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October 17, 2024
Project No. M0615.24.002

Scott Hooton
Project Manager, Environmental Programs
Port of Tacoma
One Sitcum Plaza, Tacoma, WA, 98421

Re: Groundwater Monitoring Report
Former Louisiana Pacific/Pony Lumber Site
Enforcement Order No. DE 92TC-S312
Facility Site ID: 1209
Monitoring Date: August 14, 2024

Dear Scott Hooton:

On August 14, 2024, Maul Foster & Alongi, Inc. (MFA), conducted a groundwater monitoring event on behalf of the Port of Tacoma (the Port) at the former Louisiana Pacific/Pony Lumber site (Ecology Facility ID 1209), located at 3701 Taylor Way in Tacoma, Washington (the Site) (Figure 1). Groundwater monitoring activities were conducted consistent with the requirements set forth in the Enforcement Order (DE 92TC-S312) between the Louisiana Pacific Corporation and the Washington State Department of Ecology (Ecology) and the revised operation, maintenance manual, and monitoring plan (Ecology 1992, Louisiana Pacific Corporation 2001). Groundwater monitoring is conducted every 30 months at the Site consistent with a memorandum of understanding (MOU) between Ecology and the Port (Ecology 2011). Field activities and results of the groundwater monitoring event are summarized below.

Site Background

The Site is located at the former Louisiana Pacific/Pony Lumber facility and encompasses approximately 18 acres. Between 1968 and 1969, approximately 1,800 tons of Asarco smelter slag was used as fill at the property to build stable ground for machinery. In 2004, Louisiana Pacific sold the property to Pony Lumber Company, which sold it to the Port in 2006. The property is leased to a Port tenant and operates as a parking and storage facility for newly imported backhoes and vehicles (Ecology 2016).

Between November 1983 and June 1984, Ecology collected stormwater runoff samples at the Site (Norton and Johnson 1985). Analytical results from stormwater samples indicated that metal concentrations above the U.S. Environmental Protection Agency (EPA) quality standards were discharged from the Site in stormwater. It was concluded that Asarco slag was leaching contaminants and that the former Louisiana Pacific/Pony Lumber property's stormwater was contributing contamination in Hylebos Creek and the Hylebos Waterway, which run adjacent to the Site (Ecology 2016).

In 1987, Ecology issued an order requiring a site investigation, groundwater investigation, and feasibility study; the results of these studies were presented in a site investigation report (CH2M Hill

1987). In 1990, Ecology issued Remedial Action Order No. DE 90-S170, requiring Louisiana Pacific to evaluate the effectiveness of capping as a cleanup method and to prepare a cap design for the Site (Ecology 1990). In 1993, following the issuance of the Engineering Design Report (CH2M Hill 1993) and under Enforcement Order DE92TC-S312, Louisiana Pacific constructed a low-permeability asphalt cap and stormwater drainage system on the Site. A restrictive covenant was recorded for the Site in 1993, limiting activities that may interfere with or reduce the effectiveness of the cleanup action and requiring that the Site be used only for industrial uses (Louisiana-Pacific Corporation 1993).

In March 2024, Ecology conducted a periodic review of post-cleanup site conditions and site data to ensure that human health and the environment were protected on the Site. The review determined that the remedial actions conducted at the Site continue to be protective of human health and the environment (Ecology 2024).

Groundwater monitoring has been conducted at monitoring wells LP-1, LP-2, LP-4, and LP-5 since 1995 to monitor the effectiveness of the remedial action on the Site (Figure 2). The previous groundwater monitoring event was completed by MFA in February 2022 (MFA 2022). The most recent cap inspection, completed by MFA in August 2024, is described in a separate report (MFA 2024).

Groundwater Monitoring Fieldwork

On August 14, 2024, groundwater samples were collected from LP-1, LP-2, LP-4, and LP-5 using low-flow sampling procedures. The groundwater level in each well was measured prior to sampling (Table 1). During purging, the flow rates, water levels, and water quality parameters (pH, temperature, specific conductance, dissolved oxygen, oxidation-reduction potential, and turbidity) were recorded on field sampling data sheets. Water quality field parameters were stabilized before sample collection, with exception of LP-5, which exhibited low recharge and ran dry. LP-5 was sampled following purge of four well volumes, recharge of groundwater, and recording one set of field parameters (see Attachment A). Groundwater samples were field filtered with a 0.45-micron filter and preserved with nitric acid during sample collection. A field duplicate was collected from monitoring well LP-1. Samples were collected directly into laboratory-provided bottles and were immediately placed in a cooler on ice. The samples were submitted to Apex Laboratories, LLC, in Tigard, Oregon, under standard chain-of-custody procedures for analysis of dissolved arsenic and copper by EPA Method 200.8.

Groundwater Monitoring Results

The laboratory analytical report is provided as Attachment B, and analytical data are presented in Table 2. Analytical data and the laboratory's internal quality assurance and quality control data were reviewed to assess whether they met project-specific data quality objectives. A data validation memorandum summarizing data evaluation procedures, data usability, and deviations from specific field and/or laboratory methods is included as Attachment C. The data are considered acceptable for their intended use, with the appropriate data qualifiers assigned. Results from the groundwater monitoring are as follows:

- Dissolved arsenic was detected at a concentration of 0.487 micrograms per liter (ug/L) in LP-1, 1.16 ug/L in LP-2, 0.291 ug/L in LP-4, and 2.20 ug/L in LP-5. None of the detected results exceeded the cleanup level of 36 ug/L.

- Dissolved copper was detected at a concentration of 0.530 ug/L in LP-2 and at 0.786 ug/L in LP-4. Dissolved copper was not detected above the reporting limit (of 0.180 ug/L) in LP-1 and LP-5. None of the detected results exceeded the cleanup level of 2.9 ug/L.

Plots depicting dissolved arsenic and copper concentrations versus time (since monitoring began in 1995) for LP-1, LP-2, LP-4, and LP-5 are presented in Figures 3 and 4, respectively. Arsenic and copper concentrations have remained below their respective cleanup levels in groundwater since the March 2012 sampling event. Groundwater monitoring results were submitted to Ecology within 45 days after completion of data validation.

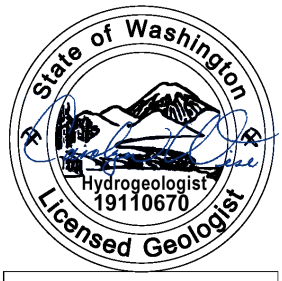
Recommendations

Consistent with the MOU, dissolved arsenic and copper concentrations in groundwater will continue to be monitored on a 30-month schedule (Ecology 2011). Therefore, the next scheduled monitoring event will take place in February 2027.

Please contact Audrey Hackett at (206) 556-2015 if you have any questions related to the groundwater monitoring activities or results presented above.

Sincerely,

Maul Foster & Alongi, Inc.



10.17.24

Audrey Hackett
Senior Environmental Scientist

Carolyn R. Wise, LHG
Senior Hydrogeologist

Attachments

References

Limitations

Figures

Tables

A—Water Field Sampling Data Sheets

B—Analytical Laboratory Report

C—Data Validation Memorandum

References

CH2M Hill. 1987. *Site Investigation Report*.

CH2M Hill. 1993. *Engineering Report—Tacoma log sort yard RCC cap*.

Ecology. 2011. Memorandum of understanding, former log yard groundwater monitoring and cap inspection. Washington Department of Ecology. September 12.

Ecology. 2024. *Draft Third Periodic Review, Louisiana Pacific Corp, (aka Pony Lumber Company LLC)*. Washington State Department of Ecology: Lacey, Washington. March.

Louisiana Pacific Corporation. 2001. *Revised Operation, Maintenance Manual, and Monitoring Plan for concrete log yard groundwater monitoring report*.

MFA. 2022. A. Hackett and C. Wise, LHG, Maul Foster & Alongi, Inc. *Groundwater Monitoring Report, Former Louisiana Pacific/Pony Lumber Site, Enforcement Order No. DE 92TC-S312, Facility Site ID: 1209, Monitoring Date: February 17, 2022.* Letter to Sarah Weeks, Port of Tacoma. June 6.

MFA. 2024. Environmental Cap and Drainage System Inspection Report, Former Louisiana Pacific/Pony Lumber Site.

Norton, D., and A. Johnson. 1985. *Completion Report on WQIS Project 1 for the Commencement Bay nearshore/tideflats Remedial Investigation: Assessment of log sort yards as metal sources to Commencement Bay waterways, November 1983 to June 1984*. Washington State Department of Ecology memorandum. February 27.

