

BOISE VENEER  
400 SOUTH 1ST STREET, ST. HELENS, OREGON

# PHASE I ENVIRONMENTAL SITE ASSESSMENT

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CONFIDENTIAL



MAUL  
FOSTER  
ALONGI

*Prepared for*  
**CITY OF ST. HELENS**  
*June 29, 2015*  
*Project No. 0830.01.01*

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## **ACRONYMS AND ABBREVIATIONS**

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AAI	all appropriate inquiries
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
bgs	below ground surface
Boise	Boise Cascade Wood Products LLC
BTEX	benzene, toluene, ethylbenzene, and xylenes
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
Client	City of St. Helens
CMMP	contaminated-media management plan
CREC	controlled recognized environmental condition
DEQ	Oregon Department of Environmental Quality
DRO	diesel-range organics
ECSI	Environmental Cleanup Site Information
EDR	Environmental Data Resources, Inc.
ESA	environmental site assessment
HREC	historical recognized environmental condition
LUST	leaking underground storage tank
MFA	Maul Foster & Alongi, Inc.
NFA	No Further Action
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
ppm	parts per million
Property	400 South 1st Street, St. Helens, Oregon
RBC	risk-based concentration
REC	recognized environmental condition
RRO	residual-range organics
SFIM	Sanborn Fire Insurance Map
USEPA	U.S. Environmental Protection Agency
user	City of St. Helens
UST	underground storage tank
VCS	Oregon Voluntary Cleanup Sites

## **EXECUTIVE SUMMARY**

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This summary contains the findings and opinions of the environmental site assessment (ESA) and is intended for use with the supporting text, figures, and attachments of the complete report.

At the request of City of St. Helens, Maul Foster & Alongi, Inc. (MFA) conducted this Phase I ESA of the site at 400 South 1st Street, St. Helens, Oregon (the Property).

This Phase I ESA was conducted in accordance with the requirements of the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM E1527-13). The Phase I ESA also was prepared to support the Bona Fide Prospective Purchaser defense (Comprehensive Environmental Response, Compensation and Liability Act [CERCLA] § 101(4)) and the innocent purchaser defense (CERCLA § 101(35)(A)(i)). This Phase I ESA generally complies with 40 Code of Federal Regulations Part 312, adopted by the U.S. Environmental Protection Agency on November 5, 2005, and effective November 1, 2006. These rules identify the standards and practices for all appropriate inquiries under CERCLA § 101(35)(B). The purpose of the Phase I ESA was to identify, to the extent reasonably feasible, “recognized environmental conditions” (RECs).

### **PROPERTY SUMMARY**

Historical maps show that a sawmill occupied the Property in 1911, but it has been noted that sawmills may have operated on the Property as early as the mid-1800s<sup>1</sup>. Boise Cascade Wood Products LLC purchased the property in 1971 and subsequently converted the warehouse and planer mill in the southern portion of the property into a veneer mill. The sawmill was closed in 1978 and was intentionally demolished through a controlled burn in 1985. Wood treating (anti-sapstain) is not known to have been conducted on the Property.

A conditional No Further Action (NFA) determination from the Oregon Department of Environmental Quality (DEQ) for petroleum hydrocarbons in soil beneath the lathe mill area was issued in 2004 under the condition that if this area was exposed in the future it would be fully evaluated at that time. The veneer mill remained in operation until 2009. Equipment was removed from the veneer mill in 2012, and the building was demolished in 2013. In anticipation of selling the property for potential future development, Boise Cascade was obligated to further evaluate the Site that included the lathe area in anticipation of the concrete cap being removed. Boise Cascade also investigated other areas with known or suspected release including the former oil house and transformer area and debarker area. After completion of a remedial investigation and selected removal actions, DEQ issued a conditional NFA determination for the Property on June 8, 2015. It is expected that this determination will be followed by a Prospective Purchaser Agreement (PPA) and Consent Judgment between the State of Oregon and the City.

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<sup>1</sup> Boise and ERM-West. 2015. Site investigation and remediation report for Boise Cascade St. Helens, Oregon Veneer Mill site. Boise Cascade and ERM-West, Inc. April.

## RECOGNIZED ENVIRONMENTAL CONDITIONS

ASTM E1527-13 defines RECs as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment.

No uncontrolled RECs were identified for the Property.

## CONTROLLED RECOGNIZED ENVIRONMENTAL CONDITIONS

ASTM E1527-13 defines controlled RECs (CRECs) as resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority.

The CRECs identified through completion of this Phase I ESA are noted below and are discussed in further detail throughout this report. Figure ES-1 displays the area names used to describe different portions of the Property.

- Groundwater concentration in excess of the DEQ residential, urban residential, and occupational risk-based concentrations (RBCs) for lead, arsenic, polycyclic aromatic hydrocarbons (PAHs), diesel-range organics (DRO), and residual-range organics (RRO) have been observed on portions of the Property. In addition, benzo(a)pyrene (a PAH) was observed in groundwater in excess of the DEQ excavation worker RBC in two locations on the southeastern portion of the Property (one in Riverside and one in the Barker Area).
- PAHs in shallow soil above the DEQ residential, urban residential, and occupational RBCs in the Lumber Mill Area.
- DRO and RRO impacts to shallow and deep soil above DEQ residential, urban residential, occupational, and construction worker RBCs were observed in the Lathe Area.
- Lead-impacted soil remains along a portion of the northwestern periphery of the Property.
- It is recognized that, because of the known presence of fill material and long operational history of the Property, that additional areas that have not been identified may contain impacted soil and/or groundwater. For example, sampling of soils at depths less than 3 feet below ground surface is limited. There are also a number of instances where soils at depth would exceed residential, urban residential, occupational, and/or construction worker RBCs if brought to the surface (i.e., the Lathe Area, the Oil House and Transformer Area, the Barker Area, and Riverside).

On June 8, 2015, the DEQ issued a conditional NFA determination for the Property. To ensure protectiveness, the conditions detailed in the NFA outline the control of environmental conditions

on the Property and were developed in consideration of future redevelopment for a variety of uses, including residential. All of the above-noted CRECs are controlled through the conditions outlined in the DEQ NFA determination, including the following:

1. Extraction of groundwater through wells or by other means for use at the Property for consumption or other beneficial use is prohibited.
2. An impermeable cap will be maintained in the lathe area to prevent potential future exposure by site workers or residents and to minimize future leaching of contamination into shallow groundwater.
3. Any contaminated soil or groundwater removed from the site must be managed in accordance with a DEQ-approved contaminated-media management plan (CMMP). Residual soil in the northern removal area, lathe area, and localized area around TP-13 (located in the Sawmill Area of the Property), and groundwater near B-18 and B-20 (located in the Riverside and Barker Areas, respectively), will be identified in the CMMP as specific areas of concern. These restrictions and requirements should be memorialized in an Easement and Equitable Servitudes recorded on the Property deed.

## HISTORICAL RECOGNIZED ENVIRONMENTAL CONDITIONS

ASTM E1527-13 defines historical RECs (HRECs) as a past release of any hazardous substances or petroleum products that has occurred in connection with the Property and that has been addressed to the satisfaction of the applicable regulatory authority, or meets unrestricted use criteria established by a regulatory authority, without the Property being subjected to any required controls.

One HREC was identified for the Property as follows:

A former maintenance building on the northwestern corner of the Property was demolished in the mid-1990s, and petroleum-impacted soil was observed under the concrete floor. Approximately 400 tons of soil was excavated and disposed of at an off-site facility. Post-excavation confirmation soil sampling depicts low concentrations of volatile organic compounds and PAHs. Additional soil sampling was conducted in 2002/2003, with detections of PAHs below all applicable human health RBCs.

## DE MINIMIS CONDITIONS

A de minimis condition, as defined by ASTM E1527-13, is a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

No de minimis conditions were identified on the Property.

## ADDITIONAL FINDINGS

A state-led sediment investigation is being conducted along the Multnomah Channel (adjacent to the Property) and the Scappoose Slough. A number of the investigations discussed throughout this report have focused on assessing the Property's potential to be a contributing upland source area. These investigations have documented current conditions, and many include work plans accepted by DEQ. As with any ongoing investigation, there remains the potential for the Property to be identified as a contributing upland source area in the future, either under observance of additional data and/or because of changing conditions. However, based on current conditions, the DEQ has concluded that the Property is protective of public health and the environment and has issued an NFA and is in the process of entering into a Prospective Purchaser Agreement with the City.

