

PETROLEUM-CONTAMINATED SOIL REMOVAL REPORT

McKinley Paper Company – Washington Mill

1815 Marine Drive

Port Angeles, WA 98363

Facility Location

1902 Marine Drive

Port Angeles, WA 98363

Report Date

November 9, 2020

INTRODUCTION

McKinley Paper Company (McKinley Paper; the Mill) commenced a construction project to replace the roll bridge that brings rolls of paper to the roll storage warehouse as part of a Mill-wide retooling effort. The construction process included preparing the areas by excavating and pouring the foundation. During the construction process, petroleum-impacted soil was encountered. McKinley Paper has prepared this report to document remedial excavation at the property located at 1815 Marine Drive in Port Angeles, Washington (the Property; Figure 1). The purpose of the remedial action was to remove apparent and accessible petroleum-impacted soil discovered to the maximum extent practical during the construction of the foundation for a new roll bridge. The remedial action was conducted in general accordance with Washington State Department of Ecology (Ecology) Guidelines for Remediation of Petroleum Contaminated Site Publication No. 10-09-057 and dated September 2011.

PROPERTY DESCRIPTION

The Mill is located on the base of Ediz Hook spit, which separates the Port Angeles Harbor on the south and east from the Strait of Juan de Fuca to the north. The Mill is accessed by Marine Drive, which extends along the southern boundary of the Property, passes through the Mill, and terminates at the tip of Ediz Hook spit at the United States Coast Guard Station. The facility location is shown on Figure 1 and the Mill Site Plan is on Figure 2.

BACKGROUND AND HISTORY

The Mill began manufacturing newsprint in December 1920 under various ownership groups such as Washington Pulp and Paper, Crown Zellerbach, James River, Daishowa America, and Nippon Paper Industries. The Mill has undergone various expansions and changes in its product line over the years. In the 1960s, it began the transition from newsprint production to the manufacture of telephone directory paper. The Mill was shut down by Nippon Paper in 2017 and purchased by McKinley Paper to produce lightweight brown paper grades from 100 percent recycled paper (mixed paper and old corrugated containers). Retooling efforts to the pulping and paper machine operations began in mid-2019 and are nearly complete. Currently, the Mill is a manufacturer of linerboard, medium, and bag grades of paper from 100 percent recycled content.

SITE DISCOVERY, INVESTIGATION, AND RESULTS

Precision Industrial Contractors began excavation of the new north tower foundation on May 4, 2020 during retooling of the Mill and construction of the new roll bridge (Photo 1). During the excavation, visible petroleum-impacted soil was discovered about 2 feet below the existing ground surface as shown on Photo 2 and Figure 3. The area of impacted soil appeared to be limited to the eastern portion of the excavation and extended to the west about 6 feet. The northern extent of the excavation was limited by the Mill's Paper Machine Building. To the east the excavation was limited by the presence of utilities and the concrete building dock. North to south the excavation was approximately 10 feet wide. The depth of the excavation was about 4 feet (Photo 2). Field observations made during the removal of petroleum-impacted soil indicated an absence of free product, but with the presence of a slight petroleum odor. Groundwater was not observed during the excavation. Depth to groundwater from approximately one mile to the southeast at properties near Port Angeles Harbor is 7 to 12 feet below ground surface according to area well log reports on the Ecology Well Report Map.

While excavating, various underground utilities were discovered. These included known mill fire and city water mains, an abandoned wood stove and metal piping. The miscellaneous piping are believed to be from previous Mill operations. Fuel oil has been supplied to the Mill's boilers from the adjacent bulk petroleum tank farm to the east (currently subleased and operated by Tesoro). The oil pipeline is currently aboveground but reportedly had been underground in the past. The actual source of the petroleum-impacted soil is unknown and is believed to be a legacy issue.

Soil Removal and Sampling

Petroleum-impacted soil was removed and stockpiled within a constructed berm and covered with plastic on-Property. The approximate volume of stockpiled soil was 8 cubic yards. One soil sample named Excavated Soils was collected from the stockpiled soil and analyzed for diesel-range petroleum hydrocarbons (DRPH) by Northwest Total Petroleum Hydrocarbons (NWTPH) Diesel Range; oil-range petroleum hydrocarbons (ORPH) by NWTPH-Diesel Range; benzene, toluene, ethylbenzene, and total xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8260C; and Resource Conservation and Recovery 8 metals (metals) by EPA Method 3050B/6010D/7471B for disposal profiling. The contaminants of concern were DRPH, ORPH, and BTEX. Metals analysis was performed for disposal purposes and was not a contaminant of concern. One soil sample named North & East Walls was composited from the north and east walls at approximately 2 feet below ground surface and one soil sample named South Wall & Bottom was composited at approximately 2 and 4 feet below ground surface, respectively, from the south wall and bottom of the excavation as shown on Figure 3. The samples were submitted to the laboratory and analyzed for DRPH, ORPH, BTEX, and metals for disposal profiling under standard chain of custody protocols.

