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## **INITIAL REMEDIAL INVESTIGATION DATA SUMMARY**

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

**Prepared by:**

Megan Coracci ■ Senior Scientist  
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November 20, 2009  
Project # 008.0228.00032

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## TABLE OF CONTENTS

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<b>1.</b>	<b>INTRODUCTION.....</b>	<b>1</b>
1.1	INTRODUCTION .....	1
1.2	PURPOSE .....	1
1.3	GENERAL BACKGROUND .....	1
<b>2.</b>	<b>REMEDIAL INVESTIGATION.....</b>	<b>3</b>
2.1	INTRODUCTION .....	3
2.2	UPLAND INVESTIGATION.....	3
2.2.1	GEOLOGY AND HYDROGEOLOGY .....	4
2.2.2	MODIFICATIONS OR DEVIATIONS FROM WORK PLAN.....	5
2.2.3	QUALITY OF THE DATA.....	6
2.2.4	IDENTIFICATION OF NON-AQUEOUS PHASE LIQUID (NAPL) .....	8
2.2.5	PRELIMINARY DATA FINDINGS – UPLAND INVESTIGATION .....	8
2.2.6	CONCEPTUAL SITE MODEL (CSM) .....	15
2.3	SEDIMENT INVESTIGATION.....	15
2.3.1	MODIFICATIONS OR DEVIATIONS FROM THE WORK PLAN .....	16
2.3.2	QUALITY OF THE DATA.....	16
2.3.3	MODIFICATIONS TO THE CSM .....	17
2.3.4	PRELIMINARY DATA FINDINGS – SEDIMENT INVESTIGATION .....	17
<b>3.</b>	<b>INDICATOR HAZARDOUS SUBSTANCES AND DATA GAPS .....</b>	<b>21</b>

## LIST OF FIGURES

---

FIGURE 1	SITE LOCATION MAP
FIGURE 2	SITE PLAN WITH 2009 UPLAND AND SEDIMENT SAMPLING LOCATIONS
FIGURE 3	SITE PLAN WITH 2009 SAMPLING LOCATIONS AND HISTORICAL SAMPLING LOCATIONS
FIGURE 4	SOIL PCL EXCEEDANCE MAP – SVOCs AND PAHS
FIGURE 5	GROUNDWATER PCL EXCEEDANCE MAP – SVOCs AND PAHS
FIGURE 6	SOIL PCL EXCEEDANCE MAP – VOCs
FIGURE 7	GROUNDWATER PCL EXCEEDANCE MAP – VOCs
FIGURE 8	SOIL PCL EXCEEDANCE MAP – TPH
FIGURE 9	GROUNDWATER PCL EXCEEDANCE MAP - TPH
FIGURE 10	SOIL PCL EXCEEDANCE MAP – DIOXINS/FURANS
FIGURE 11	GROUNDWATER PCL EXCEEDANCE MAP – DIOXINS/FURANS

## LIST OF TABLES

---

TABLE 1	ANALYTICAL SUMMARY TABLE – UPLAND INVESTIGATION
TABLE 2	SOIL ANALYTICAL SUMMARY TABLE – SVOCs AND PAHS
TABLE 3	SOIL ANALYTICAL SUMMARY TABLE – SVOCs AND PAHS AT BNSF MAULSBY MARSH
TABLE 4	GROUNDWATER ANALYTICAL SUMMARY TABLE – SVOCs AND PAHS
TABLE 5	GROUNDWATER ANALYTICAL SUMMARY TABLE – SVOCs AND PAHS AT BNSF MAULSBY MARSH
TABLE 6	SOIL ANALYTICAL SUMMARY TABLE – VOCs
TABLE 7	SOIL ANALYTICAL SUMMARY TABLE – VOCs AT BNSF MAULSBY MARSH
TABLE 8	GROUNDWATER ANALYTICAL SUMMARY TABLE – VOCs
TABLE 9	GROUNDWATER ANALYTICAL SUMMARY TABLE – VOCs AT BNSF MAULSBY MARSH
TABLE 10	SOIL ANALYTICAL SUMMARY TABLE – METALS, PCBs, AND TPH
TABLE 11	GROUNDWATER ANALYTICAL SUMMARY TABLE – METALS, PCBs, AND TPH
TABLE 12	SOIL AND GROUNDWATER ANALYTICAL SUMMARY TABLE –TPH AT MAULSBY MARSH
TABLE 13	SOIL ANALYTICAL SUMMARY TABLE – DIOXINS/FURANS
TABLE 14	GROUNDWATER ANALYTICAL SUMMARY TABLE – DIOXINS/FURANS
TABLE 15	SOIL AND GROUNDWATER SUMMARY TABLE - cPAHS
TABLE 16	SOIL AND GROUNDWATER SUMMARY TABLE – cPAHS AT MAULSBY MARSH
TABLE 17	SOIL SCREENING STEP 2 – METALS COMPARED TO BACKGROUND
TABLE 18	GROUNDWATER SCREENING STEP 2 – METALS COMPARED TO PCLs (MTCA)
TABLE 19	SOIL SCREENING STEP 3 – SVOCs, VOCs, AND TPH COMPARED TO PCLs
TABLE 20	SOIL SCREENING STEP 3 – METALS COMPARED TO PCLs

TABLE 21	SOIL SCREENING STEP 3 – CPAHS AT BNSF MAULSBY MARSH COMPARED TO PCLS
TABLE 22	SEDIMENT ANALYTICAL SUMMARY TABLE
TABLE 23	SEDIMENT ANALYTICAL SUMMARY - DRY WEIGHT
TABLE 24	SEDIMENT ANALYTICAL SUMMARY - CARBON NORMALIZED
TABLE 25	SEDIMENT ANALYTICAL SUMMARY – DIOXINS/FURANS

## **LIST OF ATTACHMENTS**

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ATTACHMENT A	PREVIOUS DATA - TABLES 1A THROUGH 7A
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# 1. INTRODUCTION

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This report has been prepared to summarize the findings of the initial Remedial Investigation (RI) data which has been collected at the JELD-WEN former Nord Door facility located at 300 West Marine View Drive, Everett, Washington, 98201 (JELD-WEN Site). The Site location is depicted on Figure 1.

## 1.1 INTRODUCTION

In accordance with the Agreed Order (No. DE 5095) SLR International Corp (SLR) has prepared this summary of the initial RI which has been conducted at the Site. The initial RI sampling and analysis was performed in accordance with the Final Work Plan for Remedial Investigation/Feasibility Study and Draft Cleanup Action Plan (Work Plan), which was submitted to Washington State Department of Ecology (Ecology) on October 21, 2008, and approved by Ecology on October 27, 2008.

