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**Manke Lumber Sumner
ACQ Plant
Soil Investigation
Summary Report**

16 March 2021

Prepared for

Manke Lumber
13702 Stewart Road SE
Sumner, WA 98390

KJ Project No. 2096012*00

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Section 1: Introduction and Site Background

This report summarizes soil investigation activities at the Manke Lumber (Manke) Sumner Sawmill site located at 13702 Stewart Road SE in Sumner, Washington (Facility). The Facility abuts Stewart Road SE to the north and 16th Street SE to the south. The Facility is bordered by the White River on the east and a railroad right-of-way to the west (Figure 1). The Facility currently supports sawmill and wood treating operations. The Facility generates and stores dangerous waste [U.S. Environmental Protection Agency (EPA)/State ID Number WAD981764434] and is subject to regular compliance evaluation inspections (CEIs). The site is zoned Heavy Industrial by the City of Sumner (City of Sumner 2019).

On 23 April 2019, the Washington State Department of Ecology (Ecology) conducted a CEI at the Facility and noted several items of concern under Washington Administrative Code (WAC) 173-303 requiring immediate action (Ecology 2020a).

During the 23 April 2019 inspection, Ecology reported the workflow in the Alkaline Copper Quaternary (ACQ) Plant area to generally include the following features, shown on Figure 2:

- Lumber was loaded onto a tram system north of the drip pad.
- The tram system moved lumber south, into a pressure treating vessel located just north of the drip pad.
- The tram system moved lumber south, out of the pressure vessel and onto the drip pad.
- While on the drip pad, treated lumber was unloaded from the tram.
- The tram was transferred to the tram return system, to the west of the drip pad, and the tram returned to the loading area.

During the inspection, Ecology noted openings in the return tram where tires were installed to assist with tram return.

Manke reported to Ecology on 21 June 2019 that use of the return tram had ceased. Since June 2019, trams have been loaded and unloaded over the drip pad and are not returned via the tram return system.

On 8 July 2019, Ecology conducted a focused compliance inspection (FCI) at the Facility as a follow-up to the CEI (Ecology 2020b). Ecology collected three surface soil samples from surface soils west of the tram return system. These samples were analyzed for total Resource Conservation and Recovery Act (RCRA) 8 metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver), copper, nickel, and zinc. Ecology reported results received on 19 July 2019. Elevated concentrations of arsenic and chromium were noted in soil, and concentrations of barium, cadmium, lead, nickel, copper, and zinc were detected above their respective laboratory reporting limits. One sample was also analyzed for Toxicity Characteristic Leaching Procedure (TCLP) metals and concentrations were below RCRA hazardous waste criteria.

In a Notice To Comply dated 3 March 2020, Ecology required that Manke complete mitigation and control conditions outlined in WAC 173-303-145(3) and define the extent of metals present in surface and shallow subsurface soil. This letter also required that Manke work closely with Ecology throughout the process and provide Ecology with a proposal for the work for Ecology review and comment.

Manke, Kennedy Jenks, and Ecology discussed preliminary project scoping during a 15 July 2020 conference call following which, a Soil Investigation Work Plan (work plan; Kennedy Jenks 2020) was prepared for Manke to investigate soil conditions adjacent to the ACQ Plant. The work plan was submitted to Ecology on 25 August 2020 and approved by Ecology on 1 September 2020.

Field activities were conducted on 6 and 7 of October 2020 and included the collection of 50 soil samples from 17 boring locations. These samples were field screened using a portable Bruker S1 Titan portable handheld X-Ray Fluorescence (XRF) machine. Eleven of the soil samples were analyzed by Eurofins TestAmerica in Tacoma for RCRA 8 metals, copper, zinc, and TCLP metals. Based on the total metals results, seven samples collected from the bottom intervals of borings were additionally analyzed for TCLP metals.

Section 2: Soil Investigation

Kennedy Jenks conducted field sampling activities on 6 and 7 October 2020 to characterize the source, nature, and extent of metals present in surface and shallow subsurface soil near the ACQ Plant. The general investigation area was focused on the area west of the ACQ Plant tram area identified in Ecology's FCI. Locations of pertinent site features and approximate boring locations are depicted on Figure 2.

2.1 Utility Locate

Prior to subsurface investigation activities, a utility locate was conducted by Manke. The utility locate included a public notification (one-call), as well as review of Manke utility drawings and contracting with a private utility locating company to identify underground utilities in the area using ground penetrating radar (GPR). The utility locate identified several underground utilities below the bioswale area, to the east of the return tram. These utilities were reportedly installed by Manke and were approximately 2 feet below ground surface (bgs). At-grade utilities are also located in the area, including several steam pipes located between the stormwater bioswale (bioswale) and return tram (Figure 2). Due to the presence of underground utilities, Kennedy Jenks staff were advised by Manke that subsurface investigations should not go deeper than 1.5 feet bgs.

2.2 Sampling Locations

A total of 17 shallow soil borings were advanced in the area west of the ACQ Plant and tram rail system, as well as along the bioswale west of the facility as depicted on Figure 2. These borings were focused in areas where historical releases of wood treatment chemicals may have occurred. Twelve of these locations were proposed in the work plan and were advanced in the general locations noted; additionally, five step-out borings were advanced to further delineate soil conditions within the area of interest. Specific sampling intervals are noted in Table 1; samples are identified with the boring name (e.g., B01) followed by the sample depth interval in inches (e.g., 0-6). Due to the presence of underground utilities west of the tram, soil samples were not collected below 1.5 feet bgs.

2.3 Sampling Methods

Surface and shallow subsurface soil samples were collected by Kennedy Jenks field staff in the vicinity of the ACQ Plant using a hand shovel and/or hand auger. Borings were advanced to a total depth of up to 1.5 feet bgs. Soils from each depth interval within each boring were placed directly into clean plastic bags using clean, disposable nitrile gloves, and homogenized in the bag; in general, depending on accessibility and recovery from each hole, soil intervals of between 3 and 6 inches were composited in one bag. These samples generally corresponded to sampling depths of 0 to 6 inches, 6 to 12 inches, and 12 to 18 inches.

Following bagging, soil recovered from borings were field screened using visual and olfactory methods, volatile organics by photoionization detector (PID), and metals (RCRA 8 metals plus copper, nickel, and zinc) using the XRF machine.

The XRF was calibrated each day using appropriate standards for RCRA 8 metals, copper, nickel, and zinc. XRF results were collected for field screening purposes to gain information about the extent of metals concentrations in soil. Following receipt of laboratory analytical results, field XRF were used to assess the correlation between laboratory analytical and field screening data. The results of this evaluation are presented in Section 3.3.

Samples were field screened using the XRF with a minimum thickness of 0.5 inch of soil beneath the XRF analysis window (e.g., the area that emits x-rays). In accordance with manufacturer's specifications, the XRF was not used for sample analysis while on top of metal-containing surfaces.

Following field screening, bagged samples were placed into laboratory-supplied containers and delivered under standard chain-of-custody to the Eurofins TestAmerica laboratory in Tacoma, Washington (TestAmerica). Five samples plus one field duplicate were analyzed for RCRA 8 metals plus copper, nickel, and zinc by EPA Method 6020, six samples were analyzed for total arsenic, copper, and chromium by EPA Method 6020, and seven samples were analyzed for TCLP metals (arsenic, copper, and chromium) by EPA Method 1311. The remainder of the samples were placed on hold at the analytical laboratory. The samples initially analyzed by the laboratory were determined in the field in conjunction with Manke and Ecology personnel.

Groundwater and surface water were not encountered in the borings and the soil was dry to moist.

Reusable sampling equipment was decontaminated between each sample location with a scrub brush, Simple Green solution, and a deionized water rinse.

2.4 Investigation-Derived Waste (IDW)

Soil from each location and decontamination water was placed into a 55-gallon drum supplied by Manke, and was reportedly handled by Manke as F035-listed dangerous waste (Ecology 2020b). Final storage and disposal of the IDW was handled by Manke.

Section 3: Results

This section describes field and analytical results from the field investigation completed on 6 and 7 October 2020. XRF and laboratory analytical results are tabulation in Table 1 and laboratory analytical reports are included in Appendix A. Field screening results for selected metals are shown on Figures 3, 5, and 6, and selected laboratory analytical results are shown on Figure 4. Sample results are described below.

3.1 Applicable Cleanup Levels

The property is an industrial property (zoned Heavy Industrial) with restricted access and Method C Industrial cleanup levels (CULs) are the applicable CULs for this site. The site meets the qualifications for industrial land use and establishment of Industrial Method C CULs laid out in WAC 173-340-745. Comparisons to Model Toxics Control Act (MTCA) Method A or B CULs is for informational purposes only as the site is utilized only for industrial land use.

3.2 XRF Soil Results

Based on XRF field screening, 13 out of 50 soil samples were estimated to contain concentrations of arsenic above 88 milligrams per kilogram (mg/kg), the MTCA Method C Industrial (Cancer) CUL for soil. No other metals were detected above MTCA Method C Industrial (Cancer or Non-Cancer) CULs. Concentrations of arsenic detected by XRF ranged from below the level of detection to 6,962 mg/kg, with an average concentration of 246 mg/kg and a median value of 49 mg/kg. Based on the field screening approach, several trends were identified:

- Total arsenic concentrations generally decreased with depth; the highest concentrations were detected in surface soil samples collected closest to the tram area [e.g., B05(0-4); B06(0-6); B09(0-3)].
- XRF Concentrations of arsenic were detected above the MTCA Method C Industrial (Cancer) CUL in seven out of 17 borings; these borings (B04 through B09, B11) were concentrated around the center of the return tram near an opening in the tram. This opening has now reportedly been closed.
- Arsenic concentrations in 13 of the deepest collected samples were below the 88 mg/kg MTCA Method C CUL. The bottom samples in borings B05, B08, B11, and B13 (laboratory data only) were measured to exceed the 88 mg/kg MTCA Method C CUL.
- Total chromium was detected above 2,000 mg/kg at one surface sample location, B09; this highest detected concentration of chromium (6,556 mg/kg) is below the MTCA Method C Industrial (Non-Cancer) CUL of 5,300,000 mg/kg. Location B09 is near the tramway at a location where there was formerly an opening in the metal tram (now patched). Deeper samples collected from the same boring contained lower field screening concentrations and the deepest sample at B09 was below the level of

detection of the XRF. In general, similar to arsenic concentrations, concentrations of total chromium decreased with depth.

- While only total arsenic was detected above the MTCA Method C Industrial CUL, concentrations of other total metals concentrations also generally decreased with increasing sample depth.

Based on field screening data from the XRF, arsenic and chromium are the primary metals of interest in soil. However, due to the likely source of the arsenic and chromium in soil, e.g., chromium copper arsenate, copper was also retained as a potential chemical of concern (COC) at the site. Concentrations of copper in XRF field screening results were not detected above 140,000 mg/kg, the MTCA Method C Industrial (Non-Cancer) CUL for soil. Concentrations of copper ranged from 2.7 mg/kg to 1,338.7 mg/kg [B09(0-3)]; the highest concentration corresponds to a surface sample with elevated concentrations of arsenic and chromium. In general, as with most metals, field screening concentrations decreased with increasing depth.

3.3 Laboratory Soil Results and Field Data Correlation

Five samples [B01(6-12), B05(0-4), B09(12-14), B11(12-18), and B17(12-18)] and one field duplicate were initially analyzed by TestAmerica for RCRA 8 metals, copper, nickel, and zinc by EPA Method 6020; following receipt of initial sample results, an additional six samples [B04(12-18), B05(10-16), B07(9-13), B08(15-18), B13(12-18), B16(12-18)] were analyzed for total arsenic, chromium, and copper.

Barium, chromium, lead, mercury, selenium, copper, nickel, and zinc were detected at concentrations above laboratory reporting limits but below the MTCA Method C Industrial CULs. Cadmium and silver were not detected above laboratory reporting limits.

In the laboratory samples analyzed for total metals, arsenic was reported at concentrations above MTCA Method C Industrial (Cancer) CUL in four out of 11 samples. XRF (field screening) concentrations of arsenic in these samples ranged from 6 mg/kg to 646 mg/kg; the corresponding laboratory analytical range was from 28 mg/kg to 1,300 mg/kg. Out of 11 samples analyzed by the analytical laboratory, in nine out of 11 pairs (XRF-lab), the result (over/under CUL) matched; in the other two sample pairs [B22(12-18) and B13(12-18)], concentrations were near the CUL and one result was above and one below.

Generally, laboratory analytical results for total metals show a strong correlation with the XRF field screening results. While concentrations do not show a 1:1 concentration correlation, the correlation between XRF field results and laboratory analytical results for total metals for the primary COCs (e.g., arsenic and chromium) was strong (r^2 of 0.96 for arsenic and r^2 of 0.93 for chromium). This suggests that while XRF screening results should not be used as the primary means for determining compliance with CULs, particularly for concentrations near the CUL, it is a reliable indicator of the magnitude of metals concentrations that a full analytical protocol will produce.