## DATA GAPS

No significant data gaps were identified.

## CONCLUSIONS

MFA has conducted a Phase I ESA, in conformance with the scope and limitations of ASTM Practice E1527-13, of 400 South 1st Street, St. Helens, Oregon.

The Phase I ESA revealed evidence of CRECs and an HREC in connection with the Property.

# FIGURE





Source: Aerial photograph (2014) obtained from the National Agriculture Imagery Program (NAIP).

Note: All site features are approximate and historical.  
OHW = Ordinary High Water.

#### Legend

Site Boundary (OHW)

**Figure ES-1**  
**Areas of Investigation**  
City of St. Helens  
St. Helens, Oregon

# 1 INTRODUCTION

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## 1.1 Purpose

On behalf of City of St. Helens, Maul Foster & Alongi, Inc. (MFA) conducted a Phase I environmental site assessment (ESA) of the property located at 400 South 1st Street, St. Helens, Oregon (the Property) (see Figure 1). The Phase I ESA was conducted in accordance with the requirements of the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM E1527-13). The Phase I ESA also was prepared to support the Bona Fide Prospective Purchaser defense (Comprehensive Environmental Response, Compensation and Liability Act [CERCLA] § 101(4)) and the innocent purchaser defense (CERCLA § 101(35)(A)(i)). This Phase I ESA generally complies with 40 Code of Federal Regulations (CFR) Part 312, adopted by the U.S. Environmental Protection Agency (USEPA) on November 5, 2005, and effective November 1, 2006. These rules identify the standards and practices for all appropriate inquiries (AAI) under CERCLA § 101(35)(B). The purpose of the Phase I ESA was to identify, to the extent reasonably feasible, “recognized environmental conditions” (RECs). ASTM Practice E1527-13 defines RECs as:

...the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property.

RECs include the presence of hazardous substances or petroleum products even under conditions that comply with applicable environmental laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment, and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

## 1.2 Scope of Work

The scope of work included four components, each of which is briefly described below.

### 1.2.1 Site Reconnaissance Visit

On May 15, 2015, Ms. Caitlin Borbely and Mr. Erik Naylor of MFA conducted a site reconnaissance of the Property to look for evidence of RECs. The results of this site visit are documented in Section 2.

### 1.2.2 Records Review

MFA reviewed the following records:

- State and federal agency database records as described in Section 4.1.
- Aerial photographs of the Property as described in Section 4.3.1.
- Sanborn Fire Insurance Maps (SFIMs) for the Property, if available. See Section 4.3.2.
- Historical city directories for the Property, if available. See Section 4.3.3.
- Prior site assessment reports for the Property, if available. See Section 4.4.

The U.S. Geological Survey 7.5-minute quadrangle map (1990) for St. Helens, Oregon, was used as the physical setting source.

### 1.2.3 Interviews

To obtain site-specific information regarding the Property, MFA interviewed current and/or former managers, owners, occupants, and operators of the Property and adjoining properties as deemed prudent. MFA also interviewed state and/or local government officials for information about the Property. The interviews are discussed in detail in Section 5 of this report.

### 1.2.4 Report Preparations

MFA prepared this report in accordance with ASTM E1527-13. The recommended format was adjusted to improve reader usability and comprehension. Consistent with this ASTM guidance document, the following issues were not evaluated during the Phase I ESA: asbestos-containing building materials; radon; lead-based paint; lead in drinking water; wetlands; regulatory compliance; cultural and historic resources; industrial hygiene; health and safety; ecological resources; endangered species; indoor air quality (including vapor intrusion); biological agents; toxic fungus; mold; and high-voltage power lines.

## 1.3 Significant Assumptions

Significant assumptions include any assumptions made during the Phase I ESA process that have the potential to impact the opinions put forth in the report. No significant assumptions were made in the preparation of this report.

## 1.4 Limitations and Exceptions

Any opinions and/or recommendations presented in this Phase I ESA report apply to conditions that existed at the Property when the services were performed. No environmental assessment can wholly eliminate uncertainty regarding the potential for RECs in connection with a property. Performance of a Phase I ESA is intended to reduce, but not eliminate, uncertainty regarding the existence of RECs in connection with a property.

MFA conducted AAI regarding the potential for RECs at the Property. ASTM E1527-13 defines AAI as

...inquiry constituting “all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice” as defined in CERCLA, 42 U.S.C

§9601(35)(B), that will qualify a party to a commercial real estate transaction for one of threshold criteria for satisfying the LLPs to CERCLA liability (42 U.S.C §9601(35)(A) & (B), §9607(b)(3), §9607(q); and §9607(r)), assuming compliance with other elements of the defense.

MFA is not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services, and does not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

This assessment does not include any near-shore or in-water leased areas, and thus potential environmental impacts in sediment were not evaluated.

## 1.5 Special Terms and Conditions

No special terms or conditions apply to this Phase I ESA other than those set forth in ASTM Standard E1527-13, CERCLA 101(35)B(iii), and 40 CFR Part 312.

## 1.6 Deviations

There were no deviations from ASTM Standard Practice E1527-13, CERCLA 101(35)B(iii), and 40 CFR Part 312.

## 1.7 Additional Services

Other services in support of the potential purchase of the Property have been performed for the city, including review of historical documents and preparation of a contaminated-media management plan (CMMMP) (MFA, 2015). Information gained from these tasks has been incorporated where applicable.

## 1.8 Qualifications of Responsible Environmental Professionals

The Phase I ESA of the Property was conducted by environmental professionals experienced in performing ESAs and familiar with ASTM Standard Practice E1527-13 and industrial facility operations. Résumés of the environmental professionals involved in the performance of the Phase I ESA are included in Appendix A.

## 1.9 Reliance

For the purposes of the contractual relationship, the term “Client” refers to the City of St. Helens, which has sole permission to rely on this report. ASTM Standard Practice E1527-13 defines the “user” as the party seeking to use the standard to complete an ESA. The Client is the user of this Phase I ESA.

# 2

# SITE DESCRIPTION AND RECONNAISSANCE

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## 2.1 Objective and Methodology

Ms. Caitlin Borbely and Mr. Erik Naylor of MFA conducted a site reconnaissance visit on May 15, 2015, in order to obtain information indicating the presence of RECs in connection with the Property. During the site reconnaissance visit, Ms. Borbely and Mr. Naylor visually and/or physically observed the Property for evidence of the presence of RECs, including evidence of underground storage tanks (USTs) and aboveground storage tanks (ASTs), petroleum products, transformers containing polychlorinated biphenyls (PCBs), and use and storage of hazardous material. The interiors and exteriors of all structures were observed. The Property and adjacent properties were also observed from public thoroughfares. Site photographs taken during the site reconnaissance are included in Appendix B.

### 2.1.1 Exterior

Ms. Borbely and Mr. Naylor visually and physically observed the periphery of the Property and the periphery of all structures on the Property. The uses of roads and paths, with no apparent outlet, on the Property were identified in an effort to determine whether these roads were likely to have been used as avenues for disposal of hazardous substances or petroleum products. The Property and adjacent properties were also observed from public thoroughfares.

### 2.1.2 Interior

The Property contains no structures and thus interior spaces were not observed.

### 2.1.3 Limiting Conditions

Access limitations were not encountered during the site visit.

## 2.2 General Site Setting

### 2.2.1 Property Location and Legal Description

The Property encompasses 23.5 acres located at the southern end of 1st Street in St. Helens, Oregon, in the southeast quarter of the northwest quarter of section 3, township 4 north, range 1 west of the Willamette Meridian (see Figure 1). The property is located in Columbia County and includes tax lots 4N1W 300 100, 4N1W 3BD 1100, and 4N1W3BD 1200. The property is located between a steep basalt cliff on the west and the Multnomah Channel of the Willamette River on the east at its confluence with the Columbia River. Contained within Tax Lot 100, and also included in the Property, is a strip of land currently dedicated as a railroad right-of-way and owned by the Oregon Department of Transportation (Figure 2).

## 2.2.2 Site and Vicinity Characteristics

The Property is currently zoned “heavy industrial.” The Property is currently vacant and contains no structures. The southern portion of the Property is paved, mostly with asphalt, although some remaining concrete building footprints were also observed. The northern portion of the Property is not paved, although some areas contain gravel. A fence restricts access from all but the eastern side of the Property which is bordered by the Multnomah Channel, and the southwestern portion of the Property which is bordered by a basalt cliff. In general, the Property is level. The Property is owned by Boise Cascade Wood Products LLC (Boise).