Limitations

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

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

Figures

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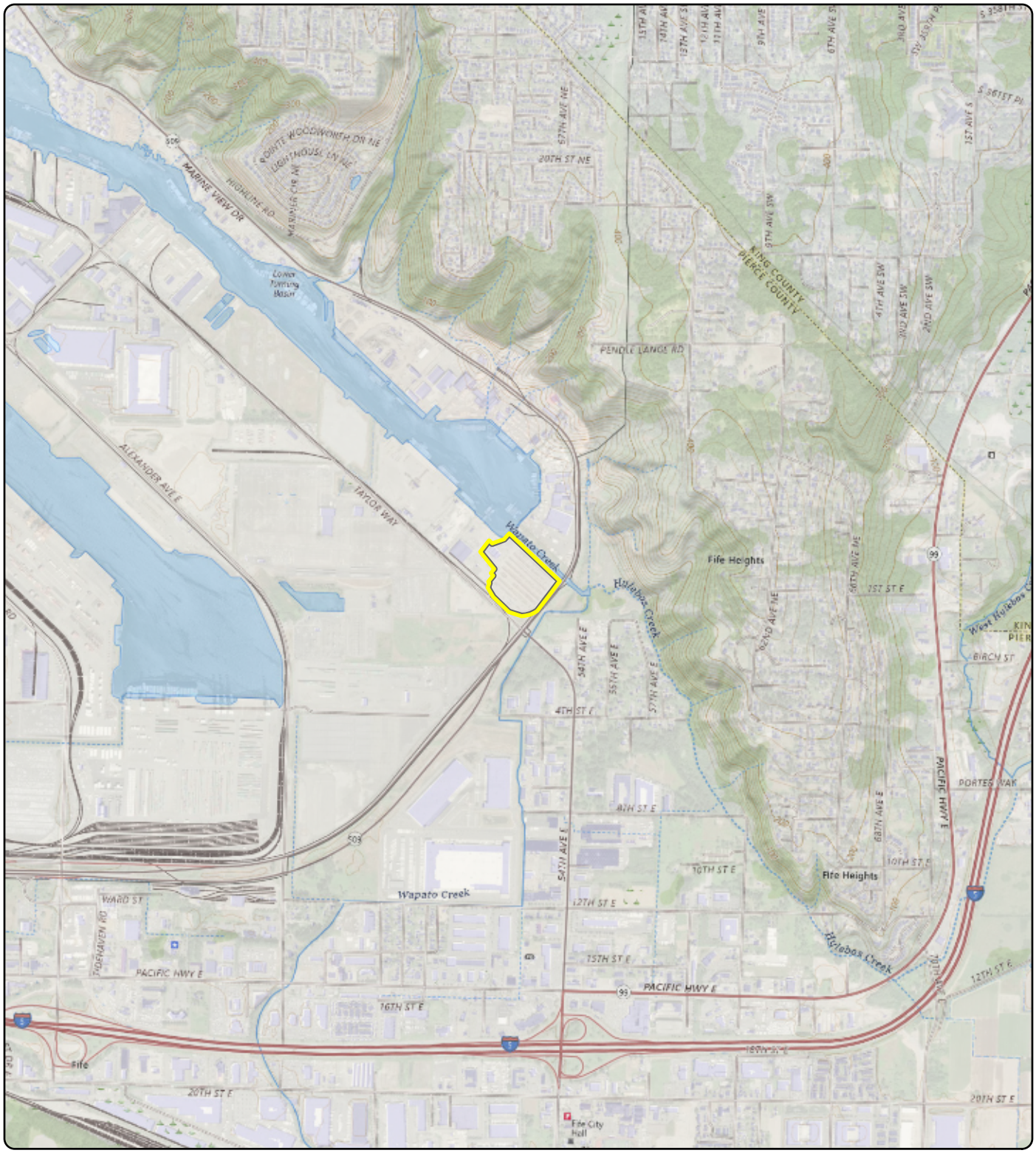

Notes
U.S. Geological Survey 7.5-minute topographic quadrangle (2020): Poverty Bay.
Township 21 north, range 3 east, section 36.

Data Source
Property boundary obtained from Pierce County.

Legend

Site Boundary

Figure 1
Site Location

Former Louisiana Pacific/Pony Lumber
3701 Taylor Way
Tacoma, Washington

0 2,000
Feet

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Path: X:\0615.24\002\Pro\M0615_24_002.aprx\Fig 1 Site Location
Print Date: 9/16/2024
Reviewed By: ahackett
Produced By: bmurphy
Project: M0615.24.002

Figure 2
Site Features

Former Louisiana Pacific/Pony Lumber
3701 Taylor Way
Tacoma, Washington

Legend

- Monitoring Well
- Site Boundary
- Tax Lot

0 130
Feet

Data Sources
Aerial photograph (2022) obtained from Esri; tax lot data obtained from Pierce County; monitoring well locations obtained from Anchor QEA site plan figure.