While XRF is a reliable predictor of the magnitude of metals concentrations, it is not a sensitive enough tool to ascertain compliance with CULs when XRF concentrations are measured to be close to (approximately, within 25 mg/kg) the CUL. While seven XRF field screening

concentrations were below 20 mg/kg during field screening, none of the laboratory analytical samples reported concentrations of arsenic below 20 mg/kg. Thus, given the dataset, it is a reasonable assumption that at 1.5 feet bgs, arsenic is above 20 mg/kg throughout the study area.

Based on the total metals results, seven samples collected from the bottom intervals of borings were analyzed for TCLP metals. At the deepest explored depth, arsenic was detected in laboratory samples above 20 mg/kg; however, the TCLP concentrations of arsenic were below the laboratory reporting limit in all but one sample, which detected arsenic at a concentration of 0.35 milligrams per liter (mg/L), below the hazardous waste criteria of 5 mg/L. TCLP concentrations of chromium were below the laboratory reporting limit in five out of seven samples; the two detections above the laboratory reporting limit were below 1 mg/L. Based on this information, leaching is not expected to be a concern in the area. While total arsenic is present in the deeper samples at concentrations above 20 mg/kg, concentrations were measured to attenuate with depth. Thus, metals are not expected to be leaching to surface water or shallow groundwater (not encountered).

Section 4: Recommendations

4.1 Exposure Pathways

Potential exposure pathways for shallow (unsaturated) soils generally include:

- Leaching to groundwater or surface water
- Soil direct contact.

Leaching to groundwater or surface water is not a complete exposure pathway. TCLP metals concentrations for arsenic, chromium, and copper were generally below the laboratory detection limits or below RCRA hazardous waste limits, so the potential for these metals to leach to groundwater or surface water is considered to be very low. Additionally, surface water discharges from the site are tested regularly for metals (including arsenic, chromium, and copper) and total suspended solids and compliance issues have not been identified.

At this site, only soil direct contact is a potentially complete exposure pathway. Exposure to potentially impacted soil may be possible for onsite workers who disturb soil in the area of potential impacts.

4.2 Short-Term Mitigation

As the potential exposure pathways are limited to soil direct contact, several options are available to limit direct contact of workers to soils in the ACQ Plant area. Recommended actions include implementation of institutional controls.

Full removal of metals-impacted soil in the ACQ Plant area is not feasible without removal of plant infrastructure and relocation of utilities, which is not considered to be a short-term mitigation option. This scenario is discussed further in Section 4.3.

4.2.1 Institutional Controls

Soil direct contact can be effectively mitigated through a variety of institutional controls (ICs). Potential ICs can include restrictions on actions within the ACQ plant area, such as preventing soil disturbance in the area without proper training (e.g., 40-hour HAZWOPER), protecting informational devices, or providing employee education. This could include signage in the area warning of metals in soil and to avoid direct exposure risks, or employee education about soils in the ACQ Plant area and how to limit exposure risks.

For the Sumner ACQ Plant area, the recommended IC is signage and employee education for those employees who work in the ACQ Plant area. Since the soil in question is within a bioswale and partially located beneath aboveground utilities (e.g., steam pipes and the return tram), there is low risk of other employees encountering this soil except to make active changes to the bioswale area or to work on the utilities. Thus, access and exposure to these soils can be

effectively managed through an employee education program. Soil disturbance (e.g., digging or earthwork) in this area should be conducted by workers with 40-hour HAZWOPER certification.

Regardless of the IC(s) selected, the IC(s) should be documented in a site-specific plan to be kept onsite. ICs should remain in place until the soil is removed (see Section 4.3) or otherwise addressed.

4.3 Long-Term Recommendations

Soil direct contact in the ACQ Plant area could be effectively mitigated through removal of soil and replacement with clean fill soil, or a clean soil or impervious cap could be installed without excavation of soils. These options would limit direct contact by preventing exposure to metals in surface soil.

If construction in ACQ Plant area is conducted in the future, e.g., if the tramway is removed, metals-impacted soil could be removed (to the extent practicable) at that time. However, without full relocation of all utilities, including the aboveground steam pipes, tramway, and utilities beneath the bioswale, it is unlikely that all impacted soil could be effectively removed. The direct contact exposure pathway can be effectively managed with ICs until such time as excavation in this area is feasible, such as during plant shutdown or a change in operations in this area. Once a timeline for ACQ Plant (or area) shutdown is known, the site owner should prepare a work plan to remove the metals-impacted soil once current obstructions are removed.

The final soil removal and handling process should be conducted only by workers with the proper certifications (e.g., 40-hour HAZWOPER). The soil in this area would currently be considered F035-listed waste; however, prior to removal, Manke would request a contained-in determination from Ecology to treat the waste according to its characteristics.

References

City of Sumner Community Development Department. 2019. City of Sumner Zoning Map.

Kennedy Jenks. 2020. Soil Investigation Work Plan Manke Lumber Sumner ACQ Plant.
Prepared for Manke Lumber. 7 August 2020.

Washington State Department of Ecology. 2020a. RE: Dangerous Waste Compliance
Inspection on April 23, 2019 at Manke Lumber Co Inc./Superior Wood Treating (Manke);
EPA/State ID Number: WAD981764434. Compliance Inspection Report. 3 March.

Washington State Department of Ecology. 2020b. RE: Dangerous Waste Focused Compliance
Inspection on July 8, 2019 at Manke Lumber Co. Inc./Superior Wood Treating (Manke);
EPA/State ID Number: WAD981764434. Dangerous Waste Compliance Inspection.
3 March.

Table

Table 1: XRF and Laboratory Analytical Data

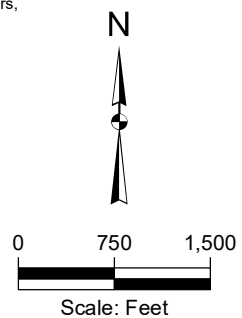
Boring ID	Sample Depth Interval (inches)	XRF Analysis Date/Time	Total Metals (mg/kg)											Total Metals (mg/kg)											Metals - TCLP (mg/L)			
			XRF											Eurofins TestAmerica											Eurofins TestAmerica			
			Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver	Copper	Nickel	Zinc	Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver	Copper	Nickel	Zinc	Arsenic	Chromium	Copper	
Method C Industrial Cancer (mg/kg)			88											88														
Method C Industrial Non-Cancer (mg/kg)			1100	700000	3500	5300000			18000	18000	140000		1100000	1100	700000	3500	5300000			18000	18000	140000		1100000				
Metals - TCLP (mg/L)			5	100	1	5	5	0.2	1	5				5	100	1	5	5	0.2	1	5				5	5		
B01	0-6	10/6/2020 13:21	24	290	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	3.9	<LOD	73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B01	6-12	10/6/2020 13:26	37	244	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	4.1	<LOD	75	49	31 F1	<0.61	37	5.1	<0.022	1.3	<0.15	64 F1	9.3	64 F1	--	--	--	
B01	12-18	10/7/2020 14:02	30	383	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	1.5	2.7	30	74	--	--	--	--	--	--	--	--	--	--	--	--	--	
B02	0-6	10/6/2020 13:09	16	233	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	8.3	<LOD	74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B02	6-12	10/6/2020 13:15	<LOD	<LOD	<LOD	<LOD	40	<LOD	<LOD	<LOD	5.1	<LOD	78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B03	0-6	10/6/2020 13:01	19	334	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	12	8.4	20	70	--	--	--	--	--	--	--	--	--	--	--	--	--	
B03	6-12	10/6/2020 13:05	32	297	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	5.6	<LOD	70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B04	0-6	10/6/2020 12:50	28	373	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	26.5	<LOD	104	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B04	6-12	10/6/2020 12:55	100	162	<LOD	262	<LOD	<LOD	<LOD	<LOD	53.1	<LOD	142	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B04	12-18	10/6/2020 17:02	43	281	<LOD	107	33	<LOD	<LOD	<LOD	15.4	<LOD	74	76 F1 F2	--	--	260 F2	--	--	--	--	290	--	--	<0.060	0.029	2.0	
B05	0-4	10/6/2020 11:26	646	156	<LOD	884	63	<LOD	<LOD	<LOD	79	<LOD	135	1300	89	<0.63	990	32	0.21	<1.2	<0.16	1800	41	140	--	--	--	
B05	4-10	10/6/2020 11:32	62	468	<LOD	<LOD	67	<LOD	<LOD	<LOD	13	9.7	29	62	--	--	--	--	--	--	--	--	--	--	--	--	--	
B05	10-16	10/6/2020 15:42	91	406	<LOD	<LOD	45	<LOD	<LOD	<LOD	3.7	77.1	53	77	130	--	--	120	--	--	--	260	--	--	<0.060	<0.025	0.85	
B06	0-6	10/6/2020 11:11	309	<LOD	<LOD	1081	30	<LOD	<LOD	<LOD	182.8	<LOD	274	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B06	6-9	10/6/2020 11:15	71	240	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	18.8	<LOD	78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B06	9-12	10/6/2020 15:23	40	337	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	1.6	8.9	36	62	--	--	--	--	--	--	--	--	--	--	--	--	--	
B07	0-6	10/6/2020 11:00	220	<LOD	<LOD	223	41	<LOD	<LOD	<LOD	165.6	<LOD	364	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B07	6-12	10/6/2020 11:05	229	125	<LOD	1049	27	<LOD	<LOD	<LOD	116.2	<LOD	259	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B07	9-13	10/6/2020 15:28	26	815	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	4.2	7.8	59	60	62	--	--	89	--	--	--	240	--	--	<0.060	<0.025	1.5	
B08	0-6	10/6/2020 10:31	114	<LOD	<LOD	38	<LOD	<LOD	<LOD	<LOD	96.7	<LOD	372	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B08	6-12	10/6/2020 10:51	315	133	<LOD	817	28	<LOD	<LOD	<LOD	108.1	<LOD	322	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B08	12-15	10/6/2020 16:52	380	199	<LOD	602	<LOD	<LOD	<LOD	<LOD	141.8	<LOD	289	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B08	15-18	10/6/2020 15:36	271	345	<LOD	29	<LOD	<LOD	<LOD	<LOD	1.8	44.1	25	102	310	--	--	320	--	--	--	1000	--	--	0.35	0.025	5.5	
B09	0-3	10/6/2020 13:32	6962	619	<LOD	6556	152	<LOD	<LOD	7	27	1338.7	84	240	--	--	--	--	--	--	--	--	--	--	--	--	--	
B09	3-8	10/6/2020 13:38	817	308	<LOD	1293	<LOD	<LOD	<LOD	<LOD	164.7	19	93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B09	12-14	10/6/2020 16:57	6	256	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	3.4	<LOD	52	28/28	35/34	<0.57/<0.48	36/38	4.1/4.0	<0.021/0.031	1.8/1.4	<0.14/<0.12	110/120	11/11	27/27	--	--	--	
B10	0-6	10/7/2020 11:25	31	<LOD	<LOD	187	30	<LOD	<LOD	<LOD	37.7	<LOD	265	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B10	6-12	10/7/2020 11:30	50	314	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	18.6	21	94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B10	12-18	10/7/2020 11:34	36	381	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	1	7.6	21	75	--	--	--	--	--	--	--	--	--	--	--	--	--	
B11	0-6	10/7/2020 11:38	42	<LOD	<LOD	149	28	<LOD	<LOD	<LOD	54.4	<LOD	216	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B11	6-12	10/7/2020 11:47	77	275	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	10.4	26	100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B11	12-17	10/7/2020 11:51	109	393	<LOD	30	<LOD	<LOD	<LOD	<LOD	1.9	10.5	33	75	76	38	<0.61	170	6.3	0.072	1.2	<0.15	190	10	76	<0.060	<0.025	1.5
B12	0-6	10/7/2020 12:20	33	198	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	43	<LOD	158	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B12	6-12	10/7/2020 12:26	40	366	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	2.7	10.9	41	83	--	--	--	--	--	--	--	--	--	--	--	--	--	
B12	12-15	10/7/2020 12:30	61	268	<LOD	<LOD	26	<LOD	<LOD	<LOD	7.6	<LOD	83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B13	0-6	10/7/2020 12:36	78	166	<LOD	251	21	<LOD	<LOD	<LOD	33.7	<LOD	135	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B13	6-12	10/7/2020 12:41	47	240	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	9.5	23	77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B13	12-18	10/7/2020 12:46	80	408	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	1.3	7.2	24	76	92	--	--	150	--	--	--	140	--	--	<0.060	<0.025	0.53	
B14	0-6	10/7/2020 11:10	18	<LOD	<LOD	102	<LOD	<LOD	<LOD	<LOD	5.7	<LOD	217	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
B14	6-12	10/7/2020 11:21	48	386	<LOD	<LOD	29	<LOD	<LOD	<LOD	2.9	6.8	20	76	--	--	--	--	--	--	--	--	--	--	--	--	--	
B14	12-18	10/7/2020 11:15	50	442	<LOD	<LOD</																						

Notes:
Bold indicates analyte was reported above the laboratory reporting limit.
Gray shading indicates analyte is above the MTCA Method A cleanup level (CUL) or the MTCA Method B CUL.
Blue shading indicates analyte is above the MTCA Method C Cancer or Non-cancer CUL.
Second result is the deuplicate sample result.