## 2.2.3 Current Uses of Property

The Property is currently vacant.

## 2.2.4 Past Uses of Property

Historical maps show that a sawmill occupied the Property in 1911, but it is believed that sawmills operated on the Property as early as the mid-1800s (Boise and ERM-West, 2015). Boise Cascade Wood Products LLC purchased the property in 1971 and subsequently converted the warehouse and planer mill in the southern portion of the property into a veneer mill. The sawmill was closed in 1978 and was intentionally demolished through a controlled burn in 1985. The veneer mill remained in operation until 2009. Equipment was removed from the veneer mill in 2012, and the building was demolished in 2013. Wood treating (anti-sapstain) is not known to have been conducted on the Property.

## 2.2.5 Current Uses of Adjoining Properties

The Property is bordered by the following:

- North—St. Helen’s downtown and marina.
- South—Frogmore Slough, St. Helens wastewater treatment plant, and beyond that Cascade Tissue facility and former site of the St. Helens Pulp and Paper Mill.
- East—Multnomah Channel and the Columbia River
- West—A basalt cliff and beyond that residential neighborhoods. Also, a portion of St. Helens downtown borders the northwestern portion of the Property.

## 2.2.6 Past Uses of Adjoining Properties

In general, the past uses of adjoining properties were similar to the current use: residential and commercial as well as the southwest adjacent City of St. Helens wastewater treatment lagoon.

## 2.2.7 Current or Past Uses in Surrounding Area

As noted above, current and past uses of much of the surrounding area are residential and commercial, with a few notable exceptions. Of note is that the Cascade Tissue facility (former St. Helens Pulp and Paper Mill) is located approximately 2,000 feet to the south/southwest and upgradient along the Multnomah Channel. A number of other current/former industrial properties are located upgradient along Scappoose Bay.

## 2.2.8 Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions

In general, the Property and surrounding area are fairly level, with slightly lower gradients to the south and larger gradients to the east toward the Multnomah Channel and Columbia River. The southwest portion of the Property contains a basalt cliff. In its Geocheck report, Environmental Data Resources, Inc. (EDR) indicated that the soils on the Property are a silty clay loam to 29 inches below ground surface (bgs), followed by a silt loam to 59 inches bgs. According to a number of environmental reports, portions of the Property have been filled, some with dredged sediment, and thus sand, gravel, and concrete rubble fill reportedly have been observed up to 20 feet bgs. The Property is underlain by a dense basalt of the Columbia River Basalt Group, with a depth to groundwater ranging from approximately 10 to 19 feet bgs with the potential for perched groundwater and more shallow depths.

## 2.3 Interior and Exterior Observations

	Observed on the Property?		Notes
	Yes	No	
Structures		X	The Property does not contain any structures/buildings.
Roads	X		The Property is accessed from the north by South 1st Street and Strand Street. South 6th Street at the southern end of the Property could also provide access. At the time of the site visits, the Property was fenced and was not easily accessible to the public.
Potable Water Supply	X		Potable water is available to the Property from the City of St. Helens municipal system.
Sewage-Disposal System	X		Municipal sewage disposal is available to the Property.

	Observed on the Property?		Notes
	Yes	No	
Hazardous Substances and Petroleum Products in Connection with Identified Uses		X	
Storage Tanks		X	Former USTs are discussed in Section 4.4.
Odors		X	
Pools of Liquid		X	
Drums		X	
Hazardous-Substance and Petroleum-Product Containers		X	
Unidentified-Substance Containers		X	
PCBs		X	
Heating and Cooling		X	
Stains or Corrosion		X	
Drains or Sumps		X	
Pits, Ponds, or Lagoons		X	
Stained Soil or Pavement		X	
Stressed Vegetation		X	
Solid Waste		X	
Wastewater		X	
Stormwater	X		Four stormwater outfalls are present on the Property, as noted in Section 4.4.
Wells	X		Fourteen monitoring wells are currently present on the Property but are scheduled for decommissioning prior to sale of the Property. Groundwater is discussed further in Section 4.4.
Septic Systems		X	

# 3 USER-PROVIDED INFORMATION

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MFA provided a Data Request Form to the Client. The form was not returned before finalization of this report.

## 3.1 Title Records

A preliminary title report was provided by Boise from Ticor Title Company and was reviewed. Environmental liens or activity and use limitations were not observed to be noted within the provided title records. Section 3.2 discusses some activity use limitations that are currently recorded against the Property. The title records have been provided in Appendix C.

## 3.2 Environmental Liens or Activity and Use Limitations

The Property is subject to the conditions outlined in the June 8, 2015, Oregon Department of Environmental Quality (DEQ) conditional No Further Action (NFA) determination, including the following:

1. Extraction of groundwater through wells or by other means for use at the Property for consumption or other beneficial use is prohibited.
2. An impermeable cap will be maintained in the lathe area to prevent potential future exposure by site workers or residents and to minimize future leaching of contamination into shallow groundwater.
3. Any contaminated soil or groundwater removed from the site must be managed in accordance with a DEQ-approved CMMP. Residual soil in the northern removal area, lathe area, and localized area around TP-13, and groundwater near B-18 and B-20, will be identified in the CMMP as specific areas of concern. These restrictions and requirements should be memorialized in an Easement and Equitable Servitudes recorded on the Property deed.

Areas of concern (also referred to as “restricted areas”) of the Property as identified in the CMMP (MFA, 2015) are depicted on Figures 3 and 4.

## Specialized Knowledge

The Client provided no specialized knowledge regarding the Property.

## 3.3 Commonly Known or Reasonably Ascertainable Information

As the Data Request Form was not returned, information pertaining to the Client’s knowledge of information commonly known or reasonably ascertainable within the local community that is

relevant to RECs in connection with the Property could not be determined by finalization of this report.

### 3.4 Valuation Reduction for Environmental Issues

The Client did not comment on its determination of whether the purchase price would be affected by the presence of contamination.

### 3.5 Owner, Property Manager, and Occupant Information

According to the Columbia County Assessor, the Property is owned by Boise, is managed by the same entity, and is vacant.

### 3.6 Reason for Performing the Phase I ESA

The Client reported that the purpose of this Phase I ESA is due diligence in preparation for purchasing the Property.

## 4 RECORDS REVIEW

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### 4.1 Standard Environmental Record Sources

MFA contracted EDR to search state and federal agency record sources for information regarding the Property and sites near the Property. All databases were searched using the standard approximate minimum search distances specified in ASTM E1527-13 or the search distances used by EDR, if those are greater. The sites identified by this database search are shown in the following table. A list of “orphan” sites with inadequate address information for mapping was also researched; orphan sites found to be within the appropriate search radii are also included in this table. The EDR-generated report is included in Appendix D.

Databases Searched	Sites Listed	
	EDR Geocheck	Orphan
<b>Approximate Minimum Search Distance: 1.0 Mile from Property Boundary</b>		
USEPA National Priorities List Sites (NPL)	0	0
Federal Delisted NPL	0	0
USEPA Corrective Action Report (CORRACTS)	0	0
DEQ Environmental Cleanup Site Information (ECSI)	7	0
DEQ Confirmed Release List (CRL)	1	0
State Equivalent NPL	0 or NA	0
Tribal Equivalent NPL	0 or NA	0

Databases Searched	Sites Listed	
	EDR Geocheck	Orphan
<b>Approximate Minimum Search Distance: 0.5 Mile from Property Boundary</b>		
USEPA's Comprehensive Environmental Response, Compensation, and Liability Act Information System (CERCLIS)	0	0
Resource Conservation and Recovery Act Information System Non-CORRACTS Treatment, Storage, and Disposal (RCRIS-TSD)	0	0
Oregon CERCLIS Equivalent	0	0
Oregon Voluntary Cleanup Sites (VCS)	1	0
Oregon Solid Waste Information Systems (Landfills)	1	0
DEQ Brownfield Projects	0	0
DEQ LUST Database	11	0
LUSTs on Indian Land	0	0
Tribal Databases (CERCLIS-Equivalent, Voluntary Cleanup Sites, Brownfield Sites, Landfill Sites)	0 or NA	0
CERCLIS "No Further Remedial Action Planned" (NFRAP)	1	0
United States Engineering Controls Sites List (USEC)	0	0
United States Sites With Institutional Controls List (USSIC)	0	0
DEQ Engineering Controls at ECSI Sites	0	0
DEQ Institutional Controls at ECSI Sites	0	0
Tribal Engineering/Institutional Controls	0	0
<b>Approximate Minimum Search Distance: 0.25 Mile from Property Boundary</b>		
USEPA Resource Conservation and Recovery Act (RCRA) Large-Quantity Generator	0	
USEPA RCRA Small-Quantity Generator	0	0
DEQ UST Database	3	0
DEQ AST Database	1	0
USTs and ASTs on Indian Land	0	0
<b>Approximate Minimum Search Distance: Property Only</b>		
Emergency Response Notification System (ERNS)	0	0
DEQ Underground Injection Control (UIC) Program	0	0

Based on MFA's review of the report provided by EDR, the Property is listed in a number of regulatory databases, including Landfills, OR SPILLS, the National Pollutant Discharge Elimination System, UST, LUST, VCS, and ECSI. The Property has been the subject of many investigations, as discussed further in Section 4.4, and contains controlled RECs (CRECs) as noted in Section 6.3. Further information as to the current status of the Property in the VCS and ECSI databases is discussed in Section 4.2 below. The Landfills database listings appears to be erroneous and likely are associated with the Cascade Tissue facility (owned by Boise White Paper) at 1300 Kaster Road in St. Helens.