## 1.2 PURPOSE

The purpose of this report is to provide a summary of the initial RI field activities and data results, and to respond to Ecology's document request (June 14, 2009 email). This report has also been prepared to identify any data gaps that may warrant further investigation.

## 1.3 GENERAL BACKGROUND

The Site consists of five adjoining parcels 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). 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. 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. CEMEX (formerly Rinker Materials and 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.

Numerous investigations were completed at the Site between 1991 and 2007, the findings of which were summarized in detail in the Work Plan. Figures depicting the areas of soil and groundwater impact were provided as Attachments 3 through 8 of the Work Plan. Identified areas of impact at the Site included: creosote and polyaromatic hydrocarbon (PAH) from historical pole treating operations at the east side of the facility and beneath West Marine View Drive, PAHs and petroleum hydrocarbons from historical fueling oil storage at the east side of the facility, shallow soil and groundwater impacts (toluene) from solvent storage at the northeast corner of the facility, pentachlorophenol (PCP) impacts to soil from wood treatment solution storage and usage at the northeast corner of the facility (appeared to be localized), total petroleum hydrocarbon (TPH) and PAH impacts to soil near the former fueling station in the central portion of the Site, PAH impacts to soil near the former casket manufacturing area, PAH impacts to soil near monitoring well MW-1, and PAH and TPH from fill material placed at the Site (appeared to be wide-spread but relatively minor). Tables presenting the findings of the previous investigations are presented as Attachment A, Tables 1a through 7a.

The purpose of the initial RI investigation was 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. The rationale for sampling in the specific areas investigated was discussed in detail in the Work Plan.

## 2. REMEDIAL INVESTIGATION

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### 2.1 INTRODUCTION

This portion of the report has been prepared to summarize the findings of the initial RI sampling and analysis at the Site.

### 2.2 UPLAND INVESTIGATION

On May 20, 22 and June 1, 2009 SLR completed 13 Geoprobe borings for the collection of soil and groundwater samples (GP-302 through GP-312, GP-334 and GP-335) at the locations depicted on Figure 2. Prior to field activities, the locations of public utilities were identified through the Utility Notification Center and the location of private utilities were identified by APS, a private utility locating company. The drilling activities were performed by Cascade Drilling Inc. based out of Woodinville, WA. The soil samples and groundwater samples were collected using the sample collection methods, sampling locations, collection depths, sample analysis, and equipment decontamination procedures detailed in the Upland Sampling and Analysis Plan (SAP). All borings were abandoned with bentonite upon completion of groundwater sampling. Specific laboratory analyses performed for each sample is summarized in Table 1. Soil and groundwater sampling results are summarized in Tables 2 through 16.

The Geoprobe borings were completed to depths between 8 and 12 feet below ground surface (bgs). Soils encountered during installation of the borings consisted primarily of sands and silts, with interbedded layers of woody debris. Ash was encountered during installation of boring GP-334 at a depth of 3.5 to 7 feet bgs. Soil samples were collected from the Geoprobe sleeve, labeled, logged onto a chain-of-custody document, and stored on ice in an insulated cooler pending delivery to the laboratory for analysis. Temporary monitoring were installed in each of the boreholes. Groundwater was encountered at depths ranging from 3 to 8 feet bgs in the main portions of the Site. Groundwater was encountered at a depth of 10 feet bgs in the area identified as the fish net storage area. The temporary wells were sufficiently purged (typically 2 to 3 temporary well-point volumes) until purge water became more clear, to remove as much sediment as possible. Following purging, a water sample was collected using a peristaltic pump and dedicated plastic tubing. The groundwater method was sufficient to characterize groundwater for total metals based on direct exposure.

On May 4 and 5, 2009 SLR collected two near surface soil samples from the former machine shop and maintenance area (SS-313 and SS-314), seven surface grab samples from areas immediately adjacent to the seven on-site transformers (SS-315 through SS-321) and one grab sample of boiler ash (SS-301) from the former hog fuel boiler which remains on the Site. The sample locations are depicted on Figure 2. The samples were collected using the sample collection methods, sampling locations, collection depths, sample analysis, and equipment decontamination procedures detailed in the Upland SAP. Specific laboratory analyses performed for each sample is summarized in Table 1. Surface soil and ash sampling results are summarized in Tables 10 and 13.



On September 22, 2009 SLR initiated sampling activities on the BNSF Maulsby Marsh property, which included clearing brush and undergrowth from the proposed boring locations. SLR collected soil samples from hand auger borings HA-322 through HA-326, and collected groundwater samples from hand auger borings HA-322 and HA-323. The sample locations are depicted on Figure 2. The samples were collected using the sample collection methods, sampling locations, collection depths, sample analysis, and equipment decontamination procedures detailed in the Upland SAP. Specific laboratory analyses performed for each sample is summarized in Table 1. Sampling results are summarized in Tables 3, 5, 7, 9, 12, and 16.

On the afternoon of September 24, 2009 SLR was approached by a BNSF rail car applying herbicide to the work area. When the BNSF field team employee was unable to reach any supervisory BNSF personnel by phone, SLR's field team was asked to gather their equipment and leave the premises immediately. Due to low water yields in hand auger borings HA-324, HA-325, and HA-326, the temporary well points were being allowed to recharge while sampling activities continued. At the request of the BNSF employee, SLR left the property, and was therefore unable to complete the remaining hand auger borings or collect groundwater samples from the temporary well points.

SLR returned to the Site on October 12 and 13, 2009 to complete the hand auger borings on the BNSF Maulsby Marsh property. SLR completed hand auger borings HA-327 through HA-333, and collected groundwater samples from temporary well points in hand auger borings HA-324 through HA-332. Due to low well yield no groundwater sample was collected from hand auger boring HA-332. The sample locations are depicted on Figure 2. The samples were collected using the sample collection methods, sampling locations, collection depths, sample analysis, and equipment decontamination procedures detailed in the Upland SAP. Specific laboratory analyses performed for each sample is summarized in Table 1. Sampling results are summarized in Tables 3, 5, 7, 9, 12, and 16.

On October 29, 2009 SLR sampled five of the six groundwater monitoring wells located on the Site. The groundwater monitoring well locations are depicted on Figure 3. Monitoring well MW-3 was not sampled because it was inaccessible during the sampling activities. The samples were collected using the sample collection methods, sampling locations, collection depths, sample analysis, and equipment decontamination procedures detailed in the Upland SAP. Specific laboratory analyses performed for each sample is summarized in Table 1. Sampling results are summarized in Table 11.

