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FINAL WORK PLAN FOR REMEDIAL INVESTIGATION/FEASIBILITY STUDY AND DRAFT CLEANUP ACTION PLAN

JELD-WEN, INC.
FORMER NORD DOOR SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON 98201

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ACRONYMS AND ABBREVIATIONS

ARARs	applicable or relevant and appropriate requirements
AST	above ground storage tank
bgs	below ground surface
BNAs	semi-volatile organic compounds (sediment)
BTEX	benzene, toluene, ethylbenzene, total xylenes
CAP	Cleanup Action Plan
CFR	Code of Federal Regulations
COPC	contaminants of potential concern
CSL	cleanup screening level
DQO	data quality objective
Ecology	Washington State Department of Ecology
EIS	environmental impact statement
EPA	Environmental Protection Agency
FS	feasibility study
HASP	health and safety plan
HCID	hydrocarbon identification
ICP	inductively coupled plasma-atomic emission spectroscopy
mg/Kg	milligrams per kilogram
mg/L	milligrams per liter
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
MCL	maximum contaminant level
MSDS	material safety data sheet
MTCA	Model Toxics Control Act
MW	monitoring well
NRCS	National Resource Conservation Service
PAH	polynuclear aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCP	Pentachlorophenol
ppm	parts per million
PPMETS	Priority pollutant metals, antimony, arsenic, beryllium, cadmium, chromium, copper, lead, nickel, selenium, silver, thallium, zinc
PPP	Public Participation Plan
PQL	practical quantitation limit
QA/QC	quality assurance/quality control
QAPP	quality assurance project plan
RI	remedial investigation
SAP	sampling and analysis plan
SAPA	sediment sampling plan appendix
SEPA	State Environmental Policy Act
SHA	site hazard assessment
SLV	screening level values
SMS	Sediment Management Standards

SQS	Sediment Quality Standards
SVOC	semi volatile organic compounds
TEE	Terrestrial Ecological Evaluation
TOC	total organic carbon
TPH	total petroleum hydrocarbons
TPH-Gx	total petroleum hydrocarbons as gasoline
TPH-Dx	total petroleum hydrocarbons as diesel
TVS	total volatile solids
UST	underground storage tank
VOC	volatile organic compound
WAC	Washington Administrative Code
WARM	Washington Ranking Method
WQC	water quality criteria

1. INTRODUCTION

This Work Plan has been prepared to describe the proposed work scope for completing the Remedial Investigation (RI), Feasibility Study (FS) and draft Cleanup Action Plan (CAP) at the JELD-WEN former Nord Door facility located at 300 West Marine View Drive, Everett, Washington, 98201 (JELD-WEN Site). The JELD-WEN Site location is shown on Figure 1.

1.1 PURPOSE

This Work Plan is intended to describe the work scope that will be performed to meet the objectives in the Agreed Order for RI/FS Study and Draft CAP dated January 2, 2008. The RI work scope has been developed to delineate and quantify the contaminants of potential concern (COPCs) that may be present in soil, groundwater, surface water and sediments. The FS will evaluate potential alternatives and a preferred alternative for the cleanup of the identified contaminants. A detailed description of the cleanup of site contaminants will be provided in the draft CAP.

1.2 OBJECTIVES

The overall objective of the RI/FS is to identify the hazardous substances which have been released to the environment; assess the nature, extent and distribution of these substances; identify the potential migration pathways and receptors; assess the theoretical risk to human health and the environment; and generate or use data of sufficient quality for site characterization, risk assessment and the subsequent analysis and selection of remedial alternatives.

1.3 GENERAL BACKGROUND

JELD-WEN, inc. (JELD-WEN) acquired certain assets, including the real property of the Nord Door plant in May 1986 through the bankruptcy court. Prior to JELD-WEN's ownership, the Site had been in use as a stile and rail door plant since the mid-1940s by E.A. Nord Company (Nord Door). Prior to the 1940s, a pole treating plant operated on the eastern portion of the Site. According to the Metsker's Atlas of Snohomish County published in 1936, the former pole treating facility was owned by National Pole Company. In addition, Sound Casket Manufacturing operated a wood casket factory on the southeastern portion of the Site from at least 1936 until sometime prior to 1947, by which time the casket factory was operated by Northwestern Lumber & Manufacturing Co. By 1976 some of the structures associated with the former wood casket plant had been incorporated into the Nord Door facility. A rectangular building and several smaller structures were located on the far southeastern corner of the Site, south of the casket factory, between at least 1947 and 1955. The 1950 Sanborn map identifies the use of the building as "fish net storage." A 1936 Metsker's map indicates the Parcel was owned by K.K. Timber Co., although the map does not indicate whether structures were present or what the use of the parcel (if any) may have been at that time. Structures were no longer present on the far southeastern corner off the Site at the time of a 1967 aerial photograph. Areas on the eastern, northern, and southern portions of the Site were filled in various stages beginning in the late 1800s or early 1900s when the adjacent Burlington Northern Santa Fe (BNSF) railroad was laying tracks along Port Gardner Bay. Additional fill activities were conducted in the late 1970s by Nord Door. In approximately 1995, the western portion of the Site was developed with an asphalt batch plant and associated buildings, which are currently occupied by Rinker Materials.

1.4 GENERAL SITE INFORMATION

Site Name: JELD-WEN

Site Address: 300 West Marine View Drive

City and State: Everett, WA 98201

County: Snohomish

Township/Range/Section: Section 7, Township 29N, Range 5E of the Willamette Meridian

Latitude: 48º 00' 49.5"

Longitude: 122º 12' 34.5"

Washington State Department of Ecology (Ecology) Facility Site ID Number: 2757

Ecology Region: Northwest Region

Ecology Project Manager: Andy Kallus, Ecology, Toxics Cleanup Program

Ecology Project Coordinator: Isaac Standen, Ecology, Toxics Cleanup Program

JELD-WEN Project Coordinator: Jay Russell (JELD-WEN, inc. Project Manager)

JELD-WEN Project Manager: Scott Miller, SLR

2. PROJECT MANAGEMENT PLAN

The project management plan for completing the RI/FS and draft CAP consists of the work scope described in this Work Plan, project communications plan, project schedule, Sampling and Analysis Plans (SAP), Quality Assurance Project Plan (QAPP), and the project specific Health & Safety Plan (HASP).

2.1 PROJECT COMMUNICATIONS

The primary contacts, roles, and contact information for the work scope described in this Work Plan a summarized in the following table:

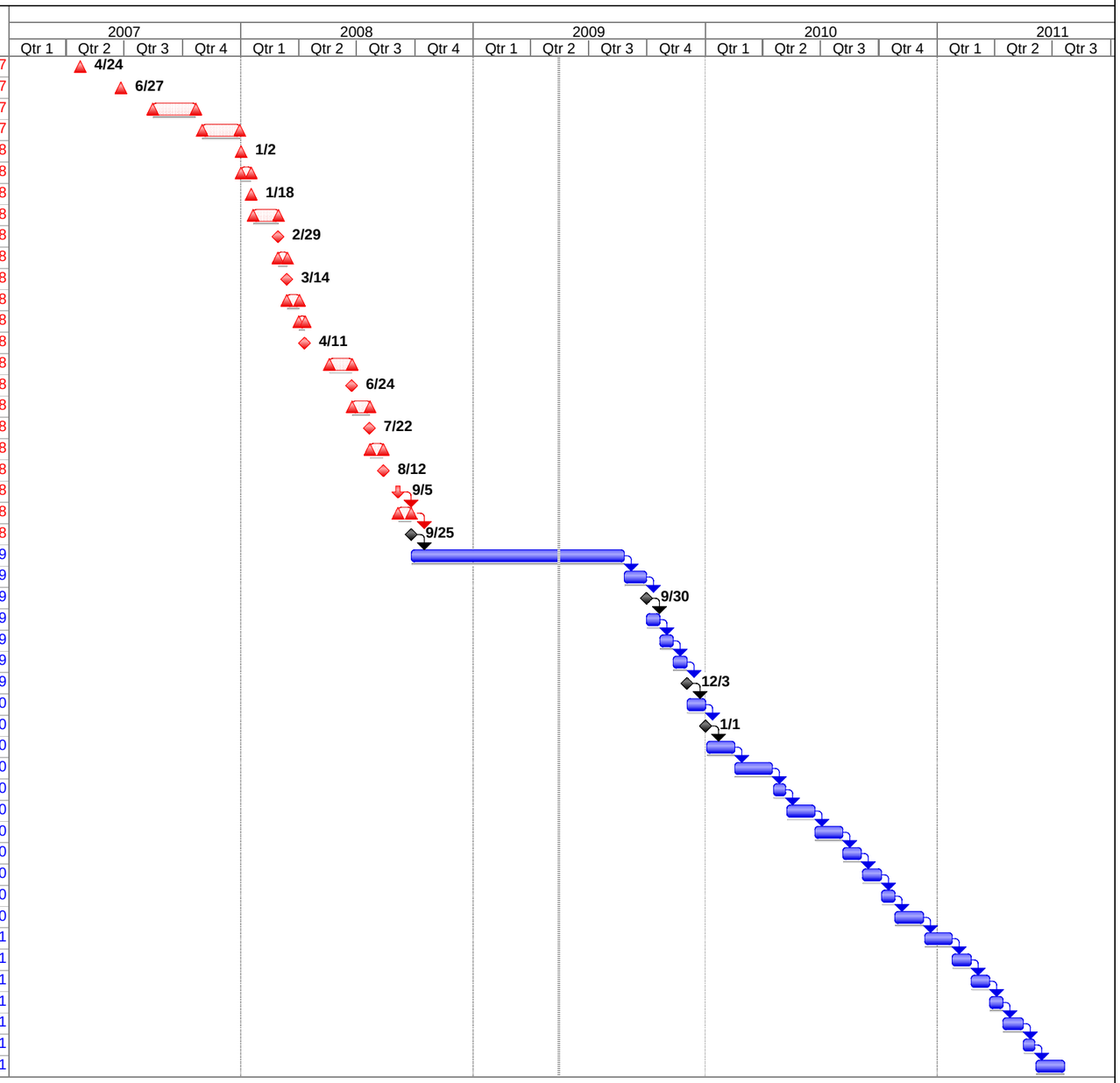
Ecology	SLR	JELD-WEN
Ecology Project Coordinator Mr. Isaac Standen **Role:** Primary Site Contact Washington State Department of Ecology, Toxics Cleanup Program 300 Desmond Drive Lacey, WA 98503 Phone: 360/407/6776 Email Address: ista461@ECY.WA.GOV	Project Manager Mr. Scott Miller **Role:** Project Manager SLR International Corp 1800 Blankenship Road, Suite 440 West Linn, Oregon 97068 Phone: 503/723-4423 Fax: 503/723-4436 Email Address: smiller@slrcorp.com	JELD-WEN Project Coordinator Mr. Jay Russell **Role:** Contact / Coordination JELD-WEN, inc. 2751 SW Airport Way Redmond, OR 97756 Phone: 541/504-2716 Fax: 541/504-2715 Email Address: jayru@jeld-wen.com

2.2 RI/FS AND DRAFT CAP SCHEDULE

The following page presents the proposed schedule for completing the RI/FS and draft CAP at the Site. The schedule may change following the September 9, 2008 meeting between JELD-WEN and Ecology and/or based on the availability of subcontractors, weather conditions, or other factors. Any schedule modifications will be submitted for approval by SLR to the Ecology Project Coordinator.

JELD-WEN site (former Nord Door)
Everett, Washington
Updated 5-14-2009

ID	Task Name	Start	Duration	Duration Calendar Days	Finish
1	Submittal of Application for entry into VCP	Tue 4/24/07	0 days	0 days	Tue 4/24/07
2	Ecology Site Visit (former Nord Door site)	Wed 6/27/07	0 days	0 days	Wed 6/27/07
3	Agreed Order and public participation plan discussions	Thu 8/16/07	48 days	67 days	Mon 10/22/07
4	Public Comment Period for the draft Agreed Order	Fri 11/2/07	41 days	58 days	Sun 12/30/07
5	Complete Agreed Order (Order No. DE 5095)	Wed 1/2/08	0 days	0 days	Wed 1/2/08
6	Preparation of the Draft RI/FS Work Plan	Wed 1/2/08	12 days	15 days	Thu 1/17/08
7	Submittal of the Draft RI/FS Work Plan to Ecology	Fri 1/18/08	0 days	0 days	Fri 1/18/08
8	Ecology Review of Draft RI/FS Work Plan	Mon 1/21/08	30 days	39 days	Fri 2/29/08
9	Ecology Comments to the Draft RI/FS Work Plan issued	Fri 2/29/08	0 days	0 days	Fri 2/29/08
10	Preparation of the Ecology requested comment response document	Fri 2/29/08	11 days	14 days	Fri 3/14/08
11	Submittal of the Ecology requested comment response document to Ecology	Fri 3/14/08	0 days	0 days	Fri 3/14/08
12	Ecology response to the comment response document	Fri 3/14/08	14 days	19 days	Wed 4/2/08
13	Preparation of the Draft Final RI/FS Work Plan	Wed 4/2/08	8 days	9 days	Fri 4/11/08
14	Submittal of the Draft Final RI/FS Work Plan to Ecology	Fri 4/11/08	0 days	0 days	Fri 4/11/08
15	Ecology Review of the Draft Final RI/FS Work Plan	Tue 5/20/08	26 days	35 days	Tue 6/24/08
16	Ecology Comment to the Draft Final RI/FS Work Plan issued	Tue 6/24/08	0 days	0 days	Tue 6/24/08
17	Preparation of the Ecology request comment response document	Wed 6/25/08	20 days	27 days	Tue 7/22/08
18	Submittal of the Ecology requested comment response document to Ecology	Tue 7/22/08	0 days	0 days	Tue 7/22/08
19	Ecology prepared response to the comment response document	Wed 7/23/08	15 days	20 days	Tue 8/12/08
20	Ecology response to the comment response document	Tue 8/12/08	0 days	0 days	Tue 8/12/08
21	Submittal of Final RI/FS Work Plan	Fri 9/5/08	0 days	0 days	Fri 9/5/08
22	Ecology Review of Final Work Plan	Fri 9/5/08	15 days	20 days	Thu 9/25/08
23	Ecology Approval of Final Work Plan	Thu 9/25/08	0 days	0 days	Thu 9/25/08
24	Conduct Field Work (Phase 1)	Fri 9/26/08	239 days	334 days	Wed 8/26/09
25	Laboratory testing with QA/QC	Thu 8/27/09	25 days	34 days	Wed 9/30/09
26	Receipt of laboratory results	Wed 9/30/09	0 days	0 days	Wed 9/30/09
27	Submittal of Phase I investigation results to Ecology	Thu 10/1/09	15 days	20 days	Wed 10/21/09
28	Phase 2 Field Work Discussions with Ecology	Thu 10/22/09	15 days	20 days	Wed 11/11/09
29	Phase 2 Work Plan development (if needed)	Thu 11/12/09	16 days	21 days	Thu 12/3/09
30	Submittal of Phase 2 Work Plan to Ecology (if needed)	Thu 12/3/09	0 days	0 days	Thu 12/3/09
31	Ecology Review of Phase 2 Work Plan	Fri 12/4/09	21 days	28 days	Fri 1/1/10
32	Ecology Approval of Phase 2 Work Plan	Fri 1/1/10	0 days	0 days	Fri 1/1/10
33	Conduct Phase 2 Field Work	Mon 1/4/10	32 days	43 days	Tue 2/16/10
34	Receipt of laboratory results (Phase 2)	Wed 2/17/10	43 days	58 days	Fri 4/16/10
35	Submittal of Phase II investigation results to Ecology	Mon 4/19/10	15 days	18 days	Fri 5/7/10
36	Prepare Draft RI/FS report	Mon 5/10/10	32 days	43 days	Tue 6/22/10
37	Ecology Review of Draft RI/FS report	Wed 6/23/10	32 days	43 days	Thu 8/5/10
38	Draft Final RI/FS report	Fri 8/6/10	21 days	28 days	Fri 9/3/10
39	Ecology Review of Draft Final RI/FS report	Mon 9/6/10	22 days	29 days	Tue 10/5/10
40	Draft for Public Review RI/FS Report preparation	Wed 10/6/10	15 days	20 days	Tue 10/26/10
41	Draft CAP preparation	Wed 10/27/10	33 days	44 days	Fri 12/10/10
42	Ecology Review of Draft CAP	Mon 12/13/10	31 days	42 days	Mon 1/24/11
43	Draft Final CAP preparation	Tue 1/25/11	22 days	29 days	Wed 2/23/11
44	Ecology Review of Draft Final CAP	Thu 2/24/11	21 days	28 days	Thu 3/24/11
45	Draft for Public Review CAP preparation	Fri 3/25/11	15 days	20 days	Thu 4/14/11
46	Public comment period for RIFS Report and CAP	Fri 4/15/11	22 days	31 days	Mon 5/16/11
47	Ecology consolidates public and remaining tribal comments	Tue 5/17/11	14 days	17 days	Fri 6/3/11
48	Final RIFS Report and Final CAP preparation	Mon 6/6/11	33 days	44 days	Wed 7/20/11



2.3 SAMPLING AND ANALYSIS PLANS (SAPS)

The upland SAP details the proposed sample collection methods, sampling locations, assessment and sample collection depths, sample analysis, and equipment decontamination procedures. The upland SAP is provided in Appendix A. The sediment SAP details the proposed sediment sampling locations, sample collection methods, sampling equipment, and decontamination procedures. The sediment SAP is provided in Appendix B.

2.4 QUALITY ASSURANCE PROJECT PLAN (QAPP)

The QAPP contains the Quality Assurance/Quality Control (QA/QC) procedures for both field and laboratory procedures. The QAPP is provided in Section 3 of the upland and sediment SAP, which are provided in Appendix A and Appendix B.

2.5 SITE HEALTH AND SAFETY PLAN (HASP)

The Site HASP contains procedures, tools, and equipment that will be used during field activities to monitor and protect worker health and safety. The HASP is provided in Appendix C.

3. SITE DESCRIPTION AND ENVIRONMENTAL BACKGROUND

3.1 SITE LOCATION

The JELD-WEN Site is located at the confluence of the Snohomish River to the north and Port Gardner Bay (Possession Sound) to the west (Figure 1). The Site consists of five adjoining parcels (29050700100400, 29050700101200, 29050700400100, 29050700401900, and 29050700402000) with a combined land area (both in-water and upland) of approximately 52.6 acres, which includes approximately 36 acres above the tidal mudflats (Figure 2). Copies of the five Snohomish County Assessor's parcel maps of the Site are included in Appendix D. The Site is bound to the north by vacant land owned by the Port of Everett, to the south by undeveloped land owned by Foss Development, to the east by West Marine View Drive and land owned by the Port of Everett, beyond which is the BNSF railway and vacant marshland (Maulsby Marsh) the western portion of which is owned by BNSF, and to the west by Port Gardner Bay.

The Site lies on an area of fill that extends into Port Gardner Bay. The Site is relatively flat, with a maximum elevation of approximately 15-feet above mean sea level. A portion of the Site lies within the 100-year flood plain.

3.2 SITE HISTORY

Historical activities at the Site have included casket manufacturing, pole treating, wood door and sash manufacturing, and fish net storage. Areas on the eastern, northern, and southern portions of the Site were filled in various stages beginning in the late 1800s or early 1900s when the adjacent BNSF railroad, formerly Great Northern Railroad, was laying tracks along Port Gardner Bay. Prior to JELD-WEN's ownership, the Site had been in use as a stile and rail door plant since the mid-1940s by Nord Door. Prior to the 1940s National Pole Company operated a pole treating plant on the eastern portion of the Site. Sound Casket Manufacturing operated a wood casket factory on the southeastern portion of the Site from at least 1936 until sometime prior to 1947, at which time the casket facility was operated by Northwestern Lumber & Manufacturing Co., Inc. By 1976 some of the structures associated with the former wood casket plant had been incorporated into the Nord Door facility. A rectangular fish net storage building and several smaller structures were present on the far southern portion of the Site, south of the casket facility, from at least 1947 through 1955. The structures were no longer present by 1967. Based on a review of historical aerial photographs and Sanborn Maps, it appears that the original boiler for the Nord Door facility was an oil-fired boiler located near Norton Avenue (now West Marine View Drive). The 1955 aerial photograph and the 1957 Sanborn Map show that the former pole treating plant has been removed from the Site and that the boiler for the Nord Door facility is a wood-fired boiler. Sometime prior to 1968, the wood-fired boiler was moved to its current location west of the main manufacturing building (Figure 2). JELD-WEN acquired certain assets, including the real property of the Nord Door plant, in May 1986 through the bankruptcy court. JELD-WEN ceased operations at the Nord Door plant in 2005. Rinker Materials (formerly Sterling Asphalt) has leased the northwest portion of the Site since the mid-1990s and has operated this portion of the Site as an asphalt batch plant. Aerial photographs depicting the Site in 1947, 1955, 1967, 1976, 1993, and 2003 are provided as Figure 3 through Figure 8, respectively.

Historical features identified on Sanborn Maps have been noted on the historical aerial photographs. Copies of the Sanborn Maps are included as Attachment 1.

A Site Hazard Assessment (SHA) Summary Report for the Site was completed by Parametrix in June 1991 for Ecology. Past land use activities and industrial operations, including the historical pole treating plant, were discussed in the SHA. In addition, operations associated with the Nord Door stile and rail door plant were summarized in the SHA including: the process of buying rough green wood, sorting, stacking, drying, planning and cutting the lumber. The finished wooden doors, rails, posts, columns, and spindles were assembled on-site. All wood used by the facility was reportedly untreated.

3.3 ENVIRONMENTAL SETTING

The Site is located at the confluence of the Snohomish River to the north and Port Gardner Bay to the west. The Site is located on a peninsula of fill which extends into Port Gardner Bay. Surface features at the Site include numerous buildings, asphalt paved areas, and unpaved graveled or grassy areas. Approximately 95% of the Site is currently paved or covered by impervious surfaces. The Site is adjoined by waterways and/or tidal mudflats to the north, south, and west. The Site is relatively flat, with a maximum elevation of approximately 15-feet above mean sea level.

According to the Soil Survey of Snohomish County Area, Washington (National Resource Conservation Service [NRCS], dated 1983) soils at the Site are classified as Urban Land. Urban Land is defined as areas that are covered by streets, buildings, parking lots, and other structures that obscure or alter the soils so that identification is not possible. Soils at the Site are likely classified as Urban Land as a result of the historic filling activities. Previous investigations at the Site identified soils to consist primarily of light brown to medium grey fine to coarse sands, with some interbedded layers of silt and silty sand. Boring installed on the northwestern portion of the Site encountered organics consisting of shells and shell pieces. Depth to groundwater across the Site has been measured between 2.5 and 12 feet below ground surface (bgs), with an average depth of approximately 6.5 feet bgs. Groundwater flow is generally toward Port Gardner Bay to the west; however, groundwater gradient at the Site has been found to be tidally influenced.

The Snohomish River in the vicinity of the Site is a low salinity estuary, with flow velocities highly influenced by both tides and river discharges. Tides are diurnal, with two high tides and two low tides in each 24-hour period. Maximum annual flows in the Snohomish River occur from November through February as a result of winter precipitation and in May and June as a result of mountain snowmelt. Low flows occur in August and September. The geology of the lower Snohomish estuary in the vicinity of the Site generally consists of alluvial sand and gravel that may contain silt, clay, and organics.

The northeastern, northwestern, and southern edges of the Site are covered by large pieces of asphalt, concrete and riprap which slope steeply down toward the shoreline. Pockets of dune grass are located between rubble and scattered along a thin band at the base of the riprap. Lower rubble supports barnacles and mussels and the shore crab. A large raft of unused logs extends into the tidal flats located southeast of the Site. The log raft is not located on the JELD-WEN Site. The riparian zone is composed principally of blackberry with a few willow trees.

According to the Everett Shoreline Master Program dated May 3, 2002 and last updated November 17, 2005, the Snohomish River supports seven species of anadromous salmonids: chinook, coho, chum, pink, steelhead, cutthroat and Dolly Varden/bull trout. Chinook salmon and bull trout were listed as threatened with extinction under the Endangered Species Act in 1999. Coho salmon are listed as a candidate species for federal protection. Other non-salmonid fish species include juvenile flounder, chub, and sculpin. Sticklebacks, perch, juvenile smelts, and lampreys are also found in the Site area. Less abundant species include candlefish, herring, and pumpkinseed. Surf smelt and sand lance are both forage fish that are abundant in shallow waters in the Site area.

The Snohomish River and estuary also provide wildlife habitats for birds (hawks, herons, bald eagles, bulls, kingfishers, turns, and sea ducks), mammals (harbor seals, sea lions, river otters, mink, muskrats, weasels, beavers, coyotes, raccoons, and deer), and invertebrates (barnacles, mussels, clams, snails, shrimp, crab, isopods and anemones). In July 2007 the U.S. Fish and Wildlife Service removed the bald eagle from the list of federal endangered and threatened wildlife. The bald eagle became a federal species of concern that no longer warranted protection under the Endangered Species Act (ESA). The bald eagle is currently State Threatened species in Washington (WAC 232-12-292). The bald eagle is still federally protected under U.S Codes including the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act.

Site-specific receptors will be evaluated as part of the RI through the completion of Terrestrial Ecological Evaluation (TEE), which will be completed in accordance with WAC 173-340-7490 to 7494. Current information on endangered species will be obtained directly from U.S. Fish and Wildlife and/or Washington State Department of Fish and Wildlife.

The Site is located in the west-central portion of Snohomish County. The climate of Snohomish County area is greatly tempered by winds from the Pacific Ocean. Summers are relatively warm, and winters are cool, but snow and freezing temperatures are uncommon. The average daily temperature in Everett in the in the summer is 62 degrees Fahrenheit and in the winter is 40 degrees Fahrenheit. During summer, rainfall is extremely light. During the rest of the year, rains are frequent, especially late in fall and in winter. The average annual precipitation in Everett is 36 inches (NRCS, 1983).

3.4 REGULATORY HISTORY AND PREVIOUS INVESTIGATIONS

Since 1989, several environmental assessment events have been completed at the Site to evaluate soil, sediment, and groundwater conditions. Activities associated with these investigations and their general findings, including regulatory compliance, are summarized in this section. Where appropriate and available, the analytical results from soil and groundwater sampling have been included in the summary tables (Table 1 through Table 7). Refer to Figure 9 for the locations of site features (including the location of sources and potential sources) described in the paragraphs below.

June 27, 1989 Notice of Noncompliance issued by EPA – On June 27, 1989 the U.S. Environmental Protection Agency (EPA) conducted an inspection of the facility to determine whether activities at the facility were in compliance with EPA regulations governing polychlorinated biphenyls (PCBs). The EPA issued eight violations to the facility, which were as follows:

Violation 1: "An overhead electrical service pole where three out-of-service pole-mounted PCB capacitors were stored did not meet the requirements of a PCB storage for

disposal area." The locations of these capacitors was not described in the letter, and no figures were included which depicted their location.

Violation 2 through 4: Three pole-mounted PCB capacitors, no model or serial numbers identified, were located in the parking lot south of the facility and west of the warehouse. Capacitors were not marked with the required PCB labels.

Violation 5 through 7: Three out of service pole-mounted PCB capacitors, no model or serial number identified, were located on the third pole west of the warehouse. Capacitors were not marked with the required PCB label.

Violation 8: The area where three out of service pole-mounted PCB capacitors were located, which were the subject of violations 5 through 7, was not marked with the PCB labels required for a storage area.

December 15, 1989 Ecology Environmental Report Tracking System Initial Report/Follow-up – The EPA stated they had "virtually closed the book" on this PCB issue. The capacitors had been removed from the Site and the EPA was awaiting the disposal certificates. The original Notice of Noncompliance was generated from a routine site inspection and was only a "bookkeeping" violation.

April 13, 1990 Drop-in Inspection by Ecology – In April 1990, Ecology conducted a Drop-In Inspection of the Nord Door facility. According to this inspection report, the Nord Door manufacturing process involved buying rough green wood (mostly Douglas-fir and Western Hemlock), sorting, stacking, drying, planing, and cutting the lumber. They assembled and finished wooden doors, rails, posts, columns, and spindles and on occasion fabricated machinery. Hazardous substances identified on the Site included glues, boiler water treatment chemicals, acetone, filler compounds for wood, and parts cleaning chemicals. Hazardous substances produced included waste oil and grease rags. Other non-hazardous substances included waste wood and sawdust. Nord reportedly had "some" underground storage tanks (USTs) that had been filled. At the time of the inspection, the facility reported the presence of one UST containing gasoline (size not stated) and one 500-gallon UST containing thinner (toluene). The facility was aware of one spill from an aboveground storage tank (AST) containing diesel fuel, but did not know the date. The AST was reportedly located close to the northeast edge of the Site. A photograph of the area was included in the inspection report, which appears to depict the area located adjacent to the former 1,000-gallon diesel UST (see Figure 9). As is discussed in a June 1, 1990 letter from Ben-Fab to Ecology (summarized below), a copy of a spill report was later identified which indicated the release occurred in 1984. Sawdust was spread on the ground and in the water to absorb the spill. The spill was reported to the U.S. Coast Guard, who sent a representative to investigate. The Coast Guard informed the facility that the appropriate measures were taken to resolve the problem. A timer was subsequently installed on the fuel pump to shut the pump off when the designated amount of fuel had been pumped into the fuel tanks of the forklifts.

The following observations were documented in Ecology's site inspection report:

- A 10,000-gallon AST was located in the northeast corner of the Site which contained "Woodlife" preservative. The constituents of Woodlife were not known. The AST was surrounded by a 6 to 8 inch concrete berm. The containment area was reportedly never pumped out; liquid which collected within the berm was allowed to evaporate.

At the time of the site visit there was standing water with a dark appearance in the berm.

- A soak-and-heat tank located adjacent to the northeast corner of the building had a 20 foot section of fire hose leading from the tank to the pavement, and presumably to the nearest storm drain catch basin. The contents and/or purpose of the soak-and-heat tank were not stated; however, later sampling conducted on the contents of the tank seem to indicate it contained only water.
- Ecology observed the area where the 500-gallon thinner (toluene) UST was located. The location of the former thinner (toluene) UST is depicted on Figure 9. The UST had reportedly not been used for 2 to 3 years. The area was impounding stormwater and the liquid had a slight sheen.
- Ecology observed the area of the reported diesel fuel spill, which was documented in a photograph included in the inspection report. The area was located on the northeastern portion of the Site, adjacent to a tidal flat of the Snohomish River, with no secondary containment. The area appeared to be located adjacent to the 1,000-gallon diesel UST. Stains and cracks were observed in the pavement.
- Drum storage and labeling was poor. Drums were observed on-site which had no cover, contained a black viscous material, and were overtopping with water and other substances. Many had missing bungs or did not have tops. There were used oil drums mixed in with resins and glue drums. Areas of poor drum storage included the primary storage area in the center of the facility and in the scrap metal pile at the southwest corner of the Site.
- The floor of the oil shed, located in the center of the facility, was sloped to drain to the yard. Sawdust was used to absorb oil spills and the sawdust was then disposed of in the garbage dumpster. There were oil stains on the floor surrounding every drip bucket.
- In the center of the facility was an area where machinery was pressure washed. The pressure wash water presumably drained to the storm sewer system.

May 14, 1990 Warning Letter from Ecology to Nord Door – In response to the issues identified in the April 1990 inspection, Ecology issued a Warning Letter to Nord Door. This letter proposed the following actions:

- Within 5 calendar days of receipt of Warning Letter, Nord would indicate in writing their intent to work voluntarily to eliminate sources of pollutants to both storm drain systems, and remediate soil and groundwater contamination.
- Within 15 calendar days Nord Company would submit to Ecology the following items:
    - Copies of all Material Safety Data Sheets (MSDS) sheets,
    - A plan and schedule for modifying the oil shed,
    - The facility's spill history,
    - Storm and sanitary system plans,
    - A plan and schedule for eliminating sources of pollutants to the storm drain system at both the heat and soak tank and the pressure wash area,
    - Historical site use information.
- Within 30 calendar days of receiving this letter, Nord Company would submit to Ecology the following items:

- A plan and schedule for disposing of the liquid in the Woodlife tank, and dismantling the tank,
- A proposal for taking care of the thinner (toluene) UST,
- A plan and schedule for soil characterization in the vicinity of all USTs, and a proposed remediation schedule,
- A plan and schedule for the containment of all stored drums,
- Locations and uses for all USTs on the Site.

June 1, 1990 Letter from Ben-Fab (Nord Door) to Ecology – Letter response to items requested within 15 calendar days:

- Copies of all MSDS sheets were provided with this response.
- The plan for modifying the oil shed included placing a 2 ½ inch high asphalt curb at the entrance which would be ramped at both sides. The perimeter of the existing walls would be sealed with a 4 inch high fiberglass ribbon and asphalt emulsion compound.
- A document was enclosed which summarized the events of the spill from the diesel tank (presumably the former 1,000-gallon diesel UST) which occurred in March 1984. According to the report, approximately 100-gallons of diesel fuel was spilled when a forklift drove off with the nozzle in the fuel pipe. Sawdust was used to absorb the fuel from the ground and water, which was then burned in the boiler. The U.S. Coast guard was notified of the incident and sent a representative to investigate. Nord was informed that they had taken appropriate measures to resolve the problem. A timer was installed on the fuel pump to shut the pump off when the designated amount of fuel had been pumped into the fuel tank of the forklift.
- The facility was in the process of contacting the City of Everett to determine the possibility of discharging the heat/soak and pressure wash run-offs to the city sanitary sewer system.
- A plan and schedule for eliminating sources of pollutants to the storm drain system at both the heat and soak tank and the pressure wash area.

August 20, 1990 Letter from Ben-Fab (Nord Door) to Ecology – Additional items had been completed in response to Ecology's May 14, 1990 letter, which included: modifications to the oil shed to provide secondary containment; storm and sanitary sewer system plans had been submitted to Ecology; discharges from the heat/soak tank and pressure wash areas had been sampled, with lab results still pending; quotes had been obtained for having the Woodlife AST cleaned and removed; the facility was making plans to remove all USTs and would conduct soil characterization at that time; the facility purchased and was using a drum storage container. While a list was still being compiled, the USTs reported to be present on-site included a 1,000-gallon diesel UST, 500-gallon gasoline UST, and a 500-gallon (approximately) thinner (toluene) UST (had been out of service for over 5 years).

September 2, 1990 Letter from Ben-Fab (Nord Door) to Ecology – This letter provided locations and uses of all USTs known to be present on the Property. Also included was a map providing the locations of the USTs. The locations of the former USTs are presented on Figure 9. The USTs on the Site were identified as follows:

- UST No. 1 – Active 1,000-gallon diesel UST installed in 1978, located on north-northeast portion of Site,
- UST No. 2 – Active 500-gallon gasoline UST installed in 1973, located northwest of main manufacturing building.
- USTs No. 3 and 4 – Inactive USTs installed in 1973 and closed in place in April 1987. Contents not reported. Located south-southwest of main manufacturing building. JELD-WEN maps identified the USTs to have contained gasoline.
- UST No 5 – Inactive 500-gallon thinner (toluene) UST installed in 1978 and out of use since approximately 1985. Located northeast of the main building.

September 18, 1990 Letter from Ben-Fab (Nord Door) to Ecology – This letter provides the findings of sampling which was conducted on the Site's wastewater streams (soak-and-heat tank, boiler blow down, condensate, glue room effluent, and equipment wash), and discussions with the City of Everett Water Department regarding the possible discharge of wastewater to the sanitary sewer. Water samples were collected from the soak tank, boiler blow down, boiler storm drain, condensate room, glue room, and compressor cooling water. Samples from the soak tank, boiler blow down, boiler storm drain, and glue room were analyzed for tannins and lignins, total organic carbon, total dissolved solids, oil and grease, and petroleum hydrocarbons. The sample methodology was not stated. The sample from the soak tank contained tannins and lignins (420 milligrams per liter [mg/L]) and total organic carbon (510 mg/L). The sample from the boiler blow down contained oil and grease (1,100 mg/L). The sample from the boiler storm drain contained oil and grease (490 mg/L). The sample from the glue room contained oil and grease (208 mg/L) and total petroleum hydrocarbons (340 mg/L).

Additionally, samples from the boiler blow down, boiler storm drain, condensate room, glue room, and compressor cooling water were analyzed for metals using EPA 6000/7000 series methods. The metals chromium, copper, lead, and zinc were identified in each of the samples. Additionally, cadmium was identified in the sample from the glue room; mercury was identified in the samples from the boiler blow down, glue room, and compressor cooling water; nickel was identified in the sample from the boiler blow down and glue room; and silver was identified in the samples from the boiler storm drain and glue room.

The city determined that based on the sampling results, the wastewater from the soak-and-heat tank, boiler blow down, and condensate could be discharged to the sanitary sewer after pH and temperature adjustment. The facility stated they were attempting to eliminate the glue room and equipment wash wastewater streams.

February 11, 1991 Letter from Sweet-Edwards/EMCON regarding UST Removal, Observations, and Soil Sampling – On November 14, 1990, Sweet/Edwards/EMCON, Inc. observed the removal of one 1,100-gallon diesel UST and one 500-gallon gasoline UST. The 1,100-gallon UST is depicted on Figure 9 as Tank 1, which is referenced in other documents as a 1,000-gallon diesel AST. The 500-gallon gasoline UST is depicted on Figure 9 as Tank 2. The USTs were excavated and removed by JELD-WEN employees. Soil samples were collected from the north, east, south, and west sidewalls and the base of the diesel UST excavation and analyzed for Total Petroleum Hydrocarbons (TPH-IR, EPA Method 418.1).

TPH-IR concentrations in the north, east and south sidewalls were identified at concentrations of 1,000 milligrams per kilogram (mg/Kg), 263 mg/Kg, and 296 mg/Kg, respectively. TPH-IR concentrations from the west wall, the base of the excavation, and the stockpile were less than 100 mg/Kg. The soil sample from the south sidewall was also analyzed for TPH as diesel (TPH-d, EPA Method 3550/8015 modified). A concentration of 160 mg/Kg of TPH-d was identified (compared to a concentration of 296 mg/Kg of TPH-IR in the same sample).

Samples collected from the sidewalls and base of the 500-gallon gasoline UST excavation were analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX, EPA Methods 5030/8020). BTEX was not detected above the laboratory practical quantitation limit (PQL) in the samples from the sidewalls or base of the excavation. Total BTEX concentrations up to 1.48 mg/Kg were identified in the soil stockpile. Analysis of TPH as gasoline (TPH-g, EPA Method 3550/8015 modified) in samples of stockpiled soil identified concentrations up to 104 mg/Kg. TPH-g was not detected above the laboratory PQL in the excavation sidewalls or base.

Based on this data, additional soil excavation was performed on the north wall of the diesel UST excavation to remove soil containing diesel-related petroleum hydrocarbons. Two samples were collected at the new limits of the excavation and analyzed for TPH-d. TPH-d concentrations were not detected above the laboratory PQL. No further excavation was conducted along the east and south walls of the excavation since TPH-d was not detected above the 200 mg/Kg action level listed under Chapter 173-340 WAC.

The report concluded that soils containing TPH-d were detected above the 200 mg/Kg recommended action level proposed under Ecology's Model Toxic Control Act (MTCA) Cleanup Regulations in samples collected from the north wall of the former diesel UST excavation. An additional 10 cubic yards of soil were subsequently removed. Samples collected at the limits of the new excavation contained TPH-d concentrations less than 200 mg/Kg. Soils containing TPH-g were identified in the soil stockpile but not in the gasoline UST excavation. These soils were reportedly "aerated" above ground by turning with a backhoe prior to being placed in the excavation as fill material. Soils removed from the diesel UST excavation north wall were reportedly being "landfarmed" on-site and would be evaluated for TPH-d at a future date. No further information was provided pertaining to the soil which was reportedly "landfarmed" on-site.

February 22, 1991 – Final Report: Penta Contaminated Water Clean-up and Discharge prepared by Nord Door – An out-of-service, 10,000-gallon Woodlife AST remained on the Site from the ownership prior to JELD-WEN's purchase. Rainwater had accumulated in the concrete containment berm of the AST and was found to contain up to 140 parts per million (ppm) of pentachlorophenol (PCP). A plan to perform carbon filtration of the water with subsequent discharge to the sanitary sewer system was approved by the City of Everett and Ecology. A discharge limit of 0.05 ppm of PCP was established. Several rounds of water filtration and discharge were undertaken between November 16, 1990 and February 8, 1991. Once the water was discharged, a private contractor would be retained to clean and remove the 10,000-gallon AST, concrete berm, and portable AST used to contain the filtered water.

A sample of the concrete would be collected to determine the levels of residual PCP. A final closure plan for the concrete berm would be established upon receipt of the results.

March 5, 1991 Letter from Ecology Regarding Closure of PCP Tank Containment Berm at Nord Door – Nord Door facility provided laboratory results from sampling soil and concrete associated with the former Woodlife AST. Concentrations of PCP in the soil were below the laboratory PQL (soil sample location not stated) and the concentration of PCP in the concrete was 0.5 ppm. Nord Door proposed closing the containment berm by knocking in the walls to a level below grade, pushing the rubble into the remaining berm, filling with clean backfill, and asphalting over the area. Ecology approved the proposed plan. The documents obtained by SLR do not indicate whether the containment berm was closed as proposed. However, based on SLR's site observations the containment berm wall was demolished and the area of the former containment berm has been covered by asphalt

March 18, 1991 Early Notice Letter from Ecology regarding Nord Door (Site #N-31-5035-000) – Under MTCA (Chapter 70.105D RCW), Ecology maintains a database of known or suspected contaminated sites. Based on available information and a site inspection on April 13, 1990, Ecology had added the Nord Door facility to the database. A copy of the site information sheet indicated the facility was listed due to confirmed impacts to soil with petroleum products, and suspected impacts to groundwater, surface water, and sediment with metals, PCBs, phenolic compounds, non-chlorinated solvents, and polynuclear aromatic hydrocarbons (PAHs).

June 1991 Site Hazard Summary Report for Nord Door prepared by Parametrix - The report summarized the results of a soil and groundwater assessment performed at the Site by SAIC/Parametrix on behalf of Ecology. The objective of the assessment was to conduct field screening and sampling to gather sufficient environmental data to assess the Site using the Washington Ranking Method (WARM) guidelines. The scope of work included the following:

- Collecting two surface soil samples from the area northwest of the main manufacturing building where barrels were previously stored (GS-1 and GS-2). Surface soil samples were analyzed for volatile organic compounds (VOCs, EPA Method 8240), TPH (EPA Method 8015), semivolatile organic compounds (SVOCs, EPA Method 8270), and Pesticides (EPA Method 8140);
- Collecting one surface soil sample from an asphalt eroded area northwest of the main building which was analyzed for VOCs (GS-3);
- Collecting two sediment samples from the storm drains on-site which were analyzed for VOCs, TPH, SVOCs, and Pesticides (SS-1 and SS-2). One sample was collected along the southwest Site border near the glue room stormwater outfall and one was collected on the northeast portion of the Site near the boiler room stormwater outfall.

The sample locations are depicted on Figure 9. It should be noted that the sample descriptions did not include the collection of a water sample, and no water sample is discussed in the text of the report. However, the table which presents the analytical findings includes the results of sample EW, which appears to be a water sample. This sample is not discussed elsewhere in the report.

With the exception of very low concentrations of methylene chloride (also identified in method blank), chloroform identified in one water sample (sampling location not provided in report), and acetone, no contaminants were identified above the PQLs. The detected concentrations of methylene chloride, chloroform, and acetone did not exceed the MTCA Method A cleanup levels. These sampling results are included in the summary analytical tables (Tables 1 through 7).

August 21, 1991 Letter from Ecology to Nord Door – Ecology assessed the relative health and environmental risk associated with the facility and assigned a hazard ranking of 5 (with 1 being the highest risk and 5 being the lowest risk.).

October 24, 1991 Letter from Sweet-Edwards/EMCON, Inc. Regarding Removal of Thinner (Toluene) UST – On August 6, 1991 a 500-gallon thinner (toluene) UST was removed from the Site (identified on Figure 9 as Tank 5). Soil samples were collected from the four sidewalls and the base of the excavation, as well as from the stockpiled soil. The soil samples were analyzed for toluene (EPA Method 5030/8020) and TPH-g (EPA Method 5030/Modified 8015). Toluene was detected at concentrations of 9.4 mg/Kg and 14.6 mg/Kg in soil samples from the north sidewall and excavation base, respectively. TPH-g was identified at concentrations of 20 mg/Kg and 30 mg/Kg from samples collected from the north sidewall and excavation base, respectively. Analysis of a composite sample from the stockpiled soils identified a toluene concentration of 0.95 mg/Kg and a TPH-g concentration of 4 mg/Kg.

The report concluded that soil samples from the former thinner (toluene) UST excavation contained concentrations of toluene below the cleanup level of 40 mg/Kg for toluene and 100 mg/Kg for TPH-g presented in the MTCA Method A table.

February 11, 1994 Letter from Nord Door/JELD-WEN to Ecology – JELD-WEN was in the process of leasing a portion of the Site to Sterling Asphalt. A subsurface investigation was conducted by RZA Agra, Inc., a consultant for the prospective lessee. The investigation included the installation 5 soil borings (C1-S1, C2-S2, C4-S1, C5-S1, and C6-S1) and two monitoring wells (MW-1 and MW-2). Soil samples collected from each of the soil borings and the two monitoring well borings were analyzed for TPH-HCID, TPH-g, TPH-d, TPH by Washington State Method 418.1 modified (TPH-418.1), BTEX, lead, PCBs, and PAHs. Groundwater samples were analyzed for TPH-g and TPH-418.1.

The samples from the six soil borings were below PQLs for all TPH constituents, BTEX, PCBs, and PAHs. One of the borings (C6-S1) identified 17 ppm of lead, which was below the MTCA Method A Cleanup level of 250 ppm. The soil sample collected from the monitoring well boring MW-1 identified TPH-418.1 in soil at a concentration of 700 ppm. This concentration was above the MTCA Method A recommended cleanup level of 200 ppm.

In addition, the two groundwater samples identified concentrations of TPH-418.1 at 16 mg/L (MW-1) and 1.6 mg/L (MW-2), which exceeded the MTCA Method A recommended cleanup levels of 1 mg/L. The locations of MW-1 and MW-2 are depicted on Figure 9. These

sampling results are included in the summary analytical tables (Tables 1 through 7). The approximate area of contamination (the two sampling locations) was by the reclaimed portion of the Port Gardner Bay tide lands where, years ago, loading of materials and moorage of boats occurred.

The Site was located on an area of historic fill in the Port Gardner Bay tide lands. The latest filling reportedly occurred in 1978. A historical review did not identify any process which would produce or cause petroleum contamination in the areas identified.

The report concluded that, based on the information available, it did not appear that this discovery was of major impact. The levels of TPH, though in excess of MTCA closure levels, should be protective of human health and the environment based on the occupancy and exposure.

May, September, and October 2006 and May 2007 Soil and Groundwater Sampling performed by SLR on behalf of JELD-WEN – In 2005, at the request of JELD-WEN, SLR conducted a review of historical documents pertaining to the now closed Nord Door facility and conducted a site walk in September 2005. Based on this information, several assessment groupings were identified which warranted further assessment. The areas warranting further investigation included fuel storage locations, Woodlife storage tank, dip tank, thinner (toluene) storage locations, and waste storage areas.

In May 2006 SLR conducted initial investigation work which included the collection of soil and groundwater samples from 42 locations focused on these initial assessment groups. Based on available information, contaminants initially identified as a potential concern at the Site were petroleum hydrocarbons, solvents, PCBs, PCP, and creosote. Sampling locations GP-1 to GP-42 are presented on Figure 9.

The May 2006 assessment identified several areas of environmental impact at the facility due to former operations. Identified impacts included: creosote from historical pole treating operations at the east side of the facility along West Marine View Drive, PAHs and petroleum hydrocarbons from historical fueling oil storage at the east side of the facility, toluene from solvent storage at the northeast corner of the facility, PCP from wood treatment solution storage and usage at the northeast corner of the facility (appeared to be localized), and PAH and TPH from fill material placed at the Site (appeared to be wide-spread but relatively minor). Based on the findings of the May 2006 investigation, subsequent investigations were conducted in September and October 2006 to further evaluate the following data gaps: the potential for creosote and oil impacts to extend off-site to the east under West Marine View Drive; to gain an understanding of the groundwater flow direction and tidal influence at the Site; to gain an understanding of the extent of impacts at the fueling station as identified in assessment location GP-34; to evaluate whether the toluene impacts near the northeastern corner of the Site were limited in extent.

Additional assessment was conducted in September and October 2006 to address the data gaps. The results of the May and September assessment work was as follows:

- Creosote and fuel oil impacts along the eastern portion of the Site – Assessment work included Geoprobe borings near the middle and eastern side of West Marine View Drive (GP-201 through GP-215). Creosote and oil impacts to soil and groundwater extended under a portion of the former manufacturing building and West Marine View Drive. The extent of these impacts had not been fully delineated in an easterly direction.
- Installation of six groundwater monitoring wells – Five groundwater monitoring wells were installed at the Site in October 2006 (MW-1 through MW-5) and one additional well (MW-6) was installed in May 2007. The six wells were sampled for TPH-Dx, TPH-Gx, SVOCs, and VOCs. Groundwater monitoring wells MW-1 through MW-4 and MW-6 were below laboratory PQLs for all analytes. Groundwater monitoring well MW-5 identified benzene (9.46 micrograms per liter [µg/L]), naphthalene (11.1µg/L), toluene (4.12 µg/L), and xylene (1.05 µg/L). Benzene was identified above the MTCA Method A Cleanup Level for benzene in groundwater (5 µg/L). Concentrations of naphthalene, toluene, and xylene identified in groundwater were well below their respective MTCA Method A Cleanup Levels.
- Groundwater flow direction and tidal influences – Pressure transducers were placed in monitoring wells MW-1 through MW-5 well for a one-week period in October 2006. The monitoring well locations are shown on Figure 9, with MW-1 located along the southern edge of the Site, MW-2 near the western edge of the Site within the Rinker Materials facility, MW-3 near the northern edge of the Site, MW-4 near the boiler, and MW-5 near West Marine View Drive. The transducer data showed tidally-influenced groundwater at the Site, with a general groundwater flow direction from the eastern, center portion of the Site toward the west (MW-2) and north (MW-3). The observed water level in MW-1 was higher than the other four monitoring wells indicating an uncharacteristically high groundwater "mound" in that area, or an error in the measured elevation of the casing of this well.
- Fueling station impacts – In October 2006, test-pit excavations were completed at the Site near the former fueling station extending over the Geoprobe sampling location GP-34. This assessment was completed to further assess the extent of oil impacted soil in this area. The test pit excavation exposed an area containing wood debris (lumber and saw dust) along with other miscellaneous waste (asphalt pieces, bottles, scrap metal) to a depth of five to six feet below the surface. Soil sampling conducted at the edges of the test-pit excavation resulted in relatively low concentrations of oil in the soil, with some elevated PAH concentrations.
- Toluene impacts – In October 2006 test-pit excavations were installed near the former thinner (toluene) storage tank at the northeastern portion of the Site. The test-pits defined the extent of the toluene impacts to the shallow soil in this area.

Based on the findings of these investigations, a release report was submitted to Ecology via their on-line reporting system on September 19, 2006. The Site is listed under Ecology's website database as Ecology Identifier or facility number 2757.

3.5 CURRENT AND FUTURE LAND AND WATER USE

The Site consists of approximately 52.6 acres of combined in-water and upland areas. The former Nord Door portion of the Site (Parcels 29050700100400, 29050700400100, 29050700401900, and 29050700402000) encompasses the eastern approximately 46.5 acres. The northwestern corner of the Site (approximately 6.1 acres) is currently leased by Rinker Materials (Parcel 29050700100400), who utilize the property as an asphalt batch plant.

The structures currently located on the former Nord Door portion of the Site include the following: the main manufacturing building located on the eastern portion of the Site, an office building located on the south-southeast portion of the Site, a training center building located on the south-southeastern portion of the Site, a maintenance warehouse located on the south-southeastern portion of the Site, a cutstock office located near the center of the Site, a planer building located near the center of the Site, two dry kiln buildings located at the northwest portion of the Site, and a lumber sorter building located near the northeast portion of the Site. In addition, machinery including a hog fuel bin and other pieces of equipment remain outside the northwest portion of the main manufacturing building. Two, small ASTs (size unknown) are located between the former dry kiln buildings and the former main manufacturing building, south of the central portion of the Site, which were formerly used to fuel facility equipment such as fork-lifts and trucks. The buildings on the former Nord Door portion of the Site are unused, with the exception of the training center building which is currently leased to Parr Lumber for storage. A portion of the paved area at the center of the Site is being leased to Harm's Paving. Additionally, Kimberly Clark is leasing parking spaces at the Site on a short term basis. There are currently no other operations on the former Nord Door portion of the Site.

The Rinker Materials portion of the Site operates as an asphalt batch plant. The main structures on the Site include an approximately four-story asphalt building, feeder shed, and a conveyor system. Numerous aggregate piles are located around the northeastern, northwestern, and southwestern perimeter of the Rinker Materials portion of the Site. Aggregate used in asphalt production is brought to the Site by barge. A conveyor system leads from the barge dock located at the west end of the Site to the aggregate piles. Aggregate is transferred via wheel-loader from the storage piles to feeders located on the north side of the plant. The feeders convey aggregate to the dryers and mixing towers. These features are shown on Figure 2.

Surface water in the Site vicinity is utilized both commercially and recreationally. The Tulalip Tribes Reservation is located approximately one mile north of the Site, on the north side of the Snohomish River. Tulalip tribal members living on the Tulalip Reservation are engaged in both commercial and subsistence fishing near the confluence of Port Gardner Bay and the Snohomish River. There is no current or proposed future use for groundwater in the Site vicinity.

In June 2006 JELD-WEN and the Port of Everett (adjacent property owner to the north) submitted a joint request for a Comprehensive Plan Map Change and Rezone to the City of Everett. The proposal requested a change to the comprehensive plan designation of the respective properties from their current designation of Maritime Service to Waterfront Commercial. The proposal also requested the zone district be changed from its current designation as Maritime Services (M-S) and Heavy Manufacturing (M-2) to Waterfront Commercial with a Planned Development Overlay Zone allowing for a mix of residential, recreational and commercial uses. The proposed changes to the

Comprehensive Plan Map and Zone District require that the Shoreline Master Program be amended for the area from Urban Maritime Interim, Aquatic and Aquatic Conservancy to Urban Multi-Use. In July 2007 the City of Everett amended the comprehensive plan map as requested. JELD-WEN and the Port of Everett are still working with the City of Everett to achieve the requested changes to the Shoreline Master Program and Zoning Map. Future uses at the Site may include residential, recreational and/or commercial uses depending on the outcome of the requested changes to the Shoreline Master Program, Comprehensive Plan Map, and Zone District.

3.6 CONCEPTUAL SITE MODEL

A conceptual site model (CSM) incorporates physical and chemical information to understand potential fate and transport mechanism at the Site. The CSM considers contaminant sources, release mechanisms, transport and exposure pathways, and potential receptors. The CSM developed for the JELD-WEN Site (Figure 10) describes the potential release mechanisms from the potential primary sources of hazardous substances to potential secondary and tertiary sources, the exposure media and routes, and the potential human receptors. This model reflects current conditions and possible future development in assessing exposure pathways. The CSM is based on available historical information and site-specific information gathered during historical sampling activities. A summary of the CSM including potential primary sources, release/transport mechanisms, primary exposure media and routes of exposure, and potential receptors are presented below.

- **Potential Primary Sources Of Contamination** – Potential primary sources of contamination identified for the Site include the following:

    - On site transformers – Seven pad-mounted transformers are currently located on the Site (TZ1 through TZ7). Transformer TZ1 is labeled as containing PCBs. Transformers TZ2 through TZ7 are labeled as containing less than 50 ppm of PCBs. If a release from a transformer occurred it may have resulted in the release of PCBs and petroleum hydrocarbons to soil or surface pavement.
    - On Site Above Ground Storage Tanks (AST's) and Underground Storage Tanks (UST's) – There is currently one small gasoline AST located near the west edge of the south central unpaved area, which was formerly used to fuel small facility equipment such as forklifts and trucks. Former ASTs at the Site have included one former diesel AST (size unknown), one former 10,000-gallon Woodlife AST, at least four former fuel oil ASTs, and at least three former creosote ASTs (sizes unknown). Former USTs present on-site included a 1,000-gallon diesel UST (Tank 1), two 500-gallon gasoline USTs (Tank 2 and Tank 3), 1,000-gallon gasoline UST (Tank 4), and a 500-gallon thinner (toluene) UST (Tank 5). The locations of the former ASTs and USTs are depicted on Figure 9. The potential primary release mechanisms from the ASTs and USTs may include historic releases to soil from overfilling, releases from the tanks, or drips/spills during transfer of fluids to/from the tanks.
    - Improper Barrel Storage Areas – A former barrel storage area was located on the south central unpaved area between the former dry kiln buildings and the former main manufacturing building, south of the central portion of the Site. During an April 1990 Drop-in Inspection by Ecology, poor drum storage and

waste handling practices were observed. The potential primary release mechanisms from the improper barrel storage areas may include past overtopping, leaks, or spills of glues, thinner (toluene), solvents, or hydraulic fluids to soil.

- The Machine Shop Area – The machine shop area is located northwest of the main manufacturing area. Potential primary release mechanisms in the machine shop area include historic spills or releases of hydraulic fluids, fuels (diesel and/or gasoline), and/or solvents to soil or surface pavement.
- General Site Operations – Past activities at the Site including door manufacturing, pole treating, and saw mill operations may have resulted in releases of hydraulic fluids, creosote, fuel oil, or other petroleum hydrocarbon constituents. The hog fuel burner was formerly used to convert saw dust and wood waste from the door manufacturing activities into steam. The residue (ash) from burning of the wood has the potential to contain dioxin. Potential primary release mechanisms from past activities include leaks or spills to soil, surface pavement, or storm water at the Site.

- **Release mechanisms** – A summary of the release mechanisms identified for the Site are provided below.

  - Primary Release Mechanisms – One of the primary means in which contaminants may have been released to the Site include leaks and spills from primary sources to on-site soil and/or pavement during the Site's historical operations, which have included casket manufacturing, pole treating, wood door and sash manufacturing, and currently asphalt manufacturing on the western portion of the Site. Other primary release mechanisms may include storm water runoff including runoff captured by storm drains which discharge into Port Gardner Bay.

  - Secondary Release/Transport Mechanisms – From on-site soil, secondary release mechanisms may include fugitive dust generation, runoff/overland flow, and leaching, all of which can contribute to the spread of contaminants (if present) in soil across the Site and have the potential to impact Port Gardner Bay. If present, contaminants in on-site soil may also volatilize into air (both outdoor and indoor), leach into on-site groundwater, and or be absorbed into on-site plant and animals through bioaccumulation. For on-site groundwater, secondary release mechanisms may include volatilization of contaminants into air (both outdoor and indoor) and groundwater migration/seepage, which can be a source for potential surface water and sediment contamination in Port Gardner Bay. Contaminants in Port Gardner Bay, if present, may be further released through the displacement and mixing of sediment particles by aquatic animals or plants (i.e., bioturbation) and through tidal currents. In addition, contaminants in Port Gardner Bay, if present, may be absorbed into aquatic organisms through bioaccumulation.

- **Primary Exposure Media And Routes Of Exposure** – The exposure media are the environmental media through which human or ecological receptors could be exposed to hazardous substances. As depicted in Figure 10, the primary exposure media affected by potentially released hazardous substances at the JELD-WEN Site include the following:

    - On-site soil
    - Air
    - On-site groundwater
    - Port Gardner Bay Sediment and Surface Water
    - Terrestrial (e.g., plants and animals) and Aquatic (e.g., fish and invertebrates such as shellfish) Prey Species

    Exposure routes refer to the means by which human or environmental receptors are potentially exposed to hazardous substances. Ingestion and dermal contact with soil, sediment, and surface water, in addition to inhalation and dietary ingestion, are the major routes of exposure through which human receptors may potentially contact contaminated media associated with the JELD-WEN Site. The primary means in which terrestrial ecological receptors may potentially come into contact with contaminants are through direct contact with soil, sediment, and surface water, and through dietary ingestion. The primary means in which aquatic ecological receptors may potentially come into contact with contaminants are through direct contact with sediment and surface water and through dietary ingestion.

    Groundwater at the Site does not meet the definition potable water as outlined in WAC173-340-720(2) based on the following factors: (a) the ground water does not serve as a current source of drinking water; and (b) the ground water is not a potential future source of drinking water given the Site's proximity to surface water that is not suitable as a domestic water supply.

- **Receptors** – Receptors are the human and ecological populations that may be potentially exposed to hazardous substances, considering current and future site land and water use. The potential human and ecological receptors identified for the JELD-WEN Site on Figure 10 are as follows: future child and adult residents, current and future industrial workers, current and future construction workers, tribal subsistence fishers, and terrestrial/aquatic ecological receptors.

3.7 PRELIMINARY CLEANUP LEVELS

The preliminary cleanup levels (PCLs) will be used to verify the COPCs for soil, sediment, and groundwater at the Site as part of RI. PCLs for soil and groundwater are presented in Tables 1 through 7. PCLs for sediment are presented in Table 1 of the Sediment SAP included as Appendix A. PCLs were obtained as defined below:

- **Groundwater** – Because on-site groundwater is non-potable in accordance with WAC 173-340-720(2), groundwater PCLs are based on the most restrictive level between protection of marine and freshwater surface water. The Site is located within an estuary and may contain both freshwater and marine species. The most restrictive cleanup level between MTCA Method A (WAC 173-340-730[2]) and Method B (WAC 173-340-730[3]) was be used. If a PCL was not available from the aforementioned sources, then the most restrictive PCL between MTCA Method A (WAC 173-340-720[3]) and Method B (WAC 173-340-720[4]) for potable groundwater will be used. PCLs for groundwater are presented on Tables 1, 3, 5, and 7. Attachment 2 provides a summary of the methodology used to generate the groundwater PCLs.

- **Soil** – Soil PCLs were calculated by selecting the most stringent of the based on protection of human health (under a residential scenario), protection of terrestrial ecological receptors, and protection of groundwater. The most restrictive cleanup level between MTCA Method A (WAC 173-340-740[2]) and Method B (WAC 173-340-740[3]) for unrestricted land use was used. MTCA Cleanup Regulations, Priority Contaminants of Ecological Concern for Sites that Qualify for the Simplified TEE Procedure, Table 749-2 for unrestricted land use were used. The Simplified TEE cleanup levels were used for the RI, however a Site Specific TEE may be conducted as part of the FS.

  Soil PCLs were calculated using Ecology's three phase partitioning model as described in WAC 173-340-747 to generate soil concentrations which are protective of surface water. The chemical physical parameters were obtained from the CLARC tables. In the event that the calculated PCLs were below the laboratory PQLs, the PCL defaulted to the laboratory PQL. PCLs for soil are presented on Tables 2, 4, 6, and 7. Attachment 2 provides a summary the calculations used to generate the soil PCLs.

- **Sediment –** Sediment PCLs will be based on Sediment Quality Standards (SQS) and Cleanup Screening Levels (CSLs) identified in the Sediment Management Standards (SMS) (Chapter 173-204 WAC). Sediment PCLs are outlined in Table 1 of the Sediment SAP presented in Appendix B.

3.8 EVALUATION OF EXISTING DATA

The analytical results from the previous investigations at the Site are summarized in Tables 1 through 7. The 2006 and 2007 assessment samples were analyzed by TestAmerica Analytical Testing Laboratory in Beaverton, Oregon, a laboratory approved by Ecology under chapter 173-50 WAC. The testing was conducted in accordance with WAC 173-340-830(2)(a-i), as appropriate. The analytical methods used included Northwest TPH methods (NWTPH-HCID, NWTPH-Gx, NWTPH-Dx), VOCs by EPA Method 8260B, SVOCs by EPA Method 8270, PAHs by EPA Method 8270M-SIM, and PCBs by EPA Method 8082, in compliance with the requirements in WAC 173-340-830. The samples were analyzed consistent with the methods appropriate for the Site, the media analyzed, the hazardous substances analyzed for, and the anticipated use of the data. The laboratory achieved the lowest PQLs of the selected methods. The 2006 and 2007 assessment samples were appropriately preserved and stored in iced coolers until arrival at TestAmerica. Sample analyses were conducted within holding time criteria, with the following exceptions:

- The method blank surrogate recoveries of 2-fluorophenol, phenol-d6 and nitrobenzene-d5 in batch 6050711 were below acceptable limits. All recoveries for the blank spike were acceptable. The surrogate problem appears to have been an isolated incident during the concentration of the extract. Corrective action required re-extraction of sample GP1-10. Re-extraction was done outside of the recommended hold time. Both sets of data were reported.

- Sample GP206-P was spiked incorrectly during the extraction process. The SIM PAH spike was not included in the Blank Spike. All PCP quality control was valid and all surrogates were added correctly. Corrective action was performed by re-extracting the sample. Re-extraction was done outside of the hold time. Both sets of data were reported.

Figures 3 through 8 depict the prior sampling locations on historical aerial photographs, which also describe identified areas of suspected releases. The existing data was screened against the most restrictive PCLs developed as part of the Work Plan. Tables 1 through 7 identify sample points where the concentrations of contaminants identified in soil or groundwater exceed the most restrictive PCLs. Petroleum hydrocarbons, SVOCs, PAHs, and toluene were identified as having exceeded PCLs. Attachments 3 through 6 depict the approximate extent SVOC and VOC impacts in soil and groundwater which exceed the PCLs. As is show on the tables, PQLs associated with previously completed sampling for some TPH, VOCs, SVOCs, and PCBs were above the PCLs developed as part of this Work Plan. These are highlighted in yellow shading on Tables 1 through 7. The work completed as part of the RI will achieve laboratory PQLs equal to or lower than the PCLs, which will include low level PAH analysis to meet the objectives of the RI. A laboratory Quality Assurance Summary will be prepared upon completion of the RI, and will incorporate current and former data gathered at the Site.

3.9 PURPOSE AND OBJECTIVES

The scope of the field investigation presented in this Work Plan has been developed to allow for completing the RI/FS and development of a draft CAP. The purpose of the field investigation is to collect and analyze adequate samples such that, when combined with the assessment results provided in previous investigations, the Site will be sufficiently characterized for completing the RI/FS and developing the draft CAP.

Findings from previous investigations have identified that COPCs exist in the Site soil and groundwater at concentrations exceeding PCLs established under MTCA. Tables 1 through 7 provide a summary of previous investigation results. Additional site characterization is needed to evaluate identified data gaps and to help define potentially complete exposure pathways and the extent of impacts. The objective of this section is to describe the work scope and methods for completing the environmental field investigation to meet these stated objectives.

3.10 INVESTIGATION AREAS

Potential contaminant migration pathways and specific areas of interest will be assessed to complete the site characterization. Potential pathways/area, investigation rational, and proposed sampling is discussed in the following sections. The proposed sampling locations are shown on Figures 11A, 11B, 11C, 11D, and 11E. The upland and sediment SAPs (Appendices A and B, respectively) detail

the proposed sample collection methods, sample handling, chain-of-custody procedures, sampling equipment, and decontamination procedures.

3.10.1 HOG FUEL BURNER ASH

The former hog fuel boiler was used to convert saw dust from wood cutting, sander dust from wood finishing, and wood waste for the door manufacturing activities into steam. The steam generated by the hog fuel boiler was used to heat the wood drying kilns and to heat the manufacturing buildings. Residue (ash) from burning of the wood has the potential to contain dioxin.

> **Data Gap:** Understanding if ash from the former hog fuel boiler is a potential source of dioxins and furans.

> **Proposed Additional Assessment:** One grab sample (301-P) of the boiler ash remaining at the Site will be collected for dioxins and furans analysis.

3.10.2 FORMER WOODLIFE STORAGE AND USE AREA

An approximately 10,000-gallon AST containing Woodlife wood treatment solution (which contained PCP) was formerly located northeast of the main manufacturing building. The AST was located within a concrete berm. The Woodlife AST was removed in approximately 1991 at which time the berm was demolished and reportedly placed into the former AST containment structure, and the entire area was asphalted over. Soil and concrete samples were collected and analyzed for PCP at the time of the AST's removal and demolition of the containment structure. The concentration of PCP in the soil sample was below the laboratory PQL and the concentration of PCP in the concrete sample was reported to be 0.5 ppm.

In May 2006, SLR completed two Geoprobe borings (GP-4 and GP-29) in the vicinity of the former Woodlife AST and dip-tank (see Figure 9). The soil samples from both borings were analyzed for hydrocarbon identification (TPH-HCID, NWTPH-HCID), Total Petroleum Hydrocarbons Diesel Range (TPH-Dx) using Ecology Method NWTPH-Dx, and PAH (EPA Method 8270M-SIM). In addition, the soil sample from boring GP-4 was analyzed for TPH in the gasoline range (TPH-Gx) using Ecology method NWTPH-Gx. Soil samples were collected from depths of 4.5 and 8 feet bgs (GP-4 and GP-29), and identified 0.156 and 7.4 ppm of PCP, respectively. The concentration of PCP in GP-29 exceeded the PCL of 0.33 ppm. Soil samples also identified TPH-Gx in GP-4 at a concentration above the PCL, and seven carcinogenic PAHs (cPAHs) in GP-29 at concentrations above their respective PCLs. Groundwater samples collected from temporary wells installed in the Geoprobe borings did not identify concentrations of SVOCs or VOCs above PCLs. TPH-Gx was identified at a concentration above the PCL in the groundwater sample collected from GP-4. The findings of the historical sampling in GP-4 and GP-29 (including other analytes which were detected above laboratory PQLs) are presented on Tables 1 through 4.

> **Data Gap:** Sampling completed at the former Woodlife AST location (GP-1) and near the former dip tank area (GP-3, GP-4, GP-5 and GP-29) showed no widespread PCP impacts. Ecology has requested additional investigation in the vicinity of the former Woodlife storage, piping, and use area to provide further assessment of PCP in the subsurface and to assess for the potential presence of dioxins and furans.

Proposed Additional Assessment: One additional boring (302-P) is proposed in the vicinity of former borings GP-3 and GP-29 to evaluate potential impacts from the former Woodlife storage and usage area. The location of proposed boring 302-P is depicted on Figure 11A. As described in the upland SAP (Appendix A), three samples from boring 302-P will be submitted for laboratory analysis of Total Petroleum Hydrocarbons Diesel Range (TPH-Dx) using Ecology Method NWTPH-Dx and for PCP by EPA Method 8270 SIM. The sample exhibiting the highest concentration of PCP will also be analyzed for dioxins and furans by EPA Method 1613B. One groundwater sample from location 302-P will be collected and held by the laboratory pending receipt of the results of the soil samples from Geoprobe boring 302-P. If dioxin or furan is identified in the soil, then the groundwater sample will also be analyzed for dioxins and furans.

3.10.3 SOUTHWEST FORMER UNPAVED ("GRASSY") AREA

Ecology identified two main grassy areas from a historical aerial photograph. This historical photograph shows materials were stored in this area. This southwest unpaved area is located on the southwestern corner of the Site. This area is now paved and is leased to Rinker Materials for material storage and operation of an asphalt batch plant. In 1992, sampling completed by RZA-AGRA on behalf of Sterling Asphalt (now Rinker Materials) included soil and groundwater sampling in this area. The 2006 sampling completed by SLR included Geoprobe boring location GP-41 at the southwestern corner of the Site. The approximate locations of these historical samples are shown on Figure 9. The findings of the historical sampling are presented on Tables 1 through 7.

Data Gap: Ecology has identified the absence of surface pavement as a feature that would allow contaminants to enter the soil and groundwater. Soil and groundwater sampling will be used to assess if contaminants may have impacted soil and/or groundwater in this former unpaved area.

Proposed Additional Assessment: Four additional Geoprobe borings (303-P, 304-P, 305-P, and 306-P) are proposed in the southwest former unpaved area. The locations of proposed borings are depicted on Figure 11B. As presented in the upland SAP (Appendix A), two soil samples from each of the borings will be submitted for TPH-HCID analysis with follow-up for TPH-Dx and/or TPH-Gx if the HCID analysis shows the presence of this range of petroleum hydrocarbons in the sample. The TPH-HCID method is a qualitative and semi-quantitative screen to determine the presence and type of petroleum products that may exist. The results of this analysis will determine which fully quantitative method/methods (TPH-Gx or TPH-Dx), if any, will be used. Should the value of the analysis for gasoline, diesel, or heavy oil exceed the reporting limits, then additional specific analysis for the identified product will be conducted. Four samples (one from each boring) exhibiting the highest concentrations of TPH based on the TPH-HCID analysis will also be analyzed for PCBs by EPA method 8082, SVOCs using EPA method 8270C, VOCs using EPA method 8260, and Priority Pollutant Metals (PPMETS) using EPA 6000/7000 series methods. Groundwater samples will be collected from each of the four locations and analyzed for TPH-HCID with follow-up for TPH-Dx and TPH-Gx, SVOCs (including PCP), and VOCs.

