	5.0	0.75	09/06/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
		ALS JOB#:	EV23090003
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23090003-19
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/31/2023 12:40:00 PM
CLIENT SAMPLE ID	BP-03D_20230831	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	1.1		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium	E200.8	1.2		UG/L	1	1.0	0.12	09/06/23	EBS
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS
Arsenic (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-20
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/31/2023 1:20:00 PM
CLIENT SAMPLE ID	BP-03S_20230831	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	64		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	09/06/23	EBS
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	09/06/23	EBS
Arsenic (Dissolved)	E200.8	67		UG/L	1	1.0	0.15	09/06/23	EBS
Cadmium (Dissolved)	E200.8	1.0		UG/L	1	1.0	0.12	09/06/23	EBS
Lead (Dissolved)	E200.8	1.1		UG/L	1	1.0	0.090	09/06/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-21
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/31/2023 2:35:00 PM
CLIENT SAMPLE ID	BP-01D_20230831	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	1.3		UG/L	1	1.0	0.15	09/08/23	EBS
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	09/08/23	EBS
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	09/08/23	EBS
Arsenic (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.15	09/08/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/08/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/08/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-22
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/31/2023 3:35:00 PM
CLIENT SAMPLE ID	BP-01S_20230831	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	130		UG/L	1	1.0	0.15	09/08/23	EBS
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	09/08/23	EBS
Lead	E200.8	25		UG/L	1	1.0	0.090	09/08/23	EBS
Arsenic (Dissolved)	E200.8	110		UG/L	1	1.0	0.15	09/08/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/08/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/08/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-23
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/31/2023 5:20:00 PM
CLIENT SAMPLE ID	BP-02D_20230831	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	ND	U	UG/L	1	1.0	0.15	09/08/23	EBS
Cadmium	E200.8	1.3		UG/L	1	1.0	0.12	09/08/23	EBS
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	09/08/23	EBS
Arsenic (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.15	09/08/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/08/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/08/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090003
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090003-24
		DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/31/2023 6:10:00 PM
CLIENT SAMPLE ID	BP-02S_20230831	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	170		UG/L	1	1.0	0.15	09/08/23	EBS
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	09/08/23	EBS
Lead	E200.8	5.7		UG/L	1	1.0	0.090	09/08/23	EBS
Arsenic (Dissolved)	E200.8	150		UG/L	1	1.0	0.15	09/08/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/08/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/08/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
		ALS JOB#:	EV23090003
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23090003-25
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	09/01/23
		COLLECTION DATE:	9/1/2023 10:05:00 AM
CLIENT SAMPLE ID	LLMW-27D_20230901	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	5600		UG/L	1	1.0	0.15	09/08/23	EBS
Cadmium	E200.8	19		UG/L	1	1.0	0.12	09/08/23	EBS
Lead	E200.8	4.0		UG/L	1	1.0	0.090	09/08/23	EBS
Arsenic (Dissolved)	E200.8	5200		UG/L	1	1.0	0.15	09/08/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/08/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/08/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
		ALS JOB#:	EV23090003
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23090003-26
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 12:00:00 PM
CLIENT SAMPLE ID	DUP-1	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	97		UG/L	1	1.0	0.15	09/08/23	EBS
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	09/08/23	EBS
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	09/08/23	EBS
Arsenic (Dissolved)	E200.8	94		UG/L	1	1.0	0.15	09/08/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/08/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/08/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
		ALS JOB#:	EV23090003
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23090003-27
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	09/01/23
		COLLECTION DATE:	8/30/2023 12:05:00 PM
CLIENT SAMPLE ID	DUP-2	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	3100		UG/L	1	1.0	0.15	09/08/23	EBS
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	09/08/23	EBS
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	09/08/23	EBS
Arsenic (Dissolved)	E200.8	3200		UG/L	1	1.0	0.15	09/08/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/08/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/08/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT: Geoengineers, Inc.
600 DuPont St.
Bellingham, WA 98225

DATE: 9/21/2023
ALS SDG#: EV23090003
WDOE ACCREDITATION: C601

CLIENT CONTACT: Garrett Leque
CLIENT PROJECT: Everett Smelter Plume Groundwater /
0504-197-00

LABORATORY BLANK RESULTS

MB-090523W - Batch 199909 - Water by E200.8 Prepared 09/05/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Arsenic	E200.8	ND	U	UG/L	1.0	0.050		0.15	09/06/23	EBS
Cadmium	E200.8	ND	U	UG/L	1.0	0.040		0.12	09/06/23	EBS
Lead	E200.8	ND	U	UG/L	1.0	0.036		0.11	09/06/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-090523W2 - Batch 199940 - Water by E200.8 Prepared 09/05/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Arsenic	E200.8	ND	U	UG/L	1.0	0.050		0.15	09/06/23	EBS
Cadmium	E200.8	ND	U	UG/L	1.0	0.040		0.12	09/06/23	EBS
Lead	E200.8	ND	U	UG/L	1.0	0.036		0.11	09/06/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-090823W - Batch 200148 - Water by E200.8 Prepared 09/08/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Arsenic	E200.8	ND	U	UG/L	1.0	0.050		0.15	09/08/23	EBS
Cadmium	E200.8	ND	U	UG/L	1.0	0.040		0.12	09/08/23	EBS
Lead	E200.8	ND	U	UG/L	1.0	0.036		0.11	09/08/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-090523W - Batch 199909 - Water by E200.8 Prepared 09/05/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Arsenic (Dissolved)	E200.8	ND	U	UG/L	1.0	0.050		0.15	09/06/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1.0	0.040		0.12	09/06/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1.0	0.036		0.11	09/06/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-090523W2 - Batch 199941 - Water by E200.8 Prepared 09/05/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		PQL	ANALYSIS DATE	ANALYSIS BY
						MDL				
Arsenic (Dissolved)	E200.8	ND	U	UG/L	1.0	0.050		0.15	09/06/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1.0	0.040		0.12	09/06/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1.0	0.036		0.11	09/06/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/21/2023
		ALS SDG#:	EV23090003
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Garrett Leque		
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00		

LABORATORY BLANK RESULTS
MB-090823W - Batch 200149 - Water by E200.8 Prepared 09/08/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS			ANALYSIS DATE	ANALYSIS BY
						MDL	PQL			
Arsenic (Dissolved)	E200.8	ND	U	UG/L	1.0	0.050	0.15		09/08/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1.0	0.040	0.12		09/08/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1.0	0.036	0.11		09/08/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT: Geoengineers, Inc.
600 DuPont St.
Bellingham, WA 98225

DATE: 9/21/2023
ALS SDG#: EV23090003
WDOE ACCREDITATION: C601

CLIENT CONTACT: Garrett Leque
CLIENT PROJECT: Everett Smelter Plume Groundwater /
0504-197-00

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 199909 - Water by E200.8 Prepared 09/05/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Arsenic - BS	E200.8	96.9			125	121	89.1	110		09/06/23	EBS
Arsenic - BSD	E200.8	95.8	1		125	120	89.1	110	10	09/06/23	EBS
Cadmium - BS	E200.8	102			125	127	89.4	110		09/06/23	EBS
Cadmium - BSD	E200.8	101	1		125	126	89.4	110	10	09/06/23	EBS
Lead - BS	E200.8	88.2			125	110	87.5	107		09/06/23	EBS
Lead - BSD	E200.8	89.5	1		125	112	87.5	107	10	09/06/23	EBS

ALS Test Batch ID: 199940 - Water by E200.8 Prepared 09/05/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Arsenic - BS	E200.8	96.8			125	121	89.1	110		09/06/23	EBS
Arsenic - BSD	E200.8	96.6	0		125	121	89.1	110	10	09/06/23	EBS
Cadmium - BS	E200.8	103			125	129	89.4	110		09/06/23	EBS
Cadmium - BSD	E200.8	102	1		125	128	89.4	110	10	09/06/23	EBS
Lead - BS	E200.8	89.6			125	112	87.5	107		09/06/23	EBS
Lead - BSD	E200.8	89.0	1		125	111	87.5	107	10	09/06/23	EBS

ALS Test Batch ID: 200148 - Water by E200.8 Prepared 09/08/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Arsenic - BS	E200.8	98.7			125	123	89.1	110		09/08/23	EBS
Arsenic - BSD	E200.8	99.5	1		125	124	89.1	110	10	09/08/23	EBS
Cadmium - BS	E200.8	103			125	129	89.4	110		09/08/23	EBS
Cadmium - BSD	E200.8	104	1		125	129	89.4	110	10	09/08/23	EBS
Lead - BS	E200.8	92.8			125	116	87.5	107		09/08/23	EBS
Lead - BSD	E200.8	92.8	0		125	116	87.5	107	10	09/08/23	EBS

ALS Test Batch ID: 199909 - Water by E200.8 Prepared 09/05/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Arsenic (Dissolved) - BS	E200.8	96.9			125	121	89.1	110		09/06/23	EBS
Arsenic (Dissolved) - BSD	E200.8	95.8	1		125	120	89.1	110	10	09/06/23	EBS
Cadmium (Dissolved) - BS	E200.8	102			125	127	89.4	110		09/06/23	EBS
Cadmium (Dissolved) - BSD	E200.8	101	1		125	126	89.4	110	2.7	09/06/23	EBS
Lead (Dissolved) - BS	E200.8	88.2			125	110	87.5	107		09/06/23	EBS
Lead (Dissolved) - BSD	E200.8	89.5	1		125	112	87.5	107	2.43	09/06/23	EBS

CERTIFICATE OF ANALYSIS

CLIENT: Geoengineers, Inc.
 600 DuPont St.
 Bellingham, WA 98225
CLIENT CONTACT: Garrett Leque
CLIENT PROJECT: Everett Smelter Plume Groundwater /
 0504-197-00

DATE: 9/21/2023
ALS SDG#: EV23090003
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS
ALS Test Batch ID: 199941 - Water by E200.8 Prepared 09/05/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Arsenic (Dissolved) - BS	E200.8	96.8			125	121	89.1	110		09/06/23	EBS
Arsenic (Dissolved) - BSD	E200.8	96.6	0		125	121	89.1	110	10	09/06/23	EBS
Cadmium (Dissolved) - BS	E200.8	103			125	129	89.4	110		09/06/23	EBS
Cadmium (Dissolved) - BSD	E200.8	102	1		125	128	89.4	110	2.7	09/06/23	EBS
Lead (Dissolved) - BS	E200.8	89.6			125	112	87.5	107		09/06/23	EBS
Lead (Dissolved) - BSD	E200.8	89.0	1		125	111	87.5	107	2.43	09/06/23	EBS

ALS Test Batch ID: 200149 - Water by E200.8 Prepared 09/08/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Arsenic (Dissolved) - BS	E200.8	98.7			125	123	89.1	110		09/08/23	EBS
Arsenic (Dissolved) - BSD	E200.8	99.5	1		125	124	89.1	110	10	09/08/23	EBS
Cadmium (Dissolved) - BS	E200.8	103			125	129	89.4	110		09/08/23	EBS
Cadmium (Dissolved) - BSD	E200.8	104	1		125	129	89.4	110	2.7	09/08/23	EBS
Lead (Dissolved) - BS	E200.8	92.8			125	116	87.5	107		09/08/23	EBS
Lead (Dissolved) - BSD	E200.8	92.8	0		125	116	87.5	107	2.43	09/08/23	EBS

APPROVED BY



Rob Greer
 Laboratory Director



ALS Environmental

Chain of Custody Form

Page 2 of 3

Laboratory location:

ALS Project Manager:

Work Order #:

Customer Information

Project Information

Parameter/Method Request for Analysis

Purchase Order

--

Project Name

Everett Smelter Plume Groundwater

Tot/Diss As, Cd, Pb, Hg (report Hg down to DL of 0.02 ppm; "J" flag)

Work Order

--

Project Number

0504-197-00

Note: All samples for dissolved analysis were field-filtered

Company Name

GeoEngineers

Bill To Company

GeoEngineers

Send Report To

Garrett Leque

Invoice Attn.

Garrett Leque

Address

554 West Bakerview Road

Address

Email garrett

City/State/Zip

Bellingham WA 98226

City/State/Zip

--

Phone

253.312.7958

Phone

--

Fax

--

Fax

--

e-Mail Address

gleague@geoengineers.com

e-Mail Address

gleague@geoengineers.com

No.

Sample Description

Date

Time

Matrix

Pres.