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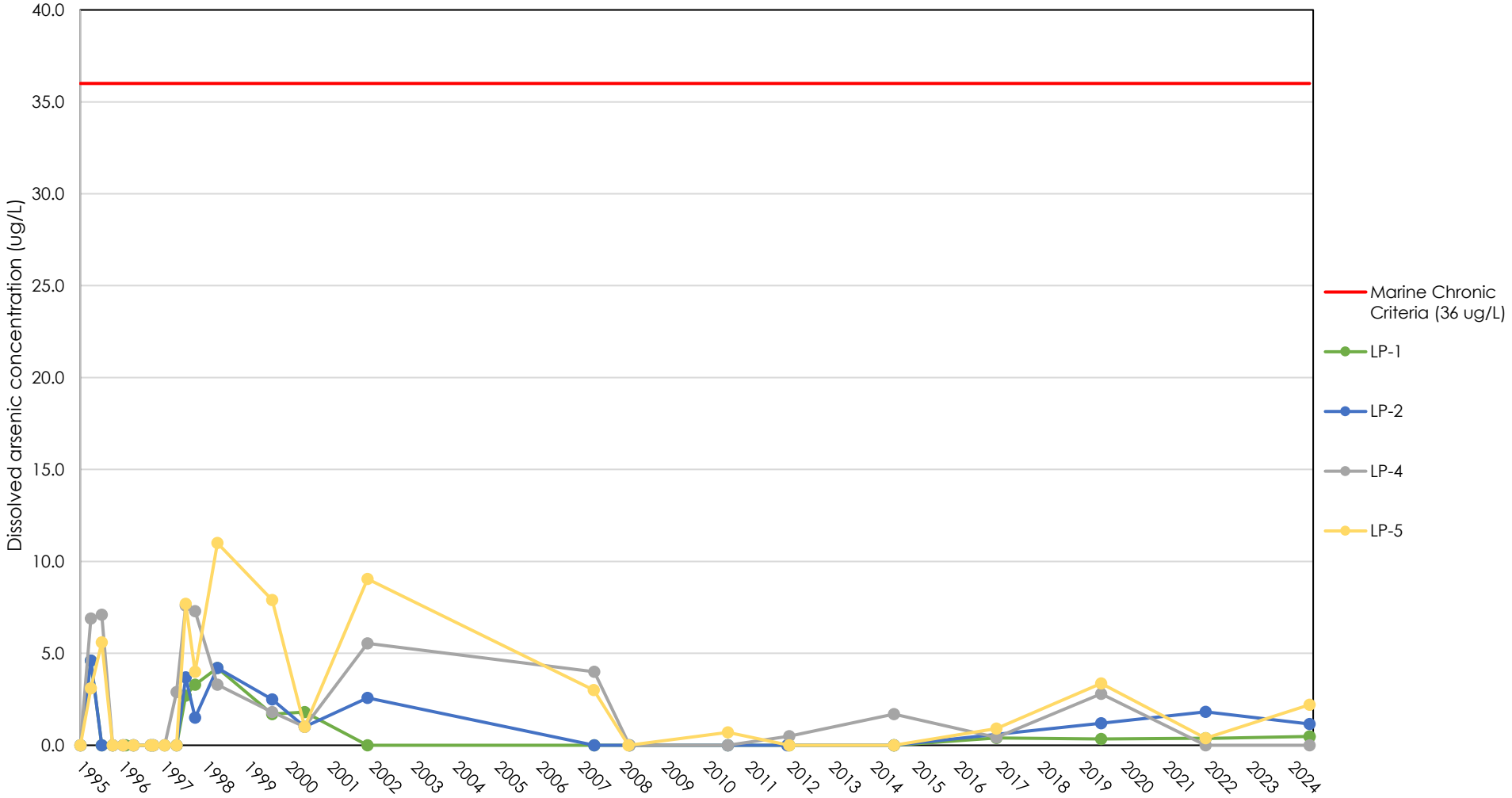
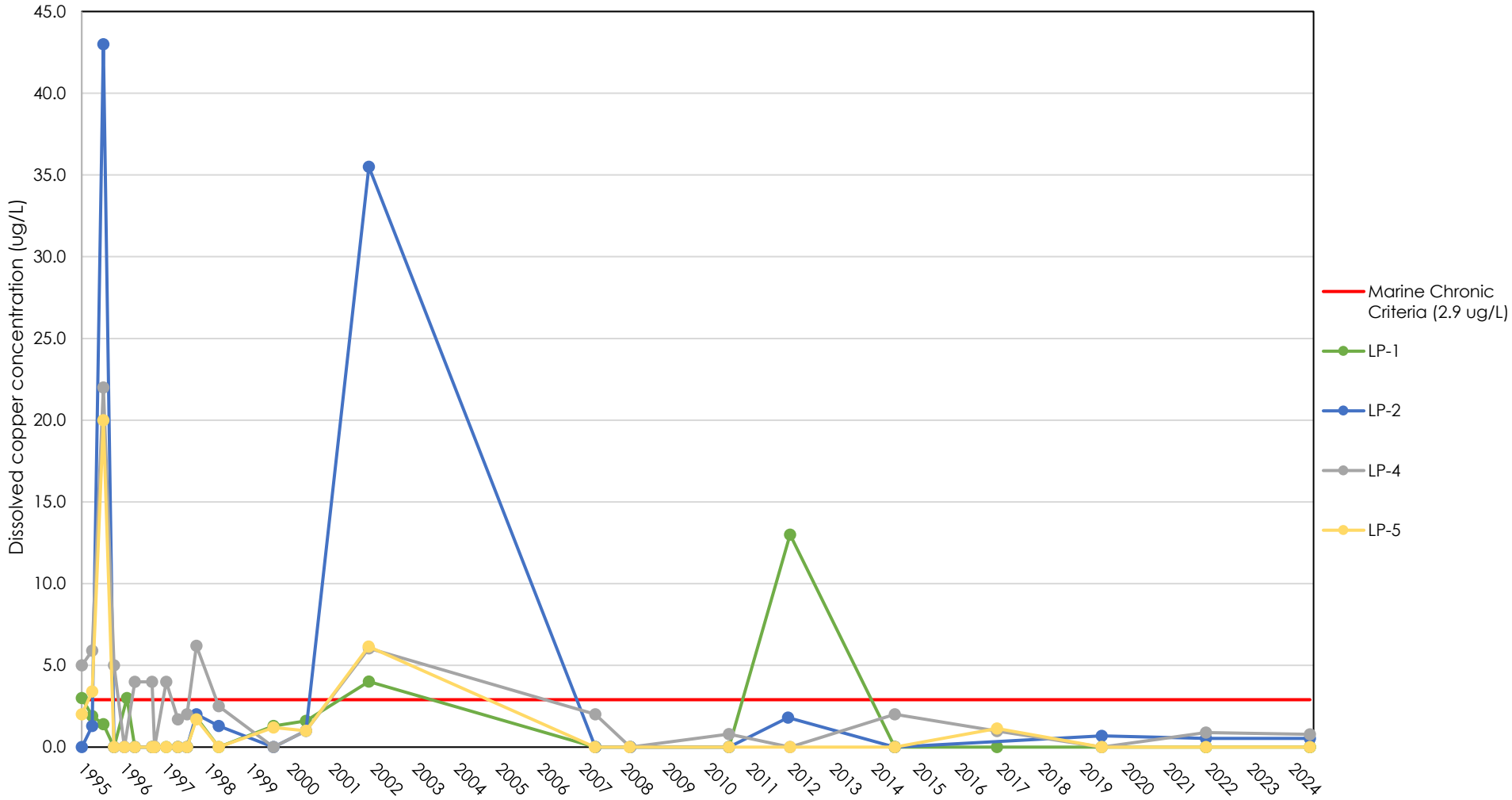
Figure 3
Dissolved Arsenic Trend Plot
Former Louisiana Pacific/Pony Lumber Site
Tacoma, Washington



Notes:
All values were below applicable marine chronic criteria in 2024.
See Table 2 for analytical data.
Several of the concentrations are undetected results plotted at the reporting limit or are estimated values.
ug/L = micrograms per liter.

Figure 4
Dissolved Copper Trend Plot
Former Louisiana Pacific/Pony Lumber Site
Tacoma, Washington



Notes:
All values were below applicable marine chronic criteria in 2024.
See Table 2 for analytical data.
Several of the concentrations are undetected results plotted at the reporting limit or are estimated values.
ug/L = micrograms per liter.

Tables

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Table 1
Water Levels
Former Louisiana Pacific/Pony Lumber Site
Tacoma, Washington

Location	Date[1]	Depth to Water (feet)[a]
LP-1	07/07/2007	14.15
	05/08/2008	12.20
	09/16/2010	13.75
	03/05/2012	11.71
	09/06/2014	14.07
	02/16/2017	10.2
	08/21/2019	13.64
	02/17/2022	12.41
	08/14/2024	14.32
LP-2	07/07/2007	15.90
	05/08/2008	13.10
	09/16/2010	12.71
	02/16/2012	10.37
	09/16/2014	6.46
	02/16/2017[b]	--
	08/21/2019	12.22
	02/17/2022	12.07
	08/14/2024	11.96
LP-4	07/07/2007	8.42
	05/08/2008	9.26
	09/16/2010	7.89
	03/05/2012	7.47
	09/06/2014	8.85
	02/16/2017	6.10
	08/21/2019	8.55
	02/17/2022	7.97
	08/14/2024	8.57
LP-5	07/07/2007	8.80
	05/08/2008	8.56
	09/16/2010	8.81
	03/05/2012	8.39
	09/06/2014	9.10
	02/16/2017	6.49
	08/21/2019	8.88
	02/17/2022	9.54
	08/14/2024	9.04

Table 1
Water Levels
Former Louisiana Pacific/Pony Lumber Site
Tacoma, Washington

Notes

-- = not measured.

[a]Surveyed reference elevations are not available. Water levels are presented as feet below top of casing.

[b]Due to a broken well casing, a measurement was not collected from LP-2 in 2017.

Reference

[1]Depth-to-water measurements collected before 2022 measured by others and obtained from: Anchor. 2019. Memorandum (re: groundwater monitoring report, former Louisiana Pacific/Pony Lumber facility, Enforcement Order No. DE 92TC-S312, Washington State Department of Ecology facility site ID #1201, monitoring date: August 21, 2019) to P. Balaraju and A. Smith, Washington State Department of Ecology, from N. Bacher, Anchor QEA, LLC, Tacoma, Washington. November 14.

Table 2
Groundwater Analytical Results
Former Louisiana Pacific/Pony Lumber Site
Tacoma, Washington

