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**TECHNICAL MEMORANDUM**

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TO: Andy Smith – Department of Ecology

FROM: Matt Dalton

DATE: August 17, 2020

SUBJECT: TCLP Test Results  
Former Tacoma Metals Site  
Tacoma, Washington

REF. NO: WKG-001-TCLP

CC: Mark Myers  
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This technical memorandum presents the results of Toxicity Characteristic Leaching Procedure (TCLP) and bench-scale testing for the former Tacoma Metals Site (TMS), Tacoma, Washington. The site is generally located north and northeast of the intersection of Portland Avenue and St. Paul Avenue (Figure 1).

The purpose of the work was as follows:

- Collect TCLP data to determine the likely designation of soil that exceeds metals cleanup levels and confirm previous TCLP testing completed by Kennedy/Jenks in 2001.
- Assess a possible on-site treatment method to remove the hazardous/dangerous waste (DW) designation to reduce off-site disposal costs.
- Assess the viability of using a field XRF analyzer to screen for metal soil concentrations during future remediation.

**BACKGROUND**

In general, the Site consists of two remedial areas with some overlap. These include 1) “*Off-Property Area*” including three property parcels (JJ Port Property, International Paper Property, and City of Tacoma Right of Way [E 18<sup>th</sup> St. Right-of-Way]) located on the northwest end of the property where releases of materials associated with a wood treating (creosote) operation occurred, and 2) “*On-Property Area*” where metal recycling activities occurred. The On-Property Area is further divided into two areas – historically paved (by the 1970s) and historically

unpaved. Wood treating (creosote plant) also occurred on the northwest end of the metal recycling parcel and a coke plant operated within the central portion of this parcel.

The focus of this work was the On-Property Area (metals recycling portion of the Site) where soil testing identified metals concentrations exceeding remediation levels (RLs) and cleanup levels (CULs). Locations that exceed metals RLs/CULs are illustrated on Figure 2, based on data collected by Kennedy/Jenks (K/J) in 2001 (K/J 2014) and compiled by Aspect Consulting (Aspect 2018).

Aspect Consulting (Aspect 2018) prepared a draft Remedial Investigation/Feasibility Study (RI/FS) report, primarily using available K/J information and results (K/J 2014). The contaminants of concern for the metals recycling area (not including creosote releases) include metals, diesel-/heavy-oil range organics (DRO/ORO) and polycyclic aromatic hydrocarbons (PAHs). The preferred remedial alternative (Alternative 2) includes soil excavation with off-site disposal with an environmental cap placed over the “paved” portion of the Site, post excavation. CULs were developed for the portion of the Site to remain unpaved, and RLs were developed for the portion of the Site where an environmental cap would be placed. These levels are summarized below in Table 1.

**Table 1 – Metal Soil CULs and RLs**

| Metal          | Unpaved Area                 |                           | Capped Area |
|----------------|------------------------------|---------------------------|-------------|
|                | Shallow Soil CULs<br>(mg/kg) | Deep Soil CULs<br>(mg/kg) | RLs (mg/kg) |
| Arsenic        | 10                           | 10                        | 1,122       |
| Barium         | 102                          | 1,650                     | 44,884      |
| Cadmium        | 14                           | 726                       | 1,496       |
| Chromium (III) | 67                           | 25,907                    | 1,000,000   |
| Copper         | 217                          | 53,333                    | 299,244     |
| Lead           | 118                          | 1,601                     | 2,000       |
| Mercury        | 5.5                          | 13                        | 2,900       |
| Selenium       | 0.3                          | 233                       | 11,221      |
| Silver         | 1,133                        | 1,133                     | 6,359       |

Notes: Shallow soil – 0 to 6 feet; deep soil 6 to 15 feet; CUL – Cleanup Level; RL – Remediation Level

Most of the metal exceedances occur in “Metal Debris Fill” that covers portions of the Site to depths of up to four feet. A deposit termed “Mixed Fill” underlies the metal debris fill, where present, the bottom of which lies at depths of approximately two to nine feet. Underlying these deposits is a “Wood Fill” that appears to be present beneath most of the Site and ranges in thickness from one to twelve feet. These deposits are described as follows:

- **Metal Debris Fill** – *Abundant mixed metal and other debris with soil matrix. Debris includes cable, wire, sheet metal, springs, machine parts, scrap metal, rubber, glass, brick, concrete, and other material. Matrix material is typically sand and gravel mixture.*
- **Mixed Fill** – *Variable fill material typically including well graded sand and gravel, poorly graded sand, silty sand and gravel, and some silt and clay. Commonly contains some metal, glass, brick, concrete, and other debris.*

- **Wood Fill** – *Mixed debris includes logs, boards, bark, chips, wood dust, planks, and pilings. Matrix material includes medium to fine, sand, silt, and clay mixtures. Matrix content is typically 0-20%.*

## TEST PIT LOCATIONS AND SOIL SAMPLING

Seventeen (17) test pits (A to Q) were excavated and sampled in May 2020 at the locations shown on Figure 3 using a Deere 310SL, extend-a-hoe with a 2-foot bucket, provided by Holt Services. Test pit locations were selected to provide a range of coverage over the site and soil samples with a range of lead concentrations (low to high) for TCLP testing, based on data in the Aspect 2018 draft RI/FS.

Test pit excavation depths ranged between eight (8) and ten (10) feet. As soils were exposed, they were described by Dave Cooper, Principal Geologist with DOF using ASTM D2488 as a general guide. Test pit logs are presented in Attachment A. Evidence of possible contamination was noted such as odors, sheens and the presence of debris. Field measurements were made for volatile vapors and metal concentrations as follows:

- **Volatile Vapors.** A portion of each sample was placed in a one-quart plastic bag. The probe of a Photoionization Detector (PID - MiniRAE 3000) was inserted into the head space of the bag and the measurement recorded (in parts per million on the test pit logs).
- **Metal Concentrations.** An Olympus DCC-2000 portable X-ray Fluorescence Analyzer (XRF) was used to analyze soil metal concentrations to evaluate the XRF for possible use as a screening tool during remedial excavation. The XRF data are summarized in attached Table 2. XRF lead concentrations are also summarized on the test pit logs.

Selected samples were placed into laboratory supplied 16-ounce glass containers for analysis of total and TCLP RCRA metals (barium, chromium, lead, silver, arsenic, cadmium, selenium and mercury). Samples were labeled and placed into chilled coolers for transport to Analytical Resources Inc. (ARI) in Tukwila, Washington. Sample handling was documented using standard chain-of-custody procedures. The chain-of-custody records are included with the laboratory reports in Attachment B.

## SOIL OBSERVATIONS

In general, shallow soils between the surface and one (1) to four (4) feet consisted of sand and gravelly sand with metal (wire, metal pieces including swarf – metal turnings) and other debris (glass, plastic, rubber, brick/fire brick, wood). Below shallow soil w/ debris, soils generally consisted of sand and gravelly sand to six (6) to eight (8) feet. At most locations wood debris was first encountered at depths from five (5) to eight (8) feet below ground surface. Other observations included the following:

- A white to blue-white precipitate was observed at a depth of up to 4.0 feet at TP-F, TP-G, TP-H, TP-L, and TP-O. The XRF measurements in these materials indicated a copper concentration greater than 1.3% (>13,000 mg/kg).
- Battery casings were encountered to a depth of ten (10) feet (bottom of pit) at TP-E. A shallow water level of 2.5 feet was observed that indicates the casings are present within a structure.
- Car parts and/or large metal scrap were encountered at TP-J and TP-K.

Groundwater seepage was only observed at locations TP-A (6-feet), TP-C (8-feet) and TP-D (7-foot). At other locations no groundwater seepage was observed to depths of approximately 8-feet at the time/duration of excavation.

## LABORATORY ANALYSES AND RESULTS

ARI analyzed selected soil samples for total and TCLP RCRA metals using the following methods:

- Total barium, lead, chromium, silver – EPA Method 6020A
- Total arsenic, cadmium, selenium – EPA Method 6020A UCT-KED
- Total mercury – EPA Method 7471B
- TCLP arsenic, barium, cadmium, chromium, lead, selenium, silver – EPA 6010C
- TCLP mercury – EPA 7470A

The results are summarized in attached Table 3.

The need to test soil using the TCLP is based on a set of threshold concentration criteria provided by the disposal facilities based on state and federal regulations. These criteria are summarized below in Table 4, along with the highest detected total metal concentration. Based on total metal concentrations, barium, silver, arsenic, and selenium would not require TCLP testing for disposal purposes, but chromium, lead, cadmium and mercury would require such testing.

**Table 4 – Total and Threshold Concentrations (for TCLP testing)**

| RCRA Metal | Testing Threshold Conc. (mg/kg) | Highest Total Conc. (mg/kg) | Require TCLP Testing |
|------------|---------------------------------|-----------------------------|----------------------|
| Barium     | 2000                            | 1920                        | No                   |
| Chromium   | 100                             | 1460                        | Yes                  |
| Lead       | 100                             | 6700                        | Yes                  |
| Silver     | 100                             | 37.3                        | No                   |
| Arsenic    | 100                             | 69.8                        | No                   |
| Cadmium    | 20                              | 82                          | Yes                  |
| Selenium   | 20                              | 10.7                        | No                   |
| Mercury    | 4                               | 47.1                        | Yes                  |

TCLP threshold criteria to designate as characteristic DW are summarized in attached Table 3, along with the TCLP testing results. Most samples were tested for TCLP lead and cadmium, and five (5) samples were tested for all eight (8) RCRA metals. TCLP testing indicates that barium, chromium, silver, arsenic, cadmium, selenium and mercury soil concentrations would not designate as characteristic DW. However, the TCLP lead designation criterion (5 mg/l) was exceeded in most of the soil samples tested.

Figure 3 shows the locations, sample depths and results for soil samples collected and analyzed in 2001 (K/J) and 2020 (DOF). The 2001 data are summarized in Attachment D. Figure 4 shows a plot of total lead vs. TCLP lead. The 2020 TCLP test results are similar to the 2001 results with TCLP concentrations generally increasing with the concentration of total lead. There is a substantial amount of variability in the data which indicates different forms of lead with differing solubilities under the TCLP test conditions are present at the site. The plot suggests that soils with lead concentrations greater than approximately 500 to 1000 mg/kg would generally designate as DW.

## FIELD XRF TEST RESULTS

Attached Table 2 provides a summary of laboratory and field (portable) XRF total metals concentration data. A portable XRF analyzer was used during the May 2020 test pit sampling to assess how its use could increase the efficiency of future soil remediation. Data presented in the June 2018 Aspect RI/FS indicates lead likely will be the primary remedial driver. Therefore, the following discussion focuses on lead.

Figure 5 shows two plots of XRF vs. laboratory lead data. The upper plot includes all data. The plot indicates no apparent difference in how the XRF responds to soil in the paved and unpaved areas of the site. In general, the XRF shows a good correspondence with the laboratory data to approximately 4,500 mg/kg total lead. Samples with laboratory lead concentrations above 6,000 mg/kg appear to saturate the instruments detector and provide unreliable measurements.

The lower plot shows XRF and laboratory lead concentrations for laboratory concentrations less than 5,000 mg/kg. There is a high correlation ( $R=0.96$ ) and a line fit plot accounts for approximately 92% ( $R^2=0.92$ ) of the variability. The data indicate the XRF reads low as an XRF measurement of 1,500 mg/kg would equate to approximately 2,000 mg/kg lead in a laboratory analysis. Accounting for the variability in the samples:

- **Paved Area** - An XRF measurement of approximately 1,000 mg/kg or higher would indicate that the sample could be above the paved area RL of 2,000 mg/kg.
- **Unpaved Area** - An XRF measurement of higher than 50 to 100 mg/kg would indicate that the sample could be above the paved area CUL of 118 mg/kg. Note that the CUL in the unpaved area is applied using the three criteria in WAC 173-340-745(8).

Information developed during the May 2020 test pit sampling indicates that the XRF would be a reliable field screening instrument to assist in making field decisions as to the extent and depth of remedial excavations, especially in the paved area with an RL of 2,000 mg/kg. The XRF field measurements would need to be confirmed using laboratory analyses.

## BENCH-SCALE TREATABILITY TESTING

TCLP testing indicates that a substantial portion of target soil on the former Tacoma Metals Site would designate as a hazardous/dangerous waste (DW) because of lead and needs to be handled accordingly. Bench-scale stabilization<sup>i</sup> testing was completed as outlined in the Ecology approved TCLP Testing Plan (DOF 2020).

Samples with high TCLP leachable lead concentrations were sent to The TDJ Group, Inc., Barrington, IL for bench scale testing using Blastox 215, a calcium silicate-based additive for stabilizing metals in soil. Technical data for Blastox 215 is included in Attachment C. Soil samples from test pits “B” and “P” were sent to TDJ for bench-scale testing. The sample from TP-B had TCLP leachable lead of 111 mg/l (DOF) and 5.5 mg/l (TDJ), while the sample from TP-P had a TCLP leachable concentration of 61.2 mg/l (DOF) and 160 mg/l (TDJ).

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<sup>i</sup> Stabilization chemically limits the hazard potential of dangerous waste by converting the constituents into less soluble form.

The bench-scale results are presented in Attachment C (TDJ letter to DOF). TDJ treated sample B with 4% Blastox (by weight) and sample P with 3% Blastox. Post-treatment TCLP testing concentrations were well below the DW threshold (5 mg/L); TP-B – 0.066 mg/l and TP-P – not detected (<0.05 mg/l). Bench-scale testing indicates that Blastox could be used to treat soil on-site to below DW threshold values so treated soil could be disposed at a Subtitle D landfill facility.

## **CLOSING**

The services described in this memorandum were performed consistent with generally accepted professional consulting principles and practices. No other warranty, expressed or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this document.

## **REFERENCES**

Aspect (Aspect Consulting), 2018, Revised Draft, Remedial Investigation and Feasibility Study, Tacoma Metals, Inc. Site, Prepared for Estate of Sophie Sussman; June 22, 2018.

DOF (Dalton, Olmsted Fuglevand, Inc.), 2020, TCLP Testing Plan, Tacoma Metals, Inc. Site, Tacoma, Washington; May 13, 2020.

K/J (Kennedy/Jenks Consultants), 2014, Revised Augmented Remedial Investigation and Feasibility Study Report, Former Tacoma Metals Site, Tacoma, Washington; prepared for Portland Avenue Associates, LLC; September 2014.

## **Attachments**

Table 2 – Soil Total Metals Data (Lab. v. XRF) – May 2020

Table 3 – Soil Metals TCLP Data – May 2020

Figure 1 – Historical Operations

Figure 2 – Extent of Metals Exceedances in Soil

Figure 3 – TCLP Test Pit Locations and Lead Conc.

Figure 4 – Total vs. TCLP Lead

Attachment A – May 2020 Test Pit Logs

Attachment B – Laboratory Reports – May 2020 Test Pit Sampling

Attachment C – Bench-Scale Treatability Test Results

Attachment D – 2001 TCLP Test Results

**TABLE 2 - Soil Total Metals Data (Lab. v. XRF) - May 2020**

Former Tacoma Metals Site  
Tacoma, WA

| Location          | Depth (ft) | Barium (mg/kg) |       | Chromium (mg/kg) |       | Lead (mg/kg) |       | Silver (mg/kg) |       | Arsenic (mg/kg) |       | Cadmium (mg/kg) |       | Selenium (mg/kg) |       | Mercury (mg/kg) |       |
|-------------------|------------|----------------|-------|------------------|-------|--------------|-------|----------------|-------|-----------------|-------|-----------------|-------|------------------|-------|-----------------|-------|
|                   |            | Lab.           | XRF   | Lab.             | XRF   | Lab.         | XRF   | Lab.           | XRF   | Lab.            | XRF   | Lab.            | XRF   | Lab.             | XRF   | Lab.            | XRF   |
| Testing Threshold |            | 2000           | ----- | 100              | ----- | 100          | ----- | 100            | ----- | 100             | ----- | 20              | ----- | 20               | ----- | 4               | ----- |
| TP-A              | 0-0.8      | 297            | nd    | 59               | 125   | 1130         | 753   | 4.29           | nd    | 28.5            | 40    | 12.7            | nd    | 2.02             | nd    | 1.4             | nd    |
| TP-G              | 0-2.5      | 494            | 573   | 382              | 537   | 3800         | 3499  | 37.3           | 44    | 6.53            | 108   | 69.2            | 78    | 5.6              | 8.1   | 5.02            | nd    |
| TP-H              | 0.5-2      | 334            | nd    | 1460             | 1108  | 6640         | 2318  | 32.3           | 30    | 7.49            | 56    | 28.4            | 38    | 2.81             | 6.9   | 7.85            | 12    |
| TP-M              | 0-1.2      | 1270           | 1034  | 140              | 492   | 2790         | 2183  | 1.43           | nd    | 33.7            | 92    | 52.7            | 29    | 2.52             | 28    | 3.04            | nd    |
| TP-B              | 0-0.8      | 587            | nd    | 118              | 234   | 1870         | 1182  | 1.26           | nd    | 46.1            | 101   | 27.8            | nd    | 1.98             | nd    | 1.91            | nd    |
| TP-B              | 2-3        | nt             | 521   | nt               | nd    | 71.1         | 50    | nt             | nd    | nt              | nd    | 0.18            | nd    | nt               | nd    | nt              | nd    |
| TP-C              | 0.3-1.3    | 1340           | 1233  | 143              | 232   | 2740         | 1503  | 4.78           | nd    | 33.1            | 66    | 82              | 86    | 10.5             | 14.4  | 3.75            | nd    |
| TP-D              | 0.5-1.5    | 1920           | 391   | 71.8             | 175   | 1430         | 1067  | 0.91           | nd    | 20.2            | 54    | 39.3            | nd    | 3.26             | 3.7   | 0.573           | nd    |
| TP-E              | 0-2        | 1200           | 647   | 122              | 263   | 6700         | 2385  | 1.61           | nd    | 30.5            | 67    | 51.9            | nd    | 2.17             | nd    | 2.36            | nd    |
| TP-F              | 2.5-3.5    | 267            | nd    | 48.6             | 134   | 1240         | 639   | 1.27           | nd    | 9.89            | 19    | 8.69            | nd    | 3.48             | nd    | 1.09            | nd    |
| TP-I              | 1-2        | 666            | 1096  | 64.5             | 178   | 1780         | 1598  | 1.41           | nd    | 14.7            | 30    | 17.6            | nd    | 2.9              | 7.1   | 1.31            | nd    |
| TP-I              | 2-3        | nt             | nd    | nt               | nd    | 148          | 120   | nt             | nd    | nt              | 13    | 3.31            | nd    | nt               | nd    | nt              | nd    |
| TP-J              | 0.5-1.5    | 1470           | 1254  | 124              | 243   | 3900         | 2296  | 2.84           | nd    | 32.7            | 81    | 49.3            | nd    | 3.64             | nd    | 3.04            | nd    |
| TP-J              | 2-3        | nt             | nd    | nt               | nd    | 1070         | 444   | nt             | nd    | nt              | 46    | 12.3            | nd    | nt               | nd    | 0.513           | nd    |
| TP-K              | 1.5-3.5    | 1360           | 1294  | 69.3             | 175   | 2950         | 2228  | 1.08           | nd    | 38.4            | nd    | 23.5            | 48    | 1.76             | nd    | 1.35            | nd    |
| TP-L              | 0.4-1.4    | 1540           | nd    | 217              | 1835  | 4530         | 3313  | 3.79           | nd    | 37.1            | 148   | 38              | nd    | 1.76             | nd    | 9.52            | nd    |
| TP-N              | 0.3-1.3    | 121            | nd    | 41.7             | 44    | 264          | 358   | 0.26           | nd    | 6.58            | 12    | 3.39            | nd    | 1.21             | nd    | 6.13            | 8.5   |
| TP-O              | 1-3        | 1090           | 587   | 141              | 251   | 6100         | 2543  | 2.19           | nd    | 49.3            | 84    | 26.7            | nd    | 2.78             | nd    | 47.1            | 37    |
| TP-P              | 0.5-3      | 671            | nd    | 170              | 363   | 4200         | 3154  | 1.71           | nd    | 52.1            | 149   | 21.1            | nd    | 10.7             | nd    | 9.01            | 14    |
| TP-Q              | 1.5-3      | 875            | nd    | 203              | 942   | 3340         | 2737  | 2.84           | nd    | 69.8            | 106   | 45.4            | nd    | 2.05             | nd    | 16.1            | 34    |

nt - Not tested

nd - Not detected using XRF

 - Exceeds TCLP testing threshold concentration (TCLP testing required for disposal)

 - Sample from unpaved area

 - Sample from paved area

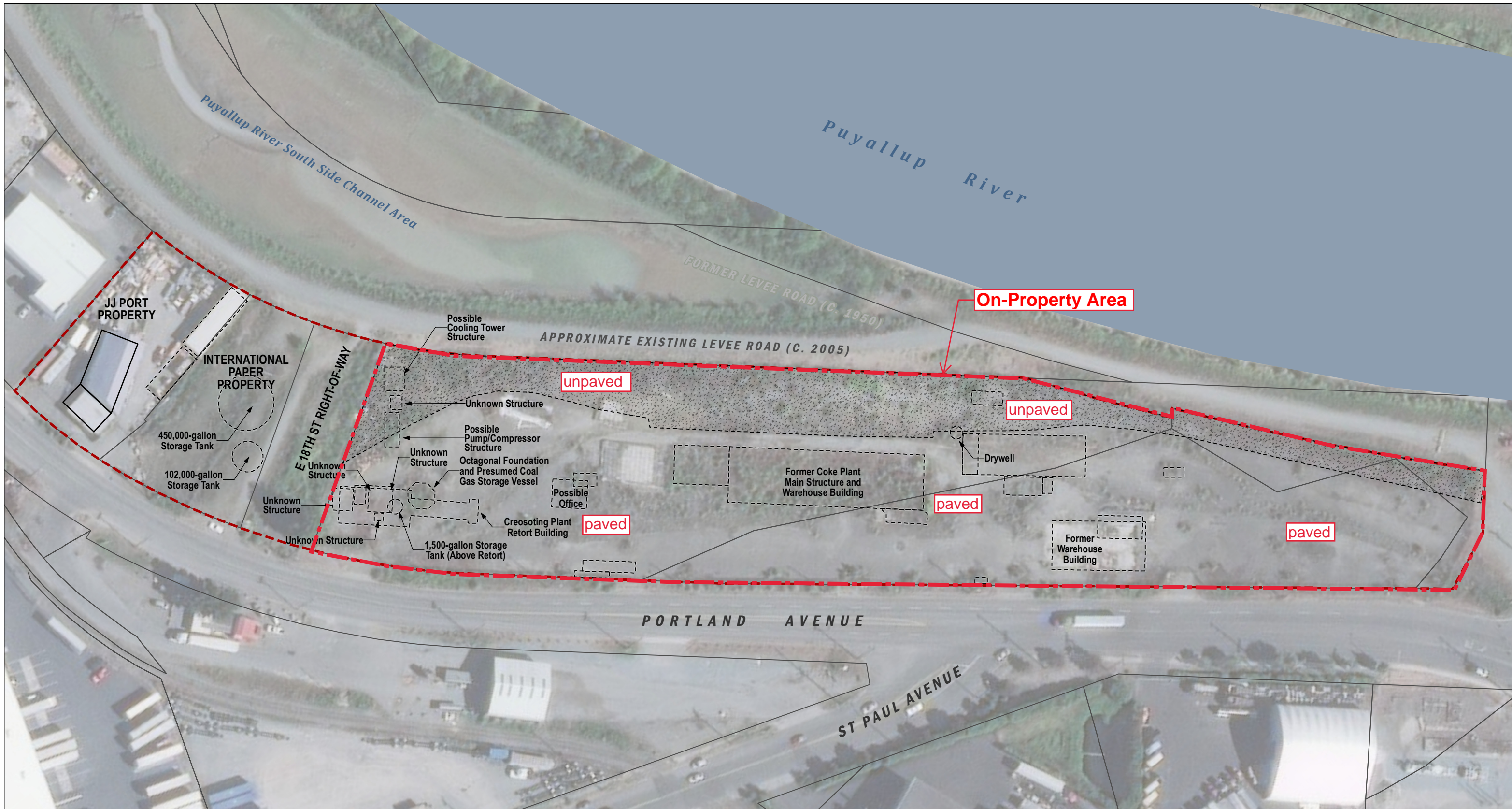
**TABLE 3 - Soil Metals TCLP Data - May 2020**

Former Tacoma Metals Site  
Tacoma, WA

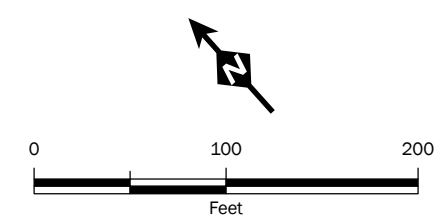
| Location              | Depth (ft) | Barium |       | Chromium |       | Lead  |       | Silver |       | Arsenic |       | Cadmium |       | Selenium |       | Mercury |         |
|-----------------------|------------|--------|-------|----------|-------|-------|-------|--------|-------|---------|-------|---------|-------|----------|-------|---------|---------|
|                       |            | Lab.   | TCLP  | Lab.     | TCLP  | Lab.  | TCLP  | Lab.   | TCLP  | Lab.    | TCLP  | Lab.    | TCLP  | Lab.     | TCLP  | Lab.    | TCLP    |
|                       |            | mg/kg  | mg/l  | mg/kg    | mg/l  | mg/kg | mg/l  | mg/kg  | mg/l  | mg/kg   | mg/l  | mg/kg   | mg/l  | mg/kg    | mg/l  | mg/kg   | mg/l    |
| Testing/DW Threshold  |            | 2000   | <100  | 100      | <5    | 100   | <5    | 100    | <1    | 100     | <5    | 20      | <1    | 20       | <1    | 4       | <0.2    |
| TP-A                  | 0-0.8      | 297    | ----- | 59       | ----- | 1130  | 1.3   | 4.3    | ----- | 28.5    | ----- | 12.7    | 0.08  | 2.0      | ----- | 1.4     | -----   |
| TP-B                  | 0-0.8      | 587    | ----- | 118      | ----- | 1870  | 111   | 1.3    | ----- | 46.1    | ----- | 27.8    | 0.25  | 2.0      | ----- | 1.9     | -----   |
| TP-B                  | 2-3        | -----  | ----- | -----    | ----- | 71.1  | ----- | -----  | ----- | -----   | ----- | 0.18    | ----- | -----    | ----- | -----   | -----   |
| TP-C                  | 0.3-1.3    | 1340   | ----- | 143      | ----- | 2740  | 15.0  | 4.8    | ----- | 33.1    | ----- | 82      | 0.94  | 10.5     | ----- | 3.75    | -----   |
| TP-D                  | 0.5-1.5    | 1920   | ----- | 71.8     | ----- | 1430  | 19.7  | 0.91   | ----- | 20.2    | ----- | 39.3    | 0.49  | 3.3      | ----- | 0.57    | -----   |
| TP-E                  | 0-2        | 1200   | 4.3   | 122      | 0.01  | 6700  | 54.2  | 1.6    | <0.02 | 30.5    | 0.05  | 51.9    | 0.78  | 2.2      | <0.25 | 2.36    | <0.0001 |
| TP-F                  | 2.5-3.5    | 267    | ----- | 48.6     | ----- | 1240  | 85.8  | 1.3    | ----- | 9.89    | ----- | 8.69    | 0.22  | 3.5      | ----- | 1.09    | -----   |
| TP-G                  | 0-2.5      | 494    | ----- | 382      | ----- | 3800  | 57.2  | 37.3   | ----- | 6.53    | ----- | 69.2    | 0.57  | 5.6      | ----- | 5.02    | -----   |
| TP-H                  | 0.5-2      | 334    | 5.5   | 1460     | 0.02  | 6640  | 70.4  | 32.3   | <0.02 | 7.49    | 0.02  | 28.4    | 0.19  | 2.8      | <0.25 | 7.85    | 0.0001  |
| TP-I                  | 1-2        | 666    | ----- | 64.5     | ----- | 1780  | 5.4   | 1.4    | ----- | 14.7    | ----- | 17.6    | 0.32  | 2.9      | ----- | 1.31    | -----   |
| TP-I                  | 2-3        | -----  | ----- | -----    | ----- | 148   | ----- | -----  | ----- | -----   | ----- | 3.31    | ----- | -----    | ----- | -----   | -----   |
| TP-J                  | 0.5-1.5    | 1470   | ----- | 124      | ----- | 3900  | 49.8  | 2.8    | ----- | 32.7    | ----- | 49.3    | 0.97  | 3.6      | ----- | 3.04    | -----   |
| TP-J                  | 2-3        | -----  | ----- | -----    | ----- | 1070  | 9.9   | -----  | ----- | -----   | ----- | 12.3    | 0.14  | -----    | ----- | 0.513   | -----   |
| TP-K                  | 1.5-3.5    | 1360   | ----- | 69.3     | ----- | 2950  | 10.6  | 1.1    | ----- | 38.4    | ----- | 23.5    | 0.50  | 1.8      | ----- | 1.35    | -----   |
| TP-L                  | 0.4-1.4    | 1540   | 2.0   | 217      | 0.02  | 4530  | 60.3  | 3.8    | <0.02 | 37.1    | 0.06  | 38      | 0.59  | 1.8      | <0.25 | 9.52    | 0.00002 |
| TP-M                  | 0-1.2      | 1270   | ----- | 140      | ----- | 2790  | 11.3  | 1.4    | ----- | 33.7    | ----- | 52.7    | 0.44  | 2.5      | ----- | 3.04    | -----   |
| TP-N                  | 0.3-1.3    | 121    | ----- | 41.7     | ----- | 264   | 0.97  | 0.26   | ----- | 6.58    | ----- | 3.39    | 0.08  | 1.2      | ----- | 6.13    | -----   |
| TP-O                  | 1-3        | 1090   | 2.8   | 141      | 0.02  | 6100  | 4.8   | 2.2    | <0.02 | 49.3    | 0.04  | 26.7    | 0.39  | 2.8      | <0.25 | 47.1    | 0.00015 |
| TP-P                  | 0.5-3      | 671    | 2.3   | 170      | 0.02  | 4200  | 61.2  | 1.7    | <0.02 | 52.1    | 0.06  | 21.1    | 0.47  | 10.7     | <0.25 | 9.01    | 0.00004 |
| TP-Q                  | 1.5-3      | 875    | ----- | 203      | ----- | 3340  | 26.4  | 2.8    | ----- | 69.8    | ----- | 45.4    | 0.68  | 2.1      | ----- | 16.1    | -----   |
| Highest Concentration |            | 1920   | 5.5   | 1460     | 0.02  | 6700  | 111   | 37.3   | 0.015 | 69.8    | 0.06  | 82      | 0.97  | 10.7     | 0.25  | 47.1    | 0.00015 |

Would not require TCLP test based on total metal concentration or did not exceed TCLP threshold DW value.  
 Would require TCLP Test based on total metal concentration.  
 Exceeded TCLP DW threshold value.  
 DW - Dangerous Waste