Excavation work for the roll bridge foundations also took place on the south end of Marine Drive and inside the paper machine building and are labeled as Interior Excavation Areas, South Tower Excavation Area, and Roll Warehouse Building Excavation Area as shown on Figure 3. The Roll Warehouse Building excavation and inside building excavations were approximately 32 feet and 41 feet from the impacted area, respectively, and to a depth of about 4 feet. Although no soil samples were collected, there was no evidence of impacted soil observed in these areas.

Results

The concentrations of DRPH and ORPH in composite sample North & East Walls collected from the north and east wall were above the Washington State Model Toxics Control Act (MTCA) cleanup level for DRPH and ORPH (2,000 milligrams per kilogram). Concentrations of BTEX in both composite samples were reported as less than the applicable MTCA cleanup levels as were concentrations of DRPH and ORPH in sample South Wall & Bottom. Metals concentrations were below the MTCA cleanup level in all samples collected. Soil analysis results are shown in Tables 1 and 2, and the laboratory results are attached.

No further excavation beyond that planned for the bridge foundation was performed due to concerns for the structural integrity of the Marine Drive right-of-way, the paper machine building foundation, and the concrete building dock and the fire water main and city water line directly adjacent to the excavation. Following completion of soil samples, construction of the foundations for the roll bridge was completed (Photo 3). Void areas were filled with clean material and covered or paved over. The contaminated stockpiled soils have been profiled as a non-hazardous solid waste and are awaiting pickup and disposal at the Waste Management Wenatchee Regional Landfill.

ECOLOGY NOTIFICATIONS

Upon receipt of sample results confirming exceedance of the MTCA cleanup levels, Ecology's Southwest Regional Office was notified by telephone on June 19, 2020. No Environmental Report Tracking System, or ERTS, number was provided. On June 29, the Mill's Industrial Section Contact, from Ecology, requested an action plan to address the discovery. On July 16, the Industrial Section Contact conducted an announced Mill-wide waste compliance evaluation which included observation of the North Tower Excavation Area.

NEXT ACTIONS

This summary report was prepared to document the actions taken when petroleum-impacted soil was discovered and will subsequently be provided to the Mill's Ecology Industrial Section Contact, Liem Nguyen, for their records.

CONCLUSIONS

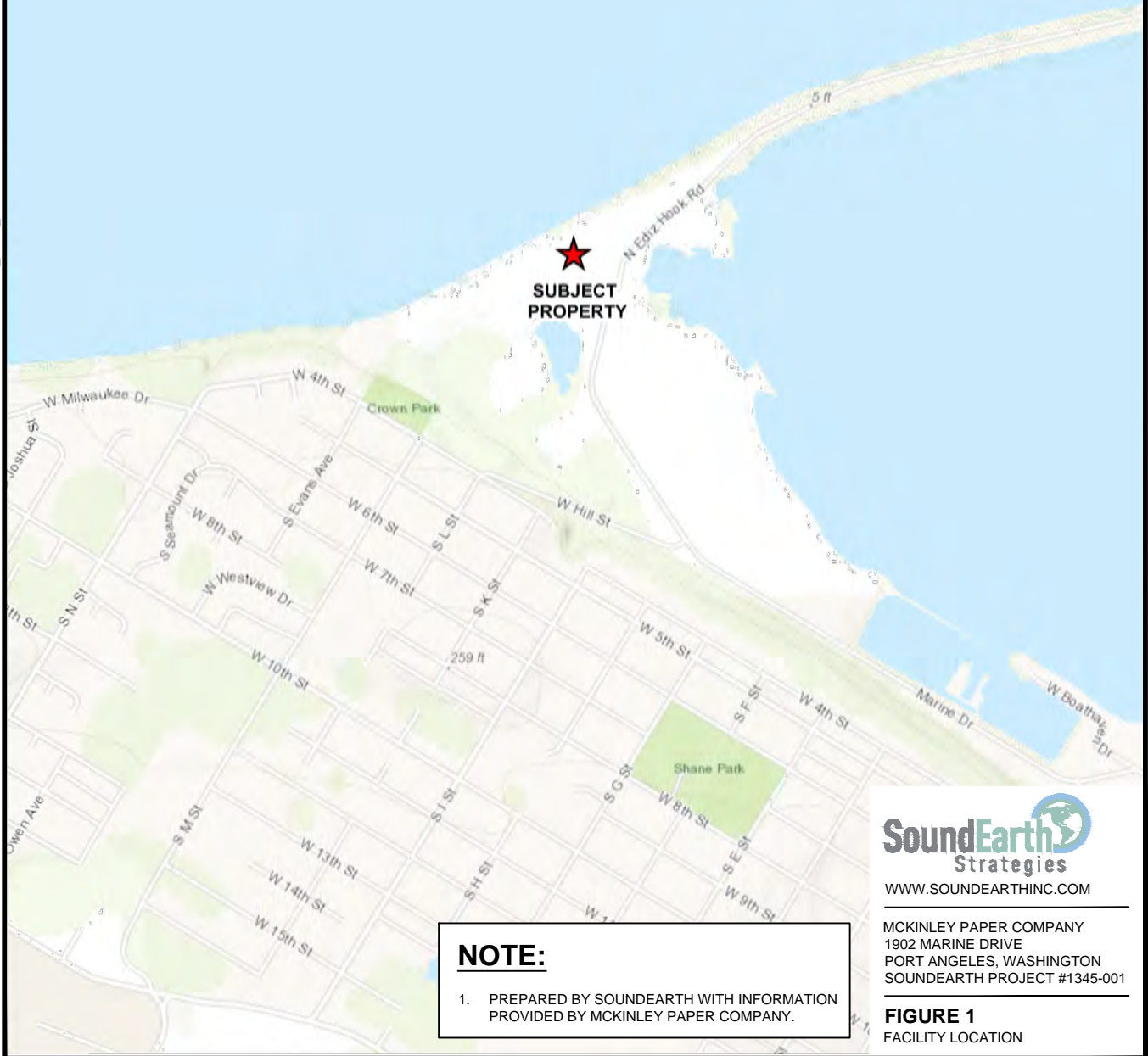
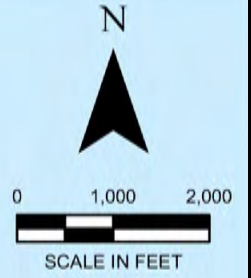
The accessible petroleum-impacted soil was removed, and the remaining petroleum-impacted soil is currently inaccessible to the north due to the Paper Mill Building and to the east due to utilities and the presence of the building dock. The extent of remaining petroleum-impacted material is unknown but appears to be limited to soil since groundwater was not encountered during the excavation.