Location	Collection Date[1]:	Sample Type:	Dissolved Arsenic	Dissolved Copper	Dissolved Lead	Dissolved Zinc
		Units:	ug/L	ug/L	ug/L	ug/L
		Cleanup Levels[2]:	36	2.9	8.5	86
LP-1	03/22/1995	N	10 U	3	3 U	20 U
	06/21/1995	N	4.6	1.9	1 U	3
	09/25/1995	N	5 U	1.4	3 U	20 U
	12/28/1995	N	5 U	10 U	3 U	50
	04/19/1996	N	5 U	3	3 U	10 U
	06/27/1996	N	10 U	2 U	8 U	10 U
	11/25/1996	N	5 U	2 U	2 U	5 U
	12/17/1996	N	200 U	20 U	50 U	20 U
	03/28/1997	N	10 U	2 U	8 U	80 U
	07/09/1997	N	1 U	1 U	0.5 U	9.4
	09/26/1997	N	2.7	1 U	0.5 U	4.3
	12/18/1997	N	3.3	1.8	0.5 U	5.6
	06/30/1998	N	4.2	1 U	0.5 U	2 U
	10/22/1999	N	1.7	1.3	1 U	170
	08/01/2000	N	1.8	1.6	ND	4
	02/02/2002	N	ND	4.01	ND	14.9
	07/07/2007	N	1 U	2 U	1 U	10 U
	07/07/2007	FD	1 U	2 U	1 U	10 U
	05/08/2008	N	ND	ND	ND	ND
	05/08/2008	FD	ND	ND	ND	ND
	09/16/2010	N	0.5 U	0.5 U	0.5 U	2.7
	03/05/2012	N	0.5 U	13	--	--
	09/06/2014	N	1 U	1 U	--	--
	09/06/2014	FD	1 U	1 U	--	--
	02/16/2017	N	0.4	0.5 U	--	--
	08/21/2019	N	0.337	0.5 U	--	--
	02/17/2022	N	0.382	0.339 J	--	--
	02/17/2022	FD	0.370	0.262 J	--	--
	08/14/2024	N	0.487	0.180 U	--	--
	08/14/2024	FD	0.460	0.180 U	--	--
LP-2	03/22/1995	N	10 U	2 U	3 U	20 U
	06/21/1995	N	4.6	1.3	1 U	5.8
	09/25/1995	N	5 U	43	5.8 U	20 U
	12/28/1995	N	5 U	10 U	3 U	20 U
	03/28/1996	N	10 U	2 U	8 U	20 U
	06/27/1996	N	10 U	2 U	8 U	10 U
	11/25/1996	N	5 U	2 U	2 U	5 U
	12/17/1996	N	200 U	20 U	50 U	20 U
	07/09/1997	N	1 U	1 U	0.74	18
	09/26/1997	N	3.7	1 U	0.5 U	3

Table 2
Groundwater Analytical Results
Former Louisiana Pacific/Pony Lumber Site
Tacoma, Washington

Location	Collection Date[1]:	Sample Type:	Dissolved Arsenic	Dissolved Copper	Dissolved Lead	Dissolved Zinc
		Units:	ug/L	ug/L	ug/L	ug/L
		Cleanup Levels[2]:	36	2.9	8.5	86
LP-2 (continued)	12/18/1997	N	1.5	2	0.5 U	2.8
	06/30/1998	N	4.2	1.3	0.5 U	2 U
	10/22/1999	N	2.5	1 U	1 U	86
	08/01/2000	N	1	1	0.5	4
	02/02/2002	N	2.58	35.5	3.87	78.5
	07/07/2007	N	1 U	2 U	1 U	10 U
	05/08/2008	N	ND	ND	ND	ND
	09/16/2010	N	0.5 U	0.5 U	0.5 U	4.0
	02/16/2012	N	0.5 U	1.8	--	--
	09/06/2014	N	1 U	1 U	--	--
	08/21/2019	N	1.2	0.69	--	--
	08/21/2019	FD	1.09	0.582	--	--
	02/17/2022	N	1.82	0.526	--	--
	08/14/2024	N	1.16	0.530	--	--
LP-4	03/22/1995	N	10 U	5	3 U	20 U
	06/21/1995	N	6.9	5.9	1 U	18
	09/25/1995	N	7.1	22	4.6	20 U
	12/28/1995	N	2 U	5	1 U	20 U
	03/28/1996	N	10 U	2 U	8 U	20 U
	06/27/1996	N	10 U	4	8 U	10 U
	11/25/1996	N	5 U	4	4	7
	12/17/1996	N	200 U	20 U	50 U	20 U
	03/28/1997	N	10 U	4	8 U	80 U
	07/09/1997	N	2.9	1.7	0.55	27
	09/26/1997	N	7.6	2	0.5 U	6.6 U
	12/18/1997	N	7.3	6.2	0.5 U	10
	06/30/1998	N	3.3	2.5	0.5 U	2 U
	10/22/1999	N	1.8	1 U	1 U	75
	08/01/2000	N	1	1	0.5	4
	02/02/2002	N	5.54	6.05	1.04	10.4
	07/07/2007	N	4	2	1 U	10 U
	05/08/2008	N	ND	ND	ND	ND
	09/16/2010	N	0.5 U	0.8	0.5 U	5.5
	03/05/2012	N	0.5	0.5 U	--	--
	09/06/2014	N	1.7	2	--	--
	02/16/2017	N	0.421	0.984	--	--
LP-4 (continued)	08/21/2019	N	2.800	0.349 J	--	--
	02/17/2022	N	0.193 J	0.894	--	--
	08/14/2024	N	0.291 J	0.786	--	--
	03/22/1995	N	100 U	2	3 U	20 U

Table 2
Groundwater Analytical Results
Former Louisiana Pacific/Pony Lumber Site
Tacoma, Washington

Location	Collection Date[1]:	Sample Type:	Dissolved Arsenic	Dissolved Copper	Dissolved Lead	Dissolved Zinc
		Units:	ug/L	ug/L	ug/L	ug/L
		Cleanup Levels[2]:	36	2.9	8.5	86
LP-5	06/21/1995	N	3.1	3.4	1 U	3.3
	09/25/1995	N	5.6	20	4.4	20 U
	12/28/1995	N	5 U	2 U	1 U	20 U
	03/28/1996	N	10 U	2 U	8 U	20 U
	06/27/1996	N	10 U	2 U	8 U	10 U
	11/25/1996	N	5 U	2 U	2 U	16
	12/17/1996	N	200 U	20 U	50 U	20 U
	03/28/1997	N	10 U	2 U	8 U	80 U
	07/09/1997	N	1 U	1 U	1	37
	09/26/1997	N	7.7	1 U	0.5 U	10
	12/18/1997	N	4	1.7	0.5 U	6.1
	06/30/1998	N	11	1 U	0.5 U	3.1
	10/22/1999	N	7.9	1.2	1 U	140
	08/2000[a]	N	1	1	0.5	4
	02/2002[a]	N	9.05	6.15	1.02	69.6
	07/2007[a]	N	3	2 U	1 U	10 U
	05/2008[a]	N	ND	ND	ND	ND
	09/16/2010	N	0.6	0.5 U	0.5 U	1.0
	09/16/2010	FD	0.7	0.5 U	0.5 U	1.0
	03/05/2012	N	0.5 U	0.5 U	--	--
	03/05/2012	FD	0.5 U	0.5 U	--	--
	09/06/2014	N	1 U	1 U	--	--
	02/16/2017	N	0.900	1.14	--	--
	02/16/2017	FD	0.908	0.900	--	--
	08/21/2019	N	3.36	1 U	--	--
	02/17/2022	N	0.386	0.173 U	--	--
	08/14/2024	N	2.20	0.180 U	--	--

Table 2
Groundwater Analytical Results
Former Louisiana Pacific/Pony Lumber Site
Tacoma, Washington

Notes

Lead and zinc analyses were discontinued in 2011 with Ecology approval.

Shading indicates values that exceed screening criteria; non-detects (U or ND) were not compared with screening criteria.

-- = not analyzed.

Ecology = Washington State Department of Ecology.

EPA = U.S. Environmental Protection Agency.

FD = field duplicate sample.

J = result is estimated.

N = normal environmental sample.

ND = result is non-detect; reporting limit value is unknown.

U = result is non-detect at the reporting limit.

ug/L = micrograms per liter.

WAC = Washington Administrative Code.

[a]Sample collection date accurate to month and year only.

References

[1]Analytical data collected before 2022 reported by others and obtained from: Anchor. 2019. Memorandum (re: groundwater monitoring report, former Louisiana Pacific/Pony Lumber facility, Enforcement Order No. DE 92TC-S312, Washington State Department of Ecology facility site ID #1201, monitoring date: August 21, 2019) to P. Balaraju and A. Smith, Washington State Department of Ecology, from N. Bacher, Anchor QEA, LLC, Tacoma, Washington. November 14.

[2]Cleanup levels established by Ecology Enforcement Order (DE 92TC-S312) and EPA aquatic life criteria, marine water, chronic (WAC 173-201A).