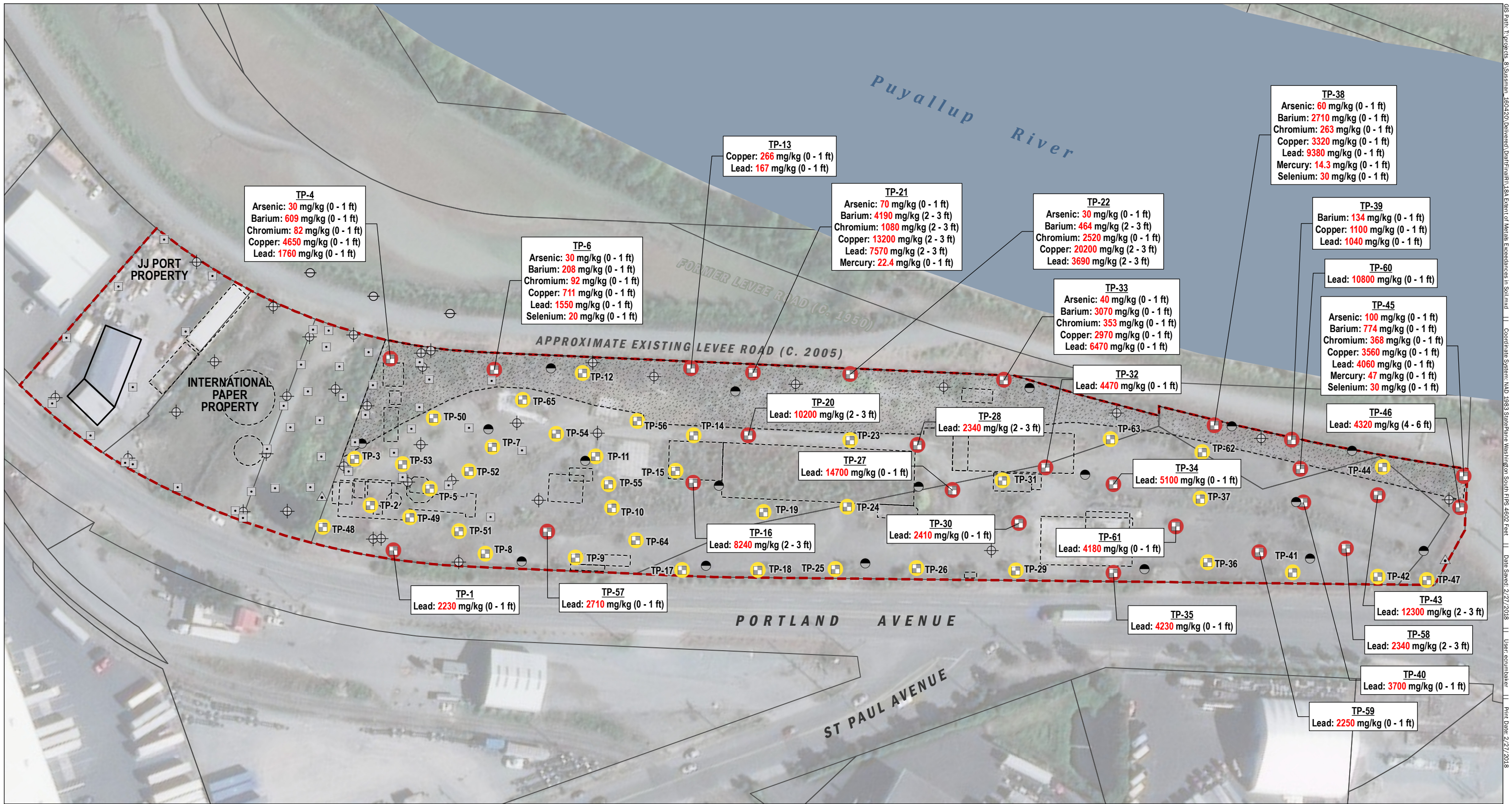
- Historic Structure
- Historic Unpaved Area
- Existing Structure
- Site Boundary
- Pierce County Parcels



**Historical Operations**  
 Revised Draft Remedial Investigation/Feasibility Study  
 Tacoma Metals, Inc. Site  
 Tacoma, Washington

**DOF - FIGURE 1 - March 2020**

|  |                          |                    |                        |
|--|--------------------------|--------------------|------------------------|
|  | FEB-2018                 | BY:<br>ACG / EAC   | FIGURE NO.<br><b>3</b> |
|  | PROJECT NO.<br>160420-03 | REVISED BY:<br>--- |                        |



Location Name

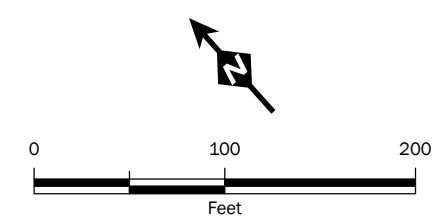
Result

Depth

**TP-13**  
Copper: 266 mg/kg (0 - 1 ft)  
Lead: 167 mg/kg (0 - 1 ft)

Monitoring Well  
Piezometer  
Reconnaissance Groundwater Sample  
Soil Boring  
Surface Water

- Test Pit
- Metals Detected at Concentrations Less than the Cleanup Level.
- Metals Detected at Concentrations Greater than the Cleanup Level.
- Historic Unpaved Area
- Existing Structure
- Site Boundary
- Pierce County Parcels
- Historic Structure

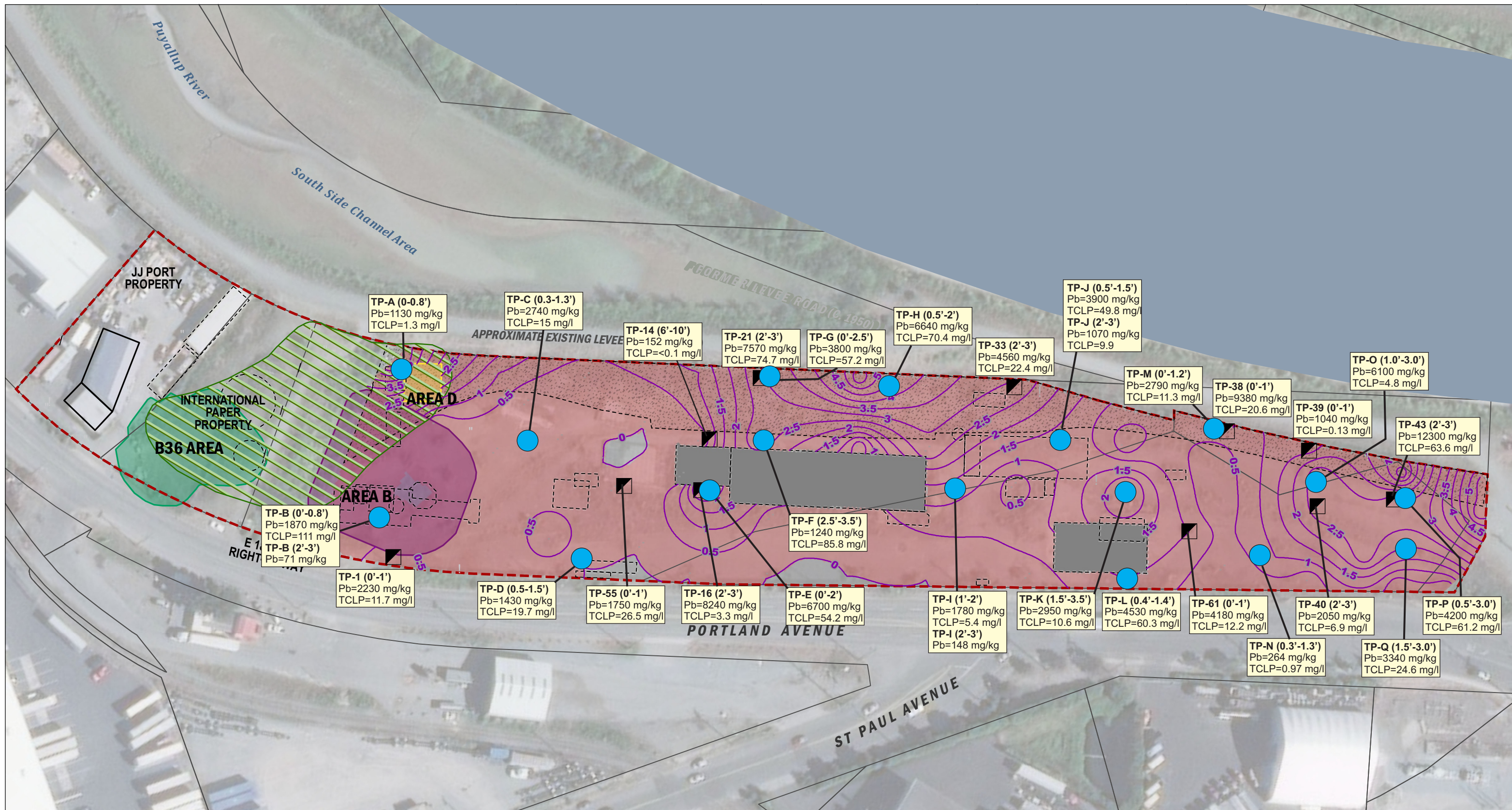


**Extent of Metals Exceedances in Soil**  
Revised Draft Remedial Investigation/Feasibility Study  
Tacoma Metals, Inc. Site  
Tacoma, Washington

**DOF - FIGURE 2 - March 2020**

|                      |                          |                    |                          |
|----------------------|--------------------------|--------------------|--------------------------|
| Aspect<br>CONSULTING | FEB-2018                 | BY:<br>ACG / EAC   | FIGURE NO.<br><b>18A</b> |
|                      | PROJECT NO.<br>160420-03 | REVISED BY:<br>RAP |                          |

GIS Path: T:\projects\_8\Sussman\_160420\Deliverables\Final\Final\Figure 18A Extent of Metals Exceedances in Soil.mxd | Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet | Date Saved: 2/27/2018 | User: ecumbaker | Print Date: 2/27/2018

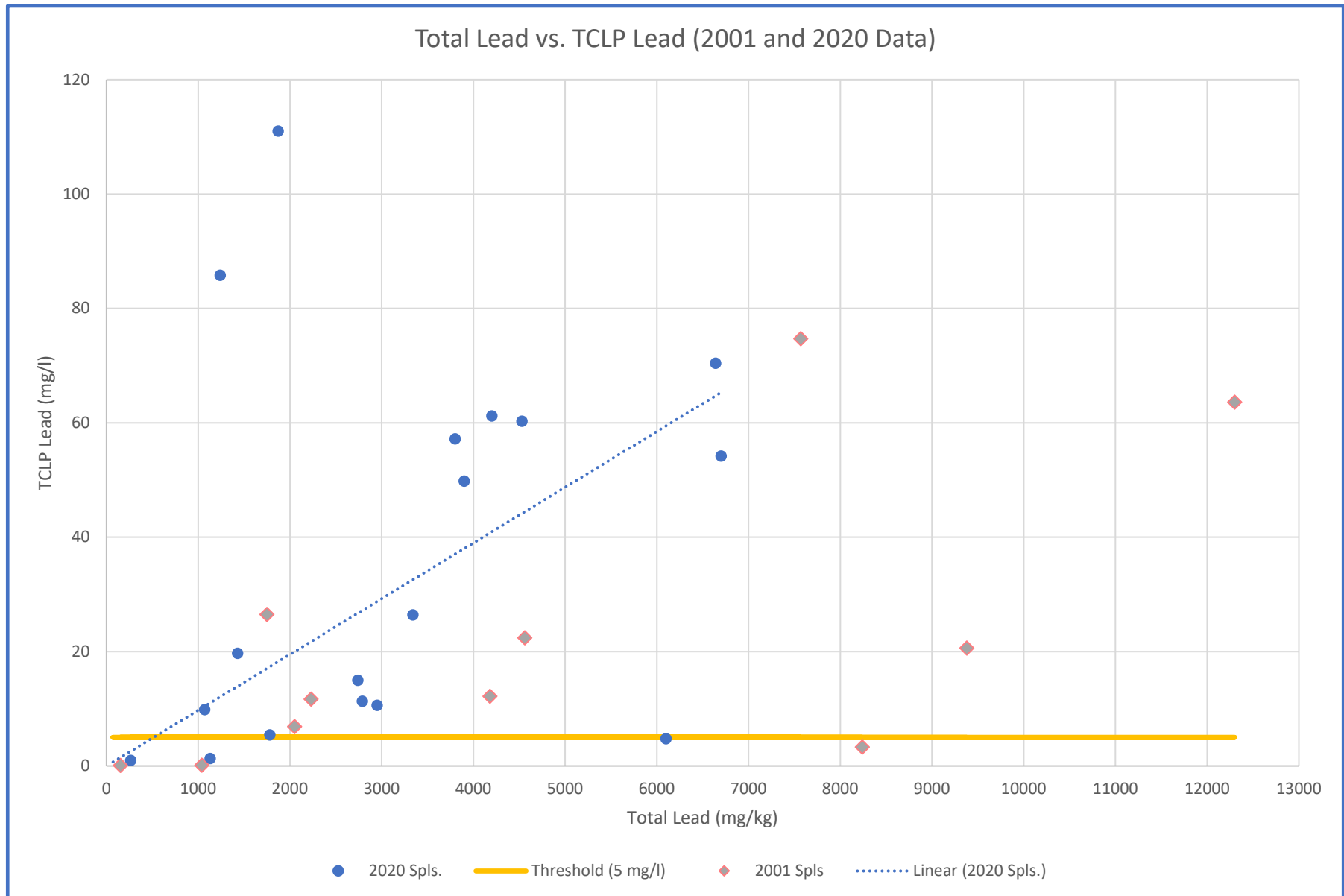


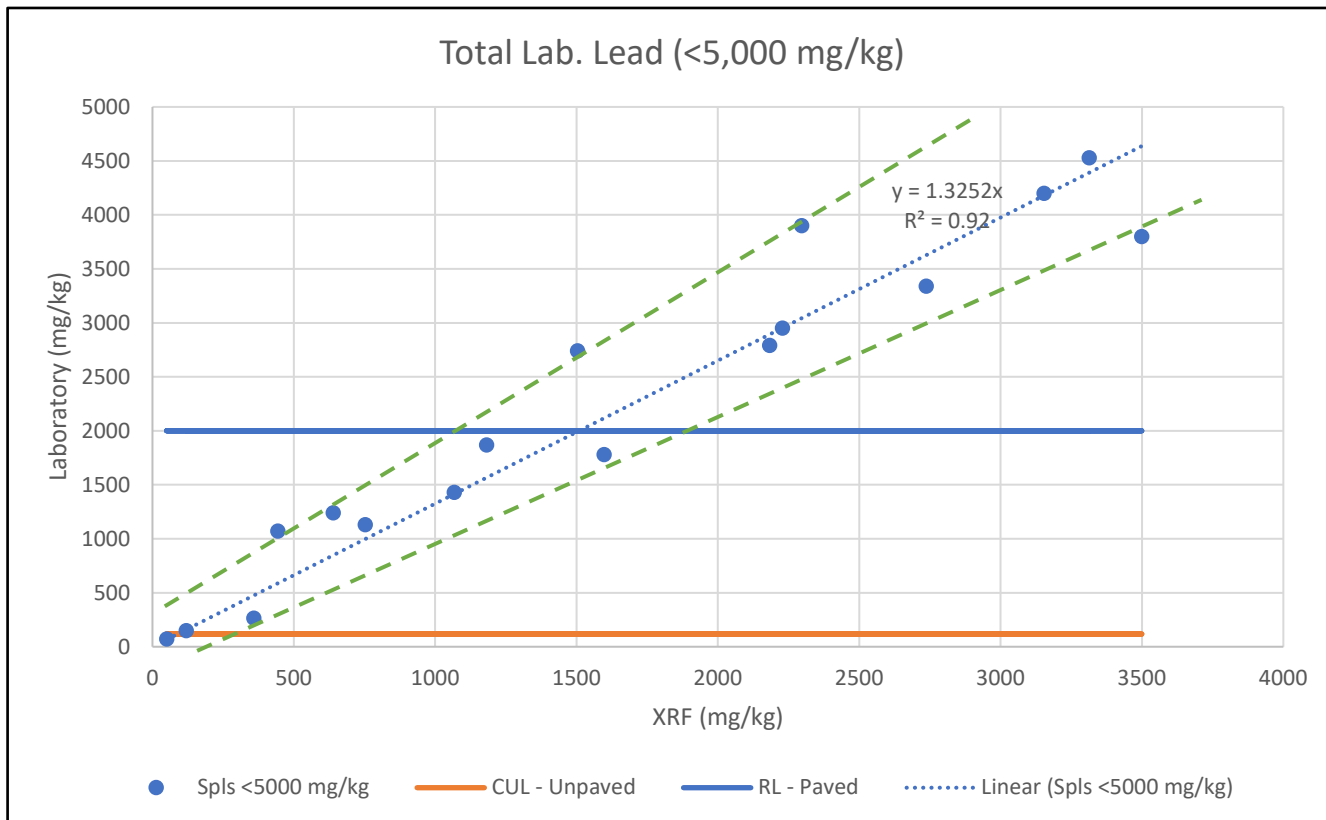
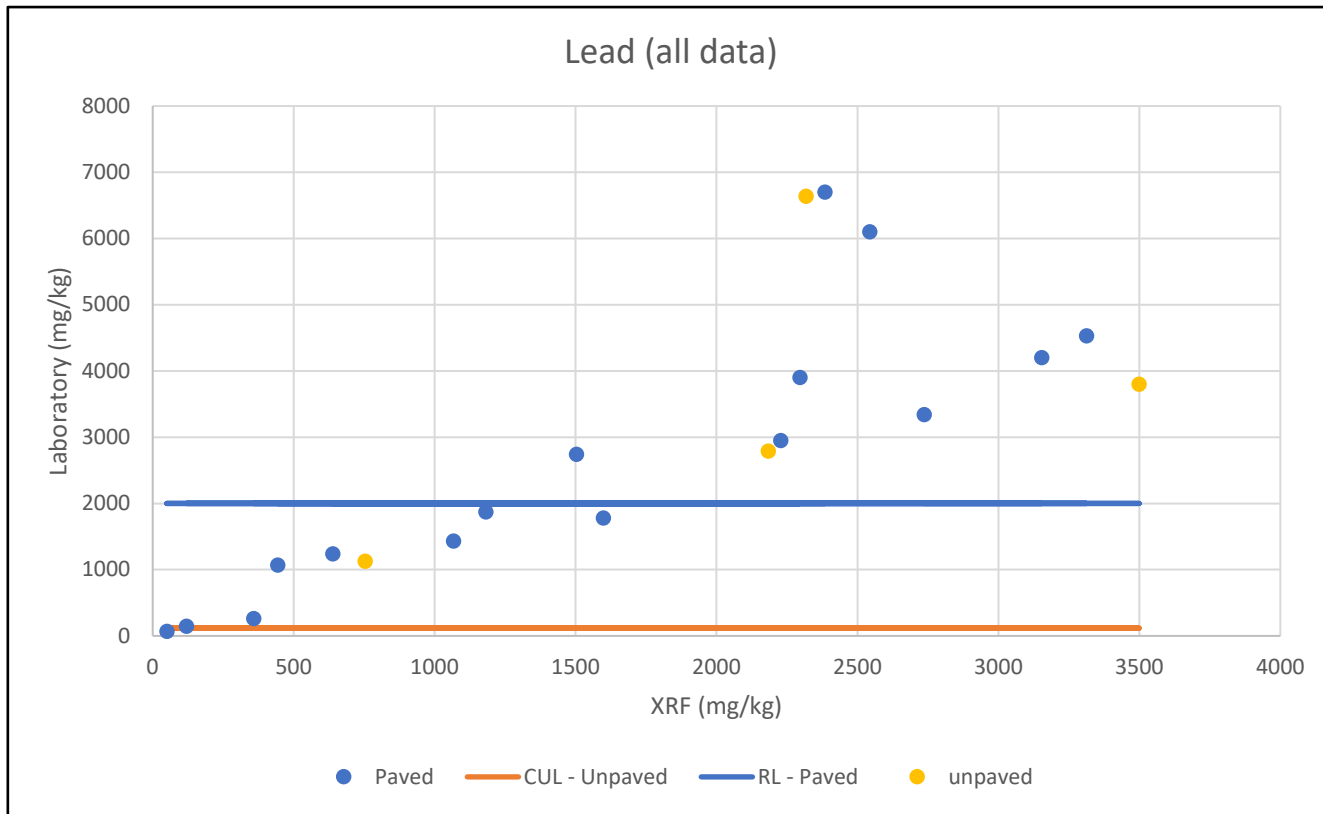
|   |   |  |  |  |
|---|---|--|--|--|
| <p>Estimated Excavation Depth (0.5' contours)</p> <p>Total cPAHs and Naphthalene Extent at or Below Water Table</p> <p>TPH DRO/ORO Extent at or Below Water Table</p> | <p>2020 Test Pit Location w/ TCLP Test</p> <p>2001 Sample Location w/ TCLP Test</p> <p>Sample Designation and Depth (ft)</p> <p>Pb=2230 mg/kg—Total Lead Concentration (mg/kg)</p> <p>TCLP=11.7 mg/l—TCLP Lead Concentration (mg/l)</p> | <p>Historic Unpaved Area</p> <p>Historic Structure</p> <p>Existing Structure</p> <p>Pierce County Parcels</p> <p>Area of Soil to Remove</p> <p>No Soil to Remove</p> | <p>Site Boundary</p> <p><b>Interim Action Areas (AECOM, 2017)</b></p> <p>Area B In Situ Solidification</p> <p>Area D In Situ Solidification</p> <p>B36 Area In Situ Solidification</p> | <p>Source: AECOM. Final Interim Action Work Plan In Situ Soil Solidification. November 17, 2017.</p> <p>0 100 200 Feet</p> |
|---|---|--|--|--|

**TCLP Test Pit Locations and Lead Conc.**  
**Preferred Remedial Alternative**  
 Revised Draft Remedial Investigation/Feasibility Study  
 Tacoma Metals, Inc. Site  
 Tacoma, Washington  
**DOF - FIGURE 3 - July 2020**

|  |                       |                 |                         |
|--|-----------------------|-----------------|-------------------------|
|  | JUN-2018              | BY: ACG / EAC   | FIGURE NO.<br><b>20</b> |
|  | PROJECT NO. 160420-03 | REVISED BY: RAP |                         |

GIS Path: I:\projects\_8\stusman\_160420\Delivered\Final\20 Preferred Remedial Alternative.mxd | Coordinate System: NAD 1983 StatePlane Washington South FIPS 4602 Feet | Date Saved: 6/6/2018 | User: eunshaher | Print Date: 6/6/2018





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**ATTACHMENT A  
MAY 2020 TEST PIT LOGS**

**Tacoma Metals Site  
Tacoma, Washington**

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**TEST PIT LOG**

TEST PIT NO. **TP-A**

Location: Former Tacoma Metals N 705407 E 1163969 (NAD83)

Date: 5/19/2020

Contractor: HOLT - Deere 310SL Extend-a-hoe w/2' bucket

Logged By: D. Cooper

Weather: Cloudy 55F

Reviewed By: M. Dalton

| Depth Ft. | Sample Number | Odors or Sheens | PID (ppm) | XRF Pb (ppm) | USC | Visual Description  |
|-----------|---------------|-----------------|-----------|--------------|-----|---|
| _1        | TP-A_0-0.8    | NO/NS           | 0         | 753<br>785   | SP  | 0-0.8' Loose, damp, mottled dark brown, gravelly, SAND, with silt - 5% metal, wood debris |
| _2        | TP-A_1-2      | NO/NS           | 0         | 9.4<br>98    |     | 0.8-1.8' Loose, moist, light brown, gravelly, SAND with silt, no debris                   |
| _3        |               | NO/NS           | 0         | 26           |     | 1.8-3.4' Loose, moist, gray, Fine to medium SAND no debris                                |
| _4        |               | NO/NS           | 0         | 119          | SM  | 3.4-5.5' Loose, wet, dark brown, silty, SAND, with organics                               |
| _5        |               | NO/NS           | 0.4       | 8            |     |   |
| _6        |               | SO/MS           | 1.5       | 52           | O   | 5.5-7.0' Loose, wet, dark brown, WOODY DEBRIS strong creosote odor, medium sheen          |
| _7        |               |                 |           |              |     |   |
| _8        |               |                 |           |              |     | Bottom of exploration 7 feet  |
| _9        |               |                 |           |              |     |   |
| _10       |               |                 |           |              |     |   |

Key USC - Unified Soil Classification PID - Photoionization detector soil headspace reading in parts per million  
NO/NS - No odor No sheen XRF Pb - Lead concentration using Olympus DCC-2000 XRF

**SEEPAGE / STABILITY OBSERVATIONS**

Groundwater Seepage @ 6'  
Calving of Sidewalls above 6'

**PHOTOGRAPH**



**TEST PIT LOG**

TEST PIT NO. **TP-B**

Location: Former Tacoma Metals N 705316 E 1163873 (NAD83)

Date: 5/19/2020

Contractor: HOLT - Deere 310SL Extend-a-hoe w/2' bucket

Logged By: D. Cooper

Weather: Cloudy 55F

Reviewed By: M. Dalton

| Depth Ft. | Sample Number | Odors or Sheens | PID (ppm) | XRF-Pb (ppm) | USC                  | Visual Description   |
|-----------|---------------|-----------------|-----------|--------------|----------------------|--|
| 1         | TP-B_0-0.8    | NO/NS           | 0         | 1182<br>1431 | SP<br>with<br>Debris | 0-0.8' Loose, damp, mottled dark brown, gravelly, SAND, with silt - 10% metal, wood debris |
| 2         | TP-B_2-1      | NO/NS           | 0         | 8.2          |                      | 0.8-2.0' Loose, moist, light brown, gravelly, SAND with silt, wood at 2'                   |
| 3         |               | NO/NS           | 0         | 50<br>116    |                      | 2.0-3.0' Loose, moist, gray, Fine to medium SAND mixed fine debris, organics               |
| 4         |               | NO/NS           | 0         | 7.5          | SM                   | 3.0-6.0' M Dense, wet, brown, silty, SAND, with trace gravel, mixed fine debris, organics  |
| 5         |               | NO/NS           | 0         | 20           |                      |  |
| 6         |               | NO/NS           | 0         | 20.6         |                      |  |
| 7         |               |                 |           |              | O                    | 6.0-8.0' Loose, wet, dark brown, WOODY DEBRIS  |
| 8         |               |                 |           |              |                      |  |
| 9         |               |                 |           |              |                      | Bottom of exploration 8 feet   |
| 10        |               |                 |           |              |                      |  |

Key USC - Unified Soil Classification PID - Photoionization detector soil headspace reading in parts per million  
NO/NS - No odor No sheen XRF Pb - Lead concentration using Olympus DCC-2000 XRF

**SEEPAGE / STABILITY OBSERVATIONS**

No Groundwater Seepage  
No Sidewall Caving

**PHOTOGRAPH**





**TEST PIT LOG**

TEST PIT NO. **TP-C**  
Date: 5/19/2020  
Logged By: D. Cooper  
Reviewed By: M. Dalton

Location: Former Tacoma Metals N 705264 E 1164028 (NAD83)  
Contractor: HOLT - Deere 310SL Extend-a-hoe w/2' bucket  
Weather: Cloudy 55F

| Depth Ft. | Sample Number | Odors or Sheens | PID (ppm) | XRF-Pb (ppm) | USC                  | Visual Description  |
|-----------|---------------|-----------------|-----------|--------------|----------------------|---|
| 1         | TP-C_0.3-1.3  | NO/NS           | 0         | 1503<br>2235 | SP<br>with<br>Debris | 0-0.3 - Asphalt Concrete  |
| 2         |               | NO/NS           | 0         | <7           |                      | 0.3-1.3' Loose, moist, dark brown, gravelly, SAND, with silt - 10% metal, glass, plastic, wood debris |
| 3         |               | NO/NS           | 0         | <6           |                      | 1.3-2.0' Loose, moist, light brown, gravelly, SAND with trace silt, no debris                         |
| 4         |               | NO/NS           | 0         | 34           |                      | 2.0-3.0' Medium dense, wet, gray-blue, gravelly, SAND, with trace silt, no debris                     |
|           | TP-C_3-4      |                 |           | 13           |                      | 3.0-4.0' Loose, moist, gray-brown, gravelly, SAND, with trace silt, mixed fine debris, ash, brick     |
| 5         |               | NO/NS           | 0         | 9            | SM                   | 4.0-6.0' M Dense, wet, dark brown, silty, SAND  |
| 6         |               | NO/NS           | 0         | 4.8          |                      |   |
| 7         |               |                 |           |              | O                    | 6.0-8.0' Loose, wet, dark brown, WOODY DEBRIS decomposed, 1-2' chunks                                 |
| 8         |               |                 |           |              |                      |   |
| 9         |               |                 |           |              |                      | Bottom of exploration 8 feet  |
| 10        |               |                 |           |              |                      |   |

Key USC - Unified Soil Classification PID - Photoionization detector soil headspace reading in parts per million  
NO/NS - No odor No sheen XRF Pb - Lead concentration using Olympus DCC-2000 XRF

**SEEPAGE / STABILITY OBSERVATIONS**

Rapid Groundwater Seepage @ 8'  
No Calving of Sidewalls

**PHOTOGRAPH**



**TEST PIT LOG**

TEST PIT NO. **TP-D**  
Date: 5/19/2020  
Logged By: D. Cooper  
Reviewed By: M. Dalton

Location: Former Tacoma Metals N 705139 E 1163990 (NAD83)  
Contractor: HOLT - Deere 310SL Extend-a-hoe w/2' bucket  
Weather: Cloudy 55F

| Depth Ft. | Sample Number | Odors or Sheens | PID (ppm) | XRF-Pb (ppm) | USC                  | Visual Description   |
|-----------|---------------|-----------------|-----------|--------------|----------------------|--|
| _1        | TP-D_0.5-1.5  | NO/NS           | 8.2       | 1067<br>1285 | SP<br>with<br>Debris | 0-0.2 - Asphalt Concrete<br>0.2-0.5' Loose, moist, brown, gravelly, SAND, basecourse               |
| _2        |               | NO/NS           | 0.4       | <7           |                      | 0.5-1.5' Loose, moist, gray-brown, gravelly, SAND with silt, 10-15% debris , glass, metal, plastic |
| _3        |               | NO/NS           | 0         | <7           |                      | 1.5-3.0' Medium dense, wet, gray, gravelly, SAND, with trace silt, no debris                       |
| _4        | TP-D_3-4      | NO/NS           | 0.2       | 13.8<br>37   | SP                   | 3.0-6.5' M Dense, wet, gray, Fine to medium SAND   |
| _5        |               | NO/NS           | 0         | 13           |                      |  |
| _6        |               | NO/NS           | 0.1       | 8            |                      |  |
| _7        |               |                 |           |              |                      | 6.5-8.0' Loose, wet, dark brown, WOODY DEBRIS, mixed with silty sand (20%), large cedar timbers    |
| _8        |               |                 |           |              |                      |  |
| _9        |               |                 |           |              |                      | Bottom of exploration 8 feet   |
| _10       |               |                 |           |              |                      |  |

Key USC - Unified Soil Classification PID - Photoionization detector soil headspace reading in parts per million  
NO/NS - No odor No sheen XRF Pb - Lead concentration using Olympus DCC-2000 XRF

**SEEPAGE / STABILITY OBSERVATIONS**

Slight Groundwater Seepage @ 7'  
No Calving of Sidewalls

**PHOTOGRAPH**



**TEST PIT LOG**

TEST PIT NO. **TP-E**  
Date: 5/19/2020  
Logged By: D. Cooper  
Reviewed By: M. Dalton

Location: Former Tacoma Metals N 705114 E 1164139 (NAD83)  
Contractor: HOLT - Deere 310SL Extend-a-hoe w/2' bucket  
Weather: Cloudy 55F

| Depth Ft. | Sample Number | Odors or Sheens | PID (ppm) | XRF-Pb (ppm) | USC             | Visual Description  |
|-----------|---------------|-----------------|-----------|--------------|-----------------|---|
| 1         | TP-E_0-2      | NO/NS           | 0         | 2385         | SP with Debris  | 0-2' Loose mix of gravelly SAND (20%) and battery casings, metal, plastic                 |
| 2         |               |                 |           |              |                 |   |
| 3         |               |                 |           |              |                 |   |
| 4         |               |                 |           |              |                 |   |
| 5         |               |                 |           |              | Battery Casings | 2.0-10' Scrap Battery Casings, with minor metal debris<br>Standing water at 2.5 feet bgs. |
| 6         |               |                 |           |              |                 |   |
| 7         |               |                 |           |              |                 |   |
| 8         |               |                 |           |              |                 |   |
| 9         |               |                 |           |              |                 |   |
| 10        |               |                 |           |              |                 | Bottom of exploration 10 feet   |

Key USC - Unified Soil Classification PID - Photoionization detector soil headspace reading in parts per million  
NO/NS - No odor No sheen XRF Pb - Lead concentration using Olympus DCC-2000 XRF

**SEEPAGE / STABILITY OBSERVATIONS**

Standing water @ 2.5' - likely flooded vault/basement  
No Calving of Sidewalls

**PHOTOGRAPH**



**TEST PIT LOG**

TEST PIT NO. **TP-F**  
Date: 5/19/2020  
Logged By: D. Cooper  
Reviewed By: M. Dalton

Location: Former Tacoma Metals N 705109 E 1164232 (NAD83)  
Contractor: HOLT - Deere 310SL Extend-a-hoe w/2' bucket  
Weather: Cloudy 60F

| Depth Ft. | Sample Number | Odors or Sheens | PID (ppm) | XRF-Pb (ppm) | USC            | Visual Description   |
|-----------|---------------|-----------------|-----------|--------------|----------------|--|
| 1         |               | NO/NS           | 0         | 10           |                | 0-0.4 - Asphalt Concrete<br>0.4-2.5' Very dense, moist, light brown, gravelly, SAND no debris                            |
| 2         |               | NO/NS           | 0         | <7           | SP with Debris | 2.5-3.5' Dense, Moist, Mottled brown, gravelly, SAND, with trace silt, 5% debris - wire, brick, metal, white precipitate |
| 3         | TP-F_2.5-3.5  | NO/NS           | 0         | 1253<br>639  |                |  |
| 4         |               | NO/NS           | 0         | <8           |                | 3.0-5.5' Dense, moist, brown, gravelly SAND, with trace silt, no debris  |
| 5         |               | NO/NS           | 0         | <10          | SP             |  |
| 6         |               | NO/NS           | 0         | <7           |                | 5.5-8.0' Dense, wet, red brown, gravelly SAND with silt scattered fire-brick   |
| 7         |               |                 |           |              | SP-SM          |  |
| 8         |               |                 |           |              |                |  |
| 9         |               |                 |           |              |                | Bottom of exploration 8 feet   |
| 10        |               |                 |           |              |                |  |