### **2.2.1 GEOLOGY AND HYDROGEOLOGY**

Soils encountered during installation of the borings consisted primarily of sands and silts, with interbedded layers of woody debris. Ash was encountered during installation of boring GP-334 at a depth of 3.5 to 7 feet bgs. This ash is assumed to be boiler ash from the hog fuel boiler that operated at the Site. Saturated soil was encountered at depths ranging from 3 to 10 feet bgs at the time of the Geoprobe drilling.

Soils encountered during installation of the hand auger borings in the BNSF Maulsby Marsh property to a maximum depth of 3 feet bgs consisted of organic topsoil followed by gravelly sand and silt.

Organic material (roots, other plant material) was found throughout the lithology. Below the topsoil layer was a black peat-like soil (typical of a swamp setting) with organics.

## **2.2.2 MODIFICATIONS OR DEVIATIONS FROM WORK PLAN**

The initial RI investigation was conducted in general accordance with the Work Plan. Modifications or deviations from the Work Plan are described as follows:

- The Work Plan specified that two soil samples would be collected from each Geoprobe boring and submitted for total petroleum hydrocarbon (TPH) – hydrocarbon identification (TPH-HCID) analysis. Follow-up analysis was to be conducted on the sample exhibiting the highest concentrations of TPH based on the TPH-HCID analysis. Given the shallow depth to groundwater and the volume of sample media needed by the laboratory, SLR was only able to collect one soil sample from Geoprobe borings GP-302 through GP-314. All follow-up analysis was requested for the single sample from each boring.
- Based on field observations, two soil samples from boring GP-335 (collected from the former fish net storage area) were analyzed for polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and Priority Pollutant Metals (metals). The Work Plan only specified one sample from this boring would be analyzed for PCBs, VOCs, SVOCs, and metals.
- Based on the Northwest TPH diesel range (TPH-Dx) analysis data for SS-313 and SS-314, TPH in the diesel range were identified at concentrations above the laboratory practical quantitation limits (PQLs) but below the site-specific preliminary cleanup levels established for the Site in the Work Plan. Follow up analysis for VOCs and SVOCs may have been warranted based on the TPH results; however, given the delay in receipt of the TPH results the analysis would have taken place well outside of the laboratory hold time. This analysis was not requested.
- Surface soil sample SS-321 was submitted for analysis of TPH-Dx due to the visibly oil-stained nature of the soil in this area. TPH-Dx analysis of this sample was not called for in the Work Plan.
- Based on the identification of PCBs in soil sample SS-318, follow up analysis of this sample for TPH-Dx may have been warranted. At the time the results of the PCB analysis were received the TPH-Dx sample was past the laboratory hold time, and therefore this analysis was not requested. The concentration of PCBs measured in soil sample SS-318 was below the preliminary cleanup level established in the Work Plan, and these results are discussed in the following sections.
- Temporary well points completed on the BNSF Maulsby Marsh property for the collection of groundwater samples had very low water yields. Given the low volume of water obtained from these wells, the laboratory was unable to complete all of the specified analysis on several of the well points. With the exception of sample location HA-333-GW, the laboratory completed TPH-HCID analysis on all of the samples, and as much of the follow-up analysis as was possible with the volume of groundwater available. An insufficient volume of water was obtained from sample location HA-333-GW for the completion of any analysis. Specific analysis performed on each sample is summarized in Table 1.

- Monitoring well MW-3 was not sampled because it was inaccessible (covered with a large puddle of rainwater) at the time of the recent sampling event.

### 2.2.3 QUALITY OF THE DATA

The analytical results are summarized in Tables 2 through 16. The project laboratory for the uplands sampling was ESC Lab Sciences of Mount Juliet, TN. The analytical testing was conducted as was outlined in the Work Plan. The soil and groundwater analytical methods used included Northwest TPH methods (NWTPH-HCID, NWTPH-Gx, NWTPH-Dx), VOCs by EPA Method 8260B, SVOCs by EPA Method 8270, polyaromatic hydrocarbons (PAHs) by EPA Method 8270-SIM, PCBs by EPA Method 8082, priority pollutant metals (metals) using EPA 6000/7000 series methods, and dioxins and furans by EPA Method 1613.

In general the laboratories met the PQLs and method detection limits (MDLs) outlined in the Work Plan. As is inherent to laboratory analysis, the laboratory PQL and associated MDLs are often adjusted when specific analytes are detected and/or matrix interference occurs.

The PQLs and associated MDLs were sufficient to meet the preliminary cleanup levels established in the Work Plan for the specific analytes. SLR notified Ecology in an email dated April 16, 2009 (prior to the start of the field work), that the project laboratory ESC had identified several analytes for which the laboratory PQLs identified in the SAP were lower than ESC's current method PQLs and MDLs. For these analytes, ESC met the PQLs and MDLs which were specified in the April 16, 2009 email. The preliminary cleanup levels for several of these analytes were lower than the revised PQLs provided by ESC. For these analytes, the preliminary cleanup levels have been adjusted to meet the new PQLs.

The samples were appropriately preserved and stored in iced coolers until arrival at ESC or Maxxam. Cooler temperatures for upland soil and groundwater samples were within the advisory range of 2° C to 6° C when received by ESC and Maxxam. Lab qualifiers noted on the attached tables are summarized below:

- Numerous analytes were identified at concentrations above the laboratory MDL but below the laboratory PQL. These analytes are “J” qualified in the attached tables.
- To achieve the PQLs for PAHs outlined in the SAP the samples analyzed for SVOCs also had to be analyzed by EPA Method 8270-SIM. The extraction for the SIM analysis for many of the samples was conducted outside of the laboratory hold time, resulting in data which is “Q” qualified in the attached tables
- The SVOCs acenaphthylene, 2-chloronaphthalene, and 2-methylnaphthalene were originally analyzed by EPA Method 8270, and were subsequently reanalyzed at a lower detection limit by 8270-SIM. The extraction for the SIM analysis was conducted out of hold time for many of the samples. The attached table presents the findings of the SIM analysis, and therefore these analytes are “Q” qualified. Unqualified SVOC data is also available for these analytes.
- The VOCs cyclohexane, methyl acetate, 1,4-dioxane, and methylcyclohexane were analyzed on different equipment than the other VOCs. The extraction for this analysis was conducted out of

the laboratory hold time for many of the samples and therefore the findings for these analytes are “Q” qualified.