Attachment A

Water Field Sampling Data Sheets

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Groundwater Field Sampling Data Sheet

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Project Information

Project No.	Client Name	Project Name	Sampling Event	Sampler(s)
M0615.24.002	Port of Tacoma	LP Pony	August 2024	B. Murphy

Well Information

Location ID	Well Type	Monument Type	Depth Measuring Point	Well Diameter (in)	Screen Interval (ft)	Sample Depth (ft)
LP-1	Monitoring	Flush-mount	Top of Casing	2.0	--	21.0

Hydrology/Level Measurements

Date	Time	Depth to Bottom (ft)	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Water Column (ft)	Well Casing Volume (gal)
		DTB	*DTP*	*DTW*	*DTP - DTW*	*DTB - DTW*	*(gal/ft x water column)*
08/14/2024	12:47	27.64	--	14.32	--	13.32	2.17

0.75" = 0.023 gal/ft
1'' = 0.041 gal/ft
1.5" = 0.092 gal/ft
2" = 0.163 gal/ft
3" = 0.367 gal/ft
4" = 0.653 gal/ft
6" = 1.469 gal/ft
8" = 2.611 gal/ft

Water Quality Data

Purge Method: Peristaltic Pump

Purge/Sampling Methods: peristaltic pump, submersible pump, vacuum pump, inertia pump, dedicated pump, disposable bailer, other

Purge Start Time	12:53		*ideally < 0.3 ft drawdown*	*± 0.1*	*± 3%*	*± 3%*	*± 10% if > 0.5*	*± 10*	*< 5 or ± 10% if > 5*
Time	**Cumulative Purge Volume**	**Flowrate**	**Water Level**	**pH**	**Temperature**	**Conductivity**	**Dissolved Oxygen**	**ORP**	**Turbidity**
	gal	*L/min*	*ft*	*SU*	*degrees C*	*uS/cm*	*mg/L*	*mV*	*NTU*
14:15	5.3	0.2	14.17	6.60	17.7	1,262	0.12	-43.9	1.42
14:18	5.4	0.2	14.17	6.61	18.2	1,252	0.09	-59.4	2.42
14:21	5.6	0.2	14.16	6.60	18.1	1,252	0.08	-69.4	1.78
14:24	5.7	0.2	14.15	6.62	18.0	1,244	0.07	-75.5	1.33
14:27	5.9	0.2	14.14	6.61	18.2	1,240	0.06	-79.3	0.42
14:30	6.1	0.2	14.14	6.62	18.1	1,238	0.06	-82.3	0.44

Last row of water quality data are considered final field parameters unless otherwise noted.

Water Quality Observations *(clarity, tint, odor, sheen, etc.)*: Clear; slight brown tint; slight organic like-like odor; light sheen.

General Comments

Duplicate sample LP-DUP-081424 collected at this location.

Sample Information

Sampling Method	Peristaltic Pump		
Sample Name	LP-1-081424		
Sample Date	08/14/2024	Sample Time	14:30

Container Type	Preservative	Filtered (Y/N)	No. Containers
VOA			
Amber glass			
Poly	HNO3	Y	2
		Total No. Containers:	2

Groundwater Field Sampling Data Sheet

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Project Information

Project No.	Client Name	Project Name	Sampling Event	Sampler(s)
M0615.24.002	Port of Tacoma	LP Pony	August 2024	B. Murphy

Well Information

Location ID	Well Type	Monument Type	Depth Measuring Point	Well Diameter (in)	Screen Interval (ft)	Sample Depth (ft)
LP-2	Monitoring	Flush-mount	Top of Casing	2.0	--	21.5

Hydrology/Level Measurements

Date	Time	Depth to Bottom (ft)	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Water Column (ft)	Well Casing Volume (gal)
		DTB	*DTP*	*DTW*	*DTP - DTW*	*DTB - DTW*	*(gal/ft x water column)*
08/14/2024	15:18	31.19	--	11.96	--	19.23	3.13

0.75" = 0.023 gal/ft
1'' = 0.041 gal/ft
1.5" = 0.092 gal/ft
2" = 0.163 gal/ft
3" = 0.367 gal/ft
4" = 0.653 gal/ft
6" = 1.469 gal/ft
8" = 2.611 gal/ft

Water Quality Data

Purge Method	Peristaltic Pump	*Purge/Sampling Methods: peristaltic pump, submersible pump, vacuum pump, inertia pump, dedicated pump, disposable bailer, other*							
Purge Start Time	15:20	*ideally < 0.3 ft drawdown*	*± 0.1*	*± 3%*	*± 3%*	*± 10% if > 0.5*		*± 10*	*< 5 or ± 10% if > 5*
Time	**Cumulative Purge Volume**	**Flowrate**	**Water Level**	**pH**	**Temperature**	**Conductivity**	**Dissolved Oxygen**	**ORP**	**Turbidity**
	gal	*L/min*	*ft*	*SU*	*degrees C*	*uS/cm*	*mg/L*	*mV*	*NTU*
15:30	0.6	0.2	12.17	6.72	16.5	2,121	0.14	-74.5	12.3
15:33	0.7	0.2	12.13	6.70	16.6	2,103	0.11	-80.7	24.1
15:36	0.8	0.2	12.11	6.73	16.6	2,118	0.09	-93.1	16.7
15:39	1.0	0.2	12.10	6.73	16.7	2,119	0.07	-99.8	16.2
15:42	1.2	0.2	12.05	6.74	16.8	2,082	0.06	-105.1	16.3
15:45	1.3	0.2	12.01	6.75	16.9	2,073	0.07	-108.5	7.19

Last row of water quality data are considered final field parameters unless otherwise noted.

Water Quality Observations *(clarity, tint, odor, sheen, etc.)*: Yellow-brown tint; floating particulates; slightly turbid; no odor; slight sheen.

Sample Information

Sampling Method	Peristaltic Pump		
Sample Name	LP-2-081424		
Sample Date	08/14/2024	Sample Time	15:45

Container Type	Preservative	Filtered (Y/N)	No. Containers
VOA			
Amber glass			
Poly	HNO3	Y	1
		Total No. Containers:	1

General Comments

Soft bottom during depth-to-bottom measurement. Lowered pump rate at 15:34.

Groundwater Field Sampling Data Sheet

MAUL FOSTER ALONGI

Project Information

Project No.	Client Name	Project Name	Sampling Event	Sampler(s)
M0615.24.002	Port of Tacoma	LP Pony	August 2024	B. Murphy

Well Information

Location ID	Well Type	Monument Type	Depth Measuring Point	Well Diameter (in)	Screen Interval (ft)	Sample Depth (ft)
LP-4	Monitoring	Flush-mount	Top of Casing	2.0	--	9.5

Hydrology/Level Measurements

Date	Time	Depth to Bottom (ft)	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Water Column (ft)	Well Casing Volume (gal)
		DTB	*DTP*	*DTW*	*DTP - DTW*	*DTB - DTW*	*(gal/ft x water column)*
08/14/2024	10:32	10.97	--	8.57	--	2.40	0.39

0.75" = 0.023 gal/ft
1'' = 0.041 gal/ft
1.5" = 0.092 gal/ft
2" = 0.163 gal/ft
3" = 0.367 gal/ft
4" = 0.653 gal/ft
6" = 1.469 gal/ft
8" = 2.611 gal/ft

Water Quality Data

Purge Method: Peristaltic Pump

Purge/Sampling Methods: peristaltic pump, submersible pump, vacuum pump, inertia pump, dedicated pump, disposable bailer, other

Purge Start Time	10:55	*ideally < 0.3 ft drawdown*	*± 0.1*	*± 3%*	*± 3%*	*± 10% if > 0.5*	*± 10*	*< 5 or ± 10% if > 5*

Time	Cumulative Purge Volume	Flowrate	Water Level	pH	Temperature	Conductivity	Dissolved Oxygen	ORP	Turbidity
	gal	*L/min*	*ft*	*SU*	*degrees C*	*uS/cm*	*mg/L*	*mV*	*NTU*
11:36	2.0	0.2	8.82	6.05	16.9	2,084	0.24	92.5	0.79
11:39	2.2	0.2	8.82	6.06	17.0	2,007	0.23	89.4	0.46
11:42	2.3	0.2	8.82	6.05	16.7	1,917	0.23	87.3	0.24
11:45	2.4	0.2	8.82	6.05	16.7	1,852	0.23	84.4	0.31

Last row of water quality data are considered final field parameters unless otherwise noted.

Water Quality Observations *(clarity, tint, odor, sheen, etc.)*: Clear; colorless; no odor; no sheen.