The remaining sites have no reported releases, have reported that cleanup is complete and/or have received NFA determinations from DEQ, and/or have little potential to impact the Property, based

on their proximity and/or elevation in relation to the Property. This assessment does not include any near-shore or in-water leased areas, and thus potential environmental impacts to sediment from nearby sites were not evaluated.

## 4.2 Regulatory File Review

The file review portion of this Phase I ESA consisted of the following: an in-person review of the DEQ files for the Property was conducted in 2013, an interview with DEQ personnel and a review of online information provided by DEQ for nearby sites was conducted in June 2015, and a review of the regulatory documentation provided by Boise was completed.

A major milestone in the regulatory history of the Property includes the issuance of a conditional NFA determination for the Property on June 8, 2015. To ensure protectiveness, the conditions detailed in the NFA outline the control of environmental conditions on the Property and were developed in consideration of future redevelopment for a variety of uses, including residential.

## 4.3 Historical Use Information on Property and Adjoining Properties

MFA used the following information sources to obtain historical use(s) information.

### 4.3.1 Historical Aerial Photographs Review

Aerial photographs of the Property from 1951, 1960, 1970, 1977, 1981, 1990, 2000, 2005, 2006, 2009, 2011, and 2012 were obtained from EDR and reviewed to identify historical changes to the Property and the Property's historical uses, if any (see Appendix E).

1951—The Property during the 1950s, as depicted in these images, was an active lumber mill owned by Pope & Talbot. The Property contained storage areas and structures reflective of this use, such as sawmills, planer mills, stackers, dry kilns, lumber sheds, and a machine shop. An approximately 1,000-foot-long cargo dock is visible along the northeastern edge of the Property. What appears to be a sandbar is located in the Multnomah channel off of the southern portion of the Property in the 1951 image but is no longer visible in the 1960 image. The downtown portion of the City of St. Helens is visible north adjacent to the Property. Scattered residences are also visible in the area, with a higher density of residential development north of the downtown area. The area to the southwest of the Property appears largely undeveloped.

1960—The northern portion of the Property appears largely unchanged. The southern portion of the Property appears to have been cleared and potentially filled/graded with a new structure now visible in this area. According to historical maps of the Property provided by Boise, the uses of this structure included the crane shed and the planer. The surrounding area to the west of the Property has been developed more densely with residences.

1970—The lumber shed structure has been added on to the crane shed and the dry planer. The cargo dock appears to have been removed. The upstream portion of Frogmore Slough (south adjacent to the Property) has been filled. The surrounding area has increased in development density—largely of residential and commercial uses.

1977—The quality of this image is poor. It appears that the Property remains largely unchanged. The city wastewater treatment lagoon has been constructed south of the Property.

1981—Structures have been removed on the northern portion of the Property. The sawmill building remains on the central portion of the Property, although it has been modified (removal of the former green sorter). The former lumber shed portion of the facility has been modified and is now longer. This structure is noted in documentation for the Property to have been converted by Boise to the former veneer production plant. The surrounding area appears largely unchanged.

1990—The quality of this image is poor. The sawmill and stacker building (also formerly near the central portion of the Property) are no longer visible. The rest of the Property as well as the surrounding area appear largely unchanged.

2000—The Property now appears to contain only the main facility structure(s) on the southern portion, with some storage areas throughout the yard. The surrounding area has increased in development density—largely of residential and commercial uses.

2005, 2006, 2009, 2011, 2012—The Property and surrounding area appear largely unchanged.

#### 4.3.2 Sanborn Map Review

SFIMs were requested from EDR. SFIMS from 1921, 1939, 1948, and 1957 were reviewed to identify historical changes to the Property and the Property's historical uses, if any (see Appendix F).

1921—Development on the northern portion of the Property was noted as the St. Helens Lumber Company's Saw Mill, with features such as the sawmill, lumber shed, machine shop, and refuge burner. A note on the central/eastern half of the Property notes “Filled Land” “Covered with Slabwood Piles.” Another notation of filled land is slightly more inland, near the former railroad spur. The southern portion of the Property is depicted with small structures labeled “shacks” and a “sand dryer.” The portion of the depicted surrounding area shows low-density residential dwellings.

1939—The Property is noted to contain the Pope & Talbot Lumber Company, with features depicted such as the sorting table, tractor garage, machine shop, power house, forge, sawmill, and re-saw mill, as well as lumber sheds. A portion of the mill is noted to have been built on pilings and is “open under.” The southern area, approximately one third of the Property, is not depicted.

1948—The Property and surrounding area appear to remain largely unchanged.

1957—The Property and surrounding area appear to remain largely unchanged.

#### 4.3.3 City Directories

EDR provided city directories for 1992, 1995, 1999, 2003, 2008, and 2013 (see Appendix G). The Property does not appear to be listed in these city directories. These directories confirm the use of adjoining and nearby properties as residential, commercial, and municipal.

## 4.4 Prior Environmental Reports for Property

Appendix H includes the documents that were provided by Boise as well as documentation obtained from DEQ (on-line and in-person file reviews). Specific documents pertaining to the environmental status of the upland portions of the Property were reviewed in the preparation of this report and have been referenced throughout as applicable. Much of the information below was provided or referenced in the 2015 Site Investigation and Remediation Report (Boise and ERM-West, Inc.), as it summarized prior investigations/data in light of current conditions.

The following is a list of the site investigations and remedial actions that have been noted to have taken place at the Property:

- UST removal and confirmation sampling in 1987
- Maintenance shop soil-removal actions in 1995 and 1997
- Lathe area soil-removal action in 2001
- Remediation investigation/feasibility study in 2002 through 2004
- Phase I ESA in 2004
- Concrete-vault removal in 2005
- Stormwater drain and sump cleanout in 2013
- Soil and groundwater investigation in 2013 through 2014
- Soil-removal action for shallow metals in 2014

Below is a summary of environmental conditions and prior investigation findings for the Property based on a review of the above documents. This summary references certain areas on the Property (named for the former use of the area), including the Lathe Area, Oil House and Transformer Area, Barker Area, Maintenance Shop and UST Area, Sorter/Stacker Area, Sawmill Area, and Riverside (see Figure 5). The future use of the Property is currently unknown. Where sample data were available for review, they have been compared to the DEQ risk-based concentrations (RBCs) for residential, urban residential, occupational, and construction and excavation workers (as applicable). The preliminary risk assessment prepared by Boise and ERM, and approved by ODEQ, noted that exposure of ecological receptors to shallow soil contamination was considered unlikely due to projected future use of the Property. Additional, potentially more stringent screening criteria may be applicable to the Property (i.e., criteria for the protection of surface water receptors).

### FORMER SAWMILL AREA

During the 2013/2014 investigation, the locations of 23 test pits were randomly selected throughout the Property. A polycyclic aromatic hydrocarbon (PAH), benzo(a)pyrene, above the DEQ residential, urban residential, and occupational RBCs was observed in soil on the north-central portion of the Property, in the former Sawmill Area. Two other PAHs, benzo(b)fluoranthene and dibenzo(a,h)anthracene, were also observed at this location, at concentrations above the DEQ residential and urban residential RBCs in soil. As these concentrations were not observed in nearby test pits, these impacts appears to be of a limited extent.