ATTACHMENTS

FIGURE 1, FACILITY LOCATION

FIGURE 2, MILL FACILITY MAP

FIGURE 3, SOIL EXCAVATION AREAS PLAN VIEW



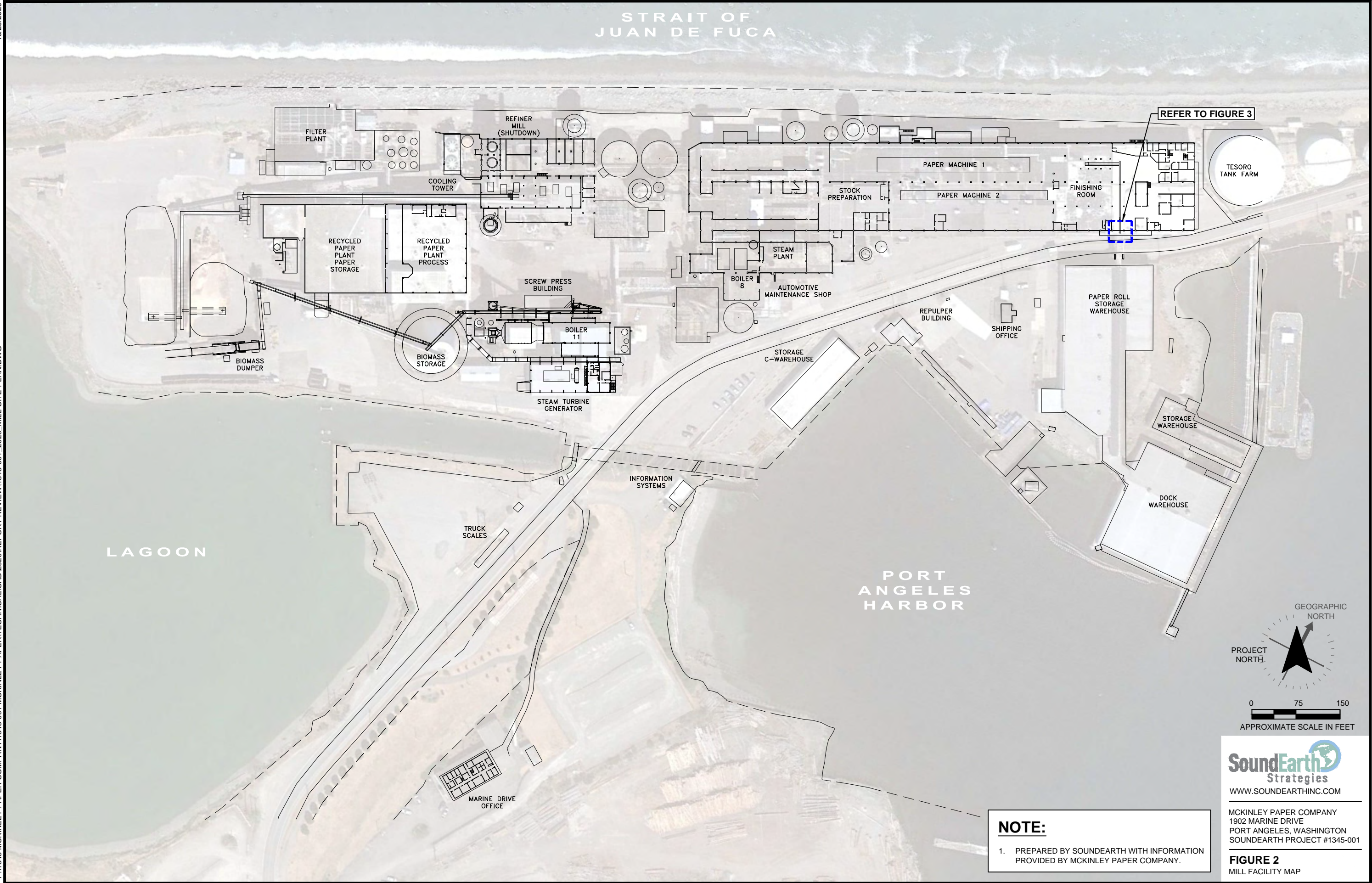
NOTE:

1. PREPARED BY SOUNDEARTH WITH INFORMATION PROVIDED BY MCKINLEY PAPER COMPANY.

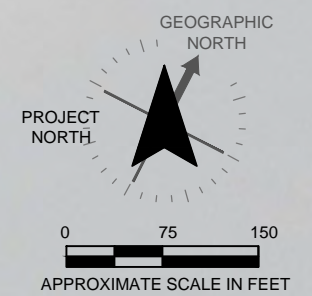
SoundEarth Strategies
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MCKINLEY PAPER COMPANY
 1902 MARINE DRIVE
 PORT ANGELES, WASHINGTON
 SOUNDEARTH PROJECT #1345-001

FIGURE 1
 FACILITY LOCATION

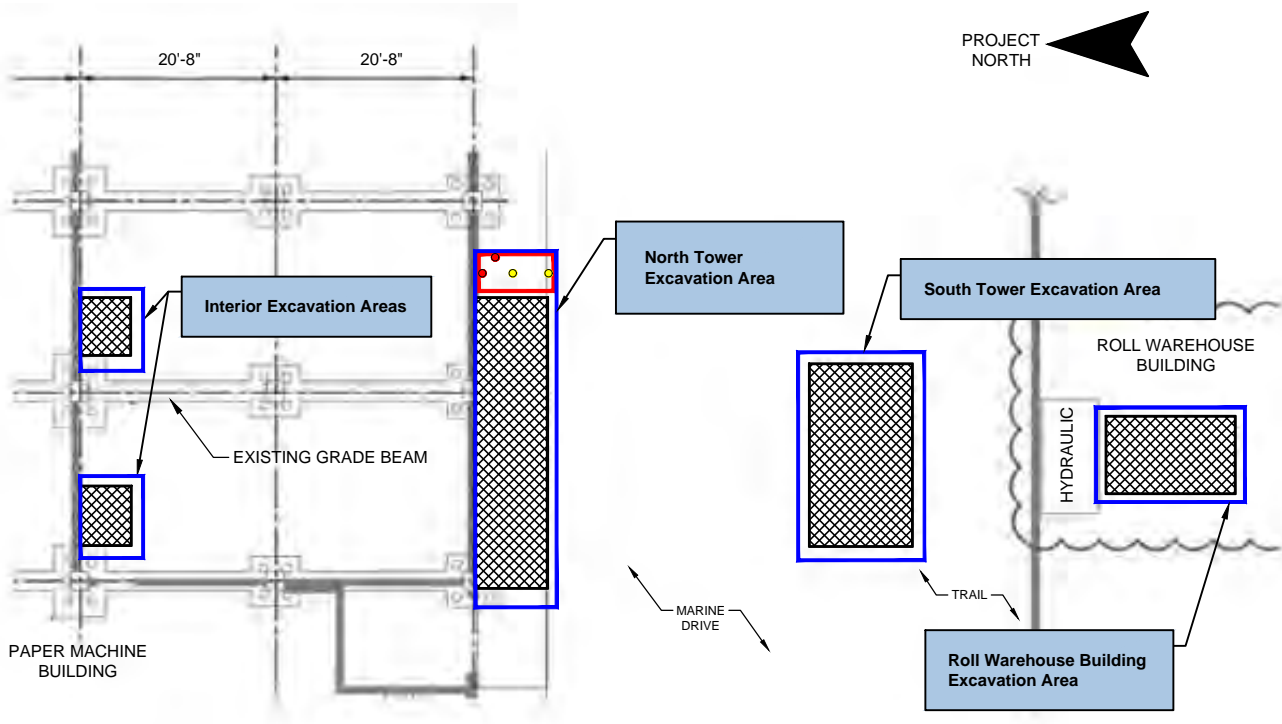


NOTE:
1. PREPARED BY SOUNDEARTH WITH INFORMATION PROVIDED BY MCKINLEY PAPER COMPANY.