Bottles

A

B

C

D

E

F

G

H

I

J

Hold

1

BP-07D1-20230830

8/30/23

1330

W

HNO₃

2

X

2

BP-04D-20230830

8/30/23

1420

W

HNO₃

2

X

3

BP-04S-20230830

8/30/23

1450

W

HNO₃

2

X

4

BP-07D2-20230830

8/30/23

1455

W

HNO₃

2

X

5

BP-05S-20230830

8/30/23

1535

W

HNO₃

2

X

6

BP-04D2-20230830

8/30/23

1625

W

HNO₃

2

X

7

BP-05D2-20230831

8/31/23

1015

W

HNO₃

2

X

8

BP-05D-20230831

8/31/23

1110

W

HNO₃

2

X

9

BP-03D-20230831

8/31/23

1240

W

HNO₃

2

X

10

BP-03S-20230831

8/31/23

1320

W

HNO₃

2

X

Sampler(s): Please Print & Sign

Shipment Method:

Required Turnaround Time:

Other: 24 Hour

Results Due Date:

Relinquished by:

Date:

Time:

Received by:

Notes:

Relinquished by:

Date:

Time:

Received by (Laboratory):

Notes:

Logged by (Laboratory):

Date:

Time:

Checked by (Laboratory):

Notes:

Preservative Key: 1-HCl 2-HNO₃ 3-H₂SO₄ 4-NaOH 5-Na₂SO₃ 6-NaHSO₄ 7-Other 8-4 degrees C 9-5035

QC Package: (Check Box Below)

X

Level II: Standard QC

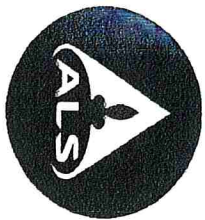
Level III: Std QC + Raw Data

Level IV: SW846 CLP-Like

Other:

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.

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ALS Environmental

Laboratory location:

Chain of Custody Form

Page 3 of 3

Customer Information				ALS Project Manager:				Work Order #:									
Project Information				Parameter/Method Request for Analysis													
Purchase Order	--	Project Name	Everett Smelter Plume Groundwater	A To/Dis As, Cd, Pb, Hg (report Hg down to DL of 0.02 ppm; "J" flag) Note: All samples for dissolved analysis were field-filtered													
Work Order	--	Project Number	0504-197-00														
Company Name	GeoEngineers	Bill To Company	GeoEngineers	C													
Send Report To	Garrett Leque	Invoice Attn.	Garrett Leque	D													
Address	554 West Bakerview Road	Address	Email garrett	E													
City/State/Zip	Bellingham WA 98226	City/State/Zip	--	F													
Phone	253.312.7958	Phone	--	G													
Fax	--	Fax	--	H													
e-Mail Address	gleague@geoengineers.com	e-Mail Address	gleague@geoengineers.com	I													
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	BP-01D-20230831	8/31/23	1435	W	HNO ₃	2	X										
2	BP-01B-20230831	8/31/23	1535	W	HNO ₃	2	X										
3	BP-02D-20230831	8/31/23	1720	W	HNO ₃	2	X										
4	BP-02S-20230831	8/31/23	1810	W	HNO ₃	2	X										
5	LLMW-27D-20230901	9/1/23	1005	W	HNO ₃	2	X										
6	DUP-1	8/30/23	1200	W	HNO ₃	2	X										
7	DUP-2	8/30/23	1205	W	HNO ₃	2	X										
8		8/1/23		W	HNO ₃	2	X										
9		8/1/23		W	HNO ₃	2	X										
10		8/1/23		W	HNO ₃	2	X										
Sampler(s): Please Print & Sign				Shipment Method:				Required Turnaround Time:				Results Due Date:					
								☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ Other _____									
Relinquished by:				Received by:				Notes:									
Date: 9/1/23 Time: 1333																	
Relinquished by:				Received by (Laboratory):				Cooler Temp.				QC Package: (Check Box Below)					
Date:				Time:				X				Level II: Standard QC					
Logged by (Laboratory):				Checked by (Laboratory):								Level III: Std QC + Raw Data					
Date:				Time:								Level IV: SW846 CLP-Like					
Preservative Key: 1-HCL 2-HNO3 3-H2SO4 4-NaOH 5-Na2S2O3 6-NaHSO4 7-Other 8-4 degrees C 9-5035												Other:					

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.

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Sample Receiving Checklist

ALS Job #: EV23090003

Received Date: 9/1/23 Received Time: 13:33 By: RA

Shipped via: FedEx Ground _____ UPS _____ Mail _____ Courier _____ Hand Delivered ☒
 FedEx Express _____ *on file*

<u>Yes</u>	<u>No</u>	<u>N/A</u>
	X	

Did all bottles have labels? ✕

Did all bottle labels and tags agree with Chain of Custody? ☒

Were samples received within hold time? ☒

Did all bottles arrive in good condition (unbroken, etc.)? 8

Was sufficient amount of sample sent for the tests indicated? x

Was correct preservation added to samples? ☒

If no, Sample Control added preservative to the following:

<u>Sample Number</u>	<u>Reagent</u>	<u>Analyte</u>
_____	_____	_____
_____	_____	_____

Were VOA vials checked for absence of air bubbles? _____ X
 Bubbles present in sample #: _____

Temperature of cooler upon receipt: 21.2°C, 21.3°C Cold Cool Ambient N/A
REC

Explain any discrepancies: one on ICE
one Bag on top of Cooley

Was client contacted? _____ Who was called? _____ By whom? _____ Date: _____

Outcome of call:



September 20, 2023

Mr. Garrett Leque
Geoengineers, Inc.
600 DuPont St.
Bellingham, WA 98225

Dear Mr. Leque ,

On September 14th, 8 samples were received by our laboratory and assigned our laboratory project number EV23090077. The project was identified as your Everett Smelter Plume Groundwater / 0504-197-00. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
		ALS JOB#:	EV23090077
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23090077-01
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	09/14/23
		COLLECTION DATE:	9/8/2023 1:55:00 PM
CLIENT SAMPLE ID	LLMW-04D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/15/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/15/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090077
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090077-02
		DATE RECEIVED:	09/14/23
		COLLECTION DATE:	9/8/2023 2:50:00 PM
CLIENT SAMPLE ID	LLMW-04S	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/15/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/15/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090077
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090077-03
		DATE RECEIVED:	09/14/23
		COLLECTION DATE:	9/8/2023 5:10:00 PM
CLIENT SAMPLE ID	EV-22A	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/15/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/15/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090077
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090077-04
		DATE RECEIVED:	09/14/23
		COLLECTION DATE:	9/8/2023 4:25:00 PM
CLIENT SAMPLE ID	EV-22B	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/15/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/15/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090077
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090077-05
		DATE RECEIVED:	09/14/23
		COLLECTION DATE:	9/12/2023 1:05:00 PM
CLIENT SAMPLE ID	LLMW-34D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/15/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/15/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090077
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090077-06
		DATE RECEIVED:	09/14/23
		COLLECTION DATE:	9/12/2023 3:50:00 PM
CLIENT SAMPLE ID	LLMW-35D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/15/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/15/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
		ALS JOB#:	EV23090077
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23090077-07
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	09/14/23
		COLLECTION DATE:	9/14/2023 12:00:00 PM
CLIENT SAMPLE ID	LLMW-25D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/15/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/15/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090077
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090077-08
		DATE RECEIVED:	09/14/23
		COLLECTION DATE:	9/14/2023 1:25:00 PM
CLIENT SAMPLE ID	EV-20B	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Mercury	SW7470	ND	UT	UG/L	1	0.20	0.036	09/15/23	RAL
Mercury (Dissolved)	SW7470	ND	UT	UG/L	1	0.20	0.036	09/15/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.



CERTIFICATE OF ANALYSIS

CLIENT: Geoengineers, Inc.
600 DuPont St.
Bellingham, WA 98225

DATE: 9/20/2023
ALS SDG#: EV23090077
WDOE ACCREDITATION: C601

CLIENT CONTACT: Garrett Leque
CLIENT PROJECT: Everett Smelter Plume Groundwater /
0504-197-00

LABORATORY BLANK RESULTS

MBLK-R446668 - Batch R446668 - Water by SW7470 Prepared 09/15/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		ANALYSIS DATE	ANALYSIS BY
						MDL	PQL		
Mercury	SW7470	ND	UT	UG/L	0.20	0.018	0.054	09/15/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

MBLK-R446669 - Batch R446669 - Water by SW7470 Prepared 09/15/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS		ANALYSIS DATE	ANALYSIS BY
						MDL	PQL		
Mercury (Dissolved)	SW7470	ND	UT	UG/L	0.20	0.018	0.054	09/15/23	RAL

UT - Analyte analyzed for but not detected at level above the MDL.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS SDG#:	EV23090077
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	WDOE ACCREDITATION:	C601

LABORATORY CONTROL SAMPLE RESULTS
ALS Test Batch ID: R446668 - Water by SW7470 Prepared 09/15/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury - BS	SW7470	101			100	101	80.6	118		09/15/23	RAL
Mercury - BSD	SW7470	101	0		100	101	80.6	118	7.94	09/15/23	RAL

ALS Test Batch ID: R446669 - Water by SW7470 Prepared 09/15/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Mercury (Dissolved) - BS	SW7470	101			100	101	80.6	118		09/15/23	RAL
Mercury (Dissolved) - BSD	SW7470	101	0		100	101	80.6	118	7.94	09/15/23	RAL

APPROVED BY



Rob Greer
Laboratory Director



ALS Environmental

Laboratory location:

Chain of Custody Form

Page 1 of 1

EV23090077

Customer Information				ALS Project Manager:				Work Order #:											
Project Information				Parameter/Method Request for Analysis															
Purchase Order	Project Name	Project Number	Bill To Company	Invoice Attn.	Address	City/State/Zip	Phone	Fax	A	B	C	D	E	F	G	H	I	J	Hold
--	Everett Smelter Plume Groundwater	0504-197-00	GeoEngineers	Garrett Leque	Email garrett	--	--	--											
Work Order																			
Company Name	GeoEngineers																		
Send Report To	Garrett Leque																		
Address	554 West Bakerview Road																		
City/State/Zip	Bellingham WA 98226																		
Phone	253.312.7958																		
Fax	--																		
e-Mail Address	gleque@geoengineers.com																		
e-Mail Address	gleque@geoengineers.com																		
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold		
1	LLMW - 04D	8/8/23	1355	W	HNO ₃	2	X												
2	LLMW - 04S	8/8/23	1450	W	HNO ₃	2	X												
3	EV - 22A	8/8/23	1710	W	HNO ₃	2	X												
4	EV - 22B	8/8/23	1625	W	HNO ₃	2	X												
5	LLMW - 34D	8/12/23	1305	W	HNO ₃	2	X												
6	LLMW - 35D	8/12/23	1550	W	HNO ₃	2	X												
7	LLMW - 25D	8/14/23	1200	W	HNO ₃	2	X												
8	EV - 20B	8/14/23	1325	W	HNO ₃	2	X												
9		8/ /23		W	HNO ₃	2	X												
10		8/ /23		W	HNO ₃	2	X												
Sampler(s): Please Print & Sign		Shipment Method:		Required Turnaround Time:		Results Due Date:													
Akanksha Garg, Akanksha Garg		☑ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour		☐ Other															
Relinquished by:	Date:	Time:	Received by:	Notes:															
Relinquished by:	Date:	Time:	Received by (Laboratory):																
Logged by (Laboratory):	Date:	Time:	Checked by (Laboratory):																
Preservative Key: 1-HCL 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ SO ₃ 6-NaHSO ₄ 7-Other 8-4 degrees C 9-5035				Cooler Temp.		QC Package: (Check Box Below)													
				X		Level II: Standard QC													
						Level III: Std QC + Raw Data													
						Level IV: SW846 CLP-Like													
						Other:													

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.