General Comments

Sample Information

Sampling Method	Peristaltic Pump		
Sample Name	LP-4-081424		
Sample Date	08/14/2024	Sample Time	11:45

Container Type	Preservative	Filtered (Y/N)	No. Containers
VOA			
Amber glass			
Poly	HNO3	Y	1
		Total No. Containers:	1

Groundwater Field Sampling Data Sheet

MAUL FOSTER ALONGI

Project Information

Project No.	Client Name	Project Name	Sampling Event	Sampler(s)
M0615.24.002	Port of Tacoma	LP Pony	August 2024	B. Murphy

Well Information

Location ID	Well Type	Monument Type	Depth Measuring Point	Well Diameter (in)	Screen Interval (ft)	Sample Depth (ft)
LP-5	Monitoring	Flush-mount	Top of Casing	2.0	--	11.0

Hydrology/Level Measurements

Date	Time	Depth to Bottom (ft)	Depth to Product (ft)	Depth to Water (ft)	Product Thickness (ft)	Water Column (ft)	Well Casing Volume (gal)
		DTB	*DTP*	*DTW*	*DTP - DTW*	*DTB - DTW*	*(gal/ft x water column)*
08/14/2024	11:08	11.98	--	9.04	--	2.94	0.48

0.75" = 0.023 gal/ft
1'' = 0.041 gal/ft
1.5" = 0.092 gal/ft
2" = 0.163 gal/ft
3" = 0.367 gal/ft
4" = 0.653 gal/ft
6" = 1.469 gal/ft
8" = 2.611 gal/ft

Water Quality Data

Purge Method: Peristaltic Pump

Purge/Sampling Methods: peristaltic pump, submersible pump, vacuum pump, inertia pump, dedicated pump, disposable bailer, other

Purge Start Time	11:25		*ideally < 0.3 ft drawdown*	*± 0.1*	*± 3%*	*± 3%*	*± 10% if > 0.5*	*± 10*	*< 5 or ± 10% if > 5*
Time	**Cumulative Purge Volume**	**Flowrate**	**Water Level**	**pH**	**Temperature**	**Conductivity**	**Dissolved Oxygen**	**ORP**	**Turbidity**
	gal	*L/min*	*ft*	*SU*	*degrees C*	*uS/cm*	*mg/L*	*mV*	*NTU*
13:26	2.2	0.2	--	6.55	16.5	2,868	0.30	-24.5	1.39

Last row of water quality data are considered final field parameters unless otherwise noted.

Water Quality Observations *(clarity, tint, odor, sheen, etc.)*: Clear; colorless; no odor; no sheen.

General Comments

Dense layer of mud or dirt at approximatley 8.8 feet depth inside well casing. Encountered resistance dropping down water level meter and tubing. Well ran dry at 12:35 with 2.1 gallons purged; stopped pumping. Resumed pumping at 13:23 with lower purge rate. Well ran dry at 13:28; stopped pumping. Lowered tubing and sampled at 13:45.

Sample Information

Sampling Method	Peristaltic Pump		
Sample Name	LP-5-081424		
Sample Date	08/14/2024	Sample Time	13:45

Container Type	Preservative	Filtered (Y/N)	No. Containers
VOA			
Amber glass			
Poly	HNO3	Y	1
		Total No. Containers:	1

Attachment B

Analytical Laboratory Report

MAUL
FOSTER
ALONGI

ANALYTICAL REPORT

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Wednesday, September 11, 2024

Audrey Hackett
Maul Foster & Alongi, Inc-Seattle
2815 2nd Ave Suite 540
Seattle, WA 98121

RE: A4H1235 - LP Pony Lumber, Port of Tacoma - M0615.24.002

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A4H1235, which was received by the laboratory on 8/16/2024 at 10:55:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: pnerenberg@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information
Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.
(See Cooler Receipt Form for details)
Default Cooler 4.7 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Maul Foster & Alongi, Inc-Seattle	Project: **LP Pony Lumber, Port of Tacoma**	
2815 2nd Ave Suite 540	Project Number: **M0615.24.002**	**Report ID:**
Seattle, WA 98121	Project Manager: **Audrey Hackett**	**A4H1235 - 09 11 24 1313**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
LP-1-081424	A4H1235-01	Water	08/14/24 14:30	08/16/24 10:55
LP-DUP-081424	A4H1235-02	Water	08/14/24 14:30	08/16/24 10:55
LP-2-081424	A4H1235-03	Water	08/14/24 15:45	08/16/24 10:55
LP-4-081424	A4H1235-04	Water	08/14/24 11:45	08/16/24 10:55
LP-5-081424	A4H1235-05	Water	08/14/24 13:45	08/16/24 10:55

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

APEX LABORATORIES

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Maul Foster & Alongi, Inc-Seattle	Project: **LP Pony Lumber, Port of Tacoma**	
2815 2nd Ave Suite 540	Project Number: **M0615.24.002**	**Report ID:**
Seattle, WA 98121	Project Manager: **Audrey Hackett**	**A4H1235 - 09 11 24 1313**

ANALYTICAL SAMPLE RESULTS

Dissolved Metals by EPA 200.8 (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
LP-1-081424 (A4H1235-01)				**Matrix: Water**				
Batch: 24H0882								
Arsenic	**0.487**	0.180	0.360	ug/L	1	09/04/24 15:59	EPA 200.8 (Diss)	
Copper	ND	0.180	0.360	ug/L	1	09/04/24 15:59	EPA 200.8 (Diss)	
LP-DUP-081424 (A4H1235-02)				**Matrix: Water**				
Batch: 24H0882								
Arsenic	**0.460**	0.180	0.360	ug/L	1	09/04/24 16:17	EPA 200.8 (Diss)	
Copper	ND	0.180	0.360	ug/L	1	09/04/24 16:17	EPA 200.8 (Diss)	
LP-2-081424 (A4H1235-03)				**Matrix: Water**				
Batch: 24H0882								
Arsenic	**1.16**	0.180	0.360	ug/L	1	09/04/24 16:22	EPA 200.8 (Diss)	
Copper	**0.530**	0.180	0.360	ug/L	1	09/04/24 16:22	EPA 200.8 (Diss)	
LP-4-081424 (A4H1235-04)				**Matrix: Water**				
Batch: 24H0882								
Arsenic	**0.291**	0.180	0.360	ug/L	1	09/04/24 16:26	EPA 200.8 (Diss)	**J**
Copper	**0.786**	0.180	0.360	ug/L	1	09/04/24 16:26	EPA 200.8 (Diss)	
LP-5-081424 (A4H1235-05)				**Matrix: Water**				
Batch: 24H0882								
Arsenic	**2.20**	0.180	0.360	ug/L	1	09/04/24 16:31	EPA 200.8 (Diss)	
Copper	ND	0.180	0.360	ug/L	1	09/04/24 16:31	EPA 200.8 (Diss)	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Maul Foster & Alongi, Inc-Seattle	Project: LP Pony Lumber, Port of Tacoma	
2815 2nd Ave Suite 540	Project Number: M0615.24.002	Report ID:
Seattle, WA 98121	Project Manager: Audrey Hackett	A4H1235 - 09 11 24 1313

QUALITY CONTROL (QC) SAMPLE RESULTS

Dissolved Metals by EPA 200.8 (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24H0882 - Matrix Matched Direct Inject									Water			
Blank (24H0882-BLK2)			Prepared: 09/04/24 12:36 Analyzed: 09/04/24 16:59									
EPA 200.8 (Diss)												
Arsenic	ND	0.180	0.360	ug/L	1	---	---	---	---	---	---	Q-16
Copper	ND	0.180	0.360	ug/L	1	---	---	---	---	---	---	Q-16
LCS (24H0882-BS2)			Prepared: 09/04/24 12:36 Analyzed: 09/04/24 17:04									
EPA 200.8 (Diss)												
Arsenic	9.79	0.180	0.360	ug/L	1	10.0	---	98	85-115%	---	---	Q-16
Copper	10.4	0.180	0.360	ug/L	1	10.0	---	104	85-115%	---	---	Q-16
Duplicate (24H0882-DUP1)			Prepared: 09/04/24 12:36 Analyzed: 09/04/24 16:03									
QC Source Sample: LP-1-081424 (A4H1235-01)												
EPA 200.8 (Diss)												
Arsenic	**0.465**	0.180	0.360	ug/L	1	---	0.487	---	---	5	20%	
Copper	ND	0.180	0.360	ug/L	1	---	ND	---	---	---	20%	
Matrix Spike (24H0882-MS1)			Prepared: 09/04/24 12:36 Analyzed: 09/04/24 16:08									
QC Source Sample: LP-1-081424 (A4H1235-01)												
EPA 200.8 (Diss)												
Arsenic	10.8	0.180	0.360	ug/L	1	10.0	0.487	104	70-130%	---	---	
Copper	9.86	0.180	0.360	ug/L	1	10.0	ND	99	70-130%	---	---	

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

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503-718-2323
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ANALYTICAL REPORT

Maul Foster & Alongi, Inc-Seattle	Project: LP Pony Lumber, Port of Tacoma	
2815 2nd Ave Suite 540	Project Number: M0615.24.002	Report ID:
Seattle, WA 98121	Project Manager: Audrey Hackett	A4H1235 - 09 11 24 1313