3.10.4 SOUTH CENTRAL UNPAVED AREA / FORMER BARREL STORAGE AREA

This south central unpaved area identified by Ecology is located between the former dry kiln buildings and the former main manufacturing building and south of the central portion of the Site (Figure 11C). This area was also a former barrel storage area and during an April 1990 Drop-in Inspection by Ecology, poor drum storage and waste handling practices were observed. Two, small ASTs were located on the western edge of this unpaved area and used to fuel facility equipment like fork-lifts and trucks. Previous environmental sampling completed in this area includes Geoprobe boring GP-34, test-pit #2, GP-24, and MW-1 that identified TPH in soil. TPH impacts to groundwater were identified in the groundwater sampled from Geoprobe location GP-24, however these impacts were not confirmed by the groundwater samples collected from monitoring well MW-1. The findings of the historical sampling are presented on Tables 1 through 7.

Data Gap: Potential soil and groundwater impacts in the former waste storage and barrel storage area.

Proposed Additional Assessment: Two additional borings (307-P and 308-P) are proposed in this south central unpaved area / former barrel storage area. Sampling from MW-1 is proposed to confirm the previous sampling results. The locations of proposed boring 307-P and 308-P are depicted on Figure 11C. As presented in the upland SAP (Appendix A), two soil samples from each of the borings will be submitted for TPH-HCID analysis with follow-up for TPH-Dx and/or TPH-Gx if TPH is identified. The two samples (one from each boring) exhibiting the highest concentrations of TPH based on the TPH-HCID analysis will also be analyzed for PCBs, SVOCs, VOCs, and PPMETS. Groundwater samples will be collected from each of the two Geoprobe boring locations and MW-1 and analyzed for TPH-HCID with follow-up for TPH-Dx and TPH-Gx, SVOCs, and VOCs. The groundwater sample from MW-1 may be submitted for additional analysis of PCBs, pending the results of the TPH-Dx analysis. Groundwater samples for total metals analysis will be collected from each of the geoprobe borings, and held pending the results of metals analysis in soil.

3.10.5 FORMER CASKET MANUFACTURING AREA / AREA NEAR GP-22

The current and former buildings on the southeastern portion of the Site operated as a casket manufacturing facility from at least the 1940s through the 1960s. At the time of these operations, the Nord Door manufacturing facility was substantially smaller, with Port Gardner Bay extending between the casket manufacturer and the Nord Door facility on the northeastern portion of the Site. The western portion of the southern parking area had not been filled, and was also still a part of Port Gardner Bay. These features are shown on the 1947 and 1955 aerial photographs (Figure 3 and Figure 4). This area has been paved since at least 1976 (Figure 6). Previous sampling completed in this area include Geoprobe boring locations GP-19, GP-20, GP-21, GP-22, GP-23, and GP-212. Locations GP-19 and GP-23 were installed to the south and southwest of the former casket manufacturer, adjacent to and presumably downgradient of the former operations. Boring GP-21 and GP-22 were installed along the northeastern edge of the former casket manufacturer. Soil sampling at GP-19 and GP-23 were non-detect for TPH-HCID. Groundwater sampling from GP-19, GP-21, and GP-23 were non-detect for TPH-HCID. PAHs were detected in the soil sample from GP-22, but at relatively low concentrations (Table 4). All 65 VOCs quantified by the EPA 8260B analysis were

non-detect in the groundwater samples from GP-19, GP-22, and GP-23. All 66 SVOC analytes quantified by the EPA 8270C analysis were non-detect in the groundwater samples from GP-19, GP-22, and GP-23. The findings of the historical sampling are presented on Tables 1 through 5.

Data Gap: Ecology has identified this former manufacturing facility that included wood drying kilns, saw mill building, lumber sheds, and a refuse burner as a potential source of impacts to the environment. The extent of PAH impacts to soil identified at sampling location GP-22 has not be defined.

Proposed Additional Assessment: Four additional Geoprobe borings (309-P, 310-P, 311-P, and 312-P) are proposed in the former casket manufacturing area / area near GP-22. The locations of proposed borings are depicted on Figure 11D. As presented in the upland SAP, two soil samples from each of the borings will be submitted for TPH-HCID analysis with follow-up for TPH-Dx and/or TPH-Gx if the HCID analysis shows the presence of this range of petroleum hydrocarbons in the sample. Four samples (one from each boring) exhibiting the highest concentrations of TPH based on the TPH-HCID analysis will also be analyzed for PCBs, SVOCs, VOCs, and PPMETS. Groundwater samples will be collected from each of the four locations and analyzed for TPH-HCID with follow-up for TPH-Dx and TPH-Gx, SVOCs, and VOCs. The sample from boring 309-P (near the former refuse burner) will also be analyzed for dioxins and furans by EPA Method 1613B. One groundwater sample from location 309-P will be collected and held by the laboratory pending receipt of the results of the soil samples from Geoprobe boring 309-P. If dioxin or furan is identified in the soil, then the groundwater sample will also be analyzed for dioxins and furans.

3.10.6 MACHINE SHOP / MAINTENANCE AREA

Sampling near the former machine shop, oil storage areas, equipment maintenance shop, and former gasoline UST was completed in 2006 and 2007. Sample locations include four Geoprobe borings (GP-8, GP-25, GP-27, and GP-28) and monitoring well MW-4. While some of the soil and groundwater samples were held (not run for laboratory analytical testing) soil samples were field screened using a photoionization detector (PID) and with visual and olfactory observations. No impacts were identified through field screening. Groundwater samples from GP-27 and MW-4 were submitted for VOC analysis and all 65 volatile organic compounds quantified by the EPA 8260B method were below laboratory PQLs. This VOC analysis included chlorinated solvent compounds. Groundwater samples from GP-27 and MW-4 were also analyzed for SVOCs, with no exceedances identified. The findings of the historical sampling are presented on Tables 1 through 5.

Data Gap: Ecology has requested further assessment near the former machine shop / maintenance area for potential impacts to soil associated with historical parts machining and maintenance activities.

Proposed Additional Assessment: Two near surface soil samples (313-P and 314-P) will be collected using hand tools from immediately below the asphalt pavement and pavement base rock near the former machine shop and maintenance area. The two sample locations will be based on field observations completed by SLR and Ecology before the start of sampling activities. The two soil samples will be analyzed for TPH-HCID with follow-up analysis for TPH-Dx and/or TPH-Gx and VOCs, PCBs, and PPMETS. Additionally,

the surface soil sample collected near transformer TZ-5 (sampling location 319-P) will be analyzed for PPMETS.

3.10.7 TRANSFORMERS

In June 1989 the EPA conducted an inspection of the facility to determine whether activities at the facility were in compliance with EPA regulations regarding PCBs. The EPA issued eight violations to the facility, which were related to the improper storage and labeling of out of use pole-mounted PCB capacitors. By December 1989 the PCB containing capacitors had reportedly been removed and the EPA had "closed the book" on the issue. Seven pad-mounted transformers are currently located on the Site (TZ1 through TZ7). Transformer TZ1 is labeled as containing PCBs. Transformers TZ2 through TZ7 are labeled as containing less than 50 ppm of PCBs. One soil and one groundwater sample were collected in May 2006 from Geoprobe location GP-34 and analyzed for PCBs. No PCBs were identified above the laboratory PQLs. Findings of this sampling are presented in Table 7.

Data Gap: Sampling for PCBs was previously conducted at location GP-34. Ecology has requested additional investigation near electrical transformers related to the potential for PCB impacts.

Proposed Additional Assessment: Seven surface soil samples (grab samples) will be collected from areas immediately adjacent to the seven on-site transformers (TZ-1 to TZ-7) for PCB analysis. These seven sampling locations are identified as 315-P to 321-P (Figure 11A). If PCBs are identified in the soil samples, analysis for TPH-Dx will be completed.

3.10.8 FORMER FISH NET STORAGE BUILDING

One rectangular building and several smaller structures are visible on the southeastern portion of the Site (Parcel 29050700401900) in aerial photographs from 1947 and 1955 and on a 1950 Sanborn map. The 1950 Sanborn map identifies the use of the building as "fish net storage." A 1936 Metsker's map indicates the Parcel was owned by K.K. Timber Co., although the map does not indicate whether structures were present or what the use of the Parcel (if any) may have been at that time. Structures were no longer present on the Parcel at the time of a 1967 aerial photograph.

Data Gap: Ecology has requested investigation of soil, groundwater, and sediment near the former fish net storage building.

Proposed Additional Assessment: Two Geoprobe borings (334-P and 335-P) are proposed near the former fish net storage building. The locations of proposed borings are depicted on Figure 11A and 11D. As presented in the upland SAP, two soil samples from each of the borings will be submitted for TPH-HCID analysis with follow-up for TPH-Dx and/or TPH-Gx if the HCID analysis shows the presence of this range of petroleum hydrocarbons in the sample. Two samples (one from each boring) exhibiting the highest concentrations of TPH based on the TPH-HCID analysis will also be analyzed for PCBs, SVOCs, VOCs, and PPMETS. Groundwater samples will be collected from the two locations and analyzed for TPH-HCID (follow-up for TPH-Dx and/or TPH-Gx), PCBs, SVOCs, VOCs, and PPMETS.

Two sediment samples (3SED11-P and 3SED12-P) are proposed near the former fish net storage building. The sediment samples will be collected from the tidal area just in front of the present day shoreline. The sediment samples will be collected, prepared, and analyzed as described in the Sediment Sampling and Analysis Plan (Appendix B) and in accordance with Sediment Management Standards (SMS) (WAC Chapter 173-204) and the Sediment Sampling and Analysis Plan Appendix (SAPA). The samples will be analyzed for ammonia (Plumb 1981 Method), grain size (Plumb 1981 Method), total solids (PSEP Method), total organic carbon (TOC) using EPA Method 9060, total sulfides (Plumb 1981 Method/EPA Method 9030B), total volatile solids (TVS) using EPA method 160.4/Standard Method 2540 E, BNAs listed in the Sediment Management Standards (Chapter 173-204 WAC) using EPA Method 8270C, PCBs using EPA Method 8082, metals analysis (arsenic, cadmium, chromium, copper, lead, silver, and zinc) using inductively coupled plasma (ICP) using EPA Method 6010B, and Mercury using Mercury Cold Vapor Atomic Absorption EPA Method 7471A.

3.10.9 EXISTING GROUNDWATER MONITORING WELLS

Six groundwater monitoring wells are located on the Site. The six wells are shallow monitoring wells screened from 5 to 15 feet bgs (MW-1 through MW-5) and 4 to 16 feet bgs (MW-6). The six wells have previously been sampled for TPH-Dx, TPH-Gx, SVOCs, and VOCs. Groundwater monitoring wells MW-1 through MW-4 and MW-6 were below laboratory PQLs for all analytes. Groundwater monitoring well MW-5 identified benzene (9.46 micrograms per liter [µg/L]), naphthalene (11.1µg/L), toluene (4.12 µg/L), and xylene (1.05 µg/L). Benzene was identified above the MTCA Method A Cleanup Level for benzene in groundwater (5 µg/L). Concentrations of naphthalene, toluene, and xylene identified in groundwater were well below their respective MTCA Method A Cleanup Levels. Findings of past groundwater sampling is presented in Tables 1, 3 and 5.

Soil samples were collected during the monitoring well installation and analyzed for TPH-Dx (MW-1, MW-3, MW-4, MW-5 and MW-6); SVOCs (MW-1, MW3, MW-5, and MW-6); and VOCs (MW-6). Samples from monitoring well borings MW-1, MW-3, and MW-4 were collected from a depth of 6.5 feet bgs, the soil sample from monitoring well boring MW-5 was collected from a depth of 8.5 feet bgs, and soil samples from the monitoring well boring MW-6 were collected from depths of 10 and 14 feet bgs. No TPH-Dx or VOCs were identified in soil from the monitoring well borings at concentrations above the PCLs. No SVOCs were identified at concentrations above the PCLs in borings MW-3 or MW-6. Soil samples from monitoring well borings MW-1 and MW-5 identified cPAHs at concentrations above the PCLs, including benzo(a)anthracene (0.0334 mg/kg) and chrysene (0.0497 mg/kg) in MW-1, and benzo(a)anthracene (0.625 mg/kg), benzo(b)fluoranthene (0.394 mg/kg) and chrysene (0.603 mg/kg) in MW-5. The soil sampling results are presented in Tables 2, 4, and 6.

Data Gap: Groundwater sampling for metals was not previously conducted.

Proposed Additional Assessment: One groundwater sample will be collected from each of the six existing groundwater monitoring wells (MW-1 through MW-6). Groundwater samples from each of the wells will be analyzed for PPMETS. A groundwater sample from MW-1 and MW-4 will also be submitted for TPH-Dx analysis. Pending the results of the TPH-Dx analysis, the groundwater samples may be submitted for additional analysis of PCBs.

3.10.10 BNSF RAILROAD PROPERTY EAST OF SITE

Previous environmental assessment work has identified oil and creosote impacts in the soil and groundwater below the eastern portion of the Site and beneath West Marine View Drive immediately east of the Site. The impacts are believed to be related to former pole treating operations which reportedly occurred at the Site prior to the 1940s, and the operation of fuel oil tanks on the Site to fuel former on-site boilers. The eastern extent of the oil and creosote impacts is unknown. The property to the east of West Marine Drive is owned by BNSF Railroad.

Data Gap: The eastern extent of the fuel oil and creosote impacts at the Site have not been defined.

Proposed Additional Assessment: Twelve hand auger borings (Sample 322-P to 333-P) are proposed east of the BNSF tracks at the base of the railroad track ballast (rock fill), along Maulsby Marsh. The proposed sampling locations are approximately 20 feet east of the railroad tracks, spread out across approximately 800 feet along the tracks. The locations of proposed samples 322-P to 333-P are depicted on Figure 11E. An access agreement with BNSF is currently being reviewed. If access to this area is provided to JELD-WEN, the samples will be collected to evaluate the extent of the previously detected contaminants below West Marine View Drive. The hand auger borings will be completed into the shallow water table, with temporary points installed in each boring for the collection of groundwater samples. Soil and groundwater samples will be analyzed for TPH-HCID with follow-up analysis for TPH-Dx, and/or TPH-Gx. If diesel and/or heavy oil range TPH is detected by the TPH-HCID follow-up analysis for SVOCs will be completed. If the project laboratory identifies gasoline range petroleum hydrocarbons or solvents, VOC analysis will be added to those samples.

3.10.11 OUTFALL SEDIMENTS AND CHANNEL SEGMENT SEDIMENTS

Nine storm water outfall locations have been identified on the Site that discharge to Port Gardner Bay. During an April 1990 Drop-in Inspection by Ecology a soak-and-heat tank was observed to have a 20 foot section of fire hose leading from the tank to the pavement, and presumably to the nearest storm drain catch basin. This catch basin is located northeastern channel segment along the northern boundary of the Site. A light sheen was observed on the water in the tank. Additionally, wastewater generated during the pressure washing of equipment reportedly may have historically discharged to the storm drain catch basins.

In June 1991 Parametrix collected two sediment samples from storm drains on-site to be analyzed for VOCs, TPH, SVOCs, and pesticides. One sample was reportedly collected from the glue room storm water outfall along the southwest Site border and one was collected from the boiler room storm water outfall on the northeastern portion of the Site. The only analyte detected in the two sediment samples above the laboratory PQL was methylene chloride, which was also identified in the associated laboratory method blanks.

Data Gap: Assessment of the potential impacts to sediments downstream of the storm water outfalls and in the northeastern most channel segment.

Proposed Additional Assessment: Three sediment samples will be collected from the tidal mudflats downstream of each of the nine storm drain outfalls and from the Ecology identified "stream" outfall. These sampling locations are identified as 3SED1-P, 3SED2-P, 3SED3-P, 3SED4-P, 3SED5-P, 3SED6-P, 3SED7-P, 3SED8-P, 3SED9-P, and 3SED10-P. These locations are shown on Figure 12A with specific sampling locations for each outfall area shown on Figure 12B. The sediment samples will be collected, prepared, and analyzed as described in the Sediment Sampling and Analysis Plan (Appendix B) and in accordance with SMS (WAC Chapter 173-204) and the SAPA. The samples will be analyzed for ammonia (Plumb 1981 Method), grain size (Plumb 1981 Method), total solids (PSEP Method), TOC using EPA Method 9060, total sulfides (Plumb 1981 Method/EPA Method 9030B), TVS (EPA method 160.4/Standard Method 2540 E), BNAs listed in the Sediment Management Standards (Chapter 173-204 WAC) using EPA Method 8270C, PCBs using EPA Method 8082, metals analysis (arsenic, cadmium, chromium, copper, lead, silver, and zinc) using ICP using EPA Method 6010B, and Mercury using Mercury Cold Vapor Atomic Absorption EPA Method 7471A. In addition, the sediment samples collected from outfall 006 and the "stream" outfall (3SED9-P), near the former Woodlife tank on the eastern portion of the Site will be analyzed for dioxins and furans. Three sediment samples will be collected and archived from both 3SED1-P (outfall 001) and 3SED7-P (outfall 005). The sediment samples will be archived pending receipt of the results of dioxin/furan analysis to be conducted on samples obtained from the old refuse burner area and the hog fuel burner. If the soil sample from the area of the old refuse burner tests positive for dioxin/furan, then the three archive samples from 3SED1-P will be analyzed for dioxins and furans. If the ash catch sample from the hog fuel burner tests positive for dioxin/furan, then the three archive samples from outfall 3SED7-P will be analyzed for dioxins and furans. The archived samples will be held in accordance to the handling requirements summarized Section 3.3.3 of the SAP (Appendix 2).

3.10.12 GENERAL HABITAT RESTORATION DATA NEEDS

The RI includes an assessment of potential impacts to the shoreline. If the RI data shows impacts to the shoreline area, supplemental data may be necessary to assess the extent of impacts and evaluate the habitat restoration alternatives. Evaluation of habitat restoration alternatives, if necessary, will be addressed as part of the FS (discussed in Section 4.0 below).

Data Gap: Additional data may be needed to evaluate habitat restoration alternatives if shoreline impact is identified.

Proposed Additional Assessment: To evaluate habitat restoration alternatives the types, concentrations, and aerial extent of the contaminants present at the Site will need to be understood. This information will be gathered as part of the RI. Supplemental data which may also need to be gathered could include:

a.) the type(s) of substrate or percent fines (muddy soft bottom, coarse, gravelly, cobble, etc.),
b.) vegetation types (terrestrial and aquatic) and locations mapped,
c.) physical artificial impairments, such as over water structures, pilings, or concrete rubble, impacting the natural environment,

d.) the depth level or bathymetry, including the ordinary high water mark (deep subtidal [below -14 feet], shallow subtidal [-14 to -4 feet], intertidal [-4 to +13 feet]),
e.) an evaluation of the terrestrial and aquatic receptors, as well as density in comparison to appropriate reference sites.

3.11 SAMPLING METHODS AND DATA QUALITY OBJECTIVES

The numbers of sampling locations, sampling depths, types of samples, and types of analysis have been selected to meet the objective of the RI/FS. That is, to identify the hazardous substances which have been released to the environment; assess the nature, extent and distribution of these substances; identify the potential migration pathways and receptors; assess the theoretical risk to human health and the environment; and generate or use data of sufficient quality for site characterization, risk assessment and the subsequent analysis and selection of remedial alternatives.

The data quality objectives (DQOs) for the RI/FS is designed to ensure that data of sufficient quality and quantity will be available to identify if hazardous compounds are present at the Site and to evaluate risks posed by the presence of hazardous compounds and identify if hazardous compounds may pose unacceptable risk to current and future human and ecological receptors via direct contact or migration. The DQOs will be used to identify the analytical practical quantification limit (PQL) goals and to establish other quality assurance goals. The DQOs are used to obtain appropriate quantification limits and to meet the requirements of WAC 173-340-820, MTCA. The DQOs are presented in the upland and sediment Sampling and Analysis Plans (SAP), (Appendix A and Appendix B). The SAP details the proposed sample collection methods, sampling equipment, and decontamination procedures. The Quality Assurance Project Plan (QAPP) contains the Quality Assurance/Quality Control (QA/QC) procedures for both field and laboratory procedures and is provided in the upland and sediment SAPs.

3.12 REMEDIAL INVESTIGATION REPORT

The RI report will document the findings from the field work described in this work plan and the results from previous assessments. These findings and results will be used to identify the hazardous substances released to the environment; summarize the nature, extent and distribution of these substances; and identify the potential migration pathways and receptors. Summary tables of the soil, groundwater, and sediment analytical results including the method reporting limits and method detection limits will be provided along with figures depicting the sampling locations.

The general elements of the RI report are as follows:

- Executive Summary
- Introduction with purpose and report organization
- Site background with site description, historical operations and features, and setting
- Conceptual site model / pathway receptor analysis
- Identification of preliminary cleanup levels

- Investigation summary describing sampling methods, data quality, and results for the soil, groundwater, stormwater, and sediment sampling
- Fate and transport discussion
- Summary and conclusion
- Figures, tables and appendices with supporting information

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ADDENDUM TO FINAL WORK PLAN FOR REMEDIAL INVESTIGATION/FEASIBILITY STUDY AND DRAFT CLEANUP ACTION PLAN

JELD-WEN, INC.
FORMER NORD DOOR SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON 98201

Prepared by:

Steve Locke ▪ Managing Principal
Scott Miller ▪ Principal Engineer

March 13, 2009
Project # 008.0228.00032

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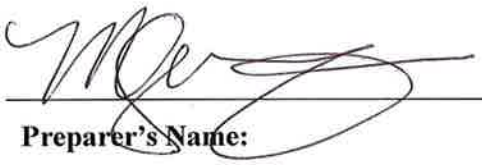
SIGNATURE PAGE

This document has been prepared by SLR International Corp. The material and data in this report were prepared under the supervision and direction of R. Scott Miller, Principal Engineer.

Prepared by:



Preparer's Name:

Megan Coracci

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Reviewed by:

Reviewer's Name:

R. Scott Miller

Reviewer's Title:

Principal Engineer

Date: *May 13, 2009*

JELD-WEN completed a Final Work Plan (dated October 24, 2008) that contains the work scope for completing the Remedial Investigation (RI), Feasibility Study (FS) and draft Cleanup Action Plan (CAP) at the JELD-WEN former Nord Door facility located at 300 West Marine View Drive, Everett, Washington, 98201 (JELD-WEN Site). The Washington State Department of Ecology (Ecology) approved the Work Plan on October 27, 2008. As requested by Ecology, language on how cultural resources would be addressed if encountered during the field investigation should be incorporated into the Final Work Plan for the JELD-WEN Site. This additional comment by Ecology has been addressed (as Section 3.13 of the Final Work Plan) in this addendum to the Final Work Plan.

3.13 CULTURAL RESOURCES

Remedial Investigation field activities will include the collection of soil, groundwater, and sediment samples which will result in a minimal amount of Site disturbance. As such, a professional archaeologist may not be needed on-site during these activities. Cultural Resource review and the need for any on-site archaeologist will be determined by Ecology in communication with the Department of Archaeology and Historic Preservation (DAHP) and the concerned tribal government.

If excavations such as test pits are required for the Site investigation, a separate cultural resources assessment and work plan may be developed in communication with DAHP and the concerned tribal governments pursuant to RCW 27.44 (Indian graves and records) and RCW 27.53 (Archaeological sites and resources) and a professional archaeologist may be on-site to oversee those activities.

If any archaeological resources are discovered during RI field activities, work will be stopped immediately and Ecology, the DAHP, the City of Everett Planning and Community Development Department, and the Tulalip Tribes Cultural Resources Department will be notified by the close of business. A professional archaeologist will arrange an on-site inspection and invite the parties to attend. The professional archaeologist shall document the discovery and provide a professionally documented site form and report to the above listed parties. In the event of an inadvertent discovery of human remains, work will be immediately halted in the discovery area, the remains will be covered and secured against further disturbance, and the Everett Police Department and Snohomish County Medical Examiner will be immediately contacted, along with DAHP and authorized Tribal representatives. A treatment plan by the professional archaeologist shall be developed in consultation with the above listed parties consistent with RCW 27.44 and RCW 27.53 and implemented according to WAC 25-48.

The purpose of the feasibility study (FS) is to develop and evaluate cleanup action alternatives and to support the selection of a cleanup alternative that will be used to prepare the draft CAP. The FS approach is consistent with WAC 173-340-350.

4.1 ESTABLISHMENT OF PRELIMINARY CLEANUP LEVELS (PCLS)

Preliminary cleanup levels for soil and groundwater at the Site will be established based on the MTCA Cleanup Regulations (chapter 173-340 WAC).

- **Groundwater** – Because on-site groundwater is non-potable in accordance with WAC 173-340-720(2), groundwater PCLs are based on the most restrictive level between protection of marine and freshwater surface water. The Site is located within an estuary and may contain both freshwater and marine species. The most restrictive cleanup level between MTCA Method A (WAC 173-340-730[2]) and Method B (WAC 173-340-730[3]) was be used. If a PCL was not available from the aforementioned sources, then the most restrictive PCL between MTCA Method A (WAC 173-340-720[3]) and Method B (WAC 173-340-720[4]) for potable groundwater was used. PCLs for groundwater are presented on Tables 1, 3, 5, and 7.
- **Soil** – Soil PCLs were calculated by selecting the most stringent of the based on protection of human health (under a residential scenario), protection of terrestrial ecological receptors, and protection of groundwater. The most restrictive cleanup level between MTCA Method A (WAC 173-340-740[2]) and Method B (WAC 173-340-740[3]) for unrestricted land use was used. MTCA Cleanup Regulations, Priority Contaminants of Ecological Concern for Sites that Qualify for the Simplified TEE Procedure, Table 749-2 for unrestricted land use were used. The Simplified TEE cleanup levels were used for the RI, however a Site Specific TEE may be conducted as part of the FS.

  Soil PCLs were calculated using Ecology's three phase partitioning model as described in WAC 173-340-747 to generate soil concentrations which are protective of surface water. The chemical physical parameters were obtained from the CLARC tables. In the event that the calculated PCLs were below the laboratory PQLs, the PCL defaulted to the laboratory PQL. PCLs for soil are presented on Tables 2, 4, 6, and 7.

The cleanup levels for sediments at the Site will be based on the Sediment Management Standards (chapter 173-204 WAC), as described below:

- Sediment Management Standards (chapter 173-204 WAC) Table 1 – Marine Sediment Quality Standards for sediments located in Puget Sound.

The cleanup levels will consider all applicable pathways including direct contact (including inhalation), media transfer pathways (leaching to groundwater migration to surface water, etc.), and exposure to terrestrial and/or aquatic ecological receptors.

4.2 DELINEATION OF MEDIA REQUIRING REMEDIAL ACTION

The results from previous Site investigation and the RI will be compared with the Site cleanup levels to determine the areas of soil, groundwater, and sediment that require remedial action. This evaluation will include the lateral and vertical extent of soil impacts, the extent and potential migration pathways for impacts to groundwater, and the extent of sediment impacts. Areas requiring remedial action will be discussed with Ecology as part of the development of remedial action objectives for the Site (presented below).

4.3 DEVELOPMENT OF REMEDIAL ACTION OBJECTIVES

Remedial action objectives for the Site will be developed for the contaminants and media of interest following completion of the RI. The remedial action objectives will take into account exposure pathways and receptors, future land uses, and will establish acceptable contaminant level or range of levels (at particular locations for each exposure route) by eliminating, reducing, or otherwise controlling risks posed through each exposure pathway and migration route.

4.4 APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

Applicable Local, State, and Federal Laws (WAC 173-340-710) states that cleanup actions conducted under MTCA shall comply with applicable state and federal laws. The code also addresses applicable relevant and appropriate requirements (ARARs), substantive (as opposed to procedural) requirements, and local government permits and approvals.

The RI/FS will be conducted under MTCA (WAC 173-340), which addresses identification and cleanup of contamination in soils, surface water, and groundwater. For contamination in sediments, MTCA refers to the Sediment Management Standards (SMS) (WAC 173-204), which includes standards for marine sediments.

Additional regulations that are Applicable or Relevant and Appropriate Requirements (ARARs) include the following:

- Federal Clean Water Act and National Toxics Rule [40 Code of Federal Regulations (CFR) 131], which provide water quality criteria (WQC) for protection of human health and aquatic organisms.
- Federal Safe Drinking Water Act (40 CFR 141), which provides maximum contaminant levels (MCLs) and maximum contaminant level goals (MCLG) for protection of drinking water.
- Washington State Department of health rules for Public Water Supplies (WAC 246-290-310), which also provides MCLs.
- Water Pollution Control Act (FWPCA) Amendments of 1972, commonly referred to as the Clean Water Act (CWA) (33 USC §1251 et seq.)
- Water Quality Standards For Surface Waters of The State of Washington (173-201A WAC)
- The Endangered Species Act (ESA) of 1973, which protects plant and animal species that are listed by the federal government as “endangered” or “threatened,” as well as critical habitat

necessary for the protection of these species (16 USC 1531-1543 and 50 CFR 10, 13, 17, 222, 226, 402, 424, and 450-453).

4.5 SCREENING OF CLEANUP ALTERNATIVES

The FS process will develop and screen remedial alternatives in accordance with WAC 173-340-360 and based on the risks identified in RI. This process will result in a range of options that will be evaluated. This range of alternatives will include options in which treatment is used to reduce the toxicity, mobility, or volume of impacted material, but varying in the types of treatment, the amount treated, and the manner in which long-term residuals or untreated impacted material are managed; options involving the containment with little or no treatment; options involving both treatment and containment; and a no-action alternative.

Cleanup alternatives will be screened to meet the thresholds requirements of WAC-173-340-160 and shall; comply with cleanup standards (WAC 173-340-700 through 173-340-760); comply with applicable state and federal laws; and provide for compliance monitoring, as applicable. Cleanup alternatives will be screened to be protective of human health and the environment and to take into account current and proposed future land uses. When selecting from cleanup action alternatives that fulfill the threshold requirements, the selected action shall use permanent solutions (as outlined in WAC 173-340-360[3]) to the maximum extent practicable, provide for a reasonable restoration time frame (as outlined in WAC 173-340-360[4]); and consider public concerns (as outlined in WAC 173-340-600).

4.6 EVALUATION OF CLEANUP ALTERNATIVES

The cleanup alternatives shall be evaluated on the basis of the requirements and the criteria specified in WAC 173-340-360.

4.7 EVALUATION OF HABITAT RESTORATION ALTERNATIVES

The RI/FS activities are being overseen by Ecology and work is being conducted under the Governor's Puget Sound Initiative. The Initiative focuses on cleaning up contamination as well as restoring Puget Sound. The Site lies on an area of fill that extends into Port Gardner Bay. The Site is relatively flat, with a maximum elevation of approximately 15-feet above mean sea level. The southern edge of the Site is covered by rubble, primarily large pieces of asphalt, along a steep upper tide line. Pockets of dune grass are located between rubble and scattered along a thin band at the base of the riprap. A large raft of unused logs extends into the tidal flats located southeast of the Site. The log raft is not located on the JELD-WEN Site. The northwestern shore of the Site is covered with rubble consisting of concrete, asphalt, and large riprap and no vegetation. A very thin strip of grasses and weeds are located at the top of the shore, near the paved area of the Site occupied by Rinker Materials. The northeastern shore of the Site is covered with broken asphalt which slopes steeply downward to the mudflat at the narrow inlet along the northeastern side of the Site. No vegetation is present on the slope.

While planning this cleanup and making cleanup decisions, Ecology and JELD-WEN, inc. will evaluate opportunities to perform remedial actions in a fashion that coincidentally enhances habitat. Elements of the remedial action will be evaluated for restoration opportunities in consultation with

Ecology as plans for cleanup are developed. Potential restoration or enhancement alternatives may be achieved by removing environmental stressors at the Site. The work performed as part of the RI will provide sufficient data to allow for an evaluation of restoration alternatives, which will be conducted as part of the FS. JELD-WEN will consider specific habitat restoration alternatives as appropriate based on the findings in the RI/FS.

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of the checklist is to provide information to help the site owner and the agency, identify impacts from the proposal, and to help the agency decide whether an EIS is required. Appendix E contains an SEPA checklist which was prepared on behalf of JELD-WEN and the Port of Everett (adjacent property owner to the north), in 2006 as part of an application for waterfront redevelopment comprehensive plan map change, planned development overlay rezone, and shoreline designation change. While some details of the planned development may have changed since the 2006 application, the SEPA checklist provides relevant information pertaining to potential receptors, habitat, and use.

4.8 FEASIBILITY STUDY REPORT

A FS report will be prepared following completion of the RI. The FS report will be used to evaluate potential alternatives and a preferred alternative for the cleanup of the contamination present at and restoration of the Site. The alternatives evaluation and the preferred cleanup alternative will meet the requirements of WAC 173-340-360.

The general elements of the FS report are as follows:

- Introduction with purpose and report organization
- Description of material requiring remedial action
- Identification of remedial action objectives
- Summary of ARARs
- Site cleanup standards
- Screening and evaluation of cleanup alternatives
- Evaluate habitat restoration alternatives
- Summary and conclusion

5. DRAFT CLEANUP ACTION PLAN

Upon approval of the final RI/FS report, JELD-WEN, inc. will prepare a draft CAP in accordance with WAC 173-340-380 that provides a proposed cleanup action to address the contamination present on the Site. The draft CAP will include the following:

- A general description of the proposed cleanup action (in accordance with WAC 173-340-350 through 173-340-390);
- A summary of the rationale for selecting the proposed action;
- A brief summary of other alternatives evaluated in the RI/FS;
- Cleanup standards and, where applicable, remediation levels, for each hazardous substance and for each medium of concern at the Site;
- The schedule for implementation of the CAP including, if known, restoration time frame;
- Institutional controls, if any, required as part of the proposed cleanup action;
- Applicable state and federal laws, if any, for the proposed cleanup action, when these are known at this step in the cleanup process (this does not preclude subsequent identification of applicable state and federal laws);
- A preliminary determination by the department that the proposed cleanup action will comply with WAC 173-340-360;
- Where the cleanup action involves on-site containment, specification of the types, levels, and amounts of hazardous substances remaining on site and the measures that will be used to prevent migration and contact with those substances.

Cleanup actions which could potentially be considered in the draft CAP may include the following:

Alternative 1 – No action, in which no physical cleanup actions are initiated.

Alternative 2 – Periodic Groundwater Monitoring, in which groundwater monitoring wells are sampled periodically to establish that impacted groundwater at the Site is stable and is not negatively affecting nearby surface water, potential receptors, habitat, or use.

Alternative 3 – Containment and Groundwater Monitoring, in which physical barriers are installed to restrict access to and movement of contaminated media. Groundwater monitoring would be conducted to establish that the containment of contaminated groundwater is successful.

Alternative 4 – Excavation, in which contaminated media is excavated and removed from the Site.

Alternative 5 – Stabilization and/or chemical oxidation, in which hazardous constituents would be changed into immobile (insoluble) forms, bound in an immobile matrix, and/or bound in a matrix which minimizes the material surface exposed to weathering and leaching.

Other alternatives may be considered upon completion of the RI/FS report. Upon selection of the preferred cleanup alternative and completion of the draft CAP, JELD-WEN and Ecology will provide public notice and opportunity for comment on the draft CAP, as required in WAC 173-340-600(13).

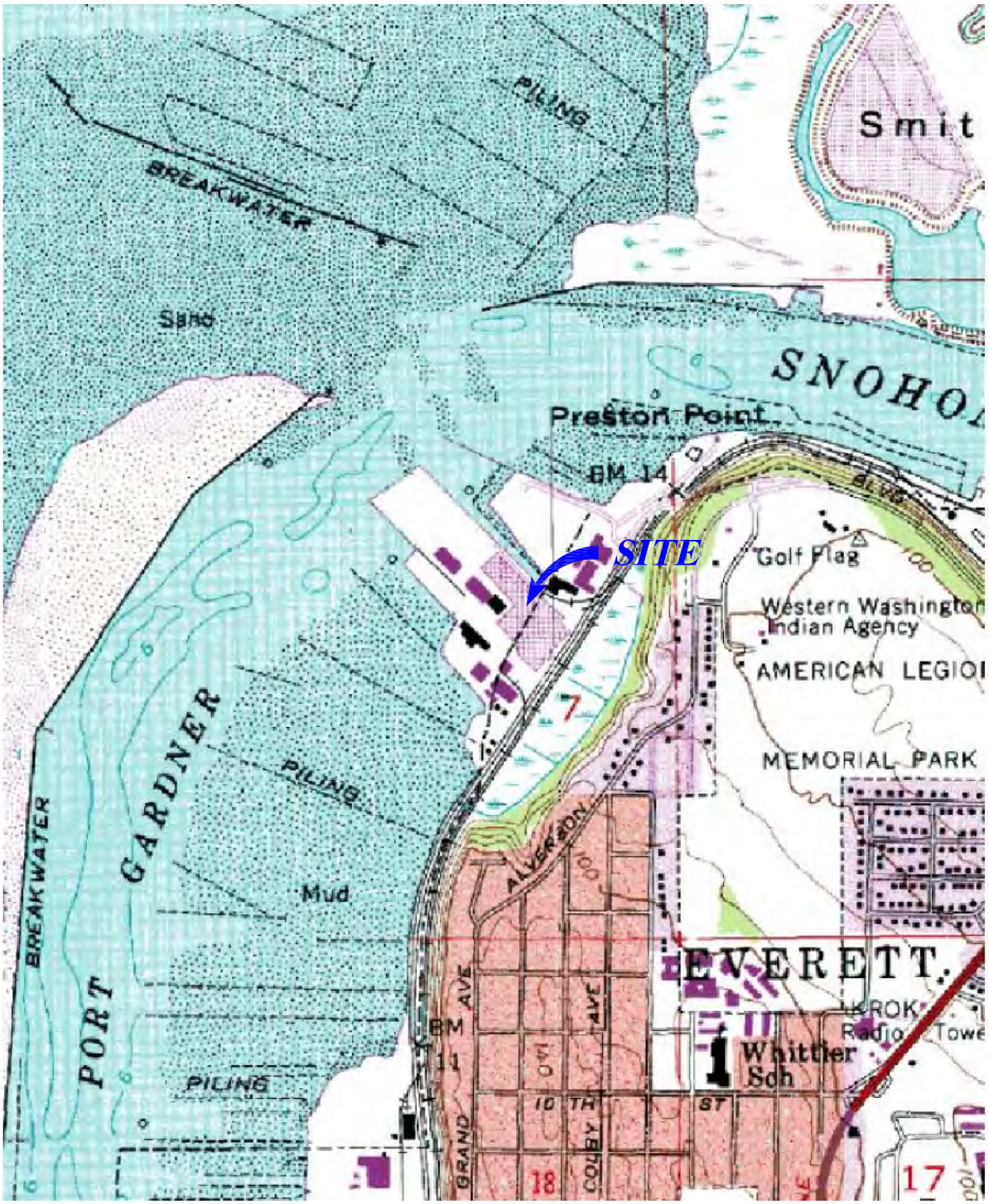
5.1 PUBLIC PARTICIPATION /PLAN

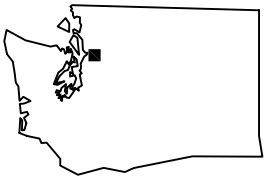
Under MTCA, the public is guaranteed meaningful opportunities to learn and provide comment on important cleanup decisions before they are made. Ecology's goal is to encourage public understanding of and participation in the cleanup of sites through a variety of public information and public involvement activities. The requirements for public notice and participation are presented in WAC 173-340. Public involvement activities will be lead by Ecology, with support from JELD-WEN. Ecology has provided SLR with a DRAFT Public Participation Plan (PPP), dated September 19, 2007. A copy of the Draft PPP is included in Appendix F.

6. CLOSING

This Work Plan has been prepared to describe the proposed work scope for completing the RI/FS and draft CAP at the Site in accordance with the Agreed Order between JELD-WEN and Ecology. This Work Plan describes the environmental assessment work scope that will be performed to meet the Work Plan objectives and to comply with the Agreed Order. SLR, on behalf of JELD-WEN, is requesting Ecology's approval of this Work Plan.

FIGURE 1	SITE LOCATION MAP
FIGURE 2	SITE PLAN
FIGURE 3	1947 AERIAL PHOTOGRAPH WITH SAMPLING LOCATIONS
FIGURE 4	1955 AERIAL PHOTOGRAPH WITH SAMPLING LOCATIONS
FIGURE 5	1967 AERIAL PHOTOGRAPH WITH SAMPLING LOCATIONS
FIGURE 6	1976 AERIAL PHOTOGRAPH WITH SAMPLING LOCATIONS
FIGURE 7	1993 AERIAL PHOTOGRAPH WITH SAMPLING LOCATIONS
FIGURE 8	2003 AERIAL PHOTOGRAPH WITH SAMPLING LOCATIONS
FIGURE 9	HISTORICAL SITE FEATURES AND SAMPLING LOCATIONS
FIGURE 10	CONCEPTUAL SITE MODEL
FIGURE 11A	PROPOSED UPLAND SAMPLING LOCATIONS
FIGURE 11B	PROPOSED SAMPLING LOCATIONS – SW FORMER UNPAVED AREA
FIGURE 11C	PROPOSED SAMPLING LOCATION S– SOUTH CENTER UNPAVED AREA
FIGURE 11D	PROPOSED SAMPLING LOCATIONS – FORMER CASKET MANUFACTURING AND FISH NET STORAGE
FIGURE 11E	PROPOSED SAMPLING LOCATIONS IN BNSF RAILWAY PROPERTY
FIGURE 12A	PROPOSED SEDIMENT SAMPLING LOCATIONS
FIGURE 12B	PHOTOGRAPHS OF PROPOSED SEDIMENT SAMPLING LOCATIONS





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APPROXIMATE SCALE IN MILES

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SOURCE: USGS 7.5 MINUTE QUADRANGLE MARYSVILLE, WA; 1991(PHOTOREVISED 1968 AND 1973)

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FIGURE 1
JELD-WEN SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON
SITE LOCATION MAP

NOTES:
THE BUILDINGS, SURFACE UTILITIES, EDGE OF PAVEMENT, AND APPROXIMATE SHORELINE SHOWN ON THIS MAP ARE BASED ON A 2006 SURVEY PERFORMED BY WH PACIFIC.

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APPROXIMATE SCALE IN FEET

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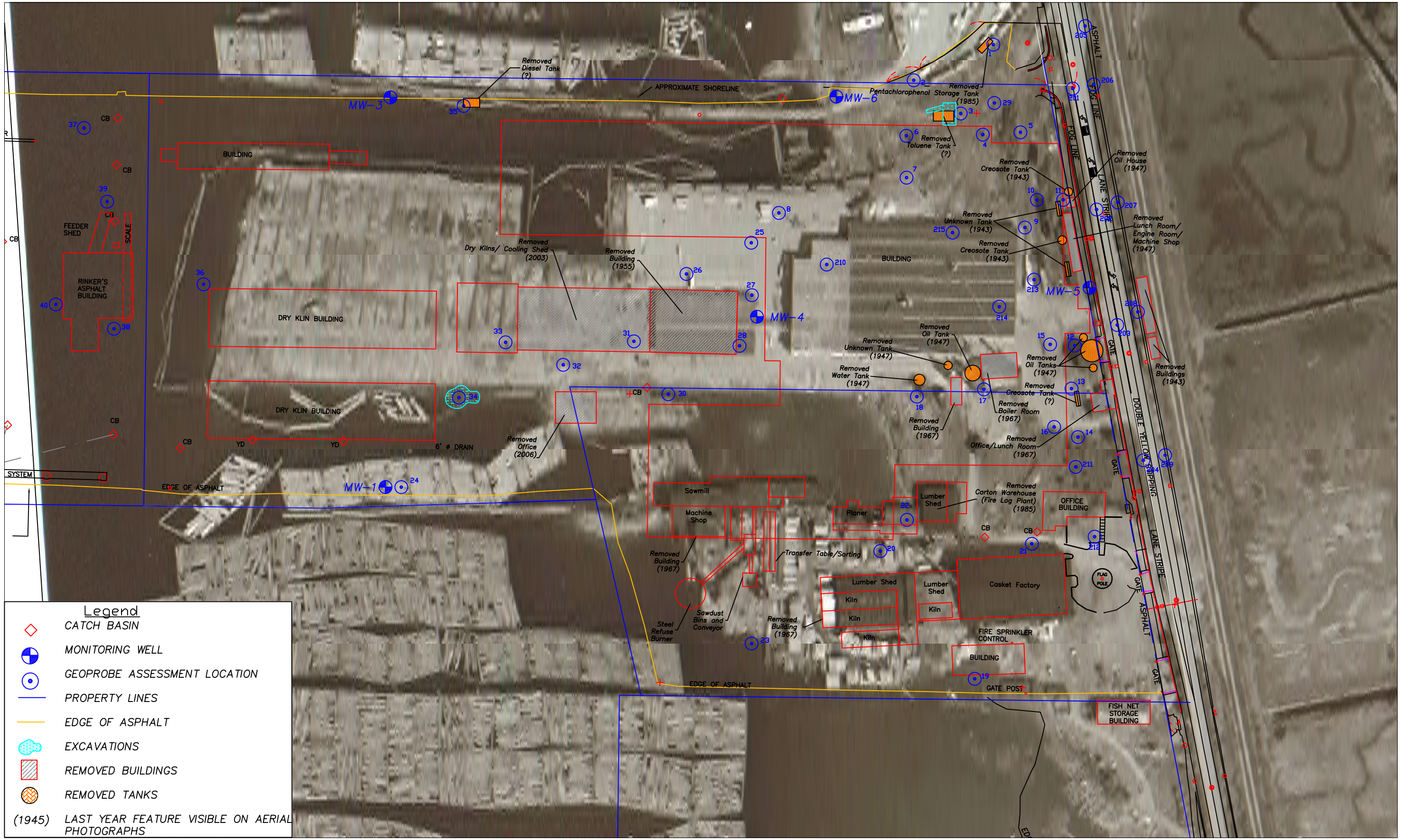
FIGURE 2
JELD-WEN SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON
SITE PLAN



Legend

- CATCH BASIN
- MONITORING WELL
- GEOPROBE ASSESSMENT LOCATION
- PROPERTY LINES
- EDGE OF ASPHALT
- EXCAVATIONS
- REMOVED BUILDINGS
- REMOVED TANKS
- (1945) LAST YEAR FEATURE VISIBLE ON AERIAL PHOTOGRAPHS

Base map from W&H Pacific Titled 'Site Map- Monitoring Wells' dated 11/20/2006
Northwestern Lumber and Manufacturing Company Detail from 1957 Sanborn Map

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APPROXIMATE SCALE

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FIGURE 3
JELD-WEN SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON
1947 AERIAL PHOTOGRAPH WITH SAMPLING LOCATIONS

Legend

- CATCH BASIN
- MONITORING WELL
- GEOPROBE ASSESSMENT LOCATION
- PROPERTY LINES
- EDGE OF ASPHALT
- EXCAVATIONS
- REMOVED BUILDINGS
- REMOVED TANKS
- (1945) LAST YEAR FEATURE VISIBLE ON AERIAL PHOTOGRAPHS

Base map from W&H Pacific Titled "Site Map- Monitoring Wells" dated 11/20/2006
Northwestern Lumber and Manufacturing Company Detail from 1957 Sanborn Map

0 150 300

APPROXIMATE SCALE

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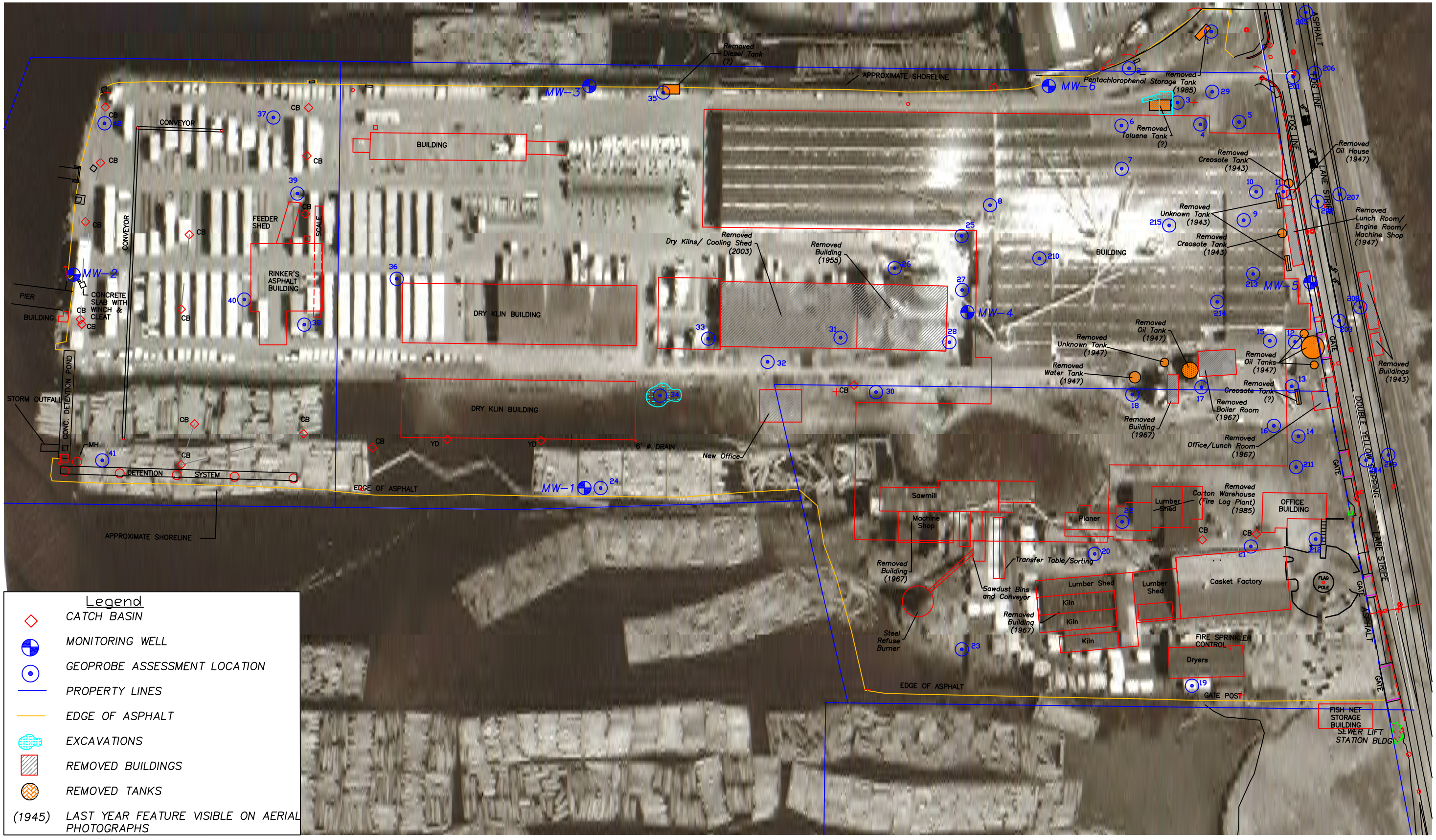
FIGURE 4
JELD-WEN SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON
1955 AERIAL PHOTOGRAPH WITH SAMPLING LOCATION



Base map from W&H Pacific Titled 'Site Map- Monitoring Wells' dated 11/20/2006
Northwestern Lumber and Manufacturing Company Detail from 1968 Sanborn Map

0 150 300
APPROXIMATE SCALE

N

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West Linn, OR 97068
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FIGURE 5
JELD-WEN SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON
1967 AERIAL PHOTOGRAPH WITH SAMPLING LOCATION

Legend

- CATCH BASIN
- MONITORING WELL
- GEOPROBE ASSESSMENT LOCATION
- PROPERTY LINES
- EDGE OF ASPHALT
- EXCAVATIONS
- REMOVED BUILDINGS
- REMOVED TANKS
- (1945) LAST YEAR FEATURE VISIBLE ON AERIAL PHOTOGRAPHS

Base map from W&H Pacific Titled 'Site Map- Monitoring Wells' dated 11/20/2006
Northwestern Lumber and Manufacturing Company Detail from 1968 Sanborn Map

0 150 300
APPROXIMATE SCALE

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FIGURE 6
JELD-WEN SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON
1976 AERIAL PHOTOGRAPH WITH SAMPLING LOCATION

Legend

- CATCH BASIN
- MONITORING WELL
- GEOPROBE ASSESSMENT LOCATION
- PROPERTY LINES
- EDGE OF ASPHALT
- EXCAVATIONS
- REMOVED BUILDINGS
- REMOVED TANKS
- (1945) LAST YEAR FEATURE VISIBLE ON AERIAL PHOTOGRAPHS

Base map from W&H Pacific Titled 'Site Map- Monitoring Wells' dated 11/20/2006
Northwestern Lumber and Manufacturing Company Detail from 1968 Sanborn Map

0 150 300
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FIGURE 7
JELD-WEN SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON
1993 AERIAL PHOTOGRAPH WITH SAMPLING LOCATION

Legend

- CATCH BASIN
- MONITORING WELL
- GEOPROBE ASSESSMENT LOCATION
- PROPERTY LINES
- EDGE OF ASPHALT
- EXCAVATIONS
- REMOVED BUILDINGS
- REMOVED TANKS
- (1945) LAST YEAR FEATURE VISIBLE ON AERIAL PHOTOGRAPHS

Base map from W&H Pacific Titled 'Site Map- Monitoring Wells' dated 11/20/2006
Northwestern Lumber and Manufacturing Company Detail from 1968 Sanborn Map

0 150 300
APPROXIMATE SCALE

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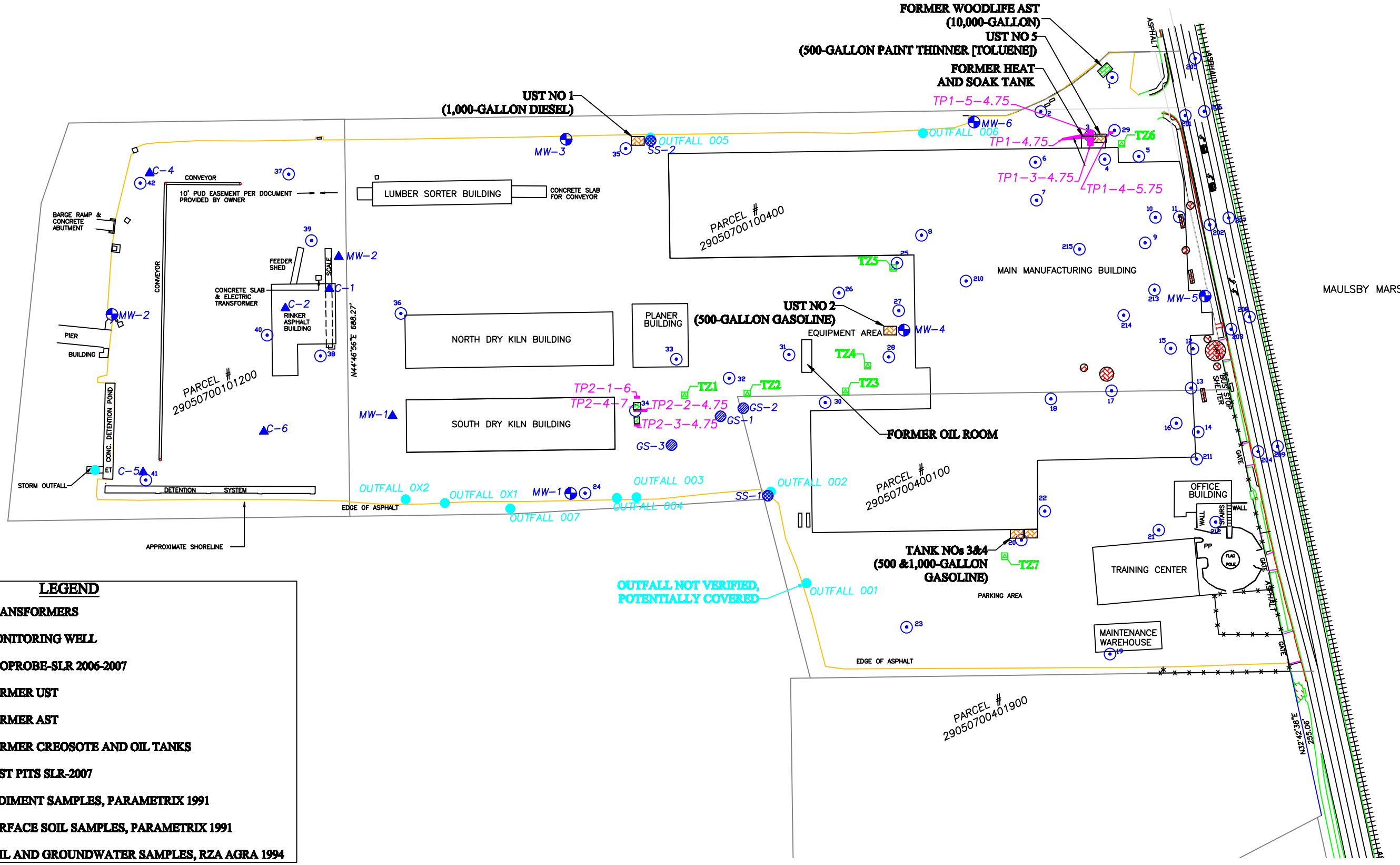
FIGURE 8
JELD-WEN SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON
2003 AERIAL PHOTOGRAPH WITH SAMPLING LOCATION



LEGEND

- TRANSFORMERS
- MW-1 — MONITORING WELL
- 41 — GEOPROBE-SLR 2006-2007
- FORMER UST
- FORMER AST
- FORMER CREOSOTE AND OIL TANKS
- TP2-3-4.75 — TEST PITS SLR-2007
- SS-1 — SEDIMENT SAMPLES, PARAMETRIX 1991
- GS-1 — SURFACE SOIL SAMPLES, PARAMETRIX 1991
- MW-1 — SOIL AND GROUNDWATER SAMPLES, RZA AGRA 1994

NOTES:
THE BUILDINGS, SURFACE UTILITIES, EDGE OF PAVEMENT, AND APPROXIMATE SHORELINE SHOWN ON THIS MAP ARE BASED ON A 2006 SURVEY PERFORMED BY WH PACIFIC.

0 175 300

APPROXIMATE SCALE IN FEET

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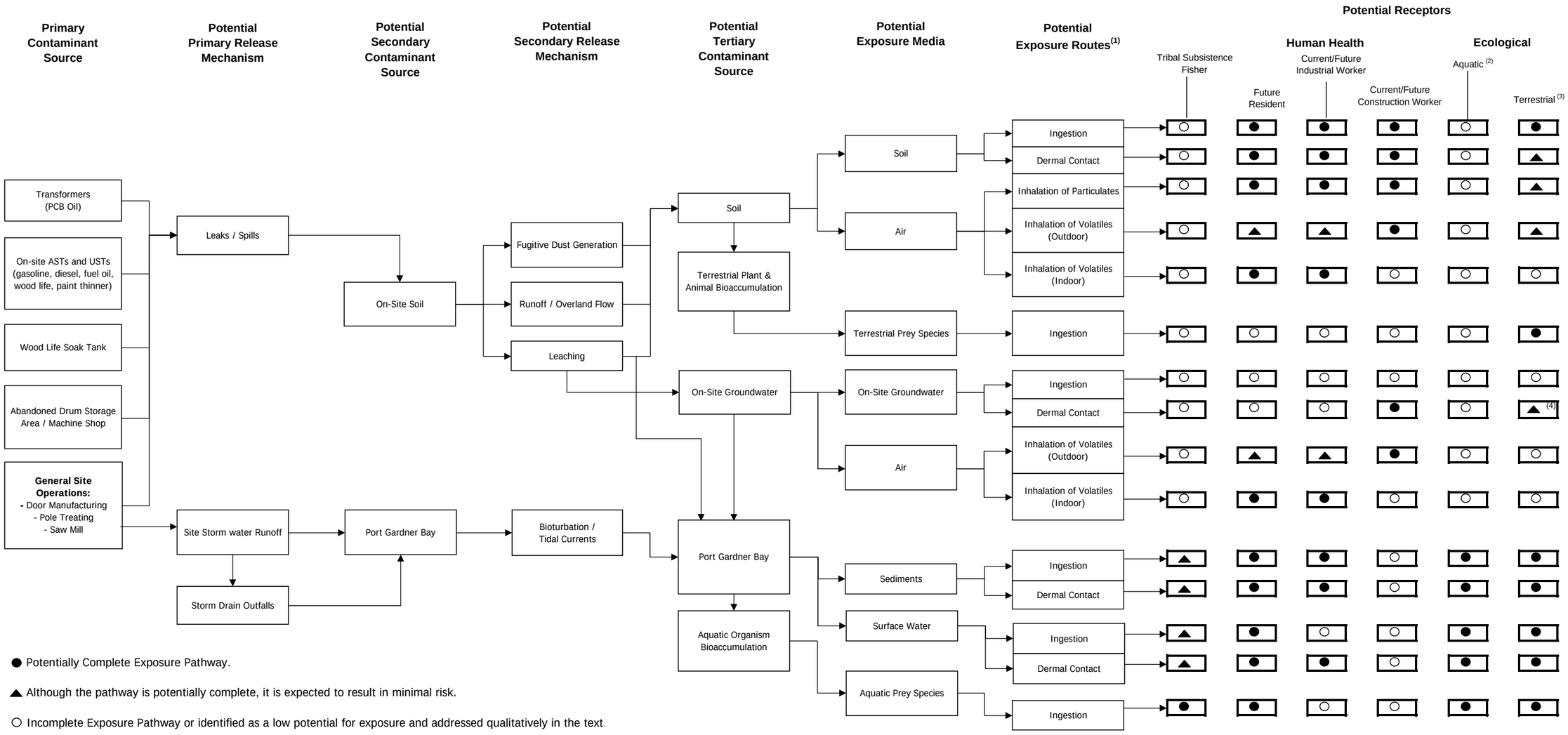
FIGURE 9
JELD-WEN SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON
HISTORICAL SAMPLING LOCATIONS

Figure 10: Conceptual Site Model
JELD-WEN Site
Everett, WA

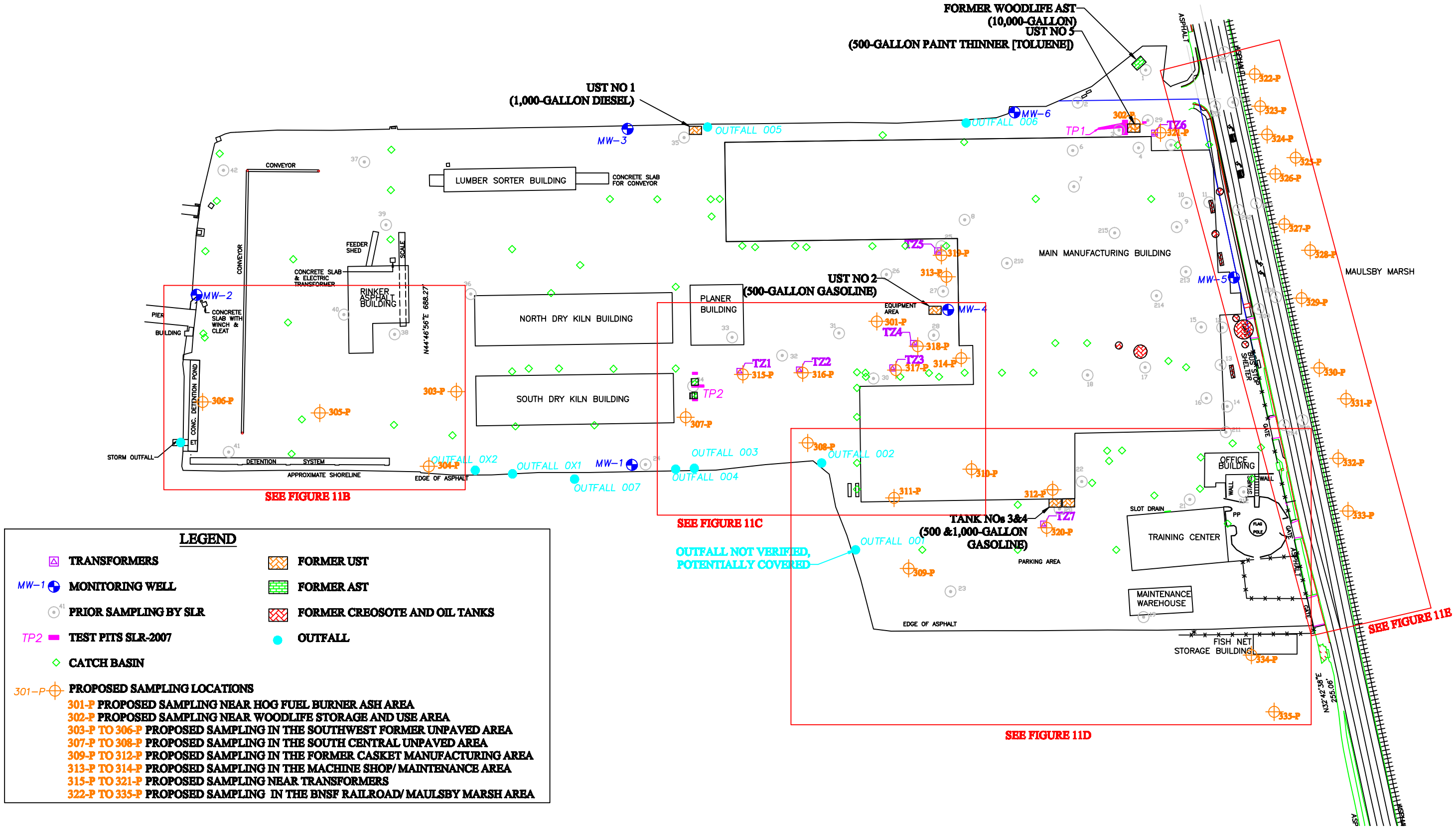


● Potentially Complete Exposure Pathway.

▲ Although the pathway is potentially complete, it is expected to result in minimal risk.

○ Incomplete Exposure Pathway or identified as a low potential for exposure and addressed qualitatively in the text.

(1) Screening levels will be based on unrestricted land use and may not reflect all of the exposure routes that are complete. Screening levels will be based on the most restrictive exposure routes
(2) Aquatic ecological receptors may include mammals, birds, fish/shellfish, benthic invertebrates, reptiles, amphibians and aquatic vegetation.
(3) Terrestrial ecological receptors may include mammals, birds, reptiles, amphibians, invertebrates and terrestrial vegetation.
(4) This completed pathway is based on terrestrial vegetation (roots) coming into contact with groundwater.



LEGEND

- TRANSFORMERS
- MONITORING WELL (MW-1)
- PRIOR SAMPLING BY SLR
- TEST PITS SLR-2007 (TP2)
- CATCH BASIN
- PROPOSED SAMPLING LOCATIONS (301-P)
- FORMER UST
- FORMER AST
- FORMER CREOSOTE AND OIL TANKS
- OUTFALL

301-P PROPOSED SAMPLING NEAR HOG FUEL BURNER ASH AREA
302-P PROPOSED SAMPLING NEAR WOODLIFE STORAGE AND USE AREA
303-P TO 306-P PROPOSED SAMPLING IN THE SOUTHWEST FORMER UNPAVED AREA
307-P TO 308-P PROPOSED SAMPLING IN THE SOUTH CENTRAL UNPAVED AREA
309-P TO 312-P PROPOSED SAMPLING IN THE FORMER CASKET MANUFACTURING AREA
313-P TO 314-P PROPOSED SAMPLING IN THE MACHINE SHOP/ MAINTENANCE AREA
315-P TO 321-P PROPOSED SAMPLING NEAR TRANSFORMERS
322-P TO 335-P PROPOSED SAMPLING IN THE BNSF RAILROAD/ MAULSBY MARSH AREA

0 175 300
APPROXIMATE SCALE IN FEET

NOTES:
THE BUILDINGS, SURFACE UTILITIES, EDGE OF PAVEMENT, AND APPROXIMATE SHORELINE SHOWN ON THIS MAP ARE BASED ON A 2006 SURVEY PERFORMED BY WH PACIFIC.