- Follow up SVOC analysis for groundwater sample GP-307-GW and GP-308-GW was requested within the laboratory hold time; however, a second extraction was required to obtain reportable data for some analytes. The second extraction was conducted outside of the laboratory hold time, resulting in a “Q” qualification for some analytes.
- Follow up analysis for soil sample GP-335-7.5 was requested outside the laboratory hold time. Therefore, TPH-Dx, PCBs, VOC, and SVOC data for this sample is “Q” qualified.
- In soil sample GP-335-7.5 chromium was identified in the method blank as well as in the soil sample. This is noted on the attached table with a “B” qualifier.
- An insufficient volume of soil and groundwater media was available to allow for the SIM analysis of sample GP-308-2 or GP-308-GW. These samples were analyzed by the conventional SVOC analysis only. The laboratory PQLs for carcinogenic PAHs (cPAHs) in these samples were above the selected preliminary cleanup levels from the Work Plan.
- The associated batch QC was outside the established quality control range for precision for nickel in soil sample GP-308-2, TPH-Dx heavy oil range in sample GP-335-7.5, and one or more SVOC analytes in soil samples HA-322-1, HA-326-2, HA-328-1, HA-328-2.5, HA-329-1, HA-330-1, HA-331-2, HA-332-1 and HA-333-3 collected from the BNSF Maulsby Marsh property, resulting in a “J3” qualifier.
- The sample matrix interfered with the ability of the laboratory to make an accurate determination for the metals antimony, chromium, and nickel in soil sample GP-308-2, for chromium in sample GP-310-4.5, and for TPH in the motor oil range in soil sample HA-327-1; the spike value was low, resulting in a “J6” qualifier.
- The concentration of naphthalene in sample GP-307-GW was reported by the laboratory to be greater than upper calibration limit resulting in an “E” qualifier.
- The laboratory reported the internal standard associated with the data responded abnormally low in one or more analytes in the SVOC analysis of soil samples HA-326-2.5, HA-327-1.5, HA-327-2.5, HA-328-1, HA-328-2.5, HA-327-1, HA-330-1, HA-331-2, HA-331-2, HA-332-1 collected from the BNSF Maulsby Marsh property. The data is likely to show a high bias concerning the result, resulting in a “J8” qualifier.
- The internal standard exhibited poor recovery due to sample matrix interference in soil samples HA-329-1, HA-330-1, and HA-333-3 collected from the BNSF Maulsby Marsh property, resulting in a “V3” qualifier. The analytical results will be biased high. The below detection levels (BDL) results will be unaffected.
- The relative percent difference value is not applicable for sample concentrations less than 5 times the reporting limit, resulting in a “P1” qualifier in samples GP-310-4.5 (arsenic), GP-308-2 (copper), GP-305-GW (thallium), and MW-2 (total antimony).

- One or more dioxin/furan congeners were identified in the each of the method blanks run by the analytical laboratory (Maxxam) during the dioxin/furan analysis. In one case (GP-309-GW) the concentrations in the method blank were higher than the concentrations in the actual sample.

For the purposes of this preliminary data presentation, laboratory data qualifiers are not further discussed for analytes which were not identified above the laboratory MDL.

#### **2.2.4 IDENTIFICATION OF NON-AQUEOUS PHASE LIQUID (NAPL)**

NAPL was not encountered at any of the sampling locations.

#### **2.2.5 PRELIMINARY DATA FINDINGS – UPLAND INVESTIGATION**

Preliminary data findings for each of the areas of the Site investigated during the initial RI are summarized below. Tables 2 through 16 present the findings of the soil and groundwater sampling results. The sample locations are depicted on Figure 2. This section first describes the data screening process, and then describes the results for each area of upland investigation.

Preliminary soil data results were screened using a three step screening process to establish the appropriate proposed cleanup levels for soil, based on site conditions. For this screening process and for the presentation of the initial RI data the preliminary cleanup levels provided in the Work Plan and updated by email on April 16, 2009 shall be referred to as screening level values (SLVs). The screening process includes comparison of the initial RI data to proposed cleanup levels (PCLs). The term PCL is a change from the term used in the Work Plan. The screening process which was applied to the soil data is described below:

- **Screening Step 1** - Soil data was initially screened to identify compounds which were identified above the detection limits and that exceeded the most stringent SLVs identified in the Work Plan. The SLVs for soil outlined in the Work Plan were developed to be protective of marine and freshwater receptors in Port Garner Bay. The results of this screening step are summarized in Tables 2, 3, 6, 7, 10, 12, 13, 15, and 16.
- **Screening Step 2** - The next screening step involved comparing the metals identified in soil at concentrations above the SLVs to the natural background concentrations for the Puget Sound Area, as identified in Table 1: Statewide & Regional 90th Percentile Values (Puget Sound), as presented Ecology Publication Number 94-115 *Natural Soils Background Concentrations in Washington State*, dated October 1994. The results of this screening step are presented in Table 17.
- **Screening Step 3** - The third step involved screening the results of the compounds identified above the SLV or background concentrations in Step 1 and Step 2 against the PCLs for soil. The PCLs for soil were generally based on the most conservative MTCA Method B cleanup levels for direct contact. Adjustments were made to consider natural background concentrations for metals and to account for the presence or absence of a constituent in groundwater at the Site. For compounds in which no Method B cleanup level has been established (i.e. TPH and some metals), the Method A cleanup level has been used. The results of this screening step are summarized in Tables 19, 20, and 21.

Groundwater data results were screened using a two step screening process to establish the appropriate cleanup levels for groundwater based on site conditions. The screening process which was applied to the groundwater data is described below:

- **Screening Step 1** - Groundwater data was initially screened to identify compounds with concentrations above the detection limits and that exceeded the most stringent SLVs identified in the Work Plan. Based on the relationship between total and dissolved metals concentrations in samples collected during the RI, it is concluded that the samples tested for total metals were affected by the presence of particulates. As a result, analytical results for total metals were not considered representative of Site groundwater conditions, consistent with WAC 173-340-720(9)(b). The analytical results for the dissolved metals samples are used for SLV comparison, with the exception of samples for which no dissolved metals concentrations are available. The results of this screening step are summarized in Tables 4, 5, 8, 9, 11, 12, 14, 15, and 16.
- **Screening Step 2** - The next screening step involved comparing the dissolved metals identified in groundwater (unless no dissolved metals analysis was performed) at concentrations above the SLVs to the Method B cleanup values for groundwater. For compounds in which no Method B cleanup level has been established (i.e. lead), the Method A cleanup level has been used. The results of this screening step are summarized in Table 18.