" < " Analyte not reported above the indicated laboratory reporting limit.
" - " denotes not measured, not available, or not applicable.
mg/kg = milligrams per kilogram
mg/L = milligrams per liter
MTCA = Model Toxic Control Act
RCRA = Resource Conservation and Recovery Act
TCLP = Toxicity Characteristic Leaching Procedure
LOD = Limit of Detection
F1 = Matrix spike and/or matrix spike duplicate recovery exceeds control limits
F2 = Matrix spike/matrix spike duplicate relative percent difference exceeds control limits

Figures

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors,



KJ Kennedy Jenks

Manke Sumner Mill
Sumner, Washington

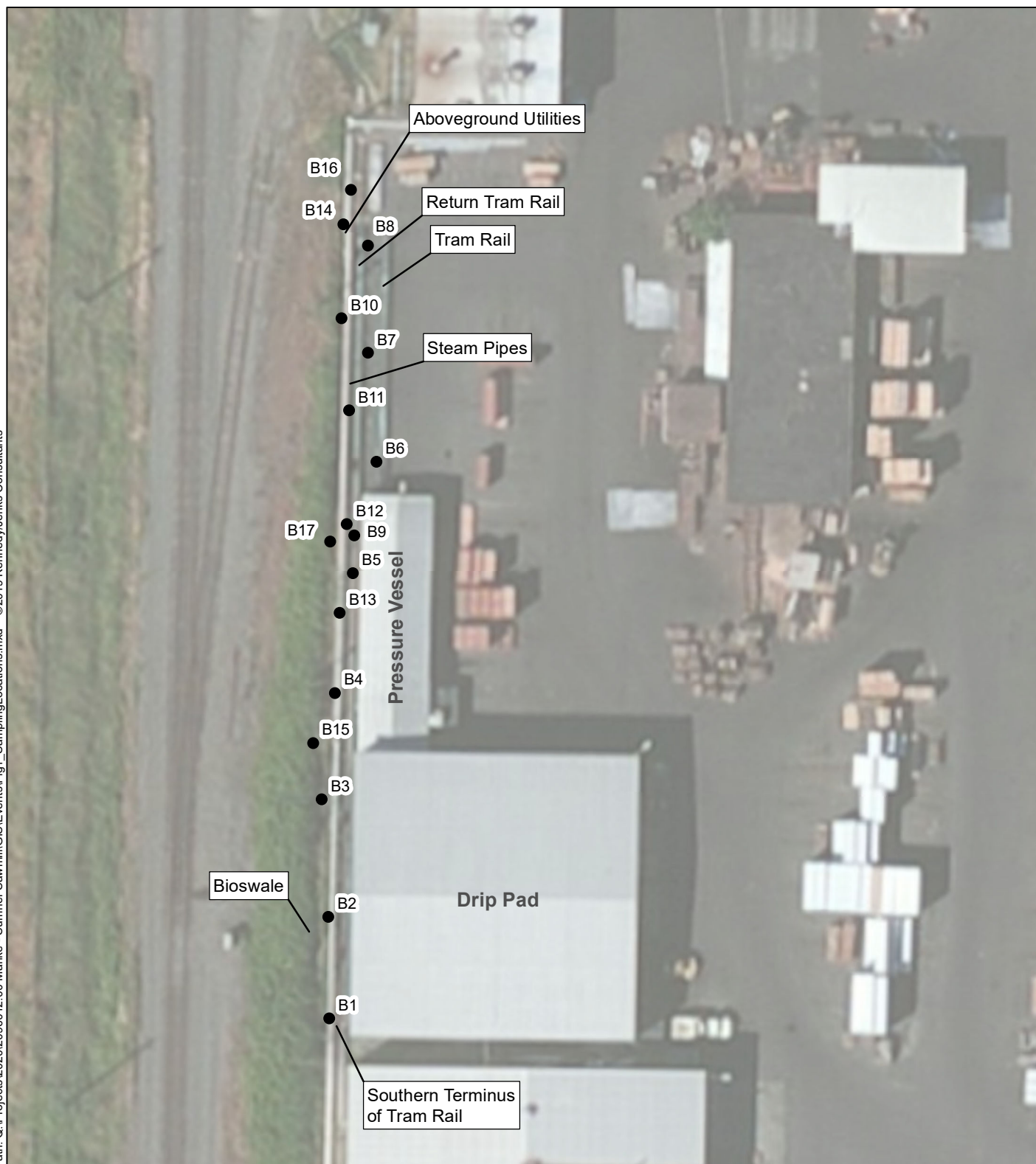
Vicinity Map

Note:

1. All locations are approximate.

Figure 1

Path: Q:\Projects\2020\2096012.00 Manke - Sumner Sawmill\GIS\Events\Fig1_SamplingLocations.mxd ©2019 Kennedy/Jenks Consultants



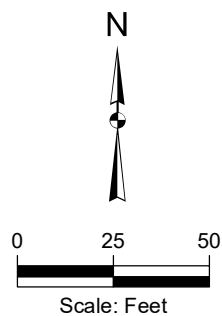
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- Sample Locations

Note:

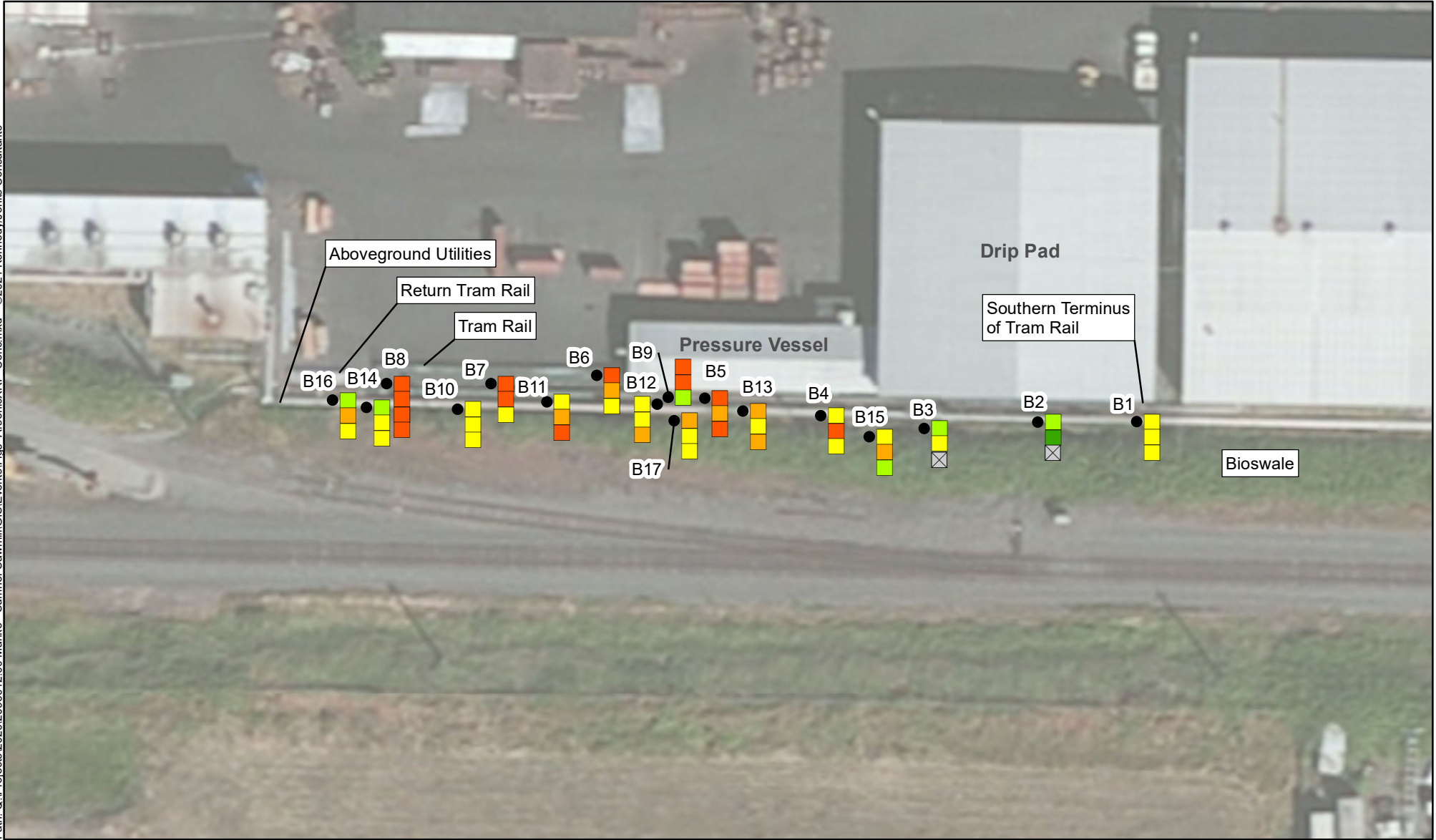
1. All locations are approximate.



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Sumner, Washington

Site Features

Figure 2



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

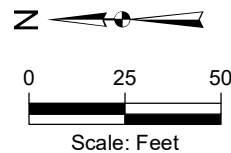
Arsenic Field Screening Concentration Range
(XRF; mg/kg)

- < LOD
- 6.00 - 20.00
- 20.01 - 50.00 (Above Method A
CUL)
- 50.01 - 88.00
- > 88 (Above Method C CUL)

- Sample Locations
- ⊗ Not Sampled

Note:

1. All locations are approximate.
2. Top box represents most shallow
soil depth sampled, middle box
represents mid soil depth sampled,
and bottom box represents deepest
soil sample.
3. LOD = limit of detection.
4. CUL = cleanup level.

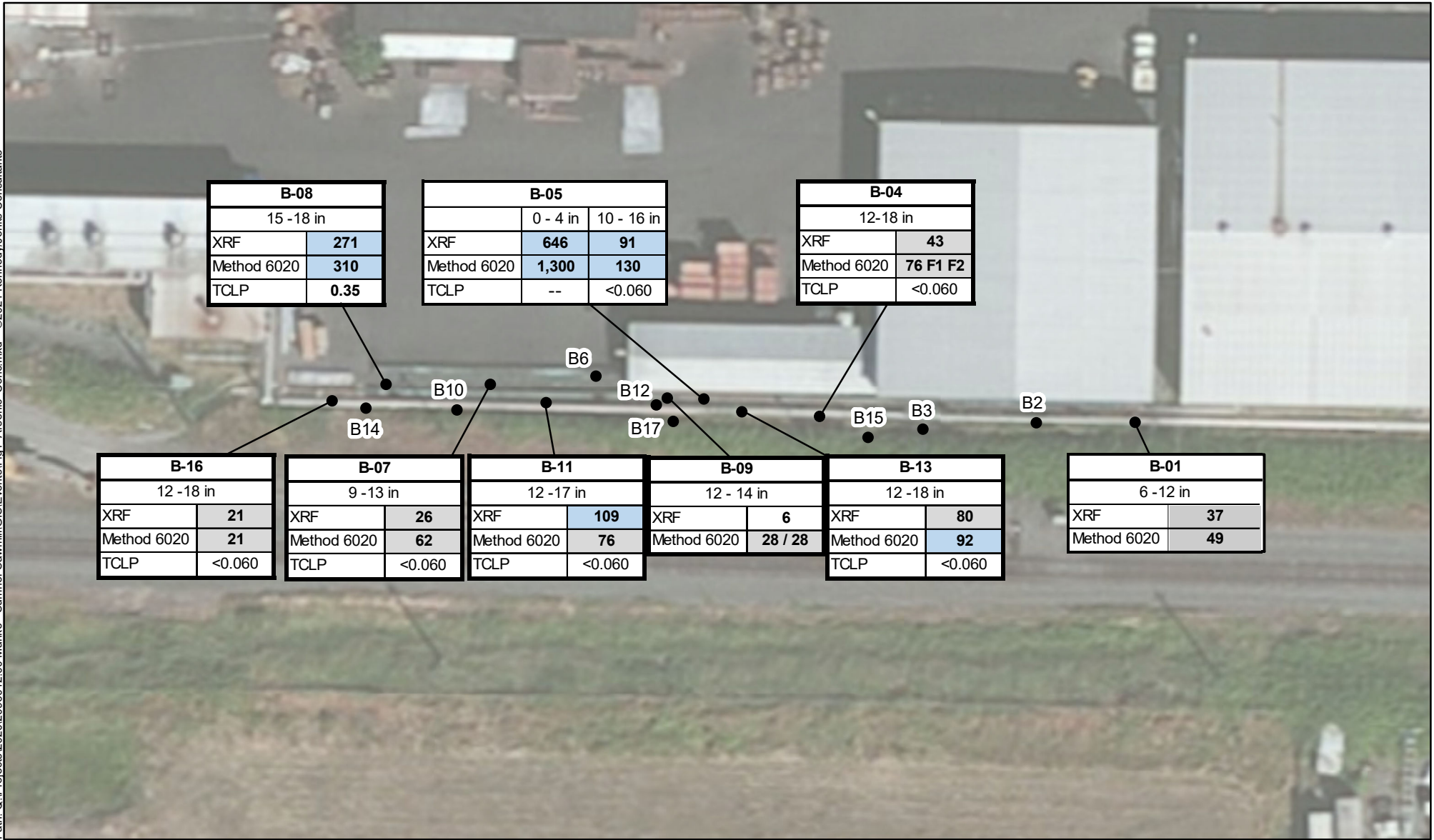


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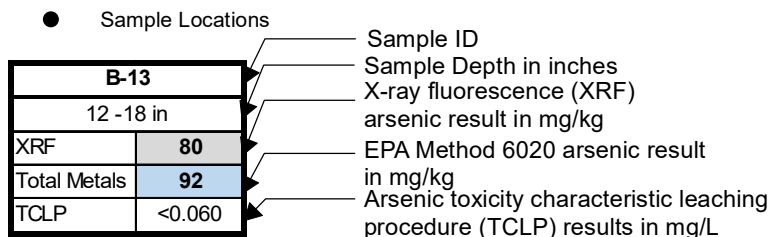
Arsenic XRF Concentrations