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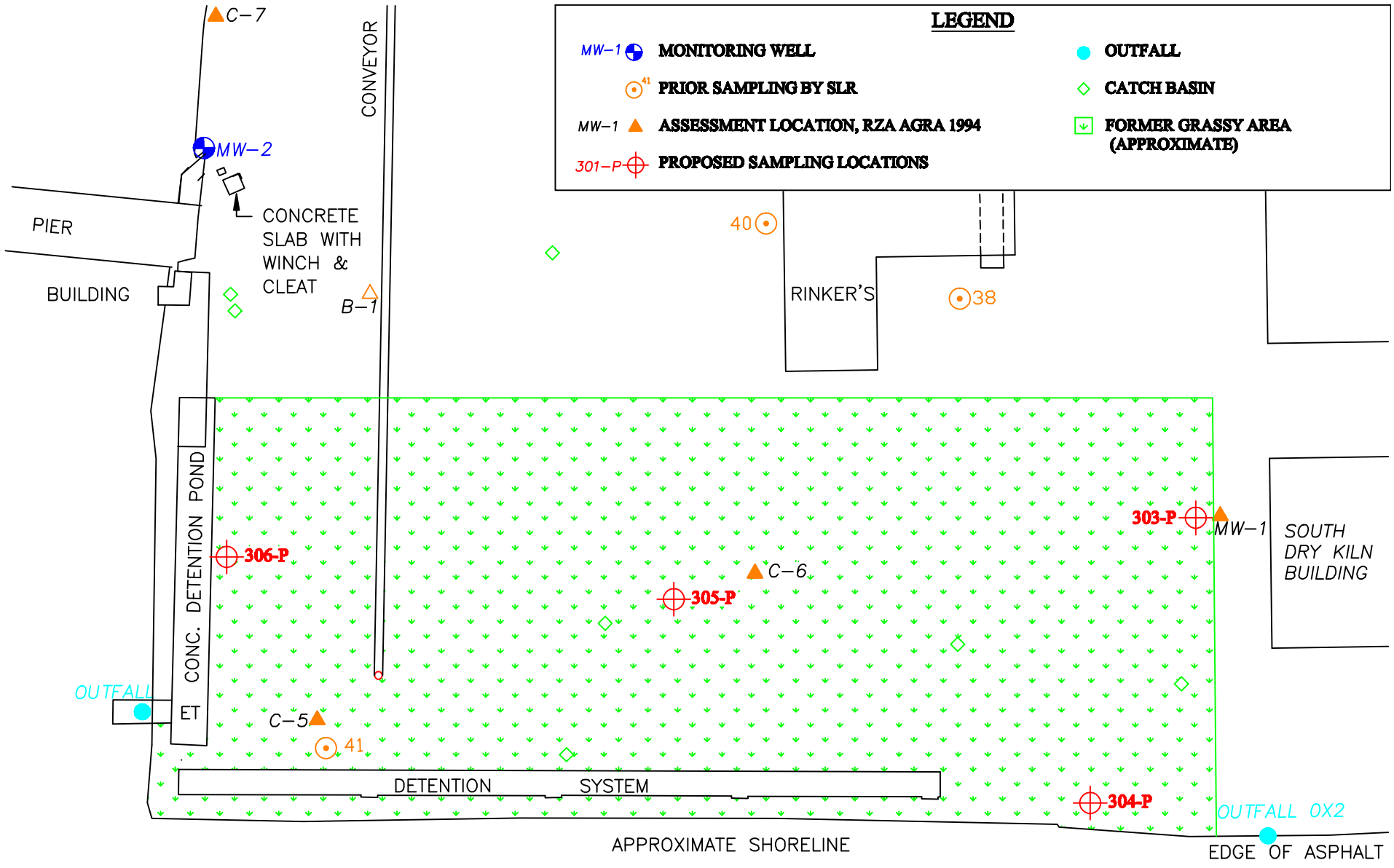
FIGURE 11A
JELD-WEN SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON
PROPOSED UPLAND SAMPLING LOCATIONS



0 70 140

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FIGURE 11B
JELD-WEN SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON
SOUTHWEST FORMER UNPAVED AREA
PROPOSED UPLAND SAMPLING LOCATIONS

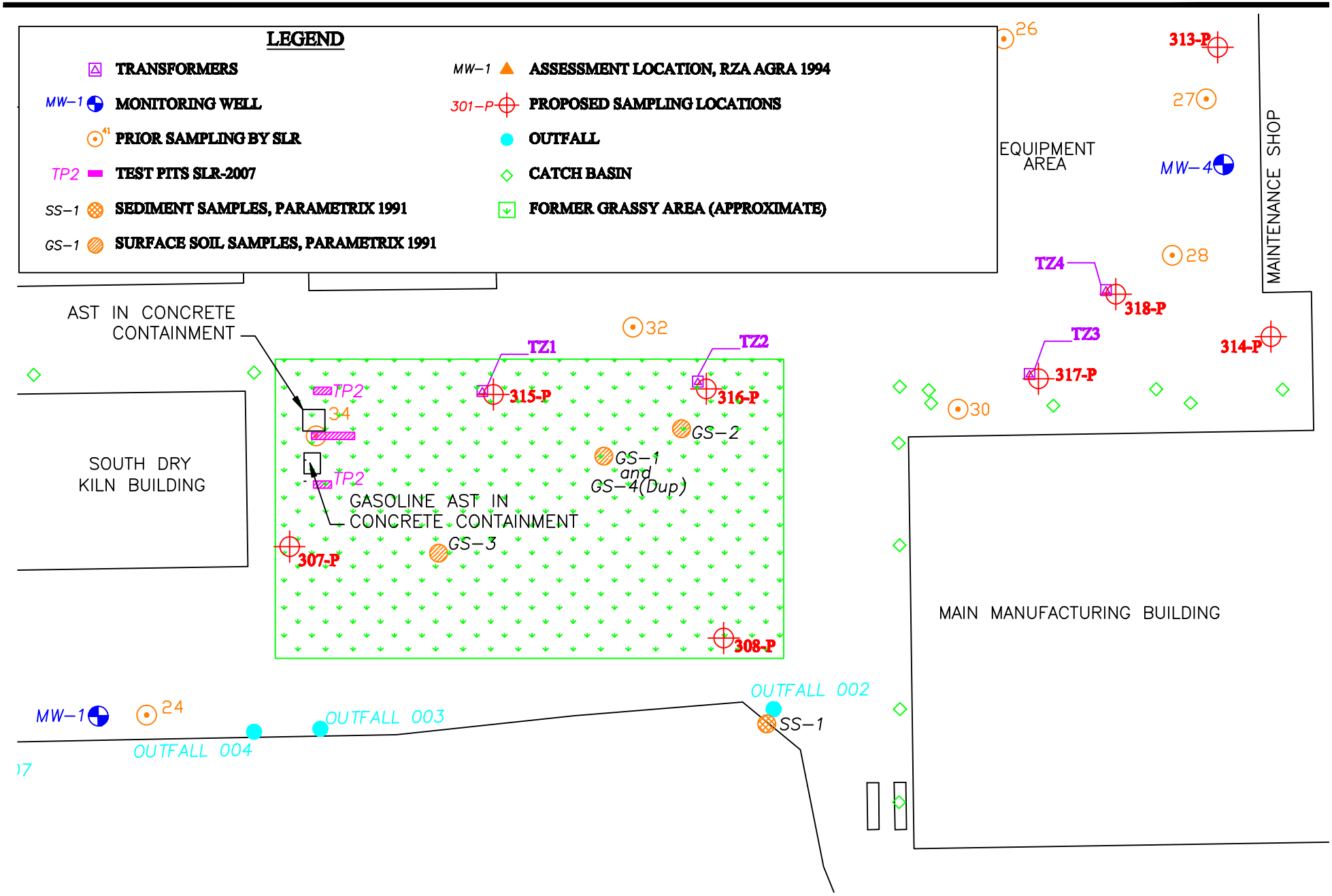

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FIGURE 11C
JELD-WEN, FORMER NORD DOOR
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON
SOUTH CENTRAL UNPAVED AREA PROPOSED UPLAND SAMPLING LOCATIONS

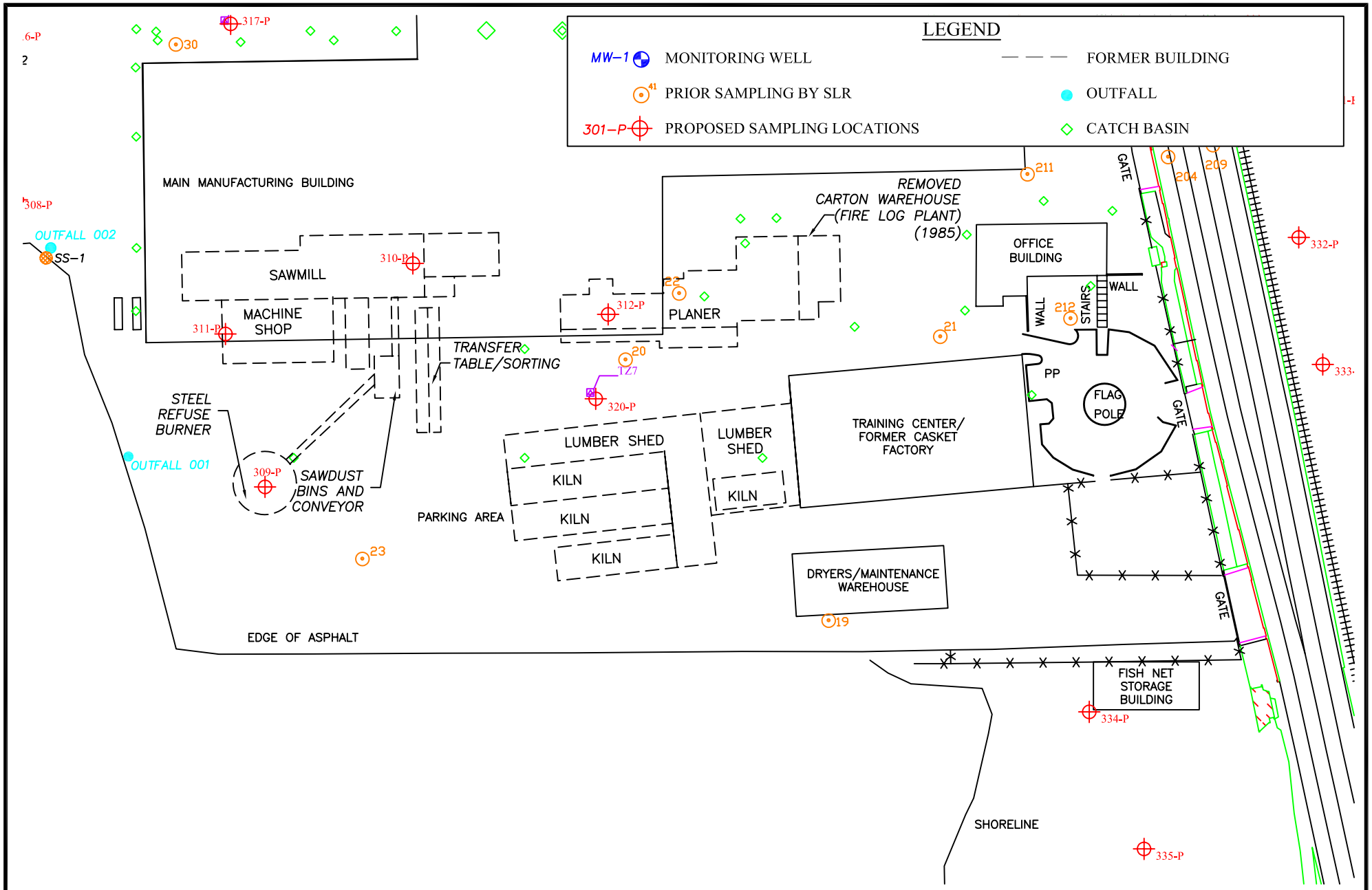

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FIGURE 11D
JELD-WEN SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON
FORMER CASKET MANUFACTURING AREA
PROPOSED UPLAND SAMPLING LOCATIONS

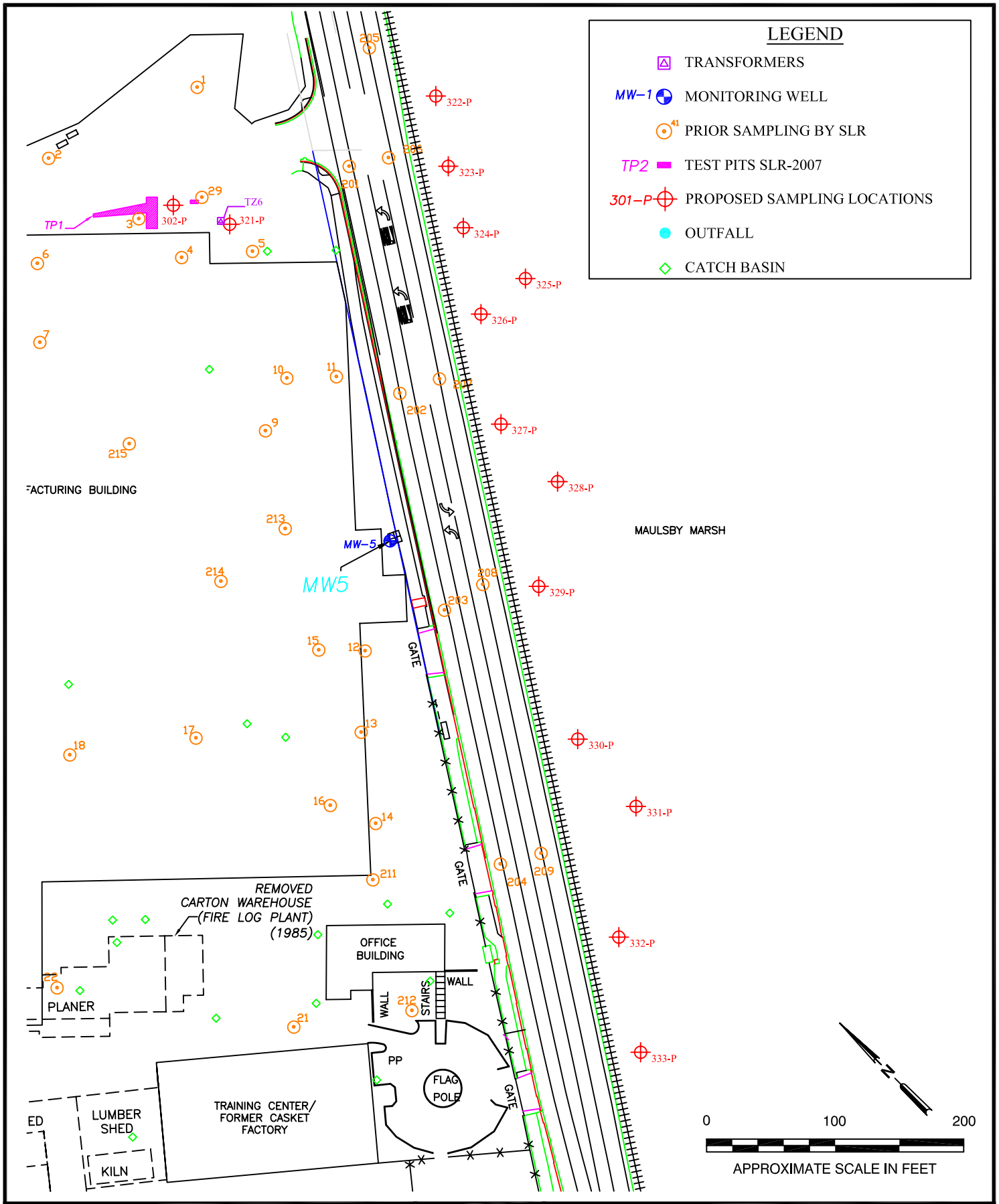

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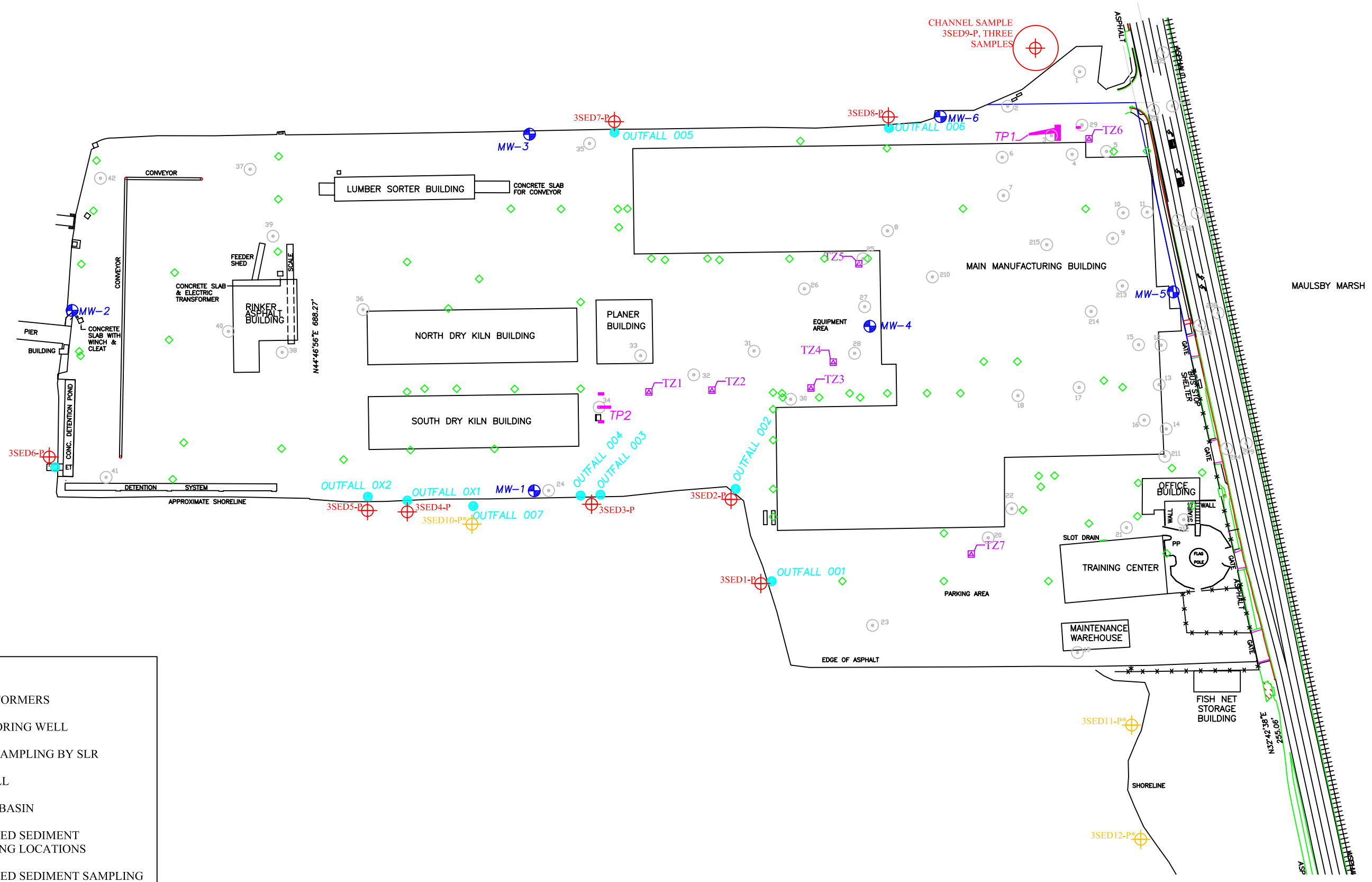
FIGURE 11E
JELD-WEN SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON
BNSF RAILWAY PROPERTY
UPLAND SAMPLING LOCATIONS



LEGEND

- TRANSFORMERS
- MW-1 MONITORING WELL
- PRIOR SAMPLING BY SLR
- OUTFALL
- CATCH BASIN
- 3SED1-P PROPOSED SEDIMENT SAMPLING LOCATIONS
- 3SED10-P* PROPOSED SEDIMENT SAMPLING LOCATIONS TO BE CONFIRMED WITH ECOLOGY

0 175 300

APPROXIMATE SCALE IN FEET

N

NOTES:
THE BUILDINGS, SURFACE UTILITIES, EDGE OF PAVEMENT, AND APPROXIMATE SHORELINE SHOWN ON THIS MAP ARE BASED ON A 2006 SURVEY PERFORMED BY WH PACIFIC.

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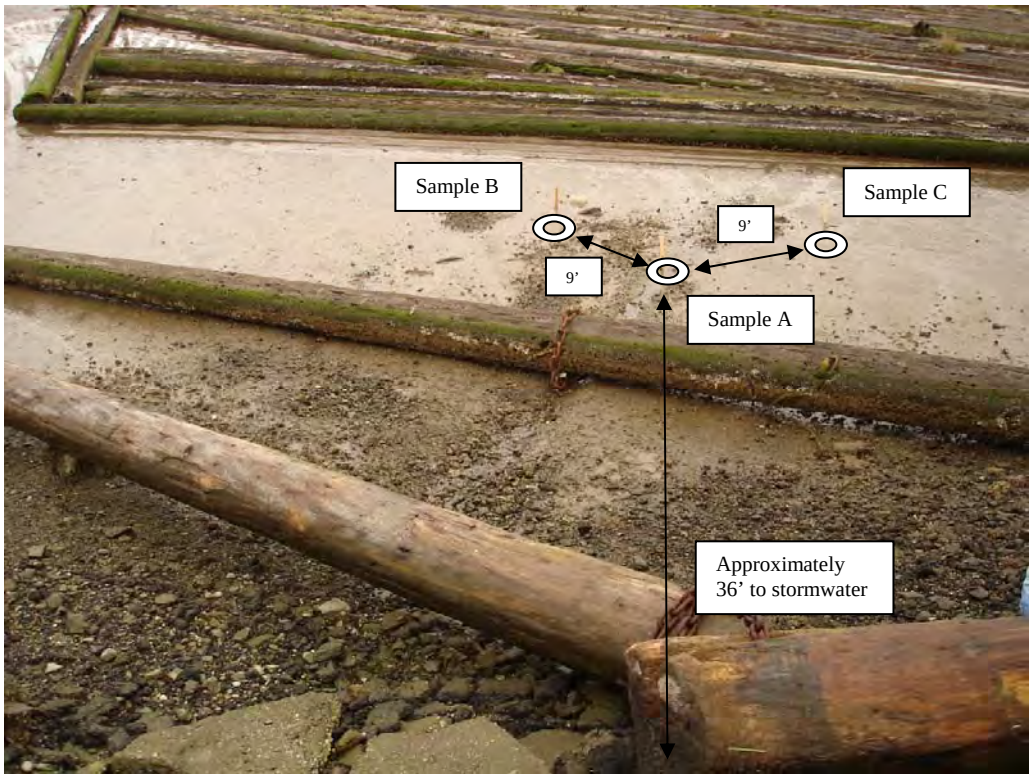
FIGURE 12A
JELD-WEN SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON
PROPOSED SEDIMENT SAMPLING LOCATIONS

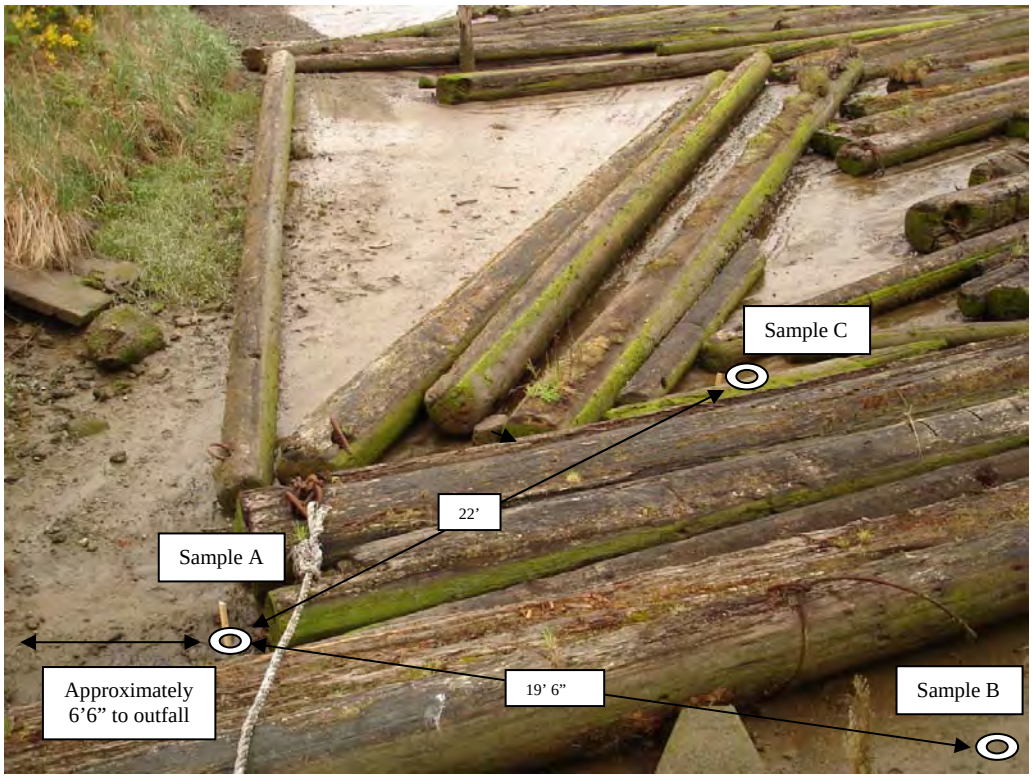
Figure 12B – Proposed Sediment Sampling Locations
JELD WEN Former Nord Door Site
Everett, WA

1. Location of storm water outfall 001 - proposed sediment sample location 3SED1-P



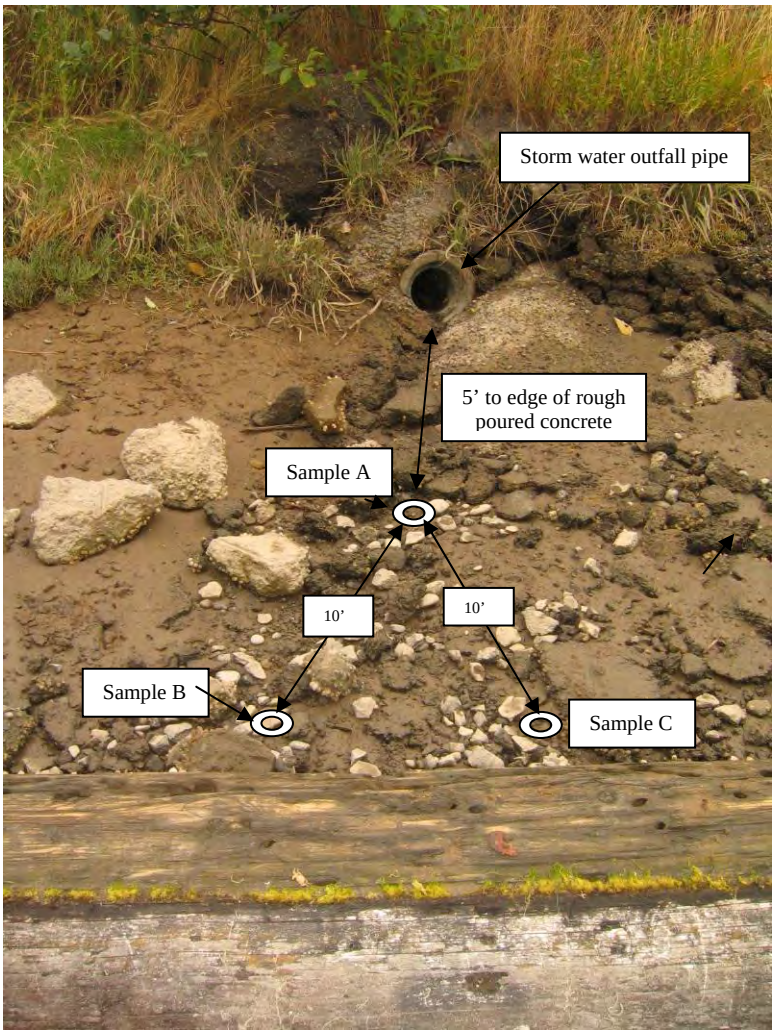
2. View of proposed sediment samples at location 3SED1-P

3. View of the storm water outfall 002 - proposed sediment sample location 3SED2-P



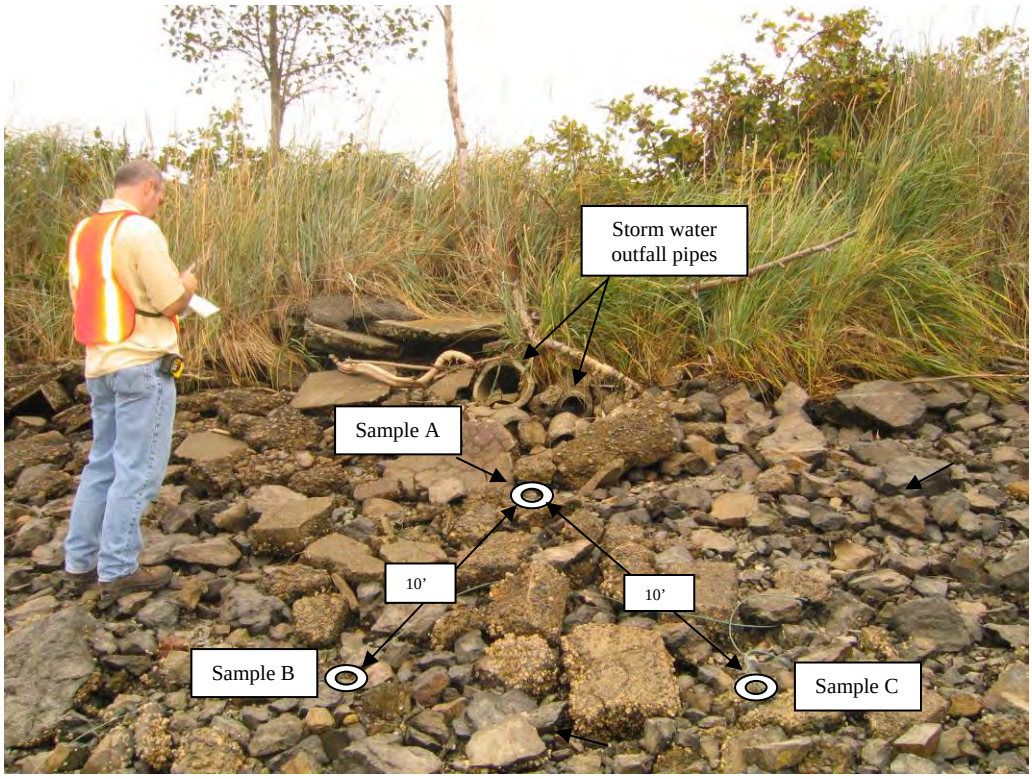
4. View of proposed sediment sample locations at 3SED2-P (locations to be field verified)

5. View of proposed sediment sample location 3SED3-P



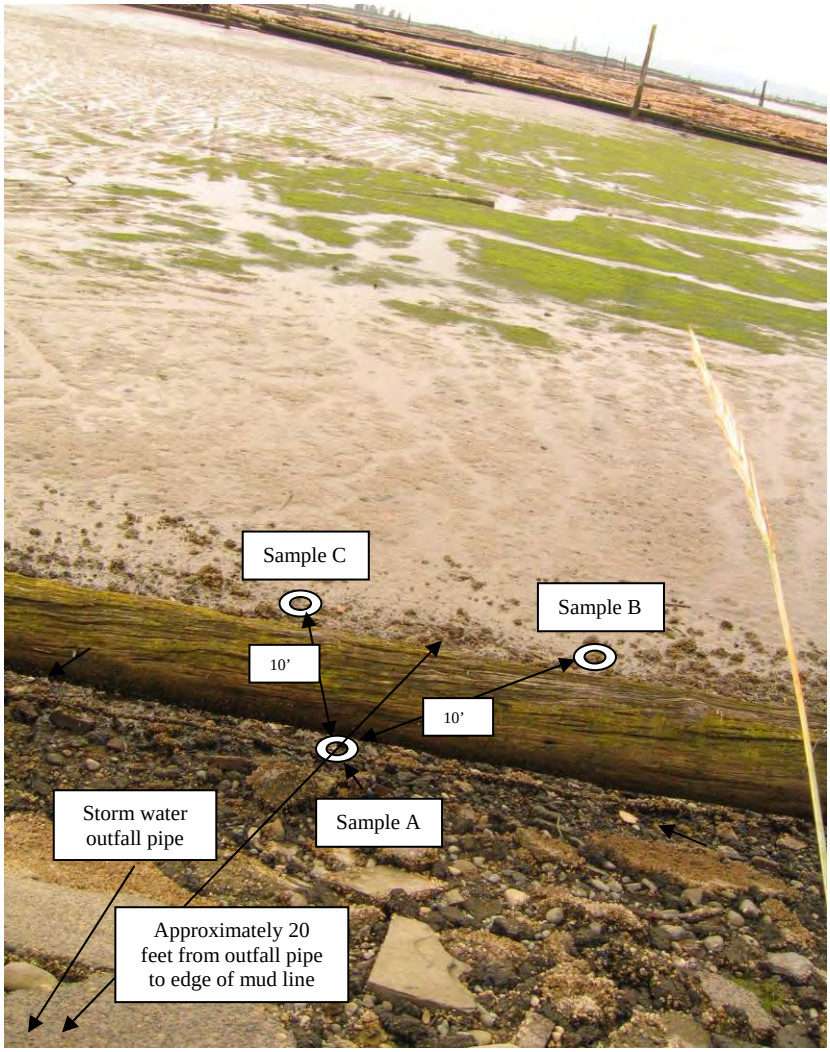
6. View of proposed sediment sampling locations 3SED3-P

7. View of storm water outfall 0X1 – proposed sediment sampling location 3SED4-P

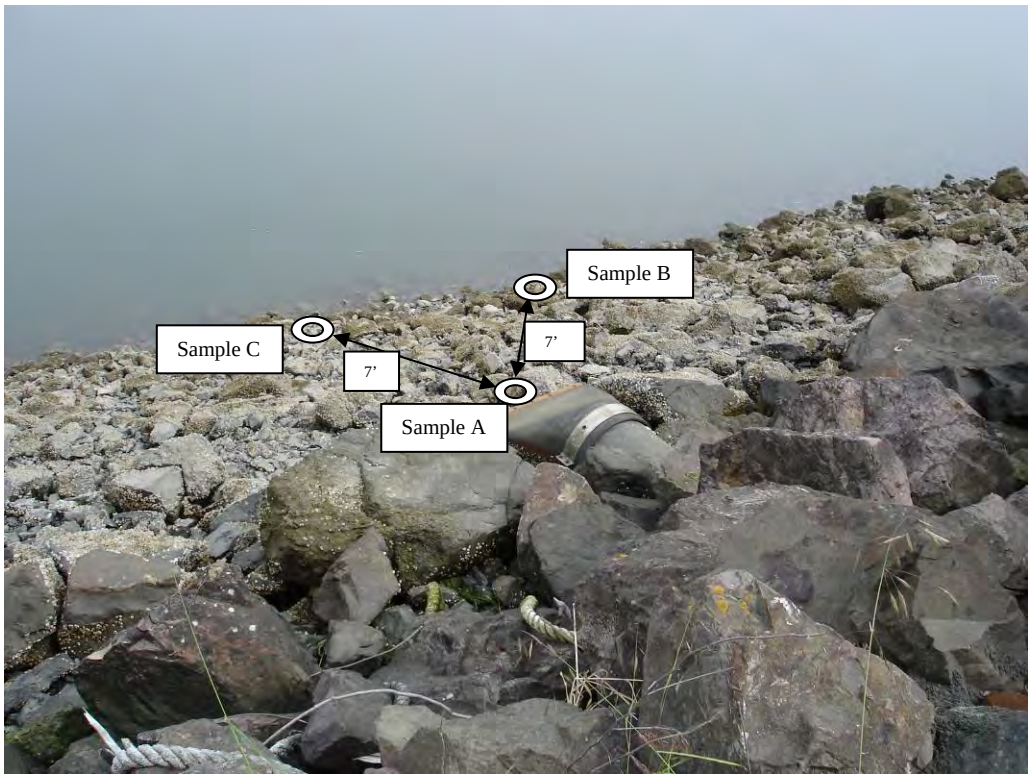


8. View of proposed sediment sampling locations 3SED4-P. Samples to be collected from below rock/debris.

9. View storm water outfall 0X2 – proposed sediment sampling location 3SED5-P

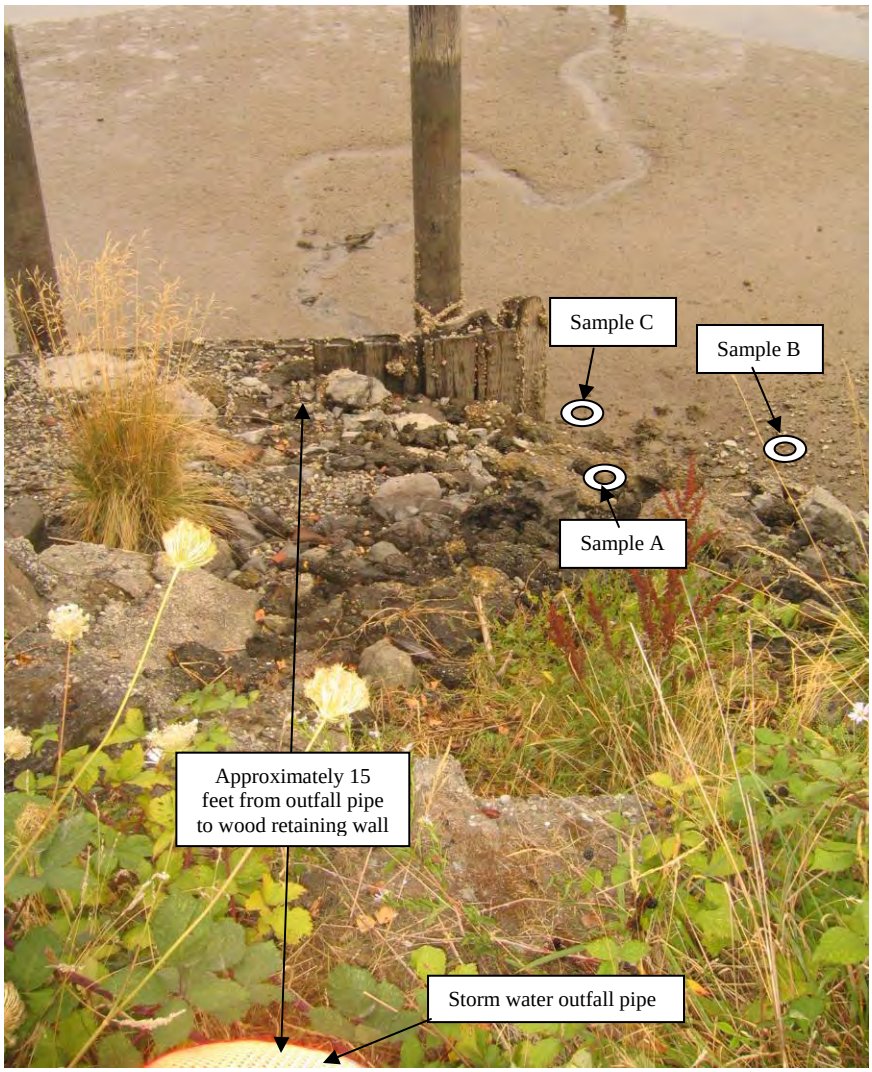


10. View of proposed sediment sampling locations 3SED5-P



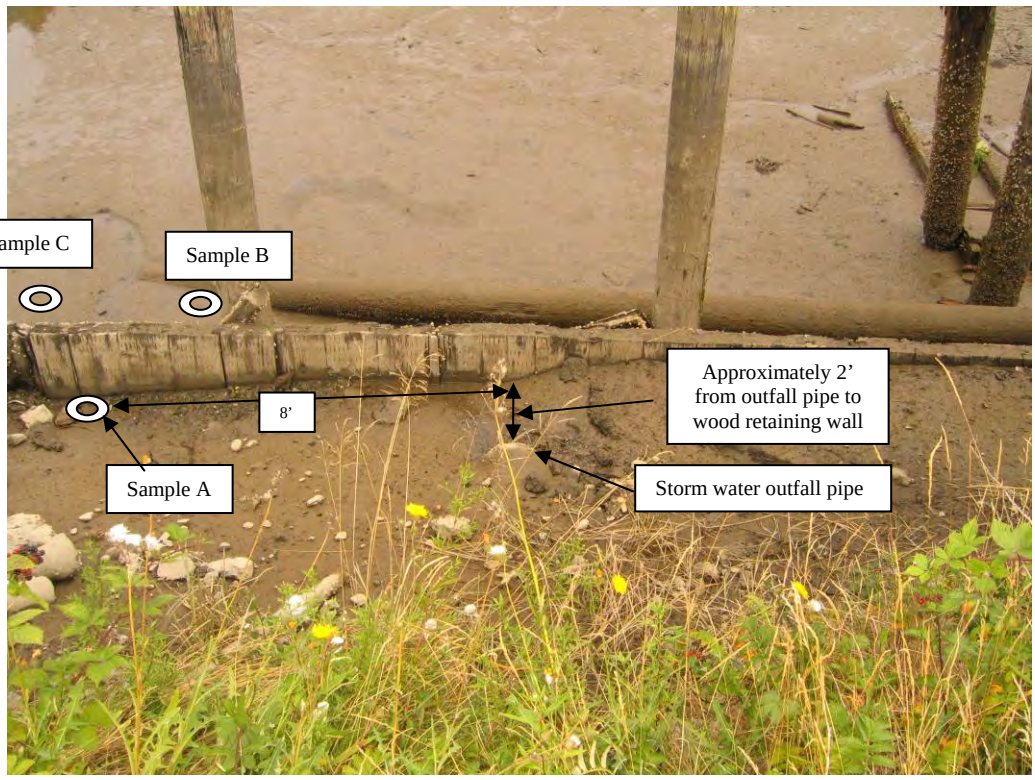
11. View of storm water outfall on Rinker Materials property – proposed sediment sample location 3SED6-P. Samples to be collected from beneath rock/debris.

12. View of storm water outfall 005 – proposed sediment sample location 3SED7-P

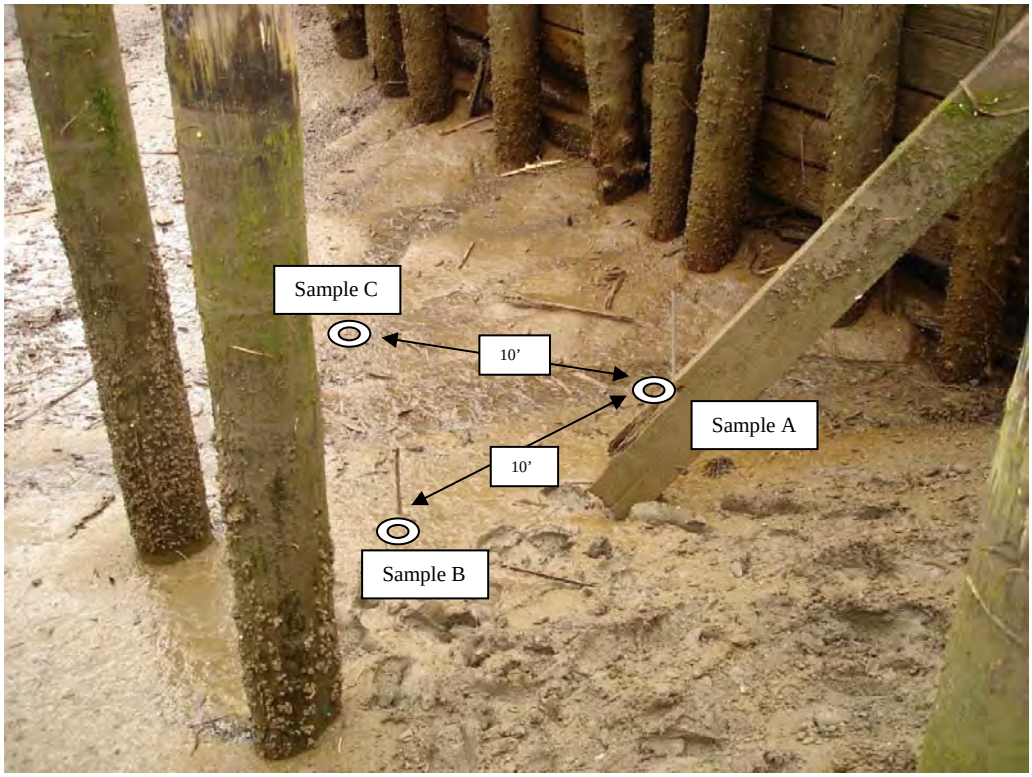


13. View of proposed sampling locations 3SED7-P.

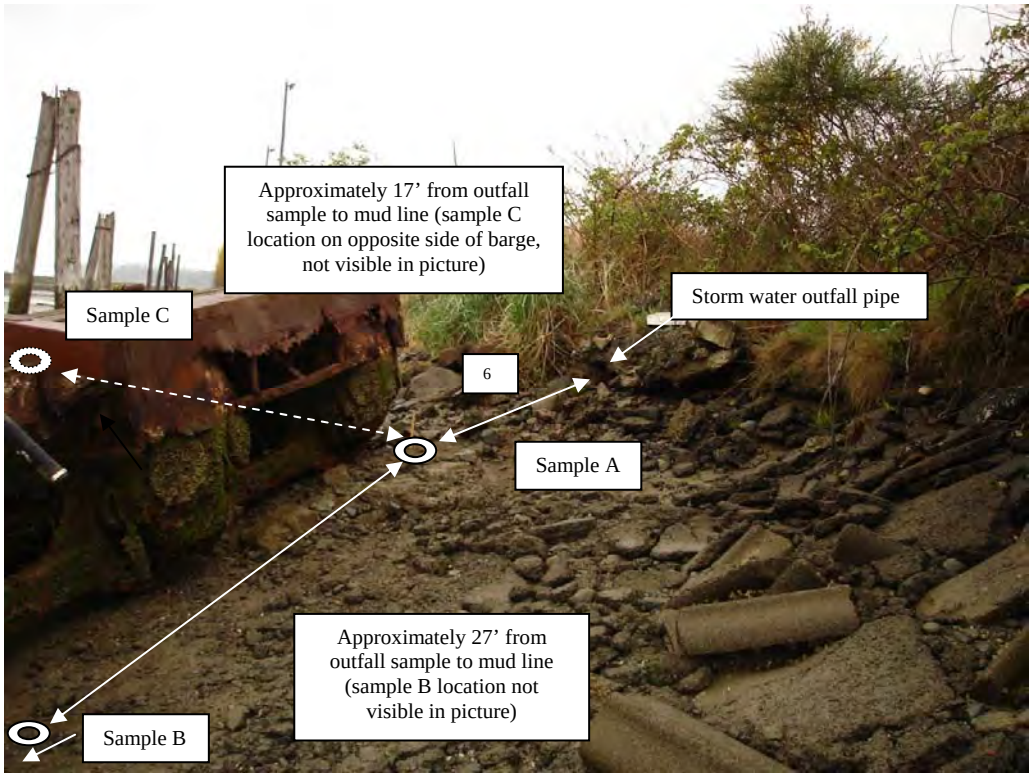
14. View of storm water outfall 006 – proposed sediment sampling location 3SED8-P



15. View of proposed sediment sampling locations 3SED8-P



16. View of proposed sediment sampling locations 3SED9-P



17. View of proposed sediment sampling locations 3SED10-P

TABLE 1 – GROUNDWATER ANALYTICAL SUMMARY TABLE – TPH

TABLE 2 – SOIL ANALYTICAL SUMMARY TABLE – TPH

TABLE 3 – GROUNDWATER ANALYTICAL SUMMARY TABLE – SVOCS AND PAHS

TABLE 4 – SOIL ANALYTICAL SUMMARY TABLE – SVOCS AND PAHS

TABLE 5 – GROUNWATER ANALYTICAL SUMMARY TABLE – VOCS

TABLE 6 – SOIL ANALYTICAL SUMMARY TABLE – VOCS

TABLE 7 – GROUNWATER AND SOIL ANALYTICAL SUMMARY TABLE – PCBS

TABLE 1 - Groundwater Analytical Summary Table
TPH
JELD-WEN Site
Everett, Washington

			Hydrocarbon Identification[A] (mg/l)			Total Petroleum Hydrocarbons[E] (mg/l)		
Sample Location	**Sample Label**	**Sample Date**	TPH Gasoline[B]	TPH Diesel[C]	TPH Heavy Oil[D]	TPH-Gx Gasoline Range	TPH-Dx Diesel Range	TPH-Dx Heavy Oil Range
RZA Sampling Event - September 1992 F								
MW-1	--	9/4/1992	--	--	--	ND (<0.050)[G]	--	--
MW-2	--	9/4/1992	--	--	--	ND (<0.050)	--	--
SLR Sampling Event - May 2006								
GP-1	GP1-GW	5/4/2006	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
GP-2	GP2-GW	5/4/2006	**DET**[H, I]	ND (<0.600)	ND (<0.600)	-	-	-
GP-3	GP3-GW	5/4/2006	**DET**[I]	ND (<0.600)	ND (<0.600)	-	-	-
GP-4	GP4-GW	5/11/2006	**DET**	**DET**	ND (<0.600)	**372**	ND (<0.238)	ND (<0.476)
GP-5	GP5-GW	5/4/2006	**DET**[I]	**DET**[I]	ND (<0.600)	-	-	-
GP-6	GP6-GW	5/2/2006	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
GP-7	GP7-GW	5/2/2006	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
GP-8	GP8-GW	5/2/2006	ND (<0.236)	ND (<0.594)	ND (<0.594)	-	-	-
GP-9	GP9-GW	5/1/2006	**DET**	**DET**	**DET**	**6.710**	**23.1**	ND (<0.943)
GP-10	GP10-GW	5/1/2006	**DET**	**DET**	**DET**	**9.140**	**41.8**	**5.94**
GP-11	GP11-GW	5/4/2006	**DET**[I]	**DET**[I]	**DET**[I]	-	-	-
GP-12	GP12-GW	5/2/2006	ND (<0.236)	**DET**	ND (<0.594)	-	ND (<0.472)	ND (<0.943)
GP-13	GP13-GW	5/1/2006	**DET**	**DET**	**DET**	**0.179**	ND (<0.472)	ND (<0.943)
GP-14	GP14-GW	5/1/2006	**DET**	**DET**	**DET**	**0.292**	**10.9**	**1.24**
GP-15	GP15-GW	5/1/2006	**DET**[J]	**DET**	ND (<0.594)	-	**1.33**	ND (<0.943)
GP-16	GP16-GW	5/1/2006	**DET**[J]	**DET**	ND (<0.594)	-	**0.492**	ND (<0.943)
GP-17	GP17-GW	5/1/2006	ND (<0.236)	**DET**	ND (<0.594)	-	ND (<0.472)	ND (<0.943)
GP-18	GP18-GW	5/1/2006	ND (<0.236)	ND (<0.594)	ND (<0.594)	-	-	-
GP-19	GP19-GW	5/1/2006	ND (<0.236)	ND (<0.594)	ND (<0.594)	-	-	-
GP-20	GP20-GW	5/4/2006	ND (<0.238)	ND (<0.600)	**DET**[I]	-	-	-
GP-21	GP21-GW	5/4/2006	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
GP-22	GP22-GW	5/4/2006	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
GP-23	GP23-GW	5/1/2006	ND (<0.236)	ND (<0.594)	ND (<0.594)	-	-	-
GP-24	GP24-GW	5/3/2006	ND (<0.238)	**DET**	**DET**	-	ND (<0.476)	**1.48**
GP-25	GP25-GW	Sample Held	-	-	-	-	-	-
GP-26	GP26-GW	5/3/2006	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
GP-27	GP27-GW	5/3/2006	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
GP-28	GP28-GW	Sample Held	-	-	-	-	-	-
GP-29	GP29-GW	5/4/2006	ND (<0.238)	ND (<0.600)	**DET**[I]	-	-	-
GP-30	GP30-GW	Sample Held	-	-	-	-	-	-
GP-31	GP31-GW	5/3/2006	ND (<0.238)	**DET**[I]	**DET**[I]	-	-	-
GP-32	GP32-GW	Sample Held	-	-	-	-	-	-
GP-33	GP33-GW	5/3/2006	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
GP-34	GP34-GW	5/3/2006	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
GP-35	GP35-GW	5/4/2006	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
GP-36	GP36-GW	5/3/2006	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
GP-37	GP37-GW	5/2/2006	ND (<0.236)	ND (<0.594)	ND (<0.594)	-	-	-
GP-38	GP38-GW	5/2/2006	ND (<0.236)	ND (<0.594)	ND (<0.594)	-	-	-
GP-39	GP39-GW	5/2/2006	ND (<0.236)	ND (<0.594)	ND (<0.594)	-	-	-
GP-40	GP40-GW	5/2/2006	ND (<0.236)	ND (<0.594)	ND (<0.594)	-	-	-
GP-41	GP41-GW	5/2/2006	ND (<0.236)	ND (<0.594)	ND (<0.594)	-	-	-
GP-42	GP42-GW	5/2/2006	ND (<0.236)	ND (<0.594)	ND (<0.594)	-	-	-
SLR Sampling Event - September 2006								
GP-201	GP201-GW	9/11/2006	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
GP-204	GP204-GW	9/11/2006	ND (<0.238)	**DET**	**DET**	-	**2.99**	**3.99**
GP-205	GP205-GW	9/11/2006	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
GP-208	GP208-GW	9/11/2006	**DET**[J]	**DET**	**DET**	-	**36.00**	**1.92**
GP-209	GP209-GW	9/11/2006	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
GP-210	GP210-GW	9/11/2006	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
GP-211	GP211-GW	9/11/2006	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
GP-212	GP212-GW	9/11/2006	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
GP-214	GP214-GW	9/11/2006	**DET**	**DET**	**DET**	**4,380**	**16.80**	**1.26**
GP-215	GP215-GW	9/11/2006	**DET**	**DET**	ND (<0.600)	**2,580**	**11.50**	ND(<0.952)
SLR Sampling Event - November 2006								
MW1-1106	--	11/14/2006	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
MW2-1106	--	11/14/2006	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
MW3-1106	--	11/14/2006	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
MW4-1106	--	11/14/2006	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
MW5-1106	--	11/14/2006	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
SLR Sampling Event -May 2007								
MW-6	--	5/11/2007	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
Preliminary Cleanup Values (PCL)[K]								
Preliminary Cleanup Values (PCL)			NA	NA	NA	1.00 / 0.80[L]	0.5	0.5

NOTES:

- = Not Sampled or Not Analyzed for specific constituent.

BOLD = Analytes detected at or above the practical quantitation limit (PQL).

A - Hydrocarbon Identification (HCID) per NW-TPH Methodology. TPH-HCID method is a qualitative and semi-quantitative screen to determine the presence and type of petroleum products that may exist. The results of this method determine which fully quantitative method/methods (TPH-Gx or TPH-Dx), if any, will be used

B - Gasoline Range Hydrocarbons

C - Diesel Range Hydrocarbons

D - Heavy Oil Range Hydrocarbons

E - Hydrocarbon per NW-TPH-Gx and NW-TPH-Dx methodologies

F - RZA samples analyzed using Wasthington State Method 418.1 modified

G - Not Detected (ND) at or above the laboratory Practical Quantitation Limit (PQL) of 0.050 mg/l (milligrams per liter)

H - Detected (**DET**) at or above the laboratory PQL

I - In areas where multiple samples were collected in close proximity to one another, the HCID results were discussed with the laboratory and the sample with the highest HCID results were submitted for follow up analysis.

J - According to the laboratory, the detection in the gasoline range was a result of "overlap" from other petroleum ranges. Follow up analysis was limited to those petroleum hydrocarbon constituents which were actually found to be present through the HCID analysis.

K - Model Toxics Control Act (MTCA) - Cleanup Regulation, Table 740-1, Method A Groundwater Levels.

L - Gasoline Range Organics 1,000 µg/l (1.00 mg/l) with no detectable benzene in groundwater, 800 µg/l (0.80 mg/l) is benzene if present in groundwater.

= Value exceeds the PCLs

= Laboratory PQL exceeds the PCL

TABLE 2 - Soil Analytical Summary Table
TPH
JELD-WEN Site
Everett, Washington

				Hydrocarbon Identification [A] (mg/kg)			Total Petroleum Hydrocarbons [E] (mg/kg)		
Sample Location	**Sample Label**	**Sample Depth (feet)**	**Sample Date**	TPH Gasoline [B]	TPH Diesel [C]	TPH Heavy Oil [D]	TPH-Gx Gasoline Range	TPH-Dx Diesel Range	TPH-Dx Heavy Oil Range
Parametrix Sampling Event - May 1991 [F]									
GS-1	--	--	5/24/1991	--	--	--	--	**19.0**	--
GS-2	--	--	5/24/1991	--	--	--	--	**23.0**	--
GS-4	--	--	5/24/2991	--	--	--	--	**22.0**	--
SS-1	--	--	5/30/1991	--	--	--	ND (<10.0) [G]	ND (<10.0)	--
SS-2	--	--	5/30/1991	--	--	--	ND (<10.0)	ND (<10.0)	--
RZA Sampling Event- August 1992[H]									
C1	C1-S1	2.5-4.0	8/27/1992	ND (<20)	ND (<50)	ND (<100)	**--**	ND (<1)	--
C2	C2-S2	7.5-9.0	8/27/1992	ND (<20)	ND (<50)	ND (<100)	**--**	ND (<1)	--
C4	C4-S1	2.5-4.0	8/27/1992	--	--	--	ND (<10)	--	--
C5	C5-S1	2.5-4.0	8/27/1992	--	--	--	ND (<10)	--	--
C6	C6-S1	2.5-4.0	8/27/1992	ND (<20)	ND (<50)	ND (<100)	**--**	ND (<1)	--
MW-1	MW-1,S-2	7.5-9.0	8/31/1992	ND (<20)	**DET[I]**	**DET**	**--**	**--**	--
MW-2	MW-2, S-1	2.5-4.0	8/31/1992	ND (<20)	ND (<50)	**DET**	**--**	**--**	--
SLR Sampling Event - May 2006									
GP-1	GP1-6	6.0	5/4/2006	ND (<33.2)	ND (<82.9)	**DET**	-	-	-
GP-1	GP1-10	10.0	5/4/2006	ND (<18.6)	**DET**	**DET**	ND (<4.47)	-	-
GP-2	GP2-5	5.0	5/4/2006	ND (<16.8)	ND (<41.9)	ND (<83.8)	-	-	-
GP-3	GP3-9	9.0	5/4/2006	ND (<21.6)	ND (<54.0)	ND (<108)	-	-	-
GP-4	GP4-4.5	4.5	5/11/1006	**DET**	ND (67.9)	ND (<136)	**47.0**	-	-
GP-5	GP5-6.5	6.5	5/4/2006	ND (<17.8)	ND (<44.6)	ND (<89.2)	-	-	-
GP-5	GP5-12	12.0	5/4/2006	ND (<18.0)	ND (<44.9)	ND (<89.9)	-	-	-
GP-6	GP6-5	5.0	5/2/2006	ND (<13.6)	ND (<34.1)	ND (<68.2)	-	-	-
GP-7	GP7-5	5.0	5/2/2006	ND (<21.6)	ND (<54.1)	ND (<108)	-	-	-
GP-8	GP8-5	5.0	5/2/2006	ND (<22.2)	ND (<55.4)	ND (<111)	-	-	-
GP-9	GP9-6	6.0	Sample Held	-	-	-	-	-	-
GP-9	GP9-12	12.0	5/1/2006	**DET**	**DET**	**DET**	**24.9**	**1,580**	**371**
GP-10	GP10-3	3.0	5/1/2006	-	-	-	-	**440**	**1,660**
GP-10	GP10-11	11.0	5/1/2006	**DET**	**DET**	**DET**	**45.3**	**14,600**	**3,020**
GP-11	GP11-6	6.0	5/4/2006	**DET**	**DET**	**DET**	**57.5**	**60,400**	**15,700**
GP-11	GP11-12	12.0	5/4/2006	**DET**	**DET**	**DET**	**11.0**	**225**	**47.4**
GP-12	GP12-8	8.0	5/2/2006	**DET**	**DET**	**DET**	ND (<4.88)	**2,380**	**801**
GP-13	GP13-11.5	11.5	5/1/2006	ND (<21.0)	ND (<52.4)	**DET**	-	ND (<15.6)	ND (<31.3)
GP-14	GP14-6	6.0	5/1/2006	**DET**	**DET**	**DET**	**14.2**	**1,460**	**284**
GP-15	GP15-10	10.0	5/1/2006	ND (<23.5)	ND (<58.8)	ND (<118)	-	-	-
GP-16	GP16-8	8.0	5/1/2006	ND (<20.9)	ND (<52.3)	ND (<105)	-	-	-
GP-17	GP17-5	5.0	5/1/2006	ND (<20.3)	ND (<50.8)	**DET**	-	**41.0**	**639**
GP-18	GP18-8	8.0	5/1/2006	ND (<24.3)	ND (<60.7)	ND (<121)	-	-	-
GP-19	GP19-10	10.0	5/1/2006	ND (<17.8)	ND (<44.6)	ND (<89.2)	-	-	-
GP-20			Sample Held	-	-	-	-	-	-
GP-21	GP21-5	5.0	5/4/2006	ND (<17.7)	ND (<44.3)	ND (<88.5)	-	-	-
GP-22	GP22-6.5	6.5	5/4/2006	ND (<20.2)	ND (<50.6)	**DET**	-	ND (<14.7)	**37.5**
GP-23	GP23-6	6.0	5/1/2006	ND (<17.9)	ND (<44.7)	ND (<89.3)	-	-	-
GP-24	GP24-6	6.0	5/3/2006	ND (<17.2)	ND (<42.9)	**DET**	-	**53.3**	**471**
GP-25			Sample Held	-	-	-	-	-	-
GP-26	GP26-7	7.0	5/3/2006	ND (<21.4)	ND (<53.6)	ND (<107)	-	-	-
GP-27	GP27-2	2.0	5/3/2006	ND (<17.6)	ND (<44.1)	ND (<88.2)	-	-	-
GP-28			Sample Held	-	-	-	-	-	-
Preliminary Cleanup Levels (PCLs)									
Preliminary Cleanup Levels				NA	NA	NA	100 / 30 [J, K]	460 [L]	2000 [J]

NOTES:

- = Not Sampled or Not Analyzed for specific constituent

BOLD = Analytes detected at or above the practical quantitation limit (PQL)

A - Hydrocarbon Identification per NW-TPH Methodology. TPH-HCID method is a qualitative and semi-quantitative screen to determine the presence and type of petroleum products that may exist. The results of this method determine which fully quantitative method/methods (TPH-Gx or TPH-Dx), if any, will be used

B - Gasoline Range Hydrocarbons

C - Diesel Range Hydrocarbons

D - Heavy Oil Range Hydrocarbons

E - Hydrocarbon per NW-TPH-Gx and NW-TPH-Dx methodologies

F - Parametrix samples analyzed using EPA Method 8015

G - Not Detected (ND) at or above the laboratory Practical Quantitation Limit (PQL) of 10.0 mg/kg (milligrams per kilogram)

H - RZA samples analyzed using Washington State Method 418.1 modified

I - Detected (**DET**) at or above the laboratory PQL

J - PCL from Model Toxics Control Act (MTCA) - Cleanup Regulation, Table 740-1, Method A Soil Cleanup Levels for Unrestricted Land Uses

K - 100 mg/kg for gasoline mixtures without benzene and the total of ethylbenzene, toluene and xylene are less than 1% of the gasoline mixture, 30 mg/kg for all other gasoline mixtures

L - PCL from Model Toxics Control Act (MTCA) - Priority Contaminants of Ecological Concern for Site that Qualify for the Simplified Terrestrial Ecological Evaluation Process, Table 749-2

= Value exceeds the PCLs

TABLE 2 - Soil Analytical Summary Table
TPH (Page 2)
JELD-WEN Site
Everett, Washington

				Hydrocarbon Identification [A] (mg/kg)			Total Petroleum Hydrocarbons [E] (mg/kg)		
Sample Location	**Sample Label**	**Sample Depth (feet)**	**Sample Date**	TPH Gasoline [B]	TPH Diesel [C]	TPH Heavy Oil [D]	TPH-Gx Gasoline Range	TPH-Dx Diesel Range	TPH-Dx Heavy Oil Range
GP-29	GP29-8	8.0	5/4/2006	ND (<20.7)[F]	ND (<51.9)	**DET[G]**	-	ND (<16.2)	**75.6**
GP-30			Sample Held	-	-	-	-	-	-
GP-31	GP31-6	6.0	5/3/2006	ND (<16.8)	ND (<41.9)	ND (<83.8)	-	-	-
GP-32			Sample Held	-	-	-	-	-	-
GP-33	GP33-7	7.0	5/3/2006	ND (<19.5)	ND (<48.8)	ND (<97.5)	-	-	-
GP-34	GP34-8	8.0	5/3/2006	**DET**	**DET**	**DET**	ND (<4.35)	**770**	**3,400**
GP-35	GP35-7	7.0	5/4/2006	ND (<22.3)	ND (<55.6)	ND (<111)	-	-	-
GP-36	GP36-6	6.0	5/3/2006	ND (<19.7)	ND (<49.2)	ND (<98.4)	-	-	-
GP-37	GP37-8	8.0	5/2/2006	ND (<18.5)	ND (<46.3)	**DET**	-	ND (<15.4)	**63.7**
GP-38	GP38-8	8.0	5/2/2006	ND (<21.8)	ND (<54.6)	ND (<109)	-	-	-
GP-39	GP39-9	9.0	5/2/2006	ND (<19.0)	ND (<47.6)	**DET**	-	ND (<69.0)	**290**
GP-40	GP40-8	8.0	5/2/2006	ND (<17.6)	ND (<44.1)	ND (<88.2)	-	-	-
GP-41	GP41-8	8.0	5/2/2006	ND (<19.3)	ND (<48.3)	**DET**	-	ND (<28.0)	**85.5**
GP-42	GP42-8	8.0	5/2/2006	ND (<19.6)	ND (<49.0)	**DET**	-	ND (<12.9)	**70.0**
Geoprobe Soil Sampling - Sept 2006									
GP201	GP201-4.5	4.5	9/11/2006	ND (<22.4)	ND (<55.9)	ND (<112)	-	-	-
GP202	GP202-7.5	7.5	9/11/2006	-	-	-	-	**30,200**	**8,220**
GP203	GP203-5.5	5.5	9/11/2006	-	-	-	-	**10,400**	**2,820**
GP204	GP204-7.5	7.5	9/11/2006	-	-	-	-	ND (<23)	ND (<45.9)
GP205	GP205-3	3	9/12/2006	-	-	-	-	ND (<14.6)	ND (<29.2)
GP206	GP206-4.5	4.5	9/12/2006	-	-	-	-	**104**	**389**
GP206	GP206-8.5	8.5	9/12/2006	-	-	-	-	**15,500**	**3,620**
GP207	GP207-3	3	9/12/2006	-	-	-	-	**54**	**411**
GP207	GP207-9	9	9/12/2006	-	-	-	-	**775**	ND (<49.1)
GP209	GP209-3	3	9/12/2006	ND (<17.4)	ND (<43.5)	ND (<87.1)	-	-	-
GP210	GP210-4	4	9/12/2006	ND (<17.4)	ND (<43.6)	ND (<87.2)	-	-	-
GP211	GP211-3.5	3.5	9/11/2006	ND (<19.4)	ND (<48.6)	ND (<97.1)	-	-	-
GP212	GP212-3.5	3.5	9/11/2006	ND (<19.4)	ND (<48.5)	ND (<97)	-	-	-
GP213	GP213-3	3	9/12/2006	**DET**	**DET**	**DET**	ND (<4.35)	**276**	**991**
GP214	GP214-6	6	9/12/2006	-	-	-	-	**152**	ND (<37.9)
GP215	GP215-4.5	4.5	9/11/2006	ND (<17.6)	ND (<43.9)	ND (<87.8)	-	-	-
Monitoring Well Soil Sampling - Oct 2006									
MW-1	MW1-6.5	6.5	10/2/2006	-	-	-	-	**23.5**	**111.0**
MW-4	MW4-6.5	6.5	10/2/2006	-	-	-	-	ND (<14.3)	ND (<28.7)
MW-5	MW5-8.5	8.5	10/2/2006	-	-	-	-	**43.7**	ND (<36.3)
MW-3	MW3-6.5	6.5	10/2/2006	-	-	-	-	ND (<14.6)	ND (<29.1)
Monitoring Well Soil Sampling - April 2007									
MW-6	MW6-10	10	4/20/2007	ND (<18.5)	ND (<46.8)	**DET**	-	ND (<14.3)	**116**
MW-6	MW6-14	14	4/20/2007	ND (<20.6)	ND (<51.4)	ND (<103)	-	-	-
Test Pit Soil Samples - Oct 2006									
TP1	TP1-1-4.75	4.75	10/18/2006	ND (<9.75)	ND (<48.7)	ND (<97.5)	-	-	-
TP1	TP1-2-4.75	4.75	10/18/2006	ND (<20.0)	ND (<50.1)	ND (<100)	-	-	-
TP1	TP1-3-4.75	4.75	10/18/2006	ND (<23.5)	ND (<58.7)	**DET**	-	**34.7**	**98.6**
TP1	TP1-4-5.75	5.75	10/18/2006	ND (<22.0)	ND (<54.9)	ND (<110)	-	-	-
TP1	TP1-5-4.75	4.75	10/19/2006	ND (<22.9)	ND (<57.2)	ND (<114)	-	-	-
TP1	TP1-Stockpile	Comp.	10/19/2006	**DET**	**DET**	**DET**	**190**	**43.2**	**162**
TP2	TP2-1-6	6	10/19/2006	ND (<16.5)	ND (<41.2)	**DET**	-	**26.2**	**173**
TP2	TP2-2-4.75	4.75	10/19/2006	ND (<21.5)	ND (<53.6)	ND (<107)	-	-	-
TP2	TP2-3-4.75	4.75	10/19/2006	ND (<22.5)	ND (<56.1)	**DET**	-	**64.4**	**182**
TP2	TP2-4-7	7	10/19/2006	ND (<17.4)	**DET**	**DET**	-	**97.3**	**225**
Preliminary Cleanup Levels (PCLs)									
Preliminary Cleanup Levels				NA	NA	NA	100 / 30 [H,I]	460 [J]	2000 [H]

NOTES:

- = Not Sampled or Not Analyzed for specific constituent

BOLD = Analytes detected at or above the practical quantitation limit (PQL).