The toxicity equivalency factor (TEF) methodology was developed by the U.S. Environmental Protection Agency (EPA) to evaluate the toxicity and assess the risks of a mixture of structurally related chemicals with a common mechanism of action. A TEF is an estimate of the relative toxicity of a chemical compared to a reference chemical. Ecology uses the TEF methodology to evaluate the toxicity and assess the risks for mixtures of dioxins/furans and carcinogenic PAHs (cPAHs). When establishing and determining compliance with cleanup levels and remediation levels for mixtures of dioxins/furans and cPAHs under the MTCA Cleanup Regulation, the mixtures are considered a single hazardous substance. For mixtures of dioxins/furans, the reference chemical is 2,3,7,8 - tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD). For mixtures of cPAHs, the reference chemical is benzo(a)pyrene. The toxic equivalency quotient (TEQ) calculations for dioxins/furans in soil and groundwater are presented in Tables 13 and 14, respectively. Tables 15 and 16 present TEQ calculations for cPAHs identified in the soil and groundwater.

- **Hog Fuel Burner Ash** – One grab sample (SS-301) of the burner ash remaining at the Site was collected for dioxins/furans analysis. The sample identified 2,3,7,8-TCDD TEQ to be 479 picograms per gram (pg/g), above the SLV of 11 pg/g. It is noted that the concentration of dioxins/furans identified in this sample are within the range of dioxin wood ash values (from 0.8 pg/g TEQ up to 800 pg/g for the 2,3,7,8-TCDD congener alone) presented in Ecology's Hog Fuel Boiler/Wood Ash Action Plan, *Publication Number 01-04-008*. As was specified in the Work Plan, since the sample of the burner ash contained dioxins/furans the sediment samples from 3SED7 (A, B and C) were submitted for analysis of dioxins/furans. The results of the sediment analysis are discussed in Section 2.3 below.
- **Former Woodlife Storage and Use Area** – Two soil samples (GP-302-1 and GP-302-3.5) were collected from the former Woodlife storage and use area and submitted for analysis of TPH-Dx

and PCP. In addition, sample GP-302-1 was submitted for analysis of dioxins/furans. No PCP or TPH-Dx was identified above the SLVs in Screening Step 1. The dioxins/furans analysis identified the 2,3,7,8-TCDD TEQ to be 4,150 pg/g, above the SLV of 11 pg/g. As outlined in the Work Plan, the groundwater sample from this location (GP-302-GW) was subsequently submitted for follow up dioxin/furan analysis. The results of this analysis identified the 2,3,7,8-TCDD TEQ to be 131 pg/L, above the SLV of 0.01 pg/L in Screening Step 1.

- **Southwest Former Unpaved (“grassy”) Area** – Four Geoprobe borings were advanced in the former unpaved area located on the southwestern corner of the Site, which is currently leased to CEMEX. Four soil samples (GP-303-6, GP-304-6, GP-305-7, and GP-306-7) and four groundwater samples (GP-303-GW, GP-304-GW, GP-305-GW, and GP-306-GW) were collected from the borings. Soil samples were analyzed for TPH-HCID, PCBs, VOCs, SVOCs, and metals. With the exception of metals, none of the constituents were identified at concentrations above SLVs. The metals arsenic, chromium, copper, nickel, silver, thallium, zinc, and mercury were identified in one or more soil samples at concentrations above the SLVs in Screening Step 1. Arsenic in sample GP-305-7 and mercury in sample GP-306-7 were present at concentrations equal to or above the published background concentrations in Screening Step 2. None of the metals concentrations exceeded PCLs in Screening Step 3.

Groundwater samples were analyzed for TPH-HCID, with follow up analysis for TPH-Dx (sample GP-304-GW only), VOCs, SVOCs, and metals. With the exception of metals, none of the constituents were identified at concentrations above the SLVs. The metals arsenic, cadmium, chromium, copper, lead nickel, silver, and zinc were identified in one or more groundwater samples at concentrations above SLVs in Screening Step 1. Concentrations of arsenic in all four borings (GP-303-GW, GP-304-GW, GP-305-GW, and GP-306-GW) and lead in two borings (GP-303-GW and GP-304-GW) were above the PCLs in Screening Step 2. In addition, the groundwater sample from GP-304-GW identified cadmium, chromium, and nickel at concentrations above the PCLs in Screening Step 2. It is noted that no metals were identified in soil from GP-304 at concentrations above PCLs. The groundwater sample from this location appears to be anomalous and may be the result of colloidal interference.

- **South Central Unpaved Area / Former Barrel Storage Area** - Two Geoprobe borings were advanced in the south central unpaved area / former barrel storage area. Two soil samples (GP-307-4 and GP-308-2) and two groundwater samples (GP-307-GW and GP-308-GW) were collected from these borings. Soil samples were submitted for analysis of TPH-HCID, PCBs, VOCs, SVOCs, and metals. With the exception of metals, none of the constituents were identified at concentrations above SLVs in the soil samples. The metals arsenic, chromium, copper, nickel, silver, thallium, zinc, and mercury were identified in one or more soil samples at concentrations above the SLVs in Screening Step 1. None of the metals were present at concentrations above published background concentrations in Screening Step 2. There are no published background concentrations for silver or thallium in the Puget Sound area and therefore these metals were screened against the PCLs in Screening Step 3. Only thallium in boring GP-307-4 was identified at a concentration above the PCLs in Screening Step 3.

Groundwater samples were analyzed for TPH-HCID, with follow up analysis for TPH-Dx (sample GP-308-GW only), VOCs, SVOCs, and metals. With the exception of metals, none of the constituents were identified at concentrations above the SLVs. The metals arsenic, cadmium, copper, lead, selenium, silver, and zinc were identified in one or more groundwater samples at

concentrations above SLVs in Screening Step 1. None of the metals were present at concentrations above PCLs in Screening Step 2.