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Sample Receiving Checklist

Outcome of call:



September 20, 2023

Mr. Garrett Leque
Geoengineers, Inc.
600 DuPont St.
Bellingham, WA 98225

Dear Mr. Leque ,

On September 14th, 8 samples were received by our laboratory and assigned our laboratory project number EV23090077. The project was identified as your Everett Smelter Plume Groundwater / 0504-197-00. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rob Greer
Laboratory Director



CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090077
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090077-01
		DATE RECEIVED:	09/14/23
		COLLECTION DATE:	9/8/2023 1:55:00 PM
CLIENT SAMPLE ID	LLMW-04D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	ND	U	UG/L	1	1.0	0.15	09/15/23	EBS
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	09/15/23	EBS
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	09/15/23	EBS
Arsenic (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.15	09/15/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/15/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/15/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090077
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090077-02
		DATE RECEIVED:	09/14/23
		COLLECTION DATE:	9/8/2023 2:50:00 PM
CLIENT SAMPLE ID	LLMW-04S	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	3.2		UG/L	1	1.0	0.15	09/15/23	EBS
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	09/15/23	EBS
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	09/15/23	EBS
Arsenic (Dissolved)	E200.8	2.1		UG/L	1	1.0	0.15	09/15/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/15/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/15/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090077
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090077-03
		DATE RECEIVED:	09/14/23
		COLLECTION DATE:	9/8/2023 5:10:00 PM
CLIENT SAMPLE ID	EV-22A	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	1.3		UG/L	1	1.0	0.15	09/15/23	EBS
Cadmium	E200.8	1.8		UG/L	1	1.0	0.12	09/15/23	EBS
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	09/15/23	EBS
Arsenic (Dissolved)	E200.8	1.1		UG/L	1	1.0	0.15	09/15/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/15/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/15/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090077
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090077-04
		DATE RECEIVED:	09/14/23
		COLLECTION DATE:	9/8/2023 4:25:00 PM
CLIENT SAMPLE ID	EV-22B	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	4.6		UG/L	1	1.0	0.15	09/15/23	EBS
Cadmium	E200.8	2.2		UG/L	1	1.0	0.12	09/15/23	EBS
Lead	E200.8	3.3		UG/L	1	1.0	0.090	09/15/23	EBS
Arsenic (Dissolved)	E200.8	1.9		UG/L	1	1.0	0.15	09/15/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/15/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/15/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090077
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090077-05
		DATE RECEIVED:	09/14/23
		COLLECTION DATE:	9/12/2023 1:05:00 PM
CLIENT SAMPLE ID	LLMW-34D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	7.9		UG/L	1	1.0	0.15	09/15/23	EBS
Cadmium	E200.8	1.2		UG/L	1	1.0	0.12	09/15/23	EBS
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	09/15/23	EBS
Arsenic (Dissolved)	E200.8	6.9		UG/L	1	1.0	0.15	09/15/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/15/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/15/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
CLIENT CONTACT:	Garrett Leque	ALS JOB#:	EV23090077
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	ALS SAMPLE#:	EV23090077-06
		DATE RECEIVED:	09/14/23
		COLLECTION DATE:	9/12/2023 3:50:00 PM
CLIENT SAMPLE ID	LLMW-35D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	4.7		UG/L	1	1.0	0.15	09/15/23	EBS
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	09/15/23	EBS
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	09/15/23	EBS
Arsenic (Dissolved)	E200.8	3.1		UG/L	1	1.0	0.15	09/15/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/15/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/15/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
		ALS JOB#:	EV23090077
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23090077-07
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	09/14/23
		COLLECTION DATE:	9/14/2023 12:00:00 PM
CLIENT SAMPLE ID	LLMW-25D	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	3.2		UG/L	1	1.0	0.15	09/15/23	EBS
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	09/15/23	EBS
Lead	E200.8	1.4		UG/L	1	1.0	0.090	09/15/23	EBS
Arsenic (Dissolved)	E200.8	1.7		UG/L	1	1.0	0.15	09/15/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/15/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/15/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
		ALS JOB#:	EV23090077
CLIENT CONTACT:	Garrett Leque	ALS SAMPLE#:	EV23090077-08
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00	DATE RECEIVED:	09/14/23
		COLLECTION DATE:	9/14/2023 1:25:00 PM
CLIENT SAMPLE ID	EV-20B	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	QUAL	UNITS	DILUTION FACTOR	RL	LIMITS MDL	ANALYSIS DATE	ANALYSIS BY
Arsenic	E200.8	12000		UG/L	5	5.0	0.75	09/15/23	EBS
Cadmium	E200.8	ND	U	UG/L	1	1.0	0.12	09/15/23	EBS
Lead	E200.8	ND	U	UG/L	1	1.0	0.090	09/15/23	EBS
Arsenic (Dissolved)	E200.8	12000		UG/L	5	5.0	0.75	09/15/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.12	09/15/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1	1.0	0.090	09/15/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

CERTIFICATE OF ANALYSIS

CLIENT:	Geoengineers, Inc. 600 DuPont St. Bellingham, WA 98225	DATE:	9/20/2023
		ALS SDG#:	EV23090077
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Garrett Leque		
CLIENT PROJECT:	Everett Smelter Plume Groundwater / 0504-197-00		

LABORATORY BLANK RESULTS
MB-091523W - Batch 200493 - Water by E200.8 Prepared 09/15/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS			ANALYSIS DATE	ANALYSIS BY
						MDL	PQL			
Arsenic	E200.8	ND	U	UG/L	1.0	0.050	0.15		09/15/23	EBS
Cadmium	E200.8	ND	U	UG/L	1.0	0.040	0.12		09/15/23	EBS
Lead	E200.8	ND	U	UG/L	1.0	0.036	0.11		09/15/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MB-091523W - Batch 200494 - Water by E200.8 Prepared 09/15/23 00:00

ANALYTE	METHOD	RESULTS	QUAL	UNITS	RL	LIMITS			ANALYSIS DATE	ANALYSIS BY
						MDL	PQL			
Arsenic (Dissolved)	E200.8	ND	U	UG/L	1.0	0.050	0.15		09/15/23	EBS
Cadmium (Dissolved)	E200.8	ND	U	UG/L	1.0	0.040	0.12		09/15/23	EBS
Lead (Dissolved)	E200.8	ND	U	UG/L	1.0	0.036	0.11		09/15/23	EBS

U - Analyte analyzed for but not detected at level above reporting limit.



CERTIFICATE OF ANALYSIS

CLIENT: Geoengineers, Inc.
600 DuPont St.
Bellingham, WA 98225

DATE: 9/20/2023
ALS SDG#: EV23090077
WDOE ACCREDITATION: C601

CLIENT CONTACT: Garrett Leque
CLIENT PROJECT: Everett Smelter Plume Groundwater /
0504-197-00

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 200493 - Water by E200.8 Prepared 09/15/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Arsenic - BS	E200.8	94.8			125	118	89.1	110		09/15/23	EBS
Arsenic - BSD	E200.8	94.1	1		125	118	89.1	110	10	09/15/23	EBS
Cadmium - BS	E200.8	98.7			125	123	89.4	110		09/15/23	EBS
Cadmium - BSD	E200.8	98.0	1		125	123	89.4	110	10	09/15/23	EBS
Lead - BS	E200.8	94.2			125	118	87.5	107		09/15/23	EBS
Lead - BSD	E200.8	93.2	1		125	117	87.5	107	10	09/15/23	EBS

ALS Test Batch ID: 200494 - Water by E200.8 Prepared 09/15/23 00:00

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	SPIKE ADDED	RESULT	LIMITS		RPD	ANALYSIS DATE	ANALYSIS BY
							MIN	MAX			
Arsenic (Dissolved) - BS	E200.8	94.8			125	118	89.1	110		09/15/23	EBS
Arsenic (Dissolved) - BSD	E200.8	94.1	1		125	118	89.1	110	10	09/15/23	EBS
Cadmium (Dissolved) - BS	E200.8	98.7			125	123	89.4	110		09/15/23	EBS
Cadmium (Dissolved) - BSD	E200.8	98.0	1		125	123	89.4	110	2.7	09/15/23	EBS
Lead (Dissolved) - BS	E200.8	94.2			125	118	87.5	107		09/15/23	EBS
Lead (Dissolved) - BSD	E200.8	93.2	1		125	117	87.5	107	2.43	09/15/23	EBS

APPROVED BY

Rob Greer
Laboratory Director



ALS Environmental

Laboratory location:

Chain of Custody Form

Page 1 of 1

EV23090077

Customer Information				ALS Project Manager:				Work Order #:									
Project Information				Parameter/Method Request for Analysis													
Purchase Order	Project Name	Project Number	Project Number	Tot/Diss As, Cd, Pb, Hg (report Hg down to DL of 0.02 ppm; "J" flag)													
Work Order	Bill To Company	Invoice Attn.	Address	Note: All samples for dissolved analysis were field-filtered													
Company Name	GeoEngineers	Garrett Leque	554 West Bakerview Road														
Send Report To	Garrett Leque	City/State/Zip	Phone														
Address	554 West Bakerview Road	Bellingham WA 98226	253.312.7958														
City/State/Zip	Bellingham WA 98226	Phone	Fax														
Phone	253.312.7958	City/State/Zip	Phone														
Fax	--	City/State/Zip	Fax														
e-Mail Address	gleque@geoengineers.com	City/State/Zip	Fax														
e-Mail Address	gleque@geoengineers.com	City/State/Zip	Fax														
No.	Sample Description	Date	Time	Matrix	Pres.	# Bottles	A	B	C	D	E	F	G	H	I	J	Hold
1	LLMW - 04D	8/8/23	1355	W	HNO ₃	2	X										
2	LLMW - 04S	8/8/23	1450	W	HNO ₃	2	X										
3	EV - 22A	8/8/23	1710	W	HNO ₃	2	X										
4	EV - 22B	8/8/23	1625	W	HNO ₃	2	X										
5	LLMW - 34D	8/12/23	1305	W	HNO ₃	2	X										
6	LLMW - 35D	8/12/23	1550	W	HNO ₃	2	X										
7	LLMW - 25D	8/14/23	1200	W	HNO ₃	2	X										
8	EV - 20B	8/14/23	1325	W	HNO ₃	2	X										
9		8/1/23		W	HNO ₃	2	X										
10		8/1/23		W	HNO ₃	2	X										
Sampler(s): Please Print & Sign				Shipment Method:				Required Turnaround Time:				Results Due Date:					
Akanksha Garg, Akanksha Garg								☒ STD 10 Wk Days ☐ 5 Wk Days ☐ 2 Wk Days ☐ 24 Hour				☐ Other					
Relinquished by: Akanksha Garg, Akanksha Garg				Received by: ALS 9-14-23 3:25				Notes:									
Relinquished by: Akanksha Garg, Akanksha Garg				Received by (Laboratory):				Cooler Temp.				QC Package: (Check Box Below)					
Logged by (Laboratory):				Checked by (Laboratory):				X				Level II: Standard QC					
												Level III: Std QC + Raw Data					
												Level IV: SW846 CLP-Like					
												Other:					
Preservative Key: 1-HCL 2-HNO ₃ 3-H ₂ SO ₄ 4-NaOH 5-Na ₂ SO ₃ 6-NaHSO ₄ 7-Other 8-4 degrees C 9-5035																	

Note: Any changes must be made in writing once samples and COC Form have been submitted to ALS Laboratory Group.

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ALS ENVIRONMENTAL

Sample Receiving Checklist

Client: Geo Engineers ALS Job #: Ev23090077

Project: Everett Smelter Plume Groundwater

Received Date: 9-14-25 Received Time: 3:25 By: MH

Type of shipping container: Cooler ☒ Box ☐ Other ☐

Shipped via: FedEx Ground ☐ UPS ☐ Mail ☐ Courier ☐ Hand Delivered ☒
FedEx Express ☐

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Were custody seals on outside of shipping container?	☐	☒	☐
If yes, how many? <u> </u> Where? <u> </u>			
Custody seal date: <u> </u> Seal name: <u> </u>			

Was Chain of Custody properly filled out (ink, signed, dated, etc.)? ☒ C-X ☐

Did all bottles have labels? ☒ ☐ ☐

Did all bottle labels and tags agree with Chain of Custody? ☐ ☒ ☐

Were samples received within hold time? ☒ ☐ ☐

Did all bottles arrive in good condition (unbroken, etc.)? ☒ ☐ ☐

Was sufficient amount of sample sent for the tests indicated? ☒ ☐ ☐

Was correct preservation added to samples? ☒ ☐ ☐

If no, Sample Control added preservative to the following:

<u>Sample Number</u>	<u>Reagent</u>	<u>Analyte</u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>

Were VOA vials checked for absence of air bubbles? ☐ ☐ ☒
Bubbles present in sample #:

Temperature of cooler upon receipt: 19.6°C Cold Cool Ambient N/A

Explain any discrepancies: Ev23090077-2 A & B were labeled with info that did not correspond with any samples. Sample was placed via elimination to correct # - checked & okay, no action taken. CNV

Was client contacted? ☐ Who was called? By whom? Date:

Outcome of call:

Project: WA Department of Ecology – Everett Smelter Plume Uplands and Lowlands Groundwater Sampling Project (2023-2024)
August-September 2023 Groundwater Sampling Event

GEI File No: 00504-197-00

Date: October 25, 2023

This report documents the results of a United States Environmental Protection Agency (USEPA)-defined Stage 2A data validation (USEPA Document 540-R-08-005; USEPA 2009) of analytical data from the analyses of groundwater samples collected as part of the August-September 2023 sampling event, and the associated laboratory and field quality control (QC) samples. The samples were obtained from the Everett Smelter Plume site located in Everett, Washington.