A - Hydrocarbon Identification per NW-TPH Methodology. TPH-HCID method is a qualitative and semi-quantitative screen to determine the presence and type of petroleum products that may exist. The results of this method determine which fully quantitative method/methods (TPH-Gx or TPH-Dx), if any, will be used

B - Gasoline Range Hydrocarbons

C - Diesel Range Hydrocarbons

D - Heavy Oil Range Hydrocarbons

E - Hydrocarbon per NW-TPH-Gx and NW-TPH-Dx methodologies

F - Not Detected (ND) at or above the laboratory Practical Quantitation Limit (PQL) of 20.7 mg/kg (milligrams per kilogram)

G - Detected (**DET**) at or above the laboratory PQL

H - PCL from Model Toxics Control Act (MTCA) - Cleanup Regulation, Table 740-1, Method A Soil Cleanup Levels for Unrestricted Land Uses

I - 100 mg/kg for gasoline mixtures without benzene and the total of ethylbenzene, toluene and xylene are less than 1% of the gasoline mixture, 30 mg/kg for all other gasoline mixtures

J - PCL Model Toxics Control Act (MTCA) - Priority Contaminants of Ecological Concern for Site that Qualify for the Simplified Terrestrial Ecological Evaluation Process, Table 749-2

= Value exceeds the PCLs

TABLE 3 - Groundwater Analytical Summary Table
SVOCs and PAHs
JELD-WEN Site
Everett, Washington

			Semivolatile Organic Compounds (SVOCs) [A] and Polynuclear Aromatic Compounds (PAHs) [B] (µg/l)																				
												Carcinogenic PAHs						PAHs							
Sample Location	**Sample Label**	**Sample Date**	Carbazole	Dibenzofuran	2,4-Dimethyl phenol	2-Methyl naphthalene	2-Methyl-phenol	3-, 4-Methylphenol	Nitrobenzene	Penta-chlorophenol	Phenol	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Indeno (1,2,3-cd) pyrene	Acenaphthene	Anthracene	Benzo(ghi) perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
SLR Sampling Event - May 2006																									
GP-1	GP1-GW	5/4/2006	-	-	-	-	-	-	-	ND (<0.952) [C]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GP-3	GP3-GW	5/4/2006	-	-	-	-	-	-	-	ND (<0.943)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GP-4	GP4-GW	5/11/2006	ND (<4.72) [D]	ND(<4.72)	ND(<4.72)	ND(<4.72)	ND (<9.43)	ND(<4.72)	ND(<4.72)	ND (<9.43)	ND(<4.72)	ND(<4.72)	ND(<4.72)	ND(<4.72)	ND(<4.72)	ND(<4.72)	ND(<4.72)	ND(<4.72)	ND(<4.72)	ND(<4.72)	ND(<4.72)	ND(<4.72)	ND(<4.72)	ND(<4.72)	ND(<4.72)
GP-6	GP6-GW	5/2/2006	-	-	-	-	-	-	-	ND (<0.952)	-	ND (<0.0952)	ND (<0.0952)	ND (<0.0952)	ND (<0.0952)	ND (<0.0952)	ND (<0.0952)	ND (<0.0952)	ND (<0.0952)	ND (<0.0952)	ND (<0.0952)	ND (<0.0952)	ND (<0.0952)	ND (<0.0952)	ND (<0.0952)
GP-7	GP7-GW	5/2/2006	ND (<4.76)	ND (<4.76)	ND (<9.52)	ND (<4.76)	ND (<9.52)	ND (<4.76)	ND (<4.76)	ND (<9.52)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)
GP-9	GP9-GW	5/1/2006	**681**	**425**	**3,890**	**1,250**	**331**	**492**	ND (<47.2)	ND (<94.3)	**251**	**100**	**61.6**	**59.4**	**56.3**	**167**	ND (<47.2)	**859**	**271**	ND (<47.2)	**469**	**504**	**13,900**	**1,090**	**423**
GP-10	GP10-GW	5/1/2006	**499**	**599**	**10,300**	**1,100**	ND (<189)	**228**	ND (<94.3)	ND (<189)	ND (<94.3)	**226**	**163**	**157**	**149**	**178**	ND (<94.3)	**1,130**	**221**	ND (<94.3)	**1,050**	**779**	**12,200**	**2,090**	**883**
GP-11	GP11-GW	5/4/2006	-	-	-	-	-	-	-	-	-	**11.8**	**6.65**	**7.05**	**5.64**	**22.8**	ND (<4.76)	**289**	**56.6**	ND (<4.76)	**66.0**	154	**7,920**	**231**	**48.9**
GP-12	GP12-GW	5/2/2006	**5.35**	**22.4**	ND (<9.43)	ND (<4.72)	ND (<9.43)	ND (<4.72)	ND (<4.72)	ND (<9.43)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	**63.3**	ND (<4.72)	ND (<4.72)	**16.2**	**35.5**	ND (<4.72)	**24.4**	**15.5**
GP-13	GP13-GW	5/1/2006	**9.57**	ND (<4.76)	ND (<9.52)	ND (<4.76)	ND (<9.52)	ND (<4.76)	ND (<4.76)	ND (<9.52)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	**60.2**	ND (<4.76)	ND (<4.76)	ND (<4.76)	**10.0**	ND (<4.76)	ND (<4.76)	ND (<4.76)
GP-14	GP14-GW	5/1/2006	**54.1**	**127**	ND (<95.2)	**184**	ND (<95.2)	ND (<47.6)	ND (<47.6)	ND (<95.2)	ND (<47.6)	ND (<47.6)	ND (<47.6)	ND (<47.6)	ND (<47.6)	ND (<47.6)	ND (<47.6)	**401**	ND (<47.6)	ND (<47.6)	**89.2**	**166**	**948**	**306**	**59.2**
GP-15	GP15-GW	5/1/2006	**163**	**206**	ND (<9.43)	**55.2**	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<9.43)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	**517**	**6.18**	ND (<4.72)	**12.2**	**200**	**7.88**	**84.4**	**7.04**
GP-16	GP16-GW	5/1/2006	ND (<4.72)	**12.3**	ND (<4.72)	ND (<4.72)	ND (<9.43)	ND (<4.72)	ND (<4.72)	ND (<9.43)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	**252**	ND (<4.72)	ND (<4.72)	ND (<4.72)	**100**	ND (<4.72)	**33.3**	ND (<4.72)
GP-17	GP17-GW	5/1/2006	ND (<4.72)	ND (<4.72)	ND (<9.43)	**8.55**	ND (<9.43)	ND (<4.72)	ND (<4.72)	ND (<9.43)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	**52.4**	ND (<4.72)	ND (<4.72)	ND (<4.72)	**8.62**	ND (<4.72)	ND (<4.72)	ND (<4.72)
GP-18	GP18-GW	5/1/2006	-	-	-	-	-	-	-	-	-	ND (<0.0943)	ND (<0.0943)	ND (<0.0943)	ND (<0.0943)	ND (<0.0943)	ND (<0.0943)	ND (<0.0943)	ND (<0.0943)	ND (<0.0943)	**0.185**	ND (<0.0943)	**0.0960**	**0.119**	**1.31**
GP-19	GP19-GW	5/1/2006	ND (<4.76)	ND (<4.76)	ND (<9.52)	ND (<4.76)	ND (<9.52)	ND (<4.76)	ND (<4.76)	ND (<9.52)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)
GP-22	GP22-GW	5/4/2006	ND (<4.72)	ND (<4.72)	ND (<9.43)	ND (<4.72)	ND (<9.43)	ND (<4.72)	ND (<4.72)	ND (<9.43)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)
GP-23	GP23-GW	5/1/2006	ND (<4.76)	ND (<4.76)	ND (<9.52)	ND (<4.76)	ND (<9.52)	ND (<4.76)	ND (<4.76)	ND (<9.52)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)
GP-24	GP24-GW	5/3/2006	ND (<4.72)	ND (<4.72)	ND (<9.43)	ND (<4.72)	ND (<9.43)	ND (<4.72)	ND (<4.72)	ND (<9.43)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)
GP-27	GP27-GW	5/3/2006	ND (<4.76)	ND (<4.76)	ND (<9.52)	ND (<4.76)	ND (<9.52)	ND (<4.76)	ND (<4.76)	ND (<9.52)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)
GP-29	GP29-GW	5/4/2006	ND (<4.72)	ND (<4.72)	ND (<9.43)	ND (<4.72)	ND (<9.43)	ND (<4.72)	ND (<4.72)	ND (<9.43)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	**11.7**	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)
GP-31	GP31-GW	5/3/2006	-	-	-	-	-	-	-	-	-	ND (<0.0952)	ND (<0.0952)	ND (<0.0952)	ND (<0.0952)	ND (<0.0952)	ND (<0.0952)	ND (<0.0952)	ND (<0.0952)	ND (<0.0952)	ND (<0.0952)	ND (<0.0952)	ND (<0.0952)	ND (<0.0952)	ND (<0.0952)
GP-34	GP34-GW	5/3/2006	ND (<190)	ND (<190)	ND (<381)	ND (<190)	ND (<381)	ND (<190)	ND (<190)	ND (<381)	ND (<190)	ND (<190)	ND (<190)	ND (<190)	ND (<190)	ND (<190)	ND (<190)	ND (<190)	ND (<190)	ND (<190)	ND (<190)	ND (<190)	ND (<190)	ND (<190)	ND (<190)
GP-35	GP35-GW	5/4/2006	-	-	-	-	-	-	-	-	-	ND (<0.0943)	ND (<0.0943)	ND (<0.0943)	ND (<0.0943)	ND (<0.0943)	ND (<0.0943)	ND (<0.0943)	ND (<0.0943)	ND (<0.0943)	ND (<0.0943)	ND (<0.0943)	**0.397**	ND (<0.0943)	ND (<0.0943)
GP-36	GP36-GW	5/3/2006	ND (<4.72)	ND (<4.72)	ND (<9.43)	ND (<4.72)	ND (<9.43)	ND (<4.72)	ND (<4.72)	ND (<9.43)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	**4.78**	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)	ND (<4.72)
GP-41	GP41-GW	5/2/2006	ND (<4.76)	ND (<4.76)	ND (<9.52)	ND (<4.76)	ND (<9.52)	ND (<4.76)	ND (<4.76)	ND (<9.52)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)
GP-42	GP42-GW	5/2/2006	ND (<4.76)	ND (<4.76)	ND (<9.52)	ND (<4.76)	ND (<9.52)	ND (<4.76)	ND (<4.76)	ND (<9.52)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)	ND (<4.76)
SLR Sampling Event - September 2006																									
GP-214	GP214-GW	9/12/2006	**239**	**115**	ND (<94.3)	**514**	ND (<94.3)	ND (<47.2)	ND (<47.2)	ND (<94.3)	ND (<47.2)	ND (<47.2)	ND (<47.2)	ND (<47.2)	ND (<47.2)	ND (<47.2)	ND (<47.2)	**363**	ND (<47.2)	ND (<47.2)	**83.9**	**103**	**1320**	**243**	**59.7**
GP-215	GP215-GW	9/12/2006	**394**	**65.4**	ND (<94.3)	**548**	ND (<94.3)	ND (<47.2)	ND (<47.2)	ND (<94.3)	ND (<47.2)	ND (<47.2)	ND (<47.2)	ND (<47.2)	ND (<47.2)	ND (<47.2)	ND (<47.2)	**295**	ND (<47.2)	ND (<47.2)	ND (<47.2)	ND (<47.2)	**619**	ND (<47.2)	ND (<47.2)
GP-204	GP204-GW	9/11/2006	-	-	-	-	-	-	-	ND (<0.943)	-	ND (<0.0943)	ND (<0.0943)	ND (<0.0943)	ND (<0.0943)	ND (<0.0943)	ND (<0.0943)	**0.11**	ND (<0.0943)	ND (<0.0943)	**0.218**	ND (<0.0943)	**0.122**	ND (<0.0943)	**0.211**
GP-208	GP208-GW	9/12/2006	-	-	-	-	-	-	-	ND (<47.2)	-	**47.6**	**27.4**	**27.5**	**10.1**	**56.1**	**9.28**	**437**	**88.7**	**24.3**	**191**	**245**	**9,080**	**766**	**179**
GP-211	GP211-GW	9/11/2006	-	-	-	-	-	-	-	ND (<0.943)	-	ND (<0.0943)	ND (<0.0943)	ND (<0.0943)	ND (<0.0943)	ND (<0.0943)	ND (<0.0943)	**27.9**	0.268	ND (<0.0943)	ND (<0.0943)	**8.14**	**0.35**	**5.19**	ND (<0.0943)
GP206	GP206-P	9/11/2006	-	-	-	-	-	-	-	ND (<97,600)	-	ND (<19,500)	ND (<19,500)	ND (<19,500)	ND (<19,500)	ND (<19,500)	ND (<19,500)	**51,200**	ND (<19,500)	ND (<19,500)	**71,200**	**41,100**	**146,000**	**144,000**	**63,700**
GP206	GP206-P	9/11/2006	-	-	-	-	-	-	-	-	-	**35,000**	**14,900**	**15,200**	**9,960**	**21,000**	ND (<9,570)	**77,000**	**24,500**	ND (<9,570)	**118,000**	**64,800**	**232,000**	**224,000**	**92,900**
SLR Sampling Event - November 2006																									
MW1-1106	-	11/14/2006	ND (<4.95)	ND (<4.95)	ND (<9.90)	ND (<4.95)	ND (<9.90)	ND (<4.95)	ND (<4.95)	ND (<9.90)	ND (<4.95)	ND (<4.95)	ND (<4.95)	ND (<4.95)	ND (<4.95)	ND (<4.95)	ND (<4.95)	ND (<4.95)	ND (<4.95)	ND (<4.95)	ND (<4.95)	ND (<4.95)	ND (<4.95)	ND (<4.95)	ND (<4.95)
MW2-1106	-	11/14/2006	ND (<4.90)	ND (<4.90)	ND (<9.80)	ND (<4.90)	ND (<9.80)	ND (<4.90)	ND (<4.90)	ND (<9.80)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)
MW3-1106	-	11/14/2006	ND (<4.90)	ND (<4.90)	ND (<9.80)	ND (<4.90)	ND (<9.80)	ND (<4.90)	ND (<4.90)	ND (<9.80)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)
MW4-1106	-	11/14/2006	ND (<4.90)	ND (<4.90)	ND (<9.80)	ND (<4.90)	ND (<9.80)	ND (<4.90)	ND (<4.90)	ND (<9.80)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)
MW5-1106	-	11/14/2006	ND (<4.90)	ND (<4.90)	ND (<9.80)	ND (<4.90)	ND (<9.80)	ND (<4.90)	ND (<4.90)	ND (<9.80)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)
SLR Sampling Event - May 2007																									
MW6	-	5/11/2007	ND (<4.90)	ND (<4.90)	ND (<9.80)	ND (<4.90)	ND (<9.80)	ND (<4.90)	ND (<4.90)	ND (<9.80)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)
Preliminary Cleanup Levels (PCLs) [E]																									
Preliminary Cleanup Levels			4	32	380	32	400	40 [F]	17	10	21,000	0.1	0.1	0.1	0.1	0.1	0.1	640	8,300	830 [G]	90	1,100	4,900	640 [H]	830

NOTES:

Of the 66 Semi-Volatile Organic Compounds (SVOCs) analytes quantified by the EPA 8270C analysis, only those analytes with one or more detections are listed

Of the 17 Polynuclear Aromatic Compounds (PAHs) and Pentachlorophenol per EPA Method 8270M-SIM, only those analytes with one or more detections are listed

- = Not Sampled or Not Analyzed for specific constituent

BOLD = Analytes detected at or above the practical quantitation limit (PQL)

A - Semivolatile Organic Compounds (SVOCs) per EPA Method 8270C

B - Polynuclear Aromatic Compounds (PAHs) and Pentachlorophenol per EPA Method 8270M-SIM

C - Pentachlorophenol (PCP) per EPA Method 8270M-SIM

D - Not Detected (ND) at or above the laboratory Practical Quantitation Limit (PQL) of 0.952 µg/l (micrograms per liter)

E - PCLs calculations presented in Attachment 2 of Work Plan

F - Per Ecology Comment 25(b) to the Draft Final Work Plan, the PCL was calculated by using the lowest PCL between surrogate chemicals 3-methylphenol and 4-methylphenol

G - Toxicity information is not aviable for benzo(g,h,i)perylene. The value for pyrene has been used as a surrogate.

H - Toxicity information is not aviable for phenanthrene. The value for acenaphthene has been used as a surrogate.

= Value exceeds the PCLs

= Laboratory PQL exceeds the PCL

TABLE 4 - Soil Analytical Summary Table
SVOCs and PAHs
JELD-WEN Site
Everett, Washington

				Semivolatile Organic Compounds (SVOCs) [A] and Polynuclear Aromatic Compounds (PAHs) [B] (mg/kg)																				
													Carcinogenic PAHs							PAHs							
Sample Location	**Sample Label**	**Sample Depth (feet)**	**Sample Date**	Carbazole	Dibenzofuran	2,4-Dimethyl phenol	2-Methyl naphthalene	2-Methylphenol	3-, 4-Methylphenol	Nitrobenzene	Pentachloro-phenol [C]	Phenol	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Chrysene	Dibenzo(a,h) anthracene	Indeno (1,2,3-cd) pyrene	Acenaphthene	Anthracene	Benzo(ghi) perylene	Fluoranthene	Fluorene	Naphthalene	Phenanthrene	Pyrene
Parametrix Sampling Event - May 1991																											
GS-1	--	--	5/24/1991	--	ND (<0.370)[D]	ND (<0.370)	ND (<0.370)	ND (<0.370)	--	ND (<0.370)	ND (<1.8)	ND (<0.370)	--	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)
GS-2	--	--	5/24/1991	--	ND (<0.40)	ND (<0.40)	ND (<0.40)	ND (<0.40)	--	ND (<0.40)	ND (<2.0)	ND (<0.40)	ND (<0.40)	ND (<0.40)	ND (<0.40)	ND (<0.40)	ND (<0.40)	ND (<0.40)	ND (<0.40)	ND (<0.40)	ND (<0.40)	ND (<0.40)	ND (<0.40)	ND (<0.40)	ND (<0.40)	ND (<0.40)	ND (<0.40)
GS-4	--	--	5/24/1991	--	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)	--	ND (<0.370)	ND (<1.8)	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)	ND (<0.370)
SS-1	--	--	5/30/1991	--	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	--	ND (<4.90)	ND (<25.0)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)	ND (<4.90)
SS-2	--	--	5/30/1991	--	ND (<2.70)	ND (<2.70)	ND (<2.70)	ND (<2.70)		ND (<2.70)	ND (<14.0)	ND (<2.70)	ND (<2.70)	ND (<2.70)	ND (<2.70)	ND (<2.70)	ND (<2.70)	ND (<2.70)	ND (<2.70)	ND (<2.70)	ND (<2.70)	ND (<2.70)	ND (<2.70)	ND (<2.70)	ND (<2.70)	ND (<2.70)	ND (<2.70)
Sampling Event - May 2006																											
GP-1	GP1-10	10.0	5/4/2006	ND (<3.80)	**4.85**	ND (<11.5)	ND (<3.80)	ND (<3.80)	ND (<3.80)	ND (<3.80)	ND (<11.5)	ND (<3.80)	**4.26**	ND (<3.80)	ND (<3.80)	ND (<3.80)	**4.70**	ND (<3.80)	ND (<3.80)	**6.96**	ND (<3.80)	ND (<3.80)	**18.9**	**9.77**	ND (<3.80)	**34.0**	**14.4**
GP-4	GP4-4.5	4.5	5/11/1006	-	-	-	-	-	-	-	**0.156**	-	ND(<0.0214)	ND(<0.0214)	ND(<0.0214)	ND(<0.0214)	ND(<0.0214)	ND(<0.0214)	ND(<0.0214)	**38.9**	ND(<0.0214)	ND(<0.0214)	ND(<0.0214)	ND(<0.0214)	ND(<0.0214)	ND(<0.0214)	ND(<0.0214)	ND(<0.0214)
GP-5	GP5-6.5	6.5	5/4/2006	-	-	-	-	-	-	-	ND (<0.769)	-	ND (<0.154)	ND (<0.154)	ND (<0.154)	ND (<0.154)	ND (<0.154)	ND (<0.154)	ND (<0.154)	**1.920**	**0.279**	ND (<0.154)	**0.873**	**1.570**	**0.221**	**4.020**	**0.422**
GP-9	GP9-6	6.0	5/1/2006	**232**	**276**	ND (<269)	**362**	ND (<88.8)	ND (<88.8)	ND (<88.8)	ND (<269)	ND (<88.8)	**137**	ND (<88.8)	ND (<88.8)	ND (<88.8)	**201**	ND (<88.8)	ND (<88.8)	**499**	**460**	ND (<88.8)	**577**	**421**	**1,060**	**1,080**	**496**
GP-9	GP9-12	12.0	5/1/2006	**-**	**-**	-	**-**	-	-	-	ND (<32.4)	-	**40.1**	**26.3**	**30.6**	**17.7**	**30.2**	ND (<6.47)	**10.1**	**118**	**31.8**	**11.0**	**171**	**99.6**	**294**	**318**	**119**
GP-10	GP10-3	3.0	5/1/2006	**47.0**	ND (<15.3)	ND (<46.4)	ND (<15.3)	ND (<15.3)	ND (<15.3)	ND (<15.3)	ND (<46.4)	ND (<15.3)	**18.7**	**48.5**	**53.2**	**40.8**	**59.1**	ND (<15.3)	**30.0**	ND (<15.3)	**156**	**39.8**	**19.6**	ND (<15.3)	ND (<15.3)	**24.3**	**30.4**
GP-10	GP10-11	11.0	5/1/2006	**-**	**-**	-	**-**	-	-	-	ND (<34.7)	-	**34.5**	**20.9**	**25.0**	**13.8**	**35.4**	ND (<6.94)	**7.14**	**10.1**	**31.9**	**8.01**	**155**	**90.1**	**238**	**301**	**115**
GP-11	GP11-12	12.0	5/4/2006	**-**	**-**	-	-	-	-	-	ND (<41.8)	-	**33.6**	**20.2**	**20.2**	**17.9**	**27**	ND (<8.36)	ND (<8.36)	**113**	**28.2**	ND (<8.36)	**159**	**91.8**	**292**	**29.4**	**97.3**
GP-12	GP12-8	8.0	5/2/2006	ND (84.2)	**143**	ND (<255)	ND (84.2)	ND (84.2)	ND (84.2)	ND (84.2)	ND (<255)	ND (84.2)	**152**	**104**	**92.8**	**102**	**261**	ND (84.2)	ND (84.2)	**287**	**185**	ND (84.2)	**629**	**271**	ND (84.2)	**705**	**577**
GP-13	GP13-11.5	11.5	5/1/2006	ND (<0.404)	ND (<0.404)	ND (<0.404)	ND (<0.404)	ND (<0.404)	ND (<0.404)	ND (<0.404)	ND (<1.22)	ND (<0.404)	ND (<0.404)	ND (<0.404)	ND (<0.404)	ND (<0.404)	ND (<0.404)	ND (<0.404)	ND (<0.404)	ND (<0.404)	ND (<0.404)	ND (<0.404)	ND (<0.404)	ND (<0.404)	ND (<0.404)	ND (<0.404)	ND (<0.404)
GP-14	GP14-6	6.0	5/1/2006	**8.14**	**15.6**	ND (<12.9)	**14.8**	ND (<4.25)	ND (<4.25)	ND (<4.25)	ND (<12.9)	ND (<4.25)	**6.77**	ND (<4.25)	ND (<4.25)	ND (<4.25)	**7.83**	ND (<4.25)	ND (<4.25)	**26.6**	**21.9**	ND (<4.25)	**32.8**	**24.4**	**38.0**	**59.9**	**24.0**
GP-15	GP15-10	10.0	5/1/2006	**3.34**	**1.52**	ND (1.18)	ND (<0.388)	ND (<0.388)	ND (<0.388)	ND (<0.388)	ND (<1.18)	ND (<0.388)	ND (<0.388)	ND (<0.388)	ND (<0.388)	ND (<0.388)	ND (<0.388)	ND (<0.388)	ND (<0.388)	**1.28**	ND (<0.388)	ND (<0.388)	**0.937**	**2.83**	**0.447**	**1.83**	**0.660**
GP-16	GP16-8	8.0	5/1/2006	ND (<0.823)	ND (<0.823)	ND (<0.823)	ND (<0.823)	ND (<0.823)	ND (<0.823)	ND (<0.823)	ND (<2.49)	ND (<0.823)	ND (<0.823)	ND (<0.823)	ND (<0.823)	ND (<0.823)	ND (<0.823)	ND (<0.823)	ND (<0.823)	ND (<0.823)	ND (<0.823)	ND (<0.823)	ND (<0.823)	ND (<0.823)	ND (<0.823)	ND (<0.823)	ND (<0.823)
GP-17	GP17-5	5.0	5/1/2006	ND (<0.734)	ND (<0.734)	ND (<0.734)	ND (<0.734)	ND (<0.734)	ND (<0.734)	ND (<0.734)	ND (<2.22)	ND (<0.734)	ND (<0.734)	ND (<0.734)	ND (<0.734)	ND (<0.734)	ND (<0.734)	ND (<0.734)	ND (<0.734)	ND (<0.734)	ND (<0.734)	ND (<0.734)	ND (<0.734)	ND (<0.734)	ND (<0.734)	ND (<0.734)	ND (<0.734)
GP-18	GP18-8	8.0	5/1/2006	-	-	-	-	-	-	-	ND (<0.0812)	-	ND (<0.0162)	ND (<0.0162)	**0.0250**	ND (<0.0162)	**0.0164**	ND (<0.0162)	ND (<0.0162)	ND (<0.0162)	ND (<0.0162)	ND (<0.0162)	**0.0292**	ND (<0.0162)	ND (<0.0162)	ND (<0.0162)	**0.0721**
GP-22	GP22-6.5	6.5	5/4/2006	-	-	-	-	-	-	-	ND (<0.0791)	-	**0.125**	**0.170**	**0.194**	**0.110**	**0.140**	**0.0327**	**0.0997**	**0.0373**	**0.0313**	**0.111**	**0.354**	**0.0185**	**0.0185**	**0.120**	**0.227**
GP-24	GP24-6	6.0	5/3/2006	-	-	-	-	-	-	-	ND (<0.144)	-	**0.0950**	**0.112**	**0.0843**	**0.0957**	**0.119**	ND (<0.0289)	**0.0650**	ND (<0.0289)	ND (<0.0289)	**0.0741**	**0.190**	ND (<0.0289)	**0.0492**	**0.111**	**0.175**
GP-29	GP29-8	8.0	5/4/2006	-	-	-	-	-	-	-	**7.4**	-	**0.459**	**0.534**	**0.681**	**0.323**	**0.626**	**0.120**	**0.347**	**0.216**	**0.520**	**0.406**	**1.3**	**0.253**	**0.360**	**1.27**	**0.856**
GP-34	GP34-8	8.0	5/3/2006	-	-	-	-	-	-	-	ND (<0.758)	-	ND (<0.152)	ND (<0.152)	**0.375**	ND (<0.152)	**0.497**	ND (<0.152)	ND (<0.152)	ND (<0.152)	ND (<0.152)	**0.175**	**0.184**	ND (<0.152)	ND (<0.152)	**0.211**	**0.216**
GP-37	GP37-8	8.0	5/2/2006	-	-	-	-	-	-	-	ND (<167)	-	ND (<0.0335)	ND (<0.0335)	ND (<0.0335)	ND (<0.0335)	ND (<0.0335)	ND (<0.0335)	ND (<0.0335)	ND (<0.0335)	ND (<0.0335)	ND (<0.0335)	ND (<0.0335)	ND (<0.0335)	**0.0355**	**0.041**	ND (<0.0335)
GP-39	GP39-9	9.0	5/2/2006	-	-	-	-	-	-	-	ND (<0.148)	-	ND (<0.0296)	ND (<0.0296)	ND (<0.0296)	ND (<0.0296)	ND (<0.0296)	ND (<0.0296)	ND (<0.0296)	ND (<0.0296)	ND (<0.0296)	ND (<0.0296)	ND (<0.0296)	ND (<0.0296)	ND (<0.0296)	ND (<0.0296)	ND (<0.0296)
GP-41	GP41-8	8.0	5/2/2006	-	-	-	-	-	-	-	ND (<0.374)	-	ND (<0.749)	ND (<0.749)	ND (<0.749)	ND (<0.749)	ND (<0.749)	ND (<0.749)	ND (<0.749)	ND (<0.749)	ND (<0.749)	ND (<0.749)	ND (<0.749)	ND (<0.749)	ND (<0.749)	ND (<0.749)	ND (<0.749)
GP-42	GP42-8	8.0	5/2/2006	-	-	-	-	-	-	-	ND (<0.352)	-	ND (<0.0705)	ND (<0.0705)	ND (<0.0705)	ND (<0.0705)	ND (<0.0705)	ND (<0.0705)	ND (<0.0705)	ND (<0.0705)	ND (<0.0705)	ND (<0.0705)	ND (<0.0705)	ND (<0.0705)	ND (<0.0705)	ND (<0.0705)	ND (<0.0705)
Geoprobe Soil Samples - Sept 2006																											
GP206	GP206-4.5	4.5	9/12/2006	-	ND (<0.350)	ND (<1.06)	ND (<0.350)	ND (<0.350)	ND (<0.350)	ND (<0.350)	ND (<1.06)	ND (<0.350)	ND (<0.350)	ND (<0.350)	ND (<0.350)	ND (<0.350)	ND (<0.350)	ND (<0.350)	ND (<0.350)	ND (<0.350)	ND (<0.350)	ND (<0.350)	ND (<0.350)	ND (<0.350)	ND (<0.350)	ND (<0.350)	ND (<0.350)
GP206	GP206-8.5	8.5	9/12/2006	-	**937**	ND (<145)	**1,410**	ND (<47.9)	ND (<47.9)	ND (<47.9)	ND (<145)	ND (<47.9)	**453**	**237**	**229**	**172**	**411**	ND (<47.9)	**83.1**	**1,510**	**453**	**96.5**	**2,060**	**1,450**	**3,860**	**3,770**	**1,850**
GP213	GP213-3	3.0	9/12/2006	-	**2.25**	ND (<5.67)	**4.05**	ND (<1.87)	ND (<1.87)	ND (<1.87)	ND (<5.67)	ND (<1.87)	**5.24**	**6.96**	**5.07**	**4.3**	**14.8**	**3.34**	**6.0**	ND (<1.87)	**3.58**	**13.0**	**6.56**	ND (<1.87)	**8.5**	**5.69**	**8.83**
GP214	GP214-6	6.0	9/12/2006	-	**10.4**	ND (<1.52)	**15.8**	ND (<0.501)	ND (<0.501)	ND (<0.501)	ND (<1.52)		**5.57**	**4.27**	**4.13**	**2.7**	**4.74**	**0.689**	**1.71**	**21.3**	**4.94**	**1.69**	**24.6**	**14.6**	**78.9**	**41.5**	**20.3**
GP202	GP202-7.5	7.5	9/11/2006	-	-	-	-	-	-	-	ND (<164)	-	**299**	**177**	**176**	**173**	**661**	**33.4**	**64.7**	786	**894**	**73.3**	**1,020**	**684**	**2,490**	**2,390**	**841**
Monitoring Well Soil Samples - Oct 2006																											
MW1	MW1-6.5	6.5	10/2/2006	-	-	-	-	-	-	-	ND (<0.0168)	-	**0.0334**	**0.0347**	**0.0293**	**0.0253**	**0.0497**	ND (<0.0168)	ND (<0.0168)	ND (<0.0168)	ND (<0.0168)	**0.02**	**0.0588**	ND (<0.0168)	ND (<0.0168)	**0.0379**	**0.0724**
MW3	MW3-6.5	6.5	10/2/2006	-	-	-	-	-	-	-	-	-	ND (<0.0156)	ND (<0.0156)	ND (<0.0156)	ND (<0.0156)	ND (<0.0156)	ND (<0.0156)	ND (<0.0156)	ND (<0.0156)	ND (<0.0156)	ND (<0.0156)	ND (<0.0156)	ND (<0.0156)	ND (<0.0156)	ND (<0.0156)	ND (<0.0156)
MW4	MW4-6.5	6.5	10/2/2006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW5	MW5-8.5	8.5	10/2/2006	-	-	-	-	-	-	-	ND (<1.97)	-	**0.625**	ND (<0.394)	**0.394**	ND (<0.394)	**0.603**	ND (<0.394)	-	**3.41**	**0.587**	ND (<0.394)	**2.38**	**2.03**	**39.5**	**5.57**	**2.09**
Monitoring Well Soil Sampling - April 2007																											
MW-6	MW6-10	10	4/20/2007	ND(<0.751)	ND(<0.751)	ND(<2.28)	ND(<0.751)	ND(<0.751)	ND(<0.751)	ND(<0.751)	ND(<2.28)	ND(<0.751)	ND(<0.751)	ND(<0.751)	ND(<0.751)	ND(<0.751)	ND(<0.751)	ND(<0.751)	ND(<0.751)	ND(<0.751)	ND(<0.751)	ND(<0.751)	ND(<0.751)	ND(<0.751)	ND(<0.751)	ND(<0.751)	ND(<0.751)
MW-6	MW6-14	14	4/20/2007	ND(<0.385)	ND(<1.17)	ND(<1.17)	ND(<0.385)	ND(<0.385)	ND(<0.385)	ND(<0.385)	ND(<1.17)	ND(<0.385)	ND(<0.385)	ND(<0.385)	ND(<0.385)	ND(<0.385)	ND(<0.385)	ND(<0.385)	ND(<0.385)	**0.149**	ND(<0.385)	ND(<0.385)	ND(<0.385)	ND(<0.385)	ND(<0.385)	ND(<0.385)	ND(<0.385)
Test Pit Soil Samples - Oct 2006																											
TP1	TP1-Stockpile	Comp.	10/19/2006	ND (<1.19)	ND (<1.19)	ND (<1.19)	ND (<1.19)	ND (<1.19)	ND (<1.19)	ND (<1.19)	ND (<0.332)	ND (<1.19)	**0.933**	**0.734**	**0.656**	**0.745**	**1.13**	ND (<0.332)	**0.406**	ND (<0.332)	**496**	**0.428**	**1.95**	ND (<0.332)	ND (<0.332)	**2.27**	**1.63**
TP1	TP1-3-4.75	4.75	10/18/2006	-	-	-	-	-	-	-	ND (<1.66)	-	**0.720**	**0.656**	**0.581**	**0.582**	**0.867**	ND (<0.332)	**0.530**	ND (<0.332)	ND (<0.332)	**0.655**	**1.54**	ND (<0.332)	ND (<0.332)	**1.36**	**1.46**
TP2	TP2-1-6	6	10/19/2006	-	-	-	-	-	-	-	ND (<0.744)	-	**0.228**	**0.222**	**0.821**	**0.522**	ND (<0.155)	ND (<0.155)	**0.196**	ND (<0.155)	ND (<0.155)	**0.224**	**1.02**	ND (<0.155)	ND (<0.155)	**0.260**	**0.780**
TP2	TP2-2-4.75	4.75	10/19/2006	-	-	-	-	-	-	-	ND (<0.0729)	-	ND (<0.0146)	ND (<0.0146)	ND (<0.0146)	ND (<0.0146)	ND (<0.0146)	ND (<0.0146)	ND (<0.0146)	ND (<0.0146)	ND (<0.0146)	ND (<0.0146)	ND (<0.0146)	ND (<0.0146)	ND (<0.0146)	ND (<0.0146)	ND (<0.0146)
TP2	TP2-3-4.75	4.75	10/19/2006	-	-	-	-	-	-	-	ND (<0.395)	-	ND (<0.0791)	ND (<0.0791)	**0.106**	ND (<0.0791)	**0.146**	ND (<0.0791)	ND (<0.0791)	**0.16**	ND (<0.0791)	ND (<0.0791)	**0.196**	**0.156**	ND (<0.0791)	**0.432**	**0.199**
TP2	TP2-4-7	7	10/19/2006	ND (<1.47)	ND (<1.47)	ND (<1.47)	ND (<1.47)	ND (<1.47)	ND (<1.47)	ND (<1.47)	ND (<0.299)	ND (<1.47)	ND (<0.0599)	ND (<0.0599)	**0.0869**	ND (<0.0599)	**0.0686**	ND (<0.0599)	ND (<0.0599)	ND (<0.0599)	ND (<0.0599)	ND (<0.0599)	0.0756	ND (<0.0599)	ND (<0.0599)	0.0646	0.0712
Preliminary Cleanup Levels (PCLs)[E]																											
Preliminary Cleanup Levels				0.33	160	3.12	320	2.33	400[F]	0.33	0.33	96.2	0.020	0.054	0.067	0.067	0.022	0.101	0.14	65.3	3,851	1,132[G]	88.6	173.8	5.0	65.3[H]	1,132

NOTES:

Of the 66 Semi-Volatile Organic Compounds (SVOCs) analytes quantified by the EPA 8270C analysis, only those analytes with one or more detections are listed

Of the 17 Polynuclear Aromatic Compounds (PAHs) and Pentachlorophenol per EPA Method 8270M-SIM, only those analytes with one or more detections are listed

- = Not Sampled or Not Analyzed for specific constituent

BOLD = Analytes detected at or above the practical quantitation limit (PQL)

A - Semivolatile Organic Compounds (SVOCs) per EPA Method 8270C

B - Polynuclear Aromatic Compounds (PAHs) and Pentachlorophenol per EPA Method 8270M-SIM

C - Pentachlorophenol (PCP) per EPA Method 8270M-SIM

D - Not Detected (ND) at or above the laboratory Method Reporting Limit (MRL) of 0.370 mg/Kg (milligrams per kilogram)

E - PCLs calculations presented in Attachment 2 of Work Plan

F - Per Ecology Comment 25(b) to the Draft Final Work Plan, the PCL was calculated by using the lowest PCL between surrogate chemicals 3-methylphenol and 4-methylphenol

G - Toxicity information is not aviabile for benzo(g,h,i)perylene. The value for pyrene has been used as a surrogate.

H - Toxicity information is not aviabile for phenanthrene. The value for acenaphthene has been used as a surrogate.

= Value exceeds the PCLs

= Laboratory PQL exceeds the PCL

TABLE 5 - Groundwater Analytical Summary Table
VOCs
JELD-WEN Site
Everett, Washington

Sample Location	Sample Label	Sample Date	Volatile Organic Compounds (VOCs) [A] (µg/l) Benzene	Ethylbenzene	Isopropyl benzene	n-Propyl benzene	Toluene	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	Xylenes [B]
SLR Sampling Event - May 2006										
GP-2	GP2-GW	5/4/2006	ND (<1.00) [C]	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00)
GP-3	GP3-GW	5/4/2006	ND (<500)	ND (<500)	ND (<1,000)	ND (<500)	**60,300**	ND (<500)	ND (<500)	ND (<1,500)
GP-5	GP5-GW	5/4/2006	**3.13**	**4.21**	ND (<2.00)	ND (<1.00)	ND (<1.00)	**1.95**	ND (<1.00)	**5.47**
GP-9	GP9-GW	5/1/2006	ND (<100)	ND (<100)	ND (<200)	ND (<100)	**125**	ND (<100)	ND (<100)	ND (<300)
GP-10	GP10-GW	5/1/2006	**103**	ND (<100)	ND (<200)	ND (<100)	**125**	ND (<100)	ND (<100)	ND (<300)
GP-12	GP12-GW	5/2/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00)
GP-13	GP13-GW	5/1/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00)
GP-14	GP14-GW	5/1/2006	ND (<5.00)	ND (<5.00)	ND (<10.00)	ND (<5.00)	ND (<5.00)	ND (<5.00)	ND (<5.00)	ND (<15.00)
GP-19	GP19-GW	5/1/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00)
GP-21	GP21-GW	5/4/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00)
GP-22	GP22-GW	5/4/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00)
GP-23	GP23-GW	5/1/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00)
GP-24	GP24-GW	5/3/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00)
GP-27	GP27-GW	5/3/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00)
GP-29	GP29-GW	5/4/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00)
GP-31	GP31-GW	5/3/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00)
GP-34	GP34-GW	5/3/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00)
GP-35	GP35-GW	5/4/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00)
GP-36	GP36-GW	5/3/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00)
GP-41	GP41-GW	5/2/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00)
GP-42	GP42-GW	5/2/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00)
SLR Sampling Event - September 2006										
GP-201	GP201-GW	9/11/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00
GP-202	GP202-P	9/11/2006	**145**	**114**	ND (<200)	ND (<100)	**185**	ND (<100)	ND (<100)	ND (<300)
GP-204	GP204-GW	9/11/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00
GP-205	GP205-GW	9/12/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	**1.05**	ND (<1.00)	ND (<1.00)	ND (<3.00
GP-207	GP207-GW	9/12/2006	**204**	**222**	ND (<100)	ND (<50.0)	**540**	**64.0**	ND (<50.0)	**343**
GP-208	GP208-GW	9/12/2006	ND (<100)	ND (<100)	ND (<200)	ND (<100)	**121**	ND (<100)	ND (<100)	ND (<300)
GP-209	GP209-GW	9/12/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00
GP-210	GP210-GW	9/12/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00
GP-211	GP211-GW	9/12/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00
GP-212	GP212-GW	9/11/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00
GP-214	GP214-GW	9/12/2006	ND (<50.0)	ND (<50.0)	ND (<100)	ND (<50.0)	ND (<50.0)	ND (<50.0)	ND (<50.0)	ND (<150.0)
GP-215	GP215-GW	9/12/2006	**66.3**	**77.8**	**6.72**	**1.49**	**1.18**	**33**	**1.03**	**35.94**
GP-206	GP206-P	9/11/2006	ND (<7,750)	ND (<38,800)	ND (<77,500)	ND (<38,800)	ND (<38,800)	ND (<38,800)	ND (<38,800)	ND (<116,300)
SLR Sampling Event - November 2006										
MW1-1106	-	11/14/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00)
MW2-1106	-	11/14/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00)
MW3-1106	-	11/14/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00)
MW4-1106	-	11/14/2006	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00)
MW5-1106	-	11/14/2006	**9.46**	ND (<1.00)	ND (<2.00)	ND (<1.00)	**4.12**	ND (<1.00)	ND (<1.00)	**1.05**
SLR Sampling Event - May 2007										
MW-6	-	5/11/2007	ND (<1.00)	ND (<1.00)	ND (<2.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<1.00)	ND (<3.00
Preliminary Cleanup Levels (PCLs)[D]										
Preliminary Cleanup Levels			1.2	530	800	NP [E]	1,300	400	400	1,000

NOTES:

Of the 65 Volatile Organic Compounds (VOCs) analytes quantified by the EPA 8260B analysis, only those analytes with one or more detections are listed.

BOLD = Analytes detected at or above the practical quantitation limit (PQL)

A - Volatile Organic Compounds (VOCs) per EPA Method 8260C

B - The sum of o-xylene and m,p-xylene

C - Not Detected (ND) at or above the laboratory Practical Quantitation Limit (PQL) of 1.00 µg/l (micrograms per liter)

D - PCLs calculations presented in Attachment 2 of Work Plan

E - Value Not Provided

= Value exceeds the PCLs

= Laboratory PQL exceeds the PCL

TABLE 6 - Soil Analytical Summary Table
VOCs
JELD-WEN Site
Everett, Washington

				Volatile Organic Compounds (VOCs) [A] (µg/kg)				
Sample Location	**Sample Label**	**Sample Depth (feet)**	**Sample Date**	Benzene	Ethylbenzene	Toluene	1,2,4-Trimethyl benzene	Xylenes [B]
Parametrix Sampling Event- May 1991								
GS-1	GS-1	--	5/24/1991	ND(<6) [C]	ND(<6)	ND(<6)	--	ND (<6)
GS-2	GS-2	--	5/24/1991	ND(<6)	ND(<6)	ND(<6)	--	ND (<6)
GS-4	GS-4	--	5/24/1991	ND(<6)	ND(<6)	ND(<6)	--	ND (<6)
GS-3	GS-3	--	5/30/1991	ND(<15)	ND(<15)	**90**	--	**54**
SS-1	SS-1	--	5/30/1991	ND(<38)	ND(<38)	ND(<38)	--	ND(<38)
SS-2	SS-2	--	5/30/1991	ND(<42)	ND(<42)	ND(<42)	--	ND(<42)
RZA Sampling Event- August 1992								
C1	C1-S1	2.5-4.0	8/27/1992	ND (<0.00005)	ND (<0.00005)	ND (<0.00005)	--	ND (<.00001)
C2	C2-S2	7.5-9.0	8/27/1992	ND (<0.00005)	ND (<0.00005)	ND (<0.00005)	--	ND (<.00001)
C6	C6-S1	2.5-4.0	8/27/1992	ND (<0.00005)	ND (<0.00005)	ND (<0.00005)	--	ND (<.00001)
May 2006 Sampling Event								
GP-3	GP3-9	9.0	5/4/2006	ND (<125)	ND (<623)	**71,000**	ND (<623)	ND (<1,873)
GP-14	GP14-6	6.0	5/1/2006	ND (<125)	ND (<624)	ND (<624)	ND (<624)	ND (<1,874)
GP-34	GP34-8	8.0	5/3/2006	ND (<22.5)	ND (<113)	ND (<113)	ND (<113)	ND (<338)
Geoprobe Soil Sampling - Sept 2006								
GP201	GP201-4.5	4.5	9/11/2006	ND (<23)	ND (<115)	ND (<115)	ND (<115)	ND (<345)
GP213	GP213-3	3.0	9/12/2006	**53**	ND (<110)	**188**	**131**	**148**
GP214	GP214-6	6.0	9/12/2006	ND (<148)	ND (<742)	ND (<742)	ND (<742)	ND (<2,222)
GP215	GP215-4.5	4.5	9/11/2006	ND (<22)	ND (<110)	ND (<110)	ND (<110)	ND (<330)
Test Pit Soil Samples - Oct 2006								
TP1	TP1-1-4.75	4.75	10/18/2006	ND (<109)	ND (<109)	ND (<109)	ND (<109)	ND (<327)
TP1	TP1-2-4.75	4.75	10/18/2006	ND (<110)	ND (<110)	ND (<110)	ND (<110)	ND (<329)
TP1	TP1-3-4.75	4.75	10/18/2006	ND (<124)	ND (<124)	**528**	ND (<124)	ND (<371)
TP1	TP1-4-5.75	5.75	10/18/2006	ND (<113)	ND (<113)	ND (<113)	ND (<113)	ND (<340)
TP1	TP1-5-4.75	4.75	10/19/2006	ND (<121)	ND (<121)	**284**	**124**	**464**
TP1	TP1-Stockpile	Comp.	10/19/2006	ND (<588)	ND (<588)	**75,300**	**747**	**1,190**
Monitoring Well Soil Sampling - April 2007								
MW-6	MW6-10	10	4/20/2007	ND (<22.6)	ND (<113)	ND (<113)	ND (<113)	ND (<339)
MW-6	MW6-14	14	4/20/2007	ND (<23.2)	ND (<116)	ND (<116)	ND (<116)	ND (<348)
Preliminary Cleanup Levels (PCLs) [D]								
Preliminary Cleanup Levels				6.8	4,530	7,000	4,000,000	9,000

NOTES:

Of the 65 Volatile Organic Compounds (VOCs) analytes quantified by the EPA 8260B analysis, only those analytes with one or more detections are listed.

BOLD = Analytes detected at or above the practical quantitation limit (PQL)

A - Volatile Organic Compounds (VOCs) per EPA Method 8260C. Parametrix Samples per Method 8240

B - The sum of o-xylene and m,p-xylene

C - Not Detected (ND) at or above the laboratory Practical Quantitation Limit (PQL) of 125 µg/kg (micrograms per kilogram)

D - PCLs calculations presented in Attachment 2 of Work Plan

= Value exceeds the PCLs

= Laboratory PQL exceeds the PCL

TABLE 7 - Groundwater and Soil Analytical Summary Table
PCBs
JELD-WEN Site
Everett, Washington

SOIL

Sample Location	Sample Label	Sample Depth (feet)	Sample Date	Polychlorinated Biphenyls [A] (µg/kg) Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
RZA Sampling Event- August 1992										
C1	C1-S1	2.5-4.0	8/27/1992	ND (<50.0)[B]	ND (<50.0)	ND (<50.0)	ND (<50.0)	ND (<50.0)	ND (<50.0)	ND (<50.0)
C2	C2-S2	7.5-9.0	8/27/1992	ND (<50.0)	ND (<50.0)	ND (<50.0)	ND (<50.0)	ND (<50.0)	ND (<50.0)	ND (<50.0)
May 2006 Sampling Event										
GP34	GP34-8	8.0	5/3/2006	ND (<37.6)	ND (75.6)	ND (<37.6)	ND (<37.6)	ND (<37.6)	ND (<37.6)	ND (<37.6)
Preliminary Cleanup Levels[C] (PCLs)										
Preliminary Cleanup Levels				0.5[D]	0.5[D]	0.5[D]	0.5[D]	0.5[D]	0.5[D]	0.5[D]

GROUNDWATER

Sample Location	Sample Label	Sample Date	Polychlorinated Biphenyls [A] (µg/l) Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
GP-34	GP34-GW	5/3/2006	ND (<0.476)	ND (<0.952)	ND (<0.476)	ND (<0.476)	ND (<0.476)	ND (<0.476)	ND (<0.476)
Preliminary Cleanup Levels									
Preliminary Cleanup Levels			0.01[D]	0.01[D]	0.01[D]	0.01[D]	0.01[D]	0.01[D]	0.01[D]

NOTES:

A - Polychlorinated Biphenyls per EPA Method 8082.

B - Not Detected (ND) at or above the laboratory Practical Quantitation Limit (PQL) of 50.0 µg/kg (micrograms per kilogram) - dry unit weight basis.

C - PCLs calculations presented in Attachment 2 of Work Plan

D - PCL for total PCBs

= Value exceeds the PCLs

= Laboratory PQL exceeds the PCL

APPENDIX A

UPLAND SAMPLING AND ANALYSIS PLAN

APPENDIX A
UPLANDS
SAMPLING AND ANALYSIS PLAN

JELD WEN, inc.
Former Nord Door Facility
300 West Marine View Drive
Everett, Washington
Ecology No. 2757

Prepared for

JELD-WEN, inc.

Updated September 2008

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APPENDIX A - STANDARD SLR FIELD FORMS

ACRONYMS AND ABBREVIATIONS

ASTM	American Society for Testing and Materials
bgs	below ground surface
BNAs	semi-volatile organic compounds (sediment)
DQO	data quality objective
Ecology	Washington State Department of Ecology
GC/MS	gas chromatograph/mass spectrophotometer
GRO	gas range organics
HASP	health and safety plan
HCID	hydrocarbon identification
ICP	inductively coupled plasma-atomic emission spectroscopy
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
MLLW	Mean lower low water (datum)
MRLs	method reporting limits
MTCA	Model Toxics Control Act
MW	Monitoring well
NAPL	nonaqueous phase liquid
NAVD	North American Vertical Datum
NGVD	National Geodetic Vertical Datum of 1929
PCB	polychlorinated biphenyl
PCP	Pentachlorophenol
PPMETS	Priority pollutant metals, antimony, arsenic, beryllium, cadmium, chromium, copper, lead, nickel, selenium, silver, thallium, zinc
QA/QC	quality assurance/quality control
QAPP	quality assurance project plan
RI	remedial investigation
RI/FS	remedial investigation/feasibility study
SAP	sampling and analysis plan
SVOC	Semi volatile organic compounds
TC	Toxicity Characteristic
TCLP	Toxicity Characteristic Leaching Procedure
TDS	total dissolved solids
TOC	total organic carbon

ACRONYMS AND ABBREVIATIONS (Continued)

TSS	total suspended solids
TPH	total petroleum hydrocarbons
TPH-Gx	total petroleum hydrocarbons as gasoline
TPH-Dx	total petroleum hydrocarbons as diesel
TSS	total suspended solids
TVS	total volatile solids
VOA	volatile organic analysis
WAC	Washington Administrative Code

1 INTRODUCTION

1.1 Purpose

This uplands Sampling and Analysis Plan (uplands SAP) is being prepared as part of the Remedial Investigation (RI) for the former Nord Door facility in Everett, Washington. This SAP is provided to identify the purpose and objectives of the uplands data collection in support of the work plan for remedial investigation/feasibility study (RI/FS) and Cleanup Action Plan (CAP) "Work Plan", specify field procedures, identify quality assurance (QA) procedures to be implemented during sampling activities and laboratory analyses, and to meet the requirements of WAC 173-340-820, Model Toxics Control Act (MTCA).

1.2 Sampling and Analysis Plan Organization

The Sampling and Analysis Plan is organized in three sections. A brief description of each section is presented below.

Section 1—Introduction. Section 1 contains an overview of the Uplands Sampling and Analysis Plan.

Section 2—Field Sampling Plan. Section 2 identifies the sampling locations and depths, and presents the procedures to be used in field sampling. Included are procedures for: soil sample and wood ash collection; groundwater sample collection, boring abandonment, water and product measurements, residuals management, sample splitting, sample labeling, shipping, and custody, and temporary well installation.

Section 3—Quality Assurance Project Plan. Section 3 identifies the project organization and includes QA procedures for field activities and laboratory analyses.

1.3 Project Organization and Responsibilities

Noted below are the responsibilities of key project personnel.

Jay Russell, Project Coordinator for JELD-WEN. Responsible for overseeing the implementation of the Agreed Order for JELD-WEN. Coordinates with the Department of Ecology (Ecology) and SLR International Corp (SLR). Provides oversight of program activities. Reviews project work scope, resource needs, and requests.

Isaac Standen, Project Coordinator for Ecology. Responsible for overseeing the implementation of the Agreed Order for Ecology. Coordinates with the Ecology and SLR. Provides oversight of all program activities. Reviews project work scope. Defines and coordinated Ecology resources.

Scott Miller, Project Manager, SLR. Provides technical oversight of all SLR project activities at the Site and senior review of all project activities. Oversees project performance and provides technical expertise to accomplish project objectives. Ensures that project tasks are successfully completed within the project time periods. Coordinates with JELD-WEN.

SLR Field Personnel. Geologists, scientists, engineers, and technicians are responsible for implementing the SAP.

Laboratories. Provide analytical support. Perform all required quality control analyses including analytical duplicates, blanks, and matrix spikes. Initiate and document required corrective action. Perform preliminary review of data for completeness, transcription, or analytical errors. Follow U.S. Environmental Protection Agency (EPA) guidelines and good laboratory practices. The project laboratory for the uplands sampling is Environmental Science Corp. (ESC) located in Mt. Juliet, Tennessee. Some of the soil and groundwater samples will be subcontracted by ESC to Analytical Resource, Inc. (ARI) and some samples will be subcontracted to Maxxam Analytics Inc. ARI is located in Tukwila, Washington and Maxxam is located in Burnaby, BC. ESC (C1915), ARI (C1235) and Maxxam (C1192) are accredited by Ecology.

1.4 Remedial Investigation Schedule

The schedule for the uplands sampling that will be completed as part of the RI is presented in the Work Plan (Section 2). Any schedule modifications will be submitted for approval by SLR to the Ecology Project Coordinator.

2 FIELD SAMPLING PLAN

2.1 Sampling Needs and Objectives

The uplands RI sampling activities to be performed at the Site are intended to provide additional information to support site characterization and cleanup decision making. Sampling will supplement the initial results and previous testing conducted on the Site. Specific sampling objectives are as follows:

- Assess if the wood ash from the former hogged fuel boiler contains dioxin.

- Perform additional sampling in the vicinity of former Woodlife storage, piping, and use area to provide further assessment of pentachlorophenol (PCP) in the subsurface and to assess for the presence of dioxins and furans that are potentially associated with PCP.

- Perform additional assessment of soil and groundwater in the vicinity of the formerly unpaved ("grassy") areas located in the southwestern portion of the property to assess if historical material storage and disposal practices may have impacted soil or groundwater.

- Perform additional assessment of soil and groundwater at the former barrel storage area located in the south central portion of the property to asses if historical barrel storage, historical materials disposal, and/or fuel storage may have impacted soil or groundwater. This area is also referred to as the south central unpaved area. Previous sampling location GP-34 and Test Pit #2 are located near the western edge of the south central unpaved area.

- Perform additional assessment at the former casket manufacturing facility to assess if historical manufacturing activities may have impacted soil or groundwater in this area. Portions of this former facility are part of the Site structures while other portions in the area of the parking lot have been removed.

- Perform additional soil assessment in area of the former machine shop and maintenance area to assess for impacts to soil associated with historical equipment repair.

- Collect surface soil samples near the seven on-site transformers for PCB analysis to assess for the potential presence of PCBs associated with electrical equipment.

- Collect soil and groundwater samples from the area of the former fish net storage building located in the southeast portion of the Site.

- Sample existing groundwater monitoring wells for metals to assess potential impacts to Site groundwater from historical site activities and equipment usage.

- Collect soil and groundwater samples along the Burlington Northern Santa Fe (BNSF) rail road property, east of West Marine View Drive to define the extent and magnitude of creosote and fuel oil impacts identified along West Marine View Drive.

2.2 Sampling Locations, Types, Frequency, and Analyses

This section generally describes proposed sampling locations. Proposed sample locations are depicted in Figures 11A through 11E of the Work Plan. A summary of the proposed sampling areas, proposed sampling location labels, and the proposed analysis is summarized in Table 1 (attached). A description of the samples to be collected at each sampling location, the proposed frequency of sampling, and the analyses to be performed is also described in this section. Sampling methods and sampling procedures are described in Section 2.3. Examples of field boring logs and sample Chain of Custody are included as Appendix B.

Ash from the Former Hogged Fuel Boiler. One grab sample (301-P) will be collected from the ash storage located at the former hogged fuel boiler. This sample of ash will be analyzed for dioxin and furans per EPA method 1613.

Former Woodlife Storage and Use Area. One Geoprobe boring (302-P) will be advanced in the eastern corner of the Site, near the former aboveground storage tank (AST) containing Woodlife wood treatment solution. Three soil samples and one groundwater sample will be collected from this location. The soil samples submitted for laboratory analysis will include one sample from just below the asphalt/gravel surface layer, one sample from the approximate mid point between the surface sample and the groundwater table, and one sample collected from a depth at the groundwater table as observed during the field work. The three soil samples will be submitted for TPH-Dx (NWTPH-Dx methods) analysis and pentachlorophenol (PCP) analysis by EPA method 8270. The soil sample from this boring with the highest concentration of PCP will be analyzed for dioxin and furans per EPA method 1613. One groundwater sample from location 302-P will be collected and held by the laboratory pending receipt of the results of the soil samples from Geoprobe boring 302-P. If dioxin or furan is identified in the soil, then the groundwater sample will also be analyzed for dioxins and furans.

Southwest Unpaved ("grassy") Area. Four Geoprobe borings (303-P, 304-P, 305-P and 306-P) will be advanced in the formerly unpaved area located in the southwestern portion of the Site. This area is now paved and is currently used by Rinker Materials for material storage and batching asphalt pavement. A total of eight soil samples will be collected from the Geoprobe borings (two from each boring location). The soil samples will be submitted for TPH-HCID (NWTPH methods) analysis with follow-up analysis for TPH-Dx and/or TPH-Gx if the HCID shows the presence of this range of hydrocarbons in the sample. Four samples (one from each boring location) exhibiting the highest concentrations of impacts based on field screening methods and the TPH-HCID results will be analyzed for metals, semi-volatile compounds (SVOCs) by EPA method 8270, volatile organic compounds (VOCs) by EPA method 8260, and polychlorinated biphenyls (PCBs) by EPA method 8082. In the absence of field observations showing impacts to soil, the soil samples from a depth at the groundwater table as observed during the field work will be submitted (one soil sample from each of the four sampling locations). Groundwater grab samples will be collected from each of the four boring locations (303-P and 306-P) and analyzed for TPH-HCID with follow-up analysis for TPH-Dx and/or TPH-Gx. The groundwater samples will also be submitted for SVOC and VOC analysis. Groundwater samples from each boring will be collected and held by the laboratory for possible total metals analysis, pending the results of the metals analysis of soil.

South Central Unpaved Area / Former Barrel Storage Area. Two Geoprobe borings (307-P and 308-P) will be advanced in this portion of the Site for soil and groundwater sampling. The soil samples will be submitted for TPH-HCID with follow-up analysis for TPH-Dx and/or TPH-Gx. One soil sample from each of the two sampling locations will be analyzed for metals, SVOCs, VOCs, and PCBs. Groundwater grab samples will be collected from each of the two boring locations and analyzed for TPH-HCID with follow-up analysis for TPH-Dx and/or TPH-Gx. The two groundwater samples will also be submitted for SVOC and VOC analysis. Groundwater samples from each boring will be collected and held by the laboratory for possible total metals analysis, pending the results of the metals analysis of soil.

Former Casket Manufacturing Area / Area near GP-22. Four Geoprobe borings (309-P, 310-P, 311-P, and 312-P) will be advanced in this portion of the Site for soil and groundwater sampling. The soil samples will be submitted for TPH-HCID with follow-up analysis for TPH-Dx and/or TPH-Gx. One soils sample from each of the four sampling locations will be analyzed for metals, SVOCs, VOCs, and PCBs. Groundwater grab samples will be collected from each of the four boring locations and analyzed for TPH-HCID with follow-up analysis for TPH-Dx and/or TPH-Gx. The two groundwater samples will also be submitted for SVOC and VOC analysis. Groundwater samples from each boring will be collected and held by the laboratory for possible total metals analysis, pending the results of the metals analysis of soil.

Former Machine Shop / Maintenance Area. Two near surface soil samples (grab samples) will be collected using a hand tool from immediately below the asphalt pavement and pavement base rock (drainage gravel). The soil samples from these two locations (313-P and 314-P) will be submitted for TPH-HCID with follow-up analysis for TPH-Dx and/or TPH-Gx, SVOCs and VOCs. These soil samples will also be analyzed for PCBs. Samples from locations 313-P, 314-P, and sampling location 319-P (discussed below) will be submitted for metals analysis.

Transformers and the Potential for PCBs. Seven surface soil samples (grab samples) will be collected using a hand tool from areas immediately adjacent to the seven on-site transformers (TZ-1 to TZ-7) and analyzed for PCBs. These seven sampling locations are identified as 315-P to 321-P. If PCBs are identified in the soil samples, analysis for TPH-Dx will be completed.

Former Fish Net Storage Building. Two Geoprobe borings (334-P and 335-P) will be collected near the former fish net storage building. Two soil samples from each of the borings will be submitted for TPH-HCID analysis with follow-up for TPH-Dx and/or TPH-Gx if the HCID analysis shows the presence of this range of petroleum hydrocarbons in the sample. Two samples (one from each boring) exhibiting the highest concentrations of TPH based on the TPH-HCID analysis will also be analyzed for PCBs, SVOCs, VOCs, and PPMETS. Groundwater samples will be collected from the two locations and analyzed for TPH-HCID (follow-up for TPH-Dx and/or TPH-Gx), PCBs, SVOCs, VOCs, and PPMETS.

Monitoring Wells. Groundwater samples will be collected from the six existing groundwater monitoring wells (MW-1 through MW-6) for total metals analysis. In addition, groundwater samples will be collected from monitoring wells MW-1 and MW-4 for analysis of TPH-Dx, with follow up analysis for PCBs.

BNSF Railroad/Maulsby Marsh. Twelve soil samples (Sample 322-P to 333-P) will be collected using a hand auger from areas east of the BNSF tracks in Maulsby Marsh. The proposed sampling locations are approximately 20 feet east of the railroad tracks, spread out across approximately 800 feet along the tracks. This section of Maulsby Marsh is owned by BNSF. Soil samples will be submitted for TPH-HCID. If the laboratory analysis identifies petroleum hydrocarbon impacts to a soil sample, follow-up analysis for TPH-Dx and/or TPH-Gx and VOCs will be performed depending on the detected range of the hydrocarbons in the sample. Groundwater samples will be collected by installing a temporary well point into each of the hand auger borings and collecting a groundwater grab sample. The groundwater samples will be submitted for TPH-HCID. If the laboratory analysis identifies petroleum hydrocarbon impacts to a groundwater sample, follow-up analysis for TPH-Dx and/or TPH-Gx and VOCs will be performed depending on the detected range of the hydrocarbons in the sample.

2.2.1 Field Quality Assurance Samples

Field QA will be maintained through compliance with the sampling plan, collection of field QA samples, and documentation of sampling plan alterations.

2.3 Sampling Methods and Procedures

This section generally describes the methods and procedures for fieldwork associated with the proposed soil and groundwater sampling.

2.3.1 Utility Location

All drilling and excavation locations will be checked for underground utilities prior to the start of field activities. Boring locations may be moved due to underground or aboveground

utilities, or site operational constraints seen during site visits. The field geologist/engineer may approve relocations within 25 feet of the original site and will notify the SLR project manager. Relocations greater than 25 feet from the original boring location will require approval by both the SLR project manager and the JELD-WEN project manager before drilling commences. Underground utilities and structures will be identified within 50 feet of the planned soil excavation areas.

2.3.2 Soil Sampling

Soil samples will be collected using the following general procedures:

A. All sampling equipment and reusable materials that will contact the sample will be decontaminated on site in accordance with procedures identified in Section 2.3.8. The field staff will use clean neoprene, nitrile, or vinyl gloves for handling each sample.

B. The sample container labels will be filled out and attached to the appropriate containers as described in Section 2.3.9.

C. Soil samples collected for chemical analysis will be transferred directly from the sampler into sample containers.

D. Laboratory provided glass jars will be filled for analyses at each sample interval, if sample volume permits. If the soil volume from a sampling interval does not adequately fill the soil jars, an additional sample will be collected from the depth interval immediately below it. Soil will be transferred directly from the stainless-steel bowl (composite samples), or from the sampling sleeve (Geoprobe samples) to the sample containers. The soil placed in the containers will be handled carefully to minimize disturbance of the soil. Each container will be filled as full as possible to minimize headspace.

E. A PID will be used to monitor each sample for volatile constituents after the sampler is first opened. The PID reading will be recorded on a Field Sampling Data Form or on a Boring Log Form (Section 3.4).

F. After filling the sample jars, the remaining sample will be logged on a Boring Log Form or a Field Sampling Data Form as described in Section 3.4. If free product contamination is observed in any sample interval, that sample will also be transferred into sample containers. For the purposes of this investigation, free product contamination is defined as a nonaqueous phase liquid that is adsorbed to the soil and is in soil pore spaces, causing staining, iridescent sheens, and an odor characteristic of petroleum or polycyclic aromatic hydrocarbons.

After being filled, the sample container(s) will be placed on ice in a cooler and handled as described in Section 2.3.9. The sample coolers will be sent to the laboratory within 36 hours of sampling.

Soil samples will be identified by the Geoprobe or hand auger location which they are collected. The prefix "GP-" will precede all Geoprobe boring numbers and the prefix “HA-” will precede all soil hand auger boring number. Geoprobe soil samples and hand auger soil samples will be numbered according to the top of the depth range sampled. For example, GP-301-5 would denote a Geoprobe soil sample from soil boring location 301 collected from a depth of 5 feet bgs; HA-306-5 would denote a hand auger soil sample collected from soil boring location 306 from a depth of 5 feet bgs.

Geoprobe Soil Borings. The Geoprobe borings will be advanced using a truck-mounted, Geoprobe direct-push drilling rig. The Geoprobe rig will be equipped with nominal 2-foot-long or 4-foot-long, 2-inch-diameter probes fitted with acetate sampling sleeves. The Geoprobe borings will be advanced to approximately 15 feet bgs. As is discussed in Section 2.3.3 below, temporary well screens will be installed in each of the Geoprobe borings. Following sampling, the Geoprobe soil borings will be abandoned as described in Section 2.3.4.

Geoprobe borings will require coring of asphalt or concrete in some areas. Subsurface soil samples in the five Geoprobe borings will be collected continuously from the ground surface to the maximum explored depth of 15 feet bgs. Soil samples will be taken from the continuous core sample (contained within the plastic sample sleeve) by hand packing the soil into a clean glass jar supplied by the project laboratory. Lithologic descriptions of the sampled soil will be recorded on a Boring Log Form. Soil samples will be collected for chemical analyses.

Soil samples from each boring will be field screened for the presence of petroleum hydrocarbons and volatile organic compounds (VOCs) by using visual appearance, odors, and a photoionization detector (PID). The soil samples will be submitted for laboratory analysis based on the highest PID measurement or visual evidence of impacts. If there is no visual evidence of impact and the PID measurements are below detection limits, the sample will be collected from a depth just above the groundwater table as observed during the field work. Field equipment will be decontaminated according to the procedures outlined in Section 2.3.9 prior to moving to the next sampling location.

Hand Tool Samples and Hand Auger Soil Borings. Surface soil samples are to be collected using hand tools on-site and from twelve hand-augured soil borings (locations 322-P to 333-P) to be collected from the BNSF Railroad property to the east. Surface soil samples will be collected from depths immediately below the asphalt pavement and pavement base rock (drainage gravel) using a jackhammer to breakup and remove the asphalt pavement, a shovel to remove the broken pavement and base rock, and a stainless steel shovel or hand trowel to collect the soil sample.

Hand auger borings will require coring of asphalt or concrete in some areas. The hand auger borings will be completed using a stainless steel hand auger to approximately five feet below the water table as observed in the borings. The depth to groundwater is expected to be within 5 feet of ground surface. The borings will be advanced using a hand auger to a maximum depth of 10 feet bgs. Boring depths may be limited by soil type or subsurface features. As is discussed in Section 2.7 below, temporary well screens will be installed in several of the hand auger borings. Following sampling, the hand auger soil borings will be abandoned as described in Section 2.6. The soil samples will be collected from the interval with the highest PID measurement or visual evidence of impact. If no evidence of impact is identified a soil sample will be collected from a depth just above the water table.

Soil samples from the hand auger will be collected by inserting an acetate core into the boring at the desired depth. Lithologic descriptions of the sampled soil will be recorded on a Boring Log Form. Surface soil samples (0 to 0.5 feet deep) will be collected with a clean hand auger or stainless-steel spoon for chemical analyses.

2.3.3 Groundwater Sampling Procedures

Groundwater samples from existing monitoring wells will be collected using the following general procedures:

A. Depth to water will be measured before sampling. The water level will be measured by using an electric well probe or oil-water interface probe to the nearest 0.01 foot from a surveyed notch in the well casing. Water depths will be recorded on a Field Sampling Data Form and will include date, time, and sampler's initials. If floating product is present, the thickness will be measured with an oil-water interface probe or a combination of water finding paste and product paste. Groundwater samples will not be collected from wells with floating product.

B. The monitoring wells will be purged using low-flow procedures. Groundwater samples will be collected using a peristaltic pump fitted with silicon tubing and either Tygon® or polyethylene tubing. Pump tubing will be lowered to a mid-screen depth for purging and sampling. Monitoring wells will be purged at a rate of 0.25 to 0.5 liters per minute.

C. Field parameters (temperature, pH, specific conductance, dissolved oxygen, and oxidation redox potential [ORP]) will be measured in purged groundwater as it is discharging through a flow-through cell. Groundwater will be passed through the cell and discharged into a temporary storage container. Field parameters will be periodically measured and recorded during well purging and upon stabilization. Field parameters will be measured using a multi-parameter meter that includes a thermometer, pH/conductivity meter, dissolved oxygen meter, and ORP meter. The multi-parameter meter will be calibrated before measurements are taken. Field parameter measurements will be recorded as follows:

- Temperature to ±0.5°C
- pH to ±0.01 units
- Specific conductance to ±1 µS/cm (measured specific conductance ≤ 999 µS/cm), ±10 µS/cm (999 µS/cm < specific conductance <10,000 µS/cm), or ±100 µS/cm (measured specific conductance >10,000 µS/cm)
- Dissolved oxygen to 0.1 mg/L
- Turbidity to 0.1 NTU
- ORP to ± 15 mV

D. Groundwater samples will be collected after the field parameters have stabilized to within 10 percent of the previous reading. If the groundwater parameters do not stabilize, a maximum of three casing volumes will be purged prior to sampling. Residuals will be managed as described in Section 2.13.

E. Groundwater samples will be collected from discharge line of the peristaltic pump (prior to removal of the discharge line after purging the well). All samples will be transferred in the field from the sampling equipment into a container prepared for the given parameters by the analytical laboratory.

F. Groundwater samples collected from the temporary well points (Geoprobe or hand auger borings) and monitoring wells will not be filtered. Groundwater samples collected by SLR during past sampling events were not filtered prior to analysis.

G. Samples will be labeled, handled, and shipped using the procedures described in Section 2.16. Sample custody will be maintained until delivery to the analytical

laboratory. All sampling field activity and data will be recorded on a Field Sampling Data Form.

H. The sampler(s) will wear new neoprene or vinyl gloves at each sampling location. New Tygon or polyethylene tubing will be used at each sampling location.

I. All reusable sampling equipment will be decontaminated using the procedures described in Section 2.15.

Groundwater samples from existing monitoring wells will be labeled with the monitoring well designation (described above) and a date suffix. The date suffix will include the month and year. For example, MW-5-907 would represent the water sample collected from MW-5 in September 2007.

Geoprobe Borings. Groundwater samples will be collected from temporary well points installed in the Geoprobe borings. The temporary wells will be constructed of ¾ inch diameter PVC blank well casing and machine-slotted well screen. Groundwater samples will be collected using dedicated polyethylene tubing and a peristaltic pump. Approximately three well casing volumes will be purged prior to sampling. Conductivity, pH, and temperature will be monitored during the purging of groundwater from the temporary wells, and the groundwater samples will be collected once these parameters have stabilized. The groundwater samples will be transferred directly from the polyethylene tubing into the laboratory-provided sampling containers, stored on ice, and delivered to project laboratory for analyses. Groundwater samples will not be filtered prior to analysis. Development details, including discharge volume, discharge rate, development parameters, and appearance will be recorded on a Field Sampling Data Form. Development water will be handled as described in Section 2.11.1. After collecting the groundwater samples, the temporary wells will be abandoned as described in Section 2.3.6.

Groundwater samples collected from Geoprobe or hand auger locations will be suffixed with "GW." For example, GP-301-GW would denote a groundwater sample from Geoprobe location 301.

Hand Auger Borings. Hand augured soil borings (locations 322-P to 333-P) are proposed from areas east of the BNSF railroad tracks. The hand auger borings will be completed to approximately five feet below the water table as encountered during the field work and temporary sampling points will be installed in each boring for the collection of groundwater samples. The temporary wells will be constructed of ¾ inch diameter PVC blank well casing and machine-slotted well screen. Groundwater samples will be collected using dedicated polyethylene tubing and a peristaltic pump. Approximately three well casing volumes will be purged prior to sampling. Conductivity,

pH, and temperature will be monitored during the purging of groundwater from the temporary wells, and the groundwater samples will be collected once these parameters have stabilized. The groundwater samples will be transferred directly from the polyethylene tubing into the laboratory-provided sampling containers, stored on ice, and delivered to project laboratory for analyses. Development details, including discharge volume, discharge rate, development parameters, and appearance will be recorded on a Field Sampling Data Form. Development water will be handled as described in Section 2.3.6.

2.3.4 Boring Abandonment

Boring abandonment will be conducted per the requirements of WAC 173-160-560. All soil borings and hand auger borings will be abandoned by simultaneously adding bentonite chips to the boring while the probe, auger, or casing is removed. Bentonite chips placed above the water table will be hydrated with water. The abandoned borings will be sealed at the surface with concrete or gravel, depending on the surrounding surface material.

2.3.5 Water and Product Measurements

Water levels and floating product levels, if present, will be measured before sampling in each well within the monitoring well network. Depth-to-water measurements will be obtained using an electric water level indicator or a combination of water finding paste and product paste. Depths will be measured to the nearest 0.01 foot relative to the top of the well casing rim (north side). Measurements will be recorded to the nearest 0.01 foot in the field logbook. Sampling records will note the measured depth to water, depth to product, measurement date, time, and sampler's initials.

2.3.6 Residuals Management - Handling Procedures

All residual soil, water, product, and used decontamination solutions will be handled appropriately. Residual soil and water will be managed in accordance with all applicable local, state, and federal requirements, and in a manner consistent with *Guidance for Remediation of Petroleum Contaminated Soils* (Ecology, 1995). There are no specific Snohomish Health District requirements for storage of residual soil or water. Used disposable clothing and equipment will be handled as solid waste. Appropriate personal protective clothing will be worn during residuals transfers because of potential skin contact and splash hazards. The following residuals management procedures will be used:

- All soil generated during drilling will be containerized or stockpiled on-site. If possible, soil will be segregated to separate potentially contaminated soil from potentially uncontaminated soil. Soil disposition will be determined by JELD-WEN.

- Water generated from drilling, sampling, and decontamination will be kept separate, to the extent possible, from residual soil. Water will be placed in 55-gallon drums or tanks.

- Drums and tanks will be labeled with a label stating the drum contains investigation derived waste – pending analysis. The label will provide the site name, address, accumulation date, and contents (including approximate quantity).

- Drums and tanks will be sealed and secured daily. An on-site staging area for the accumulation of drums and tanks will be identified by JELD-WEN. Drums and tanks containing water will be stored in the designated temporary holding area as necessary until shipped off site.

- A record of all generated residuals that have been drummed, stockpiled, or otherwise stored will be maintained to expedite characterization and disposal upon completion of field activities.

- Disposable clothing and equipment will be placed in plastic bags and disposed of as solid waste.

- JELD-WEN will be responsible for the proper disposal of all wastes. SLR will coordinate with JELD-WEN for appropriate disposal procedures.

2.3.7 Guidelines for Splitting Samples

If requested by Ecology, JELD-WEN's on-site representative will provide for the collection of split or replicate samples. The following sample splitting procedures will be followed:

- Samples will be collected as described above.

- If sufficient sample is available in the Geoprobe or auger barrel from which JELD-WEN's representative is collecting a sample, then either Ecology (or representative) or JELD-WEN's representative will collect a split sample concurrently.

- If insufficient sample is available in the Geoprobe or auger barrel from which JELD-WEN's representative is collecting a sample, then an additional split spoon drive or hand auger sample will be collected in the same sampling interval, if desired by Ecology, or immediately below the JELD-WEN sampling interval.

2.3.8 Decontamination Procedures

A decontamination area will be established for cleaning the drilling rig and well materials. All down-hole drilling equipment and the working area of the drill rig will be steam-cleaned or hot water pressure-washed prior to beginning drilling and between drilling each boring. Hand-auger equipment, split-spoon samplers, spoons, bowls, and other sampling equipment that will contact samples will be decontaminated prior to initial use, between sampling locations, and between different sampling depths at the same location. Soil, groundwater, and surface water sampling equipment will be decontaminated by following procedure:

- Tap water rinse
- Alcohol rinse (if equipment visibly stained with product)
- Tap water rinse
- Nonphosphatic detergent and tap water wash
- Tap water rinse
- Second alcohol rinse (if equipment visibly stained with product)
- Tap water rinse
- Distilled water rinse

The electric well probe and oil/water interface probe will be rinsed with alcohol and distilled water between uses in different monitoring wells. All labels and binding tape will be removed from well materials prior to steam cleaning or washing. New sampling tubing will be used at each well.

Decontamination of personnel involved in sampling activities will be accomplished as described in the site Health and Safety Plan.

2.3.9 Sample Labeling, Shipping, and Chain-of-Custody

Sample Labeling. Sample container labels will be completed immediately before or immediately after sample collection. Container labels will include the following information:

- Project name
- Sample number (including sample depth, if applicable)

- Name of collector
- Date and time of collection

Sample Shipping. Soil and water samples will be shipped to the selected analytical laboratory as follows:

- Sample containers will be transported in a sealed, iced cooler.

- In each shipping container, glass bottles will be separated by a shock-absorbing and absorbent material to prevent breakage and leakage.

- Ice or "blue ice," sealed in separate plastic bags, will be placed into each shipping container with the samples.

- All sample shipments will be accompanied by a Chain-of-Custody Form. The completed form will be sealed in a plastic bag and taped to the inside lid of the shipping container.

- Signed and dated chain-of-custody seals will be placed on all shipping containers, unless samples will be picked up at the site by the laboratory.

- The analytical laboratory's name and address and SLR's name and office (return) address will be placed on each shipping container prior to shipping.

Chain-of-Custody. Once a sample is collected, it will remain in the custody of the sampler or other SLR personnel until shipment to the laboratory. Upon transfer of sample containers to subsequent custodians, a Chain-of-Custody/Analysis Request Form will be signed by the persons transferring custody of the sample container. A signed and dated chain-of-custody seal will be placed on each shipping container prior to shipping.

Upon receipt of samples at the laboratory, the shipping container seal will be broken, and the condition of the samples will be recorded by the receiver. Chain-of-custody records will be included in the analytical report prepared by the laboratory.