## LEAD-IMPACTED-SOIL REMOVAL ACTION

Lead-impacted soil along a portion of the northwestern periphery of the Property was also observed in samples collected from test pits. Approximately 1,708 tons of impacted soil was excavated from this area and disposed of off site. The target cleanup levels used during this removal action were 400 parts per million (ppm) for soil up to 3 feet bgs and 800 ppm for soil at depths greater than 3 feet. A description of the confirmation samples and sample results includes a thin layer of residual soil on bedrock in the deepest part of the excavation (approximately 5-10 feet bgs), with concentrations remaining above target cleanup levels. Additionally, residual lead levels above RBCs for both residential and construction/excavation workers are present in samples along the northern sidewall of the excavation within about 3 feet of the property boundary. Impacted soil near the property boundary could not be removed due to concerns about damaging the adjacent building to the north, or property to the west which is at a higher elevation. The strip of remaining soil in this area has been identified in the CMMP as a restricted area, prompting appropriate sampling of and handling procedures for soil in this area upon redevelopment of the Property. As the Property is currently vacant and fenced, this strip of lead-impacted soil has been identified as a CREC.

## REMOVAL OF USTS

In 1987 a 2,000-gallon and a 3,000-gallon UST, concrete pad, and associated piping and contaminated soils were removed (approximately 60 to 80 cubic yards of material) from the northern portion of the Property. These tanks were noted in the remedial investigation report to have formerly contained gasoline and diesel. One confirmation soil sample and two pit water samples were collected and sampled for benzene, toluene, ethylbenzene, and xylenes (BTEX) at the time of removal. There were no detections in soil but reportedly there were exceedances of BTEX above federal standards in pit water. Followup investigations of this area were conducted in 2003 and 2014. The 2003 investigation identified residual-range organics (RRO) in soil below applicable RBCs, and PAHs (phenanthrene and fluorene) noted to be above ecological screening levels in groundwater (Boise and ERM-West, 2015). The 2014 investigation identified PAHs (benzo(a)pyrene, benzo(b)fluoranthene, and naphthalene) and diesel-range organics (DRO) and gasoline- and oil-range hydrocarbons in groundwater above DEQ residential, urban residential, and occupational RBCs (MFA, 2014).

## FORMER LATHE AREA

During repair of the lathe in 2001, petroleum-impacted soil was discovered beneath the floor, and approximately 10 cubic yards was removed and disposed of off site. As impacts are currently located under the former building concrete floor/foundation, no additional removal has been conducted. This area was investigated in 2002/2003 and again in 2013/2014. Both of these investigations have helped delineate the area of impacts and the range of constituents present in soil and groundwater. The lathe area is impacted by DRO and RRO in soil above DEQ residential, urban residential, and occupational and construction worker RBCs. Soil samples from 19 feet bgs were observed to contain one or more PAHs above the DEQ residential and urban residential RBCs, although as this soil is deeper than 3 feet bgs, these RBCs are not applicable unless the soil is brought to the surface. Groundwater impacts are discussed in the groundwater section below. The area to be delineated in

the forthcoming Easement and Equitable Servitudes in relation to impacted soil from the former lathe is depicted on Figures 3 and 4.

## FORMER OIL HOUSE AND TRANSFORMER AREA

A few detections of DRO and RRO (both assessed with the generic DEQ RBC for diesel) have been observed in the area of the former Oil House and Transformer Area. PCBs have not been detected in samples from this area. One soil sample from 19 feet bgs was observed to contain RRO at 14,600 ppm, which is above the DEQ residential, urban residential, and occupational and construction worker RBCs, although as this soil is deeper than 3 feet bgs, these RBCs are not applicable unless the soil is brought to the surface. Five PAHs in excess of the DEQ residential and urban residential RBCs have been observed in soil from this area.

## FORMER LOG DEBARKER AREA

One soil sample from 19 feet bgs was observed to contain one or more PAHs above the DEQ residential, urban residential, and occupational worker RBCs, although as this soil is deeper than 3 feet bgs, these RBCs are not applicable unless the soil is brought to the surface. Only the excavation worker RBC is often applicable to soils deeper than 3 feet bgs. A number of DRO and RRO detections were also observed in soil from this area, although they were detected at concentrations below applicable RBCs.

## CONCRETE VAULT

A buried concrete vault was discovered during removal of the sorter/stacker building in 2005. The vault contained hydraulic oil and water and was pumped out with oversight by an environmental consultant. The vault was noted to be in good condition, with no indication of a release of hydraulic oil. This area was investigated in 2002/2003 (in conjunction with the lumber sorter hydraulic lift), with no impacts observed.

## STORMWATER

The Property contains four stormwater outfalls that discharge to the adjacent Multnomah Channel or the Frogmore Slough. Discharge from three of these outfalls was sampled in 2013/2014. The fourth outfall was not sampled, as it was reported to have formerly drained only roof runoff and the buildings were demolished in 2013. The samples were analyzed for PCBs, PAHs, and metals (arsenic, cadmium, lead, and mercury), and it was noted that all constituents were below their respective DEQ surface water ecological screening level values (Boise and ERM-West, 2015).

## GROUNDWATER

Groundwater data collected in 2002/2003 and 2013/2014 (including data collected by MFA in 2013) show DEQ RBC exceedances as follows:

- Arsenic—residential, urban residential, and occupational RBC exceedances in groundwater were observed in all assessed locations (the Lathe Area and Riverside).

- Lead—residential, urban residential, and occupational RBC exceedances in groundwater, in three of four locations assessed in the Lathe Area. The only other area assessed for lead in groundwater was Riverside; lead was not detected above RBCs in these samples.
- PAHs (multiple)—residential, urban residential, and occupational RBC exceedances in groundwater were observed in the following assessed areas: the Lathe Area, the Oil House and Transformer Area, the Barker Area, Riverside, and the Maintenance Shop and UST Area. PAHs were not observed in samples collected from the Sorter/Stacker Area. Benzo(a)pyrene was observed to exceed the DEQ excavation worker RBC in two locations, one in the Riverside Area and one in the Barker Area.
- DRO/RRO—residential, urban residential, and occupational RBC exceedances in groundwater were observed in the following assessed areas: the Lathe Area, the Oil House and Transformer Area, the Barker Area, and Riverside. Residential and urban residential RBC exceedances were observed in the Maintenance Shop and UST Area. DRO and RRO were not observed in samples collected from the Sorter/Stacker Area. Both the DRO and the RRO were assessed with the generic DEQ RBC for diesel.

## 5 INTERVIEWS

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### 5.1 Interview(s) with Representative(s) of Owner

Ms. Merideth D'Andrea of MFA was directed to Mr. Russell Strader, representative for the current Property owner, for general and site-specific information regarding the Property. Mr. Strader indicated that, to his knowledge, there were no pending, threatened, or past litigation or administrative proceedings relevant to hazardous substances or petroleum products on the Property. He was not aware of any notices from any government agency regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products relative to the Property. According to Mr. Strader, there are no environmental liens on the Property.

Additionally, Mr. Strader noted that the Property has access to municipal water and sewer and that septic systems are not present on the Property. In regard to wells, Mr. Strader noted that there are no production wells on the Property and that 14 monitoring wells have been decommissioned.

### 5.2 Interview with Key Site Manager

See Section 5.1.

### 5.3 Interview with Occupant

The Property is currently vacant.

## **5.4 Interview with Previous Operator, Owner, and Occupant**

Contact information for previous operators, owners, and occupants was not provided and/or is not likely to be relevant to this assessment.

## **5.5 Interview(s) with State and/or Local Government Officials**

Ms. Merideth D'Andrea of MFA interviewed Mr. Mark Pugh of DEQ for information regarding the Property and surrounding area. Mr. Pugh is the DEQ project manager for the Property. Mr. Pugh acknowledged the recent NFA and the forthcoming PPA and Consent Judgment and reiterated that the Property contains fill material. Ms. D'Andrea inquired as to Mr. Pugh's knowledge of the surrounding area and other sites that may have the potential to impact the Property. Mr. Pugh did not identify any nearby sites although he did note the ongoing Scappoose Bay sediment investigations.

## **5.6 Interview with Owners or Occupants of Adjoining or Nearby Properties**

Interviews with owners or occupants of nearby properties are required for properties that have been abandoned and that have evidence of potential unauthorized uses or evidence of uncontrolled access. Adjoining properties do not fit this description; therefore, interviews of these neighbors were not conducted.