OBJECTIVE AND QUALITY CONTROL ELEMENTS

GeoEngineers, Inc. (GeoEngineers) completed the data validation consistent with the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2020) (National Functional Guidelines) to determine if the laboratory analytical results meet the project objectives and are usable for their intended purpose. Data usability was assessed by determining if:

- The samples were analyzed using well-defined and acceptable methods that provide reporting limits below applicable regulatory criteria;
- The precision and accuracy of the data are well-defined and sufficient to provide defensible data; and
- The quality assurance/quality control (QA/QC) procedures utilized by the laboratory meet acceptable industry practices and standards.

In accordance with the Quality Assurance Project Plan (QAPP) (GeoEngineers, 2023), the data validation included review of the following QC elements:

- Data Package Completeness
- Chain-of-Custody Documentation
- Holding Times and Sample Preservation
- Method Blanks
- Matrix Spikes/Matrix Spike Duplicates
- Laboratory Control Samples/Laboratory Control Sample Duplicates
- Field Duplicates

VALIDATED SAMPLE DELIVERY GROUPS

This data validation included review of the sample delivery groups (SDGs) listed below in Table 1.

TABLE 1: SUMMARY OF VALIDATED SAMPLE DELIVERY GROUPS

Laboratory SDG	Samples Validated
EV23080082	LLMW-05S_20230817, LLMW-05D_20230817, LLMW-06D_20230816, LLMW-07D_20230816, LLMW-07S_20230816, LLMW-11D_20230818, LLMW-15D_20230817, LLMW-15S_20230817, LLMW-17D_20230818, LLMW-18D_20230817, LLMW-18S_20230817, LLMW-34S_20230816
EV23080112	LLMW-01D_20230824, LLMW-03D_20230824, LLMW-08D_20230821, LLMW-10D_20230823, LLMW-12D_20230823, LLMW-21D_20230823, LLMW-38S_20230823, LLMW-39S_20230822, LLMW-40S_20230822, LLMW-42S_20230821
EV23090003	BP-01D_20230831, BP-01S_20230831, BP-02D_20230831, BP-02S_20230831, BP-03D_20230831, BP-03S_20230831, BP-04D_20230830, BP-04D2_20230830, BP-04S_20230830, BP-05D_20230831, BP-05D2_20230831, BP-05S_20230830, BP-06D_20230830, DUP-2, BP-06S_20230830, BP-07D1_20230830, BP-07D2_20230830, BP-07S_20230830, BP-08D_20230830, BP-08S_20230830, DUP-1, BP-09D_20230830, BP-09S_20230830, LLMW-19D_20230828, LLMW-27D_20230901, LLMW-31D_20230829, LLMW-36D_20230828
EV23090077	EV-20B, EV-22A, EV-22B, LLMW-04D, LLMW-04S, LLMW-25D, LLMW-34D, LLMW-35D

CHEMICAL ANALYSIS PERFORMED

ALS Environmental, Inc. (ALS), located in Everett, Washington, performed laboratory analyses on the samples using the following methods:

- Total and Dissolved Metals by Methods EPA200.8 and SW7470

DATA VALIDATION SUMMARY

The results for each of the QC elements are summarized below.

Data Package Completeness

ALS provided the required deliverables for the data validation according to the National Functional Guidelines. The laboratory followed adequate corrective action processes and the identified anomalies were discussed in the relevant laboratory case narrative.

Chain-of-Custody Documentation

Chain-of-custody (COC) forms were provided with the laboratory analytical reports. The COCs were accurate and complete when submitted to the laboratory.

Holding Times and Sample Preservation

The sample holding time is defined as the time that elapses between sample collection and sample analysis. Maximum holding time criteria exist for each analysis to help ensure that the analyte concentrations found at the time of analysis reflect the concentration present at the time of sample collection. Established holding times and sample preservation requirements were met for each analysis.

Method Blanks

Method blanks are analyzed to ensure that laboratory procedures and reagents do not introduce measurable concentrations of the analytes of interest. A method blank was analyzed with each batch of samples, at a frequency of 1 per 20 samples. For each sample batch, method blanks were analyzed at the required frequency. None of the analytes of interest were detected in the method blanks.

Matrix Spikes/Matrix Spike Duplicates

Since the actual analyte concentration in an environmental sample is not known, the accuracy of a particular analysis is usually inferred by performing a matrix spike (MS) analysis on one sample from the associated batch, known as the parent sample. One aliquot of the sample is analyzed in the normal manner and then a second aliquot of the sample is spiked with a known amount of analyte concentration and analyzed. From these analyses, a %R is calculated. Matrix spike duplicate (MSD) analyses are generally performed for organic analyses as a precision check and analyzed in the same sequence as a matrix spike. Using the results from the MS and MSD, the relative percent difference (RPD) is calculated. The %R control limits for MS and MSD analyses are specified in the laboratory documents, as are the RPD control limits for MS/MSD sample sets.

One MS/MSD analysis should be performed for every analytical batch or every 20 field samples, whichever is more frequent. The frequency requirements were met for each analysis and the %R and RPD values were within the proper control limits.

Laboratory Control Samples/Laboratory Control Sample Duplicates

A laboratory control sample (LCS) is a blank sample that is spiked with a known amount of analyte and then analyzed. An LCS is similar to an MS, but without the possibility of matrix interference. Given that matrix interference is not an issue, control limits for accuracy and precision in the LCS and its duplicate (LCSD) are usually more rigorous than for MS/MSD analyses. Additionally, data qualification based on LCS/LCSD analyses would apply to each sample in the associated batch, instead of just the parent sample. The %R control limits for LCS and LCSD analyses are specified in the laboratory documents, as are the RPD control limits for LCS/LCSD sample sets.

One LCS/LCSD analysis should be performed for every analytical batch or every 20 field samples, whichever is more frequent. The frequency requirements were met for each analysis and the %R and RPD values were within the proper control limits.

Field Duplicates

Field duplicates are similar to laboratory duplicates in that they are used to assess precision. Two samples (parent and duplicate) are created in the field by subsampling the homogenized sample and submitting them to the lab as separate samples. Duplicate samples were collected and analyzed for the same parameters as the associated parent samples. Precision is determined by calculating the RPD between each pair of samples. If one or more of the sample analytes has a concentration less than five times the reporting limit for that sample, then the absolute difference is used instead of the RPD. The RPD control limit for water samples is 35 percent.

SDG EV23090003: Two field duplicate sample pairs, BP-08S_20230830/DUP-1 and BP-06D_20230830/DUP-2, were submitted with this SDG. The precision criteria for the target analytes were met for these sample pairs.

OVERALL ASSESSMENT

As was determined by this data validation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the LCS/LCSD and MS/MSD %R values. Precision was acceptable, as demonstrated by the LCS/LCSD, MS/MSD, and field duplicate RPD values.

No analytical results were qualified. The data are acceptable for the intended use.

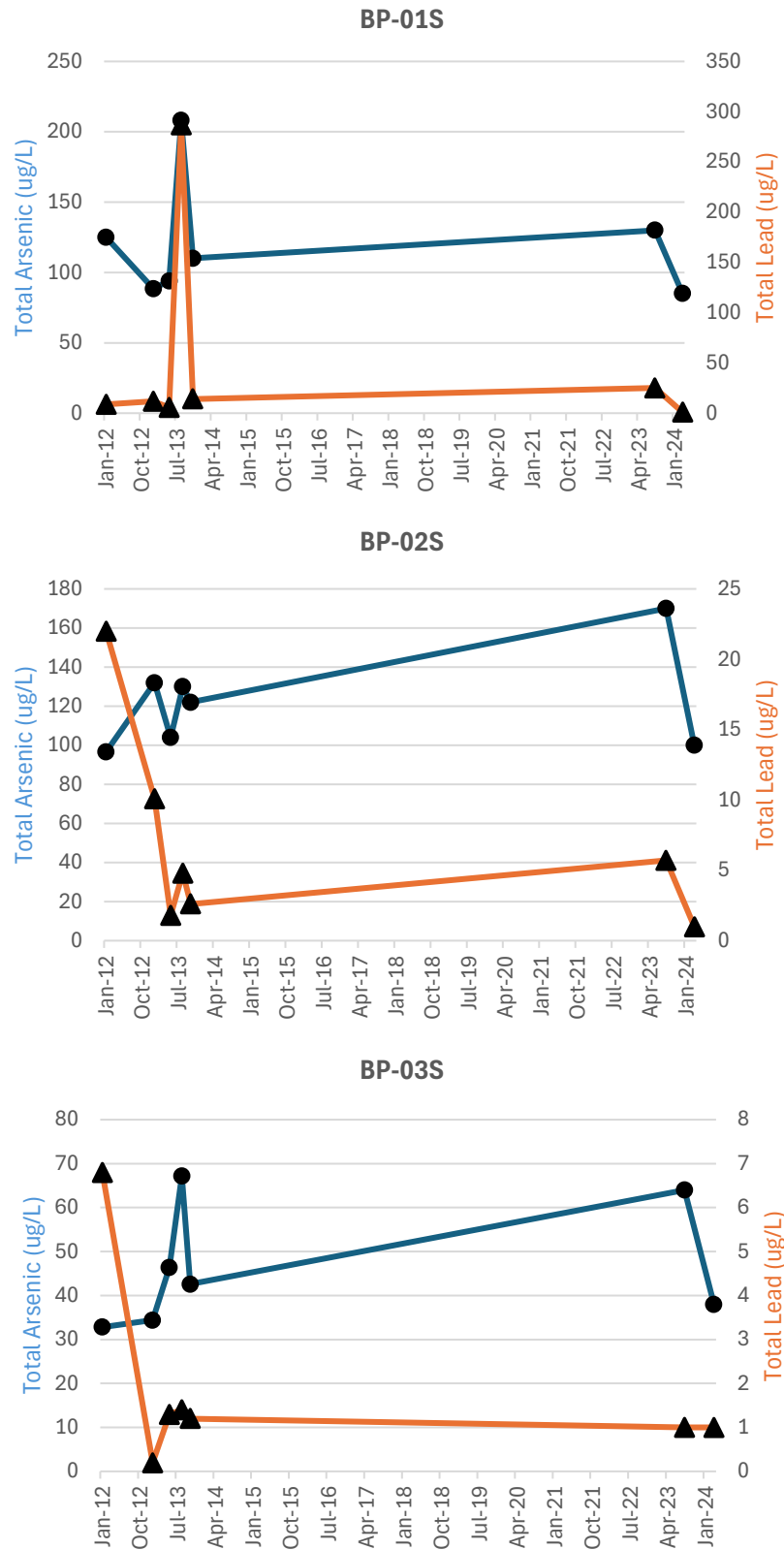
REFERENCES

U.S. Environmental Protection Agency (USEPA). "Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use," EPA-540-R-08-005. January 2009.

U.S. Environmental Protection Agency (USEPA). Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review, EPA-542-R-20-006. November 2020.

GeoEngineers, Inc. (GeoEngineers). "Quality Assurance Project Plan (QAPP), Everett Smelter Plume Uplands and Lowlands," prepared for Washington State Department of Ecology. August 11, 2023.