3 QUALITY ASSURANCE PROJECT PLAN

3.1 Introduction

The purpose of this Quality Assurance Project Plan (QAPP) is to present the quality assurance and quality control activities developed for the SAP. This QAPP covers the soil and groundwater sampling work to be undertaken by SLR International Corp during this investigation.

3.1.1 Project Organization

Primary responsibility for project quality rests with SLR International Corp project manager (PM), Mr. Scott Miller. The PM will review all project deliverables before submittal to Ecology or other appropriate regulatory agency. Where quality assurance problems or deficiencies are observed, the PM will identify the appropriate corrective action to be initiated.

3.1.2 Data Quality Objectives

This section presents the data quality objectives (DQO's) for the Remedial Investigation. This environmental assessment is being conducted to help ensure that data of sufficient quality and quantity will be available to identify if hazardous compounds are present at the Site and to evaluate risks posed by the presence of hazardous compounds in the soil and groundwater at the Site. Information is needed to identify if hazardous compounds associated with historical industrial activities have entered the subsurface and if these compounds, and the previously identified compounds, may pose unacceptable risk to current and future human and ecological receptors via direct contact or migration.

The data collected during the environmental assessment and the previously completed site assessments will be used to assess whether Site related contaminants of interest (COIs) may result in unacceptable risk to human and/or ecological receptors (current or likely future).

The numbers of sampling locations, sampling depths, types of samples, and types of analysis have been selected to meet the DQOs. The sampling proposed in this work plan

represents the minimum sampling required to meet the DQOs. If observations made during the field work indicate a release of chemicals in an assessment area, additional sampling may be completed in that area to help assess the extent of the chemical release in soil and groundwater. These DQOs will be applied to facilitate data adequacy reviews and identify data gaps. Additionally, the DQOs will be used to identify the analytical practical quantification limit (PQL) and to establish other quality assurance goals with the QAPP and the SAP. The PQL is defined as the lowest levels which can be routinely quantified and reported by a laboratory. Thresholds for PQLs from WAC 173-340-707 include that the PQL may be no greater than ten times the laboratory method detection limit (MDL); or that the PQL for a hazardous substance, medium and analytical procedure may be no greater than the PQL established by the US EPA and used in 40 CFR 136, 40 CFR 141 through 143, or 40 CFR through 270. An important DQO for this project is to obtain appropriate quantitation limits and to meet the requirements of WAC 173-340-820, MTCA. The PQLs for the proposed soil and groundwater sample analysis at the former Nord Door site are presented in Tables 2 through 7 (attached). The Preliminary Cleanup Levels (PCLs) for the Site have been calculated in accordance with MTCA Cleanup Regulation, Chapter 173-340 WAC, as is described in the Work Plan (Section 4.1). As is shown in the tables, the calculated PCLs for some analytes are lower than the PQLs which can be achieved by the laboratory. In these instances the PCL has defaulted to the laboratory PQL. When necessary to meet the PCL, PAHs will be analyzed by EPA Method 8270 SIM SS, which will result in a lower PQL.

3.2 Data Quality Assurance Objectives

The applicable data quality assurance objectives are dictated by the intended use of the data and the nature of the analytical methods. The accuracy, precision, representativeness, completeness, and comparability data quality assurance objectives are explained below.

3.2.1 Accuracy

Accuracy is the agreement between the measured value and the true value. Accuracy can be expressed as the difference between two values or the difference as a percentage of the reference or true value (ratio). Accuracy depends on the magnitude of the systematic (bias) and random (precision) errors in the measurement. Bias due to sample matrix effects will be assessed by spiking samples with known standards and calculating the recovery of the standards.

3.2.2 Precision

Precision is a measurement of mutual agreement among individual measurements of the same property under prescribed similar conditions. It is expressed in terms of the standard deviation or relative percent difference (RPD). Precision is determined through laboratory quality control parameters such as surrogate recoveries, matrix spikes, or

quality control check samples. Separate field control samples will not be collected for this scope of work. Quality control objectives for surrogate recovery, percent recovery, and RPD for matrix spikes will be those currently established by the testing laboratory.

3.2.3 Representativeness

Representativeness is a measure of how closely the measured results reflect the actual concentration or distribution of chemical compounds in the media sampled. Sampling plan design, sampling techniques, and sample handling protocols are included in the SAP to ensure that samples collected are representative of site conditions within the limitations of the collection technologies. Sampling locations were selected based on their representativeness in further assessing the extent of contamination is soil and groundwater at the site. This documentation establishes protocols for assurance of sample identification and integrity.

3.2.4 Completeness

Completeness is a measure of the amount of valid data obtained from the analytical system compared to the total data collected. The completeness of the data will be assessed during quality control reviews. Audits, internal control checks, and preventative maintenance will be implemented to help maintain the above quality assurance objectives.

3.2.5 Comparability

Comparability expresses the confidence with which one data set can be compared to another. Data comparability will be ensured by monitoring the control of sample collection, analytical methods, and data recording. Comparability of laboratory and field data will be maintained by using EPA-defined procedures, where available. Data comparability will be maintained by use of consistent methods and units. The laboratory predicted method detection limits (MDL) and method reporting limits (MRL) for the proposed sampling protocol are included as Attachment 1 to this document. Actual detection limits will depend on the sample matrix and will be reported as defined for the specific samples.

3.3 Field Data Quality Assurance Objectives

This QAPP also presents the field data quality assurance objectives for the ESA at the former JELD-WEN Site. The field data quality assurance objectives include field measurements and observations, field equipment calibration, chain-of-custody procedures, and sample handling procedures.

3.3.1 Field Measurement and Observation

Field measurements and observations will be recorded in the project log notes. Sufficient information will be recorded so that all field activities can be reconstructed without reliance on personnel memory. Entries will be recorded directly in waterproof ink and legibly and will be signed and dated by the person conducting the work. If changes are made, the changes will not obscure the previous entry, and the changes will be signed and dated. At a minimum, the following data will be recorded:

- Location of activity
- Description of sampling reference point(s)
- Date and time of any activity
- Sample number and volume or number of containers
- Field measurements made
- Calibration records for field instruments
- Relevant comments regarding field activities
- Signatures of responsible personnel

3.3.2 Field Instrument Calibration

The field instruments to be used during field activities will be calibrated at the beginning and as required according to manufacturers' specifications. Calibration records will be recorded in the project log notes including date, project number, instrument make and model, and instrument response to calibration.

3.3.3 Chain-of-Custody Procedures

The management of samples collected in the field will follow specific procedures to ensure sample integrity. To ensure sample integrity, the samples will be handled by as few people as possible and the sample collector will be responsible for the care and custody of the samples. Sample possession will be tracked from collection to analysis. Each time the samples are transferred between parties, both the sender and receiver will sign and date the chain-of-custody form and specify what samples have been transferred. When a sample shipment is sent to the laboratory, the original form will be placed with the samples and transmitted to the laboratory. A copy of the form will be retained in the project files. A chain-of-custody record will be completed for each batch of samples hand delivered or shipped to the laboratory.

The following information will be included on the chain-of-custody form:

- Sample number
- Sampler signature
- Sample collection date and time
- Place of collection
- Sample type
- Inclusive dates of possession
- Signature of sender and receiver

In addition to the chain-of-custody form, other components of sample tracking will include the sample labels and seals, field logs, sample shipment receipt, and laboratory log book. The sample labels and seals will include the following information:

- Project name and number
- Name of sampler
- Date and time of sample collection
- Sample location and number
- Analysis required
- Preservation

3.3.4 Sample Handling Procedures

Sampling plan design, sampling techniques, sampling location, and sample handling protocols are included in the SAP to ensure that samples collected are representative of site conditions within the limitations of the collection technologies.

The following table summarizes the soil sample handling requirements:

Analysis	Sample Container	Container Size	Preservation and Handling	Holding Times
Total Petroleum Hydrocarbon - Diesel (TPH-Dx)	Glass Jar	4 oz	Fill jar leaving minimal air space; keep in dark; cool to 4°C	14 days
Total Petroleum Hydrocarbon - Gasoline (TPH-Gx)	--	--	Taken from 8260/5035 methanol vial	14 days
Priority Pollutant Metals	Glass Jar	4 oz	Fill jar leaving minimal air space; keep in dark; cool to 4°C	14 days
Polychlorinated Biphenyl (PCB)	Glass Jar	4 oz	Fill jar leaving minimal air space; keep in dark; cool to 4°C	14 days

Analysis	Sample Container	Container Size	Preservation and Handling	Holding Times
Volatile Organic Analysis (VOA)	Voa vial	3 Voa vials	1-Methanol and 2-Sodium Bisulfate; keep in dark; cool to 4°C	14 days
Semi-Volatile Organic Compounds	Glass Jar	4 oz	Fill jar leaving minimal air space; keep in dark; cool to 4°C	14 days
Pentachlorophenol (PCP)	Glass Jar	4 oz	Fill jar leaving minimal air space; keep in dark; cool to 4°C	14 days
Dioxins & Furans	Glass Jar	8 oz	Fill jar leaving minimal air space; keep in dark; cool to 4°C	30 days

The following table summarizes the groundwater sample handling requirements:

Analysis	Sample Container	Container Size	Preservation and Handling	Holding Times
Total Petroleum Hydrocarbon - Diesel (TPH-Dx)	Amber Glass Bottle	1 Liter	Fill bottle leaving no air space; keep in dark; cool to 4°C; HCL to pH<2	7 days
Total Petroleum Hydrocarbon - Gasoline (TPH-Gx)	Voa Vial	3 Voa Vials	Fill bottle leaving no air space; keep in dark; cool to 4°C; HCL to pH<2	14 days
Priority Pollutant Metals	Plastic Bottle	500 mL	Fill bottle leaving no air space; keep in dark; cool to 4°C; HNO_3 to pH<2	6 Months
Polychlorinated Biphenyl (PCB)	Amber Glass Bottle	1 Liter	Fill bottle leaving no air space; keep in dark; cool to 4°C	7 days
Volatile Organic Analysis (VOA)	Voa Vial	3 Voa Vials	Fill vial leaving no air space; keep in dark; cool to 4°C; HCL to pH<2	14 days
Semi-Volatile Organic Compounds (BNA)	Amber Glass Bottle	1 Liter	Fill bottle leaving no air space; keep in dark; cool to 4°C	7 days
Pentachlorophenol (PCP)	Amber Glass Bottle	1 Liter	Fill bottle leaving no air space; keep in dark; cool to 4°C	7 days
Dioxins & Furans	Plastic Bottle	Two -1 Liter	Fill bottle leaving no air space; keep in dark; cool to 4°C	30 days

3.4 Quality Control

Quality control checks consist of measurements and tests performed in the field and laboratory. The analytical methods that will be performed as a part of this project have routine quality control checks performed to evaluate the precision and accuracy, and to determine whether the data are within the quality control limits.

3.4.1 Laboratory Quality Control Methods

Specific procedures and frequencies for laboratory quality control are detailed by the analytical method in the laboratory's Quality Assurance Plan. A general description of the types of laboratory quality control samples is as follows:

- **Method Blanks –** A minimum of one laboratory method blank will be analyzed per twenty samples or one per batch (whichever is greater) to assess possible laboratory contamination. Method blanks will contain all reagents and undergo all procedural steps used for analysis.
- **Control Samples –** A minimum of one laboratory control sample per twenty samples or one per batch (whichever is greater) will be analyzed for inorganics to verify the precision of the laboratory equipment. The control sample will be at a concentration within the calibration range, but at a different concentration than the standards used to establish the calibration curve.
- **Matrix Spike -** A minimum of one laboratory matrix spike sample will be analyzed per twenty samples or one per batch (whichever is greater) to monitor recoveries and assure that extraction and concentration levels are acceptable for quality assurance and quality control review. The laboratory matrix spike will be analyzed on a separate groundwater sample collected from one of the wells.

3.5 Data Management

This section addresses issues related to data sources, data processing, and data evaluation. Raw data generated in the field or received from analytical laboratories will be validated, entered into a computerized database, and verified for consistency and correctness.

3.5.1 Field Data Management

Accurate documentation of field activities (e.g., field parameters measurements, field notes) will be maintained using field log-books and field data forms. Entries will be made in sufficient detail to provide an accurate record of field activities without reliance on memory.

Field log entries will be dated and include a chronological description of task activities, names of individuals present, names of visitors, weather conditions, etc. All entries will be legibly entered in ink and initialed. A record of drilling, including the boring name and location, sampling intervals, sample names, and lithologic and field screening observations, will be included on a boring log.
Copies of standard SLR field forms are included in Appendix B.

3.5.2 Analytical Data Management

Following validation, all analytical data will be entered into a computerized database. The data may require some manipulation, such as common unit conversions and extraction from support information. To accomplish these manipulations, data reduction and tabulation techniques will be applied to the data and documented.

Several different tabular reports will be generated from the database. All analytical, locational, and tracking data will be stored in the database. Data reports for each type of analysis will be generated to produce standard reports.

All data validation, document control, and locational and analytical information generated by this project will be entered, stored, and generated by PC-compatible machines. Standardized software products will be used.

The volume of digital data anticipated on this project may be accommodated on a single PC work station. Project data backups will be made on a weekly basis or whenever major additions or modifications have been made to the various data management systems. Access to the database will be limited to the data manager and the authorized project personnel.

3.5.3 Sample Management

The sample management system forms the foundation of all other analytical data collection, verification, and validation tasks. Analytical data cannot be considered valid unless all the proper steps have been carried out with respect to sample management. These include:

- Sample properly documented in daily field log
- Chain-of-custody requirements met
- All sample-related documents filed
- Use of unique sample identification numbers

Data that do not pass the validation process either will be assigned data qualifiers to restrict or modify usage, or will be rejected for use. Modifications to the use of data will be documented in data validation reports.

3.5.4 Data Reporting Requirements

Quality assured data will be submitted to Ecology electronically in Environmental Information Management System (EIM) format. The electronic data will be verified to be compatible with EIM prior to delivery to Ecology.

TABLES

TABLE 1: UPLANDS ANALYTICAL SUMMARY TABLE

TABLE 2: PQL AND PCL - SOILS - TPH, PCB, DIOXIN/FURAN

TABLE 3: PQL AND PCL - SOILS - SVOC

TABLE 4: PQL AND PCL - SOILS - VOC

TABLE 5: PQL AND PCL - GW - TPH, PCB, DIOXIN/FURAN

TABLE 6: PQL AND PCL - GW - SVOC

TABLE 7: PQL AND PCL - GW - VOC

Table 1
Uplands SAP Summary Analytical Table
JELD-WEN Site, Everett, Washington

Area	Work Completed To-Date (May 2007)	Proposed RI Sampling	Matrix	TPH-HCID	TPH-Dx	TPH-Gx	PCP	PCBs	Dioxins & Furans	Metals	SVOCs	VOC	Mercury
Hog Fuel Burner Ash		1 sample of the ash from the hog fuel burner (sample location 301-P) Figure 11A	Ash						1				
Woodlife Storage and Use Area	6 GPs near Woodlife storage, piping, and use area 1 at Paint Room 2 near thinner tank 2 near boiler chemical storage (11 total GPs) 1 test pit (Test Pit 1) near the thinner tank	1 Geoprobe boring for soil and groundwater sampling (Location 302-P) Figure 11A	Soil		3		3		1				
			Water						1(1)				
Southwest Un-Paved Area/ RZA Assessment Area	1992 sampling by RZA AGRA for Serling Asphalt (now Rinkers) and one Geoprobe sampling (GP41) completed in 2006 (SLR).	4 Geoprobe borings for soil and groundwater sampling (Locations 303-P to 306-P) Figure 11B	Soil	8	8(2)	8(2)		4		4	4	4	4
			Water	4	4(2)	4(2)				4(3)	4	4	
South Centeral Un-Paved Area/ Former Barrel Storage Area/ GP-34 and Test Pit 2 Area/ GP-24 and MW-1 Area	1 at former hazardous waste storage 2 at hydraulic fluid storage/ material storage 1 fill area - outside storage (4 total GPs) 1 test pit (#2) for waste material encountered	2 Geoprobe borings for soil and groundwater sampling (Locations 307-P and 308-P) Sampling of MW-1 Figure 11C	Soil	4	4(2)	4(2)		2		2	2	2	2
			Water	3	3(2)	3(2)				3(3)	3	3	
Former Casket Manufacturing Area and GP-22 Area	5 GP completed near the former casket manufacturing building and parking area. Geoprobe Locations GP-19, GP-20, GP-21, GP-22, and GP-23.	4 Geoprobe boring for soil and groundwater sampling: near the former wood waste burner, the former mill building, near GP-22, and near the former machine shop area of the former mill Locations 309-P to 312-P Figure 11D	Soil	8	8(2)	8(2)		4	1	4	4	4(4)	4
			Water	4	4(2)	4(2)			1(1)	4(3)	4	4	
Machine Shop / Maintenance Area	4 GPs (locations GP-8, GP-25, GP-27, and GP-28) and one monitoring well (MW-4) were completed in this area. Groundwater sampling was completed at GP-8, GP-27, and MW-1 and no impacts to groundwater were identified.	Two surface samples will be completed in areas of cracked asphalt pavement and metals analysis at the transformer surface soil sample (Location 319-P) Locations 313-P and 314-P Figure 11A	Soil	2	2(2)	2(2)		2		3	2(4)	2(4)	3
			Water										
Transformer and the potential for PCBs	Prior sampling for PCBs was completed by RZA at two locations (C1 and C2) in 1992 and at Geoprobe sampling locaiton GP-34 in 2006, no PCB detected in soil at the three location nor in groundwater at one location (GP-34).	7 surface soil samples at each transformer (Locations 3015-P to 321-P) Sampling the two existing monitoring wells (MW-1 and MW-4) for TPH-Dx, with follow up analyis for PCBs Figure 11A	Soil		7(5)			7					
			Water										
Former Fishnet Storage Building		2 Geoprobe borings for soil and groundwater sampling near the former fishnet storage building Locations 334-P and 335-P Figure 11A	Soil	2	2(2)	2(2)		2		2	2	2	
			Water	2	2(2)	2(2)		2		2	2	2	
Existing Groundwater Monitoring Wells (Metals)	1992 sampling by RZA AGRA for Serling Asphalt (now Rinkers) included analysis for lead at five locations (C1, C2, C6, MW-1, and MW-2).	Sampling soil at 13 locations disucssed above (Locations 303-P to 314-P and at 319-P) Sampling the six existing monitoring wells for total metals Figure 11A	Soil										
			Water		2			2(6)		6			6
BNSF Railroad/Maulsby Marsh	9 Geoprobe borings completed in West Marine View Drive for soil and groundwater sampling in 2006.	12 hand auger sampling locations with temporary well points for groundwater sampling Locations 322-P to 333-P Figure 11E	Soil	12	12(2)	12(2)						12(4)	
			Water	12	12(2)	12(2)						12(4)	

Notes:

(1) - If dioxin/furan is detected in the soil sample, then the groundwater sample will be analyzed.

(2) - Run analysis only if TPH is detected in this range by the TPH-HCID analysis

(3) - Run only if metals are found in the soil sample.

(4) - Run analysis only if field screening and/or HCID analysis shows the presence of volatiles.

(5) - Run analysis only if PCBs are detected in the soil sample.

(6) - Run analysis only if TPH-Dx is found in the groundwater sample

TPH-Dx- Total Petroleum Hydrocarbons Diesel Range (Ecology Method NWTPH-Dx)

TPH-Gx- Total Petroleum Hydrocarbons Gasoline Range (Ecology Method NWTPH-Gx)

PCBs- Polychlorinated Biphenyls (EPA Method 8082)

Total Organic Carbon- EPA Method 9060

Metals: Arsenic, Cadmium, Total Chromium, Chromium VI, Copper, Lead, Nickel, Selenium, and Zinc (EPA Method 6010B)

SVOCs - EPA Method 8270C

VOA- Volatile Organic Analysis (EPA Method 8260)
Mercury- Mercury Cold Vapor Atomic Absorption (EPA Method 7471A)

PCP-Pentachlorophenol (EPA Method 8270 SIM)

Dioxins and Furans-EPA Method 1613B

BNA - Base Neutral Acids method for SVOCs in sediments

ICP - Inductively Coupled Plasma - Atomic Emission Spectroscopy for metals (EPA Methods 6010B)

Table 2
Groundwater PQLs and PCLs
SVOCs and PAHs
JELD-WEN Site, former Nord Door
Everett, WA

Analyte	Laboratory MDL [A] (µg/L)	Laboratory PQL [B] (µg/L)	Selected PCL [C] (µg/L)
Semivolatile Organic Compounds [D] (SVOCs)			
acenaphthylene	0.874	10	10
acetophenone	0.107	1	800
atrazine	0.909	1	1
benzaldehyde	1.36	10	800
biphenyl; 1,1-	0.422	1	400
bis(2-chloroethyl)ether	0.146	1	1
bis(2-chloroethoxy) methane	0.129	1	1
bis(2-chloroisopropyl) ether	0.24	1	1,400
bis(2-chloro-1-methylethyl)ether	0.24	1	37
bis(2-ethylhexyl) phthalate	0.162	1	1.2
bromophenyl-phenylether; 4-	0.059	1	1
butyl benzyl phthalate	0.173	1	1,300
caprolactam	0.259	10	8,000
carbazole	0.079	1	4.4
chloro-3-methylphenol;4-	0.116	1	1
chloroaniline;4-	0.191	1	32
chlorophenol;2-	0.109	1	97
chloronaphthalene;2-	0.106	1	1,000
chlorophenyl-phenyl ether;4-	0.097	1	1
dibenzofuran	0.081	1	32
dichlorobenzidine;3,3-	0.221	1	1
dichlorophenol;2,4-	0.101	1	77
diethyl phthalate	0.128	1	17,000
dimethyl phthalate	0.176	1	72,000
dimethylphenol;2,4-	2.97	10	380
di-n-butylphthalate	0.129	1	2,000
di-n-octylphthalate	0.189	1	320
dinitro-2-methylphenol: 4,6-	2.36	10	10
dinitrophenol;2,4-	2.03	10	69
dinitrotoluene;2,4-	1.63	10	10
dinitrotoluene;2,6-	1.27	10	16
hexachlorobenzene	0.126	1	1
hexachlorobutadiene	0.151	1	1
hexachlorocyclopentadiene	2.13	10	40
hexachloroethane	0.191	1	1.4
isophorone	0.141	1	8.4
methylnaphthalene; 2	0.116	1	32
methylphenol;2-	1.71	10	400
methylphenol;4-	0.958	10	40
nitroaniline;2-	1.68	10	10
nitroaniline;3-	1.36	10	10
nitroaniline;4-	0.126	1	1
nitrobenzene	0.128	1	17
nitrophenol;2-	3.14	10	10
nitrophenol;4-	0.823	10	10
nitrosodiphenylamine; N-	0.087	1	3.3
nitroso-di-n-propylamine;N-	0.127	1	1
pentachlorophenol	2.18	10	10
phenol	0.686	10	21,000
tetrachlorobenzene;1,2,4,5-	0.127	1	1
tetrachlorophenol;2,3,4,6-	1.19	10	480
trichlorophenol;2,4,5-	0.171	1	1,800
trichlorophenol;2,4,6-	0.111	1	1.4

Table 2
Groundwater PQLs and PCLs
SVOCs and PAHs
JELD-WEN Site, former Nord Door
Everett, WA

Analyte	Laboratory MDL [A] (µg/L)	Laboratory PQL [B] (µg/L)	Selected PCL [C] (µg/L)
Carcinogenic Polycyclic Aromatic Compounds(cPAHs) [E]			
benzo[a]anthracene	0.624	0.1	0.1
benzo[a]pyrene	0.137	0.1	0.1
benzo[b]fluoranthene	0.16	0.1	0.1
benzo[k]fluoranthene	0.115	0.1	0.1
chrysene	0.102	0.1	0.1
dibenzo[a,h]anthracene	0.17	0.1	0.1
indeno[1,2,3-cd]pyrene	0.138	0.1	0.1
Non-Carcinogenic PAHs (PAHs) [E]			
acenaphthene	0.114	0.1	640
anthracene	0.623	0.1	8,300
benzo[ghi]perylene [F]	0.105	0.1	830
fluoranthene	0.834	0.1	90
fluorene	0.076	0.1	1,100
naphthalene	0.105	0.1	4,900
phenanthrene [G]	0.082	0.1	640
pyrene	1.19	0.1	830

Notes:

A - Method Detection Limit (MDL) from Environmental Sciences Corp environmental laboratory

B - Practical Quantitation Limit (PQL) from Environmental Sciences Corp environmental laboratory

C - Groundwater Preliminary Cleanup Levels (PCLs) calculated as shown in Attachment 2 of Work Plan

D - SVOCs per EPA Method 8270C

E- cPAHs and PAHs will be analyzed per 8270 SIM (low level)

F - Toxicity information is not available for benzo(ghi)perylene. Pyrene has been used as surrogate

G - Toxicity information is not available for phenanthrene. Anthracene has been used as surrogate

Table 3
Soil PQLs and PCLs
SVOCs and PAHs
JELD-WEN Site, former Nord Door
Everett, WA

Analyte	Laboratory MDL [A] (mg/kg)	Laboratory PQL [B] (mg/kg)	Selected PCLs [C] (mg/kg)
Semivolatile Organic Compounds (SVOCs) [D]			
acenaphthylene	0.02844	0.33	0.33
acetophenone	0.11	0.33	8,000
atrazine	0.11	0.33	4.5
benzaldehyde	0.11	0.33	8,000
biphenyl;1,1'-	0.11	0.33	4,000
bis(2-chloroethyl)ether	0.0285	0.33	0.33
bis(2-chloroethoxy) methane	0.03208	0.33	0.33
bis(2-chloroisopropyl)ether	0.03286	0.33	3200
bis(2-chloro-1-methylethyl)ether	0.03286	0.33	14
bis(2-ethylhexyl) phthalate	0.06007	0.33	2.64
p-Bromodiphenyl ether	0.02218	0.33	0.33
butylbenzylphthalate	0.03829	0.33	369
caprolactam	0.11	0.33	40,000
carbazole	0.02861	0.33	0.33
chloro-3-methylphenol;4-	0.03364	0.33	0.33
chloroaniline;4-	0.03626	0.33	0.33
chlorophenol;2-	0.031	0.33	1.15
chloronaphthalene;2-	0.02552	0.33	6,400
chlorophenyl-phenyl ether; 4-	0.02526	0.33	0.33
dibenzofuran	0.02172	0.33	160
dichlorobenzidine;3,3-	0.03062	0.33	0.33
dichlorophenol;2,4-	0.02442	0.33	0.54
diethyl phthalate	0.04057	0.33	95.9
Dimethyl phthalate	0.02628	0.33	80,000
dimethylphenol;2,4-	0.0381	0.33	3.12
di-n-butyl phthalate	0.02729	0.33	72
di-n-octylphthalate	0.03606	0.33	1,600
dinitro-2-methylphenol;4,6-	0.03971	0.33	0.33
dinitrophenol;2,4-	0.04084	0.33	0.33
dinitrotoluene;2,4-	0.02472	0.33	0.33
dinitrotoluene;2,6-	0.02291	0.33	0.33
hexachlorobenzene	0.0247	0.33	0.33
hexachlorobutadiene	0.03257	0.33	0.48
hexachlorocyclopentadiene	0.03489	0.33	160.2
hexachloroethane	0.03302	0.33	0.33
isophorone	0.03804	0.33	0.33
methylnaphthalene;2-	0.02595	0.33	320
methylphenol;2-	0.03302	0.33	2.33
methylphenol;4-	0.03287	0.33	400
nitronaniline;2-	0.0207	0.33	0.33
nitronaniline;3-	0.06465	0.33	0.33
nitronaniline;4-	0.0381	0.33	0.33
nitrobenzene	0.02756	0.33	0.33
nitrophenol;2-	0.02748	0.33	0.33
nitrophenol;4-	0.02672	0.33	0.33
nitrosodiphenylamine; N-	0.03447	0.33	0.33
nitroso-di-n-propylamine;N-	0.033	0.33	0.33
pentachlorophenol	0.03114	0.33	0.33
phenol	0.02879	0.33	96.2
tetrachlorobenzene;1,2,4,5-	0.11	0.33	24
tetrachlorophenol;2,3,4,6-	0.016666	0.05	2,400
trichlorophenol;2,4,5-	0.03019	0.33	64.8

Table 3
Soil PQLs and PCLs
SVOCs and PAHs
JELD-WEN Site, former Nord Door
Everett, WA

Analyte	Laboratory MDL [A] (mg/kg)	Laboratory PQL [B] (mg/kg)	Selected PCLs [C] (mg/kg)
trichlorophenol;2,4,6-	0.0278	0.33	0.33
Carcinogenic Polycyclic Aromatic Compounds (cPAHs)[E]			
benzo[a]anthracene	0.03212	0.006	0.020
benzo[a]pyrene	0.02678	0.006	0.054
benzo[b]fluoranthene	0.03015	0.006	0.067
benzo[k]fluoranthene	0.03117	0.006	0.067
chrysene	0.03531	0.006	0.022
dibenzo[a,h]anthracene	0.02807	0.006	0.101
indeno[1,2,3-cd]pyrene	0.02949	0.006	0.196
Non-Carcinogenic Polycyclic Aromatic Compounds (PAHs)[E]			
acenaphthene	0.02368	0.006	65.3
anthracene	0.023	0.006	3,851
benzo[ghi]perylene[F]	0.02885	0.33	1,132
fluoranthene	0.02404	0.006	88.6
fluorene	0.0226	0.006	173.8
naphthalene	0.02604	0.33	5.0
phenanthrene[G]	0.02475	0.33	65.30
pyrene	0.03562	0.006	1,132

Notes:

A - Method Detection Limit (MDL) from Environmental Sciences Corp environmental laboratory

B - Practical Quantitation Limit (PQL) from Environmental Sciences Corp environmental laboratory

C - Soil Preliminary Cleanup Levels (PCLs) calculated as shown in Attachment 2 of Work Plan

D - SVOCs per EPA Method 8270C

E - cPAHs and PAHs will be analyzed per 8270 SIM (low level)

F - Toxicity information is not available for benzo(ghi)perylene. Pyrene has been used as surrogate

G - Toxicity information is not available for phenanthrene. Anthracene has been used as surrogate

Table 4
Groundwater PQLs and PCLs VOCs
JELD-WEN Site, former Nord Door
Everett, WA

Analyte	Laboratory MDL [A] (µg/L)	Laboratory PQL [B] (µg/L)	Selected PCL [C] (µg/L)
Volatile Organic Compounds (VOCs) [D]			
acetone	8.92	25	800
benzene	0.288	0.5	1.2
bromochloromethane	0.44	0.5	0.5
bromodichloromethane	0.37	0.5	0.5
bromoform	0.51	0.5	4.3
bromomethane	0.5	0.8900	47
butanone;2- (MEK)	1.42	2.5	4,800
carbon disulfide	0.32	0.5	800
carbon tetrachloride	0.31	0.5	0.5
chlorobenzene	0.26	0.5	130
chloroethane	0.856	0.5	15
chloroform	0.33	0.5	5.7
chloromethane	0.251	0.5	130
cyclohexane	0.3	1	1
dibromo-3-chloropropane;1,2-	0.48	1	1
dibromochloromethane	0.42	0.5	0.5
dibromoethane; 1,2-	0.48	0.5	0.5
dichlorobenzene; 1,2-	0.29	0.5	420
dichlorobenzene; 1,3-	0.189	0.5	320
dichlorobenzene; 1,4-	0.3	0.5	4.9
dichlorodifluoromethane	0.3	0.5	1,600
dichloroethane;1,1-	0.31	0.5	800
dichloroethane;1,2-	0.274	0.5	1
dichloroethylene;1,1-	0.495	0.5	1
dichloroethylene;1,2-,cis	0.38	0.5	80
dichloroethylene;1,2-,trans	0.3	0.5	10,000
dichloropropane;1,2-	0.52	0.5	1
dichloropropene;1,3-,cis	0.26	0.5	0.5
dichloropropene;1,3-,trans	0.24	0.5	0.5
dioxane;1,4-	33	100	100
ethylbenzene	0.222	0.5	530
hexanone-2	1.57	2.5	2.5
isopropylbenzene	0.189	0.5	800
methyl acetate	6.666	20	8,000
methyl-2-pentanone; 4- (MIK)	1.42	2.5	640
methyl tert-butyl ether	0.193	0.5	20
methylene chloride	0.295	0.02	4.6
methylcyclohexane	0.333	1	1
styrene	0.38	0.5	1.5
tetrachloroethane;1,1,2,2-	0.22	0.5	0.5
tetrachloroethylene	0.293	0.5	0.5
toluene	0.269	0.5	1,300
trichloro-1,2,2-trifluoroethane;1,1,2-	0.217	0.5	240,000
trichlorobenzene; 1,2,3-	0.24	7	0.5
trichlorobenzene; 1,2,4-	0.265	0.5	35
trichloroethane; 1,1,1-	0.27	0.5	420,000
trichloroethane; 1,1,2-	0.451	2	1
trichloroethylene	0.37	0.0033	1.5
trichlorofluoromethane	0.286	0.5	2,400
vinyl chloride	0.067	0.2	0.2
xylenes (total)	0.86	1.5	1,000

Notes:

A - Laboratory Method Detection Limit (MDL) from Environmental Sciences Corp environmental laboratory

B - Practical Quantitation Limit (PQL) from Environmental Sciences Corp environmental laboratory

C - Groundwater Preliminary Cleanup Levels (PCLs) calculated as shown in Attachment 2 of Work Plan

D - VOCs per EPA Method 8260

Table 5
Soil PQLs and PCLs
VOCs
JELD-WEN Site, former Nord Door
Everett, WA

Analyte	Laboratory MDL [A] (mg/kg)	Laboratory PQL [B] (mg/kg)	Selected PCLs [C] (mg/kg)
Volatile Organic Compounds (VOCs) [D]			
acetone	0.0170	0.05	3.21
benzene	0.000325	0.001	0.0068
bromochloromethane	0.000447	0.001	0.001
bromodichloromethane	0.000387	0.001	0.0014
bromoform	0.000577	0.001	0.029
bromomethane	0.001284	0.005	0.218
butanone;2- (MEK)	0.002679	0.1	48,000
carbon disulfide	0.001785	0.001	5.6
carbon tetrachloride	0.000320	0.001	0.002
chlorobenzene	0.000250	0.001	1.126
chloroethane	0.000586	0.005	350
chloroform	0.000411	0.005	0.030
chloromethane	0.000562	0.001	77
cyclohexane	0.000333	0.001	0.001
dibromochloromethane	0.000231	0.001	0.002
dibromo-3-chloropropane;1,2-	0.001157	0.005	0.71
dibromoethane; 1,2-	0.000315	0.001	0.005
dichlorobenzene; 1,2-	0.000237	0.001	4.93
dichlorobenzene; 1,3-	0.000379	0.001	0.001
dichlorobenzene; 1,4-	0.000218	0.001	0.081
dichlorodifluoromethane	0.000320	0.001	16,000
dichloroethane;1,1-	0.000259	0.001	4.37
dichloroethane;1,2-	0.000531	0.001	0.002
dichloroethylene;1,1-	0.000742	0.001	0.001
dichloroethylene;1,2-,cis	0.000723	0.001	0.40
dichloroethylene;1,2-,trans	0.000678	0.001	54
dichloropropane;1,2-	0.000751	0.001	0.0026
dichloropropene;1,3-,cis	0.000262	0.001	0.001
dichloropropene;1,3-,trans	0.000360	0.001	0.001
dioxane;1,4-	0.033	0.10	91
ethylbenzene	0.000226	0.001	4.53
hexanone-2	0.001953	0.01	0.01
isopropylbenzene	0.000211	0.001	8,000
methyl tert-butyl ether	0.000278	0.001	0.085
methylene chloride	0.0006	0.005	0.02
methyl acetate	0.006666	0.02	73,903
methylcyclohexane	0.000333	0.001	0.001
methyl-2-pentanone; 4-	0.001397	0.01	6,400
styrene	0.000203	0.001	0.034
tetrachloroethane;1,1,2,2-	0.000329	0.001	0.001
tetrachloroethylene	0.000231	0.001	0.004
toluene	0.001214	0.005	7
trichlorobenzene;1,2,3-	0.000231	0.001	0.001
trichlorobenzene; 1,2,4-	0.000249	0.001	1.33
trichloroethane; 1,1,1-	0.000516	0.001	2
trichloroethane; 1,1,2-	0.000456	0.001	0.0033
trichloro-1,2,2-trifluoroethane; 1,1,2-	0.000247	0.001	2,400,000
trichloroethylene	0.000336	0.001	0.010
trichlorofluoromethane	0.000273	0.005	24,000
vinyl chloride	0.000287	0.001	0.001
xylenes	0.000460	0.003	9

Notes:

A - Method Detection Limit (MDL) from Environmental Sciences Corp environmental laboratory

B - Practical Quantitation Limit (PQL) from Environmental Sciences Corp environmental laboratory

C - Soil Preliminary Cleanup Levels (PCLs) calculated as shown in Attachment 2 of Work Plan.

D - VOCs per EPA Method 8260

Table 6
Groundwater PQLs and PCLs
Metals, PCBs, TPH, and Dioxin/Furan
JELD-WEN Site, former Nord Door
Everett, WA

Analyte	Laboratory MDL [A] (µg/L)	Laboratory PQL [B] (µg/L)	Selected PCL [C] (µg/L)
Metals [D]			
Antimony	0.22	1	5.6
Arsenic	0.15	1	1
Beryllium	0.24	1	270
Cadmium	0.24	1	1
Chromium [E]	0.32	1	10
Copper	0.45	1	2.4
Lead	0.22	1	1
Nickel	0.34	1	8.2
Selenium	0.43	1	5
Silver	0.12	0.5	0.5
Thallium	0.09	1	1
Zinc	2.98	10	32
Mercury	0.0439	0.2	0.2
Polychlorinated Biphenyls [F] (PCBs)			
aroclor 1016	0.077	0.01	0.01
aroclor 1221	0.165	0.01	0.01
aroclor 1232	0.175	0.01	0.01
aroclor 1242	0.099	0.01	0.01
aroclor 1248	0.039	0.01	0.01
aroclor 1254	0.122	0.01	0.014
aroclor 1260	0.155	0.01	0.014
Total Petroleum Hydrocarbons (TPH) [G]			
TPH-Dx	33	100	500
TPH-Gx	31	100	1,000 / 800 [H]
Dioxins / Furans (EPA Method 1613) [I]			
2,3,7,8-Tetra TCDD [J]	1.19E-09	1.00E-08	0.00000001

Notes:

A - Method Detection Limit (MDL) from Environmental Sciences Corp environmental laboratory

B - Practical Quantitation Limit (PQL) from Environmental Sciences Corp environmental laboratory

C - Groundwater Preliminary Cleanup Levels (PCLs) calculated as shown in Attachment 2 of Work Plan

D - Metals per EPA Method 6020, Mercury per EPA Method 7470A

E - Chromium VI

F - PCBs per EPA Method 8082

G - Total Petroleum Hydrocarbons per NWTPH Method

H - Gasoline Range Organics 1,000 µg/L with no detectable benzene in groundwater, 800 µg/L if present in groundwater

I - Dioxins/Furans by EPA Method 1613

J - Per Ecology Comment 44(d) to the Draft Final Work Plan, 2,3,7,8 TCDD has been used as the value for Dioxin/Furan

Table 7
Soil PQLs and PCLs
Metals, PCBs, TPH, Dioxin/Furan
JELD-WEN Site, former Nord Door
Everett, WA

Analyte	Laboratory MDL [A] (mg/kg)	Laboratory PQL [B] (mg/kg)	Selected PCLs [C] (mg/kg)
Metals[D]			
Antimony	0.315	1	5.1
Arsenic	0.395	1	1
Beryllium	0.025	0.1	25
Cadmium	0.035	0.25	2.0
Chromium [E]	0.115	0.5	3.84
Copper	0.175	1	1.07
Lead	0.12	0.25	108
Nickel	0.49	1	10.69
Selenium	0.46	1	1
Silver	0.125	0.5	0.5
Thallium	0.45	1	1
Zinc	0.44	1.5	39.8
Mercury	0.0015	0.02	0.02
Polychlorinated Biphenyls (PCBs) [F]			
aroclor 1016	0.000077	0.0005	3.89
aroclor 1221	0.000165	0.0005	0.0005
aroclor 1232	0.000175	0.0005	0.0005
aroclor 1242	0.000099	0.0005	0.0005
aroclor 1248	0.000039	0.0005	0.0005
aroclor 1254	0.000122	0.0005	1.11
aroclor 1260	0.000155	0.0005	0.00
Total Petroleum Hydrocarbons (TPH)[G]			
TPH-Gx	-	0.1	100/30 [H]
TPH-Dx	1.3	4	460
Total Dioxin/Furan [I]			
Dioxin/Furan Total	5.10E-08	3.80E-08	0.000011[J]

Notes:

A - Method Detection Limit (MDL) from Environmental Sciences Corp environmental laboratory
B - Practical Quantitation Limit (PQL) from Environmental Sciences Corp environmental laboratory
C - Soil PCLs calculated as shown in Attachment 2 of Work Plan
D - Metals per EPA Method 6020, Mercury per EPA Method 7470A
E - Chromium VI
F - PCBs per EPA Method 8082
G - Total Petroleum Hydrocarbons per NWTPH Method
H - 100 mg/kg for gasoline mixtures without benzene and the total of ethyl benzene, toluene and xylene are less than 1% of the gasoline mixture; 30 mg/kg for all other mixtures
I - Dioxins/Furans by EPA Method 1613
J - MTCA Method B Cleanup Level - Ingestion, per Ecology comment number 89h to DRAFT RI/FS and CAP Work Plan

APPENDIX A

STANDARD SLR FIELD FORM

Project:		Boring/Well Name:
Boring Location:	Job #:	
Drilling Company:	Logged by:	MW-
Equipment:	Start Date/Time:	
Sampling Method:	Finish Date/Time:	
Hammer Weight:	Monitoring Device: PID	
Screened Interval (bgs):	First Water (bgs):	

Sample I.D.	Sample Interval	Recovery (%)	PID (ppm)	Blow Counts	Depth (feet bgs)	USCS Code	Graphic Log	Lithologic Description	Boring Abandonment or Well Construction Details
					0				
					5				
					10				
					15				
					20				

Depth of Boring (bgs):	Filter Pack:
Depth of Well (bgs):	Annulus Seal:
	Surface Seal:

Chain of Custody

Page ___ of ___

SLR
1800 Blankenship Road, Suite 440
West Linn, OR 97068

Alternate billing information:

Report to:

Email to:

Project Description:

City/Sate Collected

Phone: (503) 723-4423
FAX:

Client Project #:

ESC Key:

Collected by:

Site/Facility ID#:

P.O.#:

Collected by (signature):

Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day. 200%
___ Next Day.. . . . . 100%
___ Five Day 25%

Date Results Needed:

Email? __No__Yes

FAX? __No__Yes

No. of Cntrs

Analysis/Container/Preservative

Prepared by:

ENVIRONMENTAL SCIENCE CORP.
12065 Lebanon Road
Mt. Juliet, TN 37122
Phone (615) 758-5858
Phone (800) 767-5859
FAX (615) 758-5859

CoCode SLRWLOR (lab use only)

Template/Prelogin

Shipped Via:

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	Remarks/Contaminant	Sample # (lab only)

*Matrix: **SS** - Soil/Solid **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

pH _____ Temp _____

Flow _____ Other _____

Remarks:

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____	Condition: (lab use only)	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp:	Bottles Received:	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date:	Time:	pH Checked: NCF:

GROUNDWATER LEVEL DATA SHEET

PROJECT: ____________________ SITE: ____________________ PROJECT #: ____________________

CLIENT: ____________________ RECORDED BY: ____________________ MEASURING DEVICE: Solinst

SITE LOCATION: ____

WELL ID	DATE	TIME	TOP OF CASING ELEVATION	DEPTH TO WATER	DEPTH TO PRODUCT	GROUNDWATER ELEVATION	APPARENT PRODUCT THICKNESS	DEPTH TO BOTTOM	ODOR/ SHEEN	COMMENTS

SLR International Corp

GROUNDWATER SAMPLING FIELD DATA SHEET

'ROJECT #: _____ PURGED BY: _____ WELL I.D.: _____

CLIENT NAME: _____ SAMPLED BY: _____ SAMPLE I.D.: _____

LOCATION: _____ QA SAMPLES: _____

DATE PURGED _____ START (2400hr) _____ END (2400hr) _____

DATE SAMPLED _____ SAMPLE TIME (2400hr) _____

SAMPLE TYPE: Groundwater X Surface Water _____ Treatment Effluent _____ Other _____

CASING DIAMETER:	2"	3"	4"	5"	6"	8"	Other
Casing Volume: (gallons per foot)	(0.17)	(0.38)	(0.67)	(1.02)	(1.50)	(2.60)	( )

DEPTH TO BOTTOM (feet) = _____ CASING VOLUME (gal) = _____

DEPTH TO WATER (feet) = _____ CALCULATED PURGE (gal) = _____

WATER COLUMN HEIGHT (feet) = _____ ACTUAL PURGE (gal) = _____

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (L)	TEMP. (degrees C)	CONDUCTIVITY (µS/cm)	pH (units)	DO	ORP	TURBIDITY (visual)

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: _____ SAMPLE TURBIDITY: _____

80% RECHARGE: ____ YES ____ NO ANALYSES: _____

ODOR: _____ SAMPLE VESSEL / PRESERVATIVE: _____

PURGING EQUIPMENT

____ Bladder Pump
____ Centrifugal Pump
____ Submersible Pump
____ Peristalic Pump
____ Bailer (Teflon)
____ Bailer (PVC)
____ Bailer (Stainless Steel)
____ Dedicated _____

Other: _____

Pump Depth: _____

SAMPLING EQUIPMENT

____ Bladder Pump
____ Centrifugal Pump
____ Submersible Pump
____ Peristalic Pump
____ Bailer (Teflon)
____ Bailer (____ PVC or ____ disposable)
____ Bailer (Stainless Steel)
____ Dedicated _____

Other: _____

WELL INTEGRITY: _____ LOCK#: _____

REMARKS: _____

SIGNATURE: _____ Page ____ of ____

APPENDIX B

SEDIMENT SAMPLING AND ANALYSIS PLAN

APPENDIX B
SEDIMENT
SAMPLING AND ANALYSIS PLAN

JELD-WEN, inc.
Former Nord Door Facility
300 West Marine View Drive
Everett, Washington
Ecology No. 2757

Prepared for

JELD-WEN, inc.

Updated September 2008

Prepared by

SLR International Corp
1800 Blankenship Rd; Suite 440
West Linn, Oregon 97068

Project 008.0228.00032

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TABLE 2 - COMPARISON OF DRY WEIGHT EQUIVALENTS TO THE SQS AND CSL

APPENDIX A - STANDARD SLR FIELD FORMS

ACRONYMS AND ABBREVIATIONS

ASTM	American Society for Testing and Materials
bgs	below ground surface
BNAs	semi-volatile organic compounds (sediment)
DQO	data quality objective
Ecology	Washington State Department of Ecology
GC/MS	gas chromatograph/mass spectrophotometer
GRO	gas range organics
HASP	health and safety plan
HCID	hydrocarbon identification
ICP	inductively coupled plasma-atomic emission spectroscopy
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
MLLW	Mean lower low water (datum)
MRLs	method reporting limits
MTCA	Model Toxics Control Act
MW	Monitoring well
NAPL	nonaqueous phase liquid
NAVD	North American Vertical Datum
NGVD	National Geodetic Vertical Datum of 1929
PCB	polychlorinated biphenyl
PCP	Pentachlorophenol
PPMETS	Priority pollutant metals, antimony, arsenic, beryllium, cadmium, chromium, copper, lead, nickel, selenium, silver, thallium, zinc
PQL	pratical quantitation limit
PSEP	Puget Sound Estuary Program
QA/QC	quality assurance/quality control
QAPP	quality assurance project plan
RI	remedial investigation
RI/FS	remedial investigation/feasibility study
SAP	sampling and analysis plan
SVOC	Semi volatile organic compounds
TC	Toxicity Characteristic
TCLP	Toxicity Characteristic Leaching Procedure

ACRONYMS AND ABBREVIATIONS (Continued)

TDS	total dissolved solids
TOC	total organic carbon
TSS	total suspended solids
TPH	total petroleum hydrocarbons
TPH-Gx	total petroleum hydrocarbons as gasoline
TPH-Dx	total petroleum hydrocarbons as diesel
TSS	total suspended solids
TVS	total volatile solids
VOA	volatile organic analysis
WAC	Washington Administrative Code

1 INTRODUCTION

1.1 Purpose

This sediment Sampling and Analysis Plan (sediment SAP) is being prepared as part of the Remedial Investigation (RI) for the former Nord Door facility in Everett, Washington. This SAP is provided to identify the purpose and objectives of the sediment data collection in support of the work plan for remedial investigation/feasibility study (RI/FS) and Cleanup Action Plan (CAP) "Work Plan", specify field procedures, identify quality assurance (QA) procedures to be implemented during sampling activities and laboratory analyses, and to meet the requirements of WAC 173-340-820, Model Toxics Control Act (MTCA) Sediment Management Standards (SMS) WAC 173-204, Sediment Sampling and Analysis Plan Appendix (SAPA) Ecology Publication No. 03-09-043.

1.2 Sampling and Analysis Plan Organization

The Sampling and Analysis Plan is organized in three sections. A brief description of each section is presented below.

Section 1—Introduction. Section 1 contains an overview of the sediment Sampling and Analysis Plan.

Section 2—Field Sampling Plan. Section 2 identifies the sampling locations and the procedures to be used in field sampling. Included are procedures for: sample collection; sample labeling, shipping, and custody; measurements and documentation of the sampling locations; residuals management; and sample splitting.

Section 3—Quality Assurance Project Plan. Section 3 identifies the project organization and includes quality assurance (QA) procedures for field activities and laboratory analyses.

1.3 Project Organization and Responsibilities

Noted below are the responsibilities of key project personnel.

Jay Russell, Project Coordinator for JELD-WEN. Responsible for overseeing the implementation of the Agreed Order for JELD-WEN. Coordinates with the Department of Ecology (Ecology) and SLR International Corp (SLR). Provides oversight of program activities. Reviews project work scope, resource needs, and requests.

Isaac Standen, Project Coordinator for Ecology. Responsible for overseeing the implementation of the Agreed Order for Ecology. Coordinates with the Ecology and SLR. Provides oversight of all program activities. Reviews project work scope. Defines and coordinates Ecology resources.

Scott Miller, Project Manager, SLR. Provides technical oversight of all SLR project activities at the Site and senior review of all project activities. Oversees project performance and provides technical expertise to accomplish project objectives. Ensures that project tasks are successfully completed within the project time periods. Coordinates with JELD-WEN.

SLR Field Personnel. Geologists, scientists, engineers, and technicians are responsible for implementing the SAP.

Laboratories. Provide analytical support. Perform all required quality control analyses including analytical duplicates, blanks, and matrix spikes. Initiate and document required corrective action. Perform preliminary review of data for completeness, transcription, or analytical errors. Follow U.S. Environmental Protection Agency (EPA) guidelines and good laboratory practices. The project laboratory for the sediment sampling is Environmental Science Corp. (ESC) located in Mt. Juliet, Tennessee. Analysis of sediment samples for Ammonia (Plumb 1981 Method), Grain Size (Plumb 1981 Method), Total Solids (TS) using (PSEP Method), Total Organic Carbon (TOC) using EPA Method 9060, Total Sulfides (Plumb 1981 Method/EPA Method 9030B), Total Volatile Solids (TVS) using EPA method 160.4/Standard Method 2540 E, Semivolatile Organic Compounds (BNAs) listed in the Sediment Management Standards (Chapter 173-204 WAC) using EPA Method 8270C, Polychlorinated Biphenyls (PCBs) using EPA Method 8082, Inductively Coupled Plasma – Atomic Emission Spectroscopy for Arsenic, Cadmium, Chromium, Copper, Lead, Silver, and Zinc (ICP) using EPA Method 6010B, and Mercury Cold Vapor Atomic Absorption (Mercury) using EPA Method 7471A will be subcontracted by ESC to Analytical Resource, Inc. (ARI). Analysis of sediment samples for Dioxins and Furans using EPA Method 1613B will be subcontracted by ESC to Maxxam Analytics Inc. ARI is located in Tukwila, Washington and Maxxam is located in Burnaby, BC. ARI (C1235) and Maxxam (C1192) are accredited by Ecology for analytes in the sediment matrix.

1.4 Remedial Investigation Schedule

The schedule for the sediment sampling that will be completed as part of the RI is presented in the Work Plan (Section 2). Any schedule modifications will require approval by the Ecology Project Coordinator.

2 FIELD SAMPLING PLAN

2.1 Sampling Needs and Objectives

The sediment sampling activities to be performed as part of the RI are intended to assess potential impacts to sediments associated with historical site activities. This initial sediment assessment will be used to identify contaminated sediment areas (if any) and support site characterization and cleanup decision making.

2.2 Sampling Locations, Types, Frequency, and Analyses

This section generally describes proposed sampling locations, types of sediment samples, and the laboratory analysis to be performed. The proposed sample locations are depicted in Figure 12A of the Work Plan. Sampling methods and sampling procedures are described below.

2.2.1 Sampling Methods

Sediments. Three discreet sediment samples will be collected from each of the nine storm water outfall areas (locations 3SED1-P through 3SED8-P, and 3SED10-P) and three discreet sediment samples from the eastern most channel segment of the channel along the north boundary of the Site (location 3SED9-P). Two discreet sediment samples (locations 3SED11-P and 3SED12-P) will be collected from the tidal area just in front of the present day shoreline in the vicinity of the former fish net storage building on the southeastern portion of the Site. The sediment samples will be collected, prepared, and analyzed in accordance with the SMS and the SAPA. The samples will be collected from fine-grain materials using hand tools (either a hand auger or a stainless steel spoon). The samples submitted for laboratory analysis will be collected from the surface down to 10 centimeters in depth.

To select specific sampling locations at the storm water outfall areas, a sampling alignment will be established (measured or paced) around the base of each outfall to be sampled. The distances of each sample location (A, B, and C) from the outfall will be noted in a designated field notebook.

The sediment sampling locations in the vicinity of the former fish net storage building will be collected from the tidal area just in front of the present day shoreline, at locations to be confirmed with Ecology.

Sediment sampling stations will be located to within 3 meters. If this accuracy can be achieved using a portable global positioning system (GPS), the GPS unit will be used to measure the location information for each discreet sediment sampling location. Additionally a photo record of each station will be recorded showing position relative to the outfall and/or other permanent landmarks. The GPS information will be provided to Ecology using the Washington State Plane North American Datum (NAD) 1983.

The samples will be analyzed for ammonia (Plumb 1981 Method), grain size (Plumb 1981 Method), total solids (PSEP Method), TOC using EPA Method 9060, total sulfides (Plumb 1981 Method/EPA Method 9030B), TVS (EPA Method 160.4/Standard Method 2540 E), BNAs listed in the Sediment Management Standards (Chapter 173-204 WAC) using EPA Method 8270C, PCBs using EPA Method 8082, ICP using EPA Method 6010B, and Mercury using EPA Method 7471A. In addition, the sediment samples collected from outfall 3SED8-P and the stream outlet (3SED9-P) will be analyzed for Dioxins and Furans using EPA Method 1613B.

Additionally, three sediment samples will be collected and archived from both 3SED1-P (outfall 001) and 3SED7-P (outfall 005). The sediment samples will be archived pending receipt of the results of dioxin/furan analysis to be conducted on samples obtained from the old refuse burner area and the hog fuel burner. If the soil sample from the area of the old refuse burner tests positive for dioxin/furan, then the three archive samples from 3SED1-P will be analyzed for dioxins and furans. If the ash catch sample from the hog fuel burner tests positive for dioxin/furan, then the three archive samples from outfall 3SED7-P will be analyzed for dioxins and furans. The archived samples will be held in accordance to handling requirements summarized in Section 3.3.3.

Recommended sample preparation methods, cleanup methods, analytical methods and PQLs are summarized in Table 5 of the SAPA, which has been recreated below.

TABLE 5 from SAPA. RECOMMENDED SAMPLE PREPARATION METHODS, CLEANUP METHODS, ANALYTICAL METHODS, AND PRACTICAL QUANTITATION LIMITS FOR SEDIMENTS

Chemical	Recommended Sample Preparation Methods[a]	Recommended Sample Cleanup Methods [b]	Recommended Analytical Methods[c]	Recommended PQLs [d,e]
Metals				**(mg/kg dry weight)**
Arsenic	PSEP/3050B	--	6010B/6020/7061A	19
Cadmium	PSEP/3050B	--	6010B/6020/7131A	1.7
Chromium	PSEP/3050B	--	6010B/6020/7191	87
Copper	PSEP/3050B	--	6010B/6020	130

Chemical	Recommended Sample Preparation Methods[a]	Recommended Sample Cleanup Methods [b]	Recommended Analytical Methods[c]	Recommended PQLs [d,e]
Lead	PSEP/3050B	--	6010B/6020	150
Mercury	--f	--	7471A /245.5	0.14
Silver	PSEP/3050B	--	6010B/6020	2
Zinc	PSEP/3050B	--	6010B/6020	137
Nonionizable Organic Compounds LPAH Compounds				**(µg/kg dry weight)**
Naphthalene	3540C/3550B/3545	3640A/3660B	8270C/1625C	700
Acenaphthylene	3540C/3550B/3545	3640A/3660B	8270C/1625C	433
Acenaphthene	3540C/3550B/3545	3640A/3660B	8270C/1625C	167
Fluorene	3540C/3550B/3545	3640A/3660B	8270C/1625C	180
Phenanthrene	3540C/3550B/3545	3640A/3660B	8270/1625C	500
Anthracene	3540C/3550B/3545	3640A/3660B	8270C/1625C	320
2-Methylnaphthalene	3540C/3550B/3545	3640A/3660B	8270C/1625C	22
HPAH Compounds				
Fluoranthene	3540C/3550B/3545	3640A/3660B	8270C/1625C	567
Pyrene	3540C/3550B/3545	3640A/3660B	8270C/1625C	867
Benz[a]anthracene	3540C/3550B/3545	3640A/3660B	8270C[h]/1625C	433
Chrysene	3540C/3550B/3545	3640A/3660B	8270C[h]/1625C	467
Total benzofluoranthenes[g]	3540C/3550B/3545	3640A/3660B	8270[h]/1625C	1067
Benzo[a]pyrene	3540C/3550B/3545	3640A/3660B	8270C[h]/1625C	533
Indeno[1,2,3-cd]pyrene	3540C/3550B/3545	3640A/3660B	8270C[h]/1625C	200
Dibenz[a,h]anthracene	3540C/3550B/3545	3640A/3660B	8270C[h]/1625C	77
Benzo[ghi]perylene	3540C/3550B/3545	3640A/3660B	8270C/1625C	223
Chlorinated Benzenes				
1,2-Dichlorobenzene	3540C/3550B/3545	3640A/3660B	8270C[h]/1625C	35
1,3-Dichlorobenzene	3540C/3550B/3545	3640A/3660B	8270C[h]/1625C	57
1,4-Dichlorobenzene	3540C/3550B/3545	3640A/3660B	8270C[h]/1625C	37
1,2,4-Trichlorobenzene	3540C/3550B/3545	3640A/3660B	8270C[h]/1625C	31
Hexachlorobenzene	3540C/3550B/3545	3640A/3660B	8270C[h]/1625C	22
Phthalate Esters				
Dimethyl phthalate	3540C/3550B/3545	3640A/3660B	8270C/1625C	24
Diethyl phthalate	3540C/3550B/3545	3640/A3660B	8270C/1625C	67
Di-n-butyl phthalate	3540C/3550B/3545	3640A/3660B	8270C/1625C	467
Butyl benzyl phthalate	3540C/3550B/3545	3640A/3660B	8270C/1625C	21
Bis[2-ethylhexyl]phthalate	3540C/3550B/3545	3640A/3660B	8270C/1625C	433
Di-n-octyl phthalate	3540C/3550B/3545	3640A/3660B	8270C/1625C	2067
Miscellaneous Extractable Compounds				**(µg/kg dry weight)**
Dibenzofuran	3540C/3550B/3545	3640A/3660B	8270C/1625C	180
Hexachlorobutadiene	3540C/3550B/3545	3640A/3660B	8270C/1625C	11
Hexachloroethane	3540C/3550B/3545	3640A/3660B	8270C/1625C	47
N-nitrosodiphenylamine	3540C/3550B/3545	3640A/3660B	8270C/1625C	28
PCBs				
PCB Aroclors®	3540/3550	3620B/3640A/3660B	8082	6
Ionizable Organic Compounds				
Phenol	3540C/3550B/3545	3640A/3660B	8270C/1625C	140
2-Methylphenol	3540C/3550B/3545	3640A/3660B	8270C/1625C	63
4-Methylphenol	3540C/3550B/3545	3640A/3660B	8270C/1625C	223
2,4-Dimethylphenol	3540C/3550B/3545	3640A/3660B	8270C/1625C	29
Pentachlorophenol	3540C/3550B/3545	3640A/3660B	8270C/1625C	120
Benzyl alcohol	3540C/3550B/3545	3640A/3660B	8270C/1625C	57
Benzoic acid	3540C/3550B/3545	3640A/3660B	8270C/1625C	217

Chemical	Recommended Sample Preparation Methods[a]	Recommended Sample Cleanup Methods [b]	Recommended Analytical Methods[c]	Recommended PQLs [d,e]
Conventional Sediment Variables				
Ammonia	--j	--	Plumb (1981)	100 mg/L
Grain size	--j	--	Plumb (1981)	1%
Total solids	--j	--	PSEP	0.1% (wet wt)
Total organic carbon (TOC)	--j	--	9060	0.1%
Total sulfides	--j	--	Plumb (1981)/ 9030B	10 (mg/kg)
Total Volatile Solids	--j	--	EPA 160.4/Standard Method 2540E	0.1%
Site Specific Compounds				
Polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans (PCDDs/PCDFs)	--	--	1613	1 – 10 ng/kg

Note: GPC - gel permeation chromatography
HPAH - high molecular weight polycyclic aromatic hydrocarbon
LPAH - low molecular weight polycyclic aromatic hydrocarbon
PSEP - Puget Sound Estuary Program

a - Recommended sample preparation methods are: PSEP (1997a), Method 3050B and 3500 series - sample preparation methods from SW-846 (U.S. EPA 1996) and subjected to changes by EPA updates.

b - Recommended sample cleanup methods are: Sample extracts subjected to GPC cleanup follow the procedures specified by EPA SW-846 Method 3640A. Special care should be used during GPC to minimize loss of analytes. If sulfur is present in the samples (as is common in most marine sediments), cleanup procedures specified by EPA SW-846 Method 3660B should be used. All PCB extracts should be subjected to sulfuric acid/permanganate cleanup as specified by EPA SW-846 Method 3665A. Additional cleanup procedures may be necessary on a sample-by-sample basis. Alternative cleanup procedures are described in PSEP (1997b) and U.S. EPA (1986).

c - Recommended analytical methods are: Method 6000, 7000, 8000, and 9000 series - analytical methods from SW-846 (U.S. EPA 1986) and updates The SW-846 and updates are available from the web site at: http://www.epa.gov/epaoswer/hazwaste/test/sw846.htm

Method 1613 - analytical method from U.S. EPA-821/B-94-005 (1994)
Method 1624C/1625C - isotope dilution method (U.S. EPA 1989)
NCASI – analytical methods from the National Council for Air and Stream Improvement, Inc.
Plumb (1981) - U.S. EPA/U.S. Army Corps of Engineers Technical Report EPA/CE-81-1
PSEP (1986a)
Acid volatile sulfide method for sediment (U.S. EPA 1991).
Krone (1989) – *Krone, C. A., D. W. Brown, D. G. Burrows, R. G. Bogar, S. L. Chan and U. Varanasi, 1989. A Method for the Analysis of Butyltin Species and the Measurement of Butyltins in Sediment and English Sole Livers from Puget Sound. Marine Environmental Research 27:1-18.*

To achieve the recommended practical quantitation limits for organic compounds, it may be necessary to use a larger sample size (approximately 100 g), a smaller final extract volume for gas chromatography/mass spectrometry analyses (0.5 mL), and one of the recommended sample

cleanup methods as necessary to reduce interference, using different analytical methods with better sensitivity. Detection limits are on a dry-weight basis unless otherwise indicated. For sediment samples with low TOC, it may be necessary to achieve even lower detection limits for certain analytes in order to compare the TOC-normalized concentrations with applicable numerical criteria (see Table 1).

e - The recommended practical quantitation limits are based on a value equal to one third of the 1988 dry weight lowest apparent effects threshold value (LAET, Barrick et al 1988) except for the following chemicals: 1,2-dichlorobenzene, 1,2,4-trichlorobenzene, hexachlorobenzene, hexachlorobutadiene, n-nitrosodiphenylamine, 2-methylphenol, 2,4-dimethylphenol, and benzyl alcohol, for which the recommended maximum detection limit is equal to the full value of the 1988 dry weight LAET.

f - The sample digestion method for mercury is described in the analytical method (Method 7471A, September 1994).

g - Total benzofluoranthenes represent the sum of the b, j, and k isomers.

h - Selected ion monitoring may improve the sensitivity of method 8270C and is recommended in cases when detection limits must be lowered to human health criteria levels or when TOC levels elevate detection limits above ecological criteria levels. See PSEP organics chapter, appendix B–Guidance for Selected Ion Monitoring (1997b).

i - Sample preparation methods for volatile organic compound analyses are described in the analytical methods.

j - Sample preparation methods for sediment conventional analyses are described in the analytical methods.

Summaries of applicable QA/QC procedures to be performed by the laboratory in conjunction with the environmental sample analysis are presented in the SAPA as Table 11 for analysis of organic compounds, Table 12 for analyses of metals, and Table 13 for analysis of conventional sediment variables. Tables 11, 12, and 13 of the SAPA have been recreated below.

TABLE 11 from SAPA. QUALITY CONTROL PROCEDURES FOR ORGANIC ANALYSES

Quality Control Procedure	Frequency	Control Limit	Corrective Action
Instrument Quality Assurance/Quality Control			
Initial Calibration	See reference method(s) in Table 5	See reference method(s) in Table 5	Laboratory to recalibrate and reanalyze affected samples
Continuing Calibration	See reference method(s) in Table 5	See reference method(s) in Table 5	Laboratory to recalibrate if correlation coefficient or response factor does not meet method requirements
Method Quality Assurance/Quality Control			
Holding Times[ab]	Not applicable	See Table 10	Qualify data or collect fresh samples in cases of extreme holding time or temperature exceedance
Detection Limits[ab]	Annually	See Table 5	Laboratory must initiate corrective actions (which may include additional cleanup steps as well as other measures, see Table

Quality Control Procedure	Frequency	Control Limit	Corrective Action
			5) and contact the QA/QC coordinator and/or project manager immediately.
Method Blanks[ab]	One per sample batch or every 20 samples, whichever is more frequent, or when there is a change in reagents	Analyte concentration < PQL	Laboratory to eliminate or greatly reduce laboratory contamination due to glassware or reagents or analytical system; reanalyze affected samples
Analytical (Laboratory) Replicates[ab] and Matrix Spike Duplicates[ab]	1 duplicate analysis with every sample batch or every 20 samples, whichever is more frequent; Use analytical replicates when samples are expected to contain target analytes. Use matrix spike duplicates when samples are not expected to contain target analytes	Compound and matrix specific RPD ≤ 35 % applied when the analyte concentration is > PQL	Laboratory to redigest and reanalyze samples if analytical problems suspected, or to qualify the data if sample homogeneity problems suspected and the project manager consulted
Matrix Spikes[ab]	One per sample batch or every 20 samples, whichever is more frequent; spiked with the same analytes at the same concentration as the LCS	Compound and matrix specific	Matrix interferences should be assessed and explained in case narrative accompanying the data package.
Surrogate Spikes[ab]	Added to every organics sample as specified in analytical protocol	Compound specific	Follow corrective actions specified in SW-846.
Laboratory Control Samples (LCS), Certified or Standard Reference Material[ab]	One per analytical batch or every 20 samples, whichever is more frequent	Compound specific, recovery and relative standard deviation for repeated analyses should not exceed the control limits specified in the method of Table 5 or performance based intralaboratory control limits, whichever is lower	Laboratory to correct problem to verify the analysis can be performed in a clean matrix with acceptable precision and recovery; then reanalyze affected samples
Field Quality Assurance/Quality Control			
Field Replicates	At project manager's discretion	Not applicable	Not applicable
Field Blanks	At project manager's discretion	Analyte concentration ≤ PQL	Compare to method blank results to rule out laboratory contamination; modify sample collection and equipment decontamination procedures

Notes: CLP - Contract Laboratory Program (EPA)
COV - coefficient of variation
RPD - relative percent difference
RSD - relative standard deviation

a - Subject to QA2 review
b - Subject to QA1 review

TABLE 12 from SAPA. QUALITY CONTROL PROCEDURES FOR METAL ANALYSES

Quality Control Procedure	Frequency	Control Limit	Corrective Action
Instrument Quality Assurance/Quality Control			
Initial Calibration [a]	Daily	Correlation coefficient ≥0.995	Laboratory to optimize and recalibrate the instrument and reanalyze any affected samples
Initial Calibration Verification [a]	Immediately after initial calibration	90–110 % recovery for ICP-AES, ICP-MS and GFAA (80–120 % for mercury), or performance based intralaboratory control limits, whichever is lower	Laboratory to resolve discrepancy prior to sample analysis
Continuing	After every 10 samples or every 2	90–110 % recovery for ICP-	Laboratory to recalibrate and

Quality Control Procedure	Frequency	Control Limit	Corrective Action
Calibration Verification [a]	hours, whichever is more frequent, and after the last sample	AES and GFAA, 85-115 % for ICP-MS (80–120 % for mercury)	reanalyze affected samples
Initial and Continuing Calibration Blanks [a]	Immediately after initial calibration, then 10 percent of samples or every 2 hours, whichever is more frequent, and after the last sample	Analyte concentration < PQL	Laboratory to recalibrate and reanalyze affected samples
ICP Interelement Interference Check Samples [a]	At the beginning and end of each analytical sequence or twice per 8 hour shift, whichever is more frequent	80–120 percent of the true value	Laboratory to correct probl-em, recalibrate, and reana-lyze affected samples
Method Quality Assurance/Quality Control			
Holding Times[ab]	Not applicable	See Table 10	Qualify data or collect fresh samples
Detection Limits[ab]	Not applicable	See Table 5	Laboratory must initiate corrective actions and contact the QA/QC coordinator and/or the project manager immediately
Method Blanks[ab]	With every sample batch or every 20 samples, whichever is more frequent	Analyte concentration ≤ PQL	Laboratory to redigest and reanalyze samples with analyte concentrations < 10 times the highest method blank
Analytical (Laboratory) Replicates[ab] and Matrix Spike Duplicates[ab]	1 duplicate analysis with every sample batch or every 20 samples, whichever is more frequent; Use analytical replicates when samples are expected to contain target analytes. Use matrix spike replicates when samples are not expected to contain target	RPD ≤ 20 % applied when the analyte concentration is > PQL	Laboratory to redigest and reanalyze samples if analytical problems suspected, or to qualify the data if sample homogeneity problems suspected and the project manager consulted
Matrix Spikes[ab]	With every sample batch or every 20 samples, whichever is more frequent	75–125 % recovery applied when the sample concentration is < 4 times the spiked concentration for a particular analyte	Laboratory may be able to correct or minimize problem; or qualify and accept data
Laboratory Control Samples, Certified or Standard Reference Material [ab]	Overall frequency of 5 percent of field samples	80– 20 % recovery, or performance based intralaboratory control limits, whichever is lower	Laboratory to correct problem to verify the analysis can be performed in a clean matrix with acceptable precision and recovery; then reanalyze affected samples
Field Quality Assurance/Quality Control			
Field Replicates	At project manager's discretion	Not applicable	Not applicable
Field Blanks	At project manager's discretion	Analyte concentration ≤ PQL	Compare to method blank results to rule out laboratory contamination; modify sample collection and equipment decontamination procedures

Notes: GFAA - graphite furnace atomic absorption
ICP-MS - inductively coupled plasma/mass spectrometry
ICP-AES - inductively coupled plasma/atomic emission spectrometry
RPD - relative percent difference

Instrument and method QA/QC monitor the performance of the instrument and sample preparation procedures, and are the responsibility of the analytical laboratory. When an instrument or method control limit is exceeded, the laboratory is responsible for correcting the problem and reanalyzing the samples. Instrument and method QA/QC results reported in the final data package should always meet control limits (with a very small number of exceptions that apply to difficult analytes as specified by EPA for the CLP). If instrument and method QA/QC procedures meet control limits, laboratory procedures are deemed to be adequate. Matrix and field QA/QC procedures monitor

matrix effects and field procedures and variability. Although poor analytical procedures may also result in poor spike recovery or duplicate results, the laboratory is not held responsible for meeting control limits for these QA/QC samples. Except in the possible case of unreasonably large exceedances, any reanalyses will be performed at the request and expense of the project manager.

a
b Subject to QA2 review
Subject to QA1 review

TABLE 13 from SAPA. QUALITY CONTROL PROCEDURES FOR CONVENTIONAL ANALYSES

	Suggested Control Limit						
Analyte	**Initial Calibration[a]**	**Continuing Calibration[a]**	**Calibration Blanks[a]**	**Laboratory Control Samples**	**Matrix Spikes[ab]**	**Laboratory Triplicates[ab]**	**Method Blank[ab]**
Ammonia	Correlation coefficient ≥0.995	90–110 percent recovery	Analyte concentration ≤ PQL	80–120 percent recovery	75–125 percent recovery	20 % RSD	Analyte concentration ≤ PQL
Grain size	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	20 % RSD	Not applicable
Total organic carbon	Correlation coefficient ≥0.995	90–110 percent recovery	Analyte concentration ≤ PQL	80–120 percent recovery	75–125 percent recovery	20 % RSD	Analyte concentration ≤ PQL
Total sulfides	Correlation coefficient ≥0.990	85–115 percent recovery	Not applicable	65–135 percent recovery	65–135 percent recovery	20 % RSD	Analyte concentration ≤ PQL
Total solids	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	20 % RSD	Analyte concentration ≤ PQL

Notes:

EPA - U.S. Environmental Protection Agency
PSEP - Puget Sound Estuary Program
PQL - practical quantitation limit
QA/QC - quality assurance and quality control
RSD - relative standard deviation

a
b Subject to QA2 review
Subject to QA1 review

EPA and PSEP control limits are not available for conventional analytes. The control limits provided above are suggested limits only. They are based on EPA control limits for metals analyses (see Table 12), and an attempt has been made to take into consideration the expected analytical accuracy using PSEP methodology. Corrective action to be taken when control limits are exceeded is left to the Project Manager's discretion. The corrective action indicated for metals in Table 12 may be applied to conventional analytes.