Key USC - Unified Soil Classification PID - Photoionization detector soil headspace reading in parts per million  
NO/NS - No odor No sheen XRF Pb - Lead concentration using Olympus DCC-2000 XRF

**SEEPAGE / STABILITY OBSERVATIONS**

No Seepage  
No Calving of Sidewalls

**PHOTOGRAPH**



**TEST PIT LOG**

TEST PIT NO. **TP-G**

Location: Former Tacoma Metals N 705146 E 1164291 (NAD83)

Date: 5/19/2020

Contractor: HOLT - Deere 310SL Extend-a-hoe w/2' bucket

Logged By: D. Cooper

Weather: Cloudy 60F

Reviewed By: M. Dalton

| Depth Ft. | Sample Number | Odors or Sheens | PID (ppm) | XRF-Pb (ppm) | USC                  | Visual Description  |
|-----------|---------------|-----------------|-----------|--------------|----------------------|---|
| 1         | TP-G_0-2.5    | NO/NS           | 0         | 3499<br>5329 | SP<br>with<br>Debris | 0-1' Loose, moist, brown, silty, SAND, with fine wood, roots, white precipitate                     |
| 2         |               | NO/NS           | 0         | 4663         |                      | 1-2.5' As above, with higher fraction of blue-white precipitate                                     |
| 3         |               | NO/NS           | 0         | 705          |                      | 2.5-3.5' Loose, wet, dark brown, organic, silty, SAND   |
| 4         | TP-G_2.5-3.5  | NO/NS           | 0         | 936<br>56    | SP                   | 3.5-6.5' M Dense, wet, brown, gravelly SAND, with trace silt (* bucket sample, possible carry-down) |
| 5         |               | NO/NS           | 0         | 270*         |                      |   |
| 6         |               | NO/NS           | 0         | 22           |                      |   |
| 7         |               |                 |           |              | SM                   | 6.5-8.0' Loose, wet, dark brown, silty SAND, with organics, large woody debris - decomposed         |
| 8         |               |                 |           |              |                      |   |
| 9         |               |                 |           |              |                      | Bottom of exploration 8 feet  |
| 10        |               |                 |           |              |                      |   |

Key USC - Unified Soil Classification PID - Photoionization detector soil headspace reading in parts per million  
NO/NS - No odor No sheen XRF Pb - Lead concentration using Olympus DCC-2000 XRF

**SEEPAGE / STABILITY OBSERVATIONS**

No Groundwater Seepage  
Calving of Sidewalls above 6'

**PHOTOGRAPH**



**TEST PIT LOG**

TEST PIT NO. **TP-H**

Location: Former Tacoma Metals N 705066 E 1164369 (NAD83)

Date: 5/19/2020

Contractor: HOLT - Deere 310SL Extend-a-hoe w/2' bucket

Logged By: D. Cooper

Weather: Cloudy 60F

Reviewed By: M. Dalton

| Depth Ft. | Sample Number | Odors or Sheens | PID (ppm) | XRF-Pb (ppm) | USC            | Visual Description   |
|-----------|---------------|-----------------|-----------|--------------|----------------|--|
| 1         | TP-H_0.5-2.0  | NO/NS           | 0         | 2200         | SP with Debris | 0-0.5' Thick root mat  |
| 2         | TP-H_2-3      | NO/NS           | 0         | 2542         |                | 0.5-3.0' Loose, wet, mottled white-brown, silty, SAND, with gravel, many roots, scattered wood, metal, white-blue precipitate throughout |
| 3         |               | NO/NS           | 0         | 1863         |                |  |
| 4         |               | NO/NS           | 0         | 13.6         | SP             | 3.0-6.0' Loose, wet, brown, gravelly, SAND, with trace silt, scattered wood  |
| 5         |               | NO/NS           | 0         | 5.7          |                |  |
| 6         |               | NO/NS           | 0         | 6.5          |                |  |
| 7         |               |                 |           |              | SP             | 6.0-8.0' Loose, wet, dark gray, Fine to medium SAND, with large WOODY DEBRIS   |
| 8         |               |                 |           |              |                |  |
| 9         |               |                 |           |              |                | Bottom of exploration 8 feet   |
| 10        |               |                 |           |              |                |  |

Key USC - Unified Soil Classification PID - Photoionization detector soil headspace reading in parts per million  
NO/NS - No odor No sheen XRF Pb - Lead concentration using Olympus DCC-2000 XRF

**SEEPAGE / STABILITY OBSERVATIONS**

No Groundwater Seepage  
Slight Calving of Sidewalls

**PHOTOGRAPH**



**TEST PIT LOG**

TEST PIT NO. **TP-I**

Location: Former Tacoma Metals N 7048915146 E 1164354 (NAD83)

Date: 5/19/2020

Contractor: HOLT - Deere 310SL Extend-a-hoe w/2' bucket

Logged By: D. Cooper

Weather: Cloudy 60F

Reviewed By: M. Dalton

| Depth Ft. | Sample Number | Odors or Sheens | PID (ppm) | XRF-Pb (ppm) | USC                  | Visual Description   |
|-----------|---------------|-----------------|-----------|--------------|----------------------|--|
| _1        | TP-I_1-2      | NO/NS           | 0         | 27           | SP<br>with<br>Debris | 0-0.3 Asphalt Concrete<br>0.3-1.3' Dense, moist, brown, gravelly SAND, with trace silt, no debris                  |
| _2        | TP-I_2-3      | NO/NS           | 0         | 894          |                      | 1.3-3.4' Very dense, moist, mottled brown, gravelly SAND with silt, fine debris (10%) brick, glass, metal, asphalt |
| _3        |               | NO/NS           | 0         | 129          |                      | 85   |
| _4        |               | NO/NS           | 0         | 9            | SP                   | 3.4-7.5' Dense, moist, brown, gravelly SAND, with trace silt no debris   |
| _5        |               | NO/NS           | 0         | <6           |                      |  |
| _6        |               | NO/NS           | 0         | <6           |                      |  |
| _7        |               | NO/NS           | 0         | <6           |                      |  |
| _8        |               |                 |           |              | SM                   | 7.5-8.0' loose, wet, dark brown, silty SAND, with organics   |
| _9        |               |                 |           |              |                      | Bottom of exploration 8 feet   |
| _10       |               |                 |           |              |                      |  |

Key USC - Unified Soil Classification PID - Photoionization detector soil headspace reading in parts per million  
NO/NS - No odor No sheen XRF Pb - Lead concentration using Olympus DCC-2000 XRF

**SEEPAGE / STABILITY OBSERVATIONS**

No Groundwater Seepage  
No Calving of Sidewalls

**PHOTOGRAPH**



**TEST PIT LOG**

TEST PIT NO. **TP-J**

Location: Former Tacoma Metals N 704893 E 1164455 (NAD83)

Date: 5/19/2020

Contractor: HOLT - Deere 310SL Extend-a-hoe w/2' bucket

Logged By: D. Cooper

Weather: Cloudy 60F

Reviewed By: M. Dalton

| Depth Ft. | Sample Number | Odors or Sheens | PID (ppm) | XRF-Pb (ppm) | USC                  | Visual Description   |
|-----------|---------------|-----------------|-----------|--------------|----------------------|--|
| 1         | TP-J_0.5-1.5  | NO/NS           | 0         | 2025         | SP<br>with<br>Debris | 0-0.4 Asphalt Concrete   |
| 2         |               | SLO/NS          | 7.4       | 2296         |                      | 0.4-1.6' Very dense, moist, dark brown, gravelly SAND, with silt, debris (30%) metal, gl;ass, car parts, large scrap |
| 3         | TP-J_2-3      | SLO/NS          | 12.5      | 444          |                      | 1.6-3.5' Very dense, moist, dark gray/black, larger car parts in a gravelly SAND matrix, slight heavy oil odor       |
| 4         |               | NO/NS           | 1.5       | 7            | SP                   | 3.5-6' Dense, moist, blue-gray, gravelly SAND, with trace silt no debris   |
| 5         |               | NO/NS           | 0         | <6           |                      |  |
| 6         |               | NO/NS           | 0         | <6           |                      |  |
| 7         |               |                 |           |              | O                    | 6-7' Medium dense, wet, gray, Fine to medium SAND  |
| 8         |               |                 |           |              |                      | 7-8' loose, wet, dark brown, WOODY DEBRIS / silty sand matrix  |
| 9         |               |                 |           |              |                      | Bottom of exploration 8 feet   |
| 10        |               |                 |           |              |                      |  |

Key USC - Unified Soil Classification PID - Photoionization detector soil headspace reading in parts per million  
NO/NS - No odor No sheen XRF Pb - Lead concentration using Olympus DCC-2000 XRF

**SEEPAGE / STABILITY OBSERVATIONS**

No Groundwater Seepage  
No Calving of Sidewalls

**PHOTOGRAPH**





**TEST PIT LOG**

TEST PIT NO. **TP-K**  
Date: 5/19/2020  
Logged By: D. Cooper  
Reviewed By: M. Dalton

Location: Former Tacoma Metals N 704807 E 1164479 (NAD83)  
Contractor: HOLT - Deere 310SL Extend-a-hoe w/2' bucket  
Weather: Cloudy 60F

| Depth Ft. | Sample Number | Odors or Sheens | PID (ppm) | XRF-Pb (ppm) | USC                  | Visual Description   |
|-----------|---------------|-----------------|-----------|--------------|----------------------|--|
| _1        | TP-J_1.5-3.5  | NO/NS           | 0         | <5.6         | SP<br>with<br>Debris | 0-0.4 Asphalt Concrete<br>0.4-1.5' Medium dense, moist, light brown, gravelly, SAND, with trace silt, no debris          |
| _2        |               | NO/NS           | 0         | 1913         |                      | 1.5-3.5' Dense, moist, dark brown, gravelly, SAND, with silt, 10-20% debris - large metal scrap, wire, glass, fire brick |
| _3        |               | NO/NS           | 0         | 1610         |                      |  |
| _4        |               | NO/NS           | 0         | 7            | SP                   | 3.5-4.5' Dense, moist, blue-gray, gravelly SAND, with trace silt, no debris  |
| _5        |               | NO/NS           | 0         | 16           | SM                   | 7-8' Medium dense, wet, silty, Fine SAND, with woody debris  |
| _6        |               |                 |           |              |                      |  |
| _7        |               |                 |           |              |                      |  |
| _8        |               |                 |           |              |                      |  |
| _9        |               |                 |           |              |                      | Bottom of exploration 8 feet   |
| _10       |               |                 |           |              |                      |  |

Key USC - Unified Soil Classification PID - Photoionization detector soil headspace reading in parts per million  
NO/NS - No odor No sheen XRF Pb - Lead concentration using Olympus DCC-2000 XRF

**SEEPAGE / STABILITY OBSERVATIONS**

No Groundwater Seepage  
No Calving of Sidewalls

**PHOTOGRAPH**



**TEST PIT LOG**

TEST PIT NO. **TP-L**  
Date: 5/19/2020  
Logged By: D. Cooper  
Reviewed By: M. Dalton

Location: Former Tacoma Metals N 704807 E 1164479 (NAD83)  
Contractor: HOLT - Deere 310SL Extend-a-hoe w/2' bucket  
Weather: Cloudy 60F

| Depth Ft. | Sample Number | Odors or Sheens | PID (ppm) | XRF-Pb (ppm) | USC            | Visual Description   |
|-----------|---------------|-----------------|-----------|--------------|----------------|--|
| 1         | TP-L_0.4-1.4  | NO/NS           | 0         | 1451         | SP with Debris | 0-0.4 Asphalt Concrete<br>0.4-1.4' Dense, moist, Dark brown, gravelly, SAND, with trace silt, 10% debris - metal swarf, wire, glass, white precipitate |
| 2         |               | NO/NS           | 0         | <7           | SP             | 1.4-5' Dense, moist, brown, gravelly SAND, with trace silt, no debris  |
| 3         |               | NO/NS           | 0         | <8           |                |  |
| 4         |               | NO/NS           | 0         | <8           |                |  |
| 5         |               | NO/NS           | 0         | 19           |                |  |
| 6         |               | NO/NS           | 0         | 9.8          | SM             | 5-8' Loose, wet, dark brown, silty, Fine SAND, with woody debris   |
| 7         |               |                 |           |              |                |  |
| 8         |               |                 |           |              |                |  |
| 9         |               |                 |           |              |                |  |
| 10        |               |                 |           |              |                | Bottom of exploration 8 feet   |

Key USC - Unified Soil Classification PID - Photoionization detector soil headspace reading in parts per million  
NO/NS - No odor No sheen XRF Pb - Lead concentration using Olympus DCC-2000 XRF

**SEEPAGE / STABILITY OBSERVATIONS**

No Groundwater Seepage  
No Calving of Sidewalls

**PHOTOGRAPH**



**TEST PIT LOG**

TEST PIT NO. **TP-M**  
Date: 5/19/2020  
Logged By: D. Cooper  
Reviewed By: M. Dalton

Location: Former Tacoma Metals N 704782 E 1164610 (NAD83)  
Contractor: HOLT - Deere 310SL Extend-a-hoe w/2' bucket  
Weather: Cloudy 60F

| Depth Ft. | Sample Number | Odors or Sheens | PID (ppm) | XRF-Pb (ppm) | USC                  | Visual Description  |
|-----------|---------------|-----------------|-----------|--------------|----------------------|---|
| 1         | TP-M_0-1.2    | NO/NS           | 0         | 3000         | SP<br>with<br>Debris | 0-1.2' Loose, moist, Dark brown, silty, SAND, with gravel, fine debris - metal, wire, glass, organics   |
| 2         |               | NO/NS           | 0         | 11.1         |                      | 1.4-3' Loose, wet, mottled brown, interbedded gravelly, sand and silty, sand, trace debris - brick wood |
| 3         |               | NO/NS           | 0         | 9            |                      |   |
| 4         |               | NO/NS           | 0         | 7            | SP                   | 3-5' Loose, wet, brown, SAND, with gravel and trace silt  |
| 5         |               | NO/NS           | 0         | 7            |                      |   |
| 6         |               |                 |           |              | O                    | 5-8' Loose, wet, dark brown, WOODY DEBRIS   |
| 7         |               |                 |           |              |                      |   |
| 8         |               |                 |           |              |                      |   |
| 9         |               |                 |           |              |                      | Bottom of exploration 8 feet  |
| 10        |               |                 |           |              |                      |   |

Key USC - Unified Soil Classification PID - Photoionization detector soil headspace reading in parts per million  
NO/NS - No odor No sheen XRF Pb - Lead concentration using Olympus DCC-2000 XRF

**SEEPAGE / STABILITY OBSERVATIONS**

No Groundwater Seepage  
Calving of Sidewalls 1-2'

**PHOTOGRAPH**



**TEST PIT LOG**

TEST PIT NO. **TP-N**  
Date: 5/19/2020  
Logged By: D. Cooper  
Reviewed By: M. Dalton

Location: Former Tacoma Metals N 704645 E 1164557 (NAD83)  
Contractor: HOLT - Deere 310SL Extend-a-hoe w/2' bucket  
Weather: Cloudy 60F

| Depth Ft. | Sample Number | Odors or Sheens | PID (ppm) | XRF-Pb (ppm) | USC                  | Visual Description   |
|-----------|---------------|-----------------|-----------|--------------|----------------------|--|
| 1         | TP-N_0.3-1.3  | NO/NS           | 0         | 128<br>358   | SP<br>with<br>Debris | 0-0.3 Asphalt Concrete<br>0.3-1.3' Dense, moist, mottled brown, gravelly, SAND, with silt,<br>Trace wood, staining |
| 2         |               | NO/NS           | 0         | <5.4         | SP                   | 1.3-6' Dense, moist, brown, gravelly SAND, with trace silt, no<br>debris   |
| 3         |               | NO/NS           | 0         | <5.3         |                      |  |
| 4         |               | NO/NS           | 0         | <5.4         |                      |  |
| 5         |               |                 |           |              |                      |  |
| 6         |               | NO/NS           | 0         | <6           |                      |  |
| 7         |               |                 |           |              | SP-O                 | 6-8' Loose, wet, brown, silty, Fine SAND, with scattered woody<br>debris   |
| 8         |               |                 |           |              |                      |  |
| 9         |               |                 |           |              |                      | Bottom of exploration 8 feet   |
| 10        |               |                 |           |              |                      |  |

Key USC - Unified Soil Classification PID - Photoionization detector soil headspace reading in parts per million  
NO/NS - No odor No sheen XRF Pb - Lead concentration using Olympus DCC-2000 XRF

**SEEPAGE / STABILITY OBSERVATIONS**

No Groundwater Seepage  
No Calving of Sidewalls

**PHOTOGRAPH**



**TEST PIT LOG**

TEST PIT NO. **TP-O**  
Date: 5/19/2020  
Logged By: D. Cooper  
Reviewed By: M. Dalton

Location: Former Tacoma Metals N 704671 E 1164655 (NAD83)  
Contractor: HOLT - Deere 310SL Extend-a-hoe w/2' bucket  
Weather: Cloudy 60F

| Depth Ft. | Sample Number                  | Odors or Sheens | PID (ppm) | XRF-Pb (ppm) | USC            | Visual Description  |
|-----------|--------------------------------|-----------------|-----------|--------------|----------------|---|
| _1        | TP-OP_1-3                      | NO/NS           | 0         | 2415         | SP with Debris | 0-0.4 Asphalt Concrete  |
| _2        |                                | NO/NS           | 0         | 2543         |                | 0.4-0.8 Loose moist, light brown, gravelly, SAND, basecourse  |
| _3        | TP-O_3-4                       | NO/NS           | 0         | 1326         |                | 0.8-4.0' Medium dense, moist, mottled brown, gravelly, SAND, with silt, 5-10% debris - brick, metal, wire, glass, white precipitate |
| _4        |                                | NO/NS           | 0         | 1130         |                |   |
|           |                                |                 |           | 6.2          |                |   |
| _5        |                                | NO/NS           | 0         | 11           |                | 4-5' Medium dense, wet, gray, gravelly, SAND, with trace silt   |
| _6        |                                |                 |           |              | SP             | 5-8' Loose, moist, gray, Fine to medium SAND, uniform   |
| _7        |                                |                 |           |              |                |   |
| _8        |                                |                 |           |              |                |   |
| _9        | DUPL-1 (duplicate of TP-O_1-3) |                 |           |              |                | Bottom of exploration 8 feet  |
| _10       |                                |                 |           |              |                |   |

Key USC - Unified Soil Classification PID - Photoionization detector soil headspace reading in parts per million  
NO/NS - No odor No sheen XRF Pb - Lead concentration using Olympus DCC-2000 XRF

**SEEPAGE / STABILITY OBSERVATIONS**

No Groundwater Seepage  
Slight Calving of Sidewalls

**PHOTOGRAPH**



**TEST PIT LOG**

TEST PIT NO. **TP-P**  
Date: 5/19/2020  
Logged By: D. Cooper  
Reviewed By: M. Dalton

Location: Former Tacoma Metals N 704604 E 1164694 (NAD83)  
Contractor: HOLT - Deere 310SL Extend-a-hoe w/2' bucket  
Weather: Cloudy 60F

| Depth Ft. | Sample Number | Odors or Sheens | PID (ppm) | XRF-Pb (ppm) | USC            | Visual Description  |
|-----------|---------------|-----------------|-----------|--------------|----------------|---|
| _1        | TP-P_0.5-3    | NO/NS           | 0         | 3977         | SP with Debris | 0-0.3 Asphalt Concrete  |
| _2        |               | NO/NS           | 0         | 3154<br>3328 |                | 0.3-0.5 Loose moist, light brown, gravelly, SAND, basecourse  |
| _3        | TP-P_3-4      | NO/NS           | 0         | 959          | SP             | 0.5-2.5' Dense, moist, mottled brown, gravelly, SAND, with silt, 5-10% debris - brick, metal, rubber, wire, glass |
| _4        |               | NO/NS           | 0         | 1605         |                | 2.5-3.0 Moist, black, Cinder-Coke-Coal like interbed  |
| _5        |               | NO/NS           | 0         | 9            |                | 3-4' Very dense, wet, brown, gravelly SAND with trace silt no debris  |
| _6        |               | NO/NS           | 0         | 12           |                | 4-8' Loose, moist, gray, Fine to medium SAND, uniform   |
| _7        |               |                 |           |              |                |   |
| _8        |               |                 |           |              |                |   |
| _9        |               |                 |           |              |                | Bottom of exploration 8 feet  |
| _10       |               |                 |           |              |                |   |

Key USC - Unified Soil Classification PID - Photoionization detector soil headspace reading in parts per million  
NO/NS - No odor No sheen XRF Pb - Lead concentration using Olympus DCC-2000 XRF

**SEEPAGE / STABILITY OBSERVATIONS**

No Groundwater Seepage  
No Calving of Sidewalls

**PHOTOGRAPH**



**TEST PIT LOG**

TEST PIT NO. **TP-Q**

Location: Former Tacoma Metals N 704566 E 1164660 (NAD83)

Date: 5/19/2020

Contractor: HOLT - Deere 310SL Extend-a-hoe w/2' bucket

Logged By: D. Cooper

Weather: Cloudy 60F

Reviewed By: M. Dalton

| Depth Ft. | Sample Number | Odors or Sheens | PID (ppm) | XRF-Pb (ppm) | USC                  | Visual Description   |
|-----------|---------------|-----------------|-----------|--------------|----------------------|--|
| _1        |               | NO/NS           | 0         | 7.3          | SP                   | 0-0.4 Asphalt Concrete<br>0.4-1.5' Dense, moist, light brown, gravelly, SAND, basecourse   |
| _2        | TP-Q_1.5-3    | NO/NS           | 0         | 2805         | SP<br>with<br>Debris | 1.5-4.0' Very dense, moist, mottled gray, gravelly, SAND, with silt, 0% debris - wire, metal sheet, red brick, fire brick, glass |
| _3        | TP-O_3-4      | NO/NS           | 0         | 427          |                      |  |
| _4        |               | NO/NS           | 0         | 149          |                      |  |
|           |               |                 |           | 64           |                      |  |
| _5        |               |                 |           |              |                      |  |
| _6        |               | NO/NS           | 0         | <5.4         | SP                   | 4-8' Medium dense wet, gray, gravelly, SAND, with trace silt   |
| _7        |               |                 |           |              |                      |  |
| _8        |               |                 |           |              |                      |  |
| _9        |               |                 |           |              |                      | Bottom of exploration 8 feet   |
| _10       |               |                 |           |              |                      |  |

Key USC - Unified Soil Classification PID - Photoionization detector soil headspace reading in parts per million  
NO/NS - No odor No sheen XRF Pb - Lead concentration using Olympus DCC-2000 XRF

**SEEPAGE / STABILITY OBSERVATIONS**

No Groundwater Seepage  
Calving of Sidewalls below 4'

**PHOTOGRAPH**



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**ATTACHMENT B**  
**LABORATORY REPORTS – May 2020 Test Pit Sampling**

**Tacoma Metals Site**  
**Tacoma, Washington**

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**Analytical Resources, Incorporated**  
Analytical Chemists and Consultants

29 June 2020

Dave Cooper  
Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue, WA 98007

RE: Former Tacoma Metals

Please find enclosed sample receipt documentation and analytical results for samples from the project referenced above.

Sample analyses were performed according to ARI's Quality Assurance Plan and any provided project specific Quality Assurance Plan. Each analytical section of this report has been approved and reviewed by an analytical peer, the appropriate Laboratory Supervisor or qualified substitute, and a technical reviewer.

Should you have any questions or problems, please feel free to contact us at your convenience.

Associated Work Order(s)  
20E0270

Associated SDG ID(s)  
N/A

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I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the enclosed Narrative. ARI, an accredited laboratory, certifies that the report results for which ARI is accredited meets all the requirements of the accrediting body. A list of certified analyses, accreditations, and expiration dates is included in this report.

Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Analytical Resources, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



# Chain of Custody Record & Laboratory Analysis Request

|  |   |   |
|--|---|---|
| ARI Assigned Number:<br><b>2060070</b>                       | Turn-around Requested:<br><b>Normal</b> | Date:<br><b>5/22/20</b>   |
| ARI Client Company:<br><b>Dalton Olmsted &amp; Fuglevand</b> | Phone:<br><b>206-660-3466</b>           | Page:<br><b>1</b> of <b>3</b>                                     |
| Client Contact:<br><b>Matt Dalton / Dave Cooper</b>          |   | No. of Coolers:<br><b>3</b> Cooler Temps:<br><b>3.4, 4.3, 5.3</b> |



**Analytical Resources, Incorporated**  
 Analytical Chemists and Consultants  
 4611 South 134th Place, Suite 100  
 Tukwila, WA 98168  
 206-695-6200 206-695-6201 (fax)

| Client Project Name:<br><b>Former Tacoma Metals</b> |           |                               |        |                | Analysis Requested                                      |             |  |  |  |  |  |  |  |  | Notes/Comments |  |  |  |           |  |
|---|-----------|-------------------------------|--------|----------------|---|-------------|--|--|--|--|--|--|--|--|----------------|--|--|--|-----------|--|
| Client Project #:<br><b>WKG-001</b>                 |           | Samplers:<br><b>DG Cooper</b> |        |                | RCRA<br>Metas (As,<br>Ba, Cd, Cr,<br>Hg, Pb, Se,<br>Ag) | Cd, Pb only |  |  |  |  |  |  |  |  |                |  |  |  |           |  |
| Sample ID   | Date      | Time                          | Matrix | No. Containers |   |             |  |  |  |  |  |  |  |  |                |  |  |  |           |  |
| TP-A_0-0.8  | 5/19/2020 | 1130                          | SOIL   | 2              | X   |             |  |  |  |  |  |  |  |  |                |  |  |  |           |  |
| TP-A_I-2  | 5/19/2020 | 1140                          | SOIL   | 2              |   |             |  |  |  |  |  |  |  |  |                |  |  |  | (archive) |  |
| TP-B_0-0.8  | 5/19/2020 | 0930                          | SOIL   | 2              | X   |             |  |  |  |  |  |  |  |  |                |  |  |  |           |  |
| TP-B_2-3  | 5/19/2020 | 0940                          | SOIL   | 2              |   | X           |  |  |  |  |  |  |  |  |                |  |  |  |           |  |
| TP-C_0.3-1.3  | 5/19/2020 | 1020                          | SOIL   | 2              | X   |             |  |  |  |  |  |  |  |  |                |  |  |  |           |  |
| TP-C_3-4  | 5/19/2020 | 1030                          | SOIL   | 2              |   |             |  |  |  |  |  |  |  |  |                |  |  |  | (archive) |  |
| TP-D_0.5-1.5  | 5/19/2020 | 1230                          | SOIL   | 2              | X   |             |  |  |  |  |  |  |  |  |                |  |  |  |           |  |
| TP-D_3-4  | 5/19/2020 | 1240                          | SOIL   | 2              |   |             |  |  |  |  |  |  |  |  |                |  |  |  | (archive) |  |
| TP-E_0-2  | 5/19/2020 | 1330                          | SOIL   | 2              | X   |             |  |  |  |  |  |  |  |  |                |  |  |  |           |  |
| TP-F_2.5-3.5  | 5/19/2020 | 1430                          | SOIL   | 2              | X   |             |  |  |  |  |  |  |  |  |                |  |  |  |           |  |
| TP-G_0-2.5  | 5/19/2020 | 1400                          | SOIL   | 2              | X   |             |  |  |  |  |  |  |  |  |                |  |  |  |           |  |
| TP-G_2.5-3.5  | 5/19/2020 | 1410                          | SOIL   | 2              |   |             |  |  |  |  |  |  |  |  |                |  |  |  | (archive) |  |


|                               |  |  |                                 |                             |
|-------------------------------|--|--|---------------------------------|-----------------------------|
| Comments/Special Instructions | Relinquished by:<br>(Signature) <i>[Signature]</i> | Received by:<br>(Signature) <i>[Signature]</i> | Relinquished by:<br>(Signature) | Received by:<br>(Signature) |
|                               | Printed Name:<br><b>DG COOPER</b>                  | Printed Name:<br><b>Shelly L Fisher</b>        | Printed Name:                   | Printed Name:               |
|                               | Company:<br><b>ARI</b>                             | Company:<br><b>ARI</b>                         | Company:                        | Company:                    |
|                               | Date & Time:<br><b>5/22/20 1150</b>                | Date & Time:<br><b>5/22/2020 1150</b>          | Date & Time:                    | Date & Time:                |

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

**Sample Retention Policy:** Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.



# Chain of Custody Record & Laboratory Analysis Request

|   |           |  |        |                |   |             |   |                                     |  |  |                                 |  |  |  |  |  |  |  |  |  |                |
|---|-----------|--|--------|----------------|---|-------------|---|-------------------------------------|--|--|---------------------------------|--|--|--|--|--|--|--|--|--|----------------|
| ARI Assigned Number: <b>20E0270</b>                       |           | Turn-around Requested: <b>Normal</b>             |        |                | Date: <b>5/22/20</b>  |             |  |                                     |  |  |                                 |  |  |  |  |  |  |  |  |  |                |
| ARI Client Company: <b>Dalton Olmsted &amp; Fuglevand</b> |           | Phone: <b>206-660-3466</b>                       |        |                | Page: <b>3</b> of <b>3</b>                                  |             |   |                                     |  |  |                                 |  |  |  |  |  |  |  |  |  |                |
| Client Contact: <b>Matt Dalton / Dave Cooper</b>          |           | Client Project Name: <b>Former Tacoma Metals</b> |        |                | No. of Coolers: <b>3</b> Cooler Temps: <b>3.4, 4.3, 5.3</b> |             |   |                                     |  |  |                                 |  |  |  |  |  |  |  |  |  |                |
| Client Project #: <b>WKG-001</b>                          |           | Samplers: <b>DG Cooper</b>                       |        |                | Analysis Requested  |             |   |                                     |  |  |                                 |  |  |  |  |  |  |  |  |  |                |
| Sample ID   | Date      | Time   | Matrix | No. Containers | RCRA Metas (As, Ba, Cd, Cr, Hg, Pb, Se, Ag)                 | Cd, Pb only |   |                                     |  |  |                                 |  |  |  |  |  |  |  |  |  | Notes/Comments |
| TP-P_0.5-3  | 5/19/2020 | 1430   | SOIL   | 2              | X   |             |   |                                     |  |  |                                 |  |  |  |  |  |  |  |  |  |                |
| TP-P_3-4  | 5/19/2020 | 1440   | SOIL   | 2              |   |             |   |                                     |  |  |                                 |  |  |  |  |  |  |  |  |  | (archive)      |
| TP-Q_1.5-3  | 5/20/2020 | 1530   | SOIL   | 2              | X   |             |   |                                     |  |  |                                 |  |  |  |  |  |  |  |  |  |                |
| TP-Q_3-4  | 5/20/2020 | 1540   | SOIL   | 2              |   |             |   |                                     |  |  |                                 |  |  |  |  |  |  |  |  |  | (archive)      |
| DUPL-1  | 5/20/2020 | 1345   | SOIL   | 2              | X   |             |   |                                     |  |  |                                 |  |  |  |  |  |  |  |  |  |                |
| Comments/Special Instructions                             |           | Relinquished by: <i>[Signature]</i>              |        |                | Received by: <i>[Signature]</i>                             |             |   | Relinquished by: <i>[Signature]</i> |  |  | Received by: <i>[Signature]</i> |  |  |  |  |  |  |  |  |  |                |
|   |           | Printed Name: <b>DG COOPER</b>                   |        |                | Printed Name: <b>Shelly L Fisher</b>                        |             |   | Printed Name:                       |  |  | Printed Name:                   |  |  |  |  |  |  |  |  |  |                |
|   |           | Company: <b>DOF</b>                              |        |                | Company: <b>ARI</b>   |             |   | Company:                            |  |  | Company:                        |  |  |  |  |  |  |  |  |  |                |
|   |           | Date & Time: <b>5/22/20 1150</b>                 |        |                | Date & Time: <b>5/22/2020</b>                               |             |   | Date & Time:                        |  |  | Date & Time:                    |  |  |  |  |  |  |  |  |  |                |

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, notwithstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

**Sample Retention Policy:** Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

# Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: Normal  
 Turn-around Requested: 5/22/20  
 Date: 5/22/20  
 ARI Client Company: Dalton Olmsted & Fuglevand  
 Phone: 206-660-3466  
 Client Contact: Matt Dalton / Dave Cooper  
 Client Project Name: Former Tacoma Metals  
 Client Project #: WKG-001  
 Samplers: DG Cooper  
 No. of Coolers: 3  
 Cooler Temps: 34.4.3  
 Page: 1 of 3  
 Analysts Requested: RCRA Metals, TCLP Pb+Cd, RCRA Metals, TCLP