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FIGURE 2
MILL FACILITY MAP



LEGEND

- COMPOSITE SAMPLE LOCATIONS FOR NORTH AND EAST WALLS
- COMPOSITE SAMPLE LOCATIONS FOR SOUTH WALL AND BOTTOM
- APPROXIMATE CONSTRUCTION EXCAVATION EXTENT
- APPROXIMATE REMEDIAL EXCAVATION EXTENT
- FOUNDATION

NOTES:

1. PREPARED BY SOUNDEARTH WITH INFORMATION PROVIDED BY MCKINLEY PAPER COMPANY.
2. NOT TO SCALE. LOCATIONS ARE APPROXIMATE.
3. SOIL SAMPLES COLLECTED BY MCKINLEY PAPER COMPANY.



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 SOUNDEARTH PROJECT #1345-001

FIGURE 3
 SOIL EXCAVATION AREAS
 PLAN VIEW

TABLES

Table 1
Soil Analytical Results for TPH and BTEX
McKinley Paper Company
1902 Marine Drive
Port Angeles, Washington

Sample ID	Sampled By	Date Sampled	Depth (feet bgs)	Sample Collection Type	Sample Type	Analytical Results (milligrams per kilogram)					
						DRPH ⁽²⁾	ORPH ⁽²⁾	Benzene ⁽³⁾	Toluene ⁽³⁾	Ethylbenzene ⁽³⁾	Total Xylenes ⁽³⁾
North & East Walls	McKinley Paper	05/15/20	2	Confirmation	Composite	<5,100	40,100	<2*	<2*	<2*	<2*
South Wall & Bottom	McKinley Paper	05/15/20	2 and 4, respectively	Confirmation	Composite	26.3	475	<0.05	<0.05	<0.05	<0.05
Excavated Soils	McKinley Paper	05/18/20	--	--	Discrete	621	2,160	<0.05	<0.05	<0.05	<0.05
MTCA Cleanup Level for Soil⁽⁴⁾						2,000	2,000	0.03	7	6	9

NOTES:

Red denotes concentration exceeds MTCA cleanup level for soil.

Sample analyses conducted by Spectra Laboratories of Poulsbo, Washington.

Samples "North & East Walls" and "South Wall & Bottom" consist of excavation samples composited during collection.

⁽¹⁾Analyzed by Method NWTPH-Gx.

⁽²⁾Analyzed by Method NWTPH-Dx.

⁽³⁾Analyzed by EPA Method 8021B.

⁽⁴⁾MTCA Cleanup Regulation, Chapter 173-340-900 of WAC, Table 740-1 Method A Cleanup Levels for Soil, Unrestricted Land Uses, revised November 2007.

Laboratory Notes:

* Reporting limit elevated due to abundance of non-target compounds.

-- = not analyzed/not applicable

< = not detected at a concentration exceeding the laboratory reporting limit

bgs = below ground surface

BTEX = benzene, toluene, ethylbenzene, and total xylenes

DRPH = diesel-range petroleum hydrocarbons

EPA = US Environmental Protection Agency

MTCA = Washington State Model Toxics Control Act

NWTPH = Northwest Total Petroleum Hydrocarbon

ORPH = oil-range petroleum hydrocarbons

TPH = total petroleum hydrocarbons

Table 2
Soil Analytical Results for RCRA 8 Metals
McKinley Paper Company
1902 Marine Drive
Port Angeles, Washington

Sample ID	Sampled By	Date Sampled	Depth (feet bgs)	Sample Collection Type	Sample Type	Analytical Results ⁽¹⁾ (milligrams per kilogram)							
						Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
North & East Walls	McKinley Paper	05/15/20	2	Confirmation	Composite	<3.00	27.1	<1.00	30.1	27.5	0.32	4.12	<1.00
South Wall & Bottom	McKinley Paper	05/15/20	2 and 4, respectively	Confirmation	Composite	<3.00	37.7	<1.00	32.9	67.3	0.07	5.22	<1.00
Excavated Soils	McKinley Paper	05/18/20	--	--	Discrete	<3.00	32.3	<1.00	33.6	90.6	0.13	4.79	<1.00
MTCA Cleanup Level for Soil						20⁽²⁾	16,000⁽³⁾	2⁽²⁾	2,000⁽²⁾	250⁽²⁾	2⁽²⁾	400⁽³⁾	400⁽³⁾

NOTES:

Sample analyses conducted by Spectra Laboratories of Poulsbo, Washington.