# **6 FINDINGS AND OPINIONS**

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## **6.1 Recognized Environmental Conditions**

ASTM E1527-13 defines RECs as the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment.

No uncontrolled RECs were identified for the Property.

## **6.2 Historical Recognized Environmental Conditions**

ASTM E1527-13 defines historical RECs (HRECs) as a past release of any hazardous substances or petroleum products that has occurred in connection with the Property and that has been addressed to the satisfaction of the applicable regulatory authority, or meets unrestricted use criteria established by a regulatory authority, without the Property being subjected to any required controls.

One HREC was identified for the Property as follows:

A former maintenance building on the northwestern corner of the Property was demolished in the mid-1990s, and petroleum-impacted soil was observed under the concrete floor. Approximately 400 tons of soil was excavated and disposed of at an off-site facility. Post-excavation confirmation soil sampling depicts low concentrations of volatile organic compounds and PAHs. Additional soil sampling was conducted in 2002/2003, with detections of PAHs below all applicable human health RBCs.

### 6.3 Controlled Recognized Environmental Conditions

ASTM E1527-13 defines CRECs as resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority.

The CRECs identified through completion of this Phase I ESA are noted below and are discussed in further detail throughout this report. Figure 5 displays the area names used to describe different portions of the Property.

- Groundwater concentration in excess of the DEQ residential, urban residential, and occupational RBCs for lead, arsenic, PAHs, DRO, and RRO have been observed on portions of the Property. In addition, benzo(a)pyrene (a PAH) was observed in groundwater in excess of the DEQ excavation worker RBC in two locations on the southeastern portion of the Property (one in Riverside and one in the Barker Area).
- PAHs in shallow soil above the DEQ residential, urban residential, and occupational RBCs in the Lumber Mill Area.
- DRO and RRO impacts to shallow and deep soil above DEQ residential, urban residential, and occupational and construction worker RBCs was observed in the Lathe Area.
- Lead-impacted soil remains along a portion of the northwestern periphery of the Property.
- It is recognized that, because of the known presence of fill material and long operational history of the Property, additional areas that have not been identified may contain impacted soil and/or groundwater. For example, sampling of soils at depths less than 3 feet bgs is limited. There are also a number of instances where soils at depth would exceed residential, urban residential, and occupational and/or construction worker RBCs if brought to the surface (i.e., the Lathe Area, the Oil House and Transformer Area, the Barker Area, and Riverside).

On June 8, 2015, DEQ issued a conditional NFA determination for the Property. To ensure protectiveness, the conditions detailed in the NFA outline the control of environmental conditions on the Property and were developed in consideration of future redevelopment for a variety of uses, including residential. All of the above-noted CRECs are controlled through the conditions outlined in the DEQ NFA determination, including the following:

1. Extraction of groundwater through wells or by other means for use at the Property for consumption or other beneficial use is prohibited.
2. An impermeable cap will be maintained in the lathe area to prevent potential future exposure by site workers or residents and to minimize future leaching of contamination into shallow groundwater.
3. Any contaminated soil or groundwater removed from the site must be managed in accordance with a DEQ-approved CMMMP. Residual soil in the northern removal area, lathe area, and localized area around TP-13,<sup>2</sup> and groundwater near B-18 and B-20,<sup>3</sup> will be identified in the CMMMP as specific areas of concern. These restrictions and requirements should be memorialized in an Easement and Equitable Servitudes recorded on the Property deed.

## 6.4 De Minimis Conditions

No de minimis conditions were identified on the Property.

## 6.5 Additional Findings

A state-led sediment investigation is being conducted along the Multnomah Channel (adjacent to the Property) and the Scappoose Slough. A number of the investigations discussed throughout this report have focused on assessing the Property's potential to be a contributing upland source area. These investigations have documented current conditions, and many include work plans accepted by DEQ. As with any ongoing investigation, there remains the potential for the Property to be identified as a contributing upland source area in the future, either under observance of additional data and/or because of changing conditions.

## 6.6 Data Gaps

No significant data gaps were identified.

## 6.7 Activity Use Limitations Compliance

The Property is subject to the conditions noted in Section 6.3 above as identified in the DEQ conditional No Further Action determination. It is assumed that these conditions will soon be memorialized through other channels in the near future—for example, through a deed restriction.

## 6.8 Statement of Environmental Professionals Conducting Phase I Environmental Site Assessment

BOISE VENEER

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<sup>2</sup> TP-13 is located in the Sawmill Area of the Property.

<sup>3</sup> B-18 and B-20 are located in the Riverside and Barker Areas, respectively.

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400 SOUTH 1ST STREET, ST. HELENS, OREGON

*The material and data in this report were prepared under the supervision and direction of the undersigned.*  
MAUL FOSTER & ALONGI, INC.

  
\_\_\_\_\_  
Caitlin Borbely  
Environmental Scientist

  
\_\_\_\_\_  
Merideth D'Andrea, RG, LG  
Senior Geologist

We declare that, to the best of our professional knowledge and belief, we meet the definition of environmental professional as defined in §312.10 of 40 CFR 312 and 12.13.2. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.

## 7 CONCLUSIONS

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MFA has conducted a Phase I ESA, in conformance with the scope and limitations of ASTM Practice E1527-13, of 400 South 1st Street, St. Helens, Oregon, the Property. Any exceptions to, or deviations from, this practice are described in Section 1 of this report.

The Phase I ESA revealed evidence of CRECs in connection with the Property:

- Groundwater concentrations in excess of the DEQ RBCs for lead, arsenic, PAHs, DRO, and RRO have been observed on portions of the Property.
- PAHs in shallow soil above the DEQ RBCs in the Lumber Mill Area.
- DRO and RRO impacts to shallow and deep soil above DEQ RBCs were observed in the Lathe Area.

- Lead-impacted soil remains along a portion of the northwestern periphery of the Property.
- It is recognized that, because of the known presence of fill material and long operational history of the Property, that additional areas that have not been identified may contain impacted soil and/or groundwater.

All of the above-noted CRECs are controlled through the conditions outlined in the DEQ NFA determination.

## 8 REFERENCES

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Boise and ERM-West. 2015. Site investigation and remediation report for Boise Cascade St. Helens, Oregon Veneer Mill site. Boise Cascade and ERM-West, Inc. April.

MFA. 2014. Memorandum (re: investigation in former UST area at the Boise Cascade Veneer Plant—St. Helens, Oregon). Prepared for the City of St. Helens. Maul Foster & Alongi, Inc. April 14.

MFA, 2015. City of St. Helens contaminated media management plan. Prepared for the City of St. Helens. Maul Foster & Alongi, Inc. June 18.

## 9 LIMITATIONS

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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.

The purpose of an environmental assessment is to reasonably evaluate the potential for or actual impact of past practices on a given site area. In performing an environmental assessment, it is understood that a balance must be struck between a reasonable inquiry into the environmental issues and an exhaustive analysis of each conceivable issue of potential concern. The following paragraphs discuss the assumptions and parameters under which such an opinion is rendered.