Figure 3



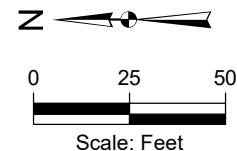
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend



Note:

1. All locations are approximate.
2. mg/kg = milligrams per kilogram
mg/L = milligrams per liter
3. Laboratory and XRF detections are bolded.
4. Results reported above the MTCA Method A cleanup level of 20 mg/kg are shaded gray.
5. Results reported above the MTCA Method C cleanup level of 88 mg/kg are shaded blue.
6. Duplicate sample results shown after "/".

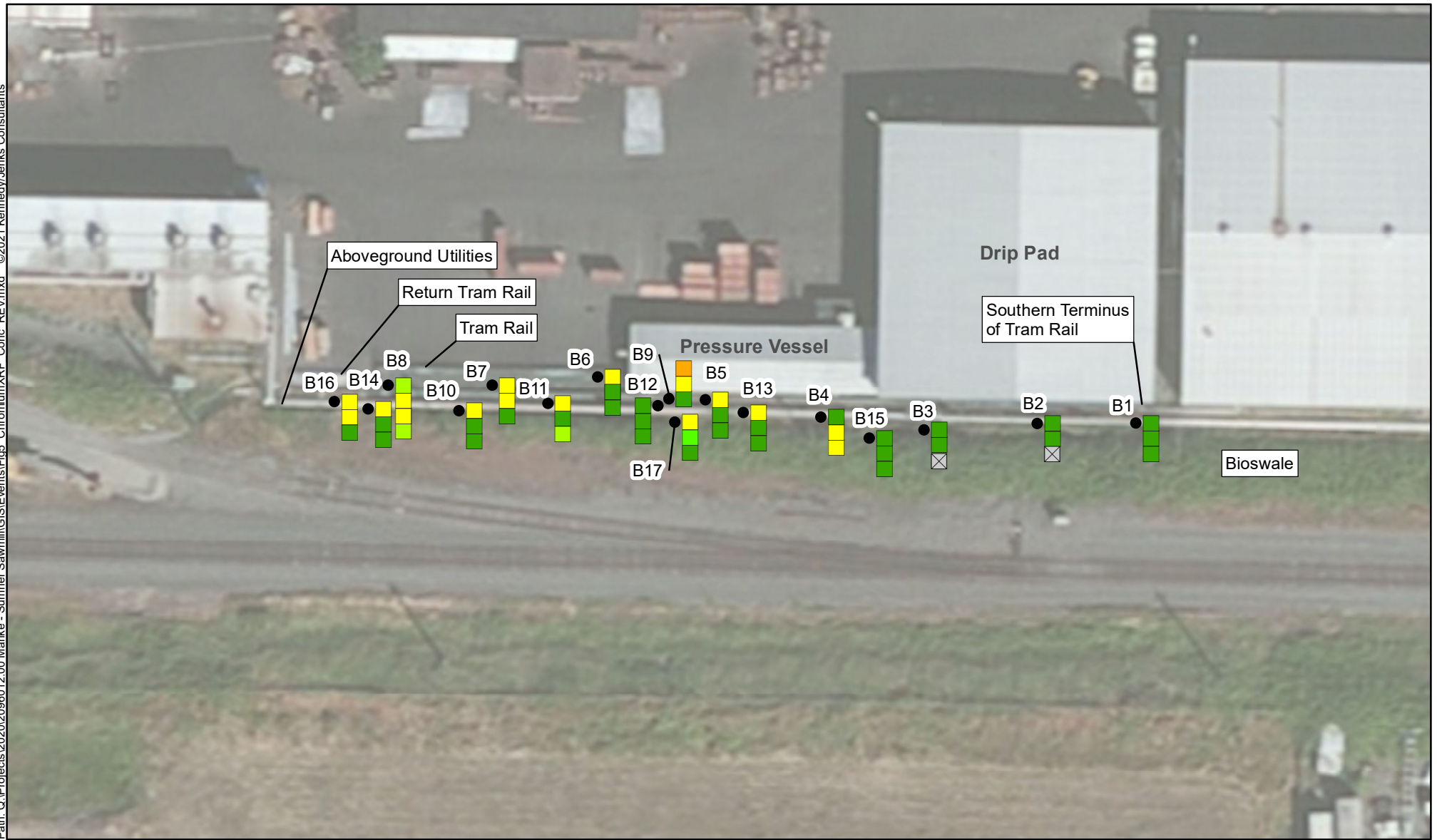


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Manke Sumner Mill
Sumner, Washington

Field and Laboratory Arsenic Concentrations

Figure 3



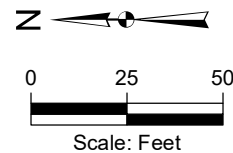
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

Chromium Field Screening Concentration Range (XRF; mg/kg)	
< LOD	● Sample Locations
20.00-100.00	☒ Not Sampled
100.00-2,000	
2,000-5,300.00 (Above Method A CUL)	
> 5,300.00 (Above Method C CUL)	

Note:

1. All locations are approximate.
2. Top box represents most shallow soil depth sampled, middle box represents mid soil depth sampled, and bottom box represents deepest soil sample.
3. LOD = limit of detection.
4. CUL = cleanup level.

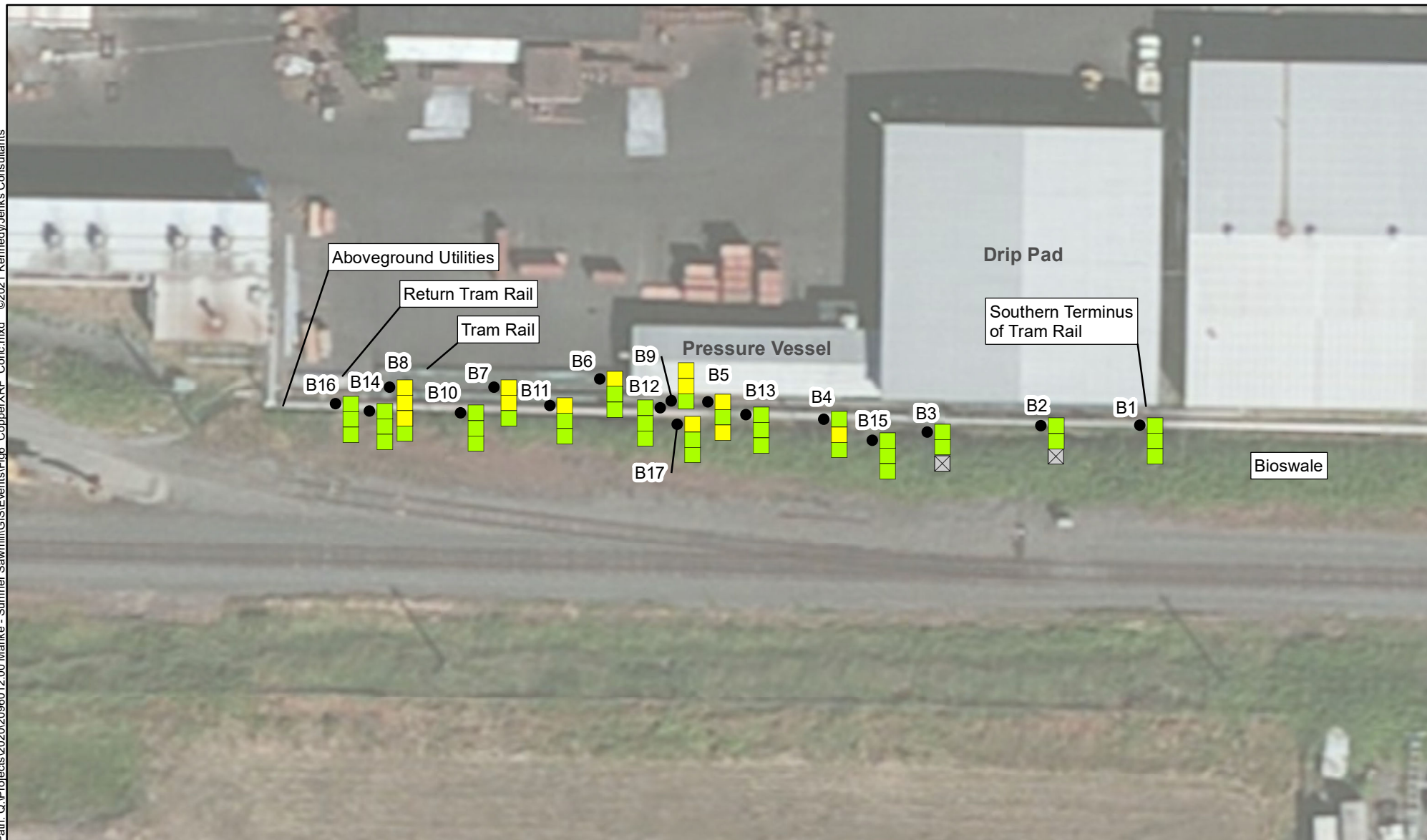


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Sumner, Washington

Chromium XRF Concentrations

Figure 4



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

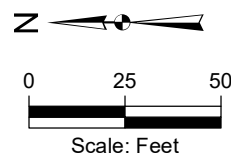
Copper Field Screening Concentration Range
(XRF; mg/kg)

- < LOD
- 2.7-50.00
- 50.00-3,200.00
- 3,200.00-140,000 (Above Method B CUL)
- > 140,000 (Above Method C CUL)

- Sample Locations
- ⊗ Not Sampled

Note:

1. All locations are approximate.
2. Top box represents most shallow soil depth sampled, middle box represents mid soil depth sampled, and bottom box represents deepest soil sample.
3. LOD = limit of detection.
4. CUL = cleanup level.



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Manke Sumner Mill
Sumner, Washington

Copper XRF Concentrations

Figure 5

Appendix A

Laboratory Analytical Reports and
Chain-of-Custody Documentation

ANALYTICAL REPORT

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-98071-1
Client Project/Site: Sumner Storm Water

For:
Manke Lumber Company Inc
1717 Marine View Drive
Tacoma, Washington 98422

Attn: Mr. John McBride



Authorized for release by:
10/21/2020 1:56:10 PM

Nathan Lewis, Project Manager I
(253)922-2310
Nathan.Lewis@Eurofinset.com

LINKS

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results through
TotalAccess

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 **Ask
The
Expert**

Visit us at:

www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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QC Sample Results	11
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Sample Summary	17
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Case Narrative

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-1

Job ID: 580-98071-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative 580-98071-1

Comments

No additional comments.

Receipt

The samples were received on 10/7/2020 4:49 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 11.5° C and 14.9° C.