Analytical Resources, Incorporated  
 Analytical Chemists and Consultants  
 4611 South 134th Place, Suite 100  
 Tukwila, WA 98168  
 206-695-6200 206-695-6201 (fax)



| Sample ID    | Date      | Time | Matrix | No. Containers | RCRA Metals (As, Ba, Cd, Cr, Hg, Pb, Se, Ag) | Cd, Pb only | Analysts Requested |             | Notes/Comments                       |
|--------------|-----------|------|--------|----------------|--|-------------|--------------------|-------------|--------------------------------------|
|              |           |      |        |                |  |             | TCLP               | RCRA Metals |                                      |
| TP-A_0-0.8   | 5/19/2020 | 1130 | SOIL   | 2              | X  |             | X                  |             | TCLP-Request<br>M. DALTON<br>6/11/20 |
| TP-A_1-2     | 5/19/2020 | 1140 | SOIL   | 2              |  |             | X                  | (archive)   |                                      |
| TP-B_0-0.8   | 5/19/2020 | 0930 | SOIL   | 2              | X  |             | X                  | (archive)   |                                      |
| TP-B_2-3     | 5/19/2020 | 0940 | SOIL   | 2              |  | X           |                    | (archive)   |                                      |
| TP-C_0.3-1.3 | 5/19/2020 | 1020 | SOIL   | 2              | X  |             | X                  | (archive)   |                                      |
| TP-C_3-4     | 5/19/2020 | 1030 | SOIL   | 2              | X  |             | X                  | (archive)   |                                      |
| TP-D_0.5-1.5 | 5/19/2020 | 1230 | SOIL   | 2              | X  |             | X                  | (archive)   |                                      |
| TP-D_3-4     | 5/19/2020 | 1240 | SOIL   | 2              |  |             | X                  | (archive)   |                                      |
| TP-E_0-2     | 5/19/2020 | 1330 | SOIL   | 2              | X  |             | X                  | (archive)   |                                      |
| TP-F_2.5-3.5 | 5/19/2020 | 1430 | SOIL   | 2              | X  |             | X                  | (archive)   |                                      |
| TP-G_0-2.5   | 5/19/2020 | 1400 | SOIL   | 2              | X  |             | X                  | (archive)   |                                      |
| TP-G_2.5-3.5 | 5/19/2020 | 1410 | SOIL   | 2              | X  |             | X                  | (archive)   |                                      |

Received by: [Signature]  
 (Signature)  
 Printed Name: SMELLY FISHER  
 Company: ARI  
 Date & Time: 5/22/2020 11:50

Relinquished by: [Signature]  
 (Signature)  
 Printed Name: [Name]  
 Company: [Company]  
 Date & Time: [Date & Time]

Comments/Special Instructions

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

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# Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: **5/22/20**  
 Date: **5/22/20**  
 Page: **2** of **3**  
 Cooler Temps: **3**  
 Cooler Temps: **34, 40, 31, 5.3**



Analytical Resources, Incorporated  
 Analytical Chemists and Consultants  
 4611 South 134th Place, Suite 100  
 Tukwila, WA 98168  
 206-695-6200 206-695-6201 (fax)

Turn-around Requested: **Normal**  
 Phone: **206-660-3466**  
 Client Company: **Dalton Olmsted & Fuglevand**  
 Client Contact: **Matt Dalton / Dave Cooper**  
 Client Project Name: **Formel Tacoma Metals**

Client Project #: **WKSG-001**  
 Samplers: **DG Cooper**  
 No. of Coolers: **3**  
 No. Containers: **2**

| Sample ID   | Date      | Time | Matrix | No. Containers | Analysis Requested                           |             | Notes/Comments |
|---|-----------|------|--------|----------------|--|-------------|----------------|
|   |           |      |        |                | RCRA Metals (As, Ba, Cd, Cr, Hg, Pb, Se, Ag) | Cd, Pb only |                |
| TP-H_0.5-2  | 5/19/2020 | 1700 | SOIL   | 2              | X  |             |                |
| TP-H_2-3  | 5/19/2020 | 1710 | SOIL   | 2              |  |             |                |
| TP-L_1-2  | 5/20/2020 | 0830 | SOIL   | 2              | X  |             | (archive)      |
| TP-L_2-3  | 5/20/2020 | 0840 | SOIL   | 2              |  |             |                |
| TP-J_0.5-1.5  | 5/20/2020 | 0930 | SOIL   | 2              | X  |             |                |
| TP-J_2-3  | 5/20/2020 | 0940 | SOIL   | 2              |  |             |                |
| TP-K_1.5-3.5  | 5/20/2020 | 1015 | SOIL   | 2              | X  |             |                |
| TP-L_0.4-1.4  | 5/20/2020 | 1130 | SOIL   | 2              | X  |             |                |
| TP-M_0-1.2  | 5/20/2020 | 1200 | SOIL   | 2              | X  |             |                |
| TP-N_0.3-1.3  | 5/20/2020 | 1300 | SOIL   | 2              | X  |             |                |
| TP-O_1-3  | 5/20/2020 | 1340 | SOIL   | 2              | X  |             |                |
| TP-O_3-4  | 5/20/2020 | 1315 | SOIL   | 2              |  |             | (archive)      |
| Received by: <b>Dalton Olmsted</b> (Signature)<br>Printed Name: <b>Dalton Olmsted</b><br>Company: <b>ARI</b><br>Date & Time: <b>5/22/20 1150</b>                            |           |      |        |                |  |             |                |
| Relinquished by: <b>Shelby Fiske</b> (Signature)<br>Printed Name: <b>Shelby Fiske</b><br>Company: <b>ARI</b><br>Date & Time: <b>5/22/20 1150</b>                            |           |      |        |                |  |             |                |
| Comments/Special Instructions: <b>As Data</b><br>Received by: <b>ARI</b> (Signature)<br>Printed Name: <b>ARI</b><br>Company: <b>ARI</b><br>Date & Time: <b>5/22/20 1150</b> |           |      |        |                |  |             |                |

**Limits of Liability:** ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.

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Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**ANALYTICAL REPORT FOR SAMPLES**

| Sample ID    | Laboratory ID | Matrix | Date Sampled      | Date Received     |
|--------------|---------------|--------|-------------------|-------------------|
| TP-A_0-0.8   | 20E0270-01    | Solid  | 19-May-2020 11:30 | 26-May-2020 11:50 |
| TP-A_1-2     | 20E0270-02    | Solid  | 19-May-2020 11:40 | 26-May-2020 11:50 |
| TP-B_0-0.8   | 20E0270-03    | Solid  | 19-May-2020 09:30 | 26-May-2020 11:50 |
| TP-B_2-3     | 20E0270-04    | Solid  | 19-May-2020 09:40 | 26-May-2020 11:50 |
| TP-C_0.3-1.3 | 20E0270-05    | Solid  | 19-May-2020 10:20 | 26-May-2020 11:50 |
| TP-C_3-4     | 20E0270-06    | Solid  | 19-May-2020 10:30 | 26-May-2020 11:50 |
| TP-D_0.5-1.5 | 20E0270-07    | Solid  | 19-May-2020 12:30 | 26-May-2020 11:50 |
| TP-D_3-4     | 20E0270-08    | Solid  | 19-May-2020 12:40 | 26-May-2020 11:50 |
| TP-E_0-2     | 20E0270-09    | Solid  | 19-May-2020 13:30 | 26-May-2020 11:50 |
| TP-F_2.5-3.5 | 20E0270-10    | Solid  | 19-May-2020 14:30 | 26-May-2020 11:50 |
| TP-G_0-2.5   | 20E0270-11    | Solid  | 19-May-2020 14:00 | 26-May-2020 11:50 |
| TP-G_2.5-3.5 | 20E0270-12    | Solid  | 19-May-2020 14:10 | 26-May-2020 11:50 |
| TP-H_0.5-2   | 20E0270-13    | Solid  | 19-May-2020 17:00 | 26-May-2020 11:50 |
| TP-H_2-3     | 20E0270-14    | Solid  | 19-May-2020 17:10 | 26-May-2020 11:50 |
| TP-I_1-2     | 20E0270-15    | Solid  | 20-May-2020 08:30 | 26-May-2020 11:50 |
| TP-I_2-3     | 20E0270-16    | Solid  | 20-May-2020 09:40 | 26-May-2020 11:50 |
| TP-J_0.5-1.5 | 20E0270-17    | Solid  | 20-May-2020 09:30 | 26-May-2020 11:50 |
| TP-J_2-3     | 20E0270-18    | Solid  | 20-May-2020 09:40 | 26-May-2020 11:50 |
| TP-K_1.5-3.5 | 20E0270-19    | Solid  | 20-May-2020 10:15 | 26-May-2020 11:50 |
| TP-L_0.4-1.4 | 20E0270-20    | Solid  | 20-May-2020 11:30 | 26-May-2020 11:50 |
| TP-M_0-1.2   | 20E0270-21    | Solid  | 20-May-2020 12:00 | 26-May-2020 11:50 |
| TP-N_0.3-1.3 | 20E0270-22    | Solid  | 20-May-2020 13:00 | 26-May-2020 11:50 |
| TP-O_1-3     | 20E0270-23    | Solid  | 20-May-2020 13:40 | 26-May-2020 11:50 |
| TP-O_3-4     | 20E0270-24    | Solid  | 20-May-2020 13:15 | 26-May-2020 11:50 |
| TP-P_0.5-3   | 20E0270-25    | Solid  | 19-May-2020 14:30 | 26-May-2020 11:50 |
| TP-P_3-4     | 20E0270-26    | Solid  | 19-May-2020 14:40 | 26-May-2020 11:50 |
| TP-Q_1.5-3   | 20E0270-27    | Solid  | 20-May-2020 15:30 | 26-May-2020 11:50 |
| TP-Q_3-4     | 20E0270-28    | Solid  | 20-May-2020 15:40 | 26-May-2020 11:50 |
| DUPL-1       | 20E0270-29    | Solid  | 20-May-2020 13:45 | 26-May-2020 11:50 |





Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

## Work Order Case Narrative

### Total Metals - EPA Method 6020A and 7471

The sample(s) were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank(s) contained lead. Only samples that are non-detect or ten times greater the method blank were reported. Samples that contain analyte have been flagged with a "B" qualifier.

The LCS percent recoveries were within control limits.

The matrix spike/matrix spike duplicate recoveries and RPD were within limits with the exception of analytes flagged on the associated forms.

### TCLP Metals

The samples were digested and analyzed within the recommended holding times.

Initial and continuing calibrations were within method requirements.

The method blank has Barium detected above the reporting limit. This is normal filter contamination. Associated detected results and QC have been flagged with "B" qualifiers. No further corrective action was taken.

A matrix spike, matrix spike duplicate and duplicate were prepared in conjunction with sample TP-D\_0.5-1.5. The duplicate has a Chromium concentration  $\leq 5$  times the reporting limit and the replicate control limit defaults to +/- the reporting limit instead of 20% the RPD. The Chromium has been flagged with an "L" on the duplicate. The results are advisory. All other matrix spike, matrix spike duplicate and duplicate percent recoveries and/or RPD were within QC limits. No further corrective action was taken.

A matrix spike, matrix spike duplicate and duplicate were prepared in conjunction with sample TP-J\_2-3. The matrix spike and matrix spike duplicate have natural concentrations of Lead that are so much greater than the concentrations spiked that an accurate determination of spike recovery is not possible. The Lead has been flagged with "HC" qualifiers on the MS/MSD. The results are advisory. All other matrix spike, matrix spike duplicate and duplicate percent recoveries and/or RPD were within QC limits. No further corrective action was taken.

A Mercury matrix spike, matrix spike duplicate and duplicate were prepared in conjunction with sample TP-E\_0-2. The matrix spike, matrix spike duplicate and duplicate percent recoveries and/or RPD were within QC limits.



# Cooler Receipt Form

ARI Client: DOF

Project Name: Former Tacoma Metals

COC No(s): \_\_\_\_\_ (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other: \_\_\_\_\_

Assigned ARI Job No: 2060070

Tracking No: \_\_\_\_\_ (NA)

**Preliminary Examination Phase:**

Were intact, properly signed and dated custody seals attached to the outside of the cooler? YES NO

Were custody papers included with the cooler? YES NO

Were custody papers properly filled out (ink, signed, etc.) YES NO

Temperature of Cooler(s) (°C) (recommended 2.0-6.0 °C for chemistry)

Time 1150 3.4 4.3 5.3

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: DOO 5204

Cooler Accepted by: [Signature] Date: 5/22/2020 Time: 1150

**Complete custody forms and attach all shipping documents**

**Log-In Phase:**

Was a temperature blank included in the cooler? YES NO

What kind of packing material was used? ... Bubble Wrap Wet Ice Gel Packs Baggies Foam Block Paper Other: boxes

Was sufficient ice used (if appropriate)? NA YES NO

How were bottles sealed in plastic bags? Individually Grouped Not

Did all bottles arrive in good condition (unbroken)? YES NO

Were all bottle labels complete and legible? YES NO

Did the number of containers listed on COC match with the number of containers received? JA YES NO

Did all bottle labels and tags agree with custody papers? YES NO

Were all bottles used correct for the requested analyses? YES NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) ... NA YES NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? YES NO

Date VOC Trip Blank was made at ARI: NA

Were the sample(s) split by ARI? NA YES Date/Time: \_\_\_\_\_ Equipment: \_\_\_\_\_ Split by: \_\_\_\_\_

Samples Logged by: JA Date: 05/26/2020 Time: 1207 Labels checked by: JA

**\*\* Notify Project Manager of discrepancies or concerns \*\***

| Sample ID on Bottle | Sample ID on COC | Sample ID on Bottle | Sample ID on COC |
|---------------------|------------------|---------------------|------------------|
|                     |                  |                     |                  |
|                     |                  |                     |                  |
|                     |                  |                     |                  |

**Additional Notes, Discrepancies, & Resolutions:**  
only received 1 container for "DUPL-1" instead of the listed 2 containers.

By: JA Date: 05/26/2020



Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**TP-A\_0-0.8**  
**20E0270-01 (Solid)**

**Metals and Metallic Compounds**

Method: EPA 6020A Sampled: 05/19/2020 11:30  
Instrument: ICPMS1 Analyst: MCB Analyzed: 06/05/2020 15:15

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-01 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.93 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 88.97

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Barium  | 7440-39-3  | 200      | 0.60            | 5.35            | 297    | mg/kg | D     |
| Lead    | 7439-92-1  | 200      | 0.73            | 1.07            | 1130   | mg/kg | B, D  |

Instrument: ICPMS2 Analyst: MCB Analyzed: 06/02/2020 18:46

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-01 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.93 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 88.97

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Chromium | 7440-47-3  | 20       | 0.14            | 0.54            | 59.0   | mg/kg |       |
| Silver   | 7440-22-4  | 20       | 0.02            | 0.21            | 4.29   | mg/kg |       |



Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**TP-A\_0-0.8**  
**20E0270-01 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Method: EPA 6020A UCT-KED       | Sampled: 05/19/2020 11:30         |
| Instrument: ICPMS2 Analyst: MCB | Analyzed: 06/02/2020 18:46        |
| Sample Preparation:             | Preparation Method: SWN EPA 3050B |
|                                 | Preparation Batch: BIE0518        |
|                                 | Sample Size: 1.05 g (wet)         |
|                                 | Final Volume: 50 mL               |
|                                 | Extract ID: 20E0270-01 A 01       |
|                                 | Dry Weight: 0.93 g                |
|                                 | % Solids: 88.97                   |

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Arsenic  | 7440-38-2  | 20       | 0.02            | 0.21            | 28.5   | mg/kg |       |
| Cadmium  | 7440-43-9  | 20       | 0.04            | 0.11            | 12.7   | mg/kg |       |
| Selenium | 7782-49-2  | 20       | 0.47            | 0.54            | 2.02   | mg/kg |       |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-A\_0-0.8**  
**20E0270-01 (Solid)**

**Metals and Metallic Compounds**

|                     |   |   |   |
|---------------------|---|---|---|
| Method: EPA 7471B   | Instrument: HYDRA Analyst: BLC  | Sampled: 05/19/2020 11:30                         | Analyzed: 06/04/2020 13:27  |
| Sample Preparation: | Preparation Method: SMM EPA 7471B<br>Preparation Batch: BIE0517<br>Prepared: 05/28/2020 | Sample Size: 0.215 g (wet)<br>Final Volume: 50 mL | Extract ID: 20E0270-01 A<br>Dry Weight: 0.19 g<br>% Solids: 88.97 |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Mercury | 7439-97-6  | 2        | 0.0110          | 0.0523          | 1.39   | mg/kg | D     |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-A\_0-0.8**  
**20E0270-01 (Solid)**

**TCLP Metals and Metallic Compounds**

|                               |   |                             |
|-------------------------------|---|-----------------------------|
| Method: EPA 6010C             | Preparation Method: LEN Digestion of EPA 1311 Elutriate | Sampled: 05/19/2020 11:30   |
| Instrument: ICP2 Analyst: TCH | Preparation Batch: BIF0652                              | Analyzed: 06/25/2020 23:59  |
| Sample Preparation:           | Prepared: 06/23/2020                                    | Extract ID: 20E0270-01 A 03 |
|                               | Sample Size: 25 mL (wet)                                |                             |
|                               | Final Volume: 25 mL                                     |                             |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Cadmium | 7440-43-9  | 5        | 0.0006          | 0.0100          | 0.0838 | mg/L  |       |
| Lead    | 7439-92-1  | 5        | 0.0065          | 0.100           | 1.31   | mg/L  |       |



Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**TP-B\_0-0.8**  
**20E0270-03 (Solid)**

**Metals and Metallic Compounds**

Method: EPA 6020A Sampled: 05/19/2020 09:30  
Instrument: ICPMS1 Analyst: MCB Analyzed: 06/05/2020 15:59

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-03 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.95 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 87.65

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Barium  | 7440-39-3  | 200      | 0.59            | 5.29            | 587    | mg/kg | D     |
| Lead    | 7439-92-1  | 200      | 0.72            | 1.06            | 1870   | mg/kg | B, D  |

Instrument: ICPMS2 Analyst: MCB Analyzed: 06/02/2020 18:41

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-03 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.95 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 87.65

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Chromium | 7440-47-3  | 20       | 0.14            | 0.53            | 118    | mg/kg |       |
| Silver   | 7440-22-4  | 20       | 0.02            | 0.21            | 1.26   | mg/kg |       |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-B\_0-0.8**  
**20E0270-03 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Method: EPA 6020A UCT-KED       | Sampled: 05/19/2020 09:30         |
| Instrument: ICPMS2 Analyst: MCB | Analyzed: 06/02/2020 18:41        |
| Sample Preparation:             | Preparation Method: SWN EPA 3050B |
|                                 | Preparation Batch: BIE0518        |
|                                 | Prepared: 05/28/2020              |
|                                 | Sample Size: 1.079 g (wet)        |
|                                 | Final Volume: 50 mL               |
|                                 | Extract ID: 20E0270-03 A 01       |
|                                 | Dry Weight: 0.95 g                |
|                                 | % Solids: 87.65                   |

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Arsenic  | 7440-38-2  | 20       | 0.02            | 0.21            | 46.1   | mg/kg |       |
| Cadmium  | 7440-43-9  | 20       | 0.03            | 0.11            | 27.8   | mg/kg |       |
| Selenium | 7782-49-2  | 20       | 0.47            | 0.53            | 1.98   | mg/kg |       |





Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**TP-B\_0-0.8**  
**20E0270-03 (Solid)**

**Metals and Metallic Compounds**

|                                |                                   |                            |
|--------------------------------|-----------------------------------|----------------------------|
| Method: EPA 7471B              |                                   | Sampled: 05/19/2020 09:30  |
| Instrument: HYDRA Analyst: BLC |                                   | Analyzed: 06/04/2020 14:12 |
| Sample Preparation:            | Preparation Method: SMM EPA 7471B | Extract ID: 20E0270-03 A   |
|                                | Preparation Batch: BIE0517        | Dry Weight: 0.22 g         |
|                                | Prepared: 05/28/2020              | % Solids: 87.65            |
|                                | Sample Size: 0.247 g (wet)        |                            |
|                                | Final Volume: 50 mL               |                            |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Mercury | 7439-97-6  | 2        | 0.00970         | 0.0462          | 1.91   | mg/kg | D     |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-B\_0-0.8**  
**20E0270-03 (Solid)**

**TCLP Metals and Metallic Compounds**

|                               |   |                             |
|-------------------------------|---|-----------------------------|
| Method: EPA 6010C             | Preparation Method: LEN Digestion of EPA 1311 Elutriate | Sampled: 05/19/2020 09:30   |
| Instrument: ICP2 Analyst: TCH | Preparation Batch: BIF0742                              | Analyzed: 06/25/2020 22:24  |
| Sample Preparation:           | Prepared: 06/25/2020                                    | Extract ID: 20E0270-03 B 02 |
|                               | Sample Size: 25 mL (wet)                                |                             |
|                               | Final Volume: 25 mL                                     |                             |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Cadmium | 7440-43-9  | 5        | 0.0006          | 0.0100          | 0.253  | mg/L  |       |
| Lead    | 7439-92-1  | 5        | 0.0065          | 0.100           | 111    | mg/L  |       |



Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**TP-B\_2-3**  
**20E0270-04 (Solid)**

**Metals and Metallic Compounds**

|                     |                                   |                             |
|---------------------|-----------------------------------|-----------------------------|
| Method: EPA 6020A   |                                   | Sampled: 05/19/2020 09:40   |
| Instrument: ICPMS1  | Analyst: MCB                      | Analyzed: 06/05/2020 16:24  |
| Sample Preparation: | Preparation Method: SWN EPA 3050B | Extract ID: 20E0270-04 A 01 |
|                     | Preparation Batch: BIE0519        | Dry Weight: 0.94 g          |
|                     | Prepared: 05/28/2020              | % Solids: 88.94             |
|                     | Sample Size: 1.059 g (wet)        |                             |
|                     | Final Volume: 50 mL               |                             |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Lead    | 7439-92-1  | 20       | 0.07            | 0.11            | 71.1   | mg/kg |       |



Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**TP-B\_2-3**  
**20E0270-04 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Method: EPA 6020A UCT-KED       | Sampled: 05/19/2020 09:40         |
| Instrument: ICPMS2 Analyst: MCB | Analyzed: 06/02/2020 21:02        |
| Sample Preparation:             | Preparation Method: SWN EPA 3050B |
|                                 | Preparation Batch: BIE0519        |
|                                 | Prepared: 05/28/2020              |
|                                 | Sample Size: 1.059 g (wet)        |
|                                 | Final Volume: 50 mL               |
|                                 | Extract ID: 20E0270-04 A 01       |
|                                 | Dry Weight: 0.94 g                |
|                                 | % Solids: 88.94                   |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Cadmium | 7440-43-9  | 20       | 0.03            | 0.11            | 0.18   | mg/kg |       |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-C\_0.3-1.3**  
**20E0270-05 (Solid)**

**Metals and Metallic Compounds**

|   |                             |
|---|-----------------------------|
| Method: EPA 6020A                                     | Sampled: 05/19/2020 10:20   |
| Instrument: ICPMS1 Analyst: MCB                       | Analyzed: 06/05/2020 14:56  |
| Sample Preparation: Preparation Method: SWN EPA 3050B | Extract ID: 20E0270-05 A 01 |
| Preparation Batch: BIE0518                            | Dry Weight: 0.89 g          |
| Prepared: 05/28/2020                                  | % Solids: 84.28             |
| Sample Size: 1.057 g (wet)                            |                             |
| Final Volume: 50 mL                                   |                             |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Barium  | 7440-39-3  | 500      | 1.57            | 14.0            | 1340   | mg/kg | D     |

|   |                             |
|---|-----------------------------|
| Instrument: ICPMS2 Analyst: MCB                       | Analyzed: 06/02/2020 19:22  |
| Sample Preparation: Preparation Method: SWN EPA 3050B | Extract ID: 20E0270-05 A 01 |
| Preparation Batch: BIE0518                            | Dry Weight: 0.89 g          |
| Prepared: 05/28/2020                                  | % Solids: 84.28             |
| Sample Size: 1.057 g (wet)                            |                             |
| Final Volume: 50 mL                                   |                             |

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Chromium | 7440-47-3  | 20       | 0.15            | 0.56            | 143    | mg/kg |       |
| Lead     | 7439-92-1  | 500      | 1.91            | 2.81            | 2740   | mg/kg | B, D  |
| Silver   | 7440-22-4  | 20       | 0.02            | 0.22            | 4.78   | mg/kg |       |



Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**TP-C\_0.3-1.3**  
**20E0270-05 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Method: EPA 6020A UCT-KED       | Sampled: 05/19/2020 10:20         |
| Instrument: ICPMS2 Analyst: MCB | Analyzed: 06/02/2020 19:22        |
| Sample Preparation:             | Preparation Method: SWN EPA 3050B |
|                                 | Preparation Batch: BIE0518        |
|                                 | Prepared: 05/28/2020              |
|                                 | Sample Size: 1.057 g (wet)        |
|                                 | Final Volume: 50 mL               |
|                                 | Extract ID: 20E0270-05 A 01       |
|                                 | Dry Weight: 0.89 g                |
|                                 | % Solids: 84.28                   |

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Arsenic  | 7440-38-2  | 20       | 0.02            | 0.22            | 33.1   | mg/kg |       |
| Cadmium  | 7440-43-9  | 20       | 0.04            | 0.11            | 82.0   | mg/kg |       |
| Selenium | 7782-49-2  | 20       | 0.49            | 0.56            | 10.5   | mg/kg |       |



Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**TP-C\_0.3-1.3**  
**20E0270-05 (Solid)**

**Metals and Metallic Compounds**

|                                |                                   |                            |
|--------------------------------|-----------------------------------|----------------------------|
| Method: EPA 7471B              |                                   | Sampled: 05/19/2020 10:20  |
| Instrument: HYDRA Analyst: BLC |                                   | Analyzed: 06/04/2020 14:14 |
| Sample Preparation:            | Preparation Method: SMM EPA 7471B | Extract ID: 20E0270-05 A   |
|                                | Preparation Batch: BIE0517        | Dry Weight: 0.21 g         |
|                                | Prepared: 05/28/2020              | % Solids: 84.28            |
|                                | Sample Size: 0.249 g (wet)        |                            |
|                                | Final Volume: 50 mL               |                            |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Mercury | 7439-97-6  | 5        | 0.0250          | 0.119           | 3.75   | mg/kg | D     |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-C\_0.3-1.3**  
**20E0270-05 (Solid)**

**TCLP Metals and Metallic Compounds**

|                               |   |                             |
|-------------------------------|---|-----------------------------|
| Method: EPA 6010C             | Preparation Method: LEN Digestion of EPA 1311 Elutriate | Sampled: 05/19/2020 10:20   |
| Instrument: ICP2 Analyst: TCH | Preparation Batch: BIF0652                              | Analyzed: 06/25/2020 23:32  |
| Sample Preparation:           | Prepared: 06/23/2020                                    | Extract ID: 20E0270-05 A 03 |
|                               | Sample Size: 25 mL (wet)                                |                             |
|                               | Final Volume: 25 mL                                     |                             |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Cadmium | 7440-43-9  | 5        | 0.0006          | 0.0100          | 0.942  | mg/L  |       |
| Lead    | 7439-92-1  | 5        | 0.0065          | 0.100           | 15.0   | mg/L  |       |





Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**TP-D\_0.5-1.5**  
**20E0270-07 (Solid)**

**Metals and Metallic Compounds**

Method: EPA 6020A Sampled: 05/19/2020 12:30  
Instrument: ICPMS1 Analyst: MCB Analyzed: 06/05/2020 16:04

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-07 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.90 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 85.34

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Barium  | 7440-39-3  | 200      | 0.62            | 5.54            | 1920   | mg/kg | D     |
| Lead    | 7439-92-1  | 200      | 0.75            | 1.11            | 1430   | mg/kg | B, D  |

Instrument: ICPMS2 Analyst: MCB Analyzed: 06/02/2020 19:27

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-07 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.90 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 85.34

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Chromium | 7440-47-3  | 20       | 0.08            | 0.55            | 71.8   | mg/kg |       |
| Silver   | 7440-22-4  | 20       | 0.02            | 0.22            | 0.91   | mg/kg |       |



Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**TP-D\_0.5-1.5**  
**20E0270-07 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Method: EPA 6020A UCT-KED       | Sampled: 05/19/2020 12:30         |
| Instrument: ICPMS2 Analyst: MCB | Analyzed: 06/02/2020 19:27        |
| Sample Preparation:             | Preparation Method: SWN EPA 3050B |
|                                 | Preparation Batch: BIE0518        |
|                                 | Prepared: 05/28/2020              |
|                                 | Sample Size: 1.057 g (wet)        |
|                                 | Final Volume: 50 mL               |
|                                 | Extract ID: 20E0270-07 A 01       |
|                                 | Dry Weight: 0.90 g                |
|                                 | % Solids: 85.34                   |

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Arsenic  | 7440-38-2  | 20       | 0.02            | 0.22            | 20.2   | mg/kg |       |
| Cadmium  | 7440-43-9  | 20       | 0.03            | 0.11            | 39.3   | mg/kg |       |
| Selenium | 7782-49-2  | 20       | 0.49            | 0.55            | 3.26   | mg/kg |       |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-D\_0.5-1.5**  
**20E0270-07 (Solid)**

**Metals and Metallic Compounds**

|                                |                                   |                            |   |
|--------------------------------|-----------------------------------|----------------------------|---|
| Method: EPA 7471B              | Preparation Method: SMM EPA 7471B | Sample Size: 0.257 g (wet) | Sampled: 05/19/2020 12:30   |
| Instrument: HYDRA Analyst: BLC | Preparation Batch: BIE0517        | Final Volume: 50 mL        | Analyzed: 06/04/2020 14:16  |
| Sample Preparation:            | Prepared: 05/28/2020              |                            | Extract ID: 20E0270-07 A<br>Dry Weight: 0.22 g<br>% Solids: 85.34 |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Mercury | 7439-97-6  | 1        | 0.00479         | 0.0228          | 0.573  | mg/kg |       |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-D\_0.5-1.5**  
**20E0270-07 (Solid)**

**TCLP Metals and Metallic Compounds**

|                               |   |                             |
|-------------------------------|---|-----------------------------|
| Method: EPA 6010C             | Preparation Method: LEN Digestion of EPA 1311 Elutriate | Sampled: 05/19/2020 12:30   |
| Instrument: ICP2 Analyst: TCH | Preparation Batch: BIF0504                              | Analyzed: 06/25/2020 21:27  |
| Sample Preparation:           | Sample Size: 25 mL (wet)                                | Extract ID: 20E0270-07 A 04 |
|                               | Final Volume: 25 mL                                     |                             |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Cadmium | 7440-43-9  | 5        | 0.0006          | 0.0100          | 0.491  | mg/L  |       |
| Lead    | 7439-92-1  | 5        | 0.0065          | 0.100           | 19.7   | mg/L  |       |



|  |   |                                |
|--|---|--------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | Reported:<br>29-Jun-2020 13:44 |
|--|---|--------------------------------|

**TP-E\_0-2**  
**20E0270-09 (Solid)**

**Metals and Metallic Compounds**

|   |                             |
|---|-----------------------------|
| Method: EPA 6020A                                     | Sampled: 05/19/2020 13:30   |
| Instrument: ICPMS1 Analyst: MCB                       | Analyzed: 06/05/2020 14:51  |
| Sample Preparation: Preparation Method: SWN EPA 3050B | Extract ID: 20E0270-09 A 01 |
| Preparation Batch: BIE0518                            | Dry Weight: 0.92 g          |
| Prepared: 05/28/2020                                  | % Solids: 84.69             |
| Sample Size: 1.088 g (wet)                            |                             |
| Final Volume: 50 mL                                   |                             |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Lead    | 7439-92-1  | 1000     | 3.69            | 5.43            | 6700   | mg/kg | B, D  |

|   |                             |
|---|-----------------------------|
| Instrument: ICPMS2 Analyst: MCB                       | Analyzed: 06/04/2020 14:16  |
| Sample Preparation: Preparation Method: SWN EPA 3050B | Extract ID: 20E0270-09 A 01 |
| Preparation Batch: BIE0518                            | Dry Weight: 0.92 g          |
| Prepared: 05/28/2020                                  | % Solids: 84.69             |
| Sample Size: 1.088 g (wet)                            |                             |
| Final Volume: 50 mL                                   |                             |

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Barium   | 7440-39-3  | 500      | 1.44            | 13.6            | 1200   | mg/kg | D     |
| Chromium | 7440-47-3  | 20       | 0.14            | 0.54            | 122    | mg/kg |       |
| Silver   | 7440-22-4  | 20       | 0.02            | 0.22            | 1.61   | mg/kg |       |



|  |   |                                |
|--|---|--------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | Reported:<br>29-Jun-2020 13:44 |
|--|---|--------------------------------|