Attachment B
Trend Plots for Selected Wells



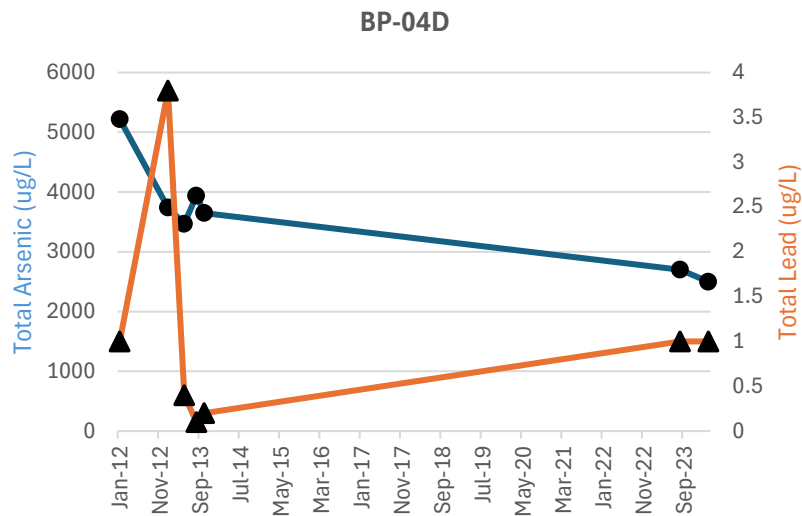
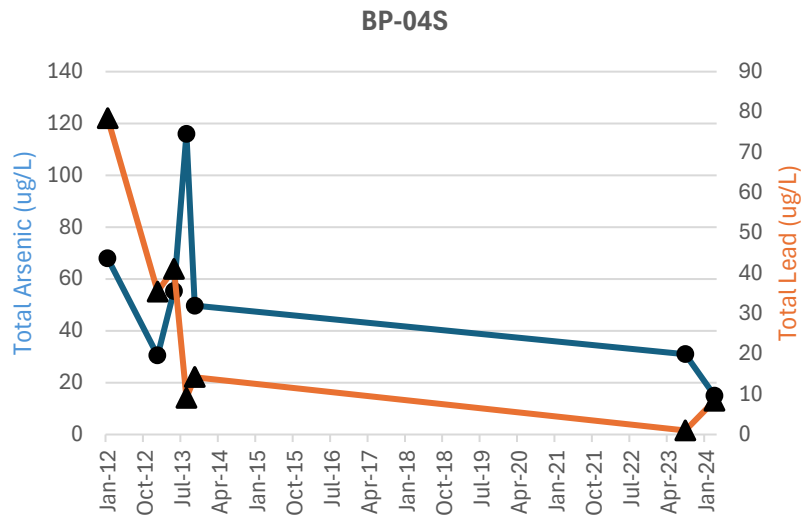
Trend Plots BP-01S, BP-03S

Everett Smelter - Lowland Area
Everett, Washington



Figure B-1

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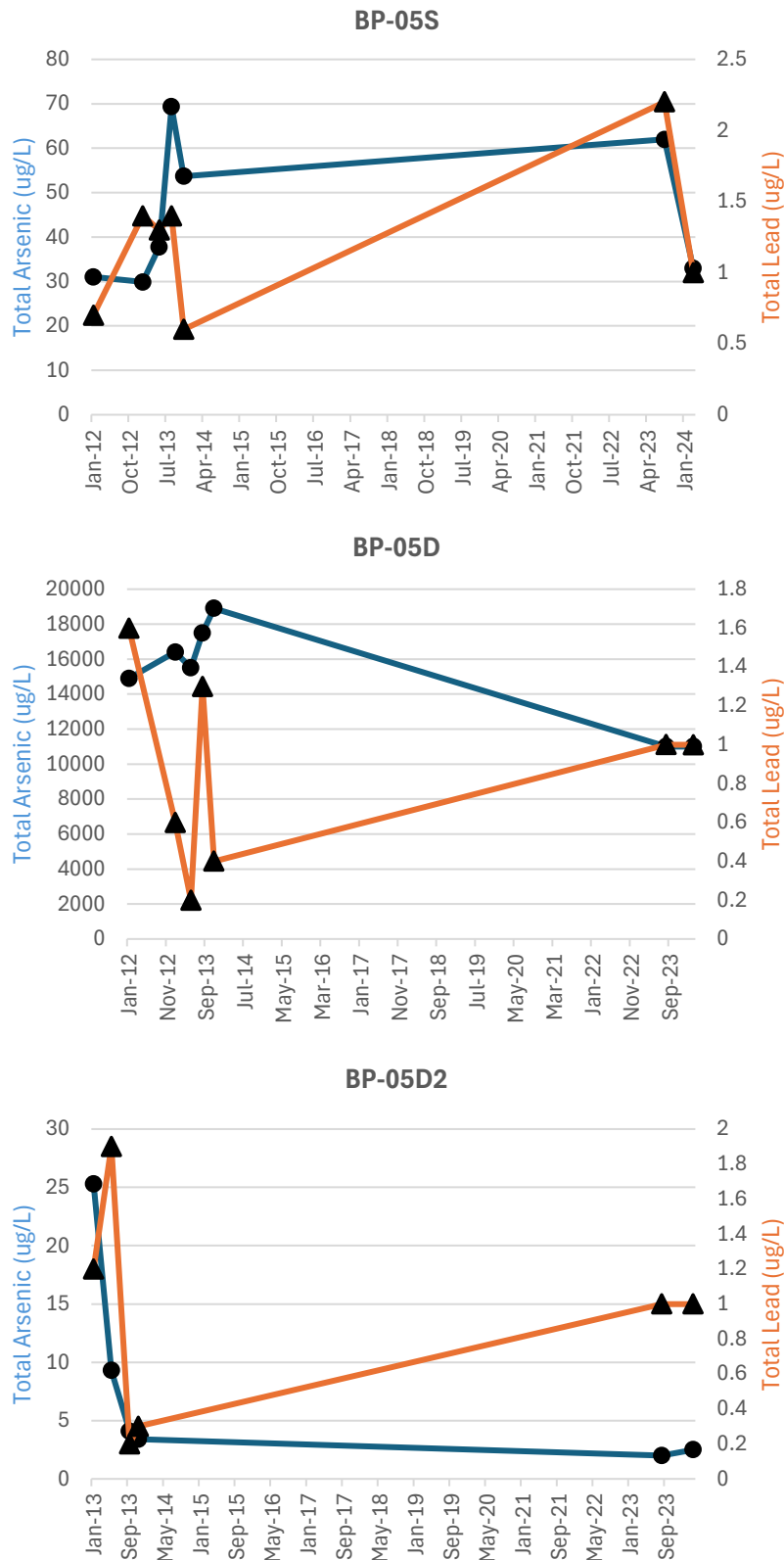
Trend Plots BP-04S, BP-04D

Everett Smelter - Lowland Area
Everett, Washington



Figure B-2

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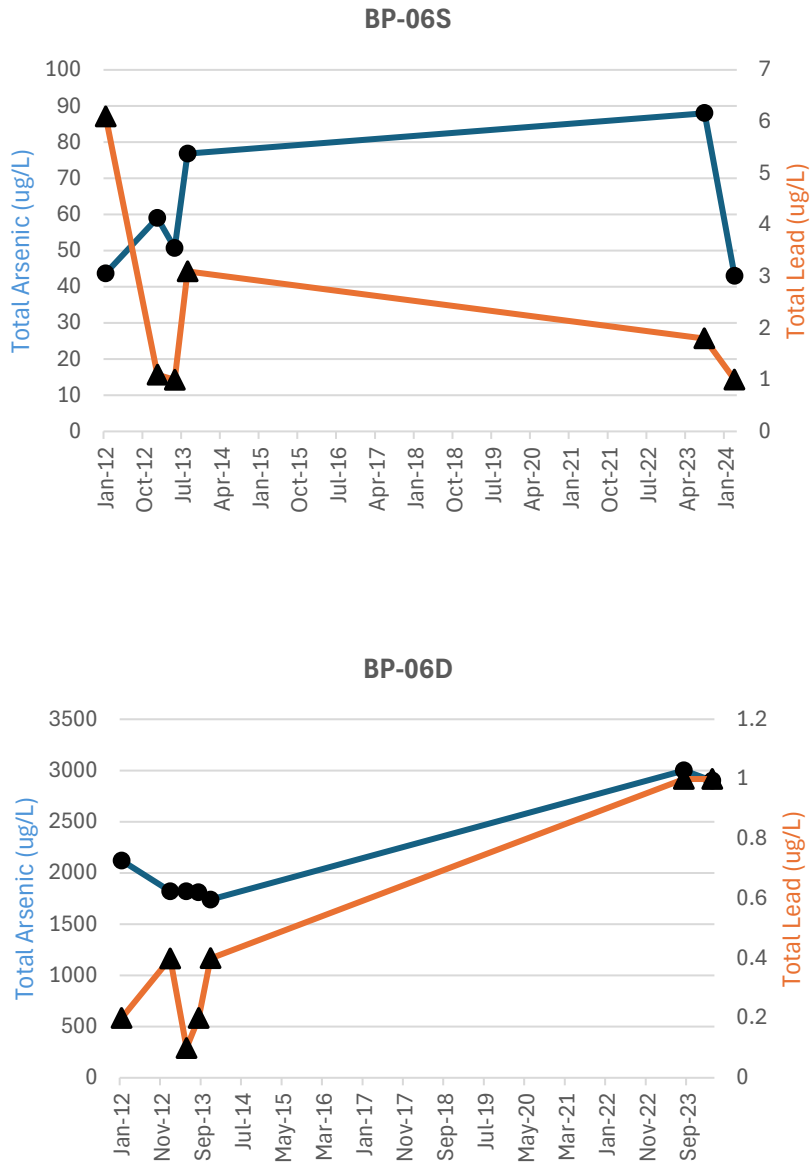
Trend Plots BP-05S, BP-05D, BP-05D2

Everett Smelter - Lowland Area
Everett, Washington



Figure B-3

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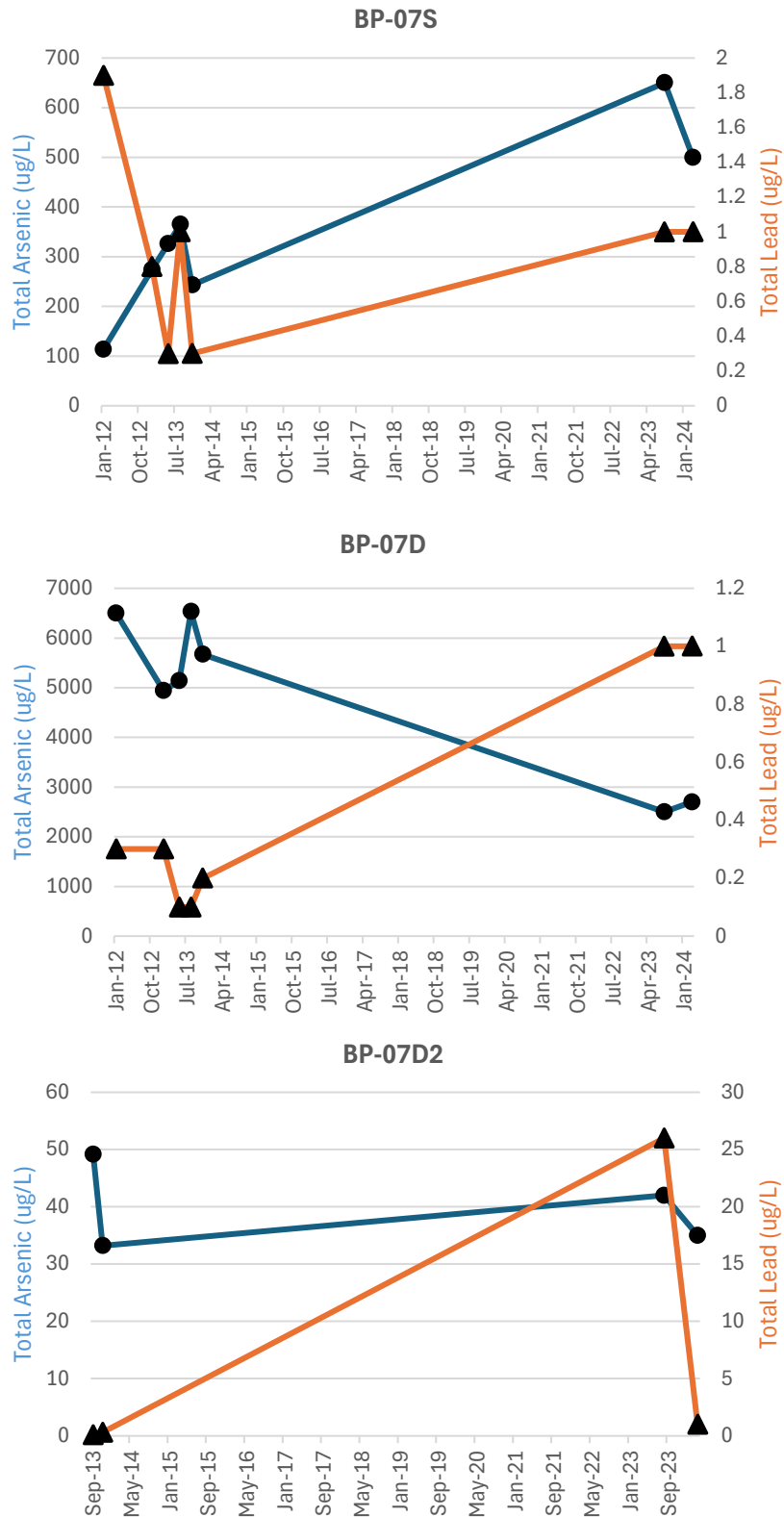
Trend Plots BP-06S, BP-06D