Receipt Exceptions

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): B05(4-10) (580-98071-11). The container labels list B05(4-10), while the COC lists B05(6-12). The sample was logged in per COC.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-1

Qualifiers

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client Sample Results

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-1

Client Sample ID: B01(6-12)

Lab Sample ID: 580-98071-2

Date Collected: 10/06/20 11:52

Matrix: Solid

Date Received: 10/07/20 16:49

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	49		0.38		mg/Kg		10/14/20 10:50	10/14/20 16:22	10
Barium	31	F1	0.76		mg/Kg		10/14/20 10:50	10/14/20 16:22	10
Cadmium	ND		0.61		mg/Kg		10/14/20 10:50	10/14/20 16:22	10
Chromium	37		0.76		mg/Kg		10/14/20 10:50	10/14/20 16:22	10
Lead	5.1		0.38		mg/Kg		10/14/20 10:50	10/14/20 16:22	10
Selenium	1.3		1.1		mg/Kg		10/14/20 10:50	10/14/20 16:22	10
Silver	ND		0.15		mg/Kg		10/14/20 10:50	10/14/20 16:22	10
Copper	64	F1	0.76		mg/Kg		10/14/20 10:50	10/14/20 16:22	10
Nickel	9.3		0.38		mg/Kg		10/14/20 10:50	10/14/20 16:22	10
Zinc	64	F1	4.2		mg/Kg		10/14/20 10:50	10/14/20 16:22	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.022		mg/Kg		10/13/20 08:37	10/13/20 12:37	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.3		0.1		%			10/19/20 12:55	1
Percent Moisture	12.7		0.1		%			10/19/20 12:55	1

Client Sample Results

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-1

Client Sample ID: B05(0-4)

Lab Sample ID: 580-98071-10

Date Collected: 10/06/20 09:56

Matrix: Solid

Date Received: 10/07/20 16:49

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1300		0.39		mg/Kg		10/14/20 10:50	10/14/20 18:01	10
Barium	89		0.79		mg/Kg		10/14/20 10:50	10/14/20 18:01	10
Cadmium	ND		0.63		mg/Kg		10/14/20 10:50	10/14/20 18:01	10
Chromium	990		0.79		mg/Kg		10/14/20 10:50	10/14/20 18:01	10
Lead	32		0.39		mg/Kg		10/14/20 10:50	10/14/20 18:01	10
Selenium	ND		1.2		mg/Kg		10/14/20 10:50	10/14/20 18:01	10
Silver	ND		0.16		mg/Kg		10/14/20 10:50	10/14/20 18:01	10
Copper	1800		0.79		mg/Kg		10/14/20 10:50	10/14/20 18:01	10
Nickel	41		0.39		mg/Kg		10/14/20 10:50	10/14/20 18:01	10
Zinc	140		4.3		mg/Kg		10/14/20 10:50	10/14/20 18:01	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.21		0.020		mg/Kg		10/13/20 08:37	10/13/20 12:46	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.9		0.1		%			10/19/20 12:55	1
Percent Moisture	12.1		0.1		%			10/19/20 12:55	1

Client Sample Results

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-1

Client Sample ID: B09(12-14)

Lab Sample ID: 580-98071-25

Date Collected: 10/06/20 15:22

Matrix: Solid

Date Received: 10/07/20 16:49

Method: 6020B - Metals (ICP/MS)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	28		0.36		mg/Kg		10/14/20 10:50	10/14/20 18:05	10
Barium	35		0.71		mg/Kg		10/14/20 10:50	10/14/20 18:05	10
Cadmium	ND		0.57		mg/Kg		10/14/20 10:50	10/14/20 18:05	10
Chromium	36		0.71		mg/Kg		10/14/20 10:50	10/14/20 18:05	10
Lead	4.1		0.36		mg/Kg		10/14/20 10:50	10/14/20 18:05	10
Selenium	1.8		1.1		mg/Kg		10/14/20 10:50	10/14/20 18:05	10
Silver	ND		0.14		mg/Kg		10/14/20 10:50	10/14/20 18:05	10
Copper	110		0.71		mg/Kg		10/14/20 10:50	10/14/20 18:05	10
Nickel	11		0.36		mg/Kg		10/14/20 10:50	10/14/20 18:05	10
Zinc	27		3.9		mg/Kg		10/14/20 10:50	10/14/20 18:05	10

Method: 7471A - Mercury (CVAA)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.021		mg/Kg		10/13/20 08:37	10/13/20 12:49	1

General Chemistry									
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86.8		0.1		%			10/19/20 12:55	1
Percent Moisture	13.2		0.1		%			10/19/20 12:55	1

Client Sample Results

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-1

Client Sample ID: DUP01-20201006

Lab Sample ID: 580-98071-26

Date Collected: 10/06/20 00:01

Matrix: Solid

Date Received: 10/07/20 16:49

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	28		0.30		mg/Kg		10/14/20 10:50	10/14/20 18:08	10
Barium	34		0.60		mg/Kg		10/14/20 10:50	10/14/20 18:08	10
Cadmium	ND		0.48		mg/Kg		10/14/20 10:50	10/14/20 18:08	10
Chromium	38		0.60		mg/Kg		10/14/20 10:50	10/14/20 18:08	10
Lead	4.0		0.30		mg/Kg		10/14/20 10:50	10/14/20 18:08	10
Selenium	1.4		0.91		mg/Kg		10/14/20 10:50	10/14/20 18:08	10
Silver	ND		0.12		mg/Kg		10/14/20 10:50	10/14/20 18:08	10
Copper	120		0.60		mg/Kg		10/14/20 10:50	10/14/20 18:08	10
Nickel	11		0.30		mg/Kg		10/14/20 10:50	10/14/20 18:08	10
Zinc	27		3.3		mg/Kg		10/14/20 10:50	10/14/20 18:08	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.031		0.021		mg/Kg		10/13/20 08:37	10/13/20 12:51	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88.0		0.1		%			10/19/20 12:55	1
Percent Moisture	12.0		0.1		%			10/19/20 12:55	1

Client Sample Results

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-1

Client Sample ID: B11(12-14)

Lab Sample ID: 580-98071-33

Date Collected: 10/07/20 09:36

Matrix: Solid

Date Received: 10/07/20 16:49

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	76		0.38		mg/Kg		10/14/20 10:50	10/14/20 18:12	10
Barium	38		0.77		mg/Kg		10/14/20 10:50	10/14/20 18:12	10
Cadmium	ND		0.61		mg/Kg		10/14/20 10:50	10/14/20 18:12	10
Chromium	170		0.77		mg/Kg		10/14/20 10:50	10/14/20 18:12	10
Lead	6.3		0.38		mg/Kg		10/14/20 10:50	10/14/20 18:12	10
Selenium	1.2		1.2		mg/Kg		10/14/20 10:50	10/14/20 18:12	10
Silver	ND		0.15		mg/Kg		10/14/20 10:50	10/14/20 18:12	10
Copper	190		0.77		mg/Kg		10/14/20 10:50	10/14/20 18:12	10
Nickel	10		0.38		mg/Kg		10/14/20 10:50	10/14/20 18:12	10
Zinc	76		4.2		mg/Kg		10/14/20 10:50	10/14/20 18:12	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.072		0.021		mg/Kg		10/13/20 08:37	10/13/20 12:53	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	81.8		0.1		%			10/19/20 12:55	1
Percent Moisture	18.2		0.1		%			10/19/20 12:55	1

Client Sample Results

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-1

Client Sample ID: B17(12-18)

Lab Sample ID: 580-98071-52

Date Collected: 10/07/20 13:30

Matrix: Solid

Date Received: 10/07/20 16:49

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	53		0.30		mg/Kg		10/14/20 10:50	10/14/20 18:20	10
Barium	26		0.61		mg/Kg		10/14/20 10:50	10/14/20 18:20	10
Cadmium	ND		0.49		mg/Kg		10/14/20 10:50	10/14/20 18:20	10
Chromium	130		0.61		mg/Kg		10/14/20 10:50	10/14/20 18:20	10
Lead	5.6		0.30		mg/Kg		10/14/20 10:50	10/14/20 18:20	10
Selenium	1.1		0.91		mg/Kg		10/14/20 10:50	10/14/20 18:20	10
Silver	ND		0.12		mg/Kg		10/14/20 10:50	10/14/20 18:20	10
Copper	110		0.61		mg/Kg		10/14/20 10:50	10/14/20 18:20	10
Nickel	9.9		0.30		mg/Kg		10/14/20 10:50	10/14/20 18:20	10
Zinc	74		3.3		mg/Kg		10/14/20 10:50	10/14/20 18:20	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.064		0.022		mg/Kg		10/13/20 08:37	10/13/20 12:55	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86.7		0.1		%			10/19/20 12:55	1
Percent Moisture	13.3		0.1		%			10/19/20 12:55	1

QC Sample Results

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 580-340786/22-A

Matrix: Solid

Analysis Batch: 340842

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 340786

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.25		mg/Kg		10/14/20 10:50	10/14/20 16:18	5
Barium	ND		0.50		mg/Kg		10/14/20 10:50	10/14/20 16:18	5
Cadmium	ND		0.40		mg/Kg		10/14/20 10:50	10/14/20 16:18	5
Chromium	ND		0.50		mg/Kg		10/14/20 10:50	10/14/20 16:18	5
Lead	ND		0.25		mg/Kg		10/14/20 10:50	10/14/20 16:18	5
Selenium	ND		0.75		mg/Kg		10/14/20 10:50	10/14/20 16:18	5
Silver	ND		0.10		mg/Kg		10/14/20 10:50	10/14/20 16:18	5
Copper	ND		0.50		mg/Kg		10/14/20 10:50	10/14/20 16:18	5
Nickel	ND		0.25		mg/Kg		10/14/20 10:50	10/14/20 16:18	5
Zinc	ND		2.8		mg/Kg		10/14/20 10:50	10/14/20 16:18	5

Lab Sample ID: LCS 580-340786/23-A

Matrix: Solid

Analysis Batch: 340842

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 340786

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	50.0	54.1		mg/Kg		108	80 - 120
Barium	50.0	53.0		mg/Kg		106	80 - 120
Cadmium	50.0	49.9		mg/Kg		100	80 - 120
Chromium	50.0	50.4		mg/Kg		101	80 - 120
Lead	50.0	48.4		mg/Kg		97	80 - 120
Selenium	50.0	55.2		mg/Kg		110	80 - 120
Silver	50.0	49.4		mg/Kg		99	80 - 120
Copper	50.0	52.7		mg/Kg		105	80 - 120
Nickel	50.0	51.9		mg/Kg		104	80 - 120
Zinc	50.0	54.5		mg/Kg		109	80 - 120

Lab Sample ID: LCSD 580-340786/24-A

Matrix: Solid

Analysis Batch: 340842

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 340786

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	50.0	53.8		mg/Kg		108	80 - 120	1	20
Barium	50.0	52.4		mg/Kg		105	80 - 120	1	20
Cadmium	50.0	49.1		mg/Kg		98	80 - 120	1	20
Chromium	50.0	49.5		mg/Kg		99	80 - 120	2	20
Lead	50.0	47.6		mg/Kg		95	80 - 120	2	20
Selenium	50.0	53.4		mg/Kg		107	80 - 120	3	20
Silver	50.0	48.4		mg/Kg		97	80 - 120	2	20
Copper	50.0	51.9		mg/Kg		104	80 - 120	2	20
Nickel	50.0	51.5		mg/Kg		103	80 - 120	1	20
Zinc	50.0	53.3		mg/Kg		107	80 - 120	2	20

Lab Sample ID: 580-98071-2 MS

Matrix: Solid

Analysis Batch: 340842

Client Sample ID: B01(6-12)

Prep Type: Total/NA

Prep Batch: 340786

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	49		38.7	92.4		mg/Kg		113	80 - 120

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 580-98071-2 MS

Matrix: Solid

Analysis Batch: 340842

Client Sample ID: B01(6-12)

Prep Type: Total/NA

Prep Batch: 340786

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	31	F1	38.7	84.3	F1	mg/Kg		138	80 - 120
Cadmium	ND		38.7	37.5		mg/Kg		97	80 - 120
Chromium	37		38.7	82.1		mg/Kg		116	80 - 120
Lead	5.1		38.7	41.8		mg/Kg		95	80 - 120
Selenium	1.3		38.7	42.0		mg/Kg		105	80 - 120
Silver	ND		38.7	36.3		mg/Kg		94	80 - 120
Copper	64	F1	38.7	123	F1	mg/Kg		152	80 - 120
Nickel	9.3		38.7	49.8		mg/Kg		105	80 - 120
Zinc	64	F1	38.7	112	F1	mg/Kg		124	80 - 120

Lab Sample ID: 580-98071-2 MSD

Matrix: Solid

Analysis Batch: 340842

Client Sample ID: B01(6-12)

Prep Type: Total/NA

Prep Batch: 340786

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	49		37.8	89.5		mg/Kg		108	80 - 120	3	20
Barium	31	F1	37.8	77.7	F1	mg/Kg		124	80 - 120	8	20
Cadmium	ND		37.8	36.1		mg/Kg		95	80 - 120	4	20
Chromium	37		37.8	80.4		mg/Kg		114	80 - 120	2	20
Lead	5.1		37.8	40.5		mg/Kg		94	80 - 120	3	20
Selenium	1.3		37.8	37.3		mg/Kg		95	80 - 120	12	20
Silver	ND		37.8	36.1		mg/Kg		95	80 - 120	0	20
Copper	64	F1	37.8	114	F1	mg/Kg		133	80 - 120	7	20
Nickel	9.3		37.8	48.3		mg/Kg		103	80 - 120	3	20
Zinc	64	F1	37.8	108		mg/Kg		118	80 - 120	3	20

Lab Sample ID: 580-98071-2 DU

Matrix: Solid

Analysis Batch: 340842

Client Sample ID: B01(6-12)

Prep Type: Total/NA

Prep Batch: 340786

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	49		46.1		mg/Kg		5	20
Barium	31	F1	31.1		mg/Kg		0.4	20
Cadmium	ND		ND		mg/Kg		NC	20
Chromium	37		37.4		mg/Kg		0.1	20
Lead	5.1		5.35		mg/Kg		6	20
Selenium	1.3		1.62		mg/Kg		20	20
Silver	ND		ND		mg/Kg		NC	20
Copper	64	F1	68.1		mg/Kg		6	20
Nickel	9.3		9.83		mg/Kg		6	20
Zinc	64	F1	63.8		mg/Kg		0.1	20

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 580-340646/22-A

Matrix: Solid

Analysis Batch: 340698

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 340646

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.030		mg/Kg		10/13/20 08:38	10/13/20 12:13	1

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-1

Method: 7471A - Mercury (CVAA)

Lab Sample ID: LCS 580-340646/23-A
Matrix: Solid
Analysis Batch: 340698

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 340646
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.167	0.158		mg/Kg		95	80 - 120

Lab Sample ID: LCSD 580-340646/24-A
Matrix: Solid
Analysis Batch: 340698

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 340646
%Rec.