SAMPLE PREPARATION INFORMATION

Dissolved Metals by EPA 200.8 (ICPMS)

Prep: Matrix Matched Direct Inject

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 24H0882							
A4H1235-01	Water	EPA 200.8 (Diss)	08/14/24 14:30	09/04/24 12:36	10mL/20mL	45mL/50mL	1.80
A4H1235-02	Water	EPA 200.8 (Diss)	08/14/24 14:30	09/04/24 12:36	10mL/20mL	45mL/50mL	1.80
A4H1235-03	Water	EPA 200.8 (Diss)	08/14/24 15:45	09/04/24 12:36	10mL/20mL	45mL/50mL	1.80
A4H1235-04	Water	EPA 200.8 (Diss)	08/14/24 11:45	09/04/24 12:36	10mL/20mL	45mL/50mL	1.80
A4H1235-05	Water	EPA 200.8 (Diss)	08/14/24 13:45	09/04/24 12:36	10mL/20mL	45mL/50mL	1.80

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

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Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Maul Foster & Alongi, Inc-Seattle	Project: **LP Pony Lumber, Port of Tacoma**	
2815 2nd Ave Suite 540	Project Number: **M0615.24.002**	**Report ID:**
Seattle, WA 98121	Project Manager: **Audrey Hackett**	**A4H1235 - 09 11 24 1313**

QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

J	Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified DL.
Q-16	Reanalysis of an original Batch QC sample.

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Maul Foster & Alongi, Inc-Seattle	Project: **LP Pony Lumber, Port of Tacoma**	
2815 2nd Ave Suite 540	Project Number: **M0615.24.002**	**Report ID:**
Seattle, WA 98121	Project Manager: **Audrey Hackett**	**A4H1235 - 09 11 24 1313**

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Validated Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ). If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

Results for Volatiles analyses on soils and sediments that are reported on a “dry weight” basis include the water miscible solvent (WMS) correction referenced in the EPA 8000 Method guidance documents. Solid and Liquid samples reported on an “As Received” basis do not have the WMS correction applied, as dry weight was not performed.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

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Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

Maul Foster & Alongi, Inc-Seattle	Project: **LP Pony Lumber, Port of Tacoma**	
2815 2nd Ave Suite 540	Project Number: **M0615.24.002**	**Report ID:**
Seattle, WA 98121	Project Manager: **Audrey Hackett**	**A4H1235 - 09 11 24 1313**

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to one half of the Reporting Limit (RL).
Blank results for gravimetric analyses are evaluated to the Reporting Level, not to half of the Reporting Level.
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.
-Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.
'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level, if results are not reported to the MDL.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

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Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

ANALYTICAL REPORT

Maul Foster & Alongi, Inc-Seattle	Project: LP Pony Lumber, Port of Tacoma	
2815 2nd Ave Suite 540	Project Number: M0615.24.002	Report ID:
Seattle, WA 98121	Project Manager: Audrey Hackett	A4H1235 - 09 11 24 1313

LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

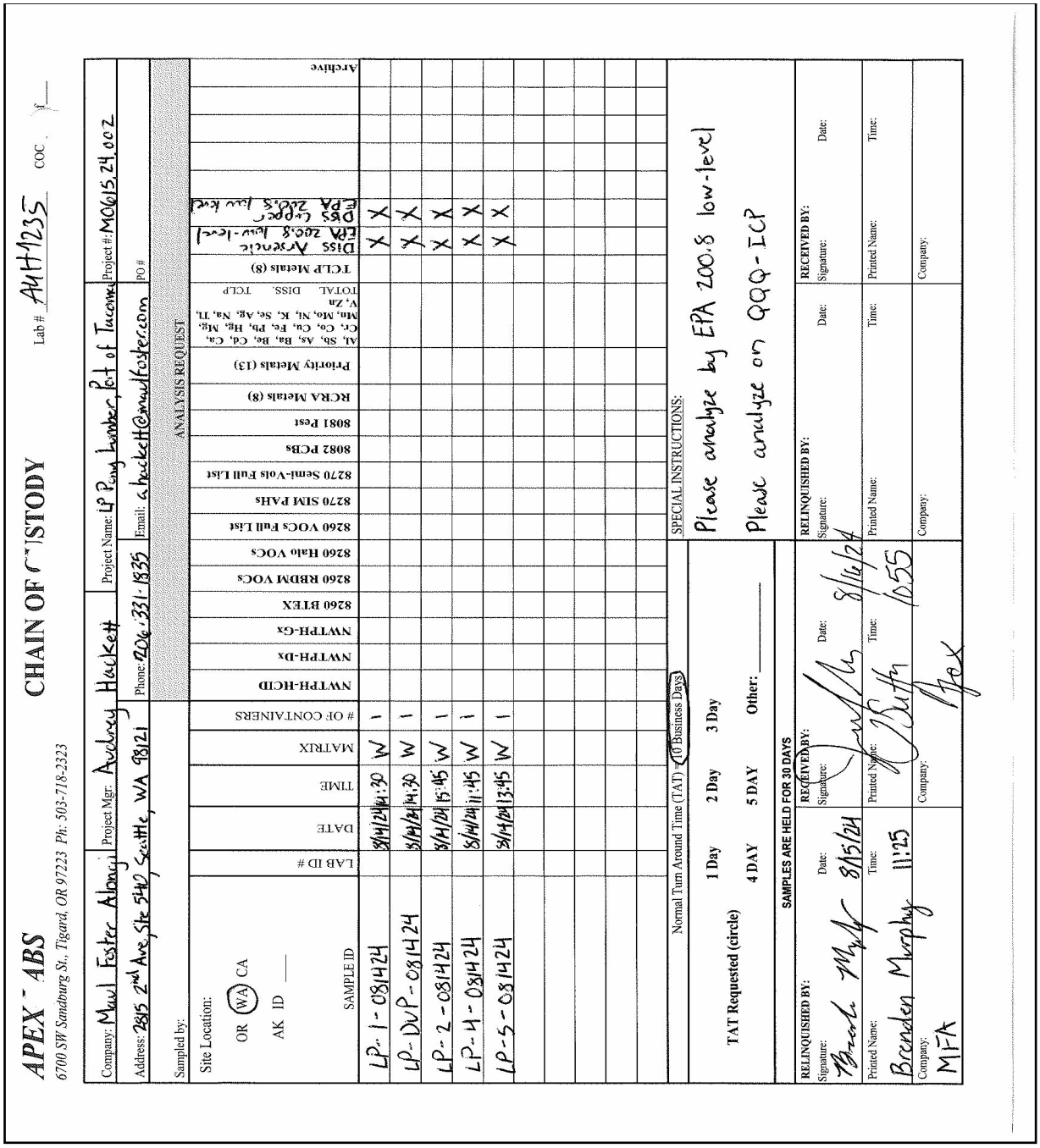
Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: **OR100062**

ANALYTICAL REPORT

Maul Foster & Alongi, Inc-Seattle	Project: **LP Pony Lumber, Port of Tacoma**	
2815 2nd Ave Suite 540	Project Number: **M0615.24.002**	**Report ID:**
Seattle, WA 98121	Project Manager: **Audrey Hackett**	**A4H1235 - 09 11 24 1313**



APEX LABS — CHAIN OF CUSTODY — Lab # A4H1235 — COC #

6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

Company: Maul Foster Alongi | Project Mgr: Audrey Hackett | Project Name: LP Pony Lumber, Port of Tacoma | Project #: M0615.24.002

Address: 2815 2nd Ave Ste 540 Seattle, WA 98121 | Phone: 206-331-1835 | Email: ahackett@maulfoster.com | PO #

Sampled by:

Site Location: OR (WA) CA / AK ID ____

ANALYSIS REQUEST

SAMPLE ID	LAB ID #	DATE	TIME	MATRIX	# OF CONTAINERS	NWTPH-HCID	NWTPH-Dx	NWTPH-Gx	8260 BTEX	8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pest	RCRA Metals (8)	Priority Metals (13)	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Tl, V, Zn TOTAL DISS. TCLP	TCLP Metals (8)	Diss Arsenic EPA 200.8 low-level	Diss Copper EPA 200.8 low-level	Archive
LP-1-081424		8/14/24	14:30	W	1															X	X	
LP-DUP-081424		8/14/24	14:30	W	1															X	X	
LP-2-081424		8/14/24	15:45	W	1															X	X	
LP-4-081424		8/14/24	11:45	W	1															X	X	
LP-5-081424		8/14/24	13:45	W	1															X	X	