Everett Smelter - Lowland Area
Everett, Washington



Figure B-4

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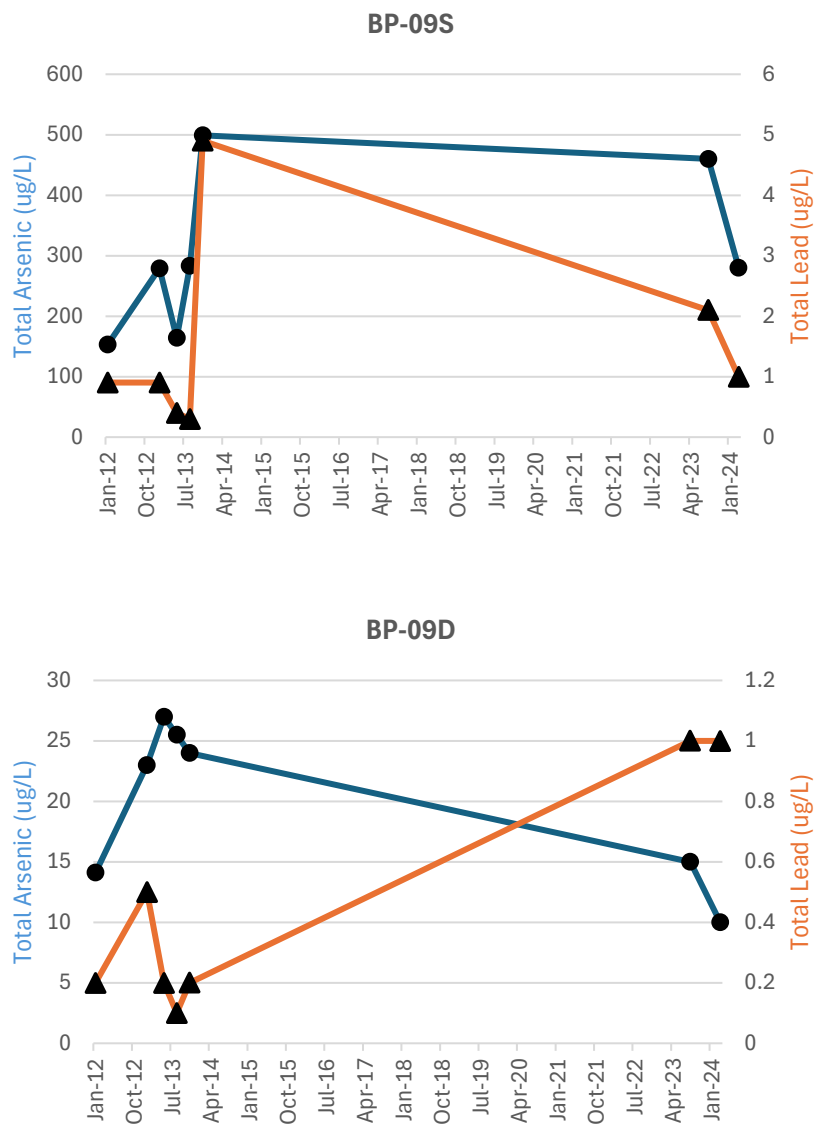
Trend Plots LLMW-04S, LLMW-04D

Everett Smelter - Lowland Area
Everett, Washington

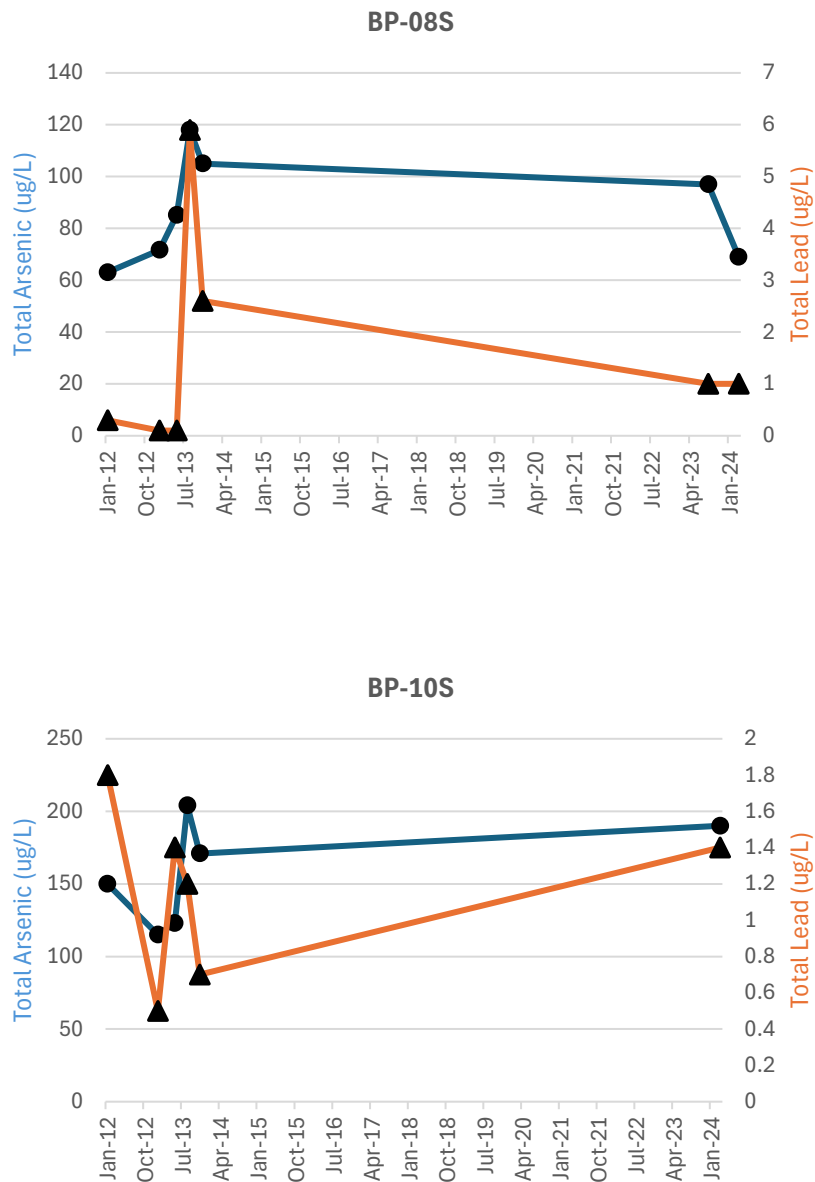


Figure B-5

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**Trend Plots BP-08S, BP-09S, BP-09D**Everett Smelter - Lowland Area
Everett, Washington**Figure B-6**

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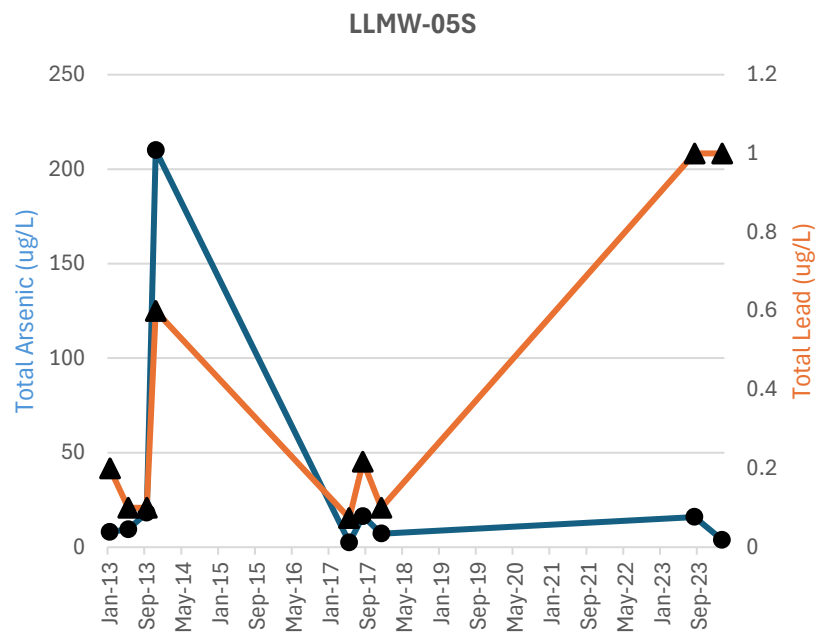
Trend Plots BP-08S, BP-10S

Everett Smelter - Lowland Area
Everett, Washington



Figure B-7

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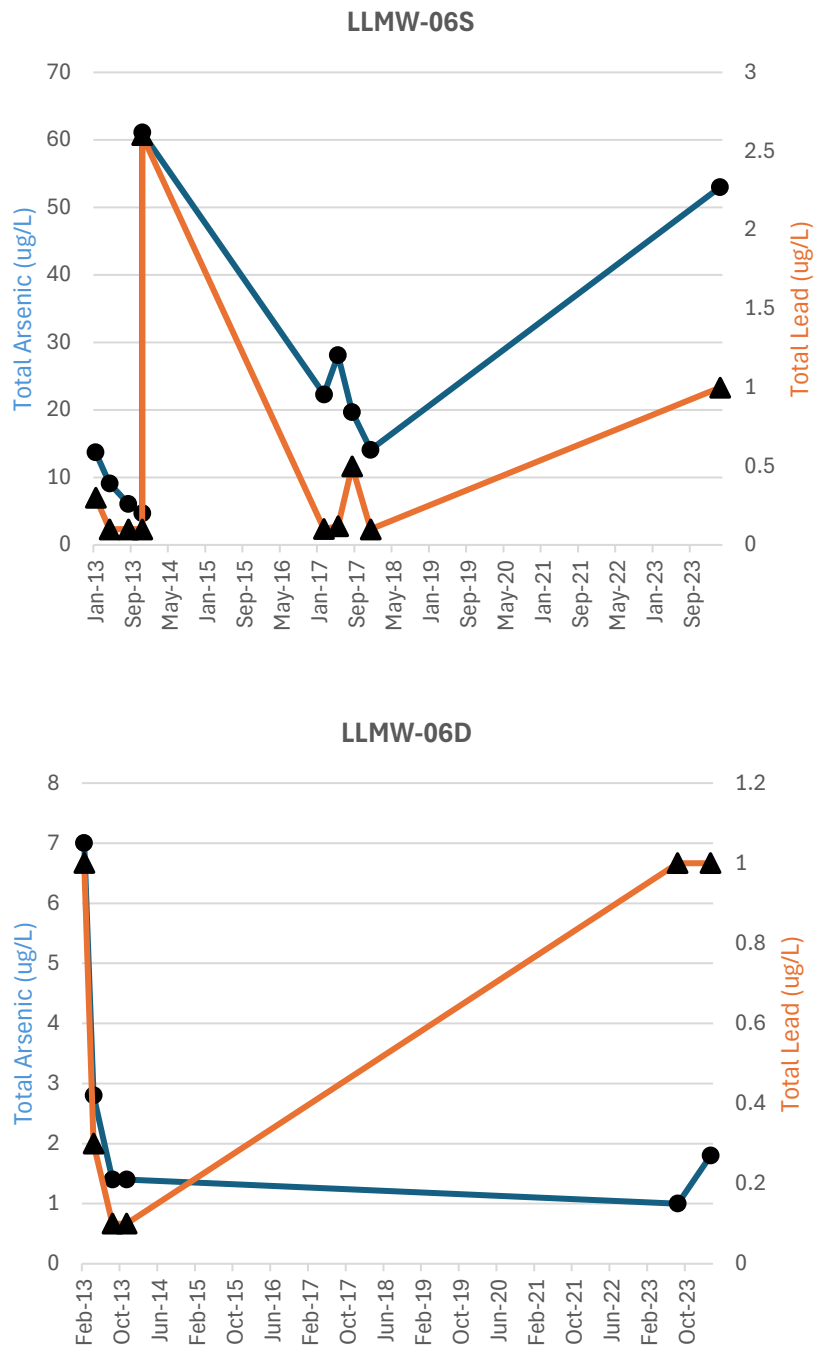
Trend Plots LLMW-05S