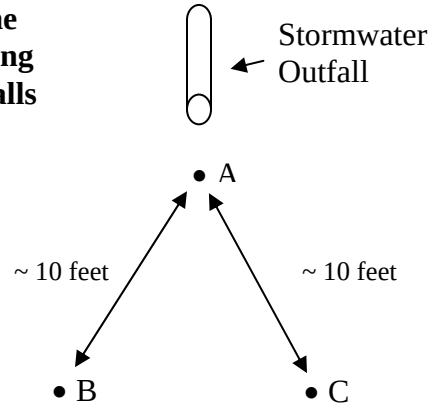
When applicable, the QA/QC procedures indicated in this table should be completed at the same frequency as for metals analyses (see Table 12).

The findings of the sediment sampling will be compared to SMS Marine Sediment Quality Standards and Cleanup Screening Levels (Table 1) for marine sediments located within Puget Sound. If the findings of the sediment sampling exceed the SMS chemical criteria, SLR will discuss additional chemical analysis and/or possible biological assay testing with Ecology.

2.3 Sample Designation

The discreet sediment samples will be collected from each stormwater outfall location in general accordance with the diagram below. Where obstacles are present at an outfall location, this schematic may be modified. Further detail on the specific sediment sampling locations for each of the outfalls is shown on Figure 12B of the Work Plan. The three discreet sediment samples at each outfall location will be labeled with the sampling locations (3SED1, 3SED2, etc.) and the suffix "A" through "C." For example, 3SED1-A would denote the discreet sediment sample "A" collected from outfall location 3SED1-P.

Schematic of the proposed sampling locations at outfalls



The two sediment samples to be collected from the tidal area will be labeled with the sampling locations (3SED11 and 3SED12) and the suffix "A."

2.4 Guidelines for Splitting Samples

If requested by Ecology, JELD-WEN's on-site representative will provide for the collection of split or replicate samples. The following sample splitting procedures will be followed:

- Samples will be collected as described above.
- If sufficient sample is available then either Ecology (or representative) or JELD-WEN's representative will collect a split sample concurrently.

2.5 Decontamination Procedures

A decontamination area will be established for cleaning the sediment sampling equipment. All tools and equipment that contacts the sediment samples will be decontaminated prior to initial use, between sampling locations, and between different sampling depths at the same location. Sediment sampling equipment will be decontaminated by following procedure:

- Tap water rinse
- Alcohol rinse (if equipment visibly stained with product)
- Tap water rinse
- Nonphosphatic detergent and tap water wash
- Tap water rinse
- Alcohol rinse (if equipment visibly stained with product)
- Tap water rinse
- Distilled water rinse

Decontamination of personnel involved in sampling activities will be accomplished as described in the site Health and Safety Plan.

2.6 Sample Labeling, Shipping, and Chain-of-Custody

Sample Labeling. Sample container labels will be completed immediately before or immediately after sample collection. Container labels will include the following information:

- Project name
- Sample number (including sample depth, if applicable)
- Name of collector
- Date and time of collection

Sample Shipping. Soil, sediment and water samples will be shipped to the selected analytical laboratory as follows:

- Sample containers will be transported in a sealed, iced cooler, kept at or below 4º C.
- In each shipping container, glass bottles will be separated by a shock-absorbing and absorbent material to prevent breakage and leakage.
- Ice or "blue ice," sealed in separate plastic bags, will be placed into each shipping container with the samples.

- All sample shipments will be accompanied by a Chain-of-Custody Form. The completed form will be sealed in a plastic bag and taped to the inside lid of the shipping container.

- Signed and dated chain-of-custody seals will be placed on all shipping containers, unless samples will be picked up at the site by the laboratory.

- The analytical laboratory's name and address and SLR's name and office (return) address will be placed on each shipping container prior to shipping.

Chain-of-Custody. Once a sample is collected, it will remain in the custody of the sampler or other SLR personnel until shipment to the laboratory. Upon transfer of sample containers to subsequent custodians, a Chain-of-Custody/Analysis Request Form will be signed by the persons transferring custody of the sample container. A signed and dated chain-of-custody seal will be placed on each shipping container prior to shipping.

Upon receipt of samples at the laboratory, the shipping container seal will be broken, and the temperature and condition of the samples will be recorded by the receiver. Chain-of-custody records will be included in the analytical report prepared by the laboratory.

3 QUALITY ASSURANCE PROJECT PLAN

3.1 Introduction

The purpose of this Quality Assurance Project Plan (QAPP) is to present the quality assurance and quality control activities developed for the SAP. This QAPP covers the sediment sampling work to be undertaken by SLR International Corp during this investigation.

3.1.1 Project Organization

Primary responsibility for project quality rests with SLR International Corp project manager (PM), Mr. Scott Miller. The PM will review all project deliverables before submittal to the Ecology or other appropriate regulatory agency. Where quality assurance problems or deficiencies are observed, the PM will identify the appropriate corrective action to be initiated.

3.1.2 Data Quality Objectives

This section presents the data quality objectives (DQO's) for the sediment sampling that is part of the Remedial Investigation. The DQOs will be used to identify the analytical practical quantification limit (PQL) goals and to establish other quality assurance goals with the QAPP and the SAP. The PQL is defined as the lowest levels which can be routinely quantified and reported by a laboratory. Thresholds for PQLs from WAC 173-340-707 include that the PQL may be no greater than ten times the laboratory method detection limit (MDL); or that the PQL for a hazardous substance, medium and analytical procedure may be no greater than the PQL established by the US EPA and used in 40 CFR 136, 40 CFR 141 through 143, or 40 CFR through 270. An important DQO for this project is to obtain appropriate quantitation limits and to meet the SMS chemical criteria (Chapter 173-204-320 WAC). The PQLs for the proposed soil and groundwater sample analysis at the former Nord Door site are presented in Tables 1 (attached). The table shows that the PQLs are sufficient to meet the analytical DQOs.

3.2 Data Quality Assurance Objectives

The applicable data quality assurance objectives are dictated by the intended use of the data and the nature of the analytical methods. The accuracy, precision, representativeness, completeness, and comparability data quality assurance objectives are explained below.

3.2.1 Accuracy

Accuracy is the agreement between the measured value and the true value. Accuracy can be expressed as the difference between two values or the difference as a percentage of the reference or true value (ratio). Accuracy depends on the magnitude of the systematic (bias) and random (precision) errors in the measurement. Bias due to sample matrix effects will be assessed by spiking samples with known standards and calculating the recovery of the standards.

3.2.2 Precision

Precision is a measurement of mutual agreement among individual measurements of the same property under prescribed similar conditions. It is expressed in terms of the standard deviation or relative percent difference (RPD). Precision is determined through laboratory quality control parameters such as surrogate recoveries, matrix spikes, or quality control check samples. Separate field control samples will not be collected for this scope of work. Quality control objectives for surrogate recovery, percent recovery, and RPD for matrix spikes will be those currently established by the testing laboratory.

3.2.3 Representativeness

Representativeness is a measure of how closely the measured results reflect the actual concentration or distribution of chemical compounds in the media sampled. Sampling plan design, sampling techniques, and sample handling protocols are included in the SAP to ensure that samples collected are representative of site conditions within the limitations of the collection technologies. Sampling locations were selected based on their representativeness in further assessing the extent of contamination is soil and groundwater at the site. This documentation establishes protocols for assurance of sample identification and integrity.

3.2.4 Completeness

Completeness is a measure of the amount of valid data obtained from the analytical system compared to the total data collected. The completeness of the data will be assessed during quality control reviews. Audits, internal control checks, and preventative maintenance will be implemented to help maintain the above quality assurance objectives.

3.2.5 Comparability

Comparability expresses the confidence with which one data set can be compared to another. Data comparability will be ensured by monitoring the control of sample collection, analytical methods, and data recording. Comparability of laboratory and field data will be maintained by using EPA-defined procedures, where available. Data comparability will be maintained by use of consistent methods and units. The laboratory PQLs for the proposed sampling protocol are included as Attachment 1 to this document. Actual detection limits will depend on the sample matrix and will be reported as defined for the specific samples.

3.3 Field Data Quality Assurance Objectives

This QAPP also presents the field data quality assurance objectives for the RI at the former Nord Door site. The field data quality assurance objectives include field measurements and observations, field equipment calibration, chain-of-custody procedures, and sample handling procedures.

3.3.1 Field Measurement and Observation

Field measurements and observations will be recorded in the project log notes. Sufficient information will be recorded so that all field activities can be reconstructed without reliance on personnel memory. Entries will be recorded directly in waterproof ink and legibly and will be signed and dated by the person conducting the work. If changes are made, the changes will not obscure the previous entry, and the changes will be signed and dated. At a minimum, the following data will be recorded:

- Location of activity
- Description of sampling reference point(s)
- Date and time of any activity
- Sample number and volume or number of sample containers
- Field measurements made
- Calibration records for field instruments
- Relevant comments regarding field activities
- Signatures of responsible personnel

3.3.2 Chain-of-Custody Procedures

The management of samples collected in the field will follow specific procedures to ensure sample integrity. To ensure sample integrity, the samples will be handled by as few people as possible and the sample collector will be responsible for the care and custody of the samples. Sample possession will be tracked from collection to analysis. Each time the samples are transferred between parties, both the sender and receiver will sign and date the chain-of-custody form and specify what samples have been transferred. When a sample shipment is sent to the laboratory, the original form will be placed with the samples and transmitted to the laboratory. A copy of the form will be retained in the project files. A chain-of-custody record will be completed for each batch of samples hand delivered or shipped to the laboratory.

The following information will be included on the chain-of-custody form:

- Sample number
- Sampler signature
- Sample collection date and time
- Place of collection
- Sample type
- Inclusive dates of possession
- Signature of sender and receiver

In addition to the chain-of-custody form, other components of sample tracking will include the sample labels and seals, field logs, sample shipment receipt, and laboratory log book. The sample labels and seals will include the following information:

- Project name
- Name of sampler
- Date and time of sample collection
- Sample location and number
- Analysis required
- Preservation

3.3.3 Sample Handling Procedures

Sampling plan design, sampling techniques, sampling location, and sample handling protocols are included in the SAP to ensure that samples collected are representative of site conditions within the limitations of the collection technologies.

The following table summarizes the sediment sample handling requirements:

Analysis	Sample Container	Container Size	Preservation and Handling	Holding Times
Inductively Coupled Plasma – Atomic Absorption Spectroscopy	Glass Jar	8 oz	Fill jar leaving minimal air space; keep in dark; cool to 4°C (if kept at -18ºC hold time is 2 years)	180 days
Mercury Cold Vapor Atomic Absorption	Glass Jar	4 oz	Fill jar leaving minimal air space; keep in dark; freeze to -18°C	28 days
Total Organic Carbon	Glass Jar	4 oz	Fill jar leaving minimal air space; keep in dark; cool to 4°C (if kept at -18ºC hold time is 180 days)	14 days
Grain Size	Glass Jar	8 oz	Fill jar leaving minimal air space; keep in dark; cool to 4°C	Un-specified
Semi-Volatile Organic Compounds	Glass Jar	8 oz	Fill jar leaving minimal air space; keep in dark; cool to 4°C (if kept at -18ºC hold time is 1 year)	14 days
Total Volatile Solids	Glass Jar	4 oz	Fill jar leaving no air space; keep in dark; cool to 4°C (if kept at -18ºC hold time is 180 days)	14 days
Total Solids	Glass Jar	4 oz	Fill jar leaving minimal air space; keep in dark; cool to 4°C (if kept at -18ºC hold time is 180 days)	14 days
Ammonia	Glass Jar	4 oz	Fill jar leaving minimal air space; keep in dark; cool to 4°C	7 days
Total Sulfides	Glass Jar	4 oz	Fill jar leaving no air space; keep in dark; cool to 4°C	7 Days
Polychlorinated Biphenyl (PCB)	Glass Jar	8 oz	Fill jar leaving minimal air space; keep in dark; cool to 4°C (if kept at -18ºC hold time is 1 year)	14 days
Dioxins & Furans	Glass Jar	8 oz	Fill jar leaving minimal air space; keep in dark; cool to 4°C (if kept at -18ºC hold time is 1 year)	14 days (40 days after extraction)

No sediment samples will be collected through the water column. Any excess sediment will be returned to the sample collection location at the time of sampling unless sediment has visible evidence of contamination (e.g. oily droplets, sheen, paint chips, sandblast grit, other wastes) in accordance with Section 5.7 of the SAPA. In the case of visible evidence of contamination the sediment will be retained in a watertight drum on site for later disposal.

Data will be interpreted in relation to SQS and CSL values. General data trends will be described in the text of the RI/FS report.

3.4 Quality Control

Quality control checks consist of measurements and tests performed in the field and laboratory. The analytical methods that will be performed as a part of this project have routine quality control checks performed to evaluate the precision and accuracy, and to determine whether the data are within the quality control limits.

3.4.1 Laboratory Quality Control Methods

Specific procedures and frequencies for laboratory quality control are detailed by the analytical method in the laboratory's Quality Assurance Plan. A general description of the types of laboratory quality control samples is as follows:

- **Method Blanks –** A minimum of one laboratory method blank will be analyzed per twenty samples or one per batch (whichever is greater) to assess possible laboratory contamination. Method blanks will contain all reagents and undergo all procedural steps used for analysis.
- **Control Samples –** A minimum of one laboratory control sample per twenty samples or one per batch (whichever is greater) will be analyzed for inorganics to verify the precision of the laboratory equipment. The control sample will be at a concentration within the calibration range, but at a different concentration than the standards used to establish the calibration curve.
- **Matrix Spike** - A minimum of one laboratory matrix spike sample will be analyzed per twenty samples or one per batch (whichever is greater) to monitor recoveries and assure that extraction and concentration levels are acceptable for quality assurance and quality control review. The laboratory matrix spike will be analyzed on a separate groundwater sample collected from one of the wells.

3.5 Data Management

This section addresses issues related to data sources, data processing, and data evaluation. Raw data generated in the field or received from analytical laboratories will be validated, entered into a computerized database, and verified for consistency and correctness.

3.5.1 Field Data Management

Accurate documentation of field activities (e.g., field parameters measurements, field notes) will be maintained using field log-books and field data forms. Entries will be made in sufficient detail to provide an accurate record of field activities without reliance on memory.

Field log entries will be dated and include a chronological description of task activities, names of individuals present, names of visitors, weather conditions, etc. All entries will be legibly entered in ink and initialed. A record of sample location, sample names, and lithologic observations, will be included on a boring log.

Copies of standard SLR field forms are included in Appendix A.

3.5.2 Analytical Data Management

Following validation, all analytical data will be entered into a computerized database. The data may require some manipulation, such as common unit conversions and extraction from support information. To accomplish these manipulations, data reduction and tabulation techniques will be applied to the data and documented.

Several different tabular reports will be generated from the database. All analytical, locational, and tracking data will be stored in the database. Data reports for each type of analysis will be generated to produce standard reports.

All data validation, document control, and locational and analytical information generated by this project will be entered, stored, and generated by PC-compatible machines. Standardized software products will be used.

The volume of digital data anticipated on this project may be accommodated on a single PC work station. Project data backups will be made on a weekly basis or whenever major additions or modifications have been made to the various data management systems. Access to the database will be limited to the data manager and the authorized project personnel.

Data to be reported based upon Tables with OC-normalized SMS and tables with dry weight normalized (1988 SMS equivalent) values.

3.5.3 Sample Management

The sample management system forms the foundation of all other analytical data collection, verification, and validation tasks. Analytical data cannot be considered valid unless all the proper steps have been carried out with respect to sample management. These include:

- Sample properly documented in daily field log (i.e. station name, date, time, gear and cast number, water depth, and location coordinates, as applicable)
- Chain-of-custody requirements met
- All sample-related documents filed
- Use of unique sample identification numbers

Data that do not pass the validation process either will be assigned data qualifiers to restrict or modify usage, or will be rejected for use. Modifications to the use of data will be documented in data validation reports.

3.5.4 Sediment Data Reporting Requirements

Quality assured sediment data will be submitted to Ecology electronically in Environmental Information Management System (EIM) format. The electronic data will be verified to be compatible with EIM prior to delivery to Ecology.

TABLES

TABLE 1: COMPARISON TO SEDIMENT QUALITY STANDARD (SQS) AND CLEANUP SCREENING LEVEL (CSL) FROM SMS
TABLE 2: COMPARISON OF DRY WEIGHT EQUIVALENTS TO THE SQS AND CSL

Table 1
Comparison to Sediment Quality Standard (SQS) and Cleanup Screening Level (CSL) from SMS
JELD-WEN Former Nord Door Site
Everett, WA

Parameter	Preliminary Cleanup Value		Sample # 1	Sample # 2	Sample # 3	etc..
	SMS SQS[A]	SMS CSL[B]				
Metals	**mg/Kg dry wt**	**mg/Kg dry wt**				
Arsenic	57	93				
Cadmium	5.1	6.7				
Chromium	260	270				
Copper	390	390				
Lead	450	530				
Mercury	0.41	0.59				
Silver	6.1	6.1				
Zinc	410	960				
Nonionizable Organic Compounds	**mg/Kg carbon**	**mg/Kg carbon**				
Aromatic Hydrocarbons						
Total LPAH	370	780				
Naphthalene	99	170				
Acenaphthylene	66	66				
Acenaphthene	16	57				
Fluorene	23	79				
Phenanthrene	100	480				
Anthracene	220	1,200				
2-Methylnaphthalene	38	64				
Total HPAH	960	5,300				
Fluoranthene	160	1,200				
Pyrene	1,000	1,400				
Benz[a]anthracene	110	270				
Chrysene	110	460				
Total benzofluoranthenes	230	450				
Benzo[a]pyrene	99	210				
Indeno[1,2,3-c,d]pyrene	34	88				
Dibenzo[a,h]anthracene	12	33				
Benzo[g,h,i]perylene	31	78				
Chlorinated Benzenes						
1,2-Dichlorobenzene	2.3	2.3				
1,4-Dichlorobenzene	3.1	9.0				
1,2,4-Trichlorobenzene	0.81	1.8				
Hexachlorobenzene	0.38	2.3				
Phthalate Esters						
Dimethyl phthalate	53	53				
Diethyl phthalate	61	110				
Di-n-butyl phthalate	220	1,700				
Butyl benzyl phthalate	4.9	64				
Bis[2-ethylhexyl]phthalate	47	78				
Di-n-octyl phthalate	58	4,500				
Miscellaneous						
Dibenzofuran	15	58				
Hexachlorobutadiene	3.9	6.2				
N-nitrosodiphenylamine	11	11				
Pesticides/PCBs						
PCBs	12	65				
Ionizable Organic Compounds	**µg/Kg dry wt**	**µg/Kg dry wt**				
Phenol	420	1200				
2-Methylphenol	63	63				
4-Methylphenol	670	670				
2,4-Dimethylphenol	29	29				
Pentachlorophenol	360	690				
Benzyl alcohol	57	73				
Benzoic acid	650	650				
Conventionals	**Reporting Convention**					
TOC	0.1 %	--				
TVS	0.1 %	--				
Total Solids	0.1 % wet wt	--				
Ammonia	100 mg/L	--				
Total Sulfides	10 mg/Kg	--				
Grain Size						
Gravel	0.1% by wt	--				
Sand	0.1% by wt	--				
Silt	0.1% by wt	--				
Clay	0.1% by wt	--				
Fines (Silt + Clay)	0.1% by wt	--				

[A] - Sediment Quality Standards - Chemical Criteria from Chapter 173-204-320 WAC (Table 1)
[B] - Cleanup Screening Level - Chemical Criteria from Chapter 173-204-520 WAC (Table 3)

SQS exceedance
CSL exceedance

Table 2
Comparison of Dry Weight Equivalents to the SQS and CSL
JELD-WEN Former Nord Door Site
Everett, WA

Parameter	Preliminary Cleanup Value		Sample # 1	Sample # 2	Sample # 3	etc..
	SMS SQS[A]	SMS CSL[B]				
Metals	mg/kg dry wt	mg/kg dry wt				
Arsenic	57	93				
Cadmium	5.1	6.7				
Chromium	260	270				
Copper	390	390				
Lead	450	530				
Mercury	0.41	0.59				
Silver	6.1	6.1				
Zinc	410	960				
Nonionizable Organic Compounds						
Aromatic Hydrocarbons	ug/kg dry wt	ug/kg dry wt				
Total LPAH	5,200	5,200				
Naphthalene	2,100	2,100				
Acenaphthylene	1,300	1,300				
Acenaphthene	500	500				
Fluorene	540	540				
Phenanthrene	1,500	1,500				
Anthracene	960	960				
2-Methylnaphthalene	670	670				
Total HPAH	12,000	17,000				
Fluoranthene	1,700	2,500				
Pyrene	2,600	3,300				
Benz[a]anthracene	1,300	1,600				
Chrysene	1,400	2,800				
Total benzofluoranthenes	3,200	3,600				
Benzo[a]pyrene	1,600	1,600				
Indeno[1,2,3-c,d]pyrene	600	690				
Dibenzo[a,h]anthracene	230	230				
Benzo[g,h,i]perylene	670	720				
Chlorinated Benzenes						
1,2-Dichlorobenzene	35	50				
1,4-Dichlorobenzene	110	110				
1,2,4-Trichlorobenzene	31	51				
Hexachlorobenzene	22	70				
Phthalate Esters						
Dimethyl phthalate	71	160				
Diethyl phthalate	200	1,200				
Di-n-butyl phthalate	1,400	5,100				
Butyl benzyl phthalate	63	900				
Bis[2-ethylhexyl]phthalate	1,300	3,100				
Di-n-octyl phthalate	6,200	6,200				
Miscellaneous						
Dibenzofuran	540	540				
Hexachlorobutadiene	11	120				
N-nitrosodiphenylamine	28	40				
Pesticides/PCBs						
PCBs	130	1,000				
Ionizable Organic Compounds	ug/kg dry wt	ug/kg dry wt				
Phenol	420	1,200				
2-Methylphenol	63	63				
4-Methylphenol	670	670				
2,4-Dimethylphenol	29	29				
Pentachlorophenol	360	690				
Benzyl alcohol	57	73				
Benzoic acid	650	650				
Conventionals	**Reporting Convention**					
TOC	0.1 %	--				
TVS	0.1 %	--				
Total Solids	0.1 % wet wt	--				
Ammonia	100 mg/L	--				
Total Sulfides	10 mg/Kg	--				
Grain Size						
Gravel	0.1% by wt	--				
Sand	0.1% by wt	--				
Silt	0.1% by wt	--				
Clay	0.1% by wt	--				
Fines (Silt + Clay)	0.1% by wt	--				

[A] - Sediment Quality Standards - Dry Weight Equivalents to SQS - From "1988 Update & Evaluation of Puget Sound AET"
[B] - Cleanup Screening Level - Dry Weight Equivalents to CSL - From "1988 Update & Evaluation of Puget Sound AET"

SQS exceedance
CSL exceedance

APPENDIX A

STANDARD SLR FIELD FORMS

Sediment Sampling Field Log

Project Name:		**Station Name:**
Project Number:	**Date:**	
Sampling Company:	**Logged by:**	
Vessel / Equipment:	**Start Time:**	
Sampling Method:	**Finish Time:**	
Sampling Gear:	**Proposed Coordinates:**	

CAST NUMBER	TIME	STATION POSITION		RECOVERY DEPTH	Sample Accepted (Yes/No)	Sampling Comments: (Biota, overfill, odor, jaws closed, good seal, etc.)
		NORTHING	EASTING			

SAMPLE DESCRIPTION: (surface cover, density, color, minor modify, major modifier, odor, sheen, layering, debris, shells, biota, etc.)

NOTES / COMMENTS:

Sample Containers:

Sample Analyses:

Chain of Custody

Page ___ of ___

SLR
1800 Blankenship Road, Suite 440
West Linn, OR 97068

Alternate billing information:

Report to:

Email to:

Project Description:

City/Sate Collected

Phone: (503) 723-4423
FAX:

Client Project #:

ESC Key:

Collected by:

Site/Facility ID#:

P.O.#:

Collected by (signature):

Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day. 200%
___ Next Day.. . . . . 100%
___ Five Day 25%

Date Results Needed:

Email? __No__Yes

FAX? __No__Yes

No. of Cntrs

Analysis/Container/Preservative

Prepared by:

ENVIRONMENTAL SCIENCE CORP.
12065 Lebanon Road
Mt. Juliet, TN 37122
Phone (615) 758-5858
Phone (800) 767-5859
FAX (615) 758-5859

CoCode SLRWLOR (lab use only)

Template/Prelogin

Shipped Via:

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	Remarks/Contaminant	Sample # (lab only)

*Matrix: **SS** - Soil/Solid **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

pH _____ Temp _____

Flow _____ Other _____

Remarks:

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____	Condition: (lab use only)	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp:	Bottles Received:	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date:	Time:	pH Checked: NCF:

APPENDIX C

SITE HEALTH AND SAFETY PLAN

Health and Safety Plan
Continued Assessment Work
Former Nord Door Facility, Everett, Washington

1.0 REVIEW AND APPROVAL

This Health and Safety Plan (HASP) has been written for the use of SLR International Corp and its employees. It may also be used as a guidance document by properly trained and experienced SLR subcontractors. However, SLR does not guarantee the health or safety of any person entering this site. Questions regarding the applicability of this HASP to personnel other than SLR employees should be referred to Steve Locke at (503) 723-4423.

Due to the potential hazardous nature of this site and the activity occurring thereon, it is not possible to discover, evaluate, and provide protection for all possible hazards which may be encountered. Strict adherence to the health and safety guidelines set forth herein will reduce, but not eliminate, the potential for injury at this site. The health and safety guidelines in this HASP were prepared specifically for the former Nord Door facility in Everett, Washington and should not be used on any other site without prior research by trained health and safety specialists.

SLR claims no responsibility for the use of this HASP by others. The HASP was written for the specific site conditions, purposes, dates, and personnel specified and must be amended if these conditions or work scope change.

Client: _____ _____

Site Name: _____

Project Name: _____

Project Number: _____

Start Date: _____

Project Manager: _____

Signature: _____

Date: _____

Site Health and Safety Officer: _____

Signature: _____

Date: _____

2.0 HEALTH AND SAFETY PERSONNEL

2.1 Project Manager

The Project Manager (PM) for the former Nord Door facility continued assessment project is Scott Miller. The PM has the following responsibilities:

- Ensure the HASP is complete prior to beginning field work.
- Ensure that all equipment and supplies to perform the items in the HASP are available.
- Manage all contract requirements, including ensuring the availability of the health and safety resources.
- Coordinate all project activities with the client, subcontractors, and SLR staff.

2.2 Site Health and Safety Officer

The Site Health and Safety Officer (SHSO) for the former Nord Door continued assessment work is Chris Kramer. The SHSO has the following responsibilities:

- Ensure the HASP is completed and enforced on the first day of on-site work.
- Day to day on-site implement of the HASP. The SHSO has the authority to stop work or prohibit any personnel from working on the site at any time for not complying with any aspect of the Plan.
- Day to day communication with the PM and any other pertinent staff to ensure efficient coordination of health and safety activities with other planned field activities.

The SHSO should have the following training:

- 40-hour Health and Safety Training
- First Aid and CPR Training
- Supervisor Training
- Medical Surveillance

2.3 Site Personnel

Each person on the site has responsibility for their own health and safety, as well as assisting others in carrying out the items in the HASP. Any person observed to be in violation of the HASP should be assisted in complying with the requirements, or reported to the SHSO. Any site personnel may shut down field activities if there is a real or perceived immediate danger to life or health.

3.0 GENERAL SITE REQUIREMENTS AND BACKGROUND INFORMATION

3.1 Location, Operations, and Approximate Size of Site

Site Name and Address: Former Nord Door Facility
300 West Marine View Drive
Everett, Washington 98201

Current Site Owners: JELD-WEN, Inc.

Current Site Operators: majority of the site is unused, Rinkers Asphalt leases a portion

Approximate Size of Site: Approximately 47.63 acres

The Site is located on the east bank of the Snohomish River and the confluence with the Puget. A Site Location Map has been included as Figure 1 and a Site Plan has been included as Figure 2 (Attachment 1). The site is located in the Section 7, Township 29N, Range 5E of the Willamette Meridian. The site is located in Everett Washington in Snohomish County. The site is relatively flat with the maximum elevation at approximately 15 feet above mean sea level.

3.2 Initial Site Entry

An initial site entry occurred on Thursday, April 27, 2006 to observe site conditions and to obtain information prior to the start of the initial site assessment work.

3.3 Description of Planned Field Work

SLR will be conducting additional environmental assessment at the former Nord Door facility. The field activities to be performed by SLR will include the following:

- Installation of Geoprobe borings
- Groundwater monitoring and sampling
- Surface soil sampling
- Hand-auger sampling for collection of soil and groundwater samples in Maulsby Swamp (adjacent to Site)
- Sediment Sampling

3.4 Schedule of Planned Field Work

Beginning field activities are tentatively scheduled for January 2008. All field work will be performed during daylight hours.

3.5 Geoprobe, Hand Auger Sampling, and Surface Soil Sampling

Geoprobe (direct push) sampling, hand-auger, and surface soil sampling will be performed as a part of the environmental assessment activities. An estimated 11 Geoprobe borings will be completed using a truck-mounted Geoprobe rig; ranging in depth from approximately 5 to 15 feet. An estimated 12 hand auger samples will be completed to a depth of approximately 5 feet. An estimated 20 surface soil will be collected using hand tools.

3.6 Sediment Sampling

Approximately 30 sediment samples will be collected using hand tools. Personnel will be equipped with a certified flotation device (i.e. life jacket) and chest waders or rubber boats, dependent on water level at time of sampling.

3.6 Landfills and Other Areas of Potential Explosive Gas or Vapor

The site is not located in an area containing a current or former landfill, and the geology of the area is not known or suspected to contain pockets of explosive gases or vapors.

3.7 Hazardous Material Useage

No hazardous materials will be used at the site during field activities.

3.8 Waste Generation

SLR anticipates both solid and liquid waste generation as a part of the field work at the site. All investigation derived waste materials will be placed into 55-gallon steel drums, labeled and left on-site pending laboratory analysis. The waste will be characterized and properly disposed of off-site in accordance with State and Federal regulations.

4.0 SITE HEALTH AND SAFETY HAZARDS

Site health and safety hazards include known or potential chemical contaminants and physical hazards that may occur during field activities. Overall, the health and safety hazards of the anticipated activities at the site have a rating of low. The greatest potential hazards are expected to be from heavy equipment and field conditions (slips, trips, and falls).

4.1 Chemical Hazards

Based on the past site activities and facility processes and limited environmental sampling, the following have been designated as the primary chemical contaminants of human health concern.

- Pentachlorophenol (PCP) and creosote that may include polynuclear aromatic hydrocarbons (PAHs).

- Petroleum fuels (gasoline and diesel) assessed using Total Petroleum Hydrocarbons – Gasoline Range (TPH-G) and Diesel Range (TPH-Dx) laboratory analysis.
- Fuel oil, heating oil, hydraulic oils, and lubricants assessed using TPH-Dx laboratory analysis.
- Acetone, Styrene, Toluene and other volatile organic compounds (VOC).
- Metals including arsenic, chromium, lead, and mercury
- Dioxins and Furans
- Polychlorinated biphenyls (PCBs)

The following tables summarize the potential hazards from the above listed primary chemical contaminants of human health concern.

Contaminant of Concern:	Pentachlorophenol (PCP) and creosote
Soil Concentration:	Unknown
Groundwater Concentration:	Unknown
PEL:	0.5 mg/m3 8-hour TWA
TLV:	0.5 mg/m3 8-hour TWA
IDLH:	2.5 mg/m3 (PCP)
Warning Properties:	None
Routes of Exposure:	Ingestion and contact
Acute Health Effects:	Skin, eyes, nose, and/or throat irritation, respiratory distress, vomiting, and chest pain.
Chronic Health Effects:	Damage to eyes, nose, throat, skin, respiratory system, kidneys, and central nervous system.

Contaminant of Concern:	TPH-G (Total Petroleum Hydrocarbons – Gasoline Range)
Soil Concentration:	Unknown
Groundwater Concentration:	Unknown
PEL:	0.2 ppm 8-hour TWA
TLV:	0.2 ppm 8-hour TWA
IDLH:	N.D. (not determined)
Warning Properties:	Characteristic gasoline odor
Routes of Exposure:	Inhalation, dermal contact, ingestion
Acute Health Effects:	Eye, skin, and mucus membrane irritation; blurred vision, dizziness, confusion and slurred speech.
Chronic Health Effects:	Kidney and liver damage, central nervous system damage, and benzene can cause blood changes including leukemia and anemia.

Contaminant of Concern:	TPH-Dx (Total Petroleum Hydrocarbons – Diesel Range)
Soil Concentration:	4,160 mg/kg (as Heavy Oil)

Groundwater Concentration:	Non Detect
PEL:	25 ppm 8-hour TWA
TLV:	100 mg/m3 8-hour TWA
IDLH:	Not Applicable
Warning Properties:	Diesel odor
Routes of Exposure:	Inhalation, dermal contact, ingestion
Acute Health Effects:	Coughing, dizziness, nausea, skin and eye irritation, diarrhea, vomiting, abdominal discomfort
Chronic Health Effects:	Dermatitis, benzene can cause blood changes including leukemia and anemia

Contaminant of Concern:	Acetone
Soil Concentration:	Unknown
Groundwater Concentration:	Unknown
PEL:	1,000 ppm 8-hour TWA
TLV:	250 ppm 8-hour TWA
IDLH:	2,500 ppm (10% LEL)
Warning Properties:	Fragrant, mint-like odor
Routes of Exposure:	Inhalation, dermal contact, ingestion
Acute Health Effects:	Eye, nose, and throat irritation; dizziness, confusion and central nervous system depression.
Chronic Health Effects:	Damage to eyes, skin, repository system; central nervous system damage.

Contaminant of Concern:	Styrene
Soil Concentration:	Unknown
Groundwater Concentration:	Unknown
PEL:	100 ppm 8-hour TWA
TLV:	50 ppm
IDLH:	700 ppm
Warning Properties:	Sweet floral odor
Routes of Exposure:	Inhalation, dermal contact, ingestion
Acute Health Effects:	Eye, nose, repository system irritation.
Chronic Health Effects:	Damage to eyes, skin, repository system, and central nervous system.

Contaminant of Concern:	Toluene
Soil Concentration:	Unknown
Groundwater Concentration:	Unknown
PEL:	100 ppm 8-hour TWA
TLV:	500 ppm (10-minute maximum peak)
IDLH:	500 ppm (10% LEL)

Warning Properties:	Sweet, pungent benzene-like odor
Routes of Exposure:	Inhalation, dermal contact, ingestion
Acute Health Effects:	Eye and nose irritation; weakness, dilated pupils, discharge of tears, dizziness, and confusion.
Chronic Health Effects:	Damage to eyes, skin, repository system, and kidneys; central nervous system damage.

Contaminant of Concern:	Arsenic
Soil Concentration:	5.01 mg/kg
Groundwater Concentration:	0.0129 mg/L
PEL:	0.01 mg/m3 8-hour TWA
TLV:	0.01 mg/m3 8-hour TWA
IDLH:	100 mg/m3
Warning Properties:	None
Routes of Exposure:	Inhalation, ingestion, and contact
Acute Health Effects:	Skin irritation, respiratory distress, diarrhea, kidney damage, muscle tremor and seizure
Chronic Health Effects:	Damage to skin, respiratory system, kidneys, central nervous system, gastrointestinal tract, and reproductive system

Contaminant of Concern:	Chromium
Soil Concentration:	3,970 mg/kg
Groundwater Concentration:	1.81 mg/L
PEL:	0.5 mg/m3 8-hour TWA
TLV:	0.5 mg/m3 8-hour TWA
IDLH:	250 mg/m3
Warning Properties:	None
Routes of Exposure:	Inhalation, ingestion, and contact
Acute Health Effects:	Skin and eye irritation
Chronic Health Effects:	Dermatitis, liver, kidney, and respiratory cancer

Contaminant of Concern:	Lead
Soil Concentration:	251 mg/kg
Groundwater Concentration:	1.02 mg/L
PEL:	0.05 mg/m3 8-hour TWA
TLV:	0.05 mg/m3 8-hour TWA
IDLH:	100 mg/m3
Warning Properties:	None
Routes of Exposure:	Inhalation and ingestion
Acute Health Effects:	Weakness, excessive tiredness, irritability, constipation, anorexia, abdominal discomfort, fine tremors, and wrist drop
Chronic Health Effects:	Damage to kidneys and nervous system, anemia, high blood

	pressure, impotence, infertility, and reduced sex drive can also occur with overexposure to lead

Contaminant of Concern:	Mercury
Soil Concentration:	Unknown
Groundwater Concentration:	Unknown
PEL:	0.1 mg/m3 8-hour TWA (as vapor)
TLV:	0.05 mg/m3 8-hour TWA (as vapor)
IDLH:	10 mg/m3 (as vapor)
Warning Properties:	Silver-white, heavy, odorless liquid
Routes of Exposure:	Ingestion, inhalation (as vapor) and dermal contact
Acute Health Effects:	Irritation to eyes and skin; cough, chest pain, difficulty breathing, tremors, headache, and indecision
Chronic Health Effects:	Damage to eyes, skin, respiratory system, central nervous, and kidneys.

Contaminant of Concern:	PCBs (as Arochor 1242)
Soil Concentration:	Unknown
Groundwater Concentration:	Unknown
PEL:	1 mg/m3 8-hour TWA (skin)
TLV:	1 mg/m3 8-hour TWA (skin)
IDLH:	5 mg/m3 (as vapor)
Warning Properties:	None
Routes of Exposure:	Ingestion, inhalation , eye contact and dermal contact
Acute Health Effects:	Irritation to eyes and skin
Chronic Health Effects:	Damage to eyes, skin, reproductive system, liver.

Contaminant of Concern:	Dioxin/furans (expressed as 2,3,7,8-tetrachlorodibenzo-p-dioxin)
PEL:	None
TLV:	--
IDLH:	Not determined
Warning Properties:	None
Routes of Exposure:	Inhalation, skin absorption, ingestion, skin and/or eye contact
Acute Health Effects:	Irritation to eyes, in animals: liver and kidney damage; hemorrhage;
Chronic Health Effects:	Allergic dermatitis, chloracne, porphyria, gastrointestinal disturbance, teratogenic effects, damage to liver, kidneys and reproductive system, potential occupational carcinogen

PAHs are a group of chemicals that are formed during the incomplete combustion of coal, oil, and gas. Most PAHs do not dissolve easily. Typically, PAHs tend to attach to particulates in

water or absorb to soil. Naphthalene is the most common PAH and benzo(a)pyrene is the most studied PAH and is ranked as an A2 suspected human carcinogen. The following table summarizes the potential hazards of PAHs:

Contaminant of Concern:	Naphthalene and benzo(a)pyrene (assumed for all PAHs)
Soil Concentration:	6,100 µg/mg (dibenzo(a,h)anthracene)
Groundwater Concentration:	1.13 µg/L (naphthalene)
PEL:	50 mg/m3 8-hour TWA (naphthalene)
TLV:	50 mg/m3 8-hour TWA (naphthalene)
IDLH:	500 ppm (naphthalene)
Warning Properties:	None
Routes of Exposure:	Inhalation, incidental ingestion, and dermal contact (PAHs have low volatilization potentials, therefore inhalation usually occurs through intake of PAHs absorbed to particulates)
Acute Health Effects:	Skin, respiratory and eye irritant, change color and properties of skin
Chronic Health Effects:	Bladder, skin and lung cancer, and reproductive damage

4.2 Physical Hazards

The following table summarizes the potential physical hazards that could occur during field work at the site:

Physical Hazard	Yes	No
Overhead/underground hazards		
● Overhead	X	
● Underground	X	
Equipment hazards		
● Drilling	X	
● Excavation		X
● Machinery	X	
Heat exposure		X
Cold exposure		X
Oxygen deficiency		X
Confined space *		X
Noise	X	
Ionizing radiation		X
Non-ionizing radiation		X
Fire/Explosion		X

Physical Hazard	Yes	No
Biological	X	
Safety		
• Holes/ditches	X	
• Steep grades		X
• Slippery surfaces	X	
• Uneven terrain	X	
• Water hazard (sediment sampling)	X	
• Unstable surfaces	X	
• Elevated work surfaces		X
Shoring/Scaffolding		X

* SLR personnel are forbidden from entering any confined space, including excavation pits.

4.3 Task Specific Hazards

The following table summarizes the potentially hazards from each specific tasks:

Task	Hazard Rating	Identified/Anticipated Hazards
Geoprobe (direct-push) borings	Low	Heavy equipment, noise, weather stress, underground utility lines, aboveground utility lines, chemical exposure and slip-trip-fall safety
Hand-Augering in Maulsby Swamp	Low	Fatigue, noise, water hazard, trains and tracks, biological (snakes etc), chemical exposure, slip-trip-fall safety
Sediment sampling	Low	Water hazard, fatigue, biological (snakes etc), slip-trip-fall safety
Groundwater sampling	Low	Chemical hazards, weather stress, safety, possible truck traffic

4.4 Utilities

Before drilling and excavating at the site, it is necessary to contact the area utility locator to determine the location of all utilities lines at the site. A Utility Clearance Log (included as

Attachment 2) will be completed prior to beginning any subsurface work. The following precautions will be followed to prevent injuries do to utilities:

- All located utility lines at the site will be noted and emphasized on the boring logs, location plans, and boring assignment plans.
- All electrical wires at the site will be considered live and dangerous. If any questions concerning the safety of excavating or drilling in the vicinity of a power line, the power company will be contacted.
- At least twenty feet of clearance will be maintained from overhead power lines, or ten feet if the lines are padded.

5.0 SITE HEALTH AND SAFETY PROCEDURES

5.1 Daily Site Safety Meetings

Site safety meetings will be held daily before initiating any field activity. The safety meetings will be mediated by the SHSO. Site safety meetings will also be held at any other time, as necessary, to ensure the safety and health of the employee on-site. A Daily Safety Meeting Log has been included as Attachment 3.

Prior to beginning any work at the site, each worker will be given an informal training on how the project will progress. The SHSO will inform the workers of the following information:

- Proposed work activities for the day and the potential hazards
- Provisions of this Plan
- Dry runs of the emergency procedures, including location of the medical facility
- Dry runs of the decontamination procedures, if applicable
- Chemical exposures expected at the site
- Site lay-out and zone delineation
- Warning signals and evacuation procedures

5.2 Site Security

The SHSO is responsible for preventing unauthorized entry into the work area and for knowing who is on-site at all times. Access to the work site will be controlled in the following manner:

- Cones, barricades, and/or caution tape will be used to delineate work area.
- Excavation will be completed in one day and no deep excavations will be remaining at the site.

5.3 Work Limitations and Restrictions

The following work limitation and restrictions will be employed by the SHSO:

- No eating, drinking, or smoking on-site.
- No contact lenses on-site. Workers requiring vision correction must wear glasses in environments with chemicals.
- No facial hair that would interfere with respirator fit.
- The SHSO will monitor weather broadcasts before the start of outdoor work each day, and more frequently as necessary. No work will be done outdoors in inclement weather (snow, sleet, etc.) without authorization from the SHSO.

5.4 Decontamination Procedures

The following decontamination procedures will be followed:

- Personnel: Personnel will wash with soap and water before leaving the site.
- Field Equipment: Field equipment will be decontaminated prior to and after use by following these procedures:
    1. Wash equipment with detergent.
    2. Rinse with tap water.
    3. Triple rinse with purified water.
    4. Air dry.
    5. Wrap in clean polyethylene plastic, when necessary.
- Heavy Equipment: Heavy equipment will be steam cleaned or boom-cleaned, if necessary.

5.5 General Health and Safety Procedures

The following general health and safety procedures will be followed at the site:

- The Utility Clearance Log will be completed prior to beginning any subsurface work.
- Determine wind direction and try to remain upwind when collecting samples.
- Daily safety meetings will be held by the SHSO.
- Potable water must always be available at the work site.
- If toilet facilities are not located within a 5-minute walk from the decontamination facilities, either provide a chemical toilet and hand washing facilities or have a vehicle available (not the emergency vehicle) for transport to nearby facilities.
- Provide dust control by spraying soils with water or a surfactant/water solution.
- Use ground fault circuit interrupters for plug-in electrical devices and extension cords (3-pin plugs only).
- Be aware of tripping hazards with extension cords, tools, hoses, augers, etc.
- If an on-site command post is necessary, ensure that it is located upwind from sources, give prevailing winds, and locate/identify on Site Map.
- On-site personnel must be able to call off site via a telephone within 150 feet of work.
- Designate at least one vehicle for emergency use.

5.6 Perimeter Identification

The perimeters of the different field activities are included on Figure 2, Site Plan (Attachment 1). There are four classifications of "zones" or "boundaries" that could be required at a job site:

1. **Exclusion Zone**: Required when workers within that zone must wear personal protective equipment (PPE).
2. **Contamination Reduction Zone**: Required when decontamination of people and equipment leaving the Exclusion Zone is required.
3. **Support Zone**: The location where administrative and other support activities are conducted.
4. **Work Area Boundary**: Excludes non-workers from entering a potentially hazardous environment.

All tasks that are being proposed at the site are classified as Work Area Boundaries.

5.7 Personnel Protective Equipment

Personnel protective equipment (PPE) is designed to protect the body against contact with known or anticipated toxic chemicals. PPE has been designated into four different levels:

1. **Level A:** Self-contained breathing apparatus (SCBA), totally encapsulating suit, two-way radio communications.
2. **Level B:** SCBA or supplied-air respirator with an escape bottle, chemically resistant PPE, two-way radio communications.
3. **Level C:** Full- or half-face air respirator (with safety goggles), chemically resistant PPE.
4. **Level D:** No respiratory protection. Safety glasses, hard hat, steel-toe boots, long-sleeved shirt and pants. Hearing protection, gloves, and other PPE as required.

The former Nord Door facility is classified as a Level D PPE site. There is little to no risk of workers being in contact with contaminants. Level D PPE includes:

- Hard Hat (ANSI Z89.1 approved)
- Steel Toed and Shank Boots (ANSI Z41.1 approved)
- Safety Glasses (ANSI Z87.1 approved)
- Gloves
- Close Fitting Clothing
- Hearing Protection (optional)

Environmental and personnel monitoring will be conducted to evaluate the level of contamination to which site personnel or the surrounding environment are being exposed. The results of the monitoring will form the basis by which the SHSO will determine the level of PPE required for a particular operation. A photo ionization detector (PID) will be used to monitor the presence of organic vapors or gases. The PID will be used during borings and test pit excavations according to the following guide:

- 0 to 20 units (ppmv) above background – Continue work
- 20 to 50 units above background – Investigate cause and continue work if PPE adequate
- Over 50 units above background – Stop work and investigate; use ventilation to reduce levels

5.8 Safety Equipment

The following safety equipment and supplies will be available at the site at all times during field work:

- Reflective vests to be available to wear around moving vehicles, if any
- At least one 20-pound ABC-type fire extinguisher
- First Aid Kit
- Emergency eyewash
- Hearing protection in the form of disposable ear plugs to be worn around heavy equipment, machinery, or when two individuals five feet or less apart need to shout to be heard
- Soap gel or disposable wipes
- Disposable towels
- Plastic sheeting
- Cleaning brushes and tubs
- Life vest / flotation equipment (sediment sampling)

6.0 CONTIGENCY PLAN

In the unlikely event of a fire or explosion, or uncontrolled release of a contaminant, prompt action to limit the extent of the impact will be required. The SHSO shall evaluate all emergency situations and inform personnel by use of a signal horn, visual, or verbal contact, as appropriate. All personnel must know ahead of time what their duties would be in the event of an emergency.

6.1 Injury or Illness

If an injury of illness occurs at the job site, take the following action:

- Get first aid for the person immediately. Call 911 if needed.
- Notify the SHSO. The SHSO is responsible for preparing and submitting the Incident Report within 24 hours.
- The SHSO will assume charge during an emergency situation.

The location of the nearest hospital, with driving instruction, has been included as Attachment 4 to this plan. The hospital is located at:

Providence Everett Medical Center
900 Pacific Avenue
Everett, Washington 98021
(425) 261-2000

6.2 Emergency Telephone Numbers

Project Personnel

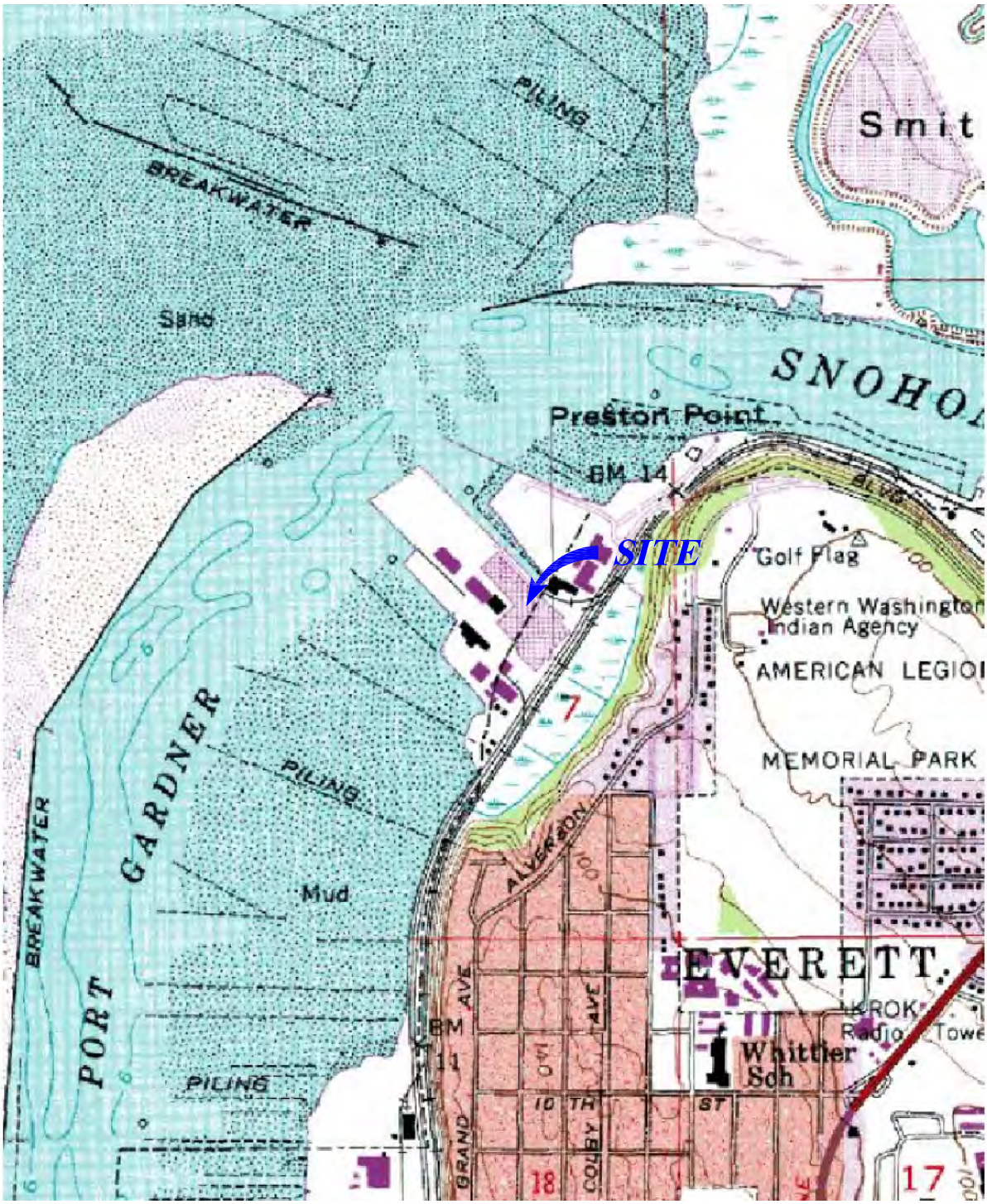
Name	Title	Cell Phone	Work Phone
Scott Miller	SLR Project Manager	(503) 572-1124	(503) 723-4423
Chris Kramer	SLR SHSO	(503) 341-2187	(503) 723-4423

Governmental Agency Contacts

Agency	Phone Number
Office of Emergency Services	(800) 852-7550
National Response Center	(800) 424-8802
One Call (Utility Locate)	(800) 424-5555
APS (Private Locater)	(425) 888-2590

Attachment 1

Figures

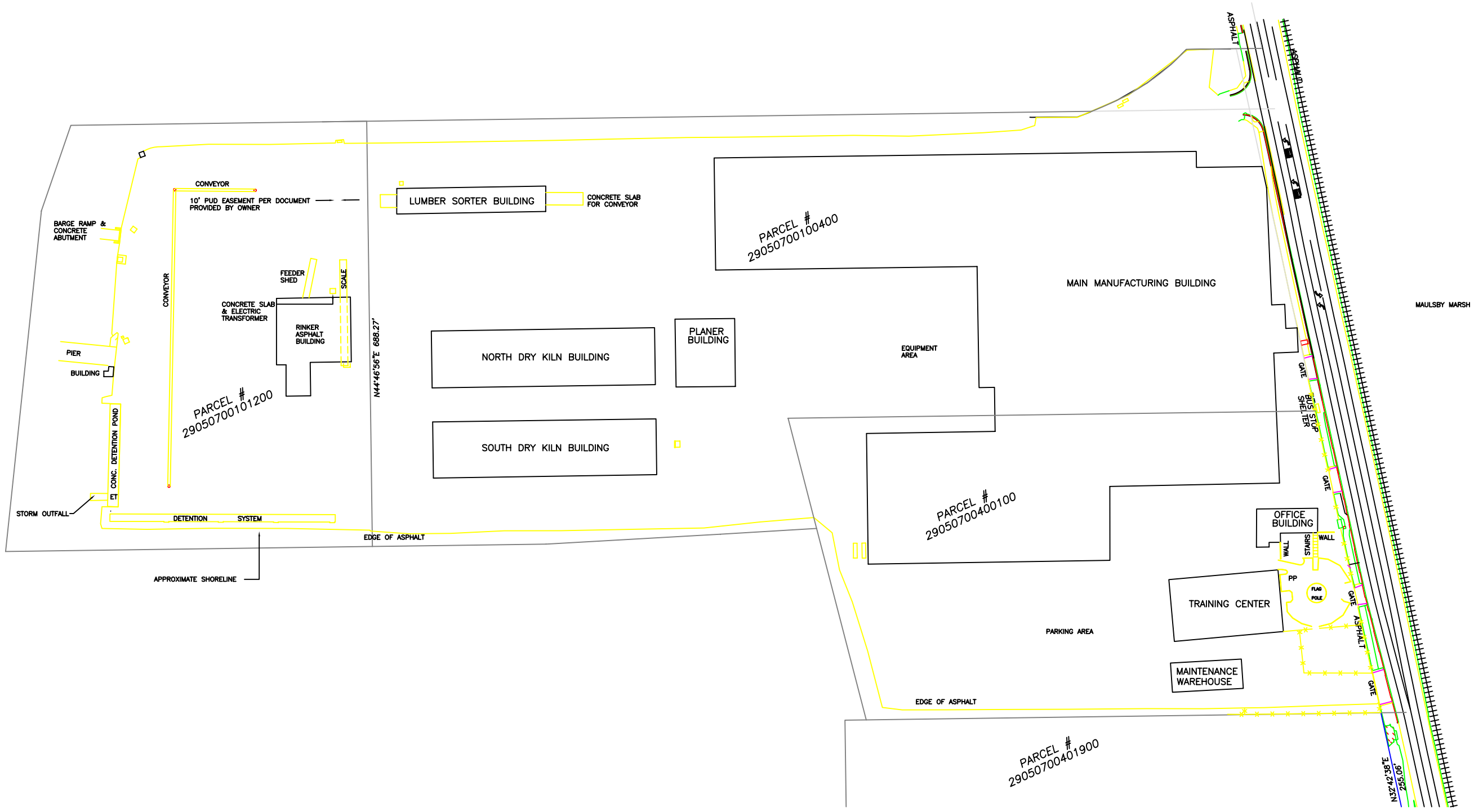


SOURCE: USGS 7.5 MINUTE QUADRANGLE EVERETT, WA 1991

SLR International Corp
1800 Blankenship Road
Suite 440
West Linn, OR 97068
T: 503-723-4423
F: 503-723-4436

DATE 09/07
DWN. EMG
APPR. _____
REVIS. _____
PROJECT NO.
008.0228.00026

FIGURE 1
JELD-WEN NORD DOOR
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON
SITE LOCATION MAP



NOTES:
THE BUILDINGS, SURFACE UTILITIES, EDGE OF PAVEMENT, AND APPROXIMATE SHORELINE SHOWN ON THIS MAP ARE BASED ON A 2006 SURVEY PERFORMED BY WH PACIFIC.

0 175 300

APPROXIMATE SCALE IN FEET

N

SLR International Corp
1800 Blankenship Road
Suite 440
West Linn, OR 97068
T: 503-723-4423
F: 503-723-4436

DATE 07/07
DWN. EMG
APPR. _____
REVIS. _____
PROJECT NO.
008.0228.00026

FIGURE 2
JELD-WEN NORD DOOR
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON
SITE PLAN

Attachment 2

Utility Clearance Log

ATTACHMENT 2

PRE-DRILLING/EXCAVATION CHECKLIST AND UTILITY CLEARANCE LOG

PROJECT:		DATE:	
LOCATION:		UTILITY LOCATOR PHONE:	
UTILITY LOCATOR:		LOCATOR CALL REFERENCE:	
DATE OF LOCATOR REQUEST:		SLR FIELD TECHNICIAN:	

Instructions: This checklist is to be completed by SLR personnel prior to initiation of filed activites as a safety measure to insure that underground structures and aboveground power lines are clearly marked in the area selected for boring or excavation. **Drilling or excavation work may not proceed until One Call has been contacted and this checklist has been completed. If any of the questions answered below are answered "no," then the project manager must be contacted and concerns/issues discussed.** "No" answers should be documented on the back of the form.

Type of Utilities and Structures	Not Present	Present	Marking (Flags, Paint, Stakes)

YES	NO	PRE-MOBILIZATION
		Is a scaled site plan, map, or drawing showing the proposed borehole locations attached?
		Does each location allow for clear entry and exit, adequate workspace, and a clear path for raising and lowering all equipment? 20 feet minimum clearance must be maintained between raised equipment and electrical lines.
		Are all of the locations and associated areas of pavement cutting at least 3 feet from any subsurface or aboveground utilities shown on client's building plans?
		Are all of the locations and associated areas of pavement cutting at least 3 feet from any subsurface or aboveground utilities shown on public right-of-way street improvement or other public property plan or site map?
		Has the Site Representative indicated no knowledge of any subsurface or aboveground utilities within 3 feet of the proposed locations? Is the Site Representative qualified to make such a determination?
		Are all of the proposed locations and associated areas of pavement cutting at least 3 feet from any subsurface utilities identified during a geophysical survey?
		Have all Utility Locating Service providers notified by the public line locator marked out their facilities in the vicinity of the locations or otherwise notified SLR that they do not have any facilities near the proposed locations?
		Are all proposed locations and associated areas of pavement cutting at least 3 feet from a visual line connecting two similar looking manhole covers?
		Are all proposed locations and associated areas of pavement cutting at least 3 feet from a visual line perpendicular to the street from the water, gas, and electrical meters?
		Are all proposed locations and associated areas of pavement cutting clear of pavement joints, curbs, crash posts, or other engineered structures?
		Does the pavement lack signs of previous excavation (e.g. no pavement subsidence, difference in pavement texture or relief, or pavement patching)? If there are signs, determine the purpose of the previous excavation.
		Before drilling, has an exploratory hole been dug to 5 feet below grade with a hole diameter greater than the outer diameter of the drilling auger?
		Does the soil encountered in the hand-dug hole appear to be native material (i.e. free of gravel, clean sand, aggregate base, or other non-native looking material)?
		Have all expected utilities been identified and all missing utilities explained?

Have any concerns noted above been discussed with the SLR Project Manager?	**Yes**	**No**
Have any concerns noted above been discussed with the client?	**Yes**	**No**

Approval to proceed:	Client Rep Name:	Title and Date:	
Approval to proceed:	SLR Rep Name:	Title and Date:	

Attachment 3

Daily Safety Meeting Log

ATTACHMENT 3

DAILY SAFETY MEETING LOG

PROJECT:		DATE:	
LOCATION:		START TIME:	

ISSUES DISCUSSED:	
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	

ATTENDEES:			
	PRINTED NAME	COMPANY	SIGNATURE
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			

MEETING CONDUCTION BY:	SIGNATURE:
SITE HEALTH AND SAFETY OFFICER:	SIGNATURE:

Attachment 4

Location of Hospital and Driving Instructions

MAPQUEST

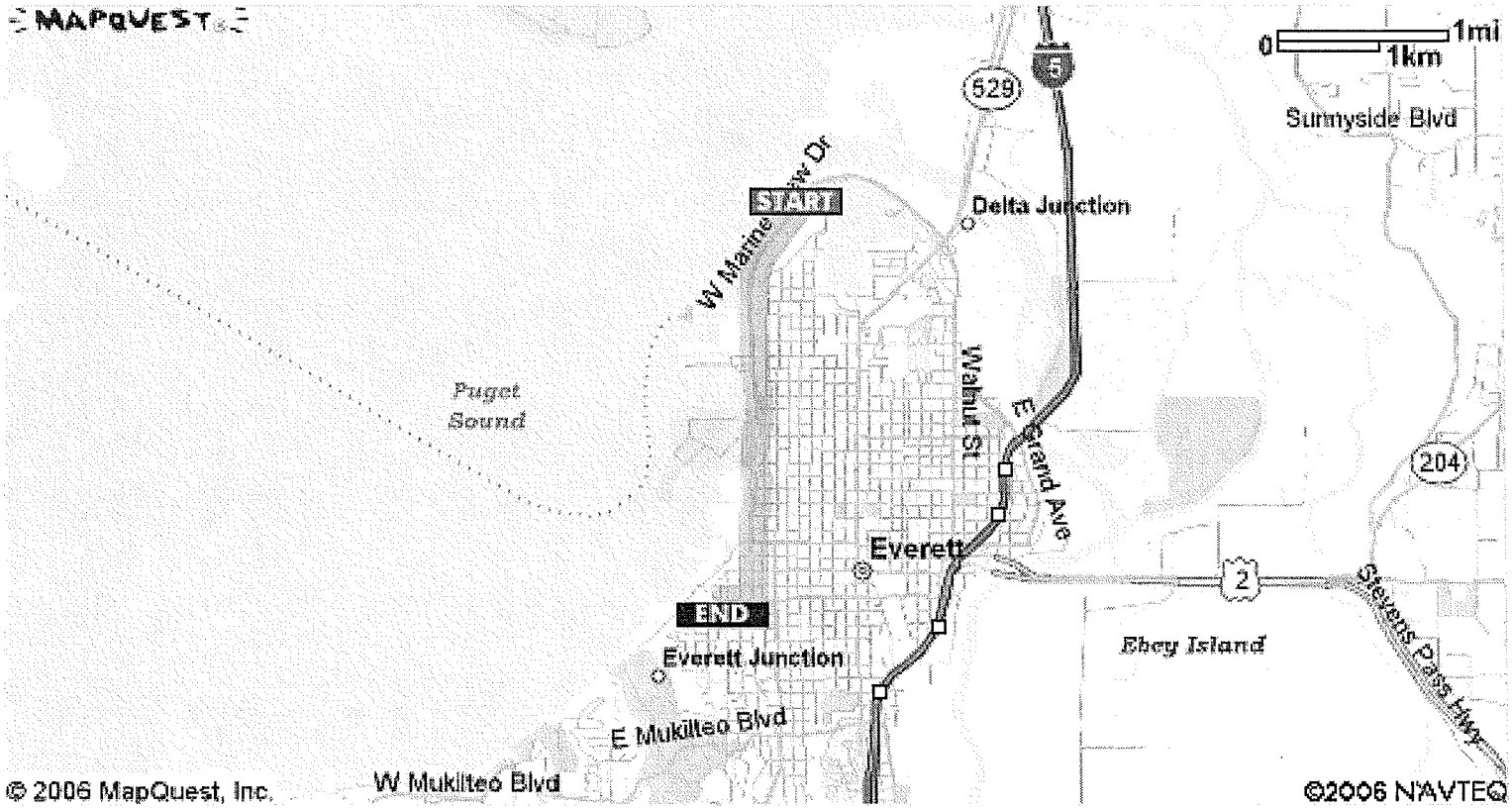
Start:
300 W Marine View Dr
Everett, WA 98201-1030, US

End:
900 Pacific Ave
Everett, WA 98201-4168, US

Notes:

Directions	Distance
Est. Time: 6 minutes **Total Est. Distance:** 2.89 miles	
1: Start out going SOUTH on W MARINE VIEW DR / WA-529 toward 10TH ST. Continue to follow W MARINE VIEW DR.	2.7 miles
2: Turn RIGHT onto PACIFIC AVE.	0.1 miles
3: End at **900 Pacific Ave** Everett, WA 98201-4168, US	

Total Est. Time: 6 minutes **Total Est. Distance:** 2.89 miles



Start:
300 W Marine View Dr
Everett, WA 98201-1030, US

End:
900 Pacific Ave
Everett, WA 98201-4168, US

APPENDIX D

PARCEL INFORMATION

Snohomish County Washington — Online Government Information & Services

* R E A L * Property Information

County Home Assessor Home Treasurer Home Information on which Department to contact

Please view Disclaimer **If you have questions, comments or suggestions, please Contact Us.**

Date/Time:8/31/2007 4:02:39 PM Answers to Frequently Asked Questions about Parcel Data (opens as new window)

Return to Property Information Entry page

Parcel Number **29050700100400** Prev Parcel Reference **07290510040009**

View Map of this parcel (opens as new window)

General Information

Taxpayer Name || Address (contact the Treasurer if you have questions)

JELD-WEN OF EVERETT INC || PO BOX 1329 - - - KLAMATH FALLS, OR 97601

If the above mailing address is incorrect and you want to make a change, see the information on Name and Address Changes

Owner Name || Address (contact the Assessor if you have questions)

JELD-WEN OF EVERETT INC || 401 HARBOR ISLES BLVD - - - KLAMATH FALLS, OR 97601

If the above name and address is incorrect due to a recent sale, please see the information on Name and Address Changes After a Sale

Street (Situs) Address (contact the Assessor if you have questions)

300 W MARINE VIEW DR - - - EVERETT, WA 98201-1030

Parcel Legal Description

SEC 07 TWP 29 RGE 05 ALL TH PTN OF GOVT LOTS 1 & 2 & TDLNS LY IN FRONT THOF DAF COM 1/4 COR ON E SIDE OF SD SEC TH S88*58 38W 675.81FT TO WLY R/W LN OF NPRR CO TH S32*42 38W ALG SD N & WLY BDY LN OF SD R/W 75.41FT TH N45*47 22W 40.82FT TO TPB TH CONT ON SAME STRT LN 1428.54FT TH S44*13 56W 688.27FT TH S45*47 22E 281.04FT TH S48*15 22E 282.50FT TH S48*26 22E 156.03FT TH N30*28 38E 184.21FT TH S45*47 22E 853.08FT TAP ON NWLY R/W OF W MARINE VIEW DR TH N32*42 38E 500FT TO TPB TGW BEG AT E1/4 COR TH S88*58 38W 675.81FT TH S32*42 38W 75.41FT TH N45*47 22W 40.82FT TO W MGN MARINE VIEW DR TPB TH SLY ALG W MGN SD RD 100FT TH N45*47 22W TO SLY MGN RR SPUR TH SELY & ELY ALG RR SPUR TAP N45*47 22W OF TPB TH S45*47 22E TO TPB

Go to top of page

Treasurer's Tax Information

Taxes For answers to questions about Taxes, please contact the Treasurer's office (opens as new window)

2007 Taxes for this parcel $53,662.01

(Taxes may include Surface Water Management and/or State Forest Fire Patrol fees. LID charges, if any, are not included.)

To obtain a duplicate tax statement, either download our Tax Statement Request form or call 425-388-3366 to request it by phone.

Go to top of page

Assessor's Property Data

Characteristics and Value Data below are for 2007 tax year.

Snohomish County Washington — Online Government Information & Services

* R E A L * Property Information

County Home Assessor Home Treasurer Home Information on which Department to contact

Please view Disclaimer **If you have questions, comments or suggestions, please** Contact Us.

Date/Time:8/31/2007 4:05:28 PM Answers to Frequently Asked Questions about Parcel Data (opens as new window)

Return to Property Information Entry page

Parcel Number **29050700400100** Prev Parcel Reference **07290540010006**

View Map of this parcel (opens as new window)

General Information

Taxpayer Name || Address (contact the Treasurer if you have questions)

JELD-WEN OF EVERETT INC || PO BOX 1329 - - - KLAMATH FALLS, OR 97601

If the above mailing address is incorrect and you want to make a change, see the information on Name and Address Changes

Owner Name || Address (contact the Assessor if you have questions)

JELD-WEN OF EVERETT INC || ATTN PROPERTY TAX DEPT - PO BOX 1329 - - KLAMATH FALLS, OR 97601

If the above name and address is incorrect due to a recent sale, please see the information on Name and Address Changes After a Sale

Street (Situs) Address (contact the Assessor if you have questions)

300 W MARINE VIEW DR - - - EVERETT, WA 98201-1030

Parcel Legal Description

SEC 07 TWP 29 RGE 05 BEG 1/4 COR E SIDE SEC 7 TH S88*58 38W ALG S LN GOVT LOT 1 675.81FT TO BDY NP R/W TH S32*42 38W ALG SD R/W 675.47FT TO TPB TH S32*42 38W 500FT TH N45*47 22W 873.84FT TH N30* 28 38E 320.17FT TH N48*26 22W 156. 03FT TH N48*15 22W 282.5FT TH N45* 47 22W 874.7FT TH NELY ALG GOVT PIER HEAD LN N51*00 00E 199.72FT TH S45*47 22 E 2139.36FT TO TPB LESS STRIP 50FT M/L WIDE & 395.8FT LONG SELY SIDE OF TR & LESS 40.8FT STRIP 500FT LONG AS MEAS ON WLY LN NP R/W AS CITY RDWY LESS ANY PTN THOF LY WLY FDL = ALL TH PTN OF GOVT LOTS 1 & 2 & TDLNS LY IN FRONT THOF DAF COM 1/4 COR ON E SIDE OF SD SEC TH S88*58 38W 675.81FT TO WLY R/W LN OF NPRR CO TH S32*42 38W ALG SD N & WLY BDY LN OF SD R/W 175.41FT TH N45*47 22W 40.82FT TO TPB TH CONT ON SAME STRT LN 1428.54FT TH S44*13 56W 688.27FT TH S45*47 22E 281.04FT TH S48*15 22E 282.50FT TH S48*26 22E 156.03FT TH N30*28 38E 184.21FT TH S45*47 22E 853.08FT TAP ON NWLY R/W OF W MARINE VIEW DR TH N32*42 38E 500FT TO TPB ALSO LESS ALL TH PTN OF TDLNS LY IN FRONT OF GOVT LOTS 1 & 2 DAF COM AT 1/4 COR OF E SD OF SEC TH S88*58 38W 675.81FT TO WLY R/W LN OF NPRR CO TH S32*42 38W ALG SD N & WLY BDY LN OF SD R/W 175.41FT TH N45*47 22W 1469.36FT TO TPB TH S44*13 56W 688.27FT TH N45*47 22W 593.66FT TO GOVT PIERHEAD LN TH N51*00 00E 553.93FT TH N64*00 00E 146.90FT TH S45*47 22E 478.70FT TO TPB

Go to top of page

Treasurer's Tax Information

Taxes For answers to questions about Taxes, please contact the Treasurer's office (opens as new window)

2007 Taxes for this parcel $36,697.43

(Taxes may include Surface Water Management and/or State Forest Fire Patrol fees. LID charges, if any, are not included.)
To obtain a duplicate tax statement, either download our Tax Statement Request form or call 425-388-3366 to request it by phone.