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	0.167	0.162		mg/Kg		97	80 - 120	3	20

Lab Sample ID: 580-98071-2 MS
Matrix: Solid
Analysis Batch: 340698

Client Sample ID: B01(6-12)
Prep Type: Total/NA
Prep Batch: 340646
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND		0.119	0.148		mg/Kg		109	80 - 120

Lab Sample ID: 580-98071-2 MSD
Matrix: Solid
Analysis Batch: 340698

Client Sample ID: B01(6-12)
Prep Type: Total/NA
Prep Batch: 340646
%Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		0.118	0.144		mg/Kg		107	80 - 120	3	20

Lab Sample ID: 580-98071-2 DU
Matrix: Solid
Analysis Batch: 340698

Client Sample ID: B01(6-12)
Prep Type: Total/NA
Prep Batch: 340646
%Rec.

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Mercury	ND		0.0284		mg/Kg				NC	20

Lab Chronicle

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-1

Client Sample ID: B01(6-12)

Date Collected: 10/06/20 11:52

Date Received: 10/07/20 16:49

Lab Sample ID: 580-98071-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			340786	10/14/20 10:50	TMH	TAL SEA
Total/NA	Analysis	6020B		10	340842	10/14/20 16:22	FCW	TAL SEA
Total/NA	Prep	7471A			340646	10/13/20 08:37	JCP	TAL SEA
Total/NA	Analysis	7471A		1	340698	10/13/20 12:37	FCW	TAL SEA
Total/NA	Analysis	2540G		1	341135	10/19/20 12:55	S1S	TAL SEA

Client Sample ID: B05(0-4)

Date Collected: 10/06/20 09:56

Date Received: 10/07/20 16:49

Lab Sample ID: 580-98071-10

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			340786	10/14/20 10:50	TMH	TAL SEA
Total/NA	Analysis	6020B		10	340842	10/14/20 18:01	FCW	TAL SEA
Total/NA	Prep	7471A			340646	10/13/20 08:37	JCP	TAL SEA
Total/NA	Analysis	7471A		1	340698	10/13/20 12:46	FCW	TAL SEA
Total/NA	Analysis	2540G		1	341135	10/19/20 12:55	S1S	TAL SEA

Client Sample ID: B09(12-14)

Date Collected: 10/06/20 15:22

Date Received: 10/07/20 16:49

Lab Sample ID: 580-98071-25

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			340786	10/14/20 10:50	TMH	TAL SEA
Total/NA	Analysis	6020B		10	340842	10/14/20 18:05	FCW	TAL SEA
Total/NA	Prep	7471A			340646	10/13/20 08:37	JCP	TAL SEA
Total/NA	Analysis	7471A		1	340698	10/13/20 12:49	FCW	TAL SEA
Total/NA	Analysis	2540G		1	341135	10/19/20 12:55	S1S	TAL SEA

Client Sample ID: DUP01-20201006

Date Collected: 10/06/20 00:01

Date Received: 10/07/20 16:49

Lab Sample ID: 580-98071-26

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			340786	10/14/20 10:50	TMH	TAL SEA
Total/NA	Analysis	6020B		10	340842	10/14/20 18:08	FCW	TAL SEA
Total/NA	Prep	7471A			340646	10/13/20 08:37	JCP	TAL SEA
Total/NA	Analysis	7471A		1	340698	10/13/20 12:51	FCW	TAL SEA
Total/NA	Analysis	2540G		1	341135	10/19/20 12:55	S1S	TAL SEA

Lab Chronicle

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-1

Client Sample ID: B11(12-14)

Lab Sample ID: 580-98071-33

Date Collected: 10/07/20 09:36

Matrix: Solid

Date Received: 10/07/20 16:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			340786	10/14/20 10:50	TMH	TAL SEA
Total/NA	Analysis	6020B		10	340842	10/14/20 18:12	FCW	TAL SEA
Total/NA	Prep	7471A			340646	10/13/20 08:37	JCP	TAL SEA
Total/NA	Analysis	7471A		1	340698	10/13/20 12:53	FCW	TAL SEA
Total/NA	Analysis	2540G		1	341135	10/19/20 12:55	S1S	TAL SEA

Client Sample ID: B17(12-18)

Lab Sample ID: 580-98071-52

Date Collected: 10/07/20 13:30

Matrix: Solid

Date Received: 10/07/20 16:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			340786	10/14/20 10:50	TMH	TAL SEA
Total/NA	Analysis	6020B		10	340842	10/14/20 18:20	FCW	TAL SEA
Total/NA	Prep	7471A			340646	10/13/20 08:37	JCP	TAL SEA
Total/NA	Analysis	7471A		1	340698	10/13/20 12:55	FCW	TAL SEA
Total/NA	Analysis	2540G		1	341135	10/19/20 12:55	S1S	TAL SEA

Laboratory References:

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-1

Laboratory: Eurofins TestAmerica, Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Washington	State	C553	02-18-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
2540G		Solid	Percent Moisture
2540G		Solid	Percent Solids

Sample Summary

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-98071-2	B01(6-12)	Solid	10/06/20 11:52	10/07/20 16:49	
580-98071-10	B05(0-4)	Solid	10/06/20 09:56	10/07/20 16:49	
580-98071-25	B09(12-14)	Solid	10/06/20 15:22	10/07/20 16:49	
580-98071-26	DUP01-20201006	Solid	10/06/20 00:01	10/07/20 16:49	
580-98071-33	B11(12-14)	Solid	10/07/20 09:36	10/07/20 16:49	
580-98071-52	B17(12-18)	Solid	10/07/20 13:30	10/07/20 16:49	

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

eurofins Environment Testing
America

Client Information		Lab P/N: Lewis, Nathan A		Carrier Tracking No(s):	
Client Contact: Julia Schwarz		E-Mail: Nathan.Lewis@Eurofins.com		COC No: 580-40426-12920.1	
Company: Kennedy/Jenks Consultants		Phone: 253-572-6252 (Tel) 253-383-2489 (Fax)		Page: 1 of 6	
Address: 32001-32nd Ave South, Suite 100		PO #:		Job #:	
City: Federal Way		W/O #:		Preservation Code:	
State, Zip: WA, 98001		Project #: 58000247		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor	
Phone: 253-572-6252 (Tel) 253-383-2489 (Fax)		SSOW#:		Loc: 580 98071	
Email: julia.schwarz@kennedyjenks.com		Site: Washington		V - Blank W - pH 4-5 Z - other (specify)	
Project Name: Summer Storm Water		Due Date Requested:		Analysis Requested	
Site: Washington		TAT Requested (days):		Barcode	
		Sample Date		580-98071 Chain of Custody	
Sample Identification		Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Weir, Silt, Sand, Gravel, Other)	Preservation Code
B01(0-6)	10/6/20	1147	6	S	
B01(6-12)		1152			
B02(0-6)		1120			
B02(6-12)		1137			
B03(0-6)		1102			
B03(6-12)		1110			
B04(0-6)		1020			
B04(6-12)		1040			
B04(12-18)		1533			
B05(0-4)		0956			
B05(4-10)		1010			
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological					
Deliverable Requested: I, II, III, IV, Other (specify)					
Empty Kit Relinquished by: _____ Date: _____ Time: _____					
Relinquished by: _____ Date/Time: 10/7/20 1049 Company: RJ					
Relinquished by: _____ Date/Time: _____ Company: _____					
Relinquished by: _____ Date/Time: _____ Company: _____					
Custody Seal No.: _____					
Custody Seal Intact: ☐ Yes ☐ No					
Cooler Temperature(s) °C and Other Remarks:					

Special Instructions/Note:

no spec in sample name, per

Please verify prior to disposal.

Therm ID: RE Cor: 14.9 °C Unc: 15.4 °C
Cooler Disc: LG B/LP
Packing: 10/6/20
Cust. Seal: Yes No X
Blue Ice: (Wet) Dry, None
Lab Cour: C. Field
FedEx: UPS:
Therm ID: RE Cor: 11.5 °C Unc: 12.1 °C
Cooler Disc: LG B/LP
Packing: 10/6/20
Cust. Seal: Yes No X
Blue Ice: (Wet) Dry, None
Lab Cour: C. Field
FedEx: UPS:

Sample Disposal (A fee may be assessed if samp.)

☐ Return To Client ☐ Disposal By Lab

Special Instructions/QC Requirements:

Received by: _____ Date/Time: 10/7/20 1647 Company: TA-See

Received by: _____ Date/Time: _____ Company: _____

Received by: _____ Date/Time: _____ Company: _____

Cooler Temperature(s) °C and Other Remarks:

Eurofins TestAmerica, Seattle

5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record



Environment Testing
America

Client Information Client Contact: Julia Schwarz Company: Kennedy/Jenks Consultants		Lab File: Lewis, Nathan A E-Mail: Nathan.Lewis@Eurofins.com		Carrier Tracking Note:		COC No: 580-40426-12920.1 Page: 2 of 6 Job #:	
Address: 32001-32nd Ave South, Suite 100 City: Federal Way State, Zip: WA, 98001 Phone: 253-572-6252(Tel) 253-383-2489(Fax) Email: juliaschwarz@kennedyjenks.com Project Name: Summer Storm Water Site: Washington		Due Date Requested: TAT Requested (days): PO #: IWO #: Project #: 58000247 SOW#:		Analysis Requested			
Sample Identification		Sample Date Sample Time Sample Type (C=Comp, G=Grab) Matrix (W=Water, S=Solid, O=Other, BT=Trace, AA=As)		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 6020B, 7471A - RCRA Metals + Cu, Ni, Zn			
BOS(10-16) BOS(0-6) BOS(6-12) BOS(9-12) BOS(0-6) BOS(6-12) BOS(9-13) BOS(0-6) BOS(6-12) BOS(15-18)		10/1/20 0915 0933 1410 0847 0858 1344 0827 0840 1330 1347		Total Number of Containers Special Instructions/Note:			
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant Deliverable Requested: I, II, III, IV, Other (specify)		☐ Poison B ☐ Unknown ☐ Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months			
Empty Kit Relinquished by:		Date:		Method of Shipment:			
Relinquished by:		Date/Time: 10/1/2020 1649		Received by: [Signature] Date/Time: 10/7/20 1649			
Relinquished by:		Date/Time:		Received by: Date/Time:			
Relinquished by:		Date/Time:		Received by: Date/Time:			
Custody Seals Intact: A Yes A No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:			

Eurofins TestAmerica, Seattle
 5755 8th Street East
 Tacoma, WA 98424
 Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

eurofins Environment Testing
 America

Client Information Client Contact: Julia Schwarz Phone: 206-200-3304 E-Mail: Nathan.Lewis@Eurofins.com Company: Kennedy/Jenks Consultants		Lab Pile: 61-Bronator/Schwarz Carrier Tracking No(s): COC No: 580-40426-12920.1 Page: 3 of 6 Job #: 6	
Address: 32001-32nd Ave South, Suite 100 City: Federal Way State Zip: WA, 98001 Phone: 253-572-6252(Tel) 253-383-2499(Fax) Email: juliaschwarz@kennedyjenks.com Project #: 58000247 Project Name: Summer Storm Water Site: Washington		Analysis Requested Due Date Requested: TAT Requested (days): PO #: WO #: Project #: SOW#:	
Sample Identification Sample ID: B09 (0-3) B09 (3-8) B09 (12-14) DUP01-20201006		Sample Date: 10/14/20 Sample Time: 1020 G Sample Type (C=Comp, G=grab): Matrix (W=Water, S=Solid, O=Other): Preservation Code: 3	
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For Months	
Empty Kit Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by: [Signature]		Method of Shipment: [Signature] Received by: [Signature] Received by: [Signature] Received by: [Signature]	
Date: 10/17/2020 1049 Date/Time: 10/17/20 1049 Date/Time: 10/17/20 1049 Date/Time: 10/17/20 1049		Date: 10/17/20 Date/Time: 10/17/20 1049 Date/Time: 10/17/20 1049 Date/Time: 10/17/20 1049	
Custody Seal No.: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks:	