**TP-E\_0-2**  
**20E0270-09 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Method: EPA 6020A UCT-KED       | Sampled: 05/19/2020 13:30         |
| Instrument: ICPMS2 Analyst: MCB | Analyzed: 06/02/2020 19:32        |
| Sample Preparation:             | Preparation Method: SWN EPA 3050B |
|                                 | Preparation Batch: BIE0518        |
|                                 | Prepared: 05/28/2020              |
|                                 | Sample Size: 1.088 g (wet)        |
|                                 | Final Volume: 50 mL               |
|                                 | Extract ID: 20E0270-09 A 01       |
|                                 | Dry Weight: 0.92 g                |
|                                 | % Solids: 84.69                   |

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Arsenic  | 7440-38-2  | 20       | 0.02            | 0.22            | 30.5   | mg/kg |       |
| Cadmium  | 7440-43-9  | 20       | 0.03            | 0.11            | 51.9   | mg/kg |       |
| Selenium | 7782-49-2  | 20       | 0.48            | 0.54            | 2.17   | mg/kg |       |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-E\_0-2**  
**20E0270-09 (Solid)**

**Metals and Metallic Compounds**

|                                |                                   |                                       |
|--------------------------------|-----------------------------------|---------------------------------------|
| Method: EPA 7471B              | Preparation Method: SMM EPA 7471B | Sampled: 05/19/2020 13:30             |
| Instrument: HYDRA Analyst: BLC | Preparation Batch: BIE0517        | Analyzed: 06/04/2020 15:02            |
| Sample Preparation:            | Sample Size: 0.231 g (wet)        | Extract ID: 20E0270-09 A              |
| Prepared: 05/28/2020           | Final Volume: 50 mL               | Dry Weight: 0.20 g<br>% Solids: 84.69 |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Mercury | 7439-97-6  | 5        | 0.0268          | 0.128           | 2.36   | mg/kg | D     |



Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**TP-E\_0-2**  
**20E0270-09 (Solid)**

**TCLP Metals and Metallic Compounds**

Method: EPA 6010C Sampled: 05/19/2020 13:30  
Instrument: ICP2 Analyst: TCH Analyzed: 06/26/2020 15:16  
Sample Preparation: Preparation Method: LEN Digestion of EPA 1311 Elutriate Extract ID: 20E0270-09 A 04  
Preparation Batch: BIF0504 Sample Size: 25 mL (wet)  
Prepared: 06/17/2020 Final Volume: 25 mL

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Arsenic  | 7440-38-2  | 5        | 0.0140          | 0.250           | 0.0552 | mg/L  | J     |
| Barium   | 7440-39-3  | 5        | 0.0075          | 0.0150          | 4.25   | mg/L  | B     |
| Cadmium  | 7440-43-9  | 5        | 0.0006          | 0.0100          | 0.779  | mg/L  |       |
| Chromium | 7440-47-3  | 5        | 0.0024          | 0.0250          | 0.0141 | mg/L  | J     |
| Lead     | 7439-92-1  | 5        | 0.0065          | 0.100           | 54.2   | mg/L  |       |
| Selenium | 7782-49-2  | 5        | 0.0408          | 0.250           | ND     | mg/L  | U     |
| Silver   | 7440-22-4  | 5        | 0.0022          | 0.0150          | ND     | mg/L  | U     |





|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-E\_0-2**  
**20E0270-09 (Solid)**

**TCLP Metals and Metallic Compounds**

|  |                             |
|--|-----------------------------|
| Method: EPA 7470A  | Sampled: 05/19/2020 13:30   |
| Instrument: HYDRA Analyst: BLC                                       | Analyzed: 06/19/2020 12:57  |
| Sample Preparation:  | Extract ID: 20E0270-09 A 03 |
| Preparation Method: LEM 7470A Digestion of EPA 1311 Elutriate for Hg |                             |
| Preparation Batch: BIF0505   | Sample Size: 20 mL          |
| Prepared: 06/17/2020   | Final Volume: 20 mL         |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Mercury | 7439-97-6  | 1        | 0.000007        | 0.000100        | ND     | mg/L  | U     |



Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**TP-F\_2.5-3.5**  
**20E0270-10 (Solid)**

**Metals and Metallic Compounds**

Method: EPA 6020A Sampled: 05/19/2020 14:30  
Instrument: ICPMS1 Analyst: MCB Analyzed: 06/05/2020 16:09

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-10 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.92 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 91.15

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Lead    | 7439-92-1  | 200      | 0.74            | 1.09            | 1240   | mg/kg | B, D  |

Instrument: ICPMS2 Analyst: MCB Analyzed: 06/02/2020 19:38

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-10 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.92 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 91.15

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Barium   | 7440-39-3  | 20       | 0.06            | 0.55            | 267    | mg/kg |       |
| Chromium | 7440-47-3  | 20       | 0.14            | 0.55            | 48.6   | mg/kg |       |
| Silver   | 7440-22-4  | 20       | 0.02            | 0.22            | 1.27   | mg/kg |       |



Dalton, Olmsted & Fuglevand, Inc  
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Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**TP-F\_2.5-3.5**  
**20E0270-10 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Method: EPA 6020A UCT-KED       | Sampled: 05/19/2020 14:30         |
| Instrument: ICPMS2 Analyst: MCB | Analyzed: 06/02/2020 19:38        |
| Sample Preparation:             | Preparation Method: SWN EPA 3050B |
|                                 | Preparation Batch: BIE0518        |
|                                 | Prepared: 05/28/2020              |
|                                 | Sample Size: 1.005 g (wet)        |
|                                 | Final Volume: 50 mL               |
|                                 | Extract ID: 20E0270-10 A 01       |
|                                 | Dry Weight: 0.92 g                |
|                                 | % Solids: 91.15                   |

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Arsenic  | 7440-38-2  | 20       | 0.02            | 0.22            | 9.89   | mg/kg |       |
| Cadmium  | 7440-43-9  | 20       | 0.03            | 0.11            | 8.69   | mg/kg |       |
| Selenium | 7782-49-2  | 20       | 0.48            | 0.55            | 3.48   | mg/kg |       |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-F\_2.5-3.5**  
**20E0270-10 (Solid)**

**Metals and Metallic Compounds**

|                                |                                   |                            |   |
|--------------------------------|-----------------------------------|----------------------------|---|
| Method: EPA 7471B              | Preparation Method: SMM EPA 7471B | Sample Size: 0.277 g (wet) | Sampled: 05/19/2020 14:30   |
| Instrument: HYDRA Analyst: BLC | Preparation Batch: BIE0517        | Final Volume: 50 mL        | Analyzed: 06/04/2020 15:05  |
| Sample Preparation:            | Prepared: 05/28/2020              |                            | Extract ID: 20E0270-10 A<br>Dry Weight: 0.25 g<br>% Solids: 91.15 |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Mercury | 7439-97-6  | 2        | 0.00832         | 0.0396          | 1.09   | mg/kg | D     |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-F\_2.5-3.5**  
**20E0270-10 (Solid)**

**TCLP Metals and Metallic Compounds**

|                     |   |                             |
|---------------------|---|-----------------------------|
| Method: EPA 6010C   | Instrument: ICP2 Analyst: TCH                           | Sampled: 05/19/2020 14:30   |
| Sample Preparation: | Preparation Method: LEN Digestion of EPA 1311 Elutriate | Analyzed: 06/25/2020 21:14  |
|                     | Preparation Batch: BIF0504                              | Extract ID: 20E0270-10 A 04 |
|                     | Prepared: 06/17/2020                                    |                             |
|                     | Sample Size: 25 mL (wet)                                |                             |
|                     | Final Volume: 25 mL                                     |                             |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Cadmium | 7440-43-9  | 5        | 0.0006          | 0.0100          | 0.223  | mg/L  |       |
| Lead    | 7439-92-1  | 5        | 0.0065          | 0.100           | 85.8   | mg/L  |       |



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Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**TP-G\_0-2.5**  
**20E0270-11 (Solid)**

**Metals and Metallic Compounds**

Method: EPA 6020A Sampled: 05/19/2020 14:00  
Instrument: ICPMS1 Analyst: MCB Analyzed: 06/05/2020 15:01

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-11 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.83 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 78.84

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Chromium | 7440-47-3  | 500      | 3.93            | 15.1            | 382    | mg/kg | D     |

Instrument: ICPMS2 Analyst: MCB Analyzed: 06/04/2020 14:18

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-11 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.83 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 78.84

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Barium  | 7440-39-3  | 500      | 1.69            | 15.1            | 494    | mg/kg | D     |
| Lead    | 7439-92-1  | 500      | 2.06            | 3.03            | 3800   | mg/kg | B, D  |
| Silver  | 7440-22-4  | 20       | 0.02            | 0.24            | 37.3   | mg/kg |       |



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Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**TP-G\_0-2.5**  
**20E0270-11 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Method: EPA 6020A UCT-KED       | Sampled: 05/19/2020 14:00         |
| Instrument: ICPMS2 Analyst: MCB | Analyzed: 06/02/2020 19:43        |
| Sample Preparation:             | Preparation Method: SWN EPA 3050B |
|                                 | Preparation Batch: BIE0518        |
|                                 | Prepared: 05/28/2020              |
|                                 | Sample Size: 1.048 g (wet)        |
|                                 | Final Volume: 50 mL               |
|                                 | Extract ID: 20E0270-11 A 01       |
|                                 | Dry Weight: 0.83 g                |
|                                 | % Solids: 78.84                   |

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Arsenic  | 7440-38-2  | 20       | 0.03            | 0.24            | 6.53   | mg/kg |       |
| Cadmium  | 7440-43-9  | 20       | 0.04            | 0.12            | 69.2   | mg/kg |       |
| Selenium | 7782-49-2  | 20       | 0.53            | 0.61            | 5.60   | mg/kg |       |



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1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**TP-G\_0-2.5**  
**20E0270-11 (Solid)**

**Metals and Metallic Compounds**

|                                |                                   |                            |   |
|--------------------------------|-----------------------------------|----------------------------|---|
| Method: EPA 7471B              | Preparation Method: SMM EPA 7471B | Sample Size: 0.259 g (wet) | Sampled: 05/19/2020 14:00   |
| Instrument: HYDRA Analyst: BLC | Preparation Batch: BIE0517        | Final Volume: 50 mL        | Analyzed: 06/04/2020 15:07  |
| Sample Preparation:            | Prepared: 05/28/2020              |                            | Extract ID: 20E0270-11 A<br>Dry Weight: 0.20 g<br>% Solids: 78.84 |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Mercury | 7439-97-6  | 10       | 0.0514          | 0.245           | 5.02   | mg/kg | D     |





|  |   |                                       |
|--|---|---------------------------------------|
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|--|---|---------------------------------------|

**TP-G\_0-2.5**  
**20E0270-11 (Solid)**

**TCLP Metals and Metallic Compounds**

|                               |   |                             |
|-------------------------------|---|-----------------------------|
| Method: EPA 6010C             | Preparation Method: LEN Digestion of EPA 1311 Elutriate | Sampled: 05/19/2020 14:00   |
| Instrument: ICP2 Analyst: TCH | Preparation Batch: BIF0504                              | Analyzed: 06/25/2020 21:18  |
| Sample Preparation:           | Prepared: 06/17/2020                                    | Extract ID: 20E0270-11 A 04 |
|                               | Sample Size: 25 mL (wet)                                |                             |
|                               | Final Volume: 25 mL                                     |                             |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Cadmium | 7440-43-9  | 5        | 0.0006          | 0.0100          | 0.571  | mg/L  |       |
| Lead    | 7439-92-1  | 5        | 0.0065          | 0.100           | 57.2   | mg/L  |       |



|  |   |                                       |
|--|---|---------------------------------------|
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|--|---|---------------------------------------|

**TP-H\_0.5-2**  
**20E0270-13 (Solid)**

**Metals and Metallic Compounds**

|   |                             |
|---|-----------------------------|
| Method: EPA 6020A                                     | Sampled: 05/19/2020 17:00   |
| Instrument: ICPMS1 Analyst: MCB                       | Analyzed: 06/05/2020 14:02  |
| Sample Preparation: Preparation Method: SWN EPA 3050B | Extract ID: 20E0270-13 A 01 |
| Preparation Batch: BIE0518                            | Dry Weight: 0.83 g          |
| Prepared: 05/28/2020                                  | % Solids: 81.03             |
| Sample Size: 1.028 g (wet)                            |                             |
| Final Volume: 50 mL                                   |                             |

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Chromium | 7440-47-3  | 500      | 3.90            | 15.0            | 1460   | mg/kg | D     |

|   |                             |
|---|-----------------------------|
| Instrument: ICPMS2 Analyst: MCB                       | Analyzed: 06/04/2020 14:20  |
| Sample Preparation: Preparation Method: SWN EPA 3050B | Extract ID: 20E0270-13 A 01 |
| Preparation Batch: BIE0518                            | Dry Weight: 0.83 g          |
| Prepared: 05/28/2020                                  | % Solids: 81.03             |
| Sample Size: 1.028 g (wet)                            |                             |
| Final Volume: 50 mL                                   |                             |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Barium  | 7440-39-3  | 500      | 1.68            | 15.0            | 334    | mg/kg | D     |
| Lead    | 7439-92-1  | 500      | 2.04            | 3.00            | 6640   | mg/kg | B, D  |
| Silver  | 7440-22-4  | 20       | 0.02            | 0.24            | 32.3   | mg/kg |       |



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1420 - 156th Ave., NE STE C1  
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Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**TP-H\_0.5-2**  
**20E0270-13 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Method: EPA 6020A UCT-KED       | Sampled: 05/19/2020 17:00         |
| Instrument: ICPMS2 Analyst: MCB | Analyzed: 06/02/2020 19:48        |
| Sample Preparation:             | Preparation Method: SWN EPA 3050B |
|                                 | Preparation Batch: BIE0518        |
|                                 | Prepared: 05/28/2020              |
|                                 | Sample Size: 1.028 g (wet)        |
|                                 | Final Volume: 50 mL               |
|                                 | Extract ID: 20E0270-13 A 01       |
|                                 | Dry Weight: 0.83 g                |
|                                 | % Solids: 81.03                   |

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Arsenic  | 7440-38-2  | 20       | 0.03            | 0.24            | 7.49   | mg/kg |       |
| Cadmium  | 7440-43-9  | 20       | 0.05            | 0.12            | 28.4   | mg/kg |       |
| Selenium | 7782-49-2  | 20       | 0.53            | 0.60            | 2.81   | mg/kg |       |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-H\_0.5-2**  
**20E0270-13 (Solid)**

**Metals and Metallic Compounds**

|                                |                                   |                            |   |
|--------------------------------|-----------------------------------|----------------------------|---|
| Method: EPA 7471B              | Preparation Method: SMM EPA 7471B | Sample Size: 0.241 g (wet) | Sampled: 05/19/2020 17:00   |
| Instrument: HYDRA Analyst: BLC | Preparation Batch: BIE0517        | Final Volume: 50 mL        | Analyzed: 06/04/2020 15:10  |
| Sample Preparation:            | Prepared: 05/28/2020              |                            | Extract ID: 20E0270-13 A<br>Dry Weight: 0.20 g<br>% Solids: 81.03 |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Mercury | 7439-97-6  | 10       | 0.0538          | 0.256           | 7.85   | mg/kg | D     |



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Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**TP-H\_0.5-2**  
**20E0270-13 (Solid)**

**TCLP Metals and Metallic Compounds**

Method: EPA 6010C

Sampled: 05/19/2020 17:00

Instrument: ICP2 Analyst: TCH

Analyzed: 06/26/2020 15:21

Sample Preparation:

Preparation Method: LEN Digestion of EPA 1311 Elutriate

Extract ID: 20E0270-13 A 04

Preparation Batch: BIF0504

Sample Size: 25 mL (wet)

Prepared: 06/17/2020

Final Volume: 25 mL

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Arsenic  | 7440-38-2  | 5        | 0.0140          | 0.250           | 0.0204 | mg/L  | J     |
| Barium   | 7440-39-3  | 5        | 0.0075          | 0.0150          | 5.50   | mg/L  | B     |
| Cadmium  | 7440-43-9  | 5        | 0.0006          | 0.0100          | 0.185  | mg/L  |       |
| Chromium | 7440-47-3  | 5        | 0.0024          | 0.0250          | 0.0154 | mg/L  | J     |
| Lead     | 7439-92-1  | 5        | 0.0065          | 0.100           | 70.4   | mg/L  |       |
| Selenium | 7782-49-2  | 5        | 0.0408          | 0.250           | ND     | mg/L  | U     |
| Silver   | 7440-22-4  | 5        | 0.0022          | 0.0150          | 0.0046 | mg/L  | J     |



|  |   |                                |
|--|---|--------------------------------|
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|--|---|--------------------------------|

**TP-H\_0.5-2**  
**20E0270-13 (Solid)**

**TCLP Metals and Metallic Compounds**

|                                |  |
|--------------------------------|--|
| Method: EPA 7470A              | Sampled: 05/19/2020 17:00  |
| Instrument: HYDRA Analyst: BLC | Analyzed: 06/19/2020 13:06   |
| Sample Preparation:            | Preparation Method: LEM 7470A Digestion of EPA 1311 Elutriate for Hg |
|                                | Preparation Batch: BIF0505   |
|                                | Sample Size: 20 mL   |
|                                | Final Volume: 20 mL  |
|                                | Extract ID: 20E0270-13 A 03  |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result   | Units | Notes |
|---------|------------|----------|-----------------|-----------------|----------|-------|-------|
| Mercury | 7439-97-6  | 1        | 0.000007        | 0.000100        | 0.000111 | mg/L  |       |



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1420 - 156th Ave., NE STE C1  
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Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**TP-I\_1-2**  
**20E0270-15 (Solid)**

**Metals and Metallic Compounds**

Method: EPA 6020A Sampled: 05/20/2020 08:30  
Instrument: ICPMS1 Analyst: MCB Analyzed: 06/05/2020 16:13

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-15 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.96 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 89.65

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Barium  | 7440-39-3  | 200      | 0.55            | 5.19            | 666    | mg/kg | D     |
| Lead    | 7439-92-1  | 200      | 0.71            | 1.04            | 1780   | mg/kg | B, D  |

Instrument: ICPMS2 Analyst: MCB Analyzed: 06/02/2020 20:29

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-15 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.96 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 89.65

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Chromium | 7440-47-3  | 20       | 0.13            | 0.52            | 64.5   | mg/kg |       |
| Silver   | 7440-22-4  | 20       | 0.02            | 0.21            | 1.41   | mg/kg |       |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-I\_1-2**  
**20E0270-15 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |                             |
|---------------------------------|-----------------------------------|-----------------------------|
| Method: EPA 6020A UCT-KED       | Sampled: 05/20/2020 08:30         |                             |
| Instrument: ICPMS2 Analyst: MCB | Analyzed: 06/02/2020 20:29        |                             |
| Sample Preparation:             | Preparation Method: SWN EPA 3050B | Extract ID: 20E0270-15 A 01 |
|                                 | Preparation Batch: BIE0518        | Dry Weight: 0.96 g          |
|                                 | Prepared: 05/28/2020              | % Solids: 89.65             |
|                                 | Sample Size: 1.075 g (wet)        |                             |
|                                 | Final Volume: 50 mL               |                             |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Arsenic | 7440-38-2  | 20       | 0.02            | 0.21            | 14.7   | mg/kg |       |
| Cadmium | 7440-43-9  | 20       | 0.03            | 0.10            | 17.6   | mg/kg |       |





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1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**TP-I\_1-2**  
**20E0270-15 (Solid)**

**Metals and Metallic Compounds**

|                                |                                   |                            |                            |
|--------------------------------|-----------------------------------|----------------------------|----------------------------|
| Method: EPA 7471B              | Preparation Method: SMM EPA 7471B | Sample Size: 0.281 g (wet) | Sampled: 05/20/2020 08:30  |
| Instrument: HYDRA Analyst: BLC | Preparation Batch: BIE0517        | Final Volume: 50 mL        | Analyzed: 06/04/2020 15:12 |
| Sample Preparation:            | Prepared: 05/28/2020              |                            | Extract ID: 20E0270-15 A   |
|                                |                                   |                            | Dry Weight: 0.25 g         |
|                                |                                   |                            | % Solids: 89.65            |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Mercury | 7439-97-6  | 2        | 0.00834         | 0.0397          | 1.31   | mg/kg | D     |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-I\_1-2**  
**20E0270-15 (Solid)**

**TCLP Metals and Metallic Compounds**

|                     |   |                             |
|---------------------|---|-----------------------------|
| Method: EPA 6010C   | Instrument: ICP2 Analyst: TCH                           | Sampled: 05/20/2020 08:30   |
| Sample Preparation: | Preparation Method: LEN Digestion of EPA 1311 Elutriate | Analyzed: 06/25/2020 23:37  |
|                     | Preparation Batch: BIF0652                              | Extract ID: 20E0270-15 A 03 |
|                     | Prepared: 06/23/2020                                    |                             |
|                     | Sample Size: 25 mL (wet)                                |                             |
|                     | Final Volume: 25 mL                                     |                             |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Cadmium | 7440-43-9  | 5        | 0.0006          | 0.0100          | 0.318  | mg/L  |       |
| Lead    | 7439-92-1  | 5        | 0.0065          | 0.100           | 5.43   | mg/L  |       |



Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**TP-I\_1-2**  
**20E0270-15RE1 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Method: EPA 6020A UCT-KED       | Sampled: 05/20/2020 08:30         |
| Instrument: ICPMS1 Analyst: MCB | Analyzed: 06/05/2020 17:34        |
| Sample Preparation:             | Preparation Method: SWN EPA 3050B |
|                                 | Preparation Batch: BIE0518        |
|                                 | Prepared: 05/28/2020              |
|                                 | Sample Size: 1.075 g (wet)        |
|                                 | Final Volume: 50 mL               |
|                                 | Extract ID: 20E0270-15RE1 A 01    |
|                                 | Dry Weight: 0.96 g                |
|                                 | % Solids: 89.65                   |

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Selenium | 7782-49-2  | 50       | 1.14            | 1.30            | 2.90   | mg/kg | D     |



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Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**TP-I\_2-3**  
**20E0270-16 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Method: EPA 6020A               | Sampled: 05/20/2020 09:40         |
| Instrument: ICPMS1 Analyst: MCB | Analyzed: 06/03/2020 17:47        |
| Sample Preparation:             | Preparation Method: SWN EPA 3050B |
|                                 | Preparation Batch: BIE0519        |
|                                 | Prepared: 05/28/2020              |
|                                 | Sample Size: 1.032 g (wet)        |
|                                 | Final Volume: 50 mL               |
|                                 | Extract ID: 20E0270-16 A 01       |
|                                 | Dry Weight: 0.89 g                |
|                                 | % Solids: 86.18                   |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Lead    | 7439-92-1  | 20       | 0.08            | 0.11            | 148    | mg/kg |       |



Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**TP-I\_2-3**  
**20E0270-16 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Method: EPA 6020A UCT-KED       | Sampled: 05/20/2020 09:40         |
| Instrument: ICPMS2 Analyst: MCB | Analyzed: 06/02/2020 20:34        |
| Sample Preparation:             | Preparation Method: SWN EPA 3050B |
|                                 | Preparation Batch: BIE0519        |
|                                 | Prepared: 05/28/2020              |
|                                 | Sample Size: 1.032 g (wet)        |
|                                 | Final Volume: 50 mL               |
|                                 | Extract ID: 20E0270-16 A 01       |
|                                 | Dry Weight: 0.89 g                |
|                                 | % Solids: 86.18                   |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Cadmium | 7440-43-9  | 20       | 0.03            | 0.11            | 3.31   | mg/kg |       |



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Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**TP-J\_0.5-1.5**  
**20E0270-17 (Solid)**

**Metals and Metallic Compounds**

Method: EPA 6020A Sampled: 05/20/2020 09:30  
Instrument: ICPMS1 Analyst: MCB Analyzed: 06/05/2020 13:16

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-17 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.90 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 83.00

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Barium  | 7440-39-3  | 500      | 1.56            | 13.9            | 1470   | mg/kg | D     |
| Lead    | 7439-92-1  | 500      | 1.89            | 2.79            | 3900   | mg/kg | B, D  |

Instrument: ICPMS2 Analyst: MCB Analyzed: 06/02/2020 20:42

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-17 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.90 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 83.00

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Chromium | 7440-47-3  | 20       | 0.14            | 0.56            | 124    | mg/kg |       |
| Silver   | 7440-22-4  | 20       | 0.02            | 0.22            | 2.84   | mg/kg |       |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-J\_0.5-1.5**  
**20E0270-17 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |                             |
|---------------------------------|-----------------------------------|-----------------------------|
| Method: EPA 6020A UCT-KED       | Sampled: 05/20/2020 09:30         |                             |
| Instrument: ICPMS2 Analyst: MCB | Analyzed: 06/02/2020 20:42        |                             |
| Sample Preparation:             | Preparation Method: SWN EPA 3050B | Extract ID: 20E0270-17 A 01 |
|                                 | Preparation Batch: BIE0518        | Dry Weight: 0.90 g          |
|                                 | Prepared: 05/28/2020              | % Solids: 83.00             |
|                                 | Sample Size: 1.081 g (wet)        |                             |
|                                 | Final Volume: 50 mL               |                             |

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Arsenic  | 7440-38-2  | 20       | 0.02            | 0.22            | 32.7   | mg/kg |       |
| Cadmium  | 7440-43-9  | 20       | 0.03            | 0.11            | 49.3   | mg/kg |       |
| Selenium | 7782-49-2  | 20       | 0.49            | 0.56            | 3.64   | mg/kg |       |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-J\_0.5-1.5**  
**20E0270-17 (Solid)**

**Metals and Metallic Compounds**

|                     |   |   |   |
|---------------------|---|---|---|
| Method: EPA 7471B   | Instrument: HYDRA Analyst: BLC  | Sampled: 05/20/2020 09:30                         | Analyzed: 06/04/2020 15:14  |
| Sample Preparation: | Preparation Method: SMM EPA 7471B<br>Preparation Batch: BIE0517<br>Prepared: 05/28/2020 | Sample Size: 0.244 g (wet)<br>Final Volume: 50 mL | Extract ID: 20E0270-17 A<br>Dry Weight: 0.20 g<br>% Solids: 83.00 |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Mercury | 7439-97-6  | 5        | 0.0259          | 0.123           | 3.04   | mg/kg | D     |





Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**TP-J\_0.5-1.5**  
**20E0270-17 (Solid)**

**TCLP Metals and Metallic Compounds**

|   |                             |
|---|-----------------------------|
| Method: EPA 6010C                                       | Sampled: 05/20/2020 09:30   |
| Instrument: ICP2 Analyst: TCH                           | Analyzed: 06/25/2020 22:51  |
| Sample Preparation:                                     | Extract ID: 20E0270-17 A 03 |
| Preparation Method: LEN Digestion of EPA 1311 Elutriate |                             |
| Preparation Batch: BIF0742                              | Sample Size: 25 mL (wet)    |
| Prepared: 06/25/2020                                    | Final Volume: 25 mL         |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Cadmium | 7440-43-9  | 5        | 0.0006          | 0.0100          | 0.971  | mg/L  |       |
| Lead    | 7439-92-1  | 5        | 0.0065          | 0.100           | 49.8   | mg/L  |       |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-J\_2-3**  
**20E0270-18 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |                            |  |
|---------------------------------|-----------------------------------|----------------------------|--|
| Method: EPA 6020A               | Preparation Method: SWN EPA 3050B | Sample Size: 1.041 g (wet) | Sampled: 05/20/2020 09:40  |
| Instrument: ICPMS1 Analyst: MCB | Preparation Batch: BIE0518        | Final Volume: 50 mL        | Analyzed: 06/05/2020 16:18   |
| Sample Preparation:             | Prepared: 05/28/2020              |                            | Extract ID: 20E0270-18 A 01<br>Dry Weight: 0.95 g<br>% Solids: 91.22 |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Lead    | 7439-92-1  | 200      | 0.72            | 1.05            | 1070   | mg/kg | B, D  |



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Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**TP-J\_2-3**  
**20E0270-18 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Method: EPA 6020A UCT-KED       | Sampled: 05/20/2020 09:40         |
| Instrument: ICPMS2 Analyst: MCB | Analyzed: 06/02/2020 20:47        |
| Sample Preparation:             | Preparation Method: SWN EPA 3050B |
|                                 | Preparation Batch: BIE0518        |
|                                 | Prepared: 05/28/2020              |
|                                 | Sample Size: 1.041 g (wet)        |
|                                 | Final Volume: 50 mL               |
|                                 | Extract ID: 20E0270-18 A 01       |
|                                 | Dry Weight: 0.95 g                |
|                                 | % Solids: 91.22                   |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Cadmium | 7440-43-9  | 20       | 0.04            | 0.11            | 12.3   | mg/kg |       |



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1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**TP-J\_2-3**  
**20E0270-18 (Solid)**

**Metals and Metallic Compounds**

|                                |                                   |                            |                            |
|--------------------------------|-----------------------------------|----------------------------|----------------------------|
| Method: EPA 7471B              | Preparation Method: SMM EPA 7471B | Sample Size: 0.267 g (wet) | Sampled: 05/20/2020 09:40  |
| Instrument: HYDRA Analyst: BLC | Preparation Batch: BIE0517        | Final Volume: 50 mL        | Analyzed: 06/04/2020 14:38 |
| Sample Preparation:            | Prepared: 05/28/2020              |                            | Extract ID: 20E0270-18 A   |
|                                |                                   |                            | Dry Weight: 0.24 g         |
|                                |                                   |                            | % Solids: 91.22            |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Mercury | 7439-97-6  | 1        | 0.00431         | 0.0205          | 0.513  | mg/kg |       |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-J\_2-3**  
**20E0270-18 (Solid)**

**TCLP Metals and Metallic Compounds**

|                               |   |                             |
|-------------------------------|---|-----------------------------|
| Method: EPA 6010C             | Preparation Method: LEN Digestion of EPA 1311 Elutriate | Sampled: 05/20/2020 09:40   |
| Instrument: ICP2 Analyst: TCH | Preparation Batch: BIF0742                              | Analyzed: 06/25/2020 22:28  |
| Sample Preparation:           | Prepared: 06/25/2020                                    | Extract ID: 20E0270-18 A 03 |
|                               | Sample Size: 25 mL (wet)                                |                             |
|                               | Final Volume: 25 mL                                     |                             |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Cadmium | 7440-43-9  | 5        | 0.0006          | 0.0100          | 0.141  | mg/L  |       |
| Lead    | 7439-92-1  | 5        | 0.0065          | 0.100           | 9.85   | mg/L  |       |



Dalton, Olmsted & Fuglevand, Inc  
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Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**TP-K\_1.5-3.5**  
**20E0270-19 (Solid)**

**Metals and Metallic Compounds**

Method: EPA 6020A Sampled: 05/20/2020 10:15  
Instrument: ICPMS1 Analyst: MCB Analyzed: 06/05/2020 13:43

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-19 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.88 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 83.34

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Barium  | 7440-39-3  | 500      | 1.51            | 14.3            | 1360   | mg/kg | D     |
| Lead    | 7439-92-1  | 500      | 1.94            | 2.85            | 2950   | mg/kg | B, D  |

Instrument: ICPMS2 Analyst: MCB Analyzed: 06/02/2020 20:52

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-19 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.88 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 83.34

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Chromium | 7440-47-3  | 20       | 0.15            | 0.57            | 69.3   | mg/kg |       |
| Silver   | 7440-22-4  | 20       | 0.02            | 0.23            | 1.08   | mg/kg |       |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-K\_1.5-3.5**  
**20E0270-19 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Method: EPA 6020A UCT-KED       | Sampled: 05/20/2020 10:15         |
| Instrument: ICPMS2 Analyst: MCB | Analyzed: 06/02/2020 20:52        |
| Sample Preparation:             | Preparation Method: SWN EPA 3050B |
|                                 | Preparation Batch: BIE0518        |
|                                 | Sample Size: 1.052 g (wet)        |
|                                 | Final Volume: 50 mL               |
|                                 | Extract ID: 20E0270-19 A 01       |
|                                 | Dry Weight: 0.88 g                |
|                                 | % Solids: 83.34                   |

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Arsenic  | 7440-38-2  | 20       | 0.03            | 0.23            | 38.4   | mg/kg |       |
| Cadmium  | 7440-43-9  | 20       | 0.03            | 0.11            | 23.5   | mg/kg |       |
| Selenium | 7782-49-2  | 20       | 0.50            | 0.57            | 1.76   | mg/kg |       |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-K\_1.5-3.5**  
**20E0270-19 (Solid)**