- **Former Casket Manufacturing Area / Area near GP-22** - Four Geoprobe borings were advanced in the former casket manufacturing area, near former boring GP-22. Four soil samples (GP-309-5, GP-310-4.5, GP-311-3.5 and GP-312-3.5) and four groundwater samples (GP-309-GW, GP-310-GW, GP-311-GW and GP-312-GW) were collected from these borings. Soil samples were analyzed for TPH-HCID with follow up analysis for NWPTH-Dx (sample GP-311-3.5 only), PCBs, VOCs, SVOCs, and metals. In addition, sample GP-309-5 was also submitted for dioxins/furans analysis. With the exception of metals, none of the constituents were identified at concentrations above SLVs in Screening Step 1. The metals arsenic, chromium, copper, nickel, silver, thallium, zinc, and mercury were identified in one or more soil samples at concentrations above SLVs. Of these, only arsenic and copper in sample GP-311-3.5 were identified at concentrations above published background concentrations in Screening Step 2. There are no published background concentrations for silver or thallium in the Puget Sound area and therefore these metals were screened against the PCLs in Screening Step 3. With the exception of thallium in samples GP-310-4.5, GP-311-3.5 and GP-312-3.5, no metals were identified above the PCLs in Screening Step 3.

Groundwater samples were analyzed for TPH-HCID, with follow up analysis for TPH-Dx (samples GP-310-GW and GP-312-GW), VOCs, SVOCs, and metals. In addition, given the presence of dioxins/furans in soil sample GP-309-5 (at concentrations below the selected PCLs), groundwater sample GP-309-GW was submitted for follow up dioxins/furans analysis. With the exception of metals and dioxins/furans, none of the constituents were identified at concentrations above the SLVs in Screening Step 1. The metals arsenic, cadmium, chromium, copper, lead, nickel, silver, and zinc were identified in one or more groundwater samples at concentrations above SLVs. Of these, only arsenic in samples GP-310-GW and GP-311-GW, and lead in sample GP-310-GW were reported at concentrations above the PCLs in Screening Step 2. The dioxin/furan analysis for groundwater sample GP-309-GW identified the 2,3,7,8-TCDD TEQ to be 1.38 pg/L, above the SLV of 0.01 pg/L in Screening Step 1. It should be noted that during development of the work plan the SLV was set at the detection limit of the analytical laboratory. Further, the analytical laboratory identified dioxins/furans in the method blank, with a TEQ of 2.4 pg/L, which is higher than the concentration detected in the actual groundwater sample. For comparison sake, the TEQ for this sample (1.38 pg/L) is below the Federal Maximum Contaminant Limit (MCL) drinking water standard (30 pg/L).

- **Machine Shop / Maintenance Area** - Two near surface soil samples (SS-313 and SS-314) were collected using hand tools from immediately below the asphalt pavement and pavement base rock near the former machine shop and maintenance area. The samples were submitted for analysis of TPH-HCID, TPH-Dx and metals. With the exception of metals, none of the constituents were identified at concentrations above the SLVs in Screening Step 1. The metals chromium, copper, and nickel were identified above the SLVs. None of these metals were reported at concentrations above the published background concentrations in Screening Step 2.
- **Transformers** - Seven surface soil samples (SS-315 through SS-321) were collected from areas immediately adjacent to the seven on-site transformers (TZ-1 to TZ-7) for PCB analysis. Soil sample SS-319 was additionally analyzed for metals. Due to visible oil staining in the location of SS-321, this sample was submitted for analysis of TPH-Dx. No PCBs were identified at concentrations above the SLVs in Screening Step 1. TPH-Dx in the diesel (1,300 milligrams per kilogram [mg/Kg]) and residual oil range (1,100 mg/Kg) were identified in surface soil



sample SS-321, above the SLV (460 mg/Kg) in Screening Step 1. The concentrations of diesel and oil range hydrocarbons in SS-321 were below the PCLs in Screening Step 3. The metals arsenic, cadmium, chromium, copper, nickel, zinc, and mercury were identified at concentrations equal to or above the SLVs in soil sample SS-319. Cadmium, copper, and zinc were reported at concentrations above published background concentrations in Screening Step 2. No metals were present at concentrations above the PCLs in Screening Step 3.

- **Former Fish Net Storage Building** - Two Geoprobe borings were completed near the former fish net storage building. Four soil samples (GP-334-3, GP-334-9.5, GP-335-7.5, and GP-335-9.5) and two groundwater samples (GP-334-GW and GP-335-GW) were collected and submitted for TPH-HCID analysis. Based on the preliminary HCID results, samples GP-334-3 and GP-335-7 were subsequently submitted for TPH-Dx analysis, and sample GP-334-3 was submitted for TPH-Gx analysis. Soil samples GP-334-3, GP-335-7.5 and GP-335-9.5 were also submitted for analysis of PCBs, VOCs, SVOCs, and metals. With the exception of VOCs and metals, none of the constituents were identified above SLVs in soil in Screening Step 1. The VOCs tetrachloroethylene (PCE) in sample GP-334-3 (0.0063 mg/Kg) and GP-335-7.5 (0.033 mg/Kg), carbon tetrachloride in sample GP-334-3 (0.0024 mg/Kg), and trichloroethylene (TCE) in sample GP-335-7.5 (0.018 mg/Kg), were identified at concentrations above the SLVs. The SLVs for PCE, TCE, and carbon tetrachloride are 0.004 mg/Kg, 0.010 mg/Kg, and 0.002 mg/Kg, respectively. None of the VOCs were identified at concentrations above PCLs in Screening Step 3. The metals arsenic, chromium, copper, nickel, silver, thallium, zinc, and mercury were identified above SLVs in one or more samples. Arsenic, chromium, nickel and zinc were also present in one or more of the samples at concentrations above the published background concentrations in Screening Step 2. There are no published background concentrations for silver or thallium in the Puget Sound area and therefore these metals were screened against the PCLs in Screening Step 3. Only thallium was identified at concentrations above PCLs in Screening Step 3. As was discussed in Section 2.2.1, ash was identified during installation of boring GP-334. Ash samples collected from the hog fuel burner identified dioxins/furans; however, no dioxins/furans analysis was conducted on the soil samples collected from the former fish net storage area. Boiler ash can be used for soil amendment or other beneficial uses with the proper considerations, under WAC 173-350-230.

Groundwater samples GP-334-GW and GP-335-GW were submitted for analysis of TPH-HCID, PCBs, VOCs, SVOCs, and metals. Groundwater samples did not identify concentrations of TPH-HCID, PCBs, VOCs, or SVOCs above the SLVs in Screening Step 1. The metals arsenic, copper and lead were identified in one or both of the samples at concentrations above the SLVs in Screening Step 1. Of these, arsenic was identified in groundwater samples GP-334-GW and GP-335-GW at concentrations above PCLs in Screening Step 2.