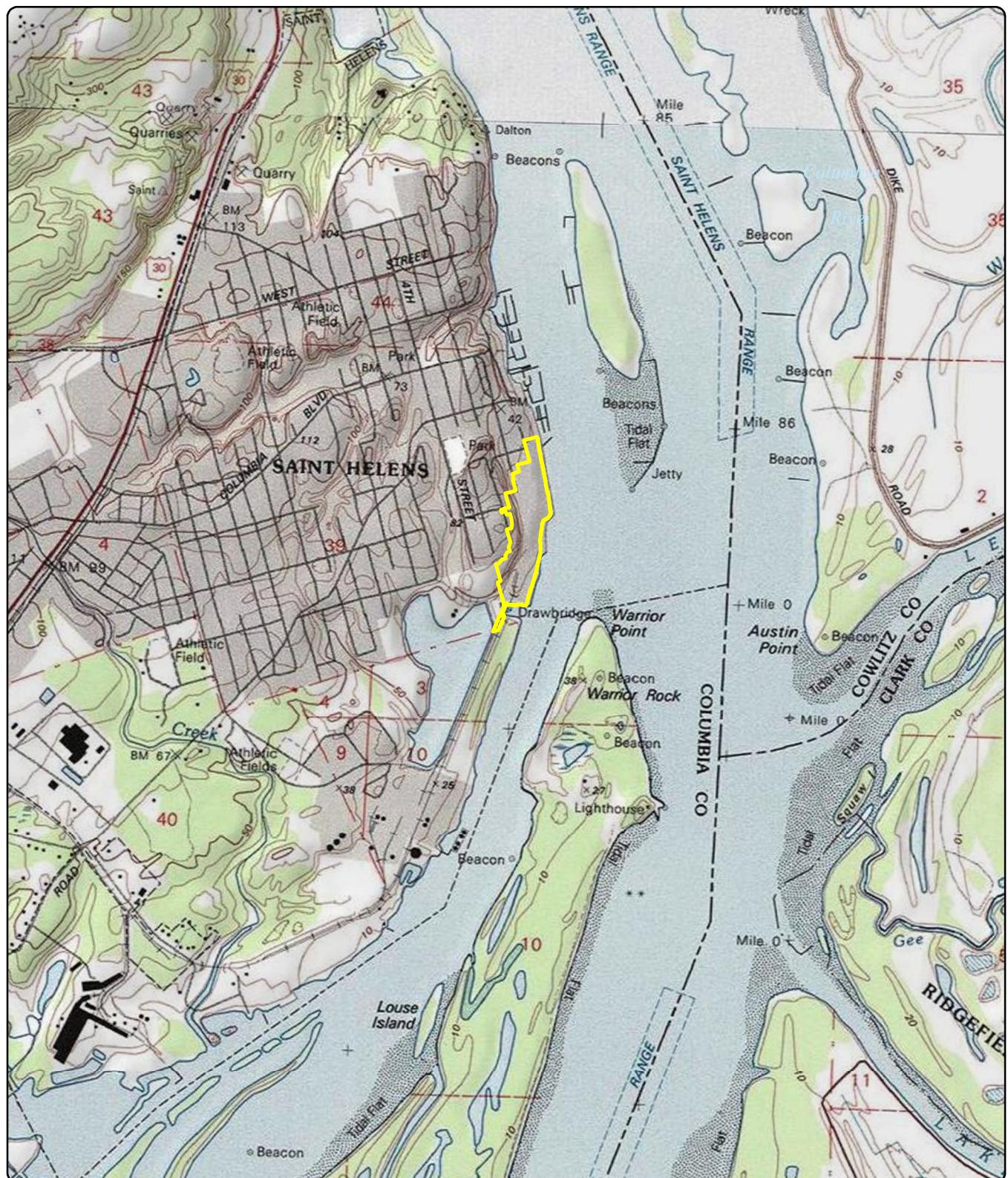
No investigation is thorough enough to exclude the presence of hazardous materials at a given site. If hazardous conditions have not been identified during the assessment, such a finding should not, therefore, be construed as a guarantee of the absence of such materials on the site, but rather as the result of the services performed within the scope, limitations, and cost of the work performed.

Environmental conditions that cannot be identified by visual observation may exist at the site. Where subsurface work was performed, our professional opinions are based in part on interpretation of data from discrete sampling locations that may not represent actual conditions at unsampled locations.

Except where there is express concern of our Client, or where specific environmental contaminants have been previously reported by others, naturally occurring toxic substances, potential environmental contaminants inside buildings, or contaminant concentrations that are not of current environmental concern may not be reflected in this document.

# FIGURES





Site Address: 400 South 1st Street, St. Helens, Oregon 97051  
 Source: Taxlot 100 plus portion of adjacent railroad right-of-way in  
 Section 03 of Township 04 North, Range 01 West

## Figure 1 Property Location

City of St. Helens  
 St. Helens, Oregon

### Legend

Property Boundary (approximate)



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0 1,000 2,000  
 Feet





Site Address: 400 South 1st Street, St. Helens, Oregon 97051  
Source: Aerial (2014) obtained from NRCS.  
Taxlot 100 plus portion of adjacent railroad right-of-way in  
Section 03 of Township 04 North, Range 01 West

## Figure 2 Property Overview

City of St. Helens  
St. Helens, Oregon

### Legend

Property Boundary (approximate)

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consult the primary data and information sources to ascertain the usability of the information.

0 200 400  
Feet





Source: Aerial photograph (2014) obtained from the National Agriculture Imagery Program (NAIP).

Note:  
OHW = ordinary high-water

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### Legend

-  Soil Restricted
-  Sample possibly containing elevated groundwater contamination
-  Site Boundary (OHW)