Samples "North & East Walls" and "South Wall & Bottom" consist of excavation samples composited during collection.

⁽¹⁾Samples analyzed by EPA Method 200.8.

⁽²⁾MTCA Cleanup Regulation, Chapter 173-340-900 of WAC, Table 740-1 Method A Cleanup Levels for Soil, Unrestricted Land Uses, revised November 2007.

⁽³⁾MTCA Cleanup Regulation, Chapter 173-340 of WAC, CLARC, Soil, Method B, Noncancer, Direct Contact, CLARC Website <<https://fortress.wa.gov/ecy/clarc/CLARHome.aspx>>.

-- = not analyzed/not applicable

< = not detected at a concentration exceeding the laboratory reporting limit

bgs = below ground surface

CLARC = Cleanup Levels and Risk Calculations

EPA = US Environmental Protection Agency

MTCA = Washington State Model Toxics Control Act

RCRA = Resource Conservation and Recovery Act

WAC = Washington Administrative Code

PHOTOS

PAPER MACHINE BUILDING



ROLL STORAGE WAREHOUSE

MARINE DRIVE (toward NE)

PHOTO 1 – ROLL BRIDGE STRUCTURE (partially dismantled)



PHOTO 2 – PETROLEUM-CONTAMINATED SOIL AREA



PHOTO 3 – AREA AFTER FOUNDATION WORK COMPLETED & NEW BRIDGE INSTALLED

LABORATORY ANALYTICAL REPORT



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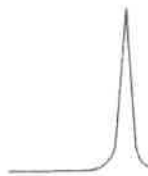
Certificate of Analysis

McKinley Paper Co.
1815 Marine Drive
Port Angeles, WA 98362

Date Received: 5/27/2020
Date Reported: 6/16/2020
Sampler: Terry Nishimoto

Project: N Foundation Excavation

Test	Result	Units	Method	Test Date	Initials
197118-01	North & East Walls			Date Sampled: 5/15/2020	
Arsenic	<3.00	mg/kg	EPA 3050B/6010 D	6/5/2020	KW
Barium	27.1	mg/kg	EPA 3050B/6010 D	6/5/2020	KW
Cadmium	<1.00	mg/kg	EPA 3050B/6010 D	6/5/2020	KW
Chromium	30.1	mg/kg	EPA 3050B/6010 D	6/5/2020	KW
Lead	27.5	mg/kg	EPA 3050B/6010 D	6/5/2020	KW
Mercury	0.32	mg/kg	EPA 7471B	6/8/2020	KW
Selenium	4.12	mg/kg	EPA 3050B/6010 D	6/5/2020	KW
Silver	<1.00	mg/kg	EPA 3050B/6010 D	6/5/2020	KW
197118-02	South Wall & Bottom			Date Sampled: 5/15/2020	
Arsenic	<3.00	mg/kg	EPA 3050B/6010 D	6/5/2020	KW
Barium	37.7	mg/kg	EPA 3050B/6010 D	6/5/2020	KW
Cadmium	<1.00	mg/kg	EPA 3050B/6010 D	6/5/2020	KW
Chromium	32.9	mg/kg	EPA 3050B/6010 D	6/5/2020	KW
Lead	67.3	mg/kg	EPA 3050B/6010 D	6/5/2020	KW
Mercury	0.07	mg/kg	EPA 7471B	6/8/2020	KW
Selenium	5.22	mg/kg	EPA 3050B/6010 D	6/5/2020	KW
Silver	<1.00	mg/kg	EPA 3050B/6010 D	6/5/2020	KW



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06/09/2020

Spectra Laboratories-Kitsap, LLC
 26276 Twelve Trees Lane
 Suite C
 Poulsbo, WA 98370
 Attn: Angela Kaelin


P.O.#: 197118
 Project: N. Foundation Excavation
 Client ID: North & East Walls
 Sample Matrix: Soil
 Date Sampled: 05/15/2020
 Date Received: 05/28/2020
 Spectra Project: 2020050744
 Spectra Number: 1

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method</u>	<u>Analyst</u>	<u>Date Analyzed</u>
Diesel	<5100	mg/Kg	NWTPH-D	SKS	06/04/2020
Oil	40100	mg/Kg	NWTPH-D	SKS	06/04/2020
Benzene	<2*	mg/Kg	SW846 8260C	DJS	05/29/2020
Ethylbenzene	<2*	mg/Kg	SW846 8260C	DJS	05/29/2020
Methyl-tert-Butyl Ether	<2*	mg/Kg	SW846 8260C	DJS	05/29/2020
Toluene	<2*	mg/Kg	SW846 8260C	DJS	05/29/2020
Total Xylenes	<2*	mg/Kg	SW846 8260C	DJS	05/29/2020

**No surrogate recovery due to dilution requirements. *Reporting limit elevated due to abundance of non-target compounds.