- **BNSF Property** – Twelve hand auger borings were completed to the east of the BNSF Property, adjacent to Maulsby Marsh (HA-322 through HA-333) and eleven groundwater samples (HA-322-GW through HA-332-GW) were collected from these borings. Soil samples were analyzed for TPH-HCID with follow-up analysis for TPH-Dx, TPH-Gx, VOCs, or SVOCs, depending on the TPH-HCID results. With the exception of diesel (790 mg/Kg) and heavy oil (1,600 mg/Kg) range organics identified in HA-329-1, no TPH compounds were identified in soil above the SLVs in Screening Step 1. The concentrations of diesel and heavy oil range organics were below the PCLs in Screening Step 3. Of the nine soil samples selected for follow-up VOC analysis, only methylene chloride (0.34 mg/Kg) in HA-322-2,

methylcyclohexane (0.0014 mg/Kg) in HA-328-1, and acetone (350 mg/Kg) in HA-332-1 were identified at concentrations above the SLVs in Screening Step 1. The concentrations of acetone and methylene chloride were below the PCLs in Screening Step 3. There is no PCL for methylcyclohexane.

Fourteen soil samples were selected for follow-up SVOC/PAH analysis. The SVOC analysis identified acenaphthylene (7.1 mg/Kg) and the noncarcinogenic PAHs acenaphthene (66 g/Kg) and naphthalene (37 mg/Kg) in soil sample HA-329-1 at concentrations above the SLVs in Screening Step 1. The concentrations of acenaphthene and naphthalene were below the PCLs in Screening Step 3. There is no PCL for acenaphthylene. Soil samples from hand auger borings on the BNSF property contained cPAHs, at concentrations above the SLVs in Screening Step 1. The calculated cPAH TEQs in eleven of the fourteen samples also exceeded the SLVs in Screening Step 1. The soil samples HA-322-1, HA-322-2, HA-323-1, HA-329-1, HA-330-1, HA-332-1, and HA-333-3 identified cPAH TEQ's above the PCL in Screening Step 3.

Groundwater samples were analyzed for TPH-HCID with follow-up analysis for TPH-Dx, TPH-Gx, VOCs, or SVOCs, depending on the TPH-HCID results and the volume of sample media available. With the exception of gasoline (4,300 µg/L) and diesel (15,000 µg/L) range organics identified in HA-329-GW, no TPH compounds were identified above the SLVs in Screening Step 1. With the exception of benzene, no VOCs were identified in groundwater samples selected for VOC analysis at concentrations above SLVs in Screening Step 1. The benzene concentration (2.2 micrograms per liter [µg/L]), was slightly above the SLV in Screening Step 1 (1.2 µg/L). For comparison sake, this concentration is below the MTCA Method A cleanup level of 5.0 µg/L for benzene in groundwater.

Six groundwater samples were selected for follow-up SVOC/PAH analysis. With the exception of carbazole, dibenzofuran, and 2-methylnaphthalene in sample HA-329-GW, and cPAHs in groundwater samples HA-323-GW and HA-329-GW, no SVOCs were identified above SLVs in Screening Step 1. The calculated cPAH TEQs in these groundwater samples from HA-323-GW and HA-329-GW also exceeded the SLVs in Screening Step 1.

- **Monitoring Wells** – Groundwater samples were collected from on-site groundwater monitoring wells MW-1, MW-2, MW-4, MW-5 and MW-6 and submitted for analysis of metals (total and dissolved) and TPH-Dx (MW-1 and MW-4, only). In addition, based on the TPH-Dx results, the groundwater sample from MW-1 was submitted for additional analysis of PCBs. Dissolved antimony, arsenic, cadmium and nickel were above the SLVs in Screening Step 1. Concentrations of dissolved antimony in MW-5 and dissolved arsenic in MW-2 and MW-6 were slightly above the PCLs in Screening Step 2.

TPH-Dx concentrations in the groundwater sample from monitoring well MW-1 were below the SLVs in Screening Step 1. No PCBs were identified above laboratory reporting limits in the groundwater sample from monitoring well MW-1.

Based on the initial RI Investigation, the upland sampling identified the following areas where contaminants in the samples were above the PCLs:

- Dioxin/furan concentrations identified in a grab sample (SS-301) of the boiler ash remaining at the Site identified the 2,3,7,8-TCDD TEQ to be 479 pg/g, above the SLV of 11 pg/g.
- Dioxin/furan concentrations identified in soil sample GP-302-1 near the former PCP dip tank area identified the 2,3,7,8-TCDD TEQ to be 4,150 pg/g, above the SLV of 11 ppt. The results of the groundwater analysis from sample GP-302-GW identified the 2,3,7,8-TCDD TEQ to be 131 ppt, above the SLV of 0.01 pg/L. As was noted above, low levels of dioxins/furans were identified in the method blank for this analysis. Given the presence of dioxins/furans in the method blank, the analytical results of this analysis are likely to be biased high.
- Dioxin/furan concentrations identified in soil sample GP-309-5 in the former casket manufacturing area was below the SLV. The dioxin/furan analysis for groundwater sample GP-309-GW identified the 2,3,7,8-TCDD TEQ to be 1.38 pg/L, above the SLV of 0.01 pg/L in Screening Step 1. For comparison sake, this concentration is below the Federal MCL drinking water standard (30 pg/L). Given the presence of dioxins/furans in the method blank, the analytical results of this analysis are likely to be biased high. This location (GP-309) is not shown as an exceedance on the groundwater map for dioxin/furan (Figure 10).
- Thallium was identified in soil samples GP-307-4, GP-310-4, GP-311-3.5, GP-312-3.5, GP-335-7.5, and GP-335-9.5 at concentrations ranging from 8.8 mg/Kg to 12 mg/Kg, slightly above the PCL (5.6 mg/Kg) in Screening Step 3. No other metals were identified in soil at concentrations above the PCLs.
- There are no PCLs for the compounds methylcyclohexane or acenaphthylene, which were identified at concentrations above the SLVs in Screening Step 1 in hand auger borings HA-328-1 and HA-329-1, respectively, from the BNSF Maulsby Marsh property.
- The soil samples HA-322-1, HA-322-2, HA-323-1, HA-329-1, HA-330-1, HA-332-1, and HA-333-3 collected from the BNSF Maulsby Marsh property identified cPAH TEQ's above the PCL in Screening Step 3.
- TPH in the gasoline and diesel ranges were identified in the groundwater sample from HA-329-GW at concentrations above the SLVs in Screening Step 1.
- The SVOCs carbazole, dibenzofuran, and 2-methylnaphthalene in sample HA-329-GW collected from the BNSF Maulsby Marsh property exceeded the SLVs in Screening Step 1. The cPAH TEQs for groundwater samples HA-323-GW and HA-329-GW collected from the BNSF Maulsby Marsh property exceeded the SLVs in Screening Step 1.
- Benzene in groundwater sample HA-329-GW collected from the BNSF Maulsby Marsh property exceeded the SLVs in Screening Step 1. The concentration was below the MTCA Method A cleanup level for unrestricted land use. This location (HA-329) is not shown as an exceedance on the groundwater map for VOCs (Figure 7).