Go to top of page

Assessor's Property Data Characteristics and Value Data below are for 2007 tax year.

Please contact the Treasurer's office for answers to questions about Taxes (opens as new window)

For questions ONLY about property characteristics or property values (NOT taxes), please contact the Assessor's Office

Property Values

Values do not reflect adjustments made due to an exemption, such as a senior or disabled persons exemption.
Reductions for exemptions are made on the property tax bill.

Tax Year	Market Land	Market Improvement	Market Total
2007	$2,925,600	$527,700	$3,453,300

Pending Property Values

Tax Year	Market Land	Market Improvement	Market Total
2008	$4,019,500	$575,800	$4,595,300

Go to top of page

Valuation and Property Tax History

View History (opens as new window)

Go to top of page

Property Characteristics

Tax Code Area (TCA) **00010** View Taxing Districts for this Parcel (opens as new window)

Use Code **242 Sawmills & Planing Mills**

Size Basis **ACRE** Size **12.72** (Size may include undivided interest in common tracts and road parcels)

Go to top of page

Property Structures

Type	Yr.Built	Structure Description
Commercial	**1918**	**Bld 1A NORD JELD WEN** View Structure Data (opens as new window)
Commercial	**1973**	**Bld 5A Office Bld** View Structure Data (opens as new window)

Go to top of page

Property Sales since 7/31/1999

Explanation of Sales Information (opens as new window)

Sales data is based solely upon excise affidavits processed by the Assessor.

No sales for this parcel have been recorded since 7/31/1999

Go to top of page

Property Maps Township/Range/Section/Quarter, links to maps

Neighborhood **5306000** Explanation of Neighborhood Code (opens as new window)

Township **29** Range **05** Section **07** Quarter **SE** Find parcel maps for this Township/Range/Section

View Map of this parcel (opens as new window)

Snohomish County Washington — Online Government Information & Services

* R E A L * Property Information

County Home Assessor Home Treasurer Home Information on which Department to contact

Please view Disclaimer **If you have questions, comments or suggestions, please** Contact Us.

Date/Time:8/31/2007 4:07:19 PM Answers to Frequently Asked Questions about Parcel Data (opens as new window)

Return to Property Information Entry page

Parcel Number **29050700101200** Prev Parcel Reference **07290510120009**

View **Map of this parcel** (opens as new window)

General Information

Taxpayer Name || Address (contact the Treasurer if you have questions)

JELD-WEN OF EVERETT INC || 401 HARBOR ISLES BLVD - - - KLAMATH FALLS, OR 97601

If the above mailing address is incorrect and you want to make a change, see the information on Name and Address Changes

Owner Name || Address (contact the Assessor if you have questions)

JELD-WEN OF EVERETT INC || 401 HARBOR ISLES BLVD - - - KLAMATH FALLS, OR 97601

If the above name and address is incorrect due to a recent sale, please see the information on Name and Address Changes After a Sale

Street (Situs) Address (contact the Assessor if you have questions)

222 W MARINE VIEW DR - - - EVERETT, WA 98201-1029

Parcel Legal Description

SEC 07 TWP 29 RGE 05 ALL TH PTN OF TDLNS LY IN FRONT OF GOVT LOTS 1 & 2 DAF - COM AT 1/4 COR ON E SD OF SEC TH S88*58 38W 675.81FT TO WLY R/W LN OF NPRR CO TH S32*42 38W ALG SD N & WLY BDY LN OF SD R/W 175.41FT TH N45*47 22W 1469.36FT TO TPB TH S44*13 56W 688.27FT TH N45*47 22W593.66FT TO GOVT PIERHEAD LN TH N51*00 00E 553.93FT TH N64*00 00E 146.90FT TH S45*47 22E 478.70FT TO TPB

Go to top of page

Treasurer's Tax Information

Taxes For answers to questions about Taxes, please contact the Treasurer's office (opens as new window)

2007 Taxes for this parcel $25,147.19

(Taxes may include Surface Water Management and/or State Forest Fire Patrol fees. LID charges, if any, are not included.)

To obtain a duplicate tax statement, either download our Tax Statement Request form or call 425-388-3366 to request it by phone.

Go to top of page

Assessor's Property Data

Characteristics and Value Data below are for 2007 tax year.

Please contact the Treasurer's office **for answers to questions about Taxes** (opens as new window)

For questions ONLY about property characteristics or property values (NOT taxes), please contact the Assessor's Office

Property Values

Values do not reflect adjustments made due to an exemption, such as a senior or disabled persons exemption.
Reductions for exemptions are made on the property tax bill.

Tax Year	Market Land	Market Improvement	Market Total
2007	**$1,296,400**	**$1,070,000**	**$2,366,400**

Pending Property Values

Tax Year	Market Land	Market Improvement	Market Total
2008	**$1,692,000**	**$1,094,700**	**$2,786,700**

Go to top of page

Valuation and Property Tax History

View History (opens as new window)

Go to top of page

Property Characteristics

Tax Code Area (TCA) **00010** View Taxing Districts for this Parcel (opens as new window)

Use Code **292 Paving & Roofing Materials**

Size Basis **ACRE** Size **6.09** (Size may include undivided interest in common tracts and road parcels)

Go to top of page

Property Structures

Type	Yr.Built	Structure Description
Commercial	**1995**	**RINKER MATERIALS NORTH PLANT** View Structure Data (opens as new window)

Go to top of page

Property Sales since 7/31/1999

Explanation of Sales Information (opens as new window)

Sales data is based solely upon excise affidavits processed by the Assessor.

No sales for this parcel have been recorded since 7/31/1999

Go to top of page

Property Maps Township/Range/Section/Quarter, links to maps

Neighborhood **5306000** Explanation of Neighborhood Code (opens as new window)

Township **29** Range **05** Section **07** Quarter **NE** Find parcel maps for this Township/Range/Section

View Map of this parcel (opens as new window)

Snohomish County Washington — Online Government Information & Services

* R E A L * Property Information

County Home Assessor Home Treasurer Home Information on which Department to contact

Please view Disclaimer **If you have questions, comments or suggestions, please Contact Us.**

Date/Time:8/31/2007 4:08:23 PM Answers to Frequently Asked Questions about Parcel Data (opens as new window)

Return to Property Information Entry page

Parcel Number **29050700401900** Prev Parcel Reference **07290540190006**

View **Map of this parcel** (opens as new window)

General Information

Taxpayer Name || Address (contact the Treasurer if you have questions)

JELD-WEN OF EVERETT INC || PO BOX 1329 - - - KLAMATH FALLS, OR 97601

If the above mailing address is incorrect and you want to make a change, see the information on Name and Address Changes

Owner Name || Address (contact the Assessor if you have questions)

JELD-WEN OF EVERETT INC || ATTN PROPERTY TAX DEPT - PO BOX 1329 - - KLAMATH FALLS, OR 97601

If the above name and address is incorrect due to a recent sale, please see the information on Name and Address Changes After a Sale

Street (Situs) Address (contact the Assessor if you have questions)

UNKNOWN UNKNOWN - - -

Parcel Legal Description

SEC 07 TWP 29 RGE 05 BEG AT E1/4 COR OF SEC 7 TH S88*58 38W ALG N LN OF GOVT LOT 2 FOR 675.81FT TO W LN OF THE ABANDONED R/W OF NP/RR CO TH S32*42 38W ALG SD W R/W LN 1175.47FT TH N45*47 22W 40.82FT TO A PT ON W R/W LN OF NORTON AVE TPB TH CONT N45*47 22W 867.27FT TH S44*12 38W 712.80FT TH S72*32 39E 1028.19FT TO A PT ON W R/W LN OF NORTON AVE TH N32*42 38E ALG W R/W LN OF NORTON AVE FOR 255.06FT TPB

Go to top of page

Treasurer's Tax Information

Taxes For answers to questions about Taxes, please contact the Treasurer's office (opens as new window)

2007 Taxes for this parcel $4,501.50

(Taxes may include Surface Water Management and/or State Forest Fire Patrol fees. LID charges, if any, are not included.)

To obtain a duplicate tax statement, either download our Tax Statement Request form or call 425-388-3366 to request it by phone.

Go to top of page

Assessor's Property Data

Characteristics and Value Data below are for 2007 tax year.

Please contact the Treasurer's office **for answers to questions about Taxes** (opens as new window)

For questions ONLY about property characteristics or property values (NOT taxes),

please contact the Assessor's Office

Property Values

Values do not reflect adjustments made due to an exemption, such as a senior or disabled persons exemption.
Reductions for exemptions are made on the property tax bill.

Tax Year	Market Land	Market Improvement	Market Total
2007	**$423,600**	**$0**	**$423,600**

Pending Property Values

Tax Year	Market Land	Market Improvement	Market Total
2008	**$524,200**	**$0**	**$524,200**

Go to top of page

Valuation and Property Tax History

View History (opens as new window)

Go to top of page

Property Characteristics

Tax Code Area (TCA) **00010** View Taxing Districts for this Parcel (opens as new window)

Use Code **910 Undeveloped (Vacant) Land**

Size Basis **ACRE** Size **10.00** (Size may include undivided interest in common tracts and road parcels)

Go to top of page

Property Structures

No structures found for this parcel

Go to top of page

Property Sales since 7/31/1999

Explanation of Sales Information (opens as new window)

Sales data is based solely upon excise affidavits processed by the Assessor.

No sales for this parcel have been recorded since 7/31/1999

Go to top of page

Property Maps Township/Range/Section/Quarter, links to maps

Neighborhood **5306000** Explanation of Neighborhood Code (opens as new window)

Township **29** Range **05** Section **07** Quarter **SE** Find parcel maps for this Township/Range/Section

View Map of this parcel (opens as new window)

Snohomish County Washington — Online Government Information & Services

* R E A L * Property Information

County Home | Assessor Home | Treasurer Home | Information on which Department to contact

Please view Disclaimer | **If you have questions, comments or suggestions, please** Contact Us.

Date/Time:4/11/2008 11:49:01 AM | Answers to Frequently Asked Questions about Parcel Data (opens as new window)

Return to Property Information Entry page

Parcel Number **29050700402000** Prev Parcel Reference **07290540200003**

View Map of this parcel (opens as new window)

General Information

Taxpayer Name || Address (contact the Treasurer if you have questions)

JELD-WEN OF EVERETT INC || PO BOX 1329 - - - KLAMATH FALLS, OR 97601

If the above mailing address is incorrect and you want to make a change, see the information on Name and Address Changes

Owner Name || Address (contact the Assessor if you have questions)

JELD-WEN OF EVERETT INC || ATTN PROPERTY TAX DEPT - PO BOX 1329 - - KLAMATH FALLS, OR 97601

If the above name and address is incorrect due to a recent sale, please see the information on Name and Address Changes After a Sale

Street (Situs) Address (contact the Assessor if you have questions)

UNKNOWN UNKNOWN - - -

Parcel Legal Description

SEC 07 TWP 29 RGE 05 BEG AT E1/4 COR OF SEC 7 TH S88*58 38W ALG N LN OF GOVT LOT 2 FOR 675.81FT TO W LN OF ABANDONED R/W OF NP/RR CO TH S32*42 38E ALG W R/W LN 1430.53FT TH N45*47 22W FOR 40.82FT TO A PT ON THE W R/W LN OF NORTON AVE AT WH PT IS THE NE COR OF THAT TR CONVYD TO CITY OF EVERETT AUD NO 2307405 TH N72*32 39W 8.29FT TO NW COR OF SD TR CONVYD TO THE CITY OF EVERETT TPB TH CONT N72*32 39W 1019.90FT TH S47*08 58E FOR 987.39FT TO A PT ON W R/W LN OF NORTON AVE TH N32*42 38E ALG W R/W LN OF NORTON AVE 65.78FT TH S57*17 22E ALG W R/W LN OF NORTON AVE 12FT TO SW COR OF SD TR TH N32*42 38E ALG W LN FOR 376.4FT TPB

Go to top of page

Treasurer's Tax Information

Taxes For answers to questions about Taxes, please contact the Treasurer's office (opens as new window)

2008 Taxes for this parcel $835.48

(Taxes may include Surface Water Management and/or State Forest Fire Patrol fees. LID charges, if any, are not included.) To obtain a duplicate tax statement, either download our Tax Statement Request form or call 425-388-3366 to request it by phone.

Go to top of page

Assessor's Property Data

Characteristics and Value Data below are for 2008 tax year.

Please contact the Treasurer's office for answers to questions about Taxes (opens as new window)

For questions ONLY about property characteristics or property values (NOT taxes), please contact the Assessor's Office

Property Values

Values do not reflect adjustments made due to an exemption, such as a senior or disabled persons exemption.
Reductions for exemptions are made on the property tax bill.

Tax Year	2008	Market Land	$87,500	Market Improvement	$0	Market Total	$87,500

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Valuation, Payment, and Property Tax History

View History (opens as new window)

Go to top of page

Property Characteristics

Tax Code Area (TCA) **00010** View Taxing Districts for this Parcel (opens as new window)

Use Code **939 Other Water Areas, NEC**

Size Basis **ACRE** Size **5.00** (Size may include undivided interest in common tracts and road parcels)

Go to top of page

Property Structures

No structures found for this parcel

Go to top of page

Property Sales since 7/31/1999

Explanation of Sales Information (opens as new window)

Sales data is based solely upon excise affidavits processed by the Assessor.

No sales for this parcel have been recorded since 7/31/1999

Go to top of page

Property Maps Township/Range/Section/Quarter, links to maps

Neighborhood **5306000** Explanation of Neighborhood Code (opens as new window)

Township **29** Range **05** Section **07** Quarter **SE** Find parcel maps for this Township/Range/Section

View Map of this parcel (opens as new window)

APPENDIX E

2006 SEPA CHECKLIST PREPARED FOR JELD-WEN AND THE PORT OF EVERETT

ENVIRONMENTAL CHECKLIST

Purpose of Checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply". Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply". In additional, complete the Supplemental Sheet for Nonproject actions (part D).

For nonproject actions, the references in the checklist to the words "project", "applicant", and "property or site" should be read as "proposal", "proposer", and "affected geographic area", respectively.

A. Background

1. Name of proposed project, if applicable:

Jeld-Wen Waterfront Redevelopment Comprehensive Plan Map Change, Planned Development Overlay Rezone and Shoreline Designation Change.

2. Name of applicant:

Applicant and Owner
Jeld-Wen, Inc, and Eagle Crest

Co-Applicant and Owner
Port of Everett

3. Address and phone number of applicant and contact person:

Jeld-Wen, Inc
P.O. Box 1329
Klamath Falls, OR 97601

Contact Person: Stuart Woolley
Executive V.P.
541.923.0807

Port of Everett
P.O. Box 538
Everett, WA 98206

Contact Person: John Mohr
Executive Director
425.259.3164

Local Contact: Randy Blair
W & H Pacific
3350 Monte Villa Parkway
Bothell, WA 98021
425.951.4815

4. Date checklist prepared: ***June 26, 2006***

5. Agency requesting checklist:

CITY OF EVERETT

6. Proposed timing or schedule (including phasing, if applicable):

Considering that this is a non-project action following approval of the requested land use, zoning and shoreline designation and approval of the submitted Redevelopment Concept the applicant will subsequently prepare more detailed site investigations, technical and environmental evaluations, design guidelines and site plans to be submitted with a more specific development application. This subsequent development application will **also be subject to SEPA review.**

Regarding phasing, the project will be developed in multiple phases. The timing of development at this time is unknown.

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

   Yes, as described in item 6.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

   - ***Project Level SEPA environmental review.***
   - ***Environmental evaluation of existing buildings***
   - ***Environmental and geotechnical explanation of soils.***
   - ***Stormwater Management Plan***
   - ***Project Level evaluation regarding Compliance with the Federal Endangered Species Act.***
   - ***Technical and environmental analysis associated with the Marina***

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.

   Not aware of any.

10. List any government approvals or permits that will be needed for your proposal, if known.

    City of Everett

    - ***Comprehensive Plan Amendment and Zoning Change***
    - ***Shoreline Master Program Amendments***
    - ***Official Site Plan Approval to comply with Planned Development Zoning Overlay requirements***
    - ***Shoreline Substantial Development Permit***
    - ***Binding Site Plan***
    - ***Grading Permit***
    - ***Demolition Permits for existing structures***
    - ***Building Permits***
    - ***Utility Extensions***
    - ***Right-of-Way Use Permits***
    - ***Sign Permits***

State of Washington

- *401 Water Quality Certification Nationwide Permits*
- *Approval to Allow Temporary Exceedance of Water Quality Standards*
- *Hydraulic Project Approval*
- *Individual Stormwater Discharge Permit*

Federal

- *Army Corps of Engineers Nationwide Permit 3 – Bulkhead Maintenance and Repair**
- *Army Corps of Engineers Section 404 Permit – Work in Navigable Waters – In –water marina and new boat haul-out**
- *Army Corps of Engineers Section 10 Permit – New Dredging*
- *Endangered Species Act (ESA) Compliance – Biological Evaluation/Biological Assessments (BE/BA)*

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page.

This proposal is to change the City of Everett Comprehensive Plan Map of the Jeld-Wen and Port of Everett properties from Maritime Services with shoreline designations of Maritime Interim Aquatic Conservancy and Aquatic to the designation of waterfront commercial with a Shoreline Urban Multi-Use overlay. The zoning of the properties would be changed from Maritime Services (M-S) and Heavy Manufacturing (M-2) to Waterfront Commercial with a Planned Development Overlay. Following approval of these initial land use, zoning and shoreline re-designations, more detailed environmental and technical evaluations will be performed, a detailed site plan prepared and design guidelines. These documents will subsequently be submitted to the City for site plan approval. Following the site plan approval more detailed design and construction documents will be submitted to the City and other applicable agencies to obtain permits for construction.

Regarding site area, the gross acres of the Jeld-Wen property is 52.63 acres, of which approximately 36 acres is uplands. The gross acres of the Port Property is 41.32 acres, of which approximately 17 acres is uplands.

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known, if a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

The proposal is located in Section 7, T29N, R5E. Two of the street addresses associated with the properties are 200 West Marine View Drive and 200 West Marine View Drive, Everett, WA 98201. A vicinity map and color aerial photo are attached (Attachment "A"). A copy of the development concept is included in Attachment "B".

B. Environmental Elements

1. Earth

a. General description of the site (circle one): (Flat,) rolling, hilly, steep slopes, mountainous, other _____ .

b. What is the steepest slope on the site (approximate percent slope)?

With the exception of rip rap and retainment at the shoreland edges the properties predominately have a 1%- 3% slope.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

According to the Snohomish County Soil Conservation Service soil survey, the properties soils are classified as "Urban Land". This is predominately due to the historic filling of this area in the early 1900's. Based on the previous use of the Jeld-Wen property for manufacturing purposes, the property appears suitable for urban development.

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

There has been no past history or evidence of unstable soils on the site. With the future development plan application a geotechnical evaluation will be performed to provide technical data on the design criteria for structures, foundations, pavement, retaining walls, utility bedding and pier/piles, and shoreline protection, etc.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

Due to the relatively flat nature of the properties, upland site grading will be less than many other properties in the City. The dredging to expand the waterfront and accommodate the marina and upland site development grading will be addressed with subsequent development applications at the time of permit application with the City and other applicable agencies.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

As is the case with all earthwork, erosions could occur on the site if soils were left exposed during heavy or lengthy rain storms. Measures used to manage erosions will be described in the future project level environmental review.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

Approximately 95% of the Jeld-Wen uplands is currently paved or covered with "impervious structures. The Port of Everett property currently has little impervious surface, however the existing zoning on the Port property would permit up to 90% or more imperious surface.

The proposal will likely reduce the impervious service by 10% or more due to the provision of both public and private open space features.

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

The measures to reduce or control erosion will be addressed with the future redevelopment projects level review.

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.'

No emissions will occur as a result of this land use zoning and shoreline re-designation request. Subsequent applications will address this item.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

Not aware of any.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:

None proposed at this time due to the action requested. Following approval of the land use, zoning and shoreline designation more detailed evaluation will be performed and this item will be addressed in a subsequent SEPA review.

3. Water

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Yes. The Snohomish River Navigation Channel, adjacent shorelands and the Maulsby Wetlands which is located east of the West Marine View Drive.

2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

Yes, the proposal and associated Development Concept proposes a Marina (public and private), pedestrian access (public and private) and expanded water access (dredging) which is both public and private. This is illustrated on the Development Concept contained in Attachment "B".

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill materials.

The amount of fill or dredge material is not known at this time. The areas projected for fill and dredge activities associated with the Marina uses are shown on Attachment "B".

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No. Domestic and fire protection water service is provided by the City.

5) Does the proposal lie with a 100-year floodplain? If so, note location on the site plan.

No.

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No. Sanitary Sewer Service is provided by the City.

b. Ground

1) Will ground water be withdrawn, or will water be discharge to ground water? Give general description, purpose, and approximate quantities, if known.

No. Existing domestic and fire protection lines will serve the project from the City of Everett water system

2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals . . .; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

No waste materials will be discharged from the project.

c. Water Runoff (including storm water):

1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

The principal source of runoff on the property will be rainwater and snowmelt from impervious surfaces such as roof tops, parking areas and other paved areas.

There will also be the potential for runoff of petrochemicals from parking areas and boat storage. The project level environmental review will include a stormwater management plan addressing the best management practices to be utilized to minimize the influence of stormwater runoff from entering the ground or surface waters. Stormwater will be detained and discharged to the Port Gardner Channel.

2) Could waste materials enter ground or surface waters? If so, generally describe.

Yes, however on the Jeld-Wen property which is over 90% impervious it will be less since the majority of this site has an outdated stormwater system. With the exception of the western 6 acres, this site has no stormwater detention or

water quality treatment facilities. The Port property which is undeveloped has less storm water runoff in its current state. The project level environmental review as previously discussed in item C.1 will include a stormwater management plan addressing the best management practices to be utilized.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

The project level environmental review will include a stormwater management plan which will describe the best management practice and measures that will be used to reduce or control surface, ground and runoff water. In addition, future construction will be performed in accordance with applicable City, State and Federal permit conditions and standards.

4. Plants

a. Check or circle types of vegetation found on the site:
_X_ deciduous tree: alder, maple, aspen, other
_X_ evergreen tree: fir, cedar, pine, other
_X_ shrubs
_X_ grass
___ pasture
___ crop or grain
___ wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other
_X_ water plants: water lily, eelgrass, milfoil, other various aquatic plants (TBD)
___ other types of vegetation

b. What kind and amount of vegetation will be removed or altered?

There are very few trees on either the Jeld-Wen or Port properties. The exception is the approximately 2 acre uplands at the south end of the Jeld-Wen property. Approximately 25% or more of the trees are proposed to be retained on this 2 acre parcel. The Port property is predominately wild grasses and invasive shrub species. All of this vegetation is proposed to be removed with future construction.

c. List threatened or endangered species known to be on or near the site.

No aware of any.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Redevelopment of the site will include multiple landscape treatments which will include native and ornamental plant species of trees, shrubs and ground covers.

These include the potential 2 acres waterfront park at the south end of the Jeld-Wen property, the proposed linear park at West Marine View Drive, the public and private trail network along the shoreline and other open space features.

5. Animals

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

birds: ~~hawk~~, ~~heron~~, eagle, songbirds, ~~other:~~ bald eagles, gulls, kingfishers, turns and sea ducks will likely be found on or in the vicinity of the project site
mammals: deer, bear, elks, beaver, ~~other:~~ Harbor seals, sea lions and ~~others~~ otters utilize the waters near the site
fish: bass, ~~salmon~~, ~~trout~~, ~~herring~~, ~~shellfish~~, other:

b. List any threatened or endangered species known to be on or near the site.

Chinook Salmon, bull trout, and bald eagles are likely near the site. To our knowledge there are no known bald eagle nests on the site. The project level environmental review will include a plant and animal evaluation and assessment.

c. Is the site part of a migration route? If so, explain.

Yes. Migrating adult and juvenile salmonid species use the Snohomish River channel as a migration route. The project level environmental review will include an evaluation and assessment regarding any potential impact and applicable mitigation measures.

d. Proposed measure to preserve or enhance wildlife, if any:

The project level environmental review will include an evaluation and assessment of various methods to preserve or enhance wildlife as an element of redeveloping the site.

6. Energy and Natural Resources

a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Future redevelopment will require electrical power and natural gas for heating, lighting, appliance, space and water heating and other typical urban energy requirements.

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No.

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

Future site development will be designed to conform to applicable state and local energy code criteria.

7. Environmental Health

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal. If so, describe.

The potential for environmental health hazards on the Jeld-Wen site will be less than the previous door manufacturing uses on the site. Specific aspects of the environmental health hazards will be addressed in the subsequent project level environmental review.

1) Describe special emergency services that might be required.

With the exception of the marina uses, standard police, fire, and medical emergency services will be required in the event of accident, fire, environmental spill or unusual emergency event on the property. Police, fire, and emergency medical services will be provided by the City of Everett. The City of Everett has mutual aid agreements with adjacent jurisdictions.

2) Proposed measures to reduce or control environmental health hazards, if any:

Redevelopment of the Jeld-Wen site will result in replacing the old structures, buildings and inadequate infrastructure which was not designed and constructed to current environmental health standards. Future development will be subject to current environmental health standards. The project level review will address any needed special measures.

b. Noise

1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

Predominately the noise is related to vehicular traffic along West Marine View Drive and the railroad on the east side of this roadway.

2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Typical short term construction noise associated with demolition of existing structures and new construction activity associated with the proposed uses. Future demolition and construction activities will occur within the established hours and days of the week permitted by the City. Long term noise will be typical of other residential, marina, and commercial uses.

3) Proposed measures to reduce or control noise impacts, if any:

Construction activity will be limited to the City permitted construction hours and others which maybe required as conditions associated with State or Federal permits.

8. Land and Shoreline Use

a. What is the current use of the site and adjacent properties?

The Jeld-Wen site is currently used by Rinker to transport gravel which has been barged to the property. The previous door manufacturing facility on the remainder of the site is no longer in operation. The Port property is undeveloped. The properties immediately adjacent to the site are undeveloped. More specifically,; 1) North – undeveloped, 2) South – mudflats/tidelands, 3) West – water channel and 4) West Marine View Drive, Railroad and Maulsby Wetland

b. Has the site been used for agriculture? If so, describe.

No.

c. Describe any structures on the site.

The Jeld-Wen property contains numerous structures and buildings associated with the previous door manufacturing facility. There is also a barge dock at the west end of the site. In addition a new gravel processing building exists on the portion of site leased to Rinker. No structures exist on the Port Property.

d. Will any structures be demolished? If so, what?

It is anticipated that most all of the existing structures will be demolished. The project level environmental review will provide a description of all structures which will be demolished.

e. What is the current zoning classification of the site?

M-S Maritime Services and M-2 Heavy Manufacturing.

f. What is the current comprehensive plan designation of the site?

Maritime Services with a shoreline overlay of Urban Maritime Interim, Aquatic, and Aquatic Conservancy.

g. If applicable, what is the current shoreline master program designation of the site?

The Everett Shoreline Master Program designates the adjacent shoreline as Urban Maritime Interim, Aquatic and Aquatic Conservancy.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

None of the uplands portions of the site are classified as environmentally sensitive. The City notes in the Shoreline Plan that the Maulsby Mudflats is subject to special area planning to be conducted by the City and multiple property owners.

i. Approximately how many people would reside or work in the completed project?

Unknown at this time. The project level environmental review will provide information on the projected number of people who will work and or reside at the site.

j. Approximately how many people would the completed project displace?

No people currently reside on the property. The existing Rinker gravel operation will need to relocate. The number of on-site Rinker employees and truck drivers varies based on the economy and construction activity.

k. Proposed measures to avoid or reduce displacement impacts, if any:

The time period necessary to obtain permits for redevelopment of the property should be sufficient for Rinker to relocate its operation.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The proposed redevelopment will require the requested Comprehensive plan amendment, rezone and Shoreline Designation change to waterfront commercial with planned development overlay and an urban multi-use shoreline designation.

The proposal also includes a pedestrian trail and open space network consistent with the adopted Shoreline Public Access Plan (2003).

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

At this stage a specific development proposal has not been prepared. This is a non-project action initially requesting a change in the land use and zoning designations.

A copy of an initial development concept is enclosed (Attachment "B"). The residential uses will likely contain waterfront live/work units, low-rise, mid-rise and residential tower flats. Residential units will predominantly be for middle to *upper income.*

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

Not applicable. No residential units exist on the property.

c. Proposed measures to reduce or control housing impacts, if any:

During the future project level environmental review, the project will include a set of design guidelines for buildings, public and private open spaces, the Marina, waterfront, and a linear park along West Marine View Drive. At this time a historic Maritime Everett Waterfront theme is proposed.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The tallest height of any proposed structure is projected to be approximately eighty (80) feet. These are labeled residential tower flats on the Conceptual Plan (Attachment "B"). Exterior building materials would likely include wood, glass, metal, masonry block, and other contemporary finishes. As previously discussed in this checklist a set of architectural design guidelines will be prepared with the future development application. These guidelines will be established as binding conditions, covenants, and restrictions (CC & R's) for all development on the property. More detailed information on the varied building heights site plan and building materials will be provided during the project level environmental review.

b. What views in the immediate vicinity would be altered or obstructed?

Views in the immediate vicinity along West Marine View Drive will be altered. The alterations associated with both the Jeld-Wen and Port Property include the open space linear Park along the roadway. Regarding the Jeld-Wen property, the new buildings will be set back further from West Marine View Drive. The residences on the bluff east of the site along Alverson Blvd. are setback approximately 700 feet from the Jeld-Wen frontage along West Marine View Drive and setback 600-700 feet from the Port property. Some views from the residences on the bluff will likely be altered, however no ones **total view will be** *obstructed. Prior to the public hearings on this proposal the applicant intends to prepare and submit cross-sections and graphic simulations which illustrate the development and the potential view alterations. Also, more detailed information on this element will be proved during the project level environmental review.*

c. Proposed measure to reduce or control aesthetic impacts, if any:

As discussed in item 10.b. the linear park, water feature, setback of buildings from West Marine View Drive and provision of architectural design guidelines and CC & R's will reduce the aesthetic impacts. In addition the building height variation will assist for the residential element. It is also proposed that the building heights will be highest at the center of the Jeld-Wen site and tapering down in height toward the edges of the site. In addition, it is anticipated there will be a tapering down in height toward the water to reduce the alteration of views from the residences on the bluff.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

Redevelopment and new development will produce exterior and interior lighting, automobile headlights, street and parking lighting, grounds lighting and business sign lighting. Information on sources of light and glare will be provided during the project level environmental review.

b. Could light or glare from the finished project be a safety hazard or interfere with views?

The future redevelopment will change the type and location of lighting on the Jeld-Wen site and provide new lighting sources on the Port site. It is not anticipated that these sources will produce a safety hazard. These sources will alter the current condition along West Marine View Drive and from the residences on the bluff. Further review of these factors will be addressed in the project level environmental review.

c. What existing off-site sources of light or glare may affect your proposal?

Not aware of any which may affect the proposal.

d. Proposed measures to reduce or control light and glare impacts, if any:

The need for any special provisions to reduce or control light and glare will be identified during the project level environmental review and site plan review process.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

North View Park is located along West Marine View Drive approximately 900 linear feet south of the Jeld-Wen property. There is also a public park on the bluff along Alverson Blvd. The City's Legion Golf Course is located within approximately one mile northeast of the property.

b. Would the proposed project displace any existing recreation uses? If so, describe.

No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

The future redevelopment will improve active and informal recreation. These improvements include the potential 2 acre public waterfront park, linear park along West Marine View Drive, increased public shoreline access on the Port property with view points and increased shoreline access to the residents on the Jeld-Wen property. These improvements are consistent with the City of Everett Shoreline Public Access Plan.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

No.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

Not aware of any.

c. Proposed measures to reduce or control impacts, if any:

Not applicable.

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

West Marine View Drive provides primary access to the Jeld-Wen and Port Property.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

The site is not currently serviced by public transit. It appears Everett Transit may have at one time served the Jeld-Wen site when the manufacturing facility was in operation. This opinion is based on the fact that a Transit Shelter exists along the frontage with West Marine View Drive. Currently Everett Transits closest bus stop is approximately one mile south of the site. With future development it is anticipated enough potential ridership would warrant Everett Transit extending transit service to the site.

c. How many parking spaces would the completed project have? How many would the project eliminate?

With the future development proposal once a specific site plan is prepared and the mix of uses determined a projection of the number of parking spaces will be able to be identified. The existing parking spaces for the previous Jeld-Wen manufacturing facility will be redeveloped and replaced.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

New vehicular and pedestrian circulation improvements will be required for redevelopment. It is anticipated the vehicular circulation (streets/drives) will be private and maintained by a Property Owners Association (POA) and or a Home Owners Association (HOA). The specific location of these facilities will be shown on the future site plan. The site plan will be subject to City approval.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

The project concept includes both a private and public marina with boat slips intended to with improvements and dredging use the adjacent water channel.

These water uses are at this time projected to be primarily for recreational boat purposes. If the market warrants there is the possibility of tour boats, charter boats, and passenger boats. Further review of these factors will be addressed during the project level environmental review.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

Redevelopment of the site will increase vehicular trips per day. At this time the number, type and peak hour are not known. The project level environmental review will include a traffic analysis in accordance with the City traffic analysis criteria.

g. Proposed measures to reduce or control transportation impacts, if any:

The future project level environmental review will include measures to reduce or control transportation impacts. At a minimum those measures will include complying with the City Traffic Mitigation requirements.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

Yes. There will be an increased demand for public services over the current use of the property. These increases will predominantly relate to police and fire protection. It is not anticipated that the residential uses will attract a significant number of families or single parents with school age children. The project level environmental review will provide more information on the increased need for public services.

b. Proposed measures to reduce or control direct impacts on public services, if any:

The removal of the vacant existing buildings will remove a potential fire hazard. With redevelopment the provision of a comprehensive vehicular circulation network, along with updated fire protection devices and new structures built to code will reduce the impact on fire and police protection. The need for any special measures to reduce or control impacts on public services will be addressed as a part of the project level environmental review.

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse, service, telephone service, sanitary sewer, septic system, other.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

Extensions and some upgrades of the utilities noted in item 16.a. will be required to serve the future redevelopment of the property. The specifics regarding extensions and upgrades will be provided as a part of the project level environmental review.

C. Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Randy Blair - WHPacific

Date Submitted: June 30, 2009

D. Supplemental sheet for nonproject actions

(do not use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?

Redevelopment of the site for commercial, recreation and residential oriented mixed-use under the proposed comprehensive plan map change and rezone could potentially result in some increased discharge to water, emissions to air, and production of noise. The previously completed sections of this Environmental Checklist provide additional information regarding the potential for increased emissions, releases and discharges in each of these categories. However, it should also be noted that incremental redevelopment and use of the site that

would otherwise occur under its current comprehensive plan designation and zoning would potentially create equal or greater levels of these same types of discharges, emissions and releases. This is because the current comprehensive plan and zoning allow and promote use of the site for a wide range of more industrial and heavy manufacturing oriented uses. These uses typically produce proportionally more water, air, noise and toxic or hazardous emissions and substances than do the mix of uses allowed under the requested plan and zone change.

Proposed measures to avoid or reduce such increases are:

(1) Full compliance of the proposed mixed-use oriented site redevelopment with all applicable City of Everett Comprehensive plan provisions and related development regulations as they would be emended by the requested map change and PDO rezone; (2) Removal of nearly all the site's older structures and large industrial uses and replacement with lower polluting uses and structures that fully comply with the most current building, fire/safety and environmental codes; and (3) Implementation of any needed special emission/discharge reduction controls or requirements as part of the project level, site plan approval and environmental review process.

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

The proposal is not anticipated to have more adverse affects on plants, animals, fish or marine life than would the types of uses and intensity of development allowed under the current comprehensive plan designation and zoning. This is because the portions of the proposed site redevelopment described in the proposed concept for redevelopment now being evaluated that are most likely to have any significant affect on plants, animals, fish or marine life are already allowed by the current comprehensive plan and zoning. The one exception is the portion of the shoreline currently designated Aquatic Conservancy. The procedure to evaluate and change the shoreline use on the portions designated Urban Maritime Interim are similar for the existing and proposed land use designation and zoning.

Proposed measures to protect or conserve plants, animals, fish or marine life are:

(1) Removal of older existing structures and redevelopment with new stormwater management facilities will reduce impacts on aquatic plants, fish, and marine life; and (2) Implementation of any special measures determined to be needed to protect or conserve plants animals, fish or marine life near the site as part of the project level, site plan approval and environmental review process.

3. How would the proposal be likely to deplete energy or natural resources?

Master planned, mixed – use redevelopment of the site as would be allowed by the proposed comprehensive plan map change and PDO rezone is likely to result in the consumption of additional energy or natural resources. However it should also be noted that incremental redevelopment and intensified use of the site what would otherwise occur under its current comprehensive plan designation and zoning is likely to eventually consume equal or greater amounts of energy or other natural resources. This is because the current comprehensive plan and zoning allow and promote use of the site for a wide range of more industrial and heavy manufacturing oriented uses. These uses typically require substantial amounts of energy and other natural resources for their manufacturing and fabrication processes.

Proposed measures to protect or conserve energy and natural resources are:

(1) Redevelopment related replacement of the site's older structures with new buildings and improvements that comply with all of the most current building and energy conservation codes; and (2) Use of a pedestrian oriented, master planned redevelopment typically requires less energy per square foot of building space and will promote greater use of future public transit and reduce the number of peak hour auto trips to and from the site.

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

Refer to response in item 2. The proposal is not anticipated to have any substantial greater impact than the uses which are permitted under the current land use and zoning designations.

Proposed measures to protect such resources or to avoid or reduce impacts are:

(1) Removal of older existing structures, and redevelopment with new stormwater management facilities will reduce impacts on aquatic plants, fish and marine life; and (2) Implementation of any special mitigation measures identified during the project level, site plan approval and environmental review process as being needed to protect or conserve environmentally sensitive areas, fish resources or other government protected areas near the site.

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

The Jeld-Wen Corporation and the Port of Everett are requesting that the City of Everett approve an amendment to the Everett Comprehensive Plan Map and associated Zone Map affecting their respective properties.

The proposal is to change the comprehensive plan designation for the subject property from Maritime Service to Waterfront Commercial. The zone district would be changed from Maritime Services (M-S) and Heavy Manufacturing (M-2) to Waterfront Commercial with a Planned Development Overlay Zone allowing for a mix of residential, recreation and commercial uses. The future development application would include project specific design guidelines. This proposal would require the Shoreline Master Program be amended for the site from Urban Maritime Interim, Aquatic and Aquatic Conservancy to Urban Multi-Use. The purpose of the above map amendments is to allow for the redevelopment of this urban shoreline site for optimum land uses while restoring and improving some of the aquatic/biological functions associated within and near the site.

As shown on the conceptual diagram (Attachment 'B") the project will include a mix of residential and recreational uses with local commercial uses to support them. The residential uses will mainly be located on the Jeld-Wen portion of the site with recreational uses (public/private marina and public walk/bike ways), commercial and some residential uses on the Port portion of the site. The Jeld-Wen portion of the site would include residential low rise, mid rise and tower flats as illustrated in the Everett Comprehensive Plan. The dwelling units would be connected by a loop road and pedestrian trails. A private marina will be provided at the northwest end of this portion of the site. The structures will be oriented to allow for optimal view opportunities from the dwelling units to the water with building heights being highest at the center of the site and tapering down in height toward the northeast and southwest and toward the northwest end of the site. The tapering of height toward the north end of the site will also mitigate obstruction of views of Puget Sound from existing dwellings east of the site, on top of the bluff. The majority of the vehicular parking will be provided underneath the various housing structures to provide appropriate spacing between the buildings to include pedestrian friendly plazas and landscaping, thus enhancing the livability of that part of the site. The 2 acre wooded area at the southern end of the Jeld-Wen site will include a trail spur from the west Marine View Drive Trail to the western end of the site where a public viewpoint will be provided. This wooded area also provides the potential for another public waterfront park. In addition, a lineal park with water frontage is proposed along West Marine View Drive. Pedestrian access to the more public and commercial Port property would be provided by way of two bridges spanning an enhanced water body between the two ownerships. These proposed public access provisions exceed those recommended in the City of Everett Shoreline Public Access Plan.

Two vehicular access points from west Marine View Drive would be provided to the site.

A public walkway, vista lookouts, plazas for outdoor public events and the marina with public restroom facilities will be oriented to the north shore of the Port property These outdoor recreation opportunities will attract the general public to a village-like esplanade where necessary local commercial goods and services will be provided to support those activities, as well as provide for incidental needs of the development residents. This recreation and commercial hub of the development will help to create a waterfront public esplanade where local residents and the general public converge to create a lively, village-square atmosphere.

One road running through the center of the Port site provides access to dwelling units and commercial facilities with a turnaround at its northern end. Low-rise residential and waterfront live-work townhomes will also be located at the Port property. The low-rise multiple-family structures are located at the entry of the site and the live-work townhome units are west of the main road. Mixed use residential and ground floor commercial buildings are provided east of the main road and will be oriented toward the river mouth and the proposed marina to the north. The marina front commercial services and the live-work units will be readily accessible from pedestrian walkways and the main street, thus having ample exposure to pedestrian and vehicular traffic.

The marina will provide a mix of private and public boat slips for the residents of the Jeld-Wen/ Port neighborhood and the public. A parking lot for the general public will be located at the northeast corner of the site, just off of West Marine View Drive. This parking area will not only serve those who may be renting a boat slip at the marina, but also anyone interested in renting a small boat or walking along the waterfront commercial esplanade at the northern boundary of the site. One road running through the center of the Port site would provide access to dwelling units and commercial facilities with a turn-around at its northern end. Specific land uses planned along the northern boundary of the site will be commercial and residential mixed use with public restroom and natural/cultural interpretive facilities to support boat owners and those using the public pedestrian walkways.

Three public vista locations will be provided along the trail running along the north boundary of the site adjoining the public/private marina. Commercial uses at the ground floor of the mixed use buildings facing the marina could have retail and commercial service uses such as restaurant/sandwich shop, grocery sales, boat/bike rental service and fitness club. Commercial uses in the work-home units could include professional offices (i.e. lawyer, architect, accountant, real estate sales, caterer) as well as artists and craftsman.

In addition to the aforementioned a detailed explanation of how the requested plan map change area rezone will assist in implementing Comprehensive Plan policies is contained in the Narrative Statement portion of the "Comprehensive Plan Change and Rezone Application" for this proposal.

Proposed measures to avoid or reduce shoreline and land use impacts are:

(1) To obtain the requested comprehensive plan amendment and PDO rezone to ensure that redevelopment will be fully consistent with these changes and related development regulations; (2) Use of the City's discretionary site plan approval process to create a high quality, site redevelopment plan. (3) Provide improved public pedestrian access, (4) Provide linear park along West Marine View Drive (5) Provide potential 2 acres public waterfront park and (6) implement applicable elements of the City Shoreline Public Access Plan.

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

Redevelopment of the site for masterplanned, residential, recreation and commercial purposes will produce an increase in daily vehicular trips. This form of mixed-use development will also produce an increased demand for most types of public services (with the exception of schools because the type of residential units being proposed are not expected to attract a significant number of single parents or families with children) and it is anticipated utilities will need to be extended and potentially upgraded.

Proposed measures to reduce or respond to such demand(s) are:

(1) The proposed form of compact, pedestrian oriented, mixed-use site redevelopment will significantly reduce both the capital expense and ongoing operational costs of satisfying its demands for additional transportation, public services and urban utilities compared to the same amount of development carried out in a more conventional manner on either this site or on scattered sites throughout the City, (2) Compact, pedestrian oriented development of the site will also provide the opportunity to create a neighborhood with opportunities to live, work, obtain convenience services and recreate on-site. (3) Redevelopment of the site will also result in removal of the older, non-conforming buildings and replacement with new buildings and improvements that will comply with the most recent building, fire and other safety codes. The site will also be provided with a fully looped water system with adequate fire flow and new fire hydrants; and (4) the proposed site redevelopment will comply with all standard City transportation, public services and utility system impact mitigation requirements as well as any special requirements imposed as part of the site plan approval and project level environmental review process.

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

The future site plan and development applications will be required to demonstrate that it is capable of complying with applicable local, state, or federal laws and requirements for the protection of the environment before it can proceed to the final approval and construction permits. A more detailed project level environmental review will be conducted with a specific development application. The final design and construction documents will be modified as necessary to avoid conflicts with applicable environmental protection requirements as a result of this more detailed environmental review effort and site plan review process.

APPENDIX F

ECOLOGY'S DRAFT PUBLIC PARTICIPATION PLAN

Site Cleanup:

JELD-WEN SITE
(FORMERLY NORD DOOR)

300 West Marine View Drive
Everett, Washington

DRAFT PUBLIC PARTICIPATION PLAN

Prepared by:
Washington State Department of Ecology

WASHINGTON STATE
DEPARTMENT OF
ECOLOGY

October 2007

Ecology Publication #07-09-097

This plan is for you!

This public participation plan is prepared for the JELD-WEN site cleanup as part of the requirement of the Model Toxics Control Act (MTCA). The plan provides information about MTCA cleanup actions and requirements for public involvement, and identifies how Ecology and JELD-WEN will support public involvement throughout the cleanup. The plan is intended to encourage coordinated and effective public involvement tailored to the community's needs at JELD-WEN.

For additional copies of this document, please contact:

Washington State Department of Ecology
Sandra Caldwell, Ecology Project Coordinator
Toxics Cleanup Program
PO Box 47600
Olympia, WA 98504-7600
(360) 407-7209
Email: saca461@ecy.wa.gov

If you need this publication in an alternate format, please call the Toxics Cleanup Program at (360) 407-7170. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call (877) 833-6341 (TTY).

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Appendix A: Fact Sheet for Agreed Order and Public Participation Plan

1.0: Introduction and Overview of the Public Participation Plan

This Public Participation Plan explains how you can become involved in improving the health of your community. It describes public participation opportunities that will be conducted during the cleanup as part of a cooperative agreement between the Washington State Department of Ecology (Ecology) and JELD-WEN, Inc. (JELD-WEN), formerly Nord Door. This agreement, called an Agreed Order, is a legal document in which JELD-WEN and Ecology agree to decide on cleanup actions for the JELD-WEN site, located at 300 West Marine View Drive, in Everett, Washington. These cleanup actions, and the public participation process that helps guide it, are established in Washington's Model Toxics Control Act (MTCA).[1]

Under MTCA, Ecology is responsible for providing timely information and meaningful opportunities for the public to learn about and comment on important cleanup decisions before they are made. The goals of the public participation process are to promote understanding of the cleanup process so that the public has the necessary information to participate, and to encourage involvement through a variety of public participation opportunities.

This Public Participation Plan provides a framework for open dialogue about the cleanup among community members, Ecology, cleanup site owners, and other interested parties. It outlines basic MTCA requirements for community involvement activities that will help ensure that this exchange of information takes place during the investigation and cleanup, which include:

- Notifying the public about available reports and studies about the site;
- Notifying the public about review and comment opportunities during specific phases of the cleanup investigation;
- Providing appropriate public participation opportunities such as fact sheets to learn about cleanup documents, and if community interest exists, holding meetings to solicit input and identify community concerns; and
- Considering public comments received during public comment periods.

In addition to these basic requirements, the plan may include additional site-specific activities to meet the needs of your community. Based upon the type of the proposed cleanup action, the level of public concern, and the risks posed by the site, Ecology may decide that additional public involvement opportunities are appropriate.

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[1] The Model Toxics Control Act (MTCA) is the hazardous waste cleanup law for the State of Washington. The full text of the law can be found in Revised Code of Washington (RCW), Chapter 70.105D The legal requirements and criteria for public notice and participation during MTCA cleanup investigations can be found in Washington Administrative Code (WAC), Section 173-340-600.

These opportunities form the basis for the public participation process. The intent of this plan is to provide complete and current information to all interested parties, to let you know when there are opportunities to provide input, to listen to concerns, and to address those concerns.

Part of the Puget Sound Initiative

JELD-WEN is one of a number of sites in the Everett area and is part of a larger cleanup effort, called the Puget Sound Initiative (PSI). Governor Chris Gregoire and the Washington State Legislature authorized the PSI as a regional approach to protect and restore Puget Sound. The PSI includes cleaning up 50-60 contaminated sites within one-half mile of the Sound. These sites are grouped in several bays around the Sound for "baywide" cleanup efforts. As other sites in the Everett baywide area move forward into investigation and cleanup, information about them will be provided to the community as well as to interested people and groups.

Roles and Responsibilities

Ecology will lead public involvement activities, with support from JELD-WEN. Ecology maintains overall responsibility and approval authority for the activities outlined in this plan. Ecology and JELD-WEN are both responsible for cleanup at this site. JELD-WEN will conduct, and Ecology will oversee, all cleanup activities. Ecology will ultimately ensure that contamination on this site is reduced to concentrations that are established in state regulations and that protect human health and the environment, known as cleanup levels.

Organization of this Public Participation Plan

The sections that follow in this plan provide:

- Section 2: Background information about the JELD-WEN site;
- Section 3: An overview of the local community that this plan is intended to engage; and
- Section 4: Detailed public involvement opportunities in this cleanup.

This PPP addresses current conditions at the site, but it is intended to be a dynamic working document that will be reviewed at each phase of the cleanup, and updated as needed. Ecology and JELD-WEN urge the public to become involved in the cleanup process.

2.0: Site Background

Site Description and Location

The JELD-WEN site is located at 300 West Marine View Drive in Everett, Snohomish County, Washington. It is west of the Legion Memorial Golf Course and the American Legion Memorial Park (see Figure 1). The site is rectangular in shape, and approximately 47 acres in size. It is bounded by vacant industrial property (the Baywood property) to the north, Maulsby Mudflats to the south, Burlington Northern Railroad and West Marine View Drive to the east, and Port Gardner Bay to the west. The site is located in the vicinity of where the Snohomish River flows into Port Gardner Bay.

Figure 1: The JELD-WEN site is shown in the above map with a star, located at 300 W. Marine View Drive, in Everett, WA.

The City of Everett Comprehensive Plan land use map[2] indicates that the site is zoned industrial, for maritime services. Zoning to the east includes a small agricultural area, and residential single-family homes. Zoning to the west includes open water and parks (Jetty Island). The site is not located within the Everett Smelter area of historic arsenic contamination.

General Site History and Contaminants

The JELD-WEN site was a wooden door plant (Nord Door) prior to its closure in 2005. The property also had a machine shop, where parts were manufactured. Prior to construction of the wooden door plant, a portion of the property near West Marine View Drive was historically used as a pole treating facility. Chemicals formerly used on the site include petroleum products such as fuel oil, diesel and gasoline, toluene, parts cleaning solvents, thinners, polychlorinated biphenyls (PCBs), glues, and pentachlorophenol (a wood preserving fungicide also known as PCP). Additionally, creosote was used in the pole-treating operation. Contaminants from these activities may be present in site soil and water.

In 2006, JELD-WEN conducted soil and groundwater investigations on the site, and found the following contaminants at concentrations above MTCA cleanup levels:

- Petroleum compounds- in soil and groundwater
- Polynuclear aromatic hydrocarbons (PAHs), also known as creosote – in soil and groundwater
- Toluene - in soil and groundwater, and
- Benzene - in groundwater.

Further investigation will be done to fully characterize the contamination at the JELD-WEN site.

The Cleanup Process

Washington State's cleanup process and key opportunities for you to provide input are outlined in Figure 2. The general cleanup process includes the following steps:

- Remedial investigation (RI) - investigates the site for types, locations, and amounts of contaminants;
- Feasibility study (FS) - identifies cleanup options for those contaminants; and
- Cleanup action plan (CAP) – selects the preferred cleanup option and explains how cleanup will be conducted.

At any time during the cleanup process, an interim action may be conducted. An interim action partially addresses cleanup at the site and is usually followed by site-wide cleanup.

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[2] Planning and Community Development, City of Everett, WA
http://www.everettwa.org/Get_PDF.aspx?pdfID=339 (Accessed September 14, 2007)

Each of these steps will be documented in reports and plans that will be available for public review. Public comment periods of at least 30 calendar days are usually conducted for the following documents:

- Draft remedial investigation report;
- Draft feasibility study report; and
- Draft cleanup action plan.

These cleanup steps and documents are described in greater detail in the following subsections.

Interim Actions

Interim actions may be conducted during the cleanup if required by Ecology. An interim action partially addresses the cleanup of a site, and may be required if:

- It is technically necessary to reduce a significant threat to human health or the environment.
- It corrects a problem that may become substantially worse or cost substantially more to fix if delayed.
- It is needed to complete another cleanup activity, such as design of a cleanup plan.

Interim actions are not currently anticipated on the JELD-WEN site.

Remedial Investigation/Feasibility Study Report

JELD-WEN and Ecology have agreed to conduct a remedial investigation (RI) on the site. The RI determines which contaminants are on the site, where they are located, and whether there is a significant threat to human health or the environment. The draft RI report provides baseline data about environmental conditions that will be used to develop cleanup options. The feasibility study (FS) and report then identify and evaluate cleanup options, in preparation for the next step in the process.

The RI and FS processes typically include several phases:

- Scoping;
- Site characterization;
- Development and screening of cleanup alternatives;
- Treatability investigations (if necessary to support decisions); and
- Detailed analysis.

The RI and FS reports are expected to be combined into a draft JELD-WEN RI/FS report. The draft report will be made available for public review and comment. Comments will be considered as the draft cleanup action plan (CAP) is prepared.

Cleanup Action Plan

JELD-WEN and Ecology have agreed to develop a CAP for the site. After public comment on the draft RI/FS report, a preferred cleanup alternative will be selected. The draft CAP explains the cleanup standards that will be applied at the site, selects the preferred cleanup alternative(s), and outlines the work to be performed during the actual site remediation. The CAP may also evaluate the completeness and effectiveness of any interim actions that were performed on the site. The draft CAP will be available for public review and comment. Once public comments are reviewed and any changes are made, Ecology provides final approval and site cleanup can begin.

3.0: Community Profile

Community Profile

Everett is Snohomish County's largest city and the sixth largest city in the State of Washington. The current population of Everett is approximately 98,000 people[3] situated within 47.7 square miles. Located on Port Gardner Bay, Everett hosts the West Coast's second largest marina, U.S. Navy Homeport Naval Station Everett, and The Boeing Company's assembly plant. The city's 2006 labor workforce was more than 80,000, predominantly employed in technology, aerospace, and service-based industries.[4]

Key Community Concerns

An important part of the Public Participation Plan is to identify key community concerns for each cleanup site. The JELD-WEN site is industrial, but located near a residential area. The proximity of the community to the site is likely to raise concerns about how daily life and the future of the community will be affected during and after cleanup of the site.

Many factors may contribute to concerns, such as the amount of contamination, how the contamination will be cleaned up, or future use of the site. Community concerns often change over time, as new information is learned and questions are answered. Identifying site-specific community concerns at each stage of the cleanup process is helpful to ensure that they are adequately addressed. On-going key community concerns will be identified for the JELD-WEN site through public comments and other opportunities as detailed in Section 4.

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[3] US Census Bureau, City & Towns Estimates Data for July 1, 2006. http://www.census.gov/popest/estimates.php (Accessed September 12, 2007)

[4] City of Everett. http://www.everettwa.org/default.aspx?ID=314 (Accessed September 12, 2007)

4.0: Public Participation Opportunities

Ecology and JELD-WEN invite you to share your comments and participate in the cleanup in your community. As we work to meet our goals, we will evaluate whether this public participation process is successful. This section describes the public participation opportunities for this site.

Measuring Success

We want this public participation process to succeed in its goals. Success can be measured, at least in part, in the following ways:

- Number of written comments submitted that reflect understanding of the cleanup process and the site;
- Direct "in-person" feedback about the site cleanup or public participation processes, if public meetings are held; and
- Periodic updates to this plan to reflect community concerns and responses.

If we are successful, this process will increase:

- Community awareness about plans for cleanup and opportunities for public involvement;
- Public participation throughout the cleanup; and
- Community understanding regarding how their input will be considered in the decision-making process.

Activities and Information Sources

Ecology Contacts

Ecology is the lead contact for questions about the cleanup in your community. The Ecology staff identified in this section are familiar with the cleanup process and activities at the site. For more information about public involvement or about technical aspects of the cleanup, please contact:

For technical questions or comments:
Isaac Standen
Ecology Project Coordinator
WA State Dept. of Ecology
Toxics Cleanup Program
P.O. Box 47600
Olympia, WA 98504-7600
Phone: (360) 407-6776
E-mail: ista461@ecy.wa.gov

For public involvement questions or comments:
Sandra Caldwell
Ecology Project Coordinator
WA State Dept. of Ecology
Toxics Cleanup Program
P.O. Box 47600
Olympia, WA 98504-7600
Phone: (360) 407-7209
E-mail: saca461@ecy.wa.gov

Ecology's Webpage

Ecology has created a webpage to provide convenient access to information. Documents such as the Agreed Order, draft reports, and cleanup plans, are posted as they are issued during the investigation and cleanup process. Visitors to the webpage can find out about public comment periods and meetings; download, print, and read information; and submit comments via e- mail. The webpage also provides links to detailed information about the MTCA cleanup process. The JELD-WEN site webpage is available at the following address: http://www.ecy.wa.gov/programs/tcp/sites/jeld_wen_everett/jeld_everett_hp.htm

Information Centers/Document Repositories

The most comprehensive source of information about the JELD-WEN site is the information center, or document repository. Two repositories provide access to the complete list of site-related documents. All JELD-WEN investigation and cleanup activity reports will be kept in print at those two locations and will be available for your review. They can be requested on CD as well. Document repositories are updated before public comment periods to include the relevant documents for review. Documents remain at the repositories throughout the investigation and cleanup. For the JELD-WEN site, the document repositories and their hours are:

- **Everett Public Library**
  2702 Hoyt Ave.
  Phone: (425) 257-8010
  Hours: Mon.-Wed. 10 a.m.-9 p.m., Thurs.-Sat. 10 a.m.-6 p.m., Sun. 1-5 p.m.

- **WA Department of Ecology Headquarters**
  300 Desmond Dr.
  Lacey, WA 98504-7600
  By appointment. Please contact Carol Dorn at (360) 407-7224 or cdor461@ecy.wa.gov.

Public Comment Periods

Public comment periods provide opportunities for you to review and comment on major documents, such as the Agreed Order, the draft RI/FS report, and the draft CAP. The typical public comment period is 30 calendar days.

Notice of Public Comment Periods

Notices for each public comment opportunity will be provided by local newspaper and by mail. These notices indicate the timeframe and subject of the comment period, and

explain how you can submit your comments. For the JELD-WEN site, newspaper notices will be posted in The Daily Herald.

Notices are also sent by regular mail to the local community and interested parties. The community typically includes all residential and business addresses within one-quarter mile of the site, as well as potentially interested parties such as public health entities, environmental groups, and business associations.

Fact Sheets

One common format for public comment notification is the fact sheet. Like the newspaper notice, fact sheets explain the timeframe and purpose of the comment period, but also provide background and a summary of the document under review. One fact sheet has been prepared for the JELD-WEN site explaining the Agreed Order and this Public Participation Plan (See Appendix A). Future fact sheets will be prepared at key milestones in the cleanup process.

MTCA Site Register

Ecology produces an electronic newsletter called the MTCA Site Register. This semi-monthly publication provides updates of the cleanup activities occurring throughout the state, including public meeting dates, public comment periods, and cleanup-related reports. Individuals who would like to receive the MTCA Site Register can sign up three ways:

- Call (360) 407-6069
- Send an email request to ltho461@ecy.wa.gov or
- Register on-line at http://www.ecy.wa.gov/programs/tcp/pub_inv/pub_inv2.html

Mailing Lists

Ecology maintains both an e-mail and regular mail distribution list throughout the cleanup process. The list is created from carrier route delineations for addresses within one-quarter mile of the site, potentially interested parties, public meeting sign-in sheets, and requests made in person, or by regular mail or e-email. You may request to be on the mailing list by contacting Ecology's public involvement staff person listed earlier in this section.

Optional Public Meetings

A public meeting will be held during a comment period if requested by ten or more people, or if Ecology decides it would be useful. Public meetings provide additional opportunity to learn about the investigation or cleanup, and to enhance informed

comment. If you are interested in a public meeting about the JELD-WEN site, please contact the Ecology staff listed earlier in this section.

Submitting Comments

You may submit comments by regular mail or e-mail during public comment periods to the Ecology Project Manager and technical staff person listed earlier in this section.

Response to Comments

Ecology will review all comments submitted during public comment periods, and will modify documents as necessary. You will receive notice by regular mail or e-mail that Ecology has received your comments, along with a general explanation about how the comments were addressed, and where the revised document can be found.

Other

Ecology and JELD-WEN are committed to the public participation process and will consider additional means for delivering information and receiving comments.

Notification to Neighborhood Organizations

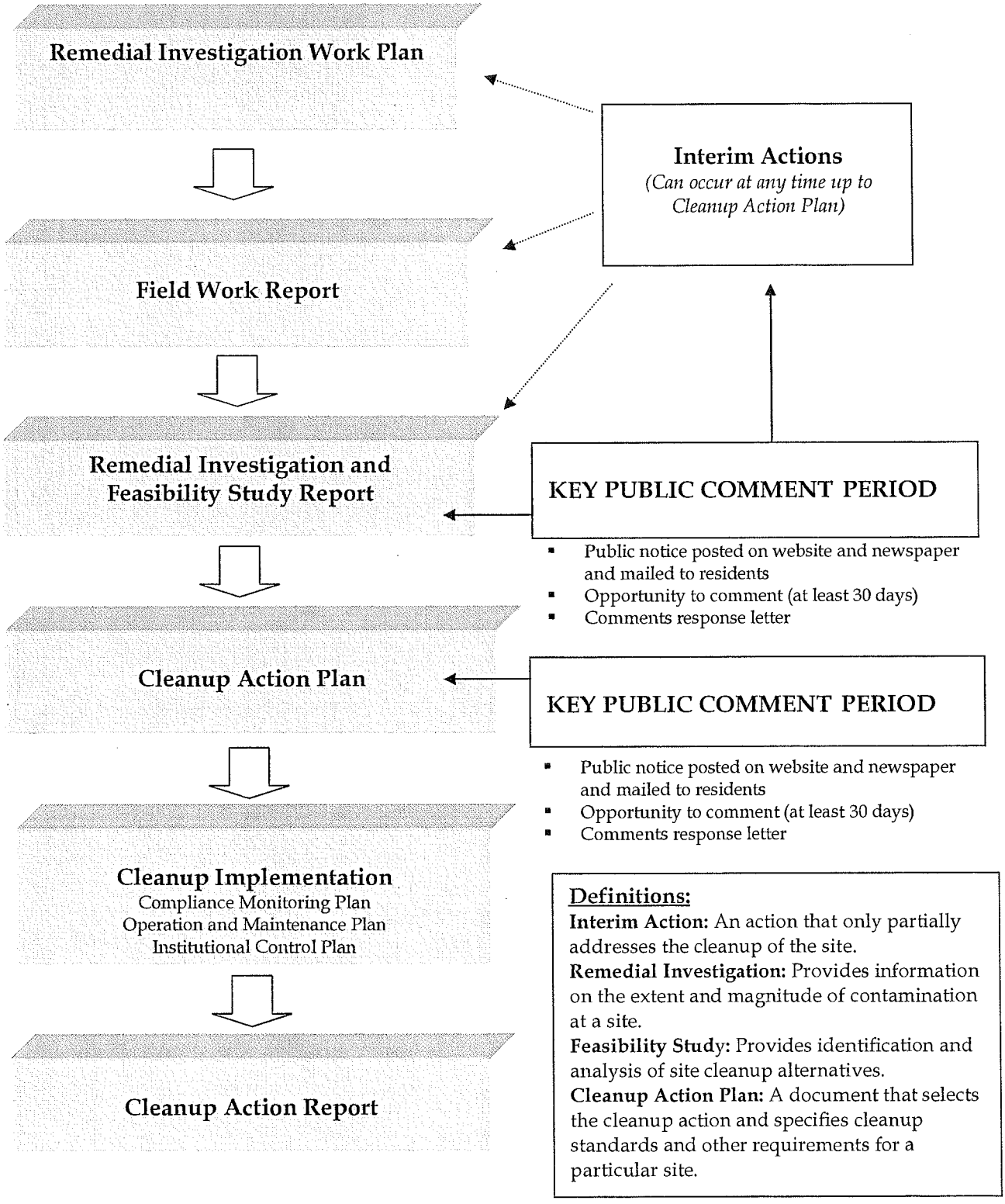
In addition to notification about cleanup activities, special notification to the community is triggered if JELD-WEN chooses to take land use actions. Local neighborhood organizations will be notified by telephone or by e-mail within one week of occurrence or confirmation of the following:

- Notification of the intent to transfer properties;
- Notification of public comment periods for development actions that will trigger State Environmental Policy Act (SEPA) and permitting requirements. All major documents will be submitted to the official document repositories; and
- Notification and stop work for any activities performed on the site that are not allowable under the restrictive covenant for the site.

Public Participation Grants

You are eligible to apply for a Public Participation Grant from Ecology to provide additional public participation activities. Those additional activities will not reduce the scope of the activities defined by this plan. Activities conducted under this plan would coordinate with the additional activities defined under the grant.

Figure 2: Washington State Cleanup Process



Glossary

Cleanup: The implementation of a cleanup action or interim action.

Cleanup Action: Any remedial action except interim actions, taken at a site to eliminate, render less toxic, stabilize, contain, immobilize, isolate, treat, destroy, or remove a hazardous substance that complies with cleanup levels; utilizes permanent solutions to the maximum extent practicable; and includes adequate monitoring to ensure the effectiveness of the cleanup action.

Cleanup Action Plan: A document that selects the cleanup action and specifies cleanup standards and other requirements for a particular site. The cleanup action plan, which follows the remedial investigation/feasibility study report, is subject to a public comment period. After completion of a comment period on the cleanup action plan, Ecology finalizes the cleanup action plan.

Cleanup Level: The concentration (or amount) of a hazardous substance in soil, water, air, or sediment that protects human health and the environment under specified exposure conditions. Cleanup levels are part of a uniform standard established in state regulations, such as MTCA.

Cleanup Process: The process for identifying, investigating, and cleaning up hazardous waste sites.

Contaminant: Any hazardous substance that does not occur naturally or occurs at greater than natural background levels.

Feasibility Study: Provides identification and analysis of site cleanup alternatives and is usually completed within a year. The entire Remedial Investigation/Feasibility Study process takes about two years and is followed by the cleanup action plan. Remedial action evaluating sufficient site information to enable the selection of a cleanup action plan.

Hazardous Site List: A list of ranked sites that require further remedial action. These sites are published in the Site Register.

Interim Action: Any remedial action that partially addresses the cleanup of a site. It is an action that is technically necessary to reduce a threat to human health or the environment by eliminating or substantially reducing one or more pathways for exposure to a hazardous substance at a facility; an action that corrects a problem that may become substantially worse or cost substantially more to address if the action is delayed; an action needed to provide for completion of a site hazard assessment, state remedial investigation/feasibility study, or design of a cleanup action.

Model Toxics Control Act: Refers to RCW 70.105D. Voters approved it in November 1988. The implementing regulation is WAC 173-340 and was amended in 2001.

Public Notice: At a minimum, adequate notice mailed to all persons who have made a timely request of Ecology and to persons residing in the potentially affected vicinity of the proposed action; mailed to appropriate news media; published in the local (city or county) newspaper of largest circulation; and the opportunity for interested persons to comment.

Public Participation Plan: A plan prepared under the authority of WAC 173-340-600 to encourage coordinated and effective public involvement tailored to the public's needs at a particular site.

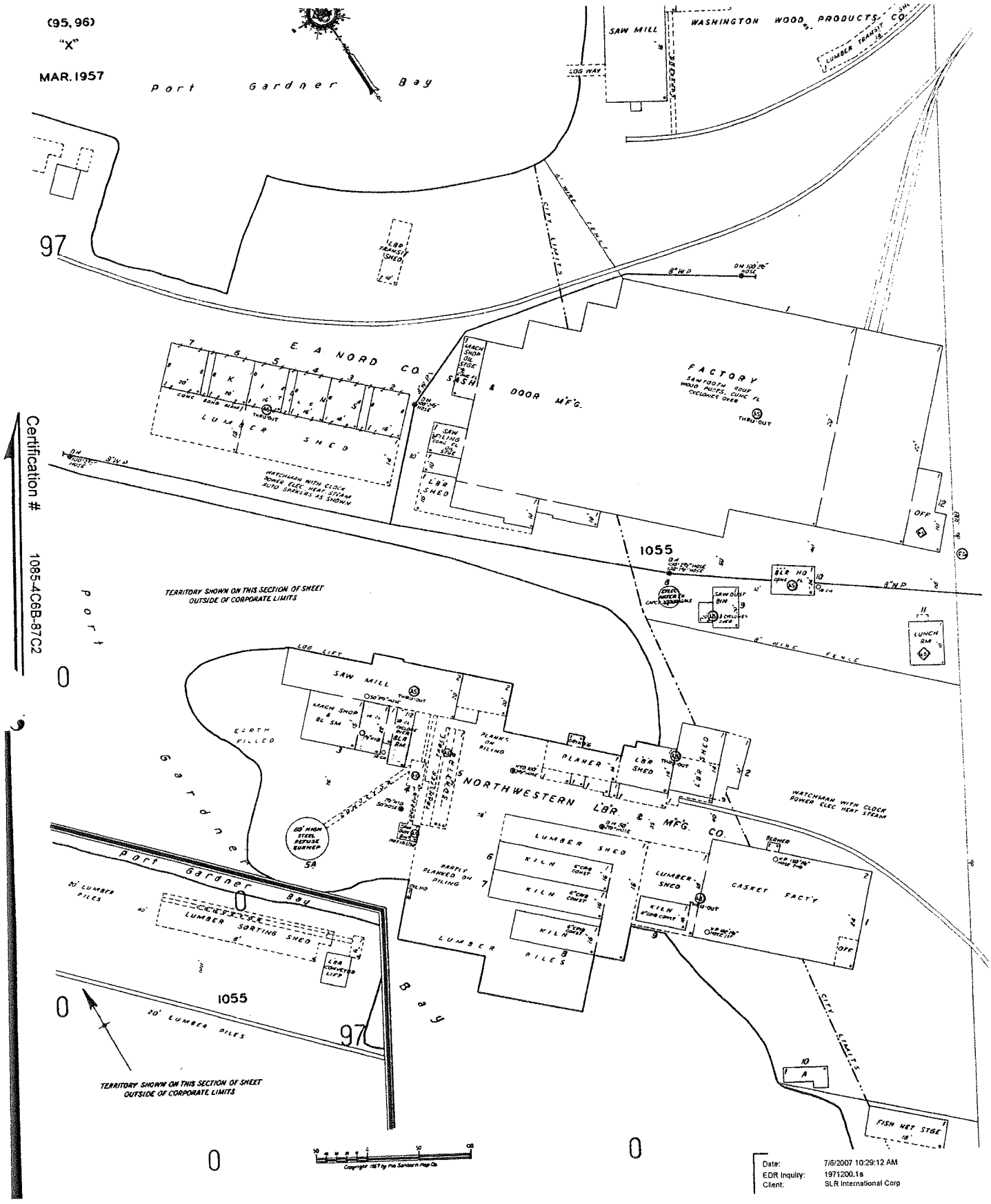
Release: Any intentional or unintentional entry of any hazardous substance into the environment, including, but not limited to, the abandonment or disposal of containers of hazardous substances.

Remedial Action: Any action to identify, eliminate, or minimize any threat posed by hazardous substances to human health or the environment, including any investigative and monitoring activities of any release or threatened release of a hazardous substance, and any health assessments or health effects studies conducted in order to determine the risk or potential risk to human health.

Remedial Investigation: Any remedial action that provides information on the extent and magnitude of contamination at a site. This usually takes 12 to 18 months and is followed by the feasibility study. The purpose of the Remedial Investigation/Feasibility Study is to collect and develop sufficient site information to enable the selection of a cleanup action.