**Metals and Metallic Compounds**

|                                |                                   |                            |                            |
|--------------------------------|-----------------------------------|----------------------------|----------------------------|
| Method: EPA 7471B              |                                   |                            | Sampled: 05/20/2020 10:15  |
| Instrument: HYDRA Analyst: BLC |                                   |                            | Analyzed: 06/04/2020 15:17 |
| Sample Preparation:            | Preparation Method: SMM EPA 7471B |                            | Extract ID: 20E0270-19 A   |
|                                | Preparation Batch: BIE0517        | Sample Size: 0.236 g (wet) | Dry Weight: 0.20 g         |
|                                | Prepared: 05/28/2020              | Final Volume: 50 mL        | % Solids: 83.34            |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Mercury | 7439-97-6  | 2        | 0.0107          | 0.0508          | 1.35   | mg/kg | D     |





|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-K\_1.5-3.5**  
**20E0270-19 (Solid)**

**TCLP Metals and Metallic Compounds**

|                     |   |                             |
|---------------------|---|-----------------------------|
| Method: EPA 6010C   | Instrument: ICP2 Analyst: TCH                           | Sampled: 05/20/2020 10:15   |
| Sample Preparation: | Preparation Method: LEN Digestion of EPA 1311 Elutriate | Analyzed: 06/25/2020 22:33  |
|                     | Preparation Batch: BIF0742                              | Extract ID: 20E0270-19 A 03 |
|                     | Prepared: 06/25/2020                                    |                             |
|                     | Sample Size: 25 mL (wet)                                |                             |
|                     | Final Volume: 25 mL                                     |                             |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Cadmium | 7440-43-9  | 5        | 0.0006          | 0.0100          | 0.499  | mg/L  |       |
| Lead    | 7439-92-1  | 5        | 0.0065          | 0.100           | 10.6   | mg/L  |       |



Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**TP-L\_0.4-1.4**  
**20E0270-20 (Solid)**

**Metals and Metallic Compounds**

Method: EPA 6020A Sampled: 05/20/2020 11:30  
Instrument: ICPMS1 Analyst: MCB Analyzed: 06/05/2020 13:48

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-20 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.88 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 85.69

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Barium  | 7440-39-3  | 500      | 1.60            | 14.3            | 1540   | mg/kg | D     |
| Lead    | 7439-92-1  | 500      | 1.94            | 2.85            | 4530   | mg/kg | B, D  |

Instrument: ICPMS2 Analyst: MCB Analyzed: 06/02/2020 20:57

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-20 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.88 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 85.69

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Chromium | 7440-47-3  | 20       | 0.15            | 0.57            | 217    | mg/kg |       |
| Silver   | 7440-22-4  | 20       | 0.02            | 0.23            | 3.79   | mg/kg |       |



Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**TP-L\_0.4-1.4**  
**20E0270-20 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Method: EPA 6020A UCT-KED       | Sampled: 05/20/2020 11:30         |
| Instrument: ICPMS2 Analyst: MCB | Analyzed: 06/02/2020 20:57        |
| Sample Preparation:             | Preparation Method: SWN EPA 3050B |
|                                 | Preparation Batch: BIE0518        |
|                                 | Prepared: 05/28/2020              |
|                                 | Sample Size: 1.023 g (wet)        |
|                                 | Final Volume: 50 mL               |
|                                 | Extract ID: 20E0270-20 A 01       |
|                                 | Dry Weight: 0.88 g                |
|                                 | % Solids: 85.69                   |

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Arsenic  | 7440-38-2  | 20       | 0.03            | 0.23            | 37.1   | mg/kg |       |
| Cadmium  | 7440-43-9  | 20       | 0.05            | 0.11            | 38.0   | mg/kg |       |
| Selenium | 7782-49-2  | 20       | 0.50            | 0.57            | 1.76   | mg/kg |       |



Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**TP-L\_0.4-1.4**  
**20E0270-20 (Solid)**

**Metals and Metallic Compounds**

|                                |                                   |                           |                            |
|--------------------------------|-----------------------------------|---------------------------|----------------------------|
| Method: EPA 7471B              | Preparation Method: SMM EPA 7471B | Sample Size: 0.24 g (wet) | Sampled: 05/20/2020 11:30  |
| Instrument: HYDRA Analyst: BLC | Preparation Batch: BIE0517        | Final Volume: 50 mL       | Analyzed: 06/04/2020 15:19 |
| Sample Preparation:            | Prepared: 05/28/2020              |                           | Extract ID: 20E0270-20 A   |
|                                |                                   |                           | Dry Weight: 0.21 g         |
|                                |                                   |                           | % Solids: 85.69            |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Mercury | 7439-97-6  | 20       | 0.102           | 0.486           | 9.52   | mg/kg | D     |



Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**TP-L\_0.4-1.4**  
**20E0270-20 (Solid)**

**TCLP Metals and Metallic Compounds**

Method: EPA 6010C Sampled: 05/20/2020 11:30  
Instrument: ICP2 Analyst: TCH Analyzed: 06/26/2020 15:25  
Sample Preparation: Preparation Method: LEN Digestion of EPA 1311 Elutriate Extract ID: 20E0270-20 A 04  
Preparation Batch: BIF0504 Sample Size: 25 mL (wet)  
Prepared: 06/17/2020 Final Volume: 25 mL

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Arsenic  | 7440-38-2  | 5        | 0.0140          | 0.250           | 0.0634 | mg/L  | J     |
| Barium   | 7440-39-3  | 5        | 0.0075          | 0.0150          | 1.98   | mg/L  | B     |
| Cadmium  | 7440-43-9  | 5        | 0.0006          | 0.0100          | 0.591  | mg/L  |       |
| Chromium | 7440-47-3  | 5        | 0.0024          | 0.0250          | 0.0196 | mg/L  | J     |
| Lead     | 7439-92-1  | 5        | 0.0065          | 0.100           | 60.3   | mg/L  |       |
| Selenium | 7782-49-2  | 5        | 0.0408          | 0.250           | ND     | mg/L  | U     |
| Silver   | 7440-22-4  | 5        | 0.0022          | 0.0150          | ND     | mg/L  | U     |



|  |   |                                |
|--|---|--------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | Reported:<br>29-Jun-2020 13:44 |
|--|---|--------------------------------|

**TP-L\_0.4-1.4**  
**20E0270-20 (Solid)**

**TCLP Metals and Metallic Compounds**

|                                |  |
|--------------------------------|--|
| Method: EPA 7470A              | Sampled: 05/20/2020 11:30  |
| Instrument: HYDRA Analyst: BLC | Analyzed: 06/19/2020 13:09   |
| Sample Preparation:            | Preparation Method: LEM 7470A Digestion of EPA 1311 Elutriate for Hg |
|                                | Preparation Batch: BIF0505   |
|                                | Prepared: 06/17/2020   |
|                                | Sample Size: 20 mL   |
|                                | Final Volume: 20 mL  |
|                                | Extract ID: 20E0270-20 A 03  |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result   | Units | Notes |
|---------|------------|----------|-----------------|-----------------|----------|-------|-------|
| Mercury | 7439-97-6  | 1        | 0.000007        | 0.000100        | 0.000019 | mg/L  | J     |



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Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**TP-M\_0-1.2**  
**20E0270-21 (Solid)**

**Metals and Metallic Compounds**

Method: EPA 6020A Sampled: 05/20/2020 12:00  
Instrument: ICPMS1 Analyst: MCB Analyzed: 06/05/2020 13:52

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-21 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.87 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 85.10

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Barium  | 7440-39-3  | 500      | 1.61            | 14.4            | 1270   | mg/kg | D     |
| Lead    | 7439-92-1  | 500      | 1.96            | 2.88            | 2790   | mg/kg | B, D  |

Instrument: ICPMS2 Analyst: MCB Analyzed: 06/02/2020 21:38

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-21 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.87 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 85.10

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Chromium | 7440-47-3  | 20       | 0.15            | 0.58            | 140    | mg/kg |       |
| Silver   | 7440-22-4  | 20       | 0.02            | 0.23            | 1.43   | mg/kg |       |



|  |   |                                |
|--|---|--------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | Reported:<br>29-Jun-2020 13:44 |
|--|---|--------------------------------|

**TP-M\_0-1.2**  
**20E0270-21 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Method: EPA 6020A UCT-KED       | Sampled: 05/20/2020 12:00         |
| Instrument: ICPMS2 Analyst: MCB | Analyzed: 06/02/2020 21:38        |
| Sample Preparation:             | Preparation Method: SWN EPA 3050B |
|                                 | Preparation Batch: BIE0518        |
|                                 | Prepared: 05/28/2020              |
|                                 | Sample Size: 1.02 g (wet)         |
|                                 | Final Volume: 50 mL               |
|                                 | Extract ID: 20E0270-21 A 01       |
|                                 | Dry Weight: 0.87 g                |
|                                 | % Solids: 85.10                   |

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Arsenic  | 7440-38-2  | 20       | 0.03            | 0.23            | 33.7   | mg/kg |       |
| Cadmium  | 7440-43-9  | 20       | 0.03            | 0.12            | 52.7   | mg/kg |       |
| Selenium | 7782-49-2  | 20       | 0.51            | 0.58            | 2.52   | mg/kg |       |





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Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**TP-M\_0-1.2**  
**20E0270-21 (Solid)**

**Metals and Metallic Compounds**

|                                |                                   |                            |
|--------------------------------|-----------------------------------|----------------------------|
| Method: EPA 7471B              |                                   | Sampled: 05/20/2020 12:00  |
| Instrument: HYDRA Analyst: BLC |                                   | Analyzed: 06/04/2020 15:21 |
| Sample Preparation:            | Preparation Method: SMM EPA 7471B | Extract ID: 20E0270-21 A   |
|                                | Preparation Batch: BIE0517        | Dry Weight: 0.21 g         |
|                                | Prepared: 05/28/2020              | % Solids: 85.10            |
|                                | Sample Size: 0.242 g (wet)        |                            |
|                                | Final Volume: 50 mL               |                            |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Mercury | 7439-97-6  | 5        | 0.0255          | 0.121           | 3.04   | mg/kg | D     |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-M\_0-1.2**  
**20E0270-21 (Solid)**

**TCLP Metals and Metallic Compounds**

|                     |   |                             |
|---------------------|---|-----------------------------|
| Method: EPA 6010C   | Instrument: ICP2 Analyst: TCH                           | Sampled: 05/20/2020 12:00   |
| Sample Preparation: | Preparation Method: LEN Digestion of EPA 1311 Elutriate | Analyzed: 06/25/2020 22:38  |
|                     | Preparation Batch: BIF0742                              | Extract ID: 20E0270-21 A 03 |
|                     | Prepared: 06/25/2020                                    |                             |
|                     | Sample Size: 25 mL (wet)                                |                             |
|                     | Final Volume: 25 mL                                     |                             |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Cadmium | 7440-43-9  | 5        | 0.0006          | 0.0100          | 0.441  | mg/L  |       |
| Lead    | 7439-92-1  | 5        | 0.0065          | 0.100           | 11.3   | mg/L  |       |



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Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**TP-N\_0.3-1.3**  
**20E0270-22 (Solid)**

**Metals and Metallic Compounds**

Method: EPA 6020A Sampled: 05/20/2020 13:00  
Instrument: ICPMS1 Analyst: MCB Analyzed: 06/05/2020 17:29

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-22 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.98 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 93.73

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Lead    | 7439-92-1  | 50       | 0.17            | 0.26            | 264    | mg/kg | B, D  |

Instrument: ICPMS2 Analyst: MCB Analyzed: 06/02/2020 21:43

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-22 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.98 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 93.73

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Barium   | 7440-39-3  | 20       | 0.06            | 0.51            | 121    | mg/kg |       |
| Chromium | 7440-47-3  | 20       | 0.13            | 0.51            | 41.7   | mg/kg |       |
| Silver   | 7440-22-4  | 20       | 0.02            | 0.20            | 0.26   | mg/kg |       |



|  |   |                                |
|--|---|--------------------------------|
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|--|---|--------------------------------|

**TP-N\_0.3-1.3**  
**20E0270-22 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Method: EPA 6020A UCT-KED       | Sampled: 05/20/2020 13:00         |
| Instrument: ICPMS2 Analyst: MCB | Analyzed: 06/02/2020 21:43        |
| Sample Preparation:             | Preparation Method: SWN EPA 3050B |
|                                 | Preparation Batch: BIE0518        |
|                                 | Sample Size: 1.041 g (wet)        |
|                                 | Final Volume: 50 mL               |
|                                 | Extract ID: 20E0270-22 A 01       |
|                                 | Dry Weight: 0.98 g                |
|                                 | % Solids: 93.73                   |

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Arsenic  | 7440-38-2  | 20       | 0.02            | 0.20            | 6.58   | mg/kg |       |
| Cadmium  | 7440-43-9  | 20       | 0.03            | 0.10            | 3.39   | mg/kg |       |
| Selenium | 7782-49-2  | 20       | 0.45            | 0.51            | 1.21   | mg/kg |       |



|  |   |                                       |
|--|---|---------------------------------------|
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|--|---|---------------------------------------|

**TP-N\_0.3-1.3**  
**20E0270-22 (Solid)**

**Metals and Metallic Compounds**

|                                |                                   |                            |                            |
|--------------------------------|-----------------------------------|----------------------------|----------------------------|
| Method: EPA 7471B              |                                   |                            | Sampled: 05/20/2020 13:00  |
| Instrument: HYDRA Analyst: BLC |                                   |                            | Analyzed: 06/04/2020 15:29 |
| Sample Preparation:            | Preparation Method: SMM EPA 7471B |                            | Extract ID: 20E0270-22 A   |
|                                | Preparation Batch: BIE0517        | Sample Size: 0.217 g (wet) | Dry Weight: 0.20 g         |
|                                | Prepared: 05/28/2020              | Final Volume: 50 mL        | % Solids: 93.73            |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Mercury | 7439-97-6  | 10       | 0.0516          | 0.246           | 6.13   | mg/kg | D     |



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Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**TP-N\_0.3-1.3**  
**20E0270-22 (Solid)**

**TCLP Metals and Metallic Compounds**

Method: EPA 6010C Sampled: 05/20/2020 13:00  
Instrument: ICP2 Analyst: TCH Analyzed: 06/25/2020 22:42  
Sample Preparation: Preparation Method: LEN Digestion of EPA 1311 Elutriate Extract ID: 20E0270-22 A 03  
Preparation Batch: BIF0742 Sample Size: 25 mL (wet)  
Prepared: 06/25/2020 Final Volume: 25 mL

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Cadmium | 7440-43-9  | 5        | 0.0006          | 0.0100          | 0.0785 | mg/L  |       |
| Lead    | 7439-92-1  | 5        | 0.0065          | 0.100           | 0.968  | mg/L  |       |



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Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**TP-O\_1-3**  
**20E0270-23 (Solid)**

**Metals and Metallic Compounds**

Method: EPA 6020A Sampled: 05/20/2020 13:40  
Instrument: ICPMS1 Analyst: MCB Analyzed: 06/05/2020 13:57

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-23 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.92 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 85.72

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Barium  | 7440-39-3  | 500      | 1.52            | 13.6            | 1090   | mg/kg | D     |
| Lead    | 7439-92-1  | 500      | 1.85            | 2.72            | 6100   | mg/kg | B, D  |

Instrument: ICPMS2 Analyst: MCB Analyzed: 06/02/2020 21:49

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-23 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.92 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 85.72

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Chromium | 7440-47-3  | 20       | 0.14            | 0.54            | 141    | mg/kg |       |
| Silver   | 7440-22-4  | 20       | 0.02            | 0.22            | 2.19   | mg/kg |       |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-O\_1-3**  
**20E0270-23 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |                            |                             |
|---------------------------------|-----------------------------------|----------------------------|-----------------------------|
| Method: EPA 6020A UCT-KED       |                                   | Sampled: 05/20/2020 13:40  |                             |
| Instrument: ICPMS2 Analyst: MCB |                                   | Analyzed: 06/02/2020 21:49 |                             |
| Sample Preparation:             | Preparation Method: SWN EPA 3050B | Sample Size: 1.073 g (wet) | Extract ID: 20E0270-23 A 01 |
|                                 | Preparation Batch: BIE0518        | Final Volume: 50 mL        | Dry Weight: 0.92 g          |
|                                 | Prepared: 05/28/2020              |                            | % Solids: 85.72             |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Arsenic | 7440-38-2  | 20       | 0.02            | 0.22            | 49.3   | mg/kg |       |
| Cadmium | 7440-43-9  | 20       | 0.03            | 0.11            | 26.7   | mg/kg |       |





|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-O\_1-3**  
**20E0270-23 (Solid)**

**Metals and Metallic Compounds**

|                                |                                   |                            |
|--------------------------------|-----------------------------------|----------------------------|
| Method: EPA 7471B              | Preparation Method: SMM EPA 7471B | Sampled: 05/20/2020 13:40  |
| Instrument: HYDRA Analyst: BLC | Preparation Batch: BIE0517        | Analyzed: 06/04/2020 15:41 |
| Sample Preparation:            | Sample Size: 0.257 g (wet)        | Extract ID: 20E0270-23 A   |
| Prepared: 05/28/2020           | Final Volume: 50 mL               | Dry Weight: 0.22 g         |
|                                |                                   | % Solids: 85.72            |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Mercury | 7439-97-6  | 50       | 0.238           | 1.13            | 47.1   | mg/kg | D     |



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1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**TP-O\_1-3**  
**20E0270-23 (Solid)**

**TCLP Metals and Metallic Compounds**

Method: EPA 6010C Sampled: 05/20/2020 13:40  
Instrument: ICP2 Analyst: TCH Analyzed: 06/26/2020 15:30  
Sample Preparation: Preparation Method: LEN Digestion of EPA 1311 Elutriate Extract ID: 20E0270-23 A 04  
Preparation Batch: BIF0504 Sample Size: 25 mL (wet)  
Prepared: 06/17/2020 Final Volume: 25 mL

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Arsenic  | 7440-38-2  | 5        | 0.0140          | 0.250           | 0.0363 | mg/L  | J     |
| Barium   | 7440-39-3  | 5        | 0.0075          | 0.0150          | 2.78   | mg/L  | B     |
| Cadmium  | 7440-43-9  | 5        | 0.0006          | 0.0100          | 0.391  | mg/L  |       |
| Chromium | 7440-47-3  | 5        | 0.0024          | 0.0250          | 0.0225 | mg/L  | J     |
| Lead     | 7439-92-1  | 5        | 0.0065          | 0.100           | 4.78   | mg/L  |       |
| Selenium | 7782-49-2  | 5        | 0.0408          | 0.250           | ND     | mg/L  | U     |
| Silver   | 7440-22-4  | 5        | 0.0022          | 0.0150          | ND     | mg/L  | U     |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-O\_1-3**  
**20E0270-23 (Solid)**

**TCLP Metals and Metallic Compounds**

|  |                             |
|--|-----------------------------|
| Method: EPA 7470A  | Sampled: 05/20/2020 13:40   |
| Instrument: HYDRA Analyst: BLC                                       | Analyzed: 06/19/2020 13:11  |
| Sample Preparation:  | Extract ID: 20E0270-23 A 03 |
| Preparation Method: LEM 7470A Digestion of EPA 1311 Elutriate for Hg |                             |
| Preparation Batch: BIF0505   | Sample Size: 20 mL          |
| Prepared: 06/17/2020   | Final Volume: 20 mL         |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result   | Units | Notes |
|---------|------------|----------|-----------------|-----------------|----------|-------|-------|
| Mercury | 7439-97-6  | 1        | 0.000007        | 0.000100        | 0.000146 | mg/L  |       |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-O\_1-3**  
**20E0270-23RE1 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |                                |
|---------------------------------|-----------------------------------|--------------------------------|
| Method: EPA 6020A UCT-KED       | Sampled: 05/20/2020 13:40         |                                |
| Instrument: ICPMS1 Analyst: MCB | Analyzed: 06/05/2020 17:45        |                                |
| Sample Preparation:             | Preparation Method: SWN EPA 3050B | Extract ID: 20E0270-23RE1 A 01 |
|                                 | Preparation Batch: BIE0518        | Sample Size: 1.073 g (wet)     |
|                                 | Prepared: 05/28/2020              | Final Volume: 50 mL            |
|                                 |                                   | Dry Weight: 0.92 g             |
|                                 |                                   | % Solids: 85.72                |

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Selenium | 7782-49-2  | 50       | 1.20            | 1.36            | 2.78   | mg/kg | D     |



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Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**TP-P\_0.5-3**  
**20E0270-25 (Solid)**

**Metals and Metallic Compounds**

Method: EPA 6020A Sampled: 05/19/2020 14:30  
Instrument: ICPMS1 Analyst: MCB Analyzed: 06/05/2020 15:05

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-25 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.97 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 89.96

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Barium  | 7440-39-3  | 500      | 1.44            | 12.9            | 671    | mg/kg | D     |
| Lead    | 7439-92-1  | 500      | 1.75            | 2.57            | 4200   | mg/kg | B, D  |

Instrument: ICPMS2 Analyst: MCB Analyzed: 06/02/2020 21:54

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-25 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.97 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 89.96

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Chromium | 7440-47-3  | 20       | 0.13            | 0.51            | 170    | mg/kg |       |
| Silver   | 7440-22-4  | 20       | 0.02            | 0.21            | 1.71   | mg/kg |       |



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Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**TP-P\_0.5-3**  
**20E0270-25 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Method: EPA 6020A UCT-KED       | Sampled: 05/19/2020 14:30         |
| Instrument: ICPMS2 Analyst: MCB | Analyzed: 06/02/2020 21:54        |
| Sample Preparation:             | Preparation Method: SWN EPA 3050B |
|                                 | Preparation Batch: BIE0518        |
|                                 | Prepared: 05/28/2020              |
|                                 | Sample Size: 1.08 g (wet)         |
|                                 | Final Volume: 50 mL               |
|                                 | Extract ID: 20E0270-25 A 01       |
|                                 | Dry Weight: 0.97 g                |
|                                 | % Solids: 89.96                   |

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Arsenic  | 7440-38-2  | 20       | 0.02            | 0.21            | 52.1   | mg/kg |       |
| Cadmium  | 7440-43-9  | 20       | 0.03            | 0.10            | 21.1   | mg/kg |       |
| Selenium | 7782-49-2  | 20       | 0.45            | 0.51            | 10.7   | mg/kg |       |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-P\_0.5-3**  
**20E0270-25 (Solid)**

**Metals and Metallic Compounds**

|                                |                                   |                           |   |
|--------------------------------|-----------------------------------|---------------------------|---|
| Method: EPA 7471B              | Preparation Method: SMM EPA 7471B | Sample Size: 0.29 g (wet) | Sampled: 05/19/2020 14:30   |
| Instrument: HYDRA Analyst: BLC | Preparation Batch: BIE0517        | Final Volume: 50 mL       | Analyzed: 06/04/2020 15:43  |
| Sample Preparation:            | Prepared: 05/28/2020              |                           | Extract ID: 20E0270-25 A<br>Dry Weight: 0.26 g<br>% Solids: 89.96 |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Mercury | 7439-97-6  | 50       | 0.201           | 0.958           | 9.01   | mg/kg | D     |



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1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**TP-P\_0.5-3**  
**20E0270-25 (Solid)**

**TCLP Metals and Metallic Compounds**

Method: EPA 6010C Sampled: 05/19/2020 14:30  
Instrument: ICP2 Analyst: TCH Analyzed: 06/26/2020 15:34

Sample Preparation: Preparation Method: LEN Digestion of EPA 1311 Elutriate Extract ID: 20E0270-25 A 04  
Preparation Batch: BIF0504 Sample Size: 25 mL (wet)  
Prepared: 06/17/2020 Final Volume: 25 mL

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Arsenic  | 7440-38-2  | 5        | 0.0140          | 0.250           | 0.0584 | mg/L  | J     |
| Barium   | 7440-39-3  | 5        | 0.0075          | 0.0150          | 2.28   | mg/L  | B     |
| Cadmium  | 7440-43-9  | 5        | 0.0006          | 0.0100          | 0.472  | mg/L  |       |
| Chromium | 7440-47-3  | 5        | 0.0024          | 0.0250          | 0.0194 | mg/L  | J     |
| Lead     | 7439-92-1  | 5        | 0.0065          | 0.100           | 61.2   | mg/L  |       |
| Selenium | 7782-49-2  | 5        | 0.0408          | 0.250           | ND     | mg/L  | U     |
| Silver   | 7440-22-4  | 5        | 0.0022          | 0.0150          | ND     | mg/L  | U     |





|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-P\_0.5-3**  
**20E0270-25 (Solid)**

**TCLP Metals and Metallic Compounds**

|                     |  |  |
|---------------------|--|--|
| Method: EPA 7470A   | Instrument: HYDRA Analyst: BLC   | Sampled: 05/19/2020 14:30<br>Analyzed: 06/19/2020 13:13                  |
| Sample Preparation: | Preparation Method: LEM 7470A Digestion of EPA 1311 Elutriate for Hg<br>Preparation Batch: BIF0505<br>Prepared: 06/17/2020 | Extract ID: 20E0270-25 A 03<br>Sample Size: 20 mL<br>Final Volume: 20 mL |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result   | Units | Notes |
|---------|------------|----------|-----------------|-----------------|----------|-------|-------|
| Mercury | 7439-97-6  | 1        | 0.000007        | 0.000100        | 0.000043 | mg/L  | J     |



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Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**TP-Q\_1.5-3**  
**20E0270-27 (Solid)**

**Metals and Metallic Compounds**

Method: EPA 6020A Sampled: 05/20/2020 15:30  
Instrument: ICPMS1 Analyst: MCB Analyzed: 06/05/2020 15:10

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-27 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.85 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 82.50

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Barium  | 7440-39-3  | 500      | 1.65            | 14.8            | 875    | mg/kg | D     |
| Lead    | 7439-92-1  | 500      | 2.01            | 2.95            | 3340   | mg/kg | B, D  |

Instrument: ICPMS2 Analyst: MCB Analyzed: 06/02/2020 21:59

Sample Preparation: Preparation Method: SWN EPA 3050B Extract ID: 20E0270-27 A 01  
Preparation Batch: BIE0518 Dry Weight: 0.85 g  
Prepared: 05/28/2020 Final Volume: 50 mL % Solids: 82.50

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Chromium | 7440-47-3  | 20       | 0.15            | 0.59            | 203    | mg/kg |       |
| Silver   | 7440-22-4  | 20       | 0.02            | 0.24            | 2.84   | mg/kg |       |



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Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**TP-Q\_1.5-3**  
**20E0270-27 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Method: EPA 6020A UCT-KED       | Sampled: 05/20/2020 15:30         |
| Instrument: ICPMS2 Analyst: MCB | Analyzed: 06/02/2020 21:59        |
| Sample Preparation:             | Preparation Method: SWN EPA 3050B |
|                                 | Preparation Batch: BIE0518        |
|                                 | Prepared: 05/28/2020              |
|                                 | Sample Size: 1.027 g (wet)        |
|                                 | Final Volume: 50 mL               |
|                                 | Extract ID: 20E0270-27 A 01       |
|                                 | Dry Weight: 0.85 g                |
|                                 | % Solids: 82.50                   |

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Arsenic  | 7440-38-2  | 20       | 0.03            | 0.24            | 69.8   | mg/kg |       |
| Cadmium  | 7440-43-9  | 20       | 0.05            | 0.12            | 45.4   | mg/kg |       |
| Selenium | 7782-49-2  | 20       | 0.52            | 0.59            | 2.05   | mg/kg |       |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

**TP-Q\_1.5-3**  
**20E0270-27 (Solid)**

**Metals and Metallic Compounds**

|                                |                                   |                            |   |
|--------------------------------|-----------------------------------|----------------------------|---|
| Method: EPA 7471B              | Preparation Method: SMM EPA 7471B | Sample Size: 0.263 g (wet) | Sampled: 05/20/2020 15:30   |
| Instrument: HYDRA Analyst: BLC | Preparation Batch: BIE0517        | Final Volume: 50 mL        | Analyzed: 06/04/2020 15:45  |
| Sample Preparation:            | Prepared: 05/28/2020              |                            | Extract ID: 20E0270-27 A<br>Dry Weight: 0.22 g<br>% Solids: 82.50 |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Mercury | 7439-97-6  | 50       | 0.242           | 1.15            | 16.1   | mg/kg | D     |



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Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**TP-Q\_1.5-3**  
**20E0270-27 (Solid)**

**TCLP Metals and Metallic Compounds**

Method: EPA 6010C Sampled: 05/20/2020 15:30  
Instrument: ICP2 Analyst: TCH Analyzed: 06/25/2020 23:41

Sample Preparation: Preparation Method: LEN Digestion of EPA 1311 Elutriate Extract ID: 20E0270-27 A 03  
Preparation Batch: BIF0742 Sample Size: 25 mL (wet)  
Prepared: 06/25/2020 Final Volume: 25 mL

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Cadmium | 7440-43-9  | 5        | 0.0006          | 0.0100          | 0.677  | mg/L  |       |
| Lead    | 7439-92-1  | 5        | 0.0065          | 0.100           | 26.4   | mg/L  |       |



|  |   |                                |
|--|---|--------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | Reported:<br>29-Jun-2020 13:44 |
|--|---|--------------------------------|

**DUPL-1**  
**20E0270-29 (Solid)**

**Metals and Metallic Compounds**

|   |                             |
|---|-----------------------------|
| Method: EPA 6020A                                     | Sampled: 05/20/2020 13:45   |
| Instrument: ICPMS1 Analyst: MCB                       | Analyzed: 06/05/2020 14:07  |
| Sample Preparation: Preparation Method: SWN EPA 3050B | Extract ID: 20E0270-29 A 01 |
| Preparation Batch: BIE0518                            | Dry Weight: 0.91 g          |
| Prepared: 05/28/2020                                  | % Solids: 85.03             |
| Sample Size: 1.069 g (wet)                            |                             |
| Final Volume: 50 mL                                   |                             |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Lead    | 7439-92-1  | 500      | 1.87            | 2.75            | 7130   | mg/kg | B, D  |

|   |                             |
|---|-----------------------------|
| Instrument: ICPMS2 Analyst: MCB                       | Analyzed: 06/04/2020 14:21  |
| Sample Preparation: Preparation Method: SWN EPA 3050B | Extract ID: 20E0270-29 A 01 |
| Preparation Batch: BIE0518                            | Dry Weight: 0.91 g          |
| Prepared: 05/28/2020                                  | % Solids: 85.03             |
| Sample Size: 1.069 g (wet)                            |                             |
| Final Volume: 50 mL                                   |                             |

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Barium   | 7440-39-3  | 500      | 1.54            | 13.8            | 723    | mg/kg | D     |
| Chromium | 7440-47-3  | 20       | 0.14            | 0.55            | 148    | mg/kg |       |
| Silver   | 7440-22-4  | 20       | 0.02            | 0.22            | 1.99   | mg/kg |       |



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1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**DUPL-1**  
**20E0270-29 (Solid)**

**Metals and Metallic Compounds**

|                                 |                                   |
|---------------------------------|-----------------------------------|
| Method: EPA 6020A UCT-KED       | Sampled: 05/20/2020 13:45         |
| Instrument: ICPMS2 Analyst: MCB | Analyzed: 06/02/2020 19:53        |
| Sample Preparation:             | Preparation Method: SWN EPA 3050B |
|                                 | Preparation Batch: BIE0518        |
|                                 | Prepared: 05/28/2020              |
|                                 | Sample Size: 1.069 g (wet)        |
|                                 | Final Volume: 50 mL               |
|                                 | Extract ID: 20E0270-29 A 01       |
|                                 | Dry Weight: 0.91 g                |
|                                 | % Solids: 85.03                   |

| Analyte  | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|----------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Arsenic  | 7440-38-2  | 20       | 0.02            | 0.22            | 24.4   | mg/kg |       |
| Cadmium  | 7440-43-9  | 20       | 0.03            | 0.11            | 25.8   | mg/kg |       |
| Selenium | 7782-49-2  | 20       | 0.48            | 0.55            | 1.47   | mg/kg |       |



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1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

**Reported:**  
29-Jun-2020 13:44

**DUPL-1**  
**20E0270-29 (Solid)**

**Metals and Metallic Compounds**

|                                |                                   |                            |
|--------------------------------|-----------------------------------|----------------------------|
| Method: EPA 7471B              |                                   | Sampled: 05/20/2020 13:45  |
| Instrument: HYDRA Analyst: BLC |                                   | Analyzed: 06/04/2020 13:59 |
| Sample Preparation:            | Preparation Method: SMM EPA 7471B | Extract ID: 20E0270-29 A   |
|                                | Preparation Batch: BIE0517        | Dry Weight: 0.22 g         |
|                                | Prepared: 05/28/2020              | % Solids: 85.03            |
|                                | Sample Size: 0.264 g (wet)        |                            |
|                                | Final Volume: 50 mL               |                            |

| Analyte | CAS Number | Dilution | Detection Limit | Reporting Limit | Result | Units | Notes |
|---------|------------|----------|-----------------|-----------------|--------|-------|-------|
| Mercury | 7439-97-6  | 50       | 0.234           | 1.11            | 39.6   | mg/kg | D     |





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1420 - 156th Ave., NE STE C1  
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Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**Metals and Metallic Compounds - Quality Control**