Surrogate	Recovery	Method
p-Terphenyl	0**	NWTPH-D
Toluene-d8	94	SW846 8260C
4-Bromofluorobenzene	90	SW846 8260C

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06/09/2020

Spectra Laboratories-Kitsap, LLC
26276 Twelve Trees Lane
Suite C
Poulsbo, WA 98370
Attn: Angela Kaelin

P.O.#: 197118
Project: N. Foundation Excavation
Client ID: South Wall & Bottom
Sample Matrix: Soil
Date Sampled: 05/15/2020
Date Received: 05/28/2020
Spectra Project: 2020050744
Spectra Number: 2

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method</u>	<u>Analyst</u>	<u>Date Analyzed</u>
Diesel	26.3	mg/Kg	NWTPH-D	SKS	06/04/2020
Oil	475	mg/Kg	NWTPH-D	SKS	06/04/2020
Benzene	<0.05	mg/Kg	SW846 8260C	DJS	05/29/2020
Ethylbenzene	<0.05	mg/Kg	SW846 8260C	DJS	05/29/2020
Methyl-tert-Butyl Ether	<0.05	mg/Kg	SW846 8260C	DJS	05/29/2020
Toluene	<0.05	mg/Kg	SW846 8260C	DJS	05/29/2020
Total Xylenes	<0.05	mg/Kg	SW846 8260C	DJS	05/29/2020

<u>Surrogate</u>	<u>Recovery</u>	<u>Method</u>
p-Terphenyl	132	NWTPH-D
Toluene-d8	93	SW846 8260C
4-Bromofluorobenzene	86	SW846 8260C

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Certificate of Analysis

McKinley Paper Co.
1815 Marine Drive
Port Angeles, WA 98362

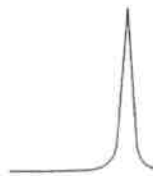
Date Received: 5/27/2020
Date Reported: 6/16/2020
Sampler: Terry Nishimoto

Project: N Foundation Excavation

Test	Result	Units	Method	Test Date	Initials
197118-03	Excavated Soils			Date Sampled: 5/15/2020	
Arsenic	<3.00	mg/kg	EPA 3050B/6010 D	6/5/2020	KW
Barium	32.3	mg/kg	EPA 3050B/6010 D	6/5/2020	KW
Cadmium	<1.00	mg/kg	EPA 3050B/6010 D	6/5/2020	KW
Chromium	33.6	mg/kg	EPA 3050B/6010 D	6/5/2020	KW
Lead	90.6	mg/kg	EPA 3050B/6010 D	6/5/2020	KW
Mercury	0.13	mg/kg	EPA 7471B	6/8/2020	KW
Selenium	4.79	mg/kg	EPA 3050B/6010 D	6/5/2020	KW
Silver	<1.00	mg/kg	EPA 3050B/6010 D	6/5/2020	KW

Approved For Release

Angela Kaelin, Laboratory Supervisor



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06/09/2020

Spectra Laboratories-Kitsap, LLC
 26276 Twelve Trees Lane
 Suite C
 Poulsbo, WA 98370
 Attn: Angela Kaelin

P.O.#: 197118
 Project: N. Foundation Excavation
 Client ID: Excavated Soils
 Sample Matrix: Soil
 Date Sampled: 05/18/2020
 Date Received: 05/28/2020
 Spectra Project: 2020050744
 Spectra Number: 3

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Method</u>	<u>Analyst</u>	<u>Date Analyzed</u>
Diesel	621	mg/Kg	NWTPH-D	SKS	06/04/2020
Oil	2160	mg/Kg	NWTPH-D	SKS	06/04/2020
Benzene	<0.05	mg/Kg	SW846 8260C	DJS	05/29/2020
Ethylbenzene	<0.05	mg/Kg	SW846 8260C	DJS	05/29/2020
Methyl-tert-Butyl Ether	<0.05	mg/Kg	SW846 8260C	DJS	05/29/2020
Toluene	<0.05	mg/Kg	SW846 8260C	DJS	05/29/2020
Total Xylenes	<0.05	mg/Kg	SW846 8260C	DJS	05/29/2020

<u>Surrogate</u>	<u>Recovery</u>	<u>Method</u>
p-Terphenyl	135	NWTPH-D
Toluene-d8	92	SW846 8260C
4-Bromofluorobenzene	85	SW846 8260C