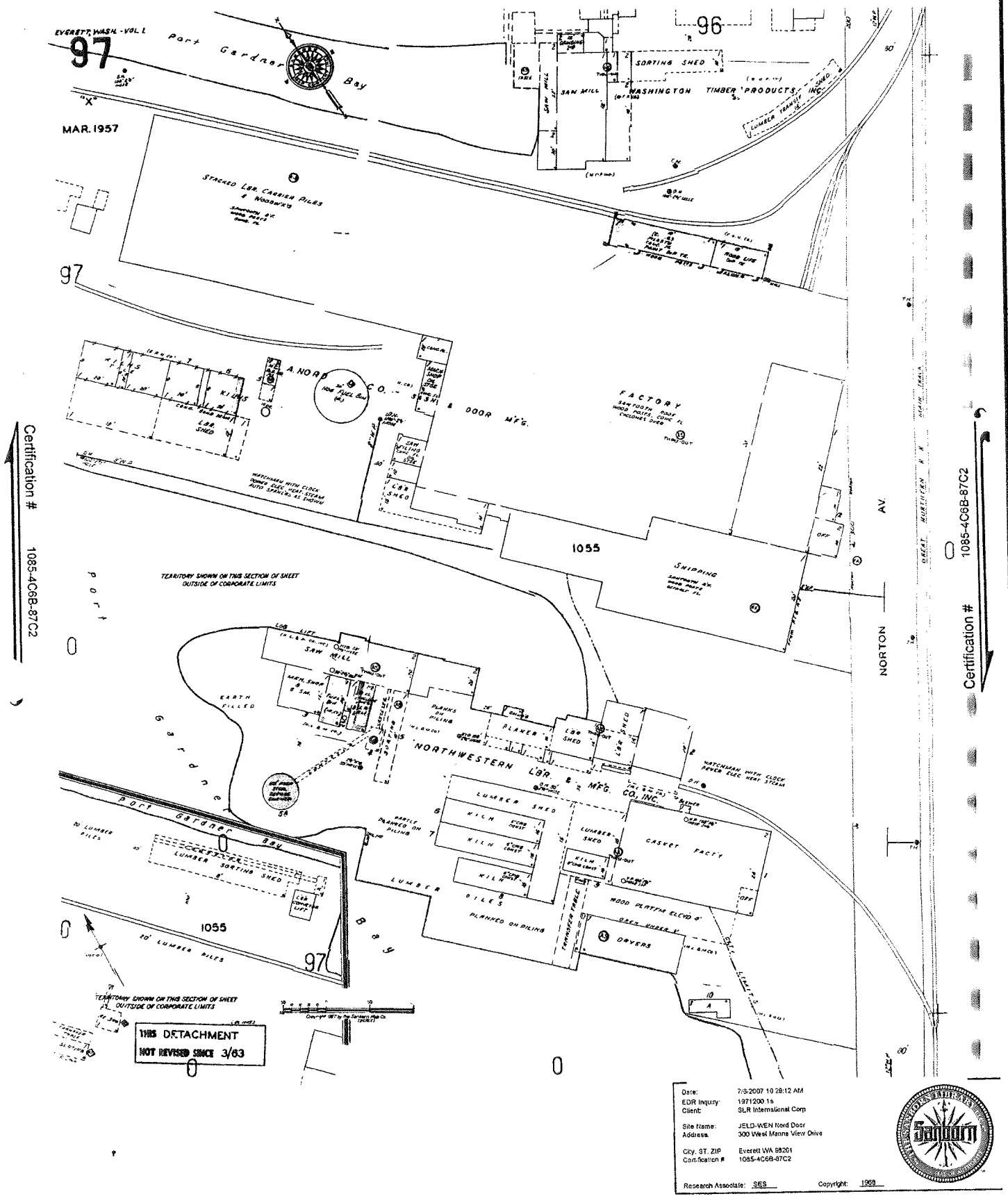
ATTACHMENT 1

SANBORN MAPS



Certification # 1085-4C6B-87C2

SLR International Corp	1800 Blankenship Road Suite 440 West Linn, OR 97068 T: 503-723-4423 F: 503-723-4436	DATE 03/08 DWN. EMG APPR. _____ REVIS. _____ PROJECT NO. **008.0228.00026**	**ATTACHMENT 1** JELD-WEN SITE 300 WEST MARINE VIEW DRIVE EVERETT, WASHINGTON **1950 SANBORN MAP**



SLR International Corp	1800 Blankenship Road Suite 440 West Linn, OR 97068 T: 503-723-4423 F: 503-723-4436	DATE 03/08 DWN. EMG APPR. _____ REVIS. _____ PROJECT NO. **008.0228.00026**

ATTACHMENT 1
JELD-WEN SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON
1968 SANBORN MAP

ATTACHMENT 2

SOIL AND GROUNDWATER PCL CALCULATIONS

Table 1
Groundwater Preliminary Cleanup Levels
SVOCs and PAHs
JELD-WEN Former Nord Door Site
Everett, WA

CAS #	Analyte	Calculated Groundwater Preliminary Cleanup Level (PCL) [A] (µg/L)	Reference [B]	Laboratory Practical Quantitation Limit (PQL) [C] (µg/L)	Selected PCLs [D]
	Semivolatile Organic Compounds (SVOCs)[E]				
208-96-8	**acenaphthylene**	NA	NA	10	10
98-86-2	**acetophenone**	800	Groundwater Method B	1	800
1912-24-9	**atrazine**	0.4	Groundwater Method B	1	1
100-52-7	**benzaldehyde**	800	Groundwater Method B	10	800
92-52-4	**biphenyl; 1,1'-**	400	Groundwater Method B	1	400
111-44-4	**bis(2-chloroethyl)ether**	0.3	Surface Water ARAR	1	1
111-91-1	**bis(2-chloroethoxy) methane**	NA	NA	1	1
39638-32-9	**bis(2-chloroisopropyl) ether**	1,400	Surface Water ARAR	1	1,400
108-60-1	**bis(2-chloro-1-methylethyl)ether**	37	Surface Water Method B	1	37
117-81-7	**bis(2-ethylhexyl) phthalate**	1.2	Surface Water ARAR	1	1.2
101-55-3	**p-Bromodiphenyl ether**	NA	NA	1	1
85-68-7	**butylbenzylphthalate**	1,300	Surface Water Method B	1	1,300
105-60-2	**caprolactam**	8,000	Groundwater Method B	10	8,000
86-74-8	**carbazole**	4.4	Groundwater Method B	1	4.4
59-50-7	**chloro-3-methylphenol;4-**	NA	NA	1	1
106-47-8	**chloroaniline;4-**	32	Groundwater Method B	1	32
95-57-8	**chlorophenol;2-**	97	Surface Water Method B	1	97
91-58-7	**chloronaphthalene;2-**	1,000	Surface Water ARAR	1	1,000
7005-72-3	**chlorophenyl-phenyl ether;4**	NA	NA	1	1
132-64-9	**dibenzofuran**	32	Groundwater Method B	1	32
91-94-1	**dichlorobenzidine;3,3-**	0.021	Surface Water ARAR	1	1
120-83-2	**dichlorophenol;2,4-**	77	Surface Water ARAR	1	77
84-66-2	**diethyl phthalate**	17,000	Surface Water ARAR	1	17,000
131-11-3	**dimethyl phthalate**	72,000	Surface Water Method B	1	72,000
105-67-9	**dimethylphenol;2,4-**	380	Surface Water ARAR	10	380
84-74-2	**di-n-butylphthalate**	2,000	Surface Water ARAR	1	2,000
117-84-0	**di-n-octylphthalate**	320	Groundwater Method B	1	320
534-52-1	**dinitro-2-methylphenol: 4,6-**	NA	NA	10	10
51-28-5	**dinitrophenol;2,4-**	69	Surface Water ARAR	10	69
121-14-2	**dinitrotoluene;2,4-**	0.11	Surface Water ARAR	10	10
606-20-2	**dinitrotoluene;2,6-**	16	Groundwater Method B	10	16
118-74-1	**hexachlorobenzene**	0.00028	Surface Water ARAR	1	1
87-68-3	**hexachlorobutadiene**	0.44	Surface Water ARAR	1	1
77-47-4	**hexachlorocyclopentadiene**	40	Surface Water ARAR	10	40
67-72-1	**hexachloroethane**	1.4	Surface Water ARAR	1	1.4
78-59-1	**isophorone**	8.4	Surface Water ARAR	1	8.4
91-57-6	**methylnaphthalene; 2**	32	Groundwater Method B	1	32
95-48-7	**methylphenol;2-**	400	Groundwater Method B	10	400
108-39-4	**methylphenol; 3-**	400	Groundwater Method B	10	400
106-44-5	**methylphenol;4-**	40	Groundwater Method B	10	40
88-74-4	**nitroaniline;2-**	NA	NA	10	10
99-09-2	**nitroaniline;3-**	NA	NA	10	10
100-01-6	**nitroaniline;4-**	NA	NA	1	1
98-95-3	**nitrobenzene**	17	Surface Water ARAR	1	17
88-75-5	**nitrophenol;2-**	NA	NA	10	10
100-02-7	**nitrophenol;4-**	NA	NA	10	10
86-30-6	**nitrosodiphenylamine; N-**	3.3	Surface Water ARAR	1	3.3
621-64-7	**nitroso-di-n-propylamine;N-**	0.005	Surface Water ARAR	1	1
87-86-5	**pentachlorophenol**	0.27	Surface Water ARAR	10	10
108-95-2	**phenol**	21,000	Surface Water ARAR	10	21,000
95-94-3	**tetrachlorobenzene;1,2,4,5-**	0.97	Surface Water ARAR	1	1
58-90-2	**tetrachlorophenol;2,3,4,6-**	480	Groundwater Method B	10	480
95-95-4	**trichlorophenol;2,4,5-**	1,800	Surface Water ARAR	1	1,800
88-06-2	**trichlorophenol;2,4,6-**	1.4	Surface Water ARAR	1	1.4
	Carcinogenic Polycyclic Aromatic Compounds (cPAHs)[F]				
56-55-3	**benzo[a]anthracene**	0.0028	Surface Water ARAR	0.1	0.1
50-32-8	**benzo[a]pyrene**	0.0028	Surface Water ARAR	0.1	0.1
205-99-2	**benzo[b]fluoranthene**	0.0028	Surface Water ARAR	0.1	0.1
207-08-9	**benzo[k]fluoranthene**	0.0028	Surface Water ARAR	0.1	0.1
218-01-9	**chrysene**	0.0028	Surface Water ARAR	0.1	0.1
53-70-3	**dibenzo[a,h]anthracene**	0.0028	Surface Water ARAR	0.1	0.1
193-39-5	**indeno[1,2,3-cd]pyrene**	0.0028	Surface Water ARAR	0.1	0.1
	Non-Carcinogenic PAHs (PAHs)[F]				
83-32-9	**acenaphthene**	640	Surface Water Method B	0.1	640
120-12-7	**anthracene**	8,300	Surface Water ARAR	0.1	8,300
191-24-2	**benzo[ghi]perylene[G]**	830	Surface Water ARAR	0.1	830
206-44-0	**fluoranthene**	90	Surface Water Method B	0.1	90
86-73-7	**fluorene**	1,100	Surface Water ARAR	0.1	1,100
91-20-3	**naphthalene**	4,900	Surface Water Method B	0.1	4,900
85-01-8	**phenanthrene[H]**	640	Surface Water Method B	0.1	640
129-00-0	**pyrene**	830	Surface Water ARAR	0.1	830

Notes:

Shading denotes PCL value where the calculated PCL is less than the laboratory PQL or where no calculated PCL is available.

A - Groundwater PCLs selected per Ecology recommended hierarchy as outlined below.

B - References source of groundwater cleanup levels selected using hierarchy provided below.

C - PQL from Environmental Sciences Corp environmental laboratory.

D - Selected PCL defined as calculated PCL, with the exception of analytes where PQL > calculated PCL. In these instances, the PQL will be selected as the PCL.

E - SVOCs per EPA Method 8270C.

F - cPAHs and PAHs will be analyzed per 8270 SIM (low level).

G - Toxicity information is not available for benzo(ghi)perylene. Pyrene has been used as surrogate.

H - Toxicity information is not available for phenanthrene. Anthracene has been used as surrogate.

NA - Value not available.

Hierarchy for Selection of PCLs

The groundwater cleanup levels were selected using the following hierarchy:

1) Choose the most stringent value among all the Surface Water ARARs and Surface Water Method B values per WAC-173-340-730.

2) If there is no Surface Water cleanup value available in the Cleanup Levels and Risk Calculation (CLARC) table, then choose the Groundwater Method A value (Table 720-1).

3) If there is no Groundwater Method A cleanup value, then choose the Groundwater Method B (ingestion) value from the CLARC table.

4) If there is no Groundwater Method B cleanup value, then choose the most stringent Groundwater ARAR value available in CLARC.

Table 2
Soil Preliminary Cleanup Levels
SVOCs and PAHs
JELD-WEN Former Nord Door Site
Everett, WA

CAS #	Analyte	Preliminary Cleanup Levels (PCL) (mg/kg)				Laboratory Practical Quantitation Limit (PQL) [E] (mg/kg)	Selected PCLs [F]	Parameters from CLARC Summary Table [G]							
		Soil Cleanup Based on Protection of Surface Water [A]	Soil Method A[B]	Soil Method B Direct Contact [C]	Terrestrial Ecological Receptors [D]			Aqueous Solubility (S) (mg/L)	Henrys Law Constant (unitless) (Hcc) (unitless)	Inhalation Cancer Potency Factor (CPFi) (kg-day/mg)	Inhalation Correction Factor (INH) (unitless)	Inhalation Reference Dose (RfDi) (mg/kg-day)	Koc (Soil Organic Carbon-Water Partitioning Coefficient) (L/kg)	Oral Cancer Potency Factor (CPFo) (kg-day/mg)	Oral Reference Dose (RfDo) (mg/kg-day)
	Semivolatile Organic Compounds (SVOCs)[H]														
208-96-8	**acenaphthylene**	NA	Not Researched	Not Researched	--	0.33	0.33	Not Researched	Not Researched	Not Researched	Not Researched	Not Researched	Not Researched	Not Researched	Not Researched
98-86-2	**acetophenone**	NA	Researched-No Data	8,000	--	0.33	8,000	Not Researched	Not Researched	Researched-No Data	2	0.000005	Not Researched	Researched-No Data	0.1
1912-24-9	**atrazine**	NA	Researched-No Data	4.5	--	0.33	4.5	Not Researched	Not Researched	Researched-No Data	1	Researched-No Data	Not Researched	0.22	0.035
100-52-7	**benzaldehyde**	NA	Researched-No Data	8,000	--	0.33	8,000	Not Researched	Not Researched	Researched-No Data	2	Researched-No Data	Not Researched	Researched-No Data	0.1
92-52-4	**biphenyl;1,1'-**	NA	Researched-No Data	4,000	--	0.33	4,000	Not Researched	Not Researched	Researched-No Data	2	0.05	Not Researched	Researched-No Data	0.05
111-44-4	**bis(2-chloroethyl)ether**	0.0017	Researched-No Data	0.91	--	0.33	0.33	17,000	0.00074	1.2	2	No Data	76	1.1	Researched-No Data
111-91-1	**bis(2-chloroethoxyl) methane**	NA	NA	NA	--	0.33	0.33	NA	NA	NA	NA	NA	NA	NA	NA
39638-32-9	**bis(2-chloroisopropyl) ether**	NA	Researched-No Data	3,200	--	0.33	3,200	Not Researched	Not Researched	Researched-No Data	2	Researched-No Data	Not Researched	Researched-No Data	0.05
108-60-1	**bis(2-chloro-1-methylethyl)ether**	NA	Researched-No Data	14	--	0.33	14	Not Researched	Not Researched	0.035	2	Researched-No Data	Not Researched	0.07	Researched-No Data
117-81-7	**bis(2-ethylhexyl) phthalate**	2.64	Researched-No Data	71	--	0.33	2.64	0.34	0.0000042	Researched-No Data	1	Researched-No Data	110,000	0.014	0.02
101-55-3	**p-Bromodiphenyl ether**	NA	NA	NA	--	0.33	0.33	NA	NA	NA	NA	NA	NA	NA	NA
85-68-7	**butylbenzylphthalate**	369	Researched-No Data	16,000	--	0.33	369	2.7	0.000052	Researched-No Data	1	0.2	14,000	Researched-No Data	0.2
105-60-2	**caprolactam**	NA	Researched-No Data	40,000	--	0.33	40,000	Not Researched	Not Researched	Researched-No Data	1	Researched-No Data	Not Researched	Researched-No Data	0.5
86-74-8	**carbazole**	0.32	Researched-No Data	50	--	0.33	0.33	7.5	0.00000063	NA	1	No Data	3,400	0.02	Researched-No Data
59-50-7	**chloro-3-methylphenol;4-**	NA	NA	NA	--	0.33	0.33	NA	NA	NA	NA	NA	NA	NA	NA
106-47-8	**chloroaniline;4-**	0.17	Researched-No Data	320	--	0.33	0.33	5,300	0.000014	Researched-No Data	2	0.004	66	Researched-No Data	0.004
95-57-8	**chlorophenol;2-**	1.15	Researched-No Data	400	--	0.33	1.15	22,000	0.016	Researched-No Data	2	Researched-No Data	390	Researched-No Data	0.005
91-58-7	**chloronaphthalene;2-**	NA	Researched-No Data	6,400	--	0.33	6,400	Not Researched	Not Researched	Researched-No Data	2	Researched-No Data	Not Researched	Researched-No Data	0.08
7005-72-3	**chlorophenyl-phenyl ether; 4-**	NA	NA	NA	--	0.33	0.33	NA	NA	NA	NA	NA	NA	NA	NA
132-64-9	**dibenzofuran**	NA	Researched-No Data	160	--	0.33	160	Not Researched	Not Researched	Researched-No Data	1	Researched-No Data	Not Researched	Researched-No Data	0.002
91-94-1	**dichlorobenzidine;3,3-**	0.0004	Researched-No Data	2.2	--	0.33	0.33	3.1	0.00000016	Researched-No Data	1	Researched-No Data	720	0.45	Researched-No Data
120-83-2	**dichlorophenol;2,4-**	0.54	Researched-No Data	240	--	0.33	0.54	4,500	0.00013	Researched-No Data	2	Researched-No Data	150	Researched-No Data	0.003
84-66-2	**diethyl phthalate**	95.9	Researched-No Data	64,000	--	0.33	95.9	1,100	0.000019	Researched-No Data	1	Researched-No Data	82	Researched-No Data	0.8
131-11-3	**dimethyl phthalate**	NA	Researched-No Data	80,000	--	0.33	80,000	Not Researched	Not Researched	Researched-No Data	1	Researched-No Data	Not Researched	Researched-No Data	1
105-67-9	**dimethylphenol;2,4-**	3.12	Researched-No Data	1,600	--	0.33	3.12	7,900	0.000082	Researched-No Data	2	Researched-No Data	210	Researched-No Data	0.02
84-74-2	**di-n-butyl phthalate**	72	Researched-No Data	8,000	200	0.33	72	11	0.000000039	Researched-No Data	1	Researched-No Data	1,600	Researched-No Data	0.1
117-84-0	**di-n-octylphthalate**	531,201	Researched-No Data	1,600	--	0.33	1,600	0.02	0.0027	Researched-No Data	1	Researched-No Data	83,000,000	Researched-No Data	0.02
534-52-1	**dinitro-2-methylphenol;4,6-**	NA	Researched-No Data	NA	--	0.33	0.33	NA	NA	NA	NA	NA	NA	NA	NA
51-28-5	**dinitrophenol;2,4-**	0.28	Researched-No Data	160	--	0.33	0.33	2,800	0.000018	Researched-No Data	1	Researched-No Data	0.01	Researched-No Data	0.002
121-14-2	**dinitrotoluene;2,4-**	0.0007	Researched-No Data	160	--	0.33	0.33	270	0.0000038	Researched-No Data	1	0.002	96	Not Researched	0.002
606-20-2	**dinitrotoluene;2,6-**	0.09	Researched-No Data	80	--	0.33	0.33	180	0.000031	Researched-No Data	1	0.001	69	Not Researched	0.001
118-74-1	**hexachlorobenzene**	0.0004	Researched-No Data	0.63	--	0.33	0.33	6.2	0.054	1.6	1	Researched-No Data	80,000	1.6	0.0008
87-68-3	**hexachlorobutadiene**	0.48	Researched-No Data	13	--	0.33	0.48	3.2	0.33	0.077	2	Researched-No Data	54,000	0.078	0.0002
77-47-4	**hexachlorocyclopentadiene**	160.2	Researched-No Data	480	--	0.33	160.2	1.8	1.1	Researched-No Data	2	0.000057	200,000	Researched-No Data	0.006
67-72-1	**hexachloroethane**	0.06	Researched-No Data	71	--	0.33	0.33	50	0.16	0.014	2	Researched-No Data	1,800	0.014	0.001
78-59-1	**isophorone**	0.04	Researched-No Data	1,100	--	0.33	0.33	12,000	0.00027	Researched-No Data	2	Researched-No Data	47	0.00095	0.2
91-57-6	**methylnaphthalene;2-**	NA	Not Researched	320	--	0.33	320	Not Researched	Not Researched	Not Researched	2	Not Researched	Not Researched	Not Researched	0.004
95-48-7	**methylphenol;2-**	2.33	Researched-No Data	4,000	--	0.33	2.33	26,000	0.000049	Researched-No Data	2	Researched-No Data	91	Researched-No Data	0.05
108-39-4	**methylphenol; 3-**	NA	Researched-No Data	4,000	--	0.33	4,000	Not Researched	Not Researched	Researched-No Data	2	Researched-No Data	Not Researched	Researched-No Data	0.05
106-44-5	**methylphenol;4-**	NA	Researched-No Data	400	--	0.33	400	Not Researched	Not Researched	Researched-No Data	2	Researched-No Data	Not Researched	Researched-No Data	0.005
88-74-4	**nitronaniline;2-**	NA	Researched-No Data	Not Researched	--	0.33	0.33	Not Researched	Not Researched	Researched-No Data	1	0.000057	Not Researched	Researched-No Data	Researched-No Data
99-09-2	**nitronaniline;3-**	NA	NA	NA	--	0.33	0.33	NA	NA	NA	NA	NA	NA	NA	NA
100-01-6	**nitronaniline;4-**	NA	NA	NA	--	0.33	0.33	NA	NA	NA	NA	NA	NA	NA	NA
98-95-3	**nitrobenzene**	0.11	Researched-No Data	40	--	0.33	0.33	2,900	0.00098	Researched-No Data	2	0.00017	120	Researched-No Data	0.0005
88-75-5	**nitrophenol;2-**	NA	NA	NA	--	0.33	0.33	NA	NA	NA	NA	NA	NA	NA	NA
100-02-7	**nitrophenol;4-**	NA	NA	NA	--	0.33	0.33	NA	NA	NA	NA	NA	NA	NA	NA
86-30-6	**nitrosodiphenylamine;N-**	0.10	Researched-No Data	200	--	0.33	0.33	35	0.00021	Researched-No Data	Researched-No	Researched-No Data	1,300	0.0049	Researched-No Data
621-64-7	**nitroso-di-n-propylamine;N-**	0.00002	Researched-No Data	0.14	--	0.33	0.33	9,900	0.000092	Researched-No Data	Researched-No	Researched-No Data	24	7	Researched-No Data
87-86-5	**pentachlorophenol**	0.004	Researched-No Data	8.3	11	0.33	0.33	2,000	0.000001	Researched-No Data	1	Researched-No Data	590	0.12	0.03
108-95-2	**phenol**	96.2	Researched-No Data	48,000	--	0.33	96.2	83,000	0.000016	Researched-No Data	2	Researched-No Data	29	Researched-No Data	0.6
95-94-3	**tetrachlorobenzene;1,2,4,5-**	NA	Researched-No Data	24	--	0.33	24	Not Researched	Not Researched	Researched-No Data	1	Researched-No Data	Not Researched	Researched-No Data	0.0003
58-90-2	**tetrachlorophenol;2,3,4,6-**	NA	Researched-No Data	2,400	--	0.05	2,400	Not Researched	Not Researched	Researched-No Data	1	Researched-No Data	280	Researched-No Data	0.03
95-95-4	**trichlorophenol;2,4,5-**	64.8	Researched-No Data	8,000	--	0.33	64.8	1,200	0.00018	Researched-No Data	2	Researched-No Data	1,600	Researched-No Data	0.1
88-06-2	**trichlorophenol;2,4,6-**	0.02	Researched-No Data	91	--	0.33	0.33	800	0.00032	0.011	2	Researched-No Data	380	0.011	Researched-No Data
	Carcinogenic Polycyclic Aromatic Compounds (cPAHs)[I]														
56-55-3	**benzo[a]anthracene**	0.020	Researched-No Data	0.140	--	0.006	0.020 [J]	0.0094	0.00014	Researched-No Data	1	Researched-No Data	360,000	7.3	Researched-No Data
50-32-8	**benzo[a]pyrene**	0.054	0.100	0.140	30	0.006	0.054 [J]	0.0016	0.000046	6.1	1	Researched-No Data	970,000	7.3	Researched-No Data
205-99-2	**benzo[b]fluoranthene**	0.067	Researched-No Data	0.140	--	0.006	0.067 [J]	0.0015	0.0046	Researched-No Data	1	Researched-No Data	1,200,000	7.3	Researched-No Data
207-08-9	**benzo[k]fluoranthene**	0.067	Researched-No Data	0.140	--	0.006	0.067 [J]	0.0008	0.000034	Researched-No Data	1	Researched-No Data	1,200,000	7.3	Researched-No Data
218-01-9	**chrysene**	0.022	Researched-No Data	0.140	--	0.006	0.022 [J]	0.0016	0.0039	Researched-No Data	1	Researched-No Data	400,000	7.3	Researched-No Data
53-70-3	**dibenzo[a,h]anthracene**	0.101	Researched-No Data	0.140	--	0.006	0.101 [J]	0.0025	0.0000006	Researched-No Data	1	Researched-No Data	1,800,000	7.3	Researched-No Data
193-39-5	**indeno[1,2,3-cd]pyrene**	0.196	Researched-No Data	0.140	--	0.006	0.140 [J]	0.000022	0.000066	Researched-No Data	1	Researched-No Data	3,500,000	7.3	Researched-No Data
	Non-Carcinogenic Polycyclic Aromatic Compounds (PAHs)[I]														
83-32-9	**acenaphthene**	65.3	Researched-No Data	4,800	NA	0.006	65.3	4.2	0.0064	Researched-No Data	1	Not Researched	4,900	Researched-No Data	0.06
120-12-7	**anthracene**	3,851	Researched-No Data	24,000	--	0.006	3,851	0.043	0.0027	Researched-No Data	1	Researched-No Data	23,000	Researched-No Data	0.3
191-24-2	**benzo[ghi]perylene[K]**	1,132	Not Researched	Not Researched	--	0.33	1,132	0.14	0.00045	Researched-No Data	1	Researched-No Data	68,000	Researched-No Data	0.03
206-44-0	**fluoranthene**	88.6	Researched-No Data	3,200	--	0.006	88.6	0.21	0.00066	Researched-No Data	1	Researched-No Data	49,000	Researched-No Data	0.04
86-73-7	**fluorene**	173.8	Researched-No Data	3,200	--	0.006	173.8	2	0.0026	Researched-No Data	1	Researched-No Data	7,700	Researched-No Data	0.04
91-20-3	**naphthalene**	137.4	5.0	1,600	--	0.33	5.0	31	0.02	Researched-No Data	2	0.00086	1,200	Researched-No Data	0.02
85-01-8	**phenanthrene[L]**	65.3	Not Researched	Not Researched	--	0.33	65.3	4.2	0.0064	Researched-No Data	1	Not Researched	4,900	Researched-No Data	0.06
129-00-0	**pyrene**	1,132	Researched-No Data	2,400	--	0.006	1,132	0.14	0.00045	Researched-No Data	1	Researched-No Data	68,000	Researched-No Data	0.03

Notes:

Shading denotes PCL value where the calculated PCL is less than the laboratory PQL or where no calculated PCL is available.

"Researched-No Data" means research has been conducted and no data exists in the Cleanup Levels and Risk Calculation (CLARC) database for this parameter.

"Not Researched" means research has not been conducted and no value exists in the CLARC database for this parameter.

A - PCLs calculated from calculated using Ecology's three phase partitioning model as described in WAC 173-340-747 to generate soil concentrations which are protective of surface water.

B - Soil Method A values for unrestricted land use from CLARC summary tables.

C - Soil Method B Direct Contact values for unrestricted land use from CLARC summary tables.

D - Terrestrial Ecological Evaluation Values from Ecology Toxics Cleanup Program Table 749-2: Priority contaminants of ecological concern for sites that qualify for the simplified terrestrial ecological evaluation.

E - PQL from Environmental Sciences Corp environmental laboratory.

F - Selected PCL = most restrictive PCL for Soil Cleanup, with the exception of analytes where PQL > calculated PCL or no calculated PCL is given. In these instances, the PQL will be selected as the PCL; if no PCL is available for Soil Cleanup Based on Protection of Surface Water, the Soil Method A or Soil Method B value (if no Method A value is given) is selected.

G - Parameters from CLARC Summary Tables used for Worksheet for Calculating Soil Cleanup Levels for Unrestricted and Industrial Land Use.

H - SVOCs per EPA Method 8270C.

I - cPAHs and PAHs per EPA Method 8270 SIM SS.

J - Presented PCLs to assist in evaluating laboratory PQLs. Cleanup levels and remediation levels will be established for mixtures of cPAHs following the procedures in MTCA 173-340-708(8)(e).

K - Toxicity information is not available for benzo(ghi)perylene. Pyrene has been used as surrogate.

L - Toxicity information is not available for phenanthrene. Anthracene has been used as surrogate.

NA - Value not available.

Table 3
Groundwater Preliminary Cleanup Levels
VOCs
JELD-WEN Former Nord Door Site
Everett, WA

CAS #	Analyte	Calculated Groundwater Preliminary Cleanup Level (PCL) [A] (µg/L)	Reference [B]	Laboratory Practical Quantitation Limit (PQL) [C] (µg/L)	Selected PCLs [D]
	Volatile Organic Compounds (VOCs) [E]				
67-64-1	**acetone**	800	Groundwater Method B	25	800
71-43-2	**benzene**	1.2	Surface Water ARAR	0.5	1.2
74-97-5	**bromochloromethane**	NA	NA	0.5	0.5
75-27-4	**bromodichloromethane**	0.27	Surface Water ARAR	0.5	0.5
75-25-2	**bromoform**	4.3	Surface Water ARAR	0.5	4.3
74-83-9	**bromomethane**	47	Surface Water ARAR	0.89	47
78-93-3	**butanone;2- (MEK)**	4,800	Groundwater Method B	2.5	4,800
75-15-0	**carbon disulfide**	800	Groundwater Method B	0.5	800
56-23-5	**carbon tetrachloride**	0.23	Surface Water ARAR	0.5	0.5
108-90-7	**chlorobenzene**	130	Surface Water ARAR	0.5	130
75-00-3	**chloroethane**	15	Groundwater Method B	0.5	15
67-66-3	**chloroform**	5.7	Surface Water ARAR	0.5	5.7
74-87-3	**chloromethane**	130	Surface Water Method B	0.5	130
110-82-7	**cyclohexane**	NA	NA	1	1
96-12-8	**dibromo-3-chloropropane;1,2-**	0.031	Groundwater Method B	1	1
124-48-1	**dibromochloromethane**	0.4	Surface Water ARAR	0.5	0.5
106-93-4	**1,2-Dibromoethane**	0.01	Groundwater Method A	0.5	0.5
95-50-1	**1,2-Dichlorobenzene**	420	Surface Water ARAR	0.5	420
541-73-1	**1,3-Dichlorobenzene**	320	Surface Water ARAR	0.5	320
106-46-7	**1,4-Dichlorobenzene**	4.9	Surface Water Method B	0.5	4.9
75-71-8	**dichlorodifluoromethane**	1,600	Groundwater Method B	0.5	1,600
75-34-3	**dichloroethane;1,1-**	800	Groundwater Method B	0.5	800
107-06-2	**dichloroethane;1,2-**	0.38	Surface Water ARAR	0.5	0.5
75-35-4	**dichloroethylene;1,1-**	0.057	Surface Water ARAR	0.5	1
156-59-2	**dichloroethylene;1,2-,cis**	80	Groundwater Method B	0.5	80
156-60-5	**dichloroethylene;1,2-,trans**	10,000	Surface Water ARAR	0.5	10,000
78-87-5	**dichloropropane;1,2-**	0.5	Surface Water ARAR	0.5	0.5
542-75-6	**dichloropropene;1,3-**	0.34	Surface Water ARAR	0.5	0.5
123-91-1	**dioxane;1,4-**	4	Groundwater Method B	100	100
100-41-4	**ethylbenzene**	530	Surface Water ARAR	0.5	530
591-78-6	**hexanone-2**	NA	NA	2.5	2.5
98-82-8	**isopropylbenzene**	800	Groundwater Method B	0.5	800
79-20-9	**methyl acetate**	8,000	Groundwater Method B	20	8,000
108-10-1	**4-methyl-2-pentanone (MIK)**	640	Groundwater Method B	2.5	640
1634-04-4	**methyl tert-butyl ether**	20	Groundwater Method A	0.5	20
75-09-2	**methylene chloride**	4.6	Surface Water ARAR	2.5	4.6
108-87-2	**methylcyclohexane**	NA	NA	1	1
100-42-5	**styrene**	1.5	Groundwater Method B	0.5	1.5
79-34-5	**tetrachloroethane;1,1,2,2-**	0.17	Surface Water ARAR	0.5	0.5
127-18-4	**tetrachloroethylene**	0.39	Surface Water Method B	0.5	0.5
108-88-3	**toluene**	1,300	Surface Water ARAR	0.5	1,300
76-13-1	**trichloro-1,2,2-trifluoroethane;1,1,2-**	240,000	Ground Water Method B	0.5	240,000
87-61-6	**1,2,3-trichlorobenzene**	NA	NA	0.5	0.5
120-82-1	**1,2,4-Trichlorobenzene**	35	Surface Water ARAR	0.5	35
71-55-6	**1,1,1-Trichloroethane**	420,000	Surface Water Method B	0.5	420,000
79-00-5	**1,1,2-Trichloroethane**	0.59	Surface Water ARAR	1	1
79-01-6	**trichloroethylene**	1.5	Surface Water Method B	1	1.5
75-69-4	**trichlorofluoromethane**	2,400	Groundwater Method B	0.5	2,400
75-01-4	**vinyl chloride**	0.025	Surface Water ARAR	0.2	0.2
1330-20-7	**xylenes (total)**	1,000	Groundwater Method A	1.5	1,000

Notes:

Shading denotes PCL value where the calculated PCL is less than the laboratory PQL or where no calculated PCL is available.

A - PCLs selected per Ecology recommended hierarchy as outlined below.

B - References source of groundwater cleanup levels selected using hierarchy provided below.

C - PQL from Environmental Sciences Corp environmental laboratory.

D - Selected PCL defined as calculated PCL, with the exception of analytes where PQL > calculated PCL. In these instances, the PQL will be selected as the PCL.

E - VOCs per EPA Method 8260.

Hierarchy for Selection of PCLs

The groundwater cleanup levels were selected using the following hierarchy:

1) Choose the most stringent value among all the Surface Water ARARs and Surface Water Method B values per WAC-173-340-730.

2) If there is no Surface Water cleanup value available in the Cleanup Levels and Risk Calculation (CLARC) table, then choose the Groundwater Method A value (Table 720-1).

3) If there is no Groundwater Method A cleanup value, then choose the Groundwater Method B (ingestion) value from the CLARC table.

4) If there is no Groundwater Method B cleanup value, then choose the most stringent Groundwater ARAR value available in CLARC.

Table 4
Soil Preliminary Cleanup Levels
VOCs
JELD-WEN Former Nord Door Site
Everett, WA

CAS #	Analyte	Preliminary Cleanup Levels (PCL) (mg/kg)				Laboratory Practical Quantitation Limit (PQL) [E] (mg/kg)	Selected PCLs [F]	Parameters from CLARC Summary Table [G]							
		Soil Cleanup Based on Protection of Surface Water [A]	Soil Method A [B]	Soil Method B Direct Contact [C]	Terrestrial Ecological Receptors [D]			Aqueous Solubility (S) (mg/L)	Henrys Law Constant (unitless) (Hcc) (unitless)	Inhalation Cancer Potency Factor (CPFi) (kg-day/mg)	Inhalation Correction Factor (INH) (unitless)	Inhalation Reference Dose (RfDi) (mg/kg-day)	Koc (Soil Organic Carbon-Water Partitioning Coefficient) (L/kg)	Oral Cancer Potency Factor (CPFo) (kg-day/mg)	Oral Reference Dose (RfDo) (mg/kg-day)
	Volatile Organic Compounds (VOCs) [H]														
67-64-1	**acetone**	3.21	Researched - No Data	8,000	--	0.05	3.21	1,000,000	0.0016	Researched-No Data	2	Researched-No Data	0.58	Researched-No Data	0.1
71-43-2	**benzene**	0.0068	0.03	18	--	0.001	0.0068	1,800	0.23	0.027	2	0.0086	62	0.055	0.004
74-97-5	**bromochloromethane**	NA	Researched - No Data	NA	--	0.001	0.001	Not Researched	Not Researched	Not Researched	Not Researched	Not Researched	Not Researched	Not Researched	Not Researched
75-27-4	**bromodichloromethane**	0.0014	Researched - No Data	16	--	0.001	0.0014	6,700	0.066	Researched-No Data	2	Researched-No Data	55	0.062	0.02
75-25-2	**bromoform**	0.029	Researched - No Data	130	--	0.001	0.029	3,100	0.022	0.0039	2	Researched-No Data	130	0.0079	0.02
74-83-9	**bromomethane**	0.218	Researched - No Data	110	--	0.005	0.218	15,000	0.26	Researched-No Data	2	0.0014	9	Researched-No Data	0.0014
78-93-3	**butanone;2- (MEK)**	NA	Researched - No Data	48,000	--	0.1	48,000	Not Researched	Not Researched	Researched-No Data	2	0.29	Not Researched	Researched-No Data	0.6
75-15-0	**carbon disulfide**	5.6	Researched - No Data	8,000	--	0.001	5.6	1,200	1.2	Researched-No Data	2	0.2	46	Researched-No Data	0.1
56-23-5	**carbon tetrachloride**	0.0021	Researched - No Data	7.7	--	0.001	0.002	790	1.3	0.053	2	Researched-No Data	150	0.13	0.0007
108-90-7	**chlorobenzene**	1.126	Researched - No Data	1,600	--	0.001	1.126	470	0.15	Researched-No Data	2	0.005	220	Researched-No Data	0.02
75-00-3	**chloroethane**	NA	Researched - No Data	350	--	0.005	350	Not Researched	Not Researched	0.0029	2	2.9	Not Researched	0.029	0.4
67-66-3	**chloroform**	0.03	Researched - No Data	160	--	0.005	0.03	7,900	0.15	0.081	2	Researched-No Data	53	0.0061	0.01
74-87-3	**chloromethane**	NA	Researched - No Data	77	--	0.001	77	Not Researched	Not Researched	0.0063	2	Researched-No Data	6	0.013	Researched-No Data
110-82-7	**cyclohexane**	NA	Not Researched	NA	--	0.001	0.001	Not Researched	Not Researched	Not Researched	Not Researched	1.7	Not Researched	Not Researched	1.7
124-48-1	**dibromochloromethane**	0.002	Researched - No Data	12	--	0.001	0.002	2,600	0.032	Researched-No Data	2	Researched-No Data	63	0.084	0.02
96-12-8	**dibromo-3-chloropropane;1,2-**	NA	Researched - No Data	0.71	--	0.005	0.71	Not Researched	Not Researched	0.0024	2	0.000057	Not Researched	1.4	Researched-No Data
106-93-4	**1,2-Dibromoethane**	NA	0.005	0.012	--	0.001	0.005	Not Researched	Not Researched	0.77	2	0.0001	66	855	Researched-No Data
95-50-1	**1,2-Dichlorobenzene**	4.93	Researched - No Data	7,200	--	0.001	4.93	160	0.078	Researched-No Data	2	0.04	380	Researched-No Data	0.09
541-73-1	**1,3-Dichlorobenzene**	NA	Not Researched	NA	--	0.001	0.001	Not Researched	Not Researched	Not Researched	2	Not Researched	Not Researched	Not Researched	Not Researched
106-46-7	**1,4-Dichlorobenzene**	0.081	Researched - No Data	42	--	0.001	0.081	74	0.1	Researched-No Data	2	0.23	620	0.024	Researched-No Data
75-71-8	**dichlorodifluoromethane**	NA	Researched - No Data	16,000	--	0.001	16,000	Not Researched	Not Researched	Researched-No Data	2	0.05	Not Researched	Researched-No Data	0.2
75-34-3	**dichloroethane;1,1-**	4.37	Researched - No Data	8,000	--	0.001	4.37	5,100	0.23	Not Researched	2	0.1	53	Not Researched	0.1
107-06-2	**dichloroethane;1,2-**	0.002	Researched - No Data	11	--	0.001	0.002	8,500	0.04	0.091	2	0.0014	38	0.091	0.02
75-35-4	**dichloroethylene;1,1-**	0.00041	Researched - No Data	4,000	--	0.001	0.001	2,300	1.1	Researched-No Data	2	0.057	65	Researched-No Data	0.05
156-59-2	**dichloroethylene;1,2-,cis**	0.40	Researched - No Data	800	--	0.001	0.40	3,500	0.17	Researched-No Data	2	Researched-No Data	36	Researched-No Data	0.01
156-60-5	**dichloroethylene;1,2-,trans**	54	Researched - No Data	1,600	--	0.001	54	6,300	0.39	Researched-No Data	2	0.02	38	Researched-No Data	0.02
78-87-5	**dichloropropane;1,2-**	0.0026	Researched - No Data	15	--	0.001	0.0026	2,800	0.12	Researched-No Data	2	0.0011	47	0.068	Researched-No Data
541-75-6	**dichloropropene;1,3-**	0.003	Researched - No Data	5.6	--	0.001	0.003	2,800	0.73	0.014	2	0.0057	27	0.18	0.03
123-91-1	**dioxane;1,4-**	NA	Researched - No Data	91	--	0.10	91	Not Researched	Not Researched	Researched-No Data	2	Researched-No Data	Not Researched	0.011	Researched-No Data
100-41-4	**ethylbenzene**	4.53	6	8,000	--	0.001	4.53	170	0.32	Researched-No Data	2	0.29	200	Researched-No Data	0.1
591-78-6	**hexanone-2**	NA	NA	NA	--	0.01	0.01	Not Researched	Not Researched	Not Researched	Not Researched	Not Researched	Not Researched	Not Researched	Not Researched
98-82-8	**isopropylbenzene**	NA	Researched - No Data	8,000	--	0.001	8,000	Not Researched	Not Researched	Researched-No Data	2	0.11	Not Researched	Researched-No Data	0.1
79-20-9	**methyl acetate**	NA	Researched - No Data	80,000	--	0.02	80,000	Not Researched	Not Researched	Researched-No Data	2	Researched-No Data	Not Researched	Researched-No Data	1
108-10-1	**4-methyl-2-pentanone**	NA	Researched - No Data	6,400	--	0.01	6,400	Not Researched	Not Researched	Researched-No Data	2	0.02	Not Researched	Researched-No Data	0.08
1634-04-4	**methyl tert-butyl ether**	0.085	0.1	560	--	0.001	0.085	50,000	0.018	Researched-No Data	2	0.86	11	0.0018	0.86
75-09-2	**methylene chloride**	0.087	0.02	130	--	0.005	0.02	13,000	0.09	0.0016	2	0.86	10	0.0075	0.06
108-87-2	**methylcyclohexane**	NA	Researched - No Data	NA	--	0.001	0.001	Not Researched	Not Researched	Researched-No Data	2	0.86	Not Researched	Researched-No Data	Researched-No Data
100-42-5	**styrene**	0.034	Researched - No Data	33	--	0.001	0.034	310	0.11	0.002	2	0.29	910	0.03	0.2
79-34-5	**tetrachloroethane;1,1,2,2-**	0.001	Researched - No Data	5	--	0.001	0.001	3,000	0.014	0.2	2	Researched-No Data	79	0.2	Researched-No Data
127-18-4	**tetrachloroethylene**	0.004	0.050	1.9	--	0.001	0.004	200	0.75	0.021	2	Researched-No Data	270	0.54	0.01
108-88-3	**toluene**	9.45	7	6,400	--	0.005	7	530	0.27	Researched-No Data	2	1.4	140	Researched-No Data	0.08
76-13-1	**1,1,2-trichloro-1,2,2-trifluoroethane**	NA	Researched - No Data	2,400,000	--	0.001	2,400,000	Not Researched	Not Researched	Researched-No Data	2	8.6	Not Researched	Researched-No Data	30
87-61-6	**1,2,3-trichlorobenzene**	NA	NA	NA	--	0.001	0.001	Not Researched	Not Researched	Not Researched	Not Researched	Not Researched	Not Researched	Not Researched	Not Researched
120-82-1	**1,2,4-Trichlorobenzene**	1.33	Researched - No Data	800	--	0.001	1.33	300	0.058	Researched-No Data	2	0.057	1,700	Researched-No Data	0.01
71-55-6	**1,1,1-Trichloroethane**	3,373	2	72,000	--	0.001	2	1,300	0.71	Researched-No Data	2	3	140	Researched-No Data	0.9
79-00-5	**1,1,2-Trichloroethane**	0.0033	Researched - No Data	18	--	0.001	0.0033	4,400	0.037	0.056	2	Researched-No Data	75	0.057	0.004
79-01-6	**trichloroethylene**	0.01	0.030	2.5	--	0.001	0.01	1,100	0.42	0.4	2	0.01	94	0.4	0.0003
75-69-4	**trichlorofluoromethane**	NA	Researched - No Data	24,000	--	0.005	24,000	Not Researched	Not Researched	Researched-No Data	2	0.2	Not Researched	Researched-No Data	0.3
75-01-4	**vinyl chloride**	0.00016	Researched - No Data	0.67	--	0.001	0.001	2,800	1.1	0.031	2	0.029	19	1.5	0.003
1330-20-7	**xylenes**	9.09	9	16,000	--	0.003	9	170	0.28	Researched-No Data	2	0.029	230	Researched-No Data	0.2

Notes:

Shading denotes PCL value where the calculated PCL is less than the laboratory PQL or where no calculated PCL is available.

"Researched-No Data" means research has been conducted and no data exists in the database for this parameter.

"Not Researched" means research has not been conducted and no value exists in the database for this parameter.

A - PCLs calculated from calculated using Ecology's three phase partitioning model as described in WAC 173-340-747 to generate soil concentrations which are protective of surface water.

B - Soil Method A values for unrestricted land use from CLARC summary tables.

C - Soil Method B Direct Contact values for unrestricted land use from CLARC summary tables.

D - Terrestrial Ecological Evaluation Values from Ecology Toxics Cleanup Program Table 749-2: Priority contaminants of ecological concern for sites that qualify for the simplified terrestrial ecological evaluation.

E - Practical Quantitation Limit (PQL) from Environmental Sciences Corp environmental laboratory.

F - Selected PCL = Most restrictive PCL for Soil Cleanup, with the exception of analytes where PQL > calculated PCL or no calculated PCL is given. In these instances, the PQL will be selected as the PCL; if no PCL is available for Soil Cleanup Based on Protection of Surface Water, the Soil Method A or Method B value (if no Method A value) is selected.

G - Parameters from CLARC Summary Tables used for Worksheet for Calculating Soil Cleanup Levels for Unrestricted and Industrial Land Use.

H - VOCs per EPA Method 8260.

NA - Value Not Available.

Table 5
Groundwater Preliminary Cleanup Levels
Metals, PCBs, Dioxin/Furan, TPH
JELD-WEN Former Nord Door Site
Everett, WA

CAS #	Analyte	Calculated Groundwater Preliminary Cleanup Level (PCL) [A] (µg/L)	Reference [B]	Laboratory Practical Quantitation Limit (PQL) [C] (µg/L)	Selected PCLs [D]
	Metals [E]				
7440-36-0	**Antimony**	5.6	Surface Water ARAR	1	5.6
7440-38-2	**Arsenic**	0.018	Surface Water ARAR	1	1
7440-41-7	**Beryllium**	270	Surface Water Method B	1	270
7440-43-9	**Cadmium in Water**	0.25	Surface Water ARAR	1	1
18540-29-9	**Chromium [F]**	10	Groundwater Method A	1	10
7440-50-8	**Copper**	2.4	Surface Water ARAR	1	2.4
7439-92-1	**Lead**	0.54	Surface Water ARAR	1	1
7440-02-0	**Nickel [G]**	8.2	Surface Water ARAR	1	8.2
7782-49-2	**Selenium**	5	Surface Water ARAR	1	5
7440-22-4	**Silver**	0.32	Surface Water ARAR	0.5	0.5
7440-28-0	**Thallium [H]**	0.24	Surface Water ARAR	1	1
7440-66-6	**Zinc**	32	Surface Water ARAR	10	32
7439-97-6	**Mercury**	0.012	Surface Water ARAR	0.2	0.2
	Polychlorinated Biphenyls [I] (PCBs)				
1336-36-3	**Total PCBs**	0.000064	Surface Water Method B	0.01	0.01
	Total Dioxin / Furan [J]				
1746-01-6	**2,3,7,8 TCDD [K]**	0.000000005	Surface Water ARAR	0.00000001	0.00000001
	Total Petroleum Hydrocarbons [L] (TPH)				
N/A	TPH-Gx	1,000/800 [M]	Groundwater Method A	100	1,000/800 [M]
N/A	TPH-Dx	500	Groundwater Method A	100	500

Notes:

Shading denotes PCL value where the calculated PCL is less than the laboratory PQL or where no calculated PCL is available.

A - PCLs selected per Ecology recommended hierarchy as outlined below.

B - References source of groundwater cleanup levels selected using hierarchy provided below.

C - PQL from Environmental Sciences Corp environmental laboratory.

D - Selected PCL defined as calculated PCL, with the exception of analytes where PQL > calculated PCL. In these instances, the PQL will be selected as the PCL.

E - Metals per EPA Method 6020; Mercury per EPA Method 7470A.

F - Chromium VI.

G - Nickel, soluble salts.

H - Thallium soluble salts.

I - PCBs per EPA Method 8082.

J - Dioxin/Furan by EPA Method 1613.

K - Per Ecology Comment 45(d) to the Draft Final Work Plan, 2,3,7,8 TCDD has been used for total Dioxin/Furan.

L - Hydrocarbon per NW-TPH-Gx and NW-TPH-Dx methodologies.

M - Gasoline Range Organics 1,000µg/L with no detectable benzene in groundwater; 800 µg/L if benzene present in groundwater.

NA - Value not available.

Hierarchy for Selection of PCLs

The groundwater cleanup levels were selected using the following hierarchy:

1) Choose the most stringent value among all the Surface Water ARARs and Surface Water Method B values per WAC-173-340-730.

2) If there is no Surface Water cleanup value available in the Cleanup Levels and Risk Calculation (CLARC) table, then choose the Groundwater Method A value (Table 720-1).

3) If there is no Groundwater Method A cleanup value, then choose the Groundwater Method B (ingestion) value from the CLARC table.

4) If there is no Groundwater Method B cleanup value, then choose the most stringent Groundwater ARAR value available in CLARC.

Table 6
Soil Preliminary Cleanup Levels
Metals, PCBs, Dioxin/Furan, and TPH
JELD-WEN Former Nord Door Site
Everett, WA

CAS #	Analyte	Preliminary Cleanup Levels (PCL) (mg/kg)				Laboratory Practical Quantitation Limit (PQL) [E] (mg/kg)	Selected PCLs [F]	Parameters from CLARC Summary Table [G]							
		Soil Cleanup Based on Protection of Surface Water [A]	Soil Method A [B]	Soil Method B Direct Contact [C]	Terrestrial Ecological Receptors [D]			Aqueous Solubility (S) (mg/L)	Henrys Law Constant (unitless) (Hcc) (unitless)	Inhalation Cancer Potency Factor (CPFi) (kg-day/mg)	Inhalation Correction Factor (INH) (unitless)	Inhalation Reference Dose (RfDi) (mg/kg-day)	Kd (Distribution Coefficient for Metals) (L/kg)	Oral Cancer Potency Factor (CPFo) (kg-day/mg)	Oral Reference Dose (RfDo) (mg/kg-day)
	Metals [H]														
7440-36-0	**Antimony**	5.1	Researched - No Data	32	--	1	5.1	Not Researched	0	Researched-No Data	1	Researched-No Data	45	Researched-No Data	0.0004
7440-38-2	**Arsenic**	0.0105	20	0.67	20	1	1	Not Researched	0	15	1	15	29	1.5	0.0003
7440-41-7	**Beryllium**	4,267	Researched - No Data	160	25	0.1	25	Not Researched	0	8.4	1	0.0000057	790	Researched-No Data	0.002
7440-43-9	**Cadmium**	5.7	2	80	25	0.25	2	Not Researched	0	0.042	1	Researched-No Data	6.7	Researched-No Data	0.001
18540-29-9	**Chromium [I]**	3.84	19	240	42	0.5	3.84	Not Researched	0	Researched-No Data	1	0.0000023	19	Researched-No Data	0.003
7440-50-8	**Copper**	1.07	Researched - No Data	3,000	100	1	1.07	Not Researched	0	Researched-No Data	1	Researched-No Data	22	Researched-No Data	0.037
7439-92-1	**Lead**	108	250	Not Researched	220	0.25	108	Not Researched	0	Researched-No Data	1	Researched-No Data	10,000	Researched-No Data	Researched-No Data
7440-02-0	**Nickel [J]**	10.69	Researched - No Data	1,600	100	1	10.69	Not Researched	0	0.84	Not Researched	Researched-No Data	65	Researched-No Data	0.02
7782-49-2	**Selenium**	0.52	Researched - No Data	400	0.8	1	1	Not Researched	0	Researched-No Data	1	Researched-No Data	5	Researched-No Data	0.005
7440-22-4	**Silver**	0.054	Researched - No Data	400	--	0.5	0.5	Not Researched	0	Researched-No Data	1	Researched-No Data	8.3	Researched-No Data	0.005
7440-28-0	**Thallium [K]**	0.342	Researched - No Data	5.6	--	1	1	Not Researched	0	Researched-No Data	1	Researched-No Data	71	Researched-No Data	0.00007
7440-66-6	**Zinc**	39.8	Researched - No Data	24,000	270	1.5	39.8	Not Researched	0	Researched-No Data	1	Researched-No Data	62	Researched-No Data	0.3
7439-97-6	**Mercury**	0.013	2	24	0.7	0.02	0.02	Not Researched	0.47	Researched-No Data	1	0.000086	52	Researched-No Data	0.0003

CAS #	Analyte	Preliminary Cleanup Levels (PCL) (mg/kg)				Laboratory PQL [E] (mg/kg)	Selected PCLs [F]	Parameters from CLARC Summary Table [G]							
		Soil Cleanup Based on Protection of Surface Water [A]	Soil Method A [B]	Soil Method B Direct Contact [C]	Terrestrial Ecological Receptors [D]			Aqueous Solubility (S) (mg/L)	Henrys Law Constant (unitless) (Hcc) (unitless)	Inhalation Cancer Potency Factor (CPFi) (kg-day/mg)	Inhalation Correction Factor (INH) (unitless)	Inhalation Reference Dose (RfDi) (mg/kg-day)	Koc (Soil Organic Carbon-Water Partitioning Coefficient) (L/kg)	Oral Cancer Potency Factor (CPFo) (kg-day/mg)	Oral Reference Dose (RfDo) (mg/kg-day)
	Polychlorinated Biphenyls [L] (PCBs)														
1336-36-3	**Total PCBs**	NA	1	0.50	--	0.0005	0.50	Not Researched	Not Researched	Researched-No Data	1	Researched-No Data	110,000	Researched-No Data	0.00007
	Total Dioxin / Furan														
1746-01-6	**2,3,7,8 TCDD [M]**	NA	NA	0.000011	--	0.000011	0.000011	Not Researched	Not Researched	150,000	1	Researched-No Data	Not Researched	150,000	Researched-No Data

Analyte	Preliminary Cleanup Levels (PCLs) (mg/kg)		Laboratory PQL (mg/kg)	Selected PCLs [E]
	Method A [B]	Terrestrial Ecological Receptors [D]		
TPH-Gx [N]	100/30 [O]	200	0.1	100/30
TPH-Dx [N]	2,000	460	4	460

Notes:

Shading denotes PCL value where the calculated PCL is less than the laboratory PQL or where no calculated PCL is available.

"Researched-No Data" means research has been conducted and no data exists in the database for this parameter.

"Not Researched" means research has not been conducted and no value exists in the database for this parameter.

A - PCLs calculated from calculated using Ecology's three phase partitioning model as described in WAC 173-340-747 to generate soil concentrations which are protective of surface water.

B - Soil Method A values for unrestricted land use from CLARC summary tables.

C - Soil Method B Direct Contact values for unrestricted land use from CLARC summary tables.

D - Terrestrial Ecological Evaluation Values from Ecology Toxics Cleanup Program Table 749-2: Priority contaminants of ecological concern for sites that qualify for the simplified terrestrial ecological evaluation.

E - Practical Quantitation Limit (PQL) from Environmental Sciences Corp environmental laboratory.

F - Selected PCL defined as most restrictive PCL for Soil Cleanup, with the exception of analytes where PQL > calculated PCL or no calculated PCL is given. In these instances, the PQL will be selected as the PCL; if no PCL is available for Soil Cleanup.

G - Parameters from CLARC Summary Tables used for Worksheet for Calculating Soil Cleanup Levels for Unrestricted and Industrial Land Use.

H - Priority Pollutant Metals per EPA Method 6010B.

I - Chromium VI.

J - Nickel, Soluble Salts.

K - Thallium, Soluble Salts.

L - PCBs per EPA Method 8082.

M - Per Ecology Comment 45(d) to the Draft Final Work Plan, 2,3,7,8 TCDD has been used for total Dioxin/Furan.

N - Hydrocarbon per NW-TPH-Gx and NW-TPH-Dx methodologies.

O - 100 mg/kg for gasoline mixtures without benzene and the total of ethylbenzene, toluene and xylene are less than 1% of the gasoline mixture, 30 mg/kg for all other gasoline mixtures.

NA - Value not available.

ATTACHMENT 3

GROUNDWATER PCL EXCEEDANCE MAP – SVOCS AND PAHS

Base map from W&H Pacific Titled "Site Map- Monitoring Wells" dated 11/20/2006
Northwestern Lumber and Manufacturing Company Detail from 1968 Sanborn Map

0 150 300
APPROXIMATE SCALE

N

SLR International Corp
1800 Blankenship Road
Suite 440
West Linn, OR 97068
T: 503-723-4423
F: 503-723-4436

DATE 04/08
DWN. EMG
APPR. ____
REVIS. ____
PROJECT NO. 008.0228.00026

ATTACHMENT 3
JELD-WEN SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON
GROUNDWATER PCL EXCEEDANCE MAP- SVOCs AND PAHs

ATTACHMENT 4

SOIL PCL EXCEEDANCE MAP – SVOCS AND PAHS

Legend

- CATCH BASIN
- MONITORING WELL
- GEOPROBE ASSESSMENT LOCATION
- TP2 TEST PIT
- SAMPLE LOCATION EXCEEDS ONE OR MORE SVOC SOIL PCL
- ESTIMATED EXTENT OF SVOC SOIL CONTAMINATION EXCEEDING PCL
- REMOVED BUILDINGS
- REMOVED TANKS
- (1945) LAST YEAR FEATURE VISIBLE ON AERIAL PHOTOGRAPHS

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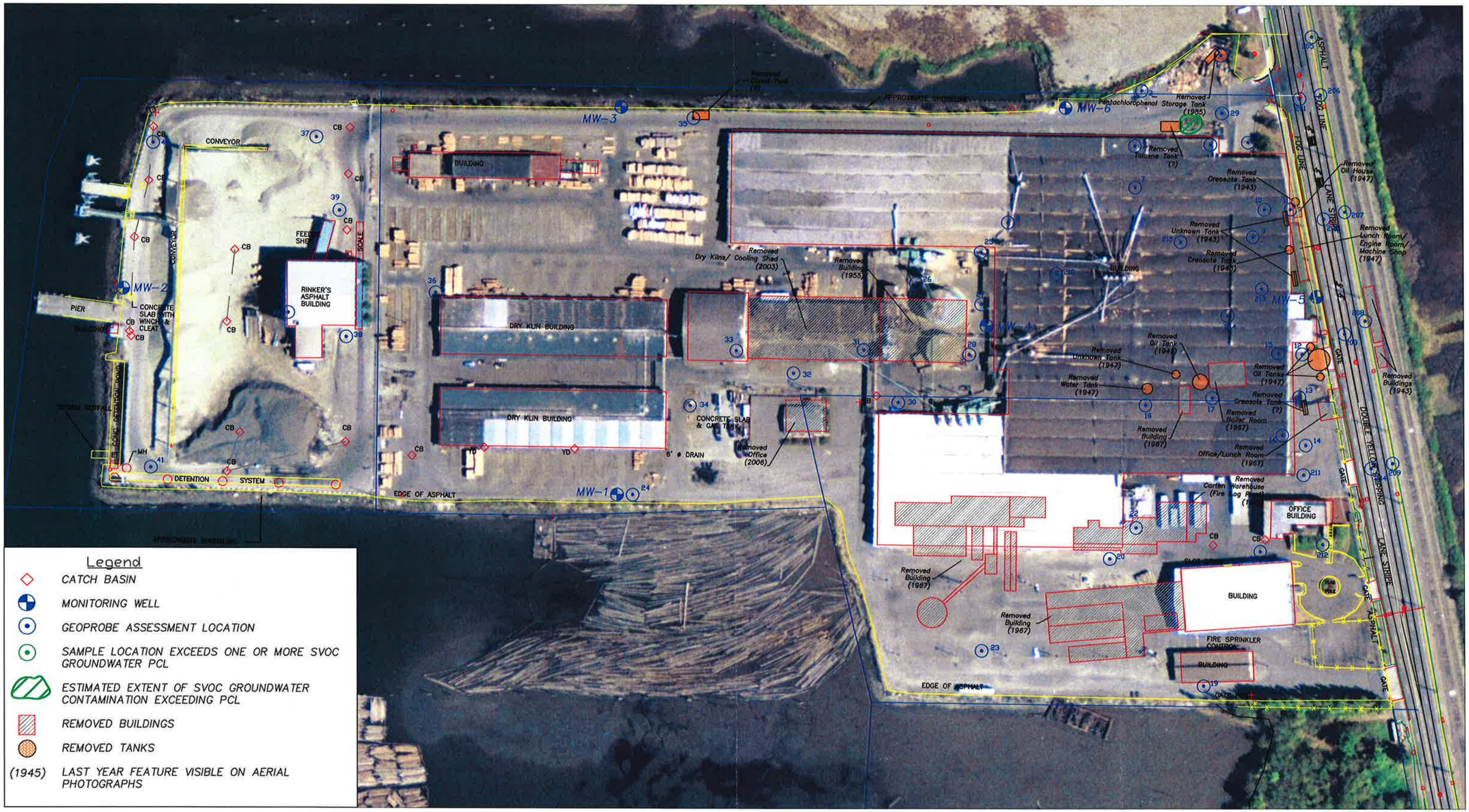
ATTACHMENT 4
JELD-WEN SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON
SOIL PCL EXCEEDANCE MAP- SVOCs AND PAHs

ATTACHMENT 5

GROUNDWATER PCL EXCEEDANCE MAP – VOCS



Legend

- CATCH BASIN
- MONITORING WELL
- GEOPROBE ASSESSMENT LOCATION
- SAMPLE LOCATION EXCEEDS ONE OR MORE SVOC GROUNDWATER PCL
- ESTIMATED EXTENT OF SVOC GROUNDWATER CONTAMINATION EXCEEDING PCL
- REMOVED BUILDINGS
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ATTACHMENT 5
JELD-WEN SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON
GROUNDWATER PCL EXCEEDANCE MAP-VOCs

ATTACHMENT 6

SOIL PCL EXCEEDANCE MAP – VOCS

Legend

- CATCH BASIN
- MONITORING WELL
- GEOPROBE ASSESSMENT LOCATION
- TP2 TEST PIT
- SAMPLE LOCATION EXCEEDS ONE OR MORE VOC SOIL PCL
- ESTIMATED EXTENT OF VOC SOIL CONTAMINATION EXCEEDING PCL
- REMOVED BUILDINGS
- REMOVED TANKS
- (1945) LAST YEAR FEATURE VISIBLE ON AERIAL PHOTOGRAPHS

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Northwestern Lumber and Manufacturing Company Detail from 1968 Sanborn Map

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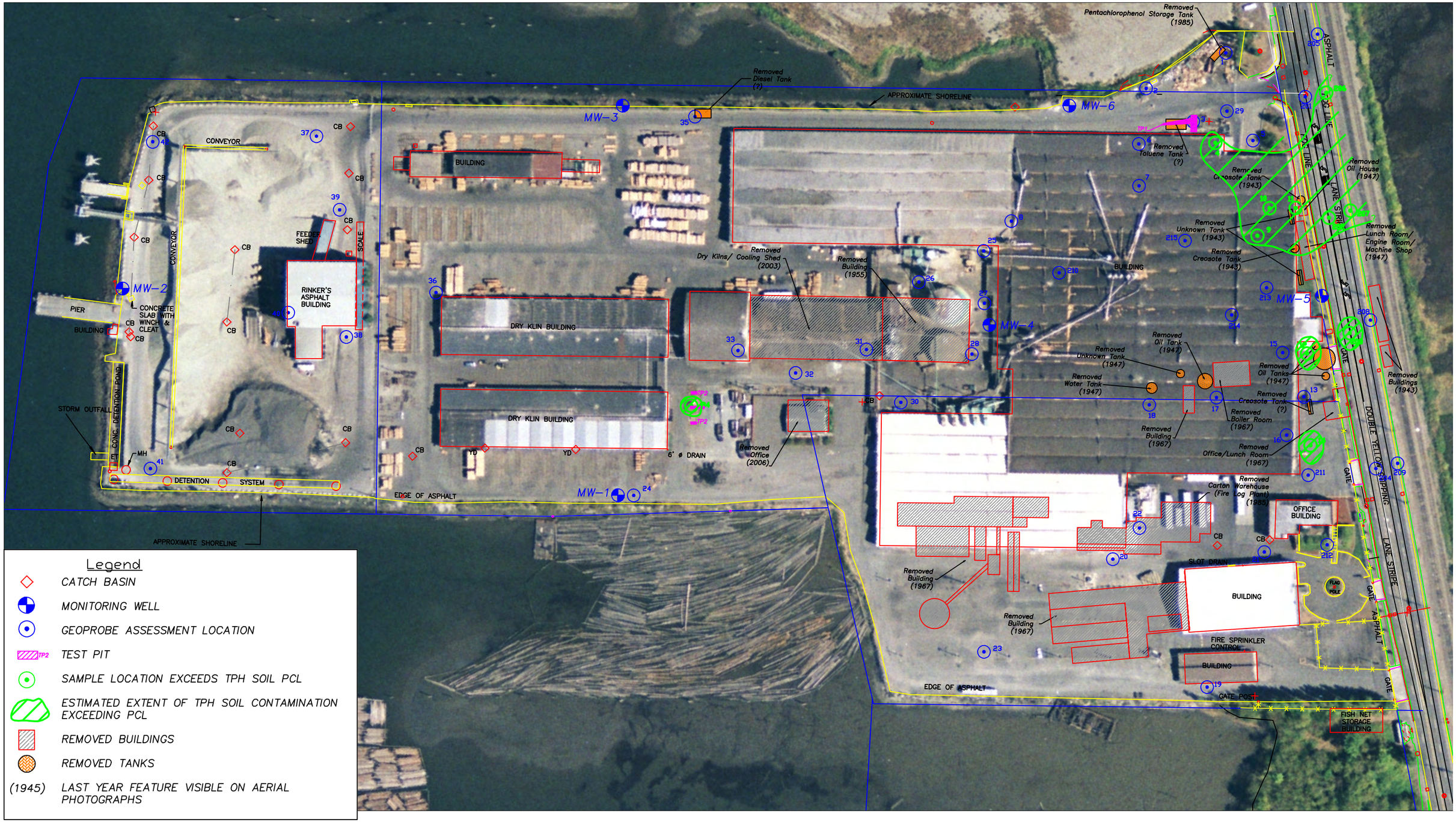
ATTACHMENT 6
JELD-WEN SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON
SOIL PCL EXCEEDANCE MAP-VOCs

ATTACHMENT 7

SOIL PCL EXCEEDANCE MAP – TPH



Legend

- CATCH BASIN
- MONITORING WELL
- GEOPROBE ASSESSMENT LOCATION
- TP2 TEST PIT
- SAMPLE LOCATION EXCEEDS TPH SOIL PCL
- ESTIMATED EXTENT OF TPH SOIL CONTAMINATION EXCEEDING PCL
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Northwestern Lumber and Manufacturing Company Detail from 1968 Sanborn Map

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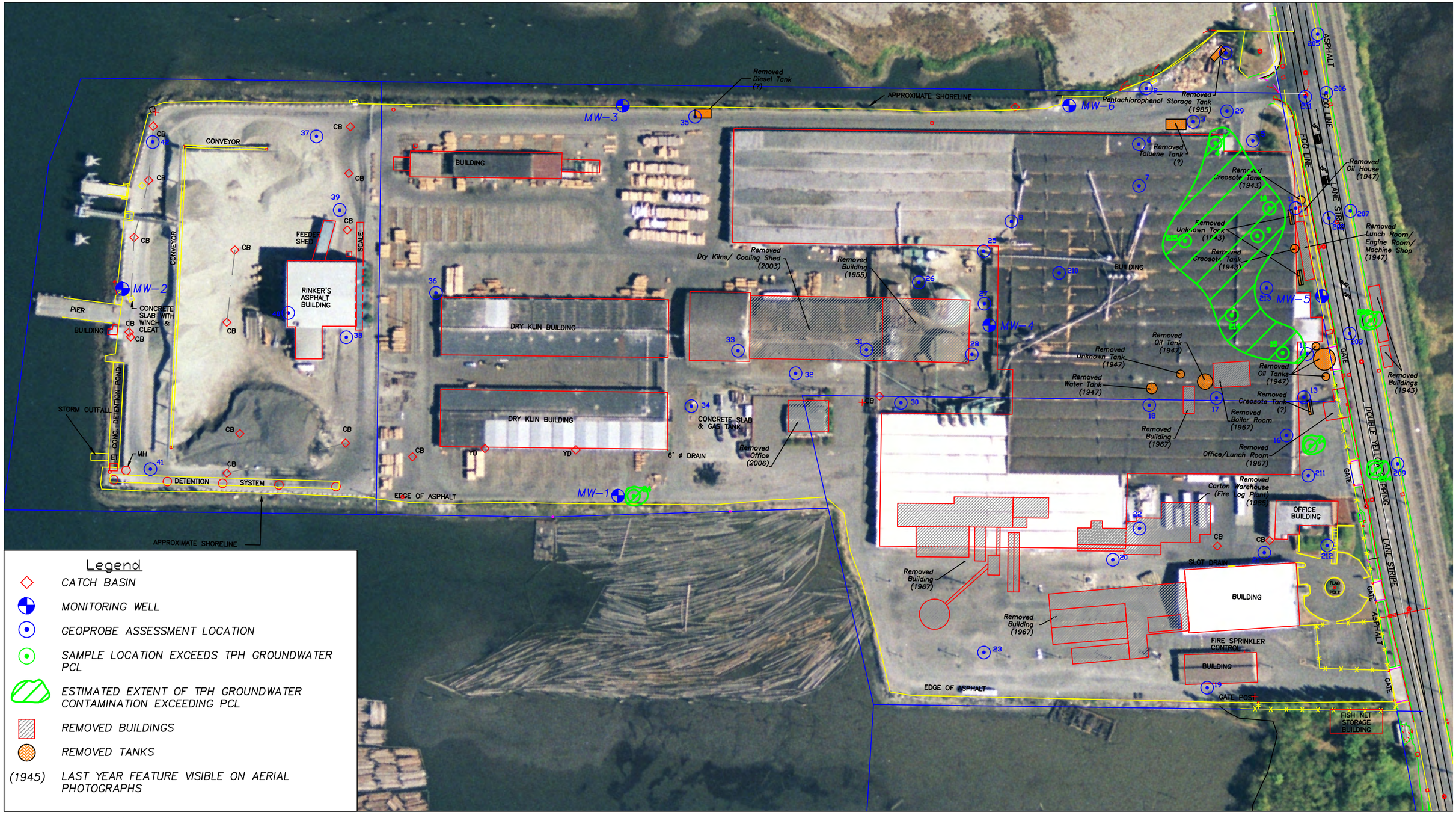
ATTACHMENT 7
JELD-WEN SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON
SOIL PCL EXCEEDANCE MAP- TPH

ATTACHMENT 8

SOIL PCL EXCEEDANCE MAP – TPH



Legend

- CATCH BASIN
- MONITORING WELL
- GEOPROBE ASSESSMENT LOCATION
- SAMPLE LOCATION EXCEEDS TPH GROUNDWATER PCL
- ESTIMATED EXTENT OF TPH GROUNDWATER CONTAMINATION EXCEEDING PCL
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ATTACHMENT 8
JELD-WEN SITE
300 WEST MARINE VIEW DRIVE
EVERETT, WASHINGTON
GROUNDWATER PCL EXCEEDANCE MA
TPH