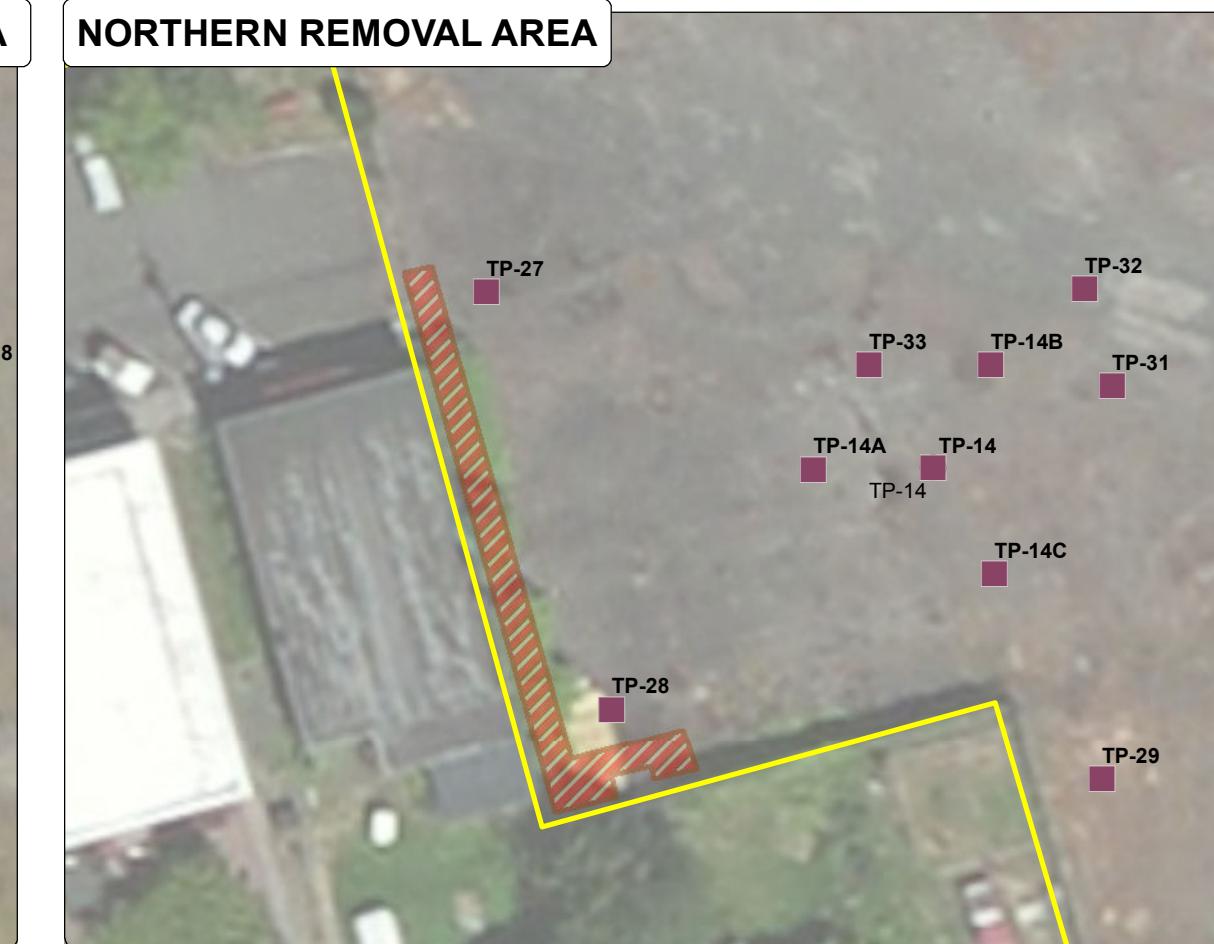
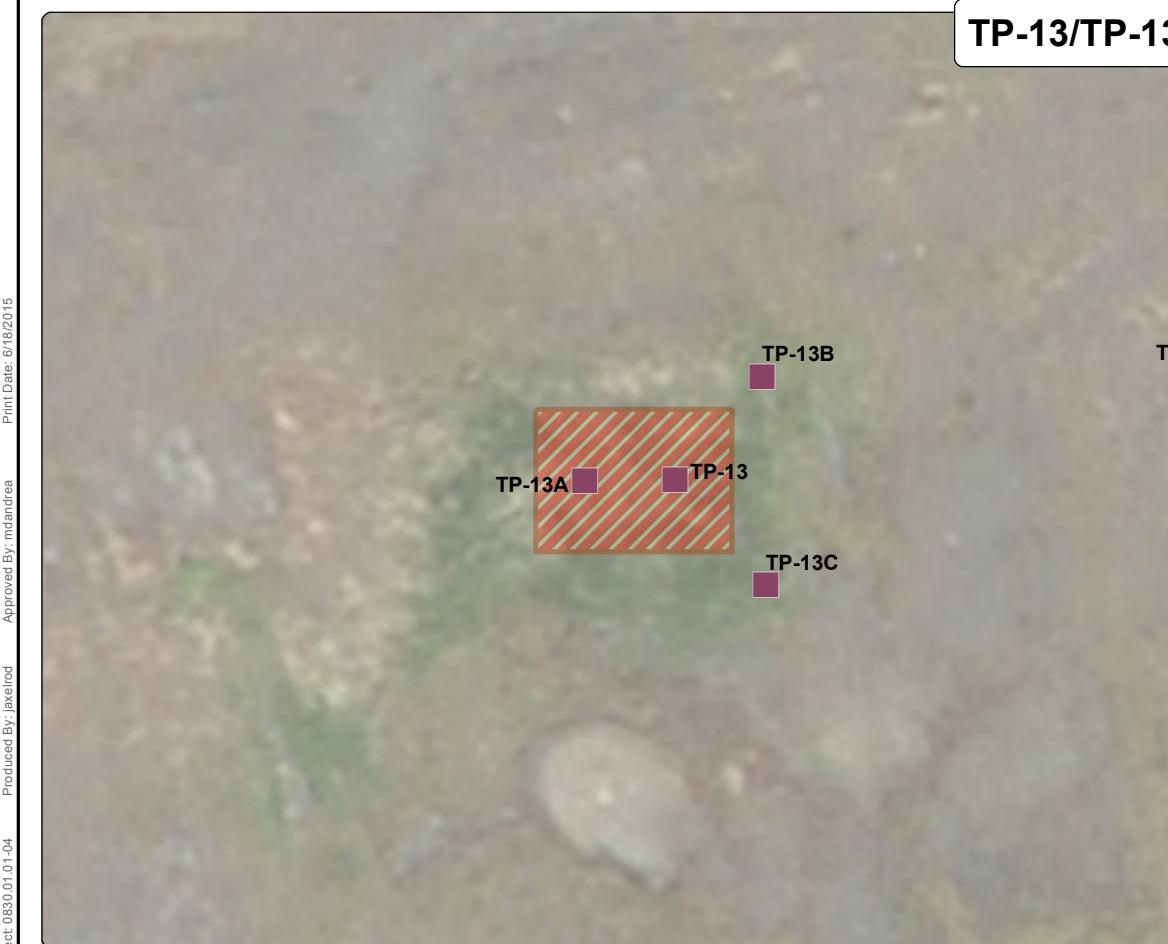
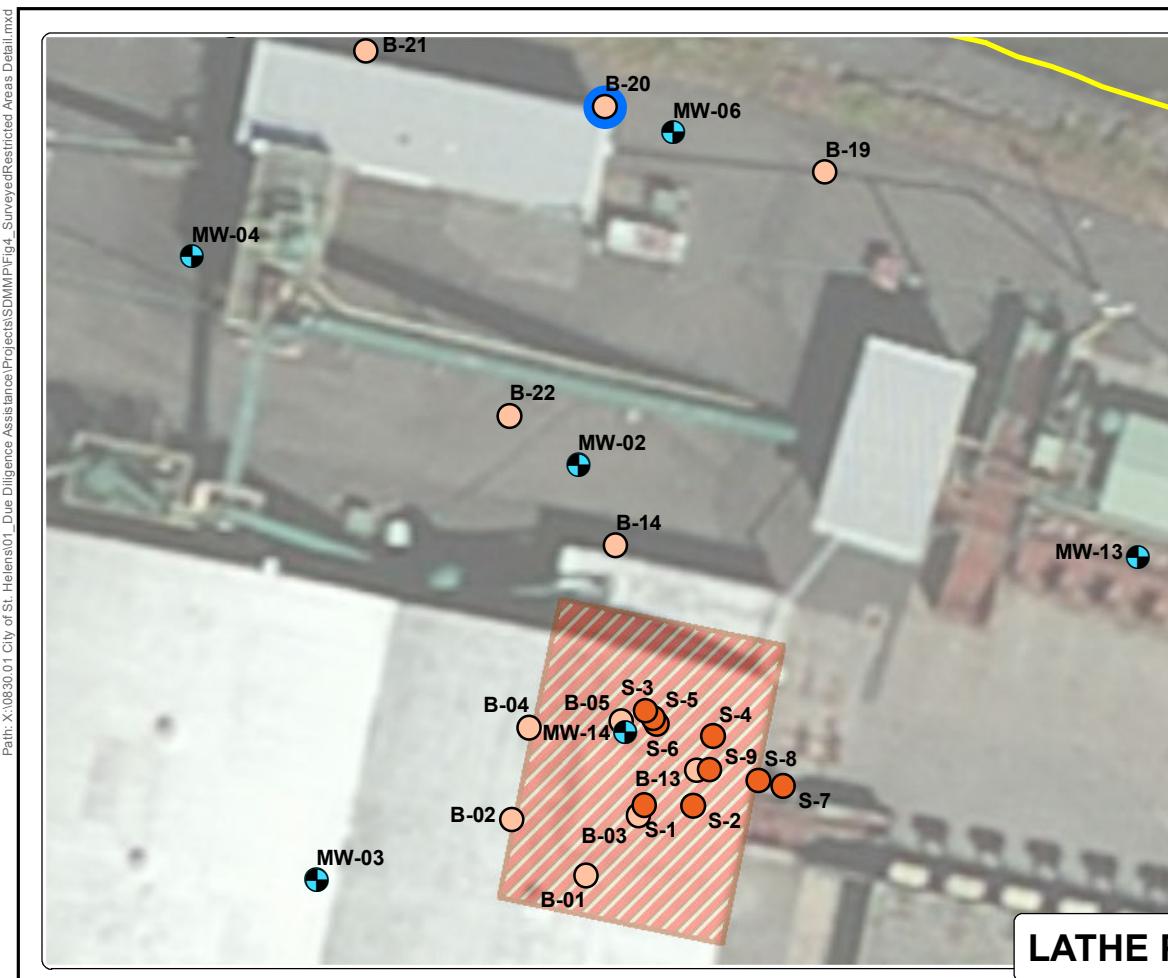
**Figure 3**  
**Restricted Areas**  
City of St. Helens  
St. Helens, Oregon

0 100 200  
Feet



**Figure 4**  
**Restricted Areas Detail**

City of St. Helens  
St. Helens, Oregon



**Legend**

- Site Boundary (Yellow line)
- Lathe Pit (Red hatched area)
- Soil Restricted Area (Red hatched area)
- Sample possibly containing elevated groundwater contamination (Blue circle)

**SAMPLE LOCATIONS**

- Soil Sample (2001) (Orange circle)
- Boring (2013-2014) (Orange circle)
- Test Pit (2014) (Purple square)
- Monitoring Well (Blue circle)

0 20 40  
Feet

Source: Aerial photograph obtained from Esri, ArcGIS Online; location of the lathe pit and sample locations TP-13A-C, TP-14A-C, and TP-27 through TP-37 (2014) digitized from figure provided by ERM; all other sample locations (2013-2014) obtained from AKS survey; 2001 sample locations obtained from hand-drawn map provided by Boise.

Note: All feature locations are approximate,

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Source: Aerial photograph (2014) obtained from the National Agriculture Imagery Program (NAIP).

Note: All site features are approximate and historical.  
OHW = Ordinary High Water.

#### Legend

Site Boundary (OHW)

**Figure 5**  
**Areas of Investigation**  
City of St. Helens  
St. Helens, Oregon

# APPENDIX A

## RESUMES



# APPENDIX B

## SITE PHOTOGRAPHS



# APPENDIX C

## TITLE RECORDS



# APPENDIX D

## EDR GEOCHECK REPORT



# APPENDIX E

## AERIAL PHOTOGRAPHS



# APPENDIX F

## SANBORN FIRE INSURANCE MAPS



# APPENDIX G

## CITY DIRECTORIES



# APPENDIX H

## ENVIRONMENTAL DOCUMENTATION