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record



Environment Testing
America

Client Information		Sampler:		Lab Pkt:		Carrier Tracking No(s):		COC No:	
Client Contact: Julia Schwarz		Phone:		Lewis, Nathan A		Nathan.Lewis@Eurofins.com		580-40426-12920.1	
Company: Kennedy/Jenks Consultants		Address: 32001-32nd Ave South, Suite 100		City: Federal Way		State, Zip: WA, 98001		Page: 4 of 6	
Phone: 253-572-6252(Tel) 253-383-2489(Fax)		PO #:		WO #:		Project #: 58000247		Job #:	
Email: Juliaschwarz@kennedyjenks.com		Site: Washington		Project Name: Summer Storm Water		SSOW#:		Preservation Codes:	
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (Residue, Swab, On-surface, etc.)	Field Filled Sample (Yes or No)	Perform MEASD (Yes or No)	6020B, 7471A - RCRA Metals + Cu, Ni, Zn	Analysis Requested
B01(12-13)		10/7/20	1246	6	S	X	X	N	Total Number of Containers
B10(0-6)			0826						
B10(6-12)			0834						
B10(12-18)			0845						
B11(0-6)			0906						
B11(6-12)			0916						
B11(12-17)			0936						
B12(0-6)			0954						
B12(6-12)			1008						
B12(12-18)			1022						
B13(0-6)			1037						
Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client		Disposal By Lab		Archive For	
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological									
Deliverable Requested: I, II, III, IV, Other (specify)									
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:			
Relinquished by:		Date/Time:		Date/Time:		Date/Time:		Company	
Relinquished by:		Date/Time:		Date/Time:		Date/Time:		Company	
Relinquished by:		Date/Time:		Date/Time:		Date/Time:		Company	
Custody Seal Intact:		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:					
Δ Yes Δ No									

Eurofins TestAmerica, Seattle

5755 8th Street East

Tacoma, WA 98424

Phone (253) 922-2310 Fax (253) 922-5047

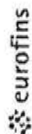
Chain of Custody Record

Environment Testing
America

Client Information		Lab PIA:		Carrier Tracking No(s):		COC No:	
Kennedy/Jenks Consultants		Lewis, Nathan A				580-40426-12920.1	
Address:		E-Mail:		Page:		Job #:	
32001-32nd Ave South, Suite 100		Nathan.Lewis@Eurofinset.com		5 of 6			
City:		State:		Zip:			
Federal Way		WA		98001			
Phone:		Project #:		SSOWF:			
253-572-6252(Tel) 253-383-2489(Fax)		58000247					
Email:		Site:					
julienschwarz@kennedyjenks.com		Washington					
Project Name:		Sample Type:		Sample Date:		Sample Time:	
Summer Storm Water		G=grab					
		Preservation Code:		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)	
		G		N		N	
Sample Identification		Matrix		Total Number of Containers		Special Instructions/Note:	
B13(6-12)		G		X			
B13(12-18)		G		X			
B14(0-6)		G		X			
B14(6-12)		G		X			
B14(12-18)		G		X			
DUP 02-2024007		G		X			
B15(0-6)		G		X			
B15(6-12)		G		X			
B15(12-18)		G		X			
B16(0-6)		G		X			
B16(6-12)		G		X			
Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client		Archive For	
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological						Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:					
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by:		Date:		Time:		Company:	
Relinquished by:		Date:		Time:		Company:	
Relinquished by:		Date:		Time:		Company:	
Custody Seals Intact:		Custody Seal No.:					
A Yes A No							

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Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record



Environment Testing
America

Client Information		Lab PIA: Lewis, Nathan A		Carrier Tracking No(s):		COC No: 580-40426-12920.1				
Client Contact: Julia Schwarz		Phone:		Page: 6 of 6		Job #:				
Company: Kennedy/Jenks Consultants		Address: 32001-32nd Ave South, Suite 100		City: Federal Way		State, Zip: WA, 98001				
Phone: 253-572-6252(Tel) 253-383-2489(Fax)		Email: julia.schwarz@kennedyjenks.com		Project #: Summer Storm Water		Site: Washington				
Due Date Requested:		TAT Requested (days):		PO #:		WO #:				
PO #:		WO #:		Project #: 58000247		SSOW#:				
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=other)	Field Filled Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B, 7471A - RCRA Metals - Cu, Ni, Zn	Analysis Requested	Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)
B16(12-18)	10/7/20	1255	G	S		X	X			
B17(0-6)		1313								
B17(6-12)		1320								
B17(12-18)		1330								
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological		Date:		Time:		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months				
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/OC Requirements:		Special Instructions/OC Requirements:		Special Instructions/OC Requirements:		Special Instructions/OC Requirements:		Special Instructions/Note:
Empty Kit Relinquished by:		Date:		Time:		Relinquished by:		Date:		Time:
Relinquished by:		Date:		Time:		Relinquished by:		Date:		Time:
Relinquished by:		Date:		Time:		Relinquished by:		Date:		Time:
Custody Seal Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		Cooler Temperature(s) °C and Other Remarks:		Cooler Temperature(s) °C and Other Remarks:		Ver: 01/16/2019 10/2/2020

Login Sample Receipt Checklist

Client: Manke Lumber Company Inc

Job Number: 580-98071-1

Login Number: 98071

List Source: Eurofins TestAmerica, Seattle

List Number: 1

Creator: Hobbs, Kenneth F

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-98071-2

Client Project/Site: Sumner Storm Water

For:

Manke Lumber Company Inc
1717 Marine View Drive
Tacoma, Washington 98422

Attn: Mr. John McBride



Authorized for release by:
11/17/2020 5:01:03 PM

Nathan Lewis, Project Manager I
(253)922-2310
Nathan.Lewis@Eurofinset.com

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-2

Job ID: 580-98071-2

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative 580-98071-2

Comments

No additional comments.

Receipt

The samples were received on 10/7/2020 4:49 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 11.5° C and 14.9° C.

Receipt Exceptions

The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): B05(4-10) (580-98071-11). The container labels list B05(4-10), while the COC lists B05(6-12). The sample was logged in per COC.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-2

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Client Sample Results

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-2

Client Sample ID: B04(12-18)

Lab Sample ID: 580-98071-9

Date Collected: 10/06/20 15:33

Matrix: Solid

Date Received: 10/07/20 16:49

Method: 6010D - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.060		mg/L		11/10/20 09:01	11/11/20 22:26	1
Chromium	0.029		0.025		mg/L		11/10/20 09:01	11/11/20 22:26	1
Copper	2.0		0.060		mg/L		11/10/20 09:01	11/11/20 22:26	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	76	F1 F2	0.32		mg/Kg		11/09/20 12:00	11/10/20 08:00	10
Chromium	260	F2	0.65		mg/Kg		11/09/20 12:00	11/10/20 08:00	10
Copper	290		0.65		mg/Kg		11/09/20 12:00	11/10/20 08:00	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.5		0.1		%			11/03/20 17:56	1
Percent Moisture	16.5		0.1		%			11/03/20 17:56	1

Client Sample Results

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-2

Client Sample ID: B05(10-16)

Lab Sample ID: 580-98071-12

Date Collected: 10/06/20 14:23

Matrix: Solid

Date Received: 10/07/20 16:49

Method: 6010D - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.060		mg/L		11/10/20 09:01	11/11/20 22:29	1
Chromium	ND		0.025		mg/L		11/10/20 09:01	11/11/20 22:29	1
Copper	0.85		0.060		mg/L		11/10/20 09:01	11/11/20 22:29	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	130		0.31		mg/Kg		11/09/20 12:00	11/10/20 08:49	10
Chromium	120		0.62		mg/Kg		11/09/20 12:00	11/10/20 08:49	10
Copper	260		0.62		mg/Kg		11/09/20 12:00	11/10/20 08:49	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	93.2		0.1		%			11/03/20 17:56	1
Percent Moisture	6.8		0.1		%			11/03/20 17:56	1

Client Sample Results

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-2

Client Sample ID: B07(9-13)

Lab Sample ID: 580-98071-18

Date Collected: 10/06/20 13:44

Matrix: Solid

Date Received: 10/07/20 16:49

Method: 6010D - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.060		mg/L		11/10/20 09:01	11/11/20 22:33	1
Chromium	ND		0.025		mg/L		11/10/20 09:01	11/11/20 22:33	1
Copper	1.5		0.060		mg/L		11/10/20 09:01	11/11/20 22:33	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	62		0.31		mg/Kg		11/09/20 12:00	11/10/20 08:53	10
Chromium	89		0.61		mg/Kg		11/09/20 12:00	11/10/20 08:53	10
Copper	240		0.61		mg/Kg		11/09/20 12:00	11/10/20 08:53	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	91.4		0.1		%			11/03/20 17:56	1
Percent Moisture	8.6		0.1		%			11/03/20 17:56	1

Client Sample Results

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-2

Client Sample ID: B08(15-18)

Lab Sample ID: 580-98071-22

Date Collected: 10/06/20 13:47

Matrix: Solid

Date Received: 10/07/20 16:49

Method: 6010D - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.35		0.060		mg/L		11/10/20 09:01	11/11/20 22:36	1
Chromium	0.025		0.025		mg/L		11/10/20 09:01	11/11/20 22:36	1
Copper	5.5		0.060		mg/L		11/10/20 09:01	11/11/20 22:36	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	310		0.30		mg/Kg		11/09/20 12:00	11/10/20 08:57	10
Chromium	320		0.60		mg/Kg		11/09/20 12:00	11/10/20 08:57	10
Copper	1000		0.60		mg/Kg		11/09/20 12:00	11/10/20 08:57	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	81.6		0.1		%			11/03/20 17:56	1
Percent Moisture	18.4		0.1		%			11/03/20 17:56	1

Client Sample Results

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-2

Client Sample ID: B11(12-17)

Lab Sample ID: 580-98071-33

Date Collected: 10/07/20 09:36

Matrix: Solid

Date Received: 10/07/20 16:49

Method: 6010D - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.060		mg/L		11/10/20 09:01	11/11/20 22:40	1
Chromium	ND		0.025		mg/L		11/10/20 09:01	11/11/20 22:40	1
Copper	1.5		0.060		mg/L		11/10/20 09:01	11/11/20 22:40	1

Client Sample Results

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-2

Client Sample ID: B13(12-18)

Lab Sample ID: 580-98071-39

Date Collected: 10/07/20 11:00

Matrix: Solid

Date Received: 10/07/20 16:49

Method: 6010D - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.060		mg/L		11/10/20 09:01	11/11/20 22:43	1
Chromium	ND		0.025		mg/L		11/10/20 09:01	11/11/20 22:43	1
Copper	0.53		0.060		mg/L		11/10/20 09:01	11/11/20 22:43	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	92		0.33		mg/Kg		11/09/20 12:00	11/10/20 09:01	10
Chromium	150		0.66		mg/Kg		11/09/20 12:00	11/10/20 09:01	10
Copper	140		0.66		mg/Kg		11/09/20 12:00	11/10/20 09:01	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.4		0.1		%			11/03/20 17:56	1
Percent Moisture	17.6		0.1		%			11/03/20 17:56	1

Client Sample Results

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-2

Client Sample ID: B16(12-18)

Lab Sample ID: 580-98071-49

Date Collected: 10/07/20 12:55

Matrix: Solid

Date Received: 10/07/20 16:49

Method: 6010D - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.060		mg/L		11/10/20 09:01	11/11/20 22:47	1
Chromium	ND		0.025		mg/L		11/10/20 09:01	11/11/20 22:47	1
Copper	0.089		0.060		mg/L		11/10/20 09:01	11/11/20 22:47	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	21		0.32		mg/Kg		11/09/20 12:00	11/10/20 09:05	10
Chromium	61		0.65		mg/Kg		11/09/20 12:00	11/10/20 09:05	10
Copper	73		0.65		mg/Kg		11/09/20 12:00	11/10/20 09:05	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.8		0.1		%			11/03/20 17:56	1
Percent Moisture	17.2		0.1		%			11/03/20 17:56	1

QC Sample Results

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-2

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 580-342742/13-A

Matrix: Solid

Analysis Batch: 342825

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 342742

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.25		mg/Kg		11/09/20 12:00	11/10/20 07:52	5
Chromium	ND		0.50		mg/Kg		11/09/20 12:00	11/10/20 07:52	5
Copper	ND		0.50		mg/Kg		11/09/20 12:00	11/10/20 07:52	5