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June 16, 2020

Terry Nishimoto
1815 Marine Drive
Port Angeles, WA 98362

Project: N Foundation Excavation
Sample Date: 5/15/20 Thru 5/18/20

Lab Work Order #: 197118
Sample Received: 5/27/20 1520

Quality Control Report Digest Laboratory Check Standard

Test Parameter	QC Sample ID	True Value mg/kg	Result mg/kg	% Recovery	Acceptance Limits mg/kg	Date Analyzed	Method
Arsenic	LCS060320-01	99.8	1.08	108	80 - 120	6/8/20	EPA 3050B/6010D
Barium	LCS060320-01	99.8	1.12	112	80 - 120	6/8/20	EPA 3050B/6010D
Cadmium	LCS060320-01	99.8	1.08	108	80 - 120	6/8/20	EPA 3050B/6010D
Chromium	LCS060320-01	99.8	1.12	112	80 - 120	6/8/20	EPA 3050B/6010D
Lead	LCS060320-01	99.8	1.14	114	80 - 120	6/8/20	EPA 3050B/6010D
Mercury	LCS060820-02	0.408	0.410	100	80 - 120	6/8/20	EPA 7471B
Selenium	LCS060320-01	99.8	1.01	101	80 - 120	6/8/20	EPA 3050B/6010D
Silver	LCS060320-01	99.8	1.08	108	80 - 120	6/8/20	EPA 3050B/6010D

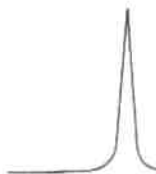
Digest Blank

Test Parameter	Blank ID	Result mg/kg	Acceptance Limits mg/kg	Date Analyzed	Method
Arsenic	MB060320-01	ND	<3.00	6/8/20	EPA 3050B/6010D
Barium	MB060320-01	ND	<1.00	6/8/20	EPA 3050B/6010D
Cadmium	MB060320-01	ND	<1.00	6/8/20	EPA 3050B/6010D
Chromium	MB060320-01	ND	<1.00	6/8/20	EPA 3050B/6010D
Lead	MB060320-01	ND	<3.00	6/8/20	EPA 3050B/6010D
Mercury	MB060820-02	ND	<0.03	6/8/20	EPA 7471B
Selenium	MB060320-01	ND	<3.00	6/8/20	EPA 3050B/6010D
Silver	MB060320-01	ND	<1.00	6/8/20	EPA 3050B/6010D

Approved for Release,

Angela Kaelin
Laboratory Supervisor
WDOE Accreditation #C594

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June 9, 2020

Spectra Laboratories-Kitsap, LLC
26276 Twelve Trees Lane
Poulsbo, WA 98370
Attn: Angela Kaelin

Method: NWTPH-Dx
Sample Matrix: Soil
Units: mg/Kg
Spectra Project #: 2020050744
Applies to Spectra #: 1-3

**HYDROCARBON ANALYSIS
QUALITY CONTROL RESULTS**

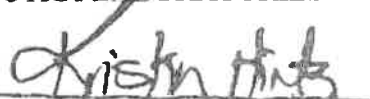
BLANK SPIKE

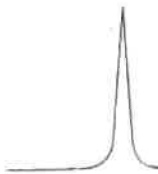
Spiked Sample:	LCS	Date Extracted:	05/29/20
		Date Analyzed:	06/04/20
<u>Compound</u>	<u>Spike Amount Added</u>	<u>Spike Amount Found</u>	<u>Percent Recovery</u>
Diesel	125	128.4	102.7%

METHOD BLANK

Date Extracted:	05/29/20	Date Analyzed:	06/04/20
Diesel	<10.0	mg/Kg	
Heavy Oil	<50.0	mg/Kg	
Surrogate Recovery:			
p-terphenyl	105%		

SPECTRA LABORATORIES


Authorized by: Kristin Hintz



June 1, 2020

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Sample Matrix: Soil
 EPA Method: 8260C / NWTPH-Gx
 Spectra Project: 2020050744
 Date Analyzed: 5/29/2020
 Units: mg/Kg
 Applies to Spectra #'s: #1-3

**GCMS VOLATILE ORGANIC ANALYSIS
 Laboratory Control Sample (LCS) Results**

COMPOUND	SAMPLE RESULT	SPIKE AMOUNT	SPIKE RESULT	LCS %REC
MTBE	<0.05	0.50	0.572	114
Benzene	<0.05	0.50	0.558	112
Toluene	<0.05	0.50	0.500	100
Etylbenzene	<0.05	0.50	0.573	115
Total Xylenes	<0.10	1.50	1.65	110

Surrogate Recoveries (%)	LCS	MB	Method Blank	
Dibromofluoromethane	97	98	Benzene	<0.05
1,2-Dichloroethane-d4	89	92	Toluene	<0.05
Toluene-d8	95	93	Ethyl Benzene	<0.05
4-Bromofluorobenzene	89	90	Total Xylenes	<0.10
			MTBE	<0.05


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