Normal Turn Around Time (TAT) = (10 Business Days)

TAT Requested (circle): 1 Day 2 Day 3 Day 4 DAY 5 DAY Other: ____

SPECIAL INSTRUCTIONS:

Please analyze by EPA 200.8 low-level

Please analyze on QQQ-ICP

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature:	Signature:	Signature:	Signature:
Date: 8/15/24	Date: 8/16/24	Date:	Date:
Printed Name: Brenden Murphy	Printed Name: Jeff Luth	Printed Name:	Printed Name:
Time: 11:25	Time: 1055	Time:	Time:
Company: MFA	Company: Apex	Company:	Company:

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

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ANALYTICAL REPORT

Maul Foster & Alongi, Inc-Seattle	Project: **LP Pony Lumber, Port of Tacoma**	
2815 2nd Ave Suite 540	Project Number: **M0615.24.002**	**Report ID:**
Seattle, WA 98121	Project Manager: **Audrey Hackett**	**A4H1235 - 09 11 24 1313**

APEX LABS COOLER RECEIPT FORM

Client: Maul Foster Alongi Element WO#: A4H1235

Project/Project #: LP Pony Lumber, Port of Tacoma M0615.24.002

Delivery Info:

Date/time received: 8/16/24 @ 1055 By: JS

Delivered by: Apex__Client__ESS__FedEx_X_UPS__Radio__Morgan__SDS__Evergreen__Other__

From USDA Regulated Origin? Yes ____ No X

Cooler Inspection Date/time inspected: 8/16/24 @ 1057 By: JS

Chain of Custody included? Yes ✓ No ____

Signed/dated by client? Yes ✓ No ____

Contains USDA Reg. Soils? Yes ____ No X Unsure (email RegSoils) ____

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	4.7						
Custody seals? (Y/N)	N						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	Y						
Ice type: (Gel/Real/Other)	Real						
Condition (In/Out):	In						

Cooler out of temp? (Y/(N)) Possible reason why: ____

Green dots applied to out of temperature samples? Yes (No)

Out of temperature samples form initiated? Yes (No)

Sample Inspection: Date/time inspected: 8/16/24 @ 13:18 By: ZA

All samples intact? Yes X No ___ Comments: ____

Bottle labels/COCs agree? Yes X No ___ Comments: ____

COC/container discrepancies form initiated? Yes ___ No X

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: ____

Do VOA vials have visible headspace? Yes ___ No ___ NA X

Comments ____

Water samples: pH checked: Yes X No ___ NA ___ pH appropriate? Yes X No ___ NA ___ pH ID: A231172

Comments: ____

2783 3801 2421

Labeled by: ZA Witness: KW Cooler Inspected by: TS

Form Y-003 R-02

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

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Attachment C

Data Validation Memorandum

MAUL
FOSTER
ALONGI

Data Validation Memorandum

Project No. M0615.24.002 | September 11, 2024 | Port of Tacoma

Maul Foster & Alongi, Inc. (MFA), conducted an independent Stage 2A review of the quality of analytical results for groundwater and associated quality control samples collected on August 14, 2024, at former Louisiana Pacific/Pony Lumber site in Tacoma, Washington.

Apex Laboratories LLC (Apex) performed the analyses. MFA reviewed Apex report number A4H1235. The analyses performed and the samples analyzed are listed in the following tables.

Analysis	Reference
Dissolved arsenic and copper	EPA 200.8

Notes
EPA = U.S. Environmental Protection Agency.

Samples Analyzed	
Report A4H1235	
LP-1-081424	LP-4-081424
LP-DUP-081424	LP-5-081424
LP-2-081424	--

Data Validation Procedures

Analytical results were evaluated according to applicable sections of U.S. Environmental Protection Agency (EPA) guidelines for data review (EPA 2020) and appropriate laboratory- and method-specific guidelines (Apex 2023, EPA 1986).

Based on the data quality assurance/quality control review described herein, the data, with the appropriate final data qualifiers assigned, are considered acceptable for their intended use. Final data qualifiers represent qualifiers originating from the laboratory and accepted by the reviewer, and data qualifiers assigned by the reviewer during validation.

Final data qualifiers:

- J = result is estimated.
- U = result is non-detect at the laboratory detection limit (LDL).

Sample Conditions

Sample Custody

Sample custody was appropriately documented on the chain-of-custody (COC) form accompanying the report.

The reviewer confirmed that the gap in custody on the COC form accompanying report A4H1235 is due to shipment via a third-party service.

Holding Times

Extractions and analyses were performed within the recommended holding times.

Preservation and Sample Storage

The samples were preserved and stored appropriately.

Sample Filtration

Field samples for dissolved EPA Method 200.8 analysis were field-filtered with a 0.45-micron filter during sample collection.

Reporting Limits

The laboratory evaluated results to LDLs.

The laboratory qualified results between the LDL and the method reporting limit with J, as estimated.

Blank Results

Method Blanks

Laboratory method blanks are used to evaluate whether laboratory contamination was introduced during sample preparation and analysis. Laboratory method blank analyses were performed at the required frequencies, in accordance with laboratory- and method-specific requirements.

All laboratory method blank results were non-detect to LDLs.

Equipment Rinsate Blanks

Equipment rinsate blanks are used to evaluate the adequacy of the field equipment decontamination process when decontaminated sampling equipment is used to collect samples.

These blanks were not required for this sampling event, as all samples were collected using dedicated or single-use equipment.

Field Filter Blanks

Field filter blanks are used to evaluate whether contamination was introduced during field filtering procedures.

The reviewer could not evaluate whether metals contamination was introduced during field filtering procedures.

Trip Blanks

Trip blanks are used to evaluate whether volatile organic compound contamination was introduced during shipping and field handling procedures.

Trip blank samples were not required for this sampling event because samples were not analyzed for volatile organic compounds.

Laboratory Control Sample and Laboratory Control Sample Duplicate Results

Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) results are used to evaluate laboratory precision and accuracy. Where LCSD results were not reported, laboratory precision was evaluated using laboratory duplicate results. The LCS samples were prepared and analyzed at the required frequency, in accordance with laboratory- and method-specific requirements.

All LCS results were within acceptance limits for percent recovery.

Laboratory Duplicate Results

Laboratory duplicate results are used to evaluate laboratory precision and sample homogeneity. All laboratory duplicate samples were prepared and analyzed at the required frequency, in accordance with laboratory- and method-specific requirements.

All laboratory duplicate results met the acceptance criteria.

Matrix Spike and Matrix Spike Duplicate Results

Matrix spike (MS) and matrix spike duplicate (MSD) results are used to evaluate laboratory precision, accuracy, and the effect of the sample matrix on sample preparation and target analyte recovery.

Where MSD results were not reported, laboratory precision was evaluated using laboratory duplicate results. The MS sample was prepared and analyzed at the required frequency, in accordance with laboratory- and method-specific requirements.

All MS results were within acceptance limits for percent recovery.

Field Duplicate Results

Field duplicate results are used to evaluate field precision and sample homogeneity. The following field duplicate and parent sample pair was submitted for analysis:

Report	Parent Sample	Field Duplicate Sample
A4H1235	LP-1-081424	LP-DUP-081424

MFA uses acceptance criteria of 100 percent RPD for results that are less than five times the MRL or 50 percent RPD for results that are greater than five times the MRL.

All field duplicate results met the RPD acceptance criteria.

Data Package

The data package was reviewed for transcription errors, omissions, and anomalies.

The reviewer confirmed with the laboratory that a low-level EPA Method 200.8 was used, and the samples were analyzed by triple quadrupole inductively coupled plasma-mass spectrometry, as requested on the COC.

Report A4H1235 was revised by Apex on September 11, 2024, to include LDLs.

No additional issues were found.

References

Apex. 2023. Quality Systems Manual. Rev. 11. Apex Laboratories, LLC: Tigard, OR. June 20.

EPA. 1986. *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.* EPA publication SW-846. 3rd ed. U.S. Environmental Protection Agency. Final updates I (1993), II (1995), IIA (1994), IIB (1995), III (1997), IIIA (1999), IIIB (2005), IV (2008), V (2015), VI phase I (2017), VI phase II (2018), VI phase III (2019), VII phase I (2019), and VII phase II (2020).

EPA. 2020. *National Functional Guidelines for Inorganic Superfund Methods Data Review.* EPA 542-R-20-006. U.S. Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation: Washington, DC. November.