Lab Sample ID: LCS 580-342742/14-A

Matrix: Solid

Analysis Batch: 342825

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 342742

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	50.0	47.9		mg/Kg		96	80 - 120
Chromium	50.0	48.3		mg/Kg		97	80 - 120
Copper	50.0	49.5		mg/Kg		99	80 - 120

Lab Sample ID: LCSD 580-342742/15-A

Matrix: Solid

Analysis Batch: 342825

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 342742

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	50.0	48.1		mg/Kg		96	80 - 120	0	20
Chromium	50.0	48.8		mg/Kg		98	80 - 120	1	20
Copper	50.0	49.8		mg/Kg		100	80 - 120	1	20

Lab Sample ID: 580-98071-9 MS

Matrix: Solid

Analysis Batch: 342825

Client Sample ID: B04(12-18)

Prep Type: Total/NA

Prep Batch: 342742

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	76	F1 F2	32.2	116	F1	mg/Kg		126	80 - 120
Chromium	260	F2	32.2	319	4	mg/Kg		186	80 - 120
Copper	290		32.2	374	4	mg/Kg		258	80 - 120

Lab Sample ID: 580-98071-9 MSD

Matrix: Solid

Analysis Batch: 342825

Client Sample ID: B04(12-18)

Prep Type: Total/NA

Prep Batch: 342742

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	76	F1 F2	32.0	232	F1 F2	mg/Kg		490	80 - 120	67	20
Chromium	260	F2	32.0	415	4 F2	mg/Kg		489	80 - 120	26	20
Copper	290		32.0	441	4	mg/Kg		469	80 - 120	16	20

Lab Sample ID: 580-98071-9 DU

Matrix: Solid

Analysis Batch: 342825

Client Sample ID: B04(12-18)

Prep Type: Total/NA

Prep Batch: 342742

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Arsenic	76	F1 F2	88.5		mg/Kg		16	20
Chromium	260	F2	275		mg/Kg		6	20
Copper	290		309		mg/Kg		6	20

Eurofins TestAmerica, Seattle

Lab Chronicle

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-2

Client Sample ID: B04(12-18)

Lab Sample ID: 580-98071-9

Date Collected: 10/06/20 15:33

Matrix: Solid

Date Received: 10/07/20 16:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			342722	11/09/20 09:50	ART	TAL SEA
TCLP	Prep	3010A			342797	11/10/20 09:01	ART	TAL SEA
TCLP	Analysis	6010D		1	343030	11/11/20 22:26	TMH	TAL SEA
Total/NA	Prep	3050B			342742	11/09/20 12:00	JCP	TAL SEA
Total/NA	Analysis	6020B		10	342825	11/10/20 08:00	FCW	TAL SEA
Total/NA	Analysis	2540G		1	342341	11/03/20 17:56	S1S	TAL SEA

Client Sample ID: B05(10-16)

Lab Sample ID: 580-98071-12

Date Collected: 10/06/20 14:23

Matrix: Solid

Date Received: 10/07/20 16:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			342722	11/09/20 09:50	ART	TAL SEA
TCLP	Prep	3010A			342797	11/10/20 09:01	ART	TAL SEA
TCLP	Analysis	6010D		1	343030	11/11/20 22:29	TMH	TAL SEA
Total/NA	Prep	3050B			342742	11/09/20 12:00	JCP	TAL SEA
Total/NA	Analysis	6020B		10	342825	11/10/20 08:49	FCW	TAL SEA
Total/NA	Analysis	2540G		1	342341	11/03/20 17:56	S1S	TAL SEA

Client Sample ID: B07(9-13)

Lab Sample ID: 580-98071-18

Date Collected: 10/06/20 13:44

Matrix: Solid

Date Received: 10/07/20 16:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			342722	11/09/20 09:50	ART	TAL SEA
TCLP	Prep	3010A			342797	11/10/20 09:01	ART	TAL SEA
TCLP	Analysis	6010D		1	343030	11/11/20 22:33	TMH	TAL SEA
Total/NA	Prep	3050B			342742	11/09/20 12:00	JCP	TAL SEA
Total/NA	Analysis	6020B		10	342825	11/10/20 08:53	FCW	TAL SEA
Total/NA	Analysis	2540G		1	342341	11/03/20 17:56	S1S	TAL SEA

Client Sample ID: B08(15-18)

Lab Sample ID: 580-98071-22

Date Collected: 10/06/20 13:47

Matrix: Solid

Date Received: 10/07/20 16:49

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			342722	11/09/20 09:50	ART	TAL SEA
TCLP	Prep	3010A			342797	11/10/20 09:01	ART	TAL SEA
TCLP	Analysis	6010D		1	343030	11/11/20 22:36	TMH	TAL SEA
Total/NA	Prep	3050B			342742	11/09/20 12:00	JCP	TAL SEA
Total/NA	Analysis	6020B		10	342825	11/10/20 08:57	FCW	TAL SEA
Total/NA	Analysis	2540G		1	342341	11/03/20 17:56	S1S	TAL SEA

Lab Chronicle

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-2

Client Sample ID: B11(12-17)

Date Collected: 10/07/20 09:36

Date Received: 10/07/20 16:49

Lab Sample ID: 580-98071-33

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			342722	11/09/20 09:50	ART	TAL SEA
TCLP	Prep	3010A			342797	11/10/20 09:01	ART	TAL SEA
TCLP	Analysis	6010D		1	343030	11/11/20 22:40	TMH	TAL SEA

Client Sample ID: B13(12-18)

Date Collected: 10/07/20 11:00

Date Received: 10/07/20 16:49

Lab Sample ID: 580-98071-39

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			342722	11/09/20 09:50	ART	TAL SEA
TCLP	Prep	3010A			342797	11/10/20 09:01	ART	TAL SEA
TCLP	Analysis	6010D		1	343030	11/11/20 22:43	TMH	TAL SEA
Total/NA	Prep	3050B			342742	11/09/20 12:00	JCP	TAL SEA
Total/NA	Analysis	6020B		10	342825	11/10/20 09:01	FCW	TAL SEA
Total/NA	Analysis	2540G		1	342341	11/03/20 17:56	S1S	TAL SEA

Client Sample ID: B16(12-18)

Date Collected: 10/07/20 12:55

Date Received: 10/07/20 16:49

Lab Sample ID: 580-98071-49

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
TCLP	Leach	1311			342722	11/09/20 09:50	ART	TAL SEA
TCLP	Prep	3010A			342797	11/10/20 09:01	ART	TAL SEA
TCLP	Analysis	6010D		1	343030	11/11/20 22:47	TMH	TAL SEA
Total/NA	Prep	3050B			342742	11/09/20 12:00	JCP	TAL SEA
Total/NA	Analysis	6020B		10	342825	11/10/20 09:05	FCW	TAL SEA
Total/NA	Analysis	2540G		1	342341	11/03/20 17:56	S1S	TAL SEA

Laboratory References:

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-2

Laboratory: Eurofins TestAmerica, Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Washington	State	C553	02-18-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
2540G		Solid	Percent Moisture
2540G		Solid	Percent Solids

Sample Summary

Client: Manke Lumber Company Inc
Project/Site: Sumner Storm Water

Job ID: 580-98071-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-98071-9	B04(12-18)	Solid	10/06/20 15:33	10/07/20 16:49	
580-98071-12	B05(10-16)	Solid	10/06/20 14:23	10/07/20 16:49	
580-98071-18	B07(9-13)	Solid	10/06/20 13:44	10/07/20 16:49	
580-98071-22	B08(15-18)	Solid	10/06/20 13:47	10/07/20 16:49	
580-98071-33	B11(12-17)	Solid	10/07/20 09:36	10/07/20 16:49	
580-98071-39	B13(12-18)	Solid	10/07/20 11:00	10/07/20 16:49	
580-98071-49	B16(12-18)	Solid	10/07/20 12:55	10/07/20 16:49	

Eurofins TestAmerica, Seattle

5755 8th Street East

Tacoma, WA 98424

Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

Environment Testing
America

Client Information		Sampler: <u>Er. Gonzalez/J. Schwarz</u>		Lab PM: <u>Lewis, Nathan A</u>		Carrier Tracking No(s):		COC No: <u>580-40426-12920.1</u>	
Client Contact: <u>Julia Schwarz</u>		Phone: <u>253-262-3304</u>		E-Mail: <u>Nathan.Lewis@Eurofinset.com</u>				Page: <u>1</u> of <u>6</u>	
Company: <u>Kennedy/Jenks Consultants</u>		Due Date Requested:		Analysis Requested				Job #:	
Address: <u>32001-32nd Ave South, Suite 100</u>		TAT Requested (days):				Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - orbic Al I - Water J - V - M... K - W - pH 4-5 L - Z - other (specify)		Loc: 580 98071	
City: <u>Federal Way</u>		PO #:							
State, Zip: <u>WA, 98001</u>		WO #:							
Phone: <u>253-572-6252(Tel) 253-383-2489(Fax)</u>		Project #:							
Email: <u>juliaschwarz@kennedyjenks.com</u>		SSOW#:		Project Name: <u>Summer Storm Water</u>					
Site: <u>Washington</u>									

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=tissue, A=air)	Field Filtered Sample (Yes or No)	Perform MSMSD (Yes or No)	6020B, 7471A - RCRA Metals + Cu, Ni, Zn	Total Num	Special Instructions/Note:
B01(0-6)	10/6/20	1147	G	S					
B01(6-12)		1152					X		
B02(0-6)		1120							
B02(6-12)		1137							
B03(0-6)		1102							
B03(6-12)		1110							
B04(0-6)		1020							
B04(6-12)		1040							
B04(12-18)		1533							
B05(0-4)		0956					X		
B05(4-10)		1010							

Therm. ID: IRE Cor: 14.9 Unc: 15.4
 Cooler Dsc: Lg Blue
 Packing: bag FedEx: _____
 Cust. Seal: Yes No UPS: _____
 Blue Ice: Wet, Dry, None Lab Cour: _____
 Other: C. T. J. R.

Therm. ID: IRE Cor: 11.5 Unc: 12.1
 Cooler Dsc: Lg Blue
 Packing: bag FedEx: _____
 Cust. Seal: Yes No UPS: _____
 Blue Ice: Wet, Dry, None Lab Cour: _____
 Other: _____

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samp)
☐ Return To Client ☐ Disposal By Lab

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: <u>[Signature]</u>	Date/Time: <u>10/7/20 1049</u>	Company: <u>KJ</u>	Received by: <u>[Signature]</u>
Relinquished by:	Date/Time:	Company:	Received by:
Relinquished by:	Date/Time:	Company:	Received by:

Custody Seals Intact: ☐ Yes ☐ No Custody Seal No.: _____ Cooler Temperature(s) °C and Other Remarks: _____

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Ver: 01/16/2019 **11/17/2020**

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Eurofins TestAmerica, Seattle

5755 8th Street East

Tacoma, WA 98424

Phone (253) 922-2310 Fax (253) 922-5047

Chain of Custody Record

Environment Testing
America

Client Information		Sampler:		Lab PM:		Carrier Tracking No(s):		COC No:	
Client Contact:		Phone:		Lewis, Nathan A				580-40426-12920.1	
Julia Schwarz				E-Mail:				Page: 5 of 6	
Company:				Nathan.Lewis@Eurofinset.com				Job #:	
Kennedy/Jenks Consultants									
Address:		Due Date Requested:		Analysis Requested Field Filtered Sample (Yes or No) Perform MSMSD (Yes or No) 6020B, 7471A - RCRA Metals + Cu, Ni, Zn		Total Number of Containers		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify) Other:	
32001-32nd Ave South, Suite 100		TAT Requested (days):							
City:		PO #:							
Federal Way		WO #:							
State, Zip:		Project #:							
WA, 98001		58000247							
Phone:		SSOW#:							
253-572-6252(Tel) 253-383-2489(Fax)									
Email:									
julia.schwarz@kennedyjenks.com									
Project Name:									
Sumner Storm Water									
Site:									
Washington									
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)		Total Number of Containers	
						Preservation Code:		Special Instructions/Note:	
B13(6-12)		10/7/20	1047	G	S	N			
B13(12-18)			1100						
B14(0-6)			0825						
B14(6-12)			0840						
B14(12-18)			0848						
DUP02-2029007			1114						
B15(0-6)			1125						
B15(6-12)			1136						
B15(12-18)			1236						
B16(0-6)			1245						
B16(6-12)									
Possible Hazard Identification ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological									
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months									
Deliverable Requested: I, II, III, IV, Other (specify)									
Special Instructions/QC Requirements:									
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:			
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:	
Custody Seals Intact:		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:					
Δ Yes Δ No									

5755 8th Street East
Tacoma, WA 98424
Phone (253) 922-2310 Fax (253) 922-5047

 eurofins Environment Testing
America

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Login Sample Receipt Checklist

Client: Manke Lumber Company Inc

Job Number: 580-98071-2

Login Number: 98071

List Source: Eurofins TestAmerica, Seattle

List Number: 1

Creator: Hobbs, Kenneth F

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	