Everett Smelter - Lowland Area
Everett, Washington



Figure B-8

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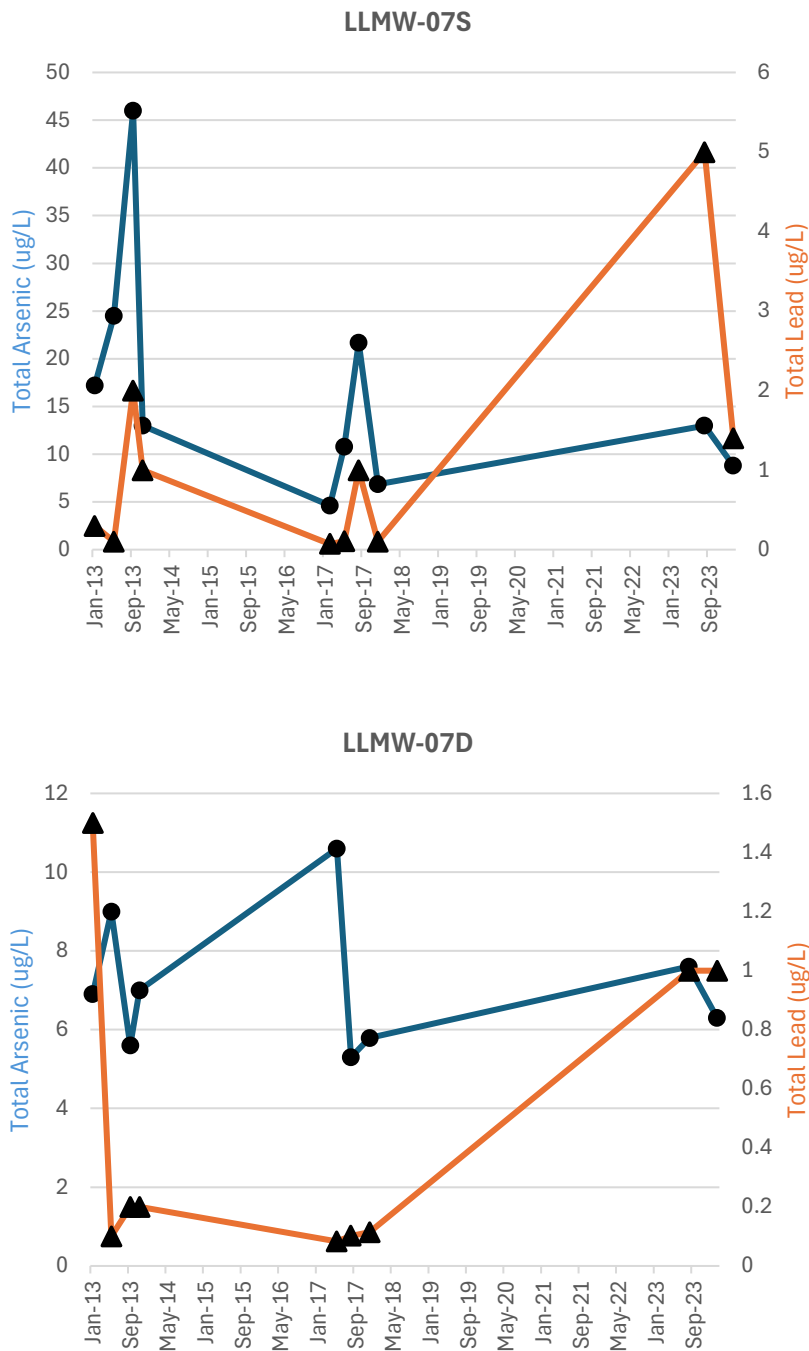
Trend Plots LLMW-06S, LLMW-06D

Everett Smelter - Lowland Area
Everett, Washington



Figure B-9

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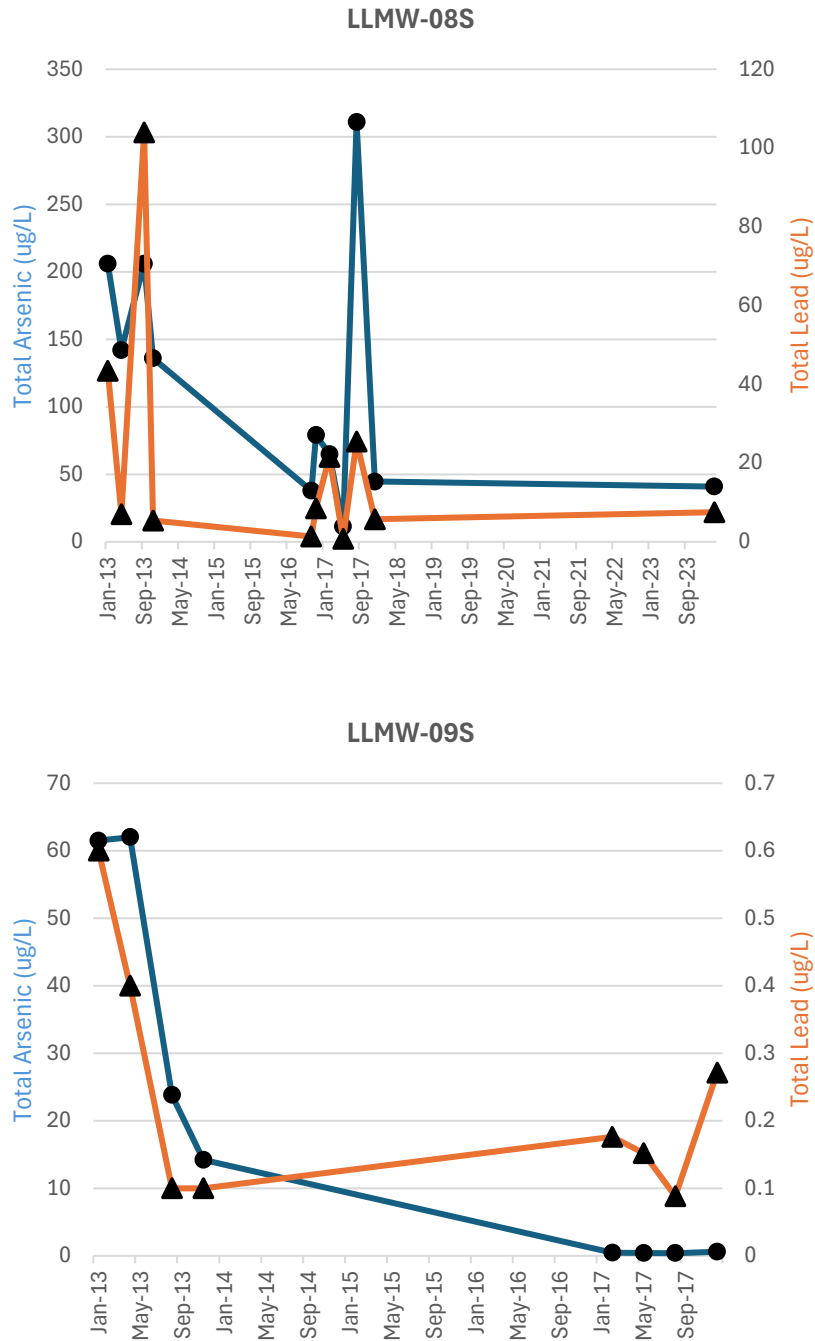
Trend Plots LLMW-07S, LLMW-07D

Everett Smelter - Lowland Area
Everett, Washington



Figure B-10

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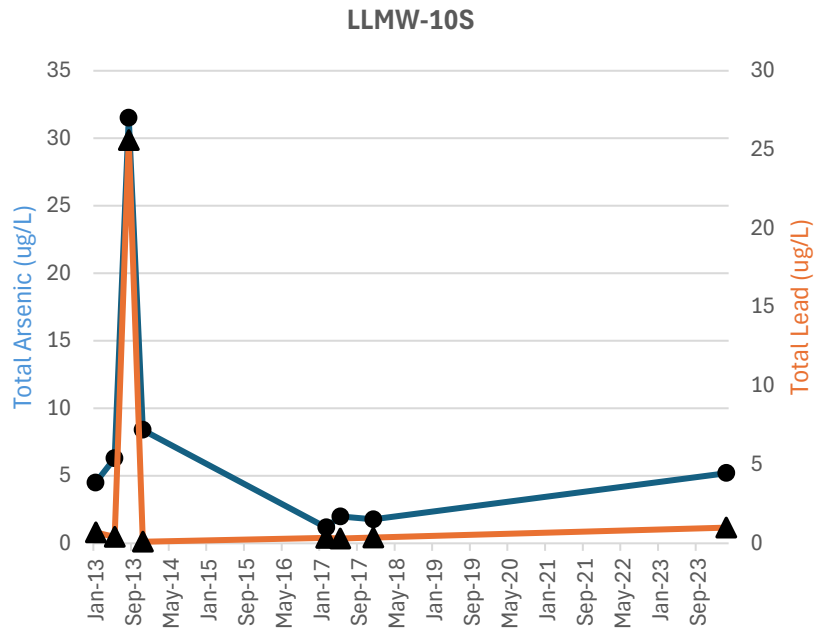
Trend Plots LLMW-08S, LLMW-09S

Everett Smelter - Lowland Area
Everett, Washington



Figure B-11

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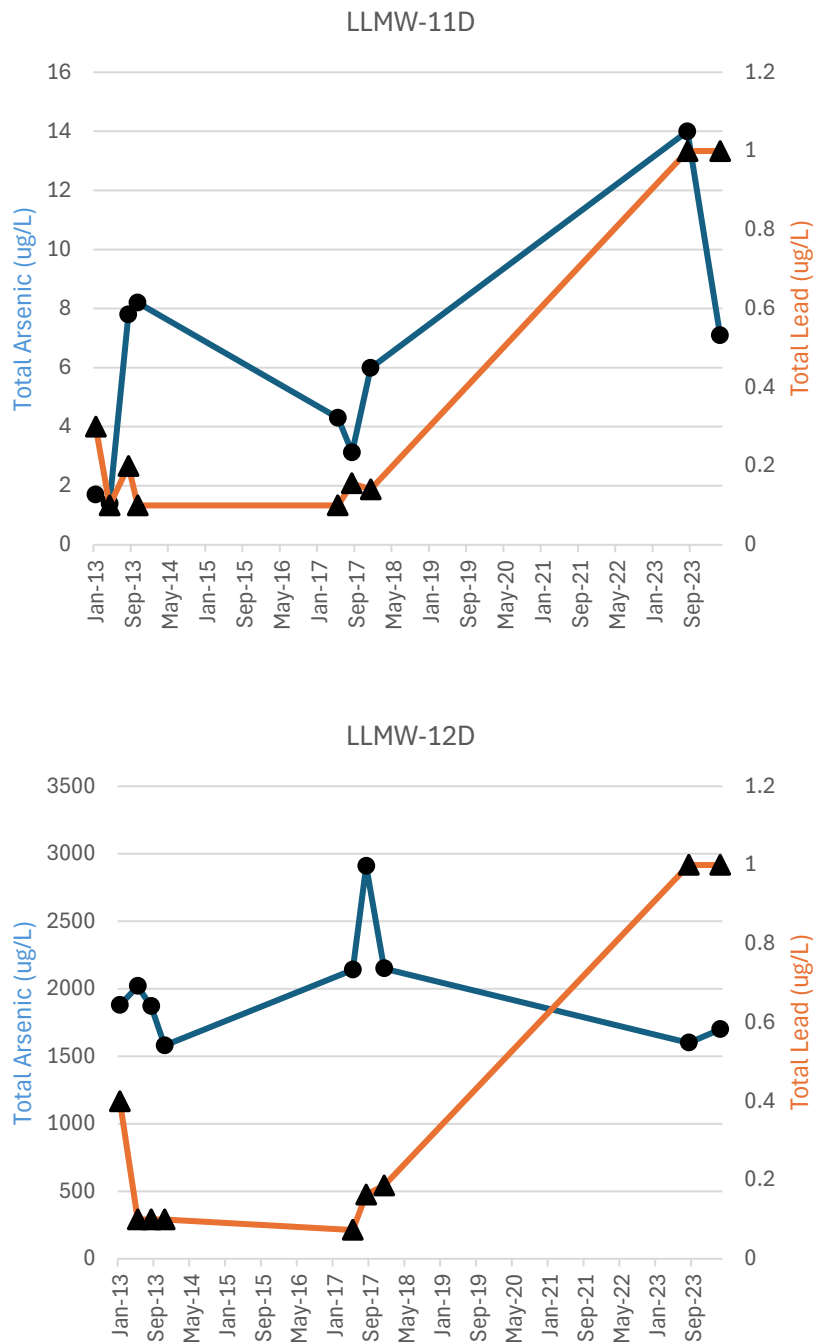
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Trend Plots LLMW-10S