**Batch BIE0517 - SMM EPA 7471B**

Instrument: HYDRA Analyst: BLC

| QC Sample/Analyte   | Result  | Detection Limit | Reporting Limit | Units | Spike Level | Source Result  | %REC  | %REC Limits | RPD   | RPD Limit | Notes |
|---|---------|-----------------|-----------------|-------|-------------|--|-------|-------------|-------|-----------|-------|
| <b>Blank (BIE0517-BLK1)</b>   |         |                 |                 |       |             | Prepared: 28-May-2020 Analyzed: 04-Jun-2020 13:13                    |       |             |       |           |       |
| Mercury   | 0.00548 | 0.00525         | 0.0250          | mg/kg |             |  |       |             |       |           | J     |
| <b>LCS (BIE0517-BS1)</b>  |         |                 |                 |       |             | Prepared: 28-May-2020 Analyzed: 04-Jun-2020 13:15                    |       |             |       |           |       |
| Mercury   | 0.455   | 0.00525         | 0.0250          | mg/kg | 0.500       |  | 91.0  | 80-120      |       |           |       |
| <b>Duplicate (BIE0517-DUP1)</b>   |         |                 |                 |       |             | Source: 20E0270-01 Prepared: 28-May-2020 Analyzed: 04-Jun-2020 13:30 |       |             |       |           |       |
| Mercury   | 0.956   | 0.0107          | 0.0511          | mg/kg |             | 1.39   |       |             | 36.80 | 20        | *, D  |
| <b>Duplicate (BIE0517-DUP2)</b>   |         |                 |                 |       |             | Source: 20E0270-29 Prepared: 28-May-2020 Analyzed: 04-Jun-2020 14:01 |       |             |       |           |       |
| Mercury   | 33.2    | 0.236           | 1.12            | mg/kg |             | 39.6   |       |             | 17.70 | 20        | D     |
| <b>Matrix Spike (BIE0517-MS1)</b>   |         |                 |                 |       |             | Source: 20E0270-01 Prepared: 28-May-2020 Analyzed: 04-Jun-2020 13:32 |       |             |       |           |       |
| Mercury   | 1.47    | 0.0108          | 0.0513          | mg/kg | 0.257       | 1.39   | 31.7  | 75-125      |       |           | HC, D |
| Recovery limits for target analytes in MS/MSD QC samples are advisory only. |         |                 |                 |       |             |  |       |             |       |           |       |
| <b>Matrix Spike (BIE0517-MS2)</b>   |         |                 |                 |       |             | Source: 20E0270-29 Prepared: 28-May-2020 Analyzed: 04-Jun-2020 14:03 |       |             |       |           |       |
| Mercury   | 30.5    | 0.234           | 1.11            | mg/kg | 0.223       | 39.6   | -4080 | 75-125      |       |           | HC, D |
| Recovery limits for target analytes in MS/MSD QC samples are advisory only. |         |                 |                 |       |             |  |       |             |       |           |       |
| <b>Matrix Spike Dup (BIE0517-MSD1)</b>                                      |         |                 |                 |       |             | Source: 20E0270-01 Prepared: 28-May-2020 Analyzed: 04-Jun-2020 13:39 |       |             |       |           |       |
| Mercury   | 1.53    | 0.0107          | 0.0511          | mg/kg | 0.255       | 1.39   | 57.7  | 75-125      | 4.41  | 20        | HC, D |
| Recovery limits for target analytes in MS/MSD QC samples are advisory only. |         |                 |                 |       |             |  |       |             |       |           |       |
| <b>Matrix Spike Dup (BIE0517-MSD2)</b>                                      |         |                 |                 |       |             | Source: 20E0270-29 Prepared: 28-May-2020 Analyzed: 04-Jun-2020 14:06 |       |             |       |           |       |
| Mercury   | 39.0    | 0.235           | 1.12            | mg/kg | 0.224       | 39.6   | -281  | 75-125      | 24.30 | 20        | HC, D |
| Recovery limits for target analytes in MS/MSD QC samples are advisory only. |         |                 |                 |       |             |  |       |             |       |           |       |



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1420 - 156th Ave., NE STE C1  
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Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**Metals and Metallic Compounds - Quality Control**

**Batch BIE0518 - SWN EPA 3050B**

Instrument: ICPMS1 Analyst: MCB

| QC Sample/Analyte                 | Isotope | Result                    | Detection Limit | Reporting Limit       | Units | Spike Level                 | Source Result | %REC | %REC Limits | RPD   | RPD Limit | Notes    |
|-----------------------------------|---------|---------------------------|-----------------|-----------------------|-------|-----------------------------|---------------|------|-------------|-------|-----------|----------|
| <b>Duplicate (BIE0518-DUP3)</b>   |         | <b>Source: 20E0270-01</b> |                 | Prepared: 28-May-2020 |       | Analyzed: 05-Jun-2020 15:20 |               |      |             |       |           |          |
| Barium                            | 135     | 377                       | 0.60            | 5.36                  | mg/kg |                             | 297           |      | 75-125      | 23.50 | 20        | *, D     |
| Lead                              | 208     | 1040                      | 0.73            | 1.07                  | mg/kg |                             | 1130          |      | 75-125      | 8.32  | 20        | B, D     |
| <b>Duplicate (BIE0518-DUP6)</b>   |         | <b>Source: 20E0270-01</b> |                 | Prepared: 28-May-2020 |       | Analyzed: 05-Jun-2020 14:11 |               |      |             |       |           |          |
| Lead                              | 208     | 2730                      | 1.82            | 2.68                  | mg/kg |                             | 1130          |      | 75-125      | 83.10 | 20        | *, B, D  |
| <b>Matrix Spike (BIE0518-MS3)</b> |         | <b>Source: 20E0270-01</b> |                 | Prepared: 28-May-2020 |       | Analyzed: 05-Jun-2020 15:25 |               |      |             |       |           |          |
| Barium                            | 135     | 358                       | 0.60            | 5.33                  | mg/kg | 26.7                        | 297           | 229  | 75-125      |       |           | HC, D    |
| Lead                              | 208     | 1040                      | 0.73            | 1.07                  | mg/kg | 26.7                        | 1130          | -308 | 75-125      |       |           | B, HC, D |

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

|                                   |     |                           |      |                       |       |                             |      |      |        |  |  |          |
|-----------------------------------|-----|---------------------------|------|-----------------------|-------|-----------------------------|------|------|--------|--|--|----------|
| <b>Matrix Spike (BIE0518-MS6)</b> |     | <b>Source: 20E0270-01</b> |      | Prepared: 28-May-2020 |       | Analyzed: 05-Jun-2020 14:17 |      |      |        |  |  |          |
| Lead                              | 208 | 2500                      | 1.81 | 2.67                  | mg/kg | 26.7                        | 1130 | 5150 | 75-125 |  |  | B, HC, D |

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

|  |     |                           |      |                       |       |                             |      |      |        |       |    |          |
|--|-----|---------------------------|------|-----------------------|-------|-----------------------------|------|------|--------|-------|----|----------|
| <b>Matrix Spike Dup (BIE0518-MSD3)</b> |     | <b>Source: 20E0270-01</b> |      | Prepared: 28-May-2020 |       | Analyzed: 05-Jun-2020 15:33 |      |      |        |       |    |          |
| Barium                                 | 135 | 381                       | 0.60 | 5.36                  | mg/kg | 26.8                        | 297  | 312  | 75-125 | 6.13  | 20 | HC, D    |
| Lead                                   | 208 | 875                       | 0.73 | 1.07                  | mg/kg | 26.8                        | 1130 | -939 | 75-125 | 17.60 | 20 | B, HC, D |

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

|  |     |                           |      |                       |       |                             |      |      |        |      |    |          |
|--|-----|---------------------------|------|-----------------------|-------|-----------------------------|------|------|--------|------|----|----------|
| <b>Matrix Spike Dup (BIE0518-MSD6)</b> |     | <b>Source: 20E0270-01</b> |      | Prepared: 28-May-2020 |       | Analyzed: 05-Jun-2020 14:24 |      |      |        |      |    |          |
| Lead                                   | 208 | 2420                      | 1.82 | 2.68                  | mg/kg | 26.8                        | 1130 | 4820 | 75-125 | 3.32 | 20 | B, HC, D |

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Instrument: ICPMS2 Analyst: MCB

| QC Sample/Analyte           | Isotope | Result | Detection Limit | Reporting Limit       | Units | Spike Level                 | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|-----------------------------|---------|--------|-----------------|-----------------------|-------|-----------------------------|---------------|------|-------------|-----|-----------|-------|
| <b>Blank (BIE0518-BLK1)</b> |         |        |                 | Prepared: 28-May-2020 |       | Analyzed: 02-Jun-2020 18:14 |               |      |             |     |           |       |
| Barium                      | 135     | ND     | 0.06            | 0.50                  | mg/kg |                             |               |      |             |     |           | U     |
| Barium                      | 137     | ND     | 0.05            | 0.50                  | mg/kg |                             |               |      |             |     |           | U     |
| Chromium                    | 52      | ND     | 0.13            | 0.50                  | mg/kg |                             |               |      |             |     |           | U     |
| Chromium                    | 53      | 0.20   | 0.07            | 0.50                  | mg/kg |                             |               |      |             |     |           | J     |
| Lead                        | 208     | 0.24   | 0.07            | 0.10                  | mg/kg |                             |               |      |             |     |           |       |
| Silver                      | 107     | ND     | 0.02            | 0.20                  | mg/kg |                             |               |      |             |     |           | U     |
| Arsenic                     | 75a     | ND     | 0.02            | 0.20                  | mg/kg |                             |               |      |             |     |           | U     |



Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**Metals and Metallic Compounds - Quality Control**

**Batch BIE0518 - SWN EPA 3050B**

Instrument: ICPMS2 Analyst: MCB

| QC Sample/Analyte                 | Isotope | Result | Detection Limit | Reporting Limit | Units | Spike Level  | Source Result | %REC | %REC Limits | RPD   | RPD Limit | Notes |
|-----------------------------------|---------|--------|-----------------|-----------------|-------|--|---------------|------|-------------|-------|-----------|-------|
| <b>Blank (BIE0518-BLK1)</b>       |         |        |                 |                 |       | Prepared: 28-May-2020 Analyzed: 02-Jun-2020 18:14                    |               |      |             |       |           |       |
| Cadmium                           | 111     | ND     | 0.03            | 0.10            | mg/kg |  |               |      |             |       |           | U     |
| Cadmium                           | 114     | ND     | 0.04            | 0.10            | mg/kg |  |               |      |             |       |           | U     |
| Selenium                          | 78      | ND     | 0.44            | 0.50            | mg/kg |  |               |      |             |       |           | U     |
| <b>LCS (BIE0518-BS1)</b>          |         |        |                 |                 |       | Prepared: 28-May-2020 Analyzed: 02-Jun-2020 18:19                    |               |      |             |       |           |       |
| Barium                            | 135     | 25.3   | 0.06            | 0.50            | mg/kg | 25.0   |               | 101  | 80-120      |       |           |       |
| Barium                            | 137     | 25.9   | 0.05            | 0.50            | mg/kg | 25.0   |               | 103  | 80-120      |       |           |       |
| Chromium                          | 52      | 26.9   | 0.13            | 0.50            | mg/kg | 25.0   |               | 108  | 80-120      |       |           |       |
| Chromium                          | 53      | 27.2   | 0.07            | 0.50            | mg/kg | 25.0   |               | 109  | 80-120      |       |           |       |
| Lead                              | 208     | 28.6   | 0.07            | 0.10            | mg/kg | 25.0   |               | 115  | 80-120      |       |           | B     |
| Silver                            | 107     | 28.1   | 0.02            | 0.20            | mg/kg | 25.0   |               | 113  | 80-120      |       |           |       |
| Arsenic                           | 75a     | 26.0   | 0.02            | 0.20            | mg/kg | 25.0   |               | 104  | 80-120      |       |           |       |
| Cadmium                           | 111     | 26.0   | 0.03            | 0.10            | mg/kg | 25.0   |               | 104  | 80-120      |       |           |       |
| Cadmium                           | 114     | 25.9   | 0.04            | 0.10            | mg/kg | 25.0   |               | 104  | 80-120      |       |           |       |
| Selenium                          | 78      | 83.8   | 0.44            | 0.50            | mg/kg | 80.0   |               | 105  | 80-120      |       |           |       |
| <b>Duplicate (BIE0518-DUP1)</b>   |         |        |                 |                 |       | Source: 20E0270-01 Prepared: 28-May-2020 Analyzed: 02-Jun-2020 18:51 |               |      |             |       |           |       |
| Chromium                          | 52      | 65.7   | 0.14            | 0.54            | mg/kg |  | 59.0          |      |             | 10.70 | 20        |       |
| Silver                            | 107     | 9.77   | 0.02            | 0.21            | mg/kg |  | 4.29          |      |             | 77.90 | 20        | *     |
| Arsenic                           | 75a     | 24.3   | 0.02            | 0.21            | mg/kg |  | 28.5          |      |             | 15.70 | 20        |       |
| Cadmium                           | 114     | 15.8   | 0.04            | 0.11            | mg/kg |  | 12.7          |      |             | 21.80 | 20        | *     |
| Selenium                          | 78      | 2.00   | 0.47            | 0.54            | mg/kg |  | 2.02          |      |             | 0.92  | 20        |       |
| <b>Duplicate (BIE0518-DUP2)</b>   |         |        |                 |                 |       | Source: 20E0270-29 Prepared: 28-May-2020 Analyzed: 02-Jun-2020 19:58 |               |      |             |       |           |       |
| Chromium                          | 52      | 235    | 0.14            | 0.55            | mg/kg |  | 148           |      |             | 45.50 | 20        | *     |
| Silver                            | 107     | 4.53   | 0.02            | 0.22            | mg/kg |  | 1.99          |      |             | 78.10 | 20        | *     |
| Arsenic                           | 75a     | 55.8   | 0.02            | 0.22            | mg/kg |  | 24.4          |      |             | 78.30 | 20        | *     |
| Cadmium                           | 111     | 25.8   | 0.03            | 0.11            | mg/kg |  | 25.8          |      |             | 0.00  |           |       |
| Selenium                          | 78      | 2.46   | 0.49            | 0.55            | mg/kg |  | 1.47          |      |             | 50.10 | 20        | *     |
| <b>Duplicate (BIE0518-DUP4)</b>   |         |        |                 |                 |       | Source: 20E0270-29 Prepared: 28-May-2020 Analyzed: 04-Jun-2020 14:23 |               |      |             |       |           |       |
| Barium                            | 135     | 781    | 1.57            | 14.0            | mg/kg |  | 723           |      |             | 7.78  | 20        | D     |
| Chromium                          | 52      | ND     | 3.64            | 14.0            | mg/kg |  | 148           |      |             |       |           | U     |
| Chromium                          | 53      | ND     | 1.96            | 14.0            | mg/kg |  | 146           |      |             |       |           | U     |
| <b>Matrix Spike (BIE0518-MS1)</b> |         |        |                 |                 |       | Source: 20E0270-01 Prepared: 28-May-2020 Analyzed: 02-Jun-2020 18:56 |               |      |             |       |           |       |



Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**Metals and Metallic Compounds - Quality Control**

**Batch BIE0518 - SWN EPA 3050B**

Instrument: ICPMS2 Analyst: MCB

| QC Sample/Analyte                 | Isotope | Result | Detection Limit           | Reporting Limit | Units | Spike Level           | Source Result | %REC                        | %REC Limits | RPD | RPD Limit | Notes |
|-----------------------------------|---------|--------|---------------------------|-----------------|-------|-----------------------|---------------|-----------------------------|-------------|-----|-----------|-------|
| <b>Matrix Spike (BIE0518-MS1)</b> |         |        | <b>Source: 20E0270-01</b> |                 |       | Prepared: 28-May-2020 |               | Analyzed: 02-Jun-2020 18:56 |             |     |           |       |
| Chromium                          | 52      | 99.6   | 0.14                      | 0.53            | mg/kg | 26.7                  | 59.0          | 152                         | 75-125      |     |           | *     |
| Silver                            | 107     | 30.6   | 0.02                      | 0.21            | mg/kg | 26.7                  | 4.29          | 98.8                        | 75-125      |     |           |       |
| Arsenic                           | 75a     | 49.0   | 0.02                      | 0.21            | mg/kg | 26.7                  | 28.5          | 77.0                        | 75-125      |     |           |       |
| Cadmium                           | 114     | 37.9   | 0.04                      | 0.11            | mg/kg | 26.7                  | 12.7          | 94.4                        | 75-125      |     |           |       |
| Selenium                          | 78      | 79.6   | 0.47                      | 0.53            | mg/kg | 85.3                  | 2.02          | 90.9                        | 75-125      |     |           |       |

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

|                                   |     |      |                           |      |       |                       |      |                             |        |  |  |    |
|-----------------------------------|-----|------|---------------------------|------|-------|-----------------------|------|-----------------------------|--------|--|--|----|
| <b>Matrix Spike (BIE0518-MS2)</b> |     |      | <b>Source: 20E0270-29</b> |      |       | Prepared: 28-May-2020 |      | Analyzed: 02-Jun-2020 20:03 |        |  |  |    |
| Chromium                          | 52  | 181  | 0.14                      | 0.55 | mg/kg | 27.5                  | 148  | 117                         | 75-125 |  |  | HC |
| Silver                            | 107 | 29.1 | 0.02                      | 0.22 | mg/kg | 27.5                  | 1.99 | 98.3                        | 75-125 |  |  |    |
| Arsenic                           | 75a | 79.3 | 0.02                      | 0.22 | mg/kg | 27.5                  | 24.4 | 200                         | 75-125 |  |  | *  |
| Cadmium                           | 111 | 50.6 | 0.03                      | 0.11 | mg/kg | 27.5                  | 25.8 | 90.4                        | 75-125 |  |  |    |
| Selenium                          | 78  | 83.2 | 0.48                      | 0.55 | mg/kg | 88.1                  | 1.47 | 92.8                        | 75-125 |  |  |    |

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

|                                   |     |     |                           |      |       |                       |     |                             |        |  |  |       |
|-----------------------------------|-----|-----|---------------------------|------|-------|-----------------------|-----|-----------------------------|--------|--|--|-------|
| <b>Matrix Spike (BIE0518-MS4)</b> |     |     | <b>Source: 20E0270-29</b> |      |       | Prepared: 28-May-2020 |     | Analyzed: 04-Jun-2020 14:25 |        |  |  |       |
| Barium                            | 135 | 814 | 1.56                      | 13.9 | mg/kg | 27.9                  | 723 | 328                         | 75-125 |  |  | HC, D |
| Chromium                          | 52  | ND  | 3.63                      | 13.9 | mg/kg | 27.9                  | 148 | -531                        | 75-125 |  |  | U     |
| Chromium                          | 53  | ND  | 1.95                      | 13.9 | mg/kg | 27.9                  | 146 | -524                        | 75-125 |  |  | U     |

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

|  |     |      |                           |      |       |                       |      |                             |        |       |    |   |
|--|-----|------|---------------------------|------|-------|-----------------------|------|-----------------------------|--------|-------|----|---|
| <b>Matrix Spike Dup (BIE0518-MSD1)</b> |     |      | <b>Source: 20E0270-01</b> |      |       | Prepared: 28-May-2020 |      | Analyzed: 02-Jun-2020 19:03 |        |       |    |   |
| Chromium                               | 52  | 76.1 | 0.14                      | 0.54 | mg/kg | 26.8                  | 59.0 | 63.8                        | 75-125 | 26.70 | 20 | * |
| Silver                                 | 107 | 28.0 | 0.02                      | 0.21 | mg/kg | 26.8                  | 4.29 | 88.7                        | 75-125 | 8.85  | 20 |   |
| Arsenic                                | 75a | 42.2 | 0.02                      | 0.21 | mg/kg | 26.8                  | 28.5 | 51.2                        | 75-125 | 14.90 | 20 | * |
| Cadmium                                | 114 | 34.2 | 0.04                      | 0.11 | mg/kg | 26.8                  | 12.7 | 80.2                        | 75-125 | 10.30 | 20 |   |
| Selenium                               | 78  | 75.6 | 0.47                      | 0.54 | mg/kg | 85.7                  | 2.02 | 85.8                        | 75-125 | 5.14  | 20 |   |

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

|  |     |      |                           |      |       |                       |      |                             |        |       |    |    |
|--|-----|------|---------------------------|------|-------|-----------------------|------|-----------------------------|--------|-------|----|----|
| <b>Matrix Spike Dup (BIE0518-MSD2)</b> |     |      | <b>Source: 20E0270-29</b> |      |       | Prepared: 28-May-2020 |      | Analyzed: 02-Jun-2020 20:09 |        |       |    |    |
| Chromium                               | 52  | 167  | 0.14                      | 0.55 | mg/kg | 27.5                  | 148  | 67.8                        | 75-125 | 7.88  | 20 | HC |
| Silver                                 | 107 | 27.0 | 0.02                      | 0.22 | mg/kg | 27.5                  | 1.99 | 91.1                        | 75-125 | 7.16  | 20 |    |
| Arsenic                                | 75a | 77.8 | 0.02                      | 0.22 | mg/kg | 27.5                  | 24.4 | 194                         | 75-125 | 1.94  | 20 | *  |
| Cadmium                                | 111 | 57.5 | 0.03                      | 0.11 | mg/kg | 27.5                  | 25.8 | 116                         | 75-125 | 12.80 | 20 |    |
| Selenium                               | 78  | 79.2 | 0.48                      | 0.55 | mg/kg | 88.0                  | 1.47 | 88.3                        | 75-125 | 5.00  | 20 |    |



|  |   |                                |
|--|---|--------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | Reported:<br>29-Jun-2020 13:44 |
|--|---|--------------------------------|

**Metals and Metallic Compounds - Quality Control**

**Batch BIE0518 - SWN EPA 3050B**

Instrument: ICPMS2 Analyst: MCB

| QC Sample/Analyte | Isotope | Result | Detection Limit | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|-------------------|---------|--------|-----------------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|-------------------|---------|--------|-----------------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

| <b>Matrix Spike Dup (BIE0518-MSD4)</b> |     | <b>Source: 20E0270-29</b> |      | Prepared: 28-May-2020 |       | Analyzed: 04-Jun-2020 14:28 |     |      |        |       |    |       |
|--|-----|---------------------------|------|-----------------------|-------|-----------------------------|-----|------|--------|-------|----|-------|
| Barium                                 | 135 | 979                       | 1.57 | 14.0                  | mg/kg | 28.0                        | 723 | 915  | 75-125 | 18.40 | 20 | HC, D |
| Chromium                               | 52  | ND                        | 3.64 | 14.0                  | mg/kg | 28.0                        | 148 | -529 | 75-125 |       |    | U     |
| Chromium                               | 53  | ND                        | 1.96 | 14.0                  | mg/kg | 28.0                        | 146 | -521 | 75-125 |       |    | U     |

Recovery limits for target analytes in MS/MSD QC samples are advisory only.



Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**Metals and Metallic Compounds - Quality Control**

**Batch BIE0519 - SWN EPA 3050B**

Instrument: ICPMS1 Analyst: MCB

| QC Sample/Analyte               | Isotope | Result                    | Detection Limit | Reporting Limit       | Units | Spike Level                 | Source Result | %REC | %REC Limits | RPD   | RPD Limit | Notes |
|---------------------------------|---------|---------------------------|-----------------|-----------------------|-------|-----------------------------|---------------|------|-------------|-------|-----------|-------|
| <b>Duplicate (BIE0519-DUP2)</b> |         | <b>Source: 20E0270-04</b> |                 | Prepared: 28-May-2020 |       | Analyzed: 05-Jun-2020 16:28 |               |      |             |       |           |       |
| Lead                            | 208     | 58.5                      | 0.07            | 0.11                  | mg/kg |                             | 71.1          |      |             | 19.50 | 20        |       |

|                                   |     |                           |      |                       |       |                             |      |      |        |  |  |  |
|-----------------------------------|-----|---------------------------|------|-----------------------|-------|-----------------------------|------|------|--------|--|--|--|
| <b>Matrix Spike (BIE0519-MS2)</b> |     | <b>Source: 20E0270-04</b> |      | Prepared: 28-May-2020 |       | Analyzed: 05-Jun-2020 16:34 |      |      |        |  |  |  |
| Lead                              | 208 | 96.6                      | 0.07 | 0.11                  | mg/kg | 26.5                        | 71.1 | 96.0 | 75-125 |  |  |  |

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

|  |     |                           |      |                       |       |                             |      |      |        |       |    |   |
|--|-----|---------------------------|------|-----------------------|-------|-----------------------------|------|------|--------|-------|----|---|
| <b>Matrix Spike Dup (BIE0519-MSD2)</b> |     | <b>Source: 20E0270-04</b> |      | Prepared: 28-May-2020 |       | Analyzed: 05-Jun-2020 16:41 |      |      |        |       |    |   |
| Lead                                   | 208 | 83.3                      | 0.07 | 0.11                  | mg/kg | 26.6                        | 71.1 | 45.8 | 75-125 | 14.80 | 20 | * |

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

Instrument: ICPMS2 Analyst: MCB

| QC Sample/Analyte           | Isotope | Result | Detection Limit | Reporting Limit | Units | Spike Level           | Source Result | %REC                        | %REC Limits | RPD | RPD Limit | Notes |
|-----------------------------|---------|--------|-----------------|-----------------|-------|-----------------------|---------------|-----------------------------|-------------|-----|-----------|-------|
| <b>Blank (BIE0519-BLK1)</b> |         |        |                 |                 |       | Prepared: 28-May-2020 |               | Analyzed: 02-Jun-2020 18:28 |             |     |           |       |
| Lead                        | 208     | ND     | 0.07            | 0.10            | mg/kg |                       |               |                             |             |     |           | U     |
| Cadmium                     | 111     | ND     | 0.03            | 0.10            | mg/kg |                       |               |                             |             |     |           | U     |
| Cadmium                     | 114     | ND     | 0.04            | 0.10            | mg/kg |                       |               |                             |             |     |           | U     |

|                          |     |      |      |      |       |                       |  |                             |        |  |  |  |
|--------------------------|-----|------|------|------|-------|-----------------------|--|-----------------------------|--------|--|--|--|
| <b>LCS (BIE0519-BS1)</b> |     |      |      |      |       | Prepared: 28-May-2020 |  | Analyzed: 02-Jun-2020 18:33 |        |  |  |  |
| Lead                     | 208 | 26.8 | 0.07 | 0.10 | mg/kg | 25.0                  |  | 107                         | 80-120 |  |  |  |
| Cadmium                  | 111 | 23.7 | 0.03 | 0.10 | mg/kg | 25.0                  |  | 94.9                        | 80-120 |  |  |  |
| Cadmium                  | 114 | 23.8 | 0.04 | 0.10 | mg/kg | 25.0                  |  | 95.2                        | 80-120 |  |  |  |

|                                 |     |                           |      |                       |       |                             |      |  |  |       |    |  |
|---------------------------------|-----|---------------------------|------|-----------------------|-------|-----------------------------|------|--|--|-------|----|--|
| <b>Duplicate (BIE0519-DUP1)</b> |     | <b>Source: 20E0270-04</b> |      | Prepared: 28-May-2020 |       | Analyzed: 02-Jun-2020 21:07 |      |  |  |       |    |  |
| Cadmium                         | 111 | 0.14                      | 0.03 | 0.11                  | mg/kg |                             | 0.18 |  |  | 18.90 | 20 |  |

|                                   |     |                           |      |                       |       |                             |      |      |        |  |  |  |
|-----------------------------------|-----|---------------------------|------|-----------------------|-------|-----------------------------|------|------|--------|--|--|--|
| <b>Matrix Spike (BIE0519-MS1)</b> |     | <b>Source: 20E0270-04</b> |      | Prepared: 28-May-2020 |       | Analyzed: 02-Jun-2020 21:12 |      |      |        |  |  |  |
| Cadmium                           | 111 | 25.7                      | 0.03 | 0.11                  | mg/kg | 26.5                        | 0.18 | 96.3 | 75-125 |  |  |  |

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

|  |     |                           |      |                       |       |                             |      |      |        |      |    |  |
|--|-----|---------------------------|------|-----------------------|-------|-----------------------------|------|------|--------|------|----|--|
| <b>Matrix Spike Dup (BIE0519-MSD1)</b> |     | <b>Source: 20E0270-04</b> |      | Prepared: 28-May-2020 |       | Analyzed: 02-Jun-2020 21:19 |      |      |        |      |    |  |
| Cadmium                                | 111 | 26.4                      | 0.03 | 0.11                  | mg/kg | 26.6                        | 0.18 | 98.9 | 75-125 | 2.66 | 20 |  |

Recovery limits for target analytes in MS/MSD QC samples are advisory only.



Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**TCLP Metals and Metallic Compounds - Quality Control**

**Batch BIF0504 - LEN Digestion of EPA 1311 Elutriate**

Instrument: ICP2 Analyst: TCH

| QC Sample/Analyte   | Result | Detection Limit | Reporting Limit | Units | Spike Level | Source Result  | %REC | %REC Limits | RPD   | RPD Limit | Notes |
|---|--------|-----------------|-----------------|-------|-------------|--|------|-------------|-------|-----------|-------|
| <b>Blank (BIF0504-BLK1)</b>   |        |                 |                 |       |             | Prepared: 17-Jun-2020 Analyzed: 25-Jun-2020 21:09                    |      |             |       |           |       |
| Arsenic   | ND     | 0.0140          | 0.250           | mg/L  |             |  |      |             |       |           | U     |
| Cadmium   | 0.0034 | 0.0006          | 0.0100          | mg/L  |             |  |      |             |       |           | J     |
| Chromium  | ND     | 0.0024          | 0.0250          | mg/L  |             |  |      |             |       |           | U     |
| Lead  | ND     | 0.0065          | 0.100           | mg/L  |             |  |      |             |       |           | U     |
| Selenium  | ND     | 0.0408          | 0.250           | mg/L  |             |  |      |             |       |           | U     |
| Silver  | ND     | 0.0022          | 0.0150          | mg/L  |             |  |      |             |       |           | U     |
| <b>Blank (BIF0504-BLK2)</b>   |        |                 |                 |       |             | Prepared: 17-Jun-2020 Analyzed: 26-Jun-2020 15:03                    |      |             |       |           |       |
| Barium  | 0.0501 | 0.0075          | 0.0150          | mg/L  |             |  |      |             |       |           |       |
| Chromium  | 0.0034 | 0.0024          | 0.0250          | mg/L  |             |  |      |             |       |           | J     |
| <b>Duplicate (BIF0504-DUP1)</b>   |        |                 |                 |       |             | Source: 20E0270-07 Prepared: 17-Jun-2020 Analyzed: 25-Jun-2020 21:23 |      |             |       |           |       |
| Arsenic   | 0.0523 | 0.0140          | 0.250           | mg/L  |             | 0.0468   |      |             | 11.00 | 20        | J     |
| Cadmium   | 0.499  | 0.0006          | 0.0100          | mg/L  |             | 0.491  |      |             | 1.61  | 20        |       |
| Lead  | 20.1   | 0.0065          | 0.100           | mg/L  |             | 19.7   |      |             | 1.89  | 20        |       |
| Selenium  | ND     | 0.0408          | 0.250           | mg/L  |             | ND   |      |             |       |           | U     |
| Silver  | ND     | 0.0022          | 0.0150          | mg/L  |             | ND   |      |             |       |           | U     |
| <b>Duplicate (BIF0504-DUP2)</b>   |        |                 |                 |       |             | Source: 20E0270-07 Prepared: 17-Jun-2020 Analyzed: 26-Jun-2020 16:20 |      |             |       |           |       |
| Barium  | 2.24   | 0.0075          | 0.0150          | mg/L  |             | 2.19   |      |             | 2.29  | 20        | B     |
| Chromium  | 0.0131 | 0.0024          | 0.0250          | mg/L  |             | 0.0069   |      |             | 61.80 | 20        | L, J  |
| <b>Matrix Spike (BIF0504-MS1)</b>   |        |                 |                 |       |             | Source: 20E0270-07 Prepared: 17-Jun-2020 Analyzed: 25-Jun-2020 21:32 |      |             |       |           |       |
| Arsenic   | 4.21   | 0.0140          | 0.250           | mg/L  | 4.00        | 0.0468   | 104  | 75-125      |       |           |       |
| Cadmium   | 1.57   | 0.0006          | 0.0100          | mg/L  | 1.00        | 0.491  | 108  | 75-125      |       |           |       |
| Lead  | 24.0   | 0.0065          | 0.100           | mg/L  | 4.00        | 19.7   | 108  | 75-125      |       |           |       |
| Selenium  | 4.23   | 0.0408          | 0.250           | mg/L  | 4.00        | ND   | 106  | 75-125      |       |           |       |
| Silver  | 1.07   | 0.0022          | 0.0150          | mg/L  | 1.00        | ND   | 107  | 75-125      |       |           |       |
| Recovery limits for target analytes in MS/MSD QC samples are advisory only. |        |                 |                 |       |             |  |      |             |       |           |       |
| <b>Matrix Spike (BIF0504-MS2)</b>   |        |                 |                 |       |             | Source: 20E0270-07 Prepared: 17-Jun-2020 Analyzed: 26-Jun-2020 16:30 |      |             |       |           |       |
| Barium  | 6.28   | 0.0075          | 0.0150          | mg/L  | 4.00        | 2.19   | 102  | 75-125      |       |           | B     |
| Chromium  | 0.991  | 0.0024          | 0.0250          | mg/L  | 1.00        | 0.0069   | 98.4 | 75-125      |       |           |       |
| Recovery limits for target analytes in MS/MSD QC samples are advisory only. |        |                 |                 |       |             |  |      |             |       |           |       |
| <b>Matrix Spike Dup (BIF0504-MSD1)</b>                                      |        |                 |                 |       |             | Source: 20E0270-07 Prepared: 17-Jun-2020 Analyzed: 25-Jun-2020 21:36 |      |             |       |           |       |



Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**TCLP Metals and Metallic Compounds - Quality Control**

**Batch BIF0504 - LEN Digestion of EPA 1311 Elutriate**

Instrument: ICP2 Analyst: TCH

| QC Sample/Analyte                      | Result | Detection Limit           | Reporting Limit | Units | Spike Level           | Source Result | %REC                        | %REC Limits | RPD  | RPD Limit | Notes |
|--|--------|---------------------------|-----------------|-------|-----------------------|---------------|-----------------------------|-------------|------|-----------|-------|
| <b>Matrix Spike Dup (BIF0504-MSD1)</b> |        | <b>Source: 20E0270-07</b> |                 |       | Prepared: 17-Jun-2020 |               | Analyzed: 25-Jun-2020 21:36 |             |      |           |       |
| Arsenic                                | 4.20   | 0.0140                    | 0.250           | mg/L  | 4.00                  | 0.0468        | 104                         | 75-125      | 0.11 | 20        |       |
| Cadmium                                | 1.56   | 0.0006                    | 0.0100          | mg/L  | 1.00                  | 0.491         | 107                         | 75-125      | 0.41 | 20        |       |
| Lead                                   | 24.2   | 0.0065                    | 0.100           | mg/L  | 4.00                  | 19.7          | 112                         | 75-125      | 0.76 | 20        |       |
| Selenium                               | 4.27   | 0.0408                    | 0.250           | mg/L  | 4.00                  | ND            | 107                         | 75-125      | 0.89 | 20        |       |
| Silver                                 | 1.08   | 0.0022                    | 0.0150          | mg/L  | 1.00                  | ND            | 108                         | 75-125      | 0.61 | 20        |       |

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

|  |      |                           |        |      |                       |        |                             |        |      |    |   |
|--|------|---------------------------|--------|------|-----------------------|--------|-----------------------------|--------|------|----|---|
| <b>Matrix Spike Dup (BIF0504-MSD2)</b> |      | <b>Source: 20E0270-07</b> |        |      | Prepared: 17-Jun-2020 |        | Analyzed: 26-Jun-2020 16:34 |        |      |    |   |
| Barium                                 | 6.32 | 0.0075                    | 0.0150 | mg/L | 4.00                  | 2.19   | 103                         | 75-125 | 0.57 | 20 | B |
| Chromium                               | 1.00 | 0.0024                    | 0.0250 | mg/L | 1.00                  | 0.0069 | 99.7                        | 75-125 | 1.33 | 20 |   |

Recovery limits for target analytes in MS/MSD QC samples are advisory only.





|  |   |                                |
|--|---|--------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | Reported:<br>29-Jun-2020 13:44 |
|--|---|--------------------------------|

**TCLP Metals and Metallic Compounds - Quality Control**

**Batch BIF0505 - LEM 7470A Digestion of EPA 1311 Elutriate for Hg**

Instrument: HYDRA Analyst: BLC

| QC Sample/Analyte   | Result   | Detection Limit | Reporting Limit | Units | Spike Level | Source Result  | %REC | %REC Limits | RPD  | RPD Limit | Notes |
|---|----------|-----------------|-----------------|-------|-------------|--|------|-------------|------|-----------|-------|
| <b>Blank (BIF0505-BLK1)</b>   |          |                 |                 |       |             | Prepared: 17-Jun-2020 Analyzed: 19-Jun-2020 12:55                    |      |             |      |           |       |
| Mercury   | ND       | 0.000007        | 0.000100        | mg/L  |             |  |      |             |      |           | U     |
| <b>Duplicate (BIF0505-DUP1)</b>   |          |                 |                 |       |             | Source: 20E0270-09 Prepared: 17-Jun-2020 Analyzed: 19-Jun-2020 12:59 |      |             |      |           |       |
| Mercury   | ND       | 0.000007        | 0.000100        | mg/L  |             | ND   |      |             |      |           | U     |
| <b>Matrix Spike (BIF0505-MS1)</b>   |          |                 |                 |       |             | Source: 20E0270-09 Prepared: 17-Jun-2020 Analyzed: 19-Jun-2020 13:02 |      |             |      |           |       |
| Mercury   | 0.000948 | 0.000007        | 0.000100        | mg/L  | 0.00100     | ND   | 94.8 | 75-125      |      |           |       |
| Recovery limits for target analytes in MS/MSD QC samples are advisory only. |          |                 |                 |       |             |  |      |             |      |           |       |
| <b>Matrix Spike Dup (BIF0505-MSD1)</b>                                      |          |                 |                 |       |             | Source: 20E0270-09 Prepared: 17-Jun-2020 Analyzed: 19-Jun-2020 13:04 |      |             |      |           |       |
| Mercury   | 0.000874 | 0.000007        | 0.000100        | mg/L  | 0.00100     | ND   | 87.4 | 75-125      | 8.11 | 20        |       |
| Recovery limits for target analytes in MS/MSD QC samples are advisory only. |          |                 |                 |       |             |  |      |             |      |           |       |



|  |   |                                |
|--|---|--------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | Reported:<br>29-Jun-2020 13:44 |
|--|---|--------------------------------|

**TCLP Metals and Metallic Compounds - Quality Control**

**Batch BIF0652 - LEN Digestion of EPA 1311 Elutriate**

Instrument: ICP2 Analyst: TCH

| QC Sample/Analyte   | Result | Detection Limit | Reporting Limit | Units | Spike Level | Source Result  | %REC | %REC Limits | RPD  | RPD Limit | Notes |
|---|--------|-----------------|-----------------|-------|-------------|--|------|-------------|------|-----------|-------|
| <b>Blank (BIF0652-BLK1)</b>   |        |                 |                 |       |             | Prepared: 23-Jun-2020 Analyzed: 25-Jun-2020 23:27                    |      |             |      |           |       |
| Cadmium   | 0.0026 | 0.0006          | 0.0100          | mg/L  |             |  |      |             |      |           | J     |
| Lead  | 0.0104 | 0.0065          | 0.100           | mg/L  |             |  |      |             |      |           | J     |
| <b>Duplicate (BIF0652-DUP1)</b>   |        |                 |                 |       |             | Source: 20E0270-01 Prepared: 23-Jun-2020 Analyzed: 25-Jun-2020 23:55 |      |             |      |           |       |
| Cadmium   | 0.0833 | 0.0006          | 0.0100          | mg/L  |             | 0.0838   |      |             | 0.66 | 20        |       |
| Lead  | 1.28   | 0.0065          | 0.100           | mg/L  |             | 1.31   |      |             | 2.07 | 20        |       |
| <b>Matrix Spike (BIF0652-MS1)</b>   |        |                 |                 |       |             | Source: 20E0270-01 Prepared: 23-Jun-2020 Analyzed: 26-Jun-2020 00:04 |      |             |      |           |       |
| Cadmium   | 1.12   | 0.0006          | 0.0100          | mg/L  | 1.00        | 0.0838   | 103  | 75-125      |      |           |       |
| Lead  | 5.29   | 0.0065          | 0.100           | mg/L  | 4.00        | 1.31   | 99.6 | 75-125      |      |           |       |
| Recovery limits for target analytes in MS/MSD QC samples are advisory only. |        |                 |                 |       |             |  |      |             |      |           |       |
| <b>Matrix Spike Dup (BIF0652-MSD1)</b>                                      |        |                 |                 |       |             | Source: 20E0270-01 Prepared: 23-Jun-2020 Analyzed: 26-Jun-2020 00:08 |      |             |      |           |       |
| Cadmium   | 1.10   | 0.0006          | 0.0100          | mg/L  | 1.00        | 0.0838   | 101  | 75-125      | 1.96 | 20        |       |
| Lead  | 5.28   | 0.0065          | 0.100           | mg/L  | 4.00        | 1.31   | 99.4 | 75-125      | 0.15 | 20        |       |

Recovery limits for target analytes in MS/MSD QC samples are advisory only.



|  |   |                                |
|--|---|--------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | Reported:<br>29-Jun-2020 13:44 |
|--|---|--------------------------------|

**TCLP Metals and Metallic Compounds - Quality Control**

**Batch BIF0742 - LEN Digestion of EPA 1311 Elutriate**

Instrument: ICP2 Analyst: TCH

| QC Sample/Analyte                 | Result | Detection Limit | Reporting Limit | Units | Spike Level | Source Result  | %REC | %REC Limits | RPD    | RPD Limit | Notes |
|-----------------------------------|--------|-----------------|-----------------|-------|-------------|--|------|-------------|--------|-----------|-------|
| <b>Blank (BIF0742-BLK1)</b>       |        |                 |                 |       |             | Prepared: 25-Jun-2020 Analyzed: 25-Jun-2020 22:19                    |      |             |        |           |       |
| Cadmium                           | 0.0018 | 0.0006          | 0.0100          | mg/L  |             |  |      |             |        |           | J     |
| Lead                              | ND     | 0.0065          | 0.100           | mg/L  |             |  |      |             |        |           | U     |
| <b>Duplicate (BIF0742-DUP1)</b>   |        |                 |                 |       |             | Source: 20E0270-17 Prepared: 25-Jun-2020 Analyzed: 25-Jun-2020 22:47 |      |             |        |           |       |
| Arsenic                           | 0.0435 | 0.0140          | 0.250           | mg/L  |             | 0.0470   |      |             | 7.72   | 20        | J     |
| Cadmium                           | 0.965  | 0.0006          | 0.0100          | mg/L  |             | 0.971  |      |             | 0.59   | 20        |       |
| Chromium                          | 0.0128 | 0.0024          | 0.0250          | mg/L  |             | 0.0030   |      |             | 124.00 | 20        | L, J  |
| Lead                              | 49.4   | 0.0065          | 0.100           | mg/L  |             | 49.8   |      |             | 0.72   | 20        |       |
| <b>Matrix Spike (BIF0742-MS1)</b> |        |                 |                 |       |             | Source: 20E0270-17 Prepared: 25-Jun-2020 Analyzed: 25-Jun-2020 22:56 |      |             |        |           |       |
| Cadmium                           | 1.93   | 0.0006          | 0.0100          | mg/L  | 1.00        | 0.971  | 96.1 | 75-125      |        |           |       |
| Lead                              | 52.8   | 0.0065          | 0.100           | mg/L  | 4.00        | 49.8   | 75.9 | 75-125      |        |           | HC    |

Recovery limits for target analytes in MS/MSD QC samples are advisory only.

| <b>Matrix Spike Dup (BIF0742-MSD1)</b> |        |                 |                 |       |             | Source: 20E0270-17 Prepared: 25-Jun-2020 Analyzed: 25-Jun-2020 23:00 |      |             |      |           |       |
|--|--------|-----------------|-----------------|-------|-------------|--|------|-------------|------|-----------|-------|
| QC Sample/Analyte                      | Result | Detection Limit | Reporting Limit | Units | Spike Level | Source Result  | %REC | %REC Limits | RPD  | RPD Limit | Notes |
| Cadmium                                | 1.99   | 0.0006          | 0.0100          | mg/L  | 1.00        | 0.971  | 102  | 75-125      | 2.88 | 20        |       |
| Lead                                   | 52.5   | 0.0065          | 0.100           | mg/L  | 4.00        | 49.8   | 68.6 | 75-125      | 0.55 | 20        | HC    |

Recovery limits for target analytes in MS/MSD QC samples are advisory only.



Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

**Certified Analyses included in this Report**

| Analyte                           | Certifications               |
|-----------------------------------|------------------------------|
| <b>EPA 6010C in Solid</b>         |                              |
| Silver                            | WADOE, DoD-ELAP              |
| Silver                            | NELAP, WADOE, DoD-ELAP       |
| Arsenic                           | CALAP, WADOE                 |
| Arsenic                           | NELAP, WADOE                 |
| Barium                            | NELAP, WADOE                 |
| Barium                            | CALAP, WADOE                 |
| Cadmium                           | WADOE, DoD-ELAP              |
| Cadmium                           | NELAP, WADOE, DoD-ELAP       |
| Chromium                          | WADOE, DoD-ELAP              |
| Chromium                          | NELAP, WADOE, DoD-ELAP       |
| Lead                              | WADOE, DoD-ELAP              |
| Lead                              | NELAP, WADOE, DoD-ELAP       |
| Selenium                          | WADOE, DoD-ELAP              |
| Selenium                          | NELAP, WADOE, DoD-ELAP       |
| <b>EPA 6020A in Solid</b>         |                              |
| Silver-107                        | NELAP, DoD-ELAP, WADOE       |
| Silver-107                        | DoD-ELAP, WADOE              |
| Barium-135                        | NELAP, DoD-ELAP, WADOE, ADEC |
| Barium-135                        | DoD-ELAP, WADOE, ADEC        |
| Barium-137                        | DoD-ELAP, WADOE, ADEC        |
| Barium-137                        | NELAP, DoD-ELAP, WADOE, ADEC |
| Chromium-52                       | DoD-ELAP, WADOE, ADEC        |
| Chromium-52                       | NELAP, DoD-ELAP, WADOE, ADEC |
| Chromium-53                       | DoD-ELAP, WADOE, ADEC        |
| Chromium-53                       | NELAP, DoD-ELAP, WADOE, ADEC |
| Lead-208                          | NELAP, DoD-ELAP, WADOE, ADEC |
| Lead-208                          | DoD-ELAP, WADOE, ADEC        |
| <b>EPA 6020A UCT-KED in Solid</b> |                              |
| Arsenic-75a                       | NELAP, DoD-ELAP, WADOE, ADEC |
| Arsenic-75a                       | DoD-ELAP, WADOE, ADEC        |
| Cadmium-111                       | DoD-ELAP, WADOE, ADEC        |
| Cadmium-111                       | NELAP, DoD-ELAP, WADOE, ADEC |
| Cadmium-114                       | DoD-ELAP, WADOE, ADEC        |
| Cadmium-114                       | NELAP, DoD-ELAP, WADOE, ADEC |



|  |   |                                       |
|--|---|---------------------------------------|
| Dalton, Olmsted & Fuglevand, Inc<br>1420 - 156th Ave., NE STE C1<br>Bellevue WA, 98007 | Project: Former Tacoma Metals<br>Project Number: [none]<br>Project Manager: Dave Cooper | <b>Reported:</b><br>29-Jun-2020 13:44 |
|--|---|---------------------------------------|

Selenium-78 DoD-ELAP,WADOE  
Selenium-78 NELAP,DoD-ELAP,WADOE

**EPA 7470A in Water**

Mercury WADOE,DoD-ELAP  
Mercury WADOE,NELAP,DoD-ELAP

**EPA 7471B in Solid**

Mercury WADOE,NELAP,DoD-ELAP  
Mercury WADOE,DoD-ELAP,CALAP

| Code     | Description  | Number | Expires    |
|----------|--|--------|------------|
| ADEC     | Alaska Dept of Environmental Conservation          | 17-015 | 01/31/2021 |
| DoD-ELAP | DoD-Environmental Laboratory Accreditation Program | 66169  | 01/01/2021 |
| WADOE    | WA Dept of Ecology                                 | C558   | 06/30/2020 |
| WA-DW    | Ecology - Drinking Water                           | C558   | 06/30/2020 |



Dalton, Olmsted & Fuglevand, Inc  
1420 - 156th Ave., NE STE C1  
Bellevue WA, 98007

Project: Former Tacoma Metals  
Project Number: [none]  
Project Manager: Dave Cooper

Reported:  
29-Jun-2020 13:44

### Notes and Definitions

- \* Flagged value is not within established control limits.
- B This analyte was detected in the method blank.
- D The reported value is from a dilution
- H Hold time violation - Hold time was exceeded.
- HC The natural concentration of the spiked analyte is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
- J Estimated concentration value detected below the reporting limit.
- L Analyte concentration is  $\leq 5$  times the reporting limit and the replicate control limit defaults to  $\pm$  RL instead of 20% RPD
- U This analyte is not detected above the reporting limit (RL) or if noted, not detected above the limit of detection (LOD).
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- [2C] Indicates this result was quantified on the second column on a dual column analysis.

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**ATTACHMENT C  
BENCH-SCALE TREATABILITY TEST RESULTS**

**Tacoma Metals Site  
Tacoma, Washington**

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## The TDJ Group, Inc.

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Mr. Dave Cooper, LG, LH  
Principal Geologist  
DOF Dalton, Olmsted & Fuglevand  
1001 SW Klickitat Way, Suite 200B  
Seattle, WA 98134

Mr. Cooper,

Thank you for sending samples from the Tacoma Metal Site to our firm for a treatability study. Table 1 in the attached spreadsheet contains the results of our testing, in addition to results from those same sample areas tested prior that DOF provided.

The "B" samples we tested had similar total metals to those samples tested previous by DOF. This provides assurance that the samples are representative of that area. However, you should note that the leachable metals (TCLP data) were significantly less than what we saw in your data. So, while the total metals data align well with prior data, the TCLP suggests that you have some leachable variability for "B" samples. Blastox 215 was very effective at stabilizing this soil with a 4% add rate.

The "P" samples were not completely in line with the sample data obtained by DOF. Specifically, the untreated sample produced a TCLP value that was almost 3 times higher (160 mg/L vs. 61.2 mg/L) and the treated sample from this same area produced total metals that were about 5 times (4200 mg/kg vs 19000 mg/kg) higher than previous data. Blastox 215 was very effective at stabilizing this soil with a 3% add rate.

In spite of the high variability of TCLP and total metals, Blastox 215 was able to stabilize the lead to well below the regulatory limit of 5.0 mg/L. We obtained a Non-Detectable (ND) reading and a reading slightly above the detection limit at .06 mg/L. Both of tests give strong indication of the treatability of this waste.

Historically, we've had a very high rate of success in using the bench-scale developed add rate in the field. In other words, the add rate developed in the lab has worked very well in the field. You indicated that you are leaning towards using a pug mill for mixing. A pug mill should be



able to replicate the mixing we do in the lab, which should provide more assurance of a successful project.

3% Blastox 215 worked on the highest leachable lead soil we tested. Because of that, there is a pretty good level of assurance that this add rate would work for all of the soil. However, because we have seen some high variability of leachable lead, I would recommend 4% be used for budgetary purposes budget for this project.

Once the contractor has been selected, a small pilot study can be done using 3% in the “worst case scenario” waste to determine if we can further optimize the dose rate from the 4% level.

Please let me know if you have any questions.

Respectfully Submitted,

James A. Lively  
TDJ Group, Inc.

| TABLE 1     |             | DOF TACOMA METALS TREATABILITY:<br>BLASTOX STUDY |                     |                |  |
|-------------|-------------|--|---------------------|----------------|--|
| SAMPLE ID   | Chemistry   | Chemistry<br>Dose %                              | TOTAL Pb<br>(mg/kg) | TCLP Pb (mg/L) | Comments   |
| TP-B        | None        | 0%   | 1870                | 111            | From DOF Spreadsheet; Sample B                                       |
| DOF.B.UT    | None        | 0%   | 1900                | 5.5            | untreated waste that tested haz; Sample B                            |
| DOF.B.4.215 | Blastox 215 | 4%   | 1600                | 0.066          | treated waste that tested non-haz; Sample B                          |
| TP-P        | None        | 0%   | 4200                | 61.2           | From DOF Spreadsheet; Sample P                                       |
| DOF.P.UT    | none        | 0%   | 5800                | 160            | untreated waste that tested haz; highest level observed;<br>Sample P |
| DOF.P.3.215 | Blastox 215 | 3%   | 19000               | *ND            | treated waste that is "worst-case"; tested non-haz; Sample P         |

\*Reporting Limit is .05 mg/L

# TECHNICAL DATA

## BLASTOX® 215

**PRODUCT NAME**            **Blastox® 215**

**PRODUCT DESCRIPTION:**

Blastox® 215 is a patented, fine granular, complex calcium silicate-based additive for stabilizing heavy metals including lead and cadmium. Other heavy metals can be stabilized with other TDJ product lines.

USE: Dose rates vary based on untreated leachability rates. Exact dose rates can be verified by performing a treatability study. When resultant waste tests non-hazardous via the EPA TCLP test, it qualifies for disposal in a local subtitle D landfill.

CHEMICAL REACTIONS: Blastox® 215 produces insoluble heavy metal compounds through chemical conversion, pH adjustment and physical encapsulation.

RESTRICTIONS: Material must be kept dry until preparations are made for field application.

**TYPICAL PROPERTIES\***

|                         |   |
|-------------------------|---|
| SPECIFIC GRAVITY:       | 3.15 – 3.22                                       |
| BULK DENSITY:           | 95 – 100 #/FT <sup>3</sup>                        |
| pH:                     | 11.0-12.0   |
| SOLUBILITY:             | (Slight) .1% - 1.0%                               |
| SCREEN ANALYSIS :(~85%) | (-) 52 – (+) 400 mesh per ASTM E-11 specification |

\*These data are results of historical production performance.

**AVAILABILITY**

Blastox 215 is manufactured at TDJ's facilities in the Chicagoland area and sold through distributors. Product is available in bulk, super sacks and 70 lb multi-walled paper bags. Contact TDJ's corporate office for pricing and your local distributor.

**TECHNICAL SERVICE**

Complete technical bulletins and information are available from TDJ's corporate office or on the TDJ website at [www.blastox.com](http://www.blastox.com). Technical assistance for specific applications is available by contacting the corporate office.

**BLASTOX® 215 WARRANTY**

All recommendations, statements and technical data contained herein are believed to be reliable and accurate, but are not to be construed as a warranty, expressed or implied. We accept no responsibility for results obtained by the application of this information. Unless otherwise specifically stated in a written supply contract, user assumes all responsibility and liability for loss or damage arising from the handling and use of this product.

12/05 Rev: 5/16 Blastox215TechData

**The TDJ Group, Inc.**

[www.blastox.com](http://www.blastox.com)

**1-800-252-7869**



# BANTOX® & BLASTOX®

*Technical Bulletin/Soil*

*BLASTOX / TB-002S*

## TREATABILITY TESTING OF SOILS

Blastox® 215 is used to stabilize heavy metals in soil so that it can pass a TCLP test, or other EPA test protocol like the SPLP or the MEP. The EPA requires a Toxicity Characteristic Leaching Procedure (TCLP) test (Method 1311) to determine if contaminated soils need to be managed as hazardous or non-hazardous waste. Soils exhibiting hazardous characteristics need to be disposed of at a facility permitted for that material, or be treated in the field prior to off-site disposal. In nearly every case, stabilizing the soil in the field prior to disposal can save the generator a great deal of money over transporting and disposing of the soil as a hazardous waste.

Regardless of the test protocol required, it is important to conduct a treatability study to more precisely identify the dose of stabilization reagent necessary to meet the testing criteria. In order for TDJ to conduct this study, please follow these recommendations when collecting and submitting samples:

1. Provide any leaching & physical performance criteria for this particular waste. Does the soil need to meet the TCLP criteria or other performance standard for leaching? Does the soil need to meet a physical test criteria such as compressive strength or permeability requirement?
2. Provide a sample of suitable quantity for all requisite testing. Labs require approximately 120 grams for each sample tested. 2 quart jars (plastic preferred over glass) of each waste that needs to be tested should be sufficient. Ensure lids are secured with tape and expedite shipping to the address at the bottom of this Bulletin. Ship to Attention: Technical Services.
3. If available, a split of a sample that has been previously tested is preferable. If not available, a new sample from a known area of contamination will suffice. Please also provide copies of all previous analytical data of the contaminated soil.
4. Determine if more than one sample needs to be sent to TDJ. Depending on the variability of the contamination, it may be necessary to test more than one sample. This is especially true for projects where some of the wastes have very high concentrations of metals (TCLP > 100 mg/l). If this is the case, contact a TDJ representative for consultation.
5. Allow two weeks for test results to be obtained.

If there is no time to perform a treatability study, existing soil test data can be useful to estimate the amount of treatment reagent. The minimum data required are: (1) total metals, (2) TCLP metals, and (3) the 3 pH values collected during the TCLP (Initial pH; pH after hydrochloric acid addition; final pH of extract).

9/12Rev: SOIL/TB002S SoilTreatabilityTesting

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**ATTACHMENT D  
2001 TCLP Test Results**

**Tacoma Metals Site  
Tacoma, Washington**

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**TABLE 4-8A**  
**REMEDIAL INVESTIGATION**  
**SPLP AND TCLP ANALYTICAL RESULTS - METALS<sup>(a)</sup>**  
**Former Tacoma Metals Facility**

| Analyte  | Analysis      | Sample Designation/Depth |                   |                    |              |              |              |              |              |              |               |              |              |               | Criteria     |                        |
|----------|---------------|--------------------------|-------------------|--------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|--------------|--------------|---------------|--------------|------------------------|
|          |               | TP-1-0-1                 | TP-14-6-10        | TP-16-2-3          | TP-21-2-3    | TP-22-2-3    | TP-33-2-3    | TP-38-0-1    | TP-39-0-1    | TP-40-2-3    | TP-43-2-3     | TP-45-0-1    | TP-55-0-1    | TP-60-0-1     |              | TP-61-0-1              |
| Arsenic  | Total (mg/kg) | 40                       | <6 <sup>(b)</sup> | --- <sup>(c)</sup> | <300         | <60          | ---          | 60           | 10           | <30          | 80            | 100          | <30          | 50            | <30          | 219 <sup>(d)</sup>     |
|          | TCLP (mg/l)   | ---                      | ---               | ---                | ---          | ---          | ---          | ---          | ---          | ---          | ---           | <0.05        | ---          | ---           | ---          | 5.0 <sup>(e)</sup>     |
|          | SPLP (mg/l)   | ---                      | ---               | ---                | ---          | ---          | ---          | ---          | ---          | ---          | ---           | <0.05        | ---          | ---           | ---          | NA <sup>(f)</sup>      |
| Barium   | Total (mg/kg) | 290                      | 84.9              | ---                | 4,190        | 464          | ---          | 2,710        | 110          | 851          | 1,280         | 774          | 1,080        | 1,050         | 377          | 245,000 <sup>(d)</sup> |
|          | TCLP (mg/l)   | ---                      | ---               | ---                | 6.99         | ---          | ---          | ---          | ---          | ---          | ---           | ---          | ---          | ---           | ---          | 100.0 <sup>(e)</sup>   |
|          | SPLP (mg/l)   | ---                      | ---               | ---                | 0.672        | ---          | ---          | ---          | ---          | ---          | ---           | ---          | ---          | ---           | ---          | NA                     |
| Cadmium  | Total (mg/kg) | 8.5                      | 2.3               | 68                 | 130          | 52           | ---          | 125          | 13.2         | 40           | 46            | 30           | 29           | 30            | 10           | 3,500 <sup>(d)</sup>   |
|          | TCLP (mg/l)   | ---                      | ---               | ---                | 0.94         | ---          | ---          | ---          | ---          | ---          | ---           | ---          | ---          | ---           | ---          | 1.0 <sup>(e)</sup>     |
|          | SPLP (mg/l)   | ---                      | ---               | ---                | <0.002       | ---          | ---          | ---          | ---          | ---          | ---           | ---          | ---          | ---           | ---          | NA                     |
| Chromium | Total (mg/kg) | 76                       | 35.3              | ---                | <b>1,080</b> | 913          | ---          | 263          | 30           | 212          | 259           | 368          | 117          | 225           | 53           | 500 <sup>(g)</sup>     |
|          | TCLP (mg/l)   | ---                      | ---               | ---                | <0.05        | ---          | ---          | ---          | ---          | ---          | ---           | ---          | ---          | ---           | ---          | 1.0 <sup>(e)</sup>     |
|          | SPLP (mg/l)   | ---                      | ---               | ---                | <0.005       | ---          | ---          | ---          | ---          | ---          | ---           | ---          | ---          | ---           | ---          | NA                     |
| Copper   | Total (mg/kg) | 873                      | 78.6              | ---                | 13,200       | 20,200       | ---          | 3,320        | 1,100        | 1,240        | 2,520         | 3,560        | 465          | 2,330         | 356          | 130,000 <sup>(d)</sup> |
|          | TCLP (mg/l)   | ---                      | ---               | ---                | ---          | 66.2         | ---          | ---          | ---          | ---          | ---           | ---          | ---          | ---           | ---          | NA                     |
|          | SPLP (mg/l)   | ---                      | ---               | ---                | ---          | 0.005        | ---          | ---          | ---          | ---          | ---           | ---          | ---          | ---           | ---          | NA                     |
| Lead     | Total (mg/kg) | <b>2,230</b>             | 152               | <b>8,240</b>       | <b>7,570</b> | <b>3,690</b> | <b>4,560</b> | <b>9,380</b> | <b>1,040</b> | <b>2,050</b> | <b>12,300</b> | <b>4,060</b> | <b>1,750</b> | <b>10,800</b> | <b>4,180</b> | 1,000 <sup>(g)</sup>   |
|          | TCLP (mg/l)   | <b>11.7</b>              | <0.1              | 3.3                | <b>74.7</b>  | ---          | <b>22.4</b>  | <b>20.6</b>  | 0.13         | <b>6.9</b>   | <b>63.6</b>   | ---          | <b>26.5</b>  | ---           | <b>12.2</b>  | 5.0 <sup>(e)</sup>     |
|          | SPLP (mg/l)   | ---                      | <0.02             | <0.02              | ---          | ---          | ---          | ---          | 0.03         | <0.02        | 0.03          | ---          | ---          | ---           | 0.07         | NA                     |
| Mercury  | Total (mg/kg) | 1.53                     | 0.07              | ---                | 10.2         | 5.1          | 1.69         | 14.3         | 0.21         | 3.19         | 21            | 47           | 0.83         | 77            | 0.76         | 1,050 <sup>(d)</sup>   |
|          | TCLP (mg/l)   | ---                      | ---               | ---                | ---          | ---          | ---          | ---          | ---          | ---          | ---           | ---          | ---          | 0.0005        | ---          | 0.2 <sup>(e)</sup>     |
|          | SPLP (mg/l)   | ---                      | ---               | ---                | ---          | ---          | ---          | ---          | ---          | ---          | ---           | ---          | ---          | 0.0021        | ---          | NA                     |
| Selenium | Total (mg/kg) | <10                      | <6                | ---                | <300         | <60          | ---          | 30           | <10          | <30          | <30           | 30           | <30          | 40            | <30          | 17,500 <sup>(d)</sup>  |
|          | TCLP (mg/l)   | ---                      | ---               | ---                | ---          | ---          | ---          | ---          | ---          | ---          | ---           | ---          | ---          | <0.2          | ---          | 1.0 <sup>(e)</sup>     |
|          | SPLP (mg/l)   | ---                      | ---               | ---                | ---          | ---          | ---          | ---          | ---          | ---          | ---           | ---          | ---          | <0.05         | ---          | NA                     |
| Silver   | Total (mg/kg) | 1.4                      | <0.4              | ---                | 90           | 198          | ---          | 6            | <0.8         | 3            | 5             | 7            | <2           | 2             | <2           | 17,500 <sup>(d)</sup>  |
|          | TCLP (mg/l)   | ---                      | ---               | ---                | ---          | <0.02        | ---          | ---          | ---          | ---          | ---           | ---          | ---          | ---           | ---          | 5.0 <sup>(e)</sup>     |
|          | SPLP (mg/l)   | ---                      | ---               | ---                | ---          | <0.003       | ---          | ---          | ---          | ---          | ---           | ---          | ---          | ---           | ---          | NA                     |

**Analytes detected in samples at concentrations exceeding criteria are shown in bold and italics.**

Notes:

- (a) Samples were analyzed for TCLP and SPLP Metals by EPA Methods 1311/1312/6010.
- (b) "<" denotes analyte was not detected at the indicated reporting limit.
- (c) "---" Sample not tested for selected analyte.
- (d) MTCA Method C industrial soil cleanup levels are based on CLARC II, dated February 1996.
- (e) Toxicity characteristics based on Dangerous Waste Criteria (WAC 173-303-100).
- (f) "NA" = No criteria available.
- (g) Method A industrial soil cleanup levels (WAC 173-340-745) used where Method C industrial soil cleanup levels are not available.

mg/kg - milligrams per kilogram  
mg/l - milligrams per liter