Everett Smelter - Lowland Area
Everett, Washington



Figure B-12

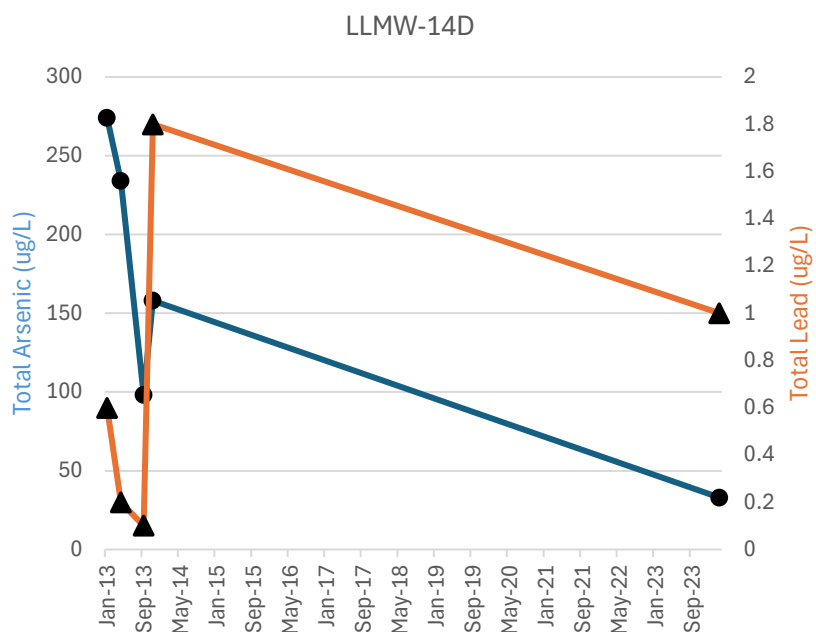
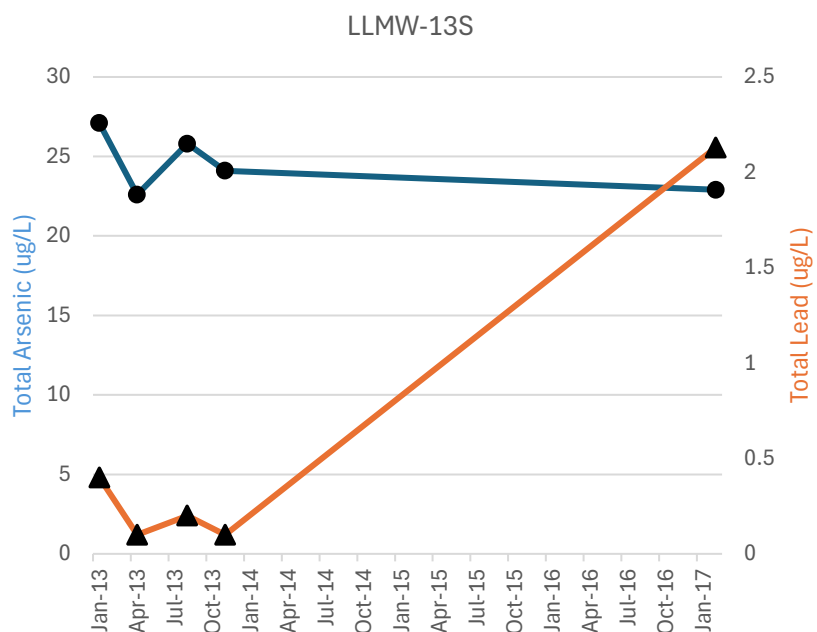


Trend Plots LLMW-11D, LLMW-12D

Everett Smelter - Lowland Area
Everett, Washington

Figure B-13

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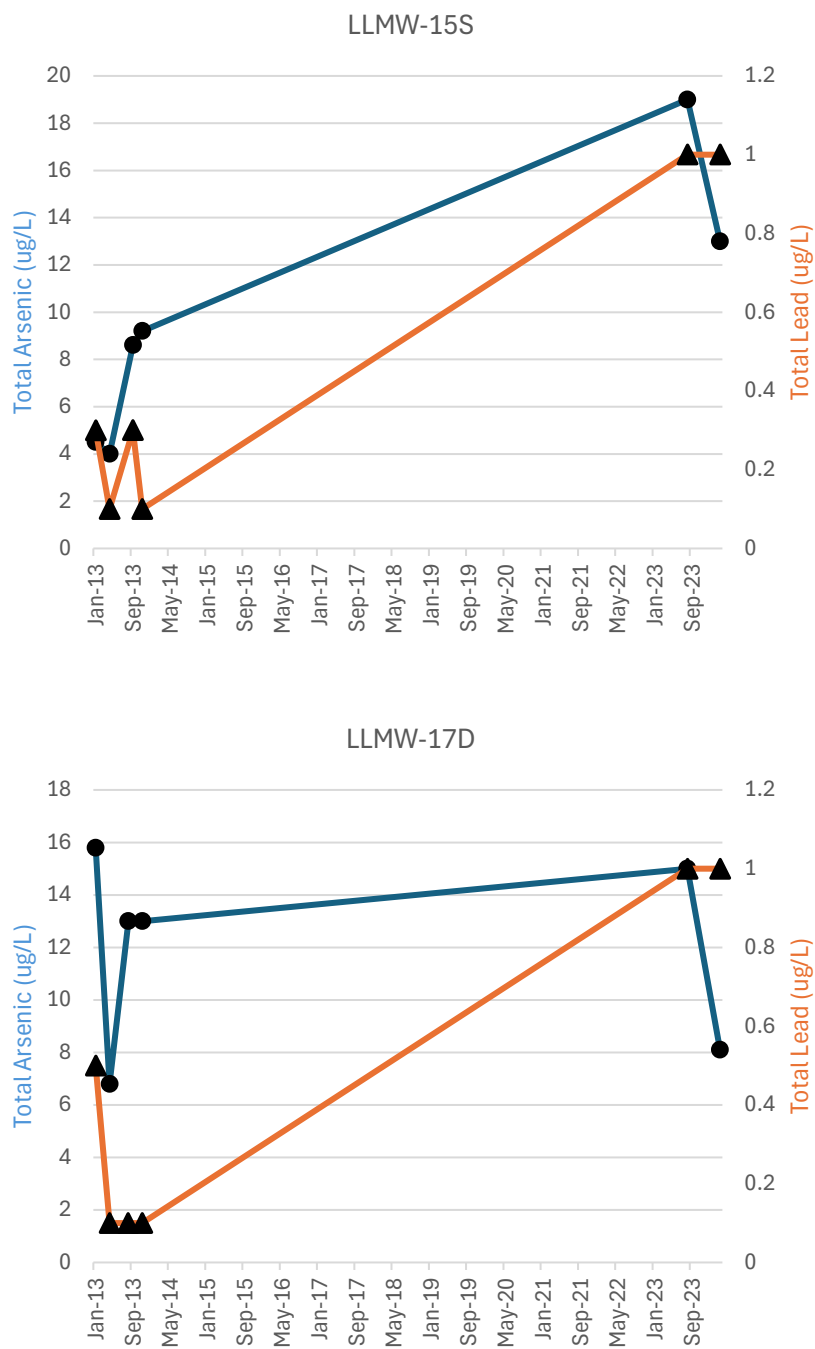
Trend Plots LLMW-13S, LLMW-14D

Everett Smelter - Lowland Area
Everett, Washington

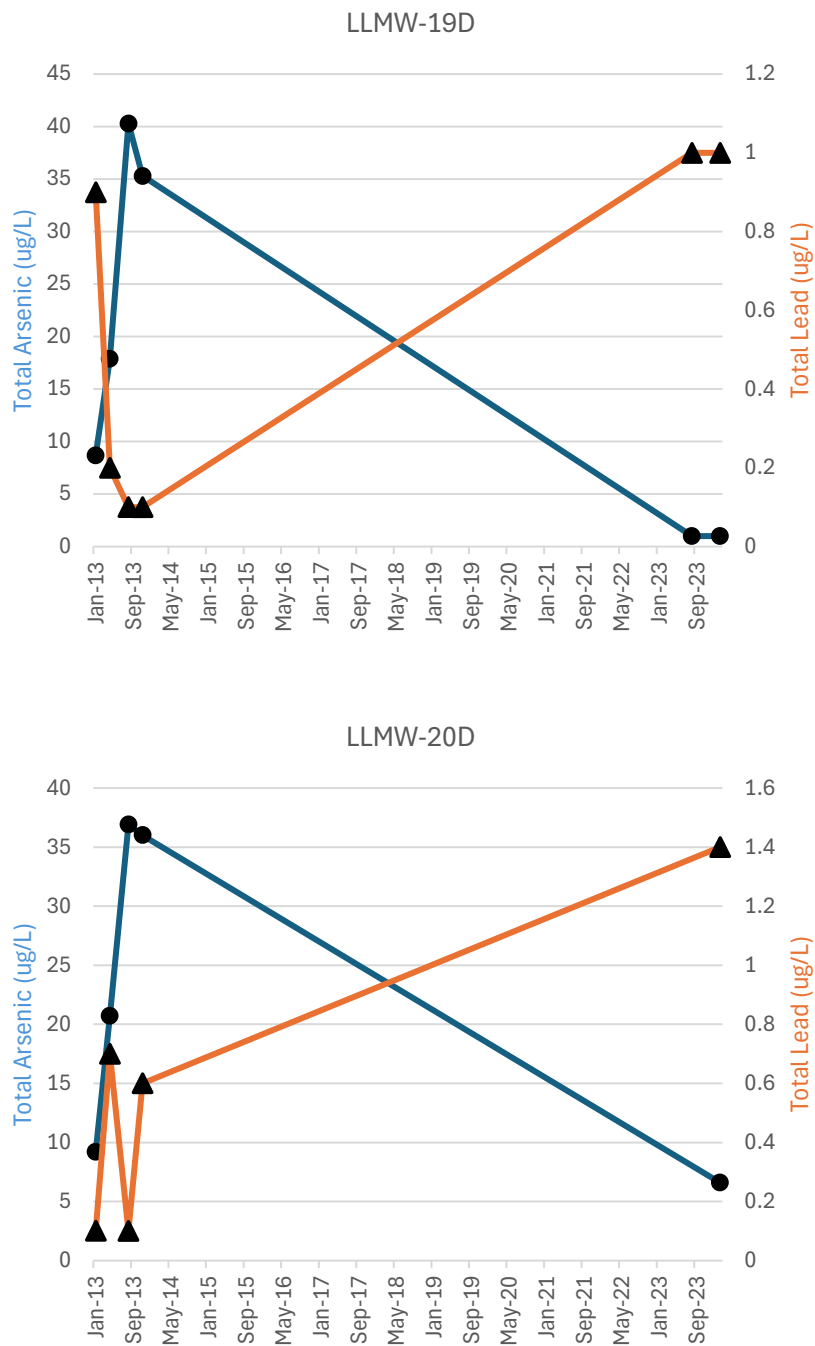


Figure B-14

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**Trend Plots LLMW-15S, LLMW-17D**Everett Smelter - Lowland Area
Everett, Washington**Figure B-15**

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**Trend Plots LLMW-19D, LLMW-20D**Everett Smelter - Lowland Area
Everett, Washington**Figure B-16**

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