- Total metals concentrations (arsenic, cadmium, chromium, lead, and nickel) in groundwater sample GP-304-GW were above the PCLs in Screening Step 2. It should be noted that this groundwater sample was collected directly from a temporary monitoring well advanced using a Geoprobe. The concentrations detected in these types of groundwater samples are likely to be biased high due to the turbidity the groundwater samples and colloidal interference. Additionally the groundwater sample was unfiltered and was submitted for total metals analysis. The total metals analysis typically results in higher detected concentrations than samples submitted for dissolved metals analysis. No metals were identified in the soil sample collected from GP-304 at concentrations above PCLs. Therefore, the concentrations metals in this sample appear to be anomalous.
- Total arsenic was identified in groundwater samples GP-303-GW, GP-304-GW, GP-305-GW, GP-306-GW, GP-310-GW, GP-311-GW, GP-334-GW, and GP-335-GW at concentrations above PCLs. As was noted above, these groundwater samples were collected from Geoprobe borings and were submitted for total metals analysis. These types of groundwater samples are likely to be biased high. Dissolved arsenic concentrations collected from the groundwater monitoring wells were significantly lower, and were only identified at concentrations slightly above the PCL (4.8 µg/L) in monitoring wells MW-2 (8.3 µg/L) and MW-6 (6 µg/L). For comparison sake, background arsenic concentrations were calculated using the publish soil background concentrations (Ecology Publication Number 94-115 *Natural Soils Background Concentrations in Washington State*, dated October 1994), and calculated using a modified Ecology equation 747-1 from MTCA Cleanup Regulation WAC 173-340-747. The calculated background arsenic concentration in groundwater is 12 µg/L. Based on this evaluation, the arsenic concentrations identified in temporary well points and on-site groundwater monitoring wells are likely representative of background concentrations.
- Total lead was identified in groundwater samples GP-303-GW, GP-304-GW, and GP-310-GW at concentrations above PCLs. As was noted above, these groundwater samples were collected from Geoprobe borings and were submitted for total metals analysis. These types of groundwater samples are likely to be biased high. Dissolved lead concentrations in all groundwater samples collected from properly installed groundwater monitoring wells (MW-1, MW-2, MW-4, MW-5 and MW-6) were below SLVs.
- Total and dissolved antimony concentrations in the groundwater sample from monitoring well MW-5 were above the PCLs in Screening Step 2. No other antimony concentrations (either total or dissolved) were identified above SLVs in groundwater samples collected from the Site. The antimony concentrations in MW-5 appear to be anomalous.

### 2.2.6 CONCEPTUAL SITE MODEL (CSM)

Results from the initial upland RI are generally consistent with the conceptual site model (CSM) presented in the RI Work Plan.

## 2.3 SEDIMENT INVESTIGATION

On May 3 through 5, 2009 SLR collected sediment samples from 12 locations around the shoreline of the Site (3SED1 through 3SED12), with up to three samples collected per location (samples A, B, and C). The sample locations are depicted on Figure 2. Ecology was on-site for the sediment sampling completed on May 3, at which time the locations for sediment samples 3SED11 and

3SED12 were determined. The remaining sample locations had previously been identified and described in the Sediment SAP. The samples were collected using the sample collection methods, sampling locations, collection depths, sample analysis, and equipment decontamination procedures detailed in the Sediment SAP. Laboratory analysis was performed by Analytical Resources Inc. (ARI) with the exception of dioxins and furans analysis which was performed by Maxxam Analytics. Specific laboratory analyses performed for each sample is summarized in Table 22. Sediment sampling results are summarized in Table 23 (dry weight equivalent), Table 24 (carbon normalized) and Table 25 (dioxin/furan results).

On September 15, 2009 SLR's subcontractor Anchor Environmental returned to the Site and collected three additional discreet sediment samples from location 3SED8 (A, B, and C) in the same manner outlined in the Sediment SAP. The samples were collected due to concerns with the laboratory Quality Control for the May 2009 the dioxin/furan analysis. The laboratory analysis was performed by ARI, with the exception of dioxins/furans, which was performed by Analytical Perspectives (Accreditation # C2027).

### **2.3.1 MODIFICATIONS OR DEVIATIONS FROM THE WORK PLAN**

The initial RI investigation was conducted in general compliance with the Work Plan. There were no modifications or deviations from the Work Plan during the sediment investigation, with the following exception:

- Duplicate sampling for dioxins/furans was completed at sediment sampling location 3SED8 (three discreet samples, 3SED8-A, 3SED8-B, and 3SED8-C). Duplicate sampling was not included in the Work Plan. An addendum to the Work Plan was submitted to Ecology for this duplicate sampling work.

### **2.3.2 QUALITY OF THE DATA**

The laboratories met the PQLs and MDLs outlined in the Work Plan. As is inherent to laboratory analysis, the laboratory PQL and associated MDLs are often adjusted when specific analytes are detected and/or matrix interference occurs. In general, PQLs and associated MDLs were also sufficient to meet the SLVs established in the Work Plan for the specific analytes.

The samples were appropriately preserved and stored in iced coolers until arrival at ARI, Maxxam, or Analytical Perspectives. Coolers containing sediment samples were delivered directly to ARI on the day of sampling. Cooler temperatures for three of the seven coolers delivered to ARI were outside of the advisory temperature range, with temperatures ranging from 8.8° C to 11.2° C. Temperatures were between 78 ° and 90° Fahrenheit on the days sediments were samples, and given the volume of sediment collected the samples may have not had time to cool prior to reaching the laboratory. Lab qualifiers noted on the attached tables are summarized below:

- Numerous analytes were identified at concentrations above the laboratory MDL but below the laboratory PQL. These analytes are "J" qualified in the attached tables.

- The concentrations of phenanthrene and fluoranthene in sediment sample 3SED10-A were estimated because these analytes were above the valid instrument calibration range, resulting in an “E” qualifier on the sediment tables.
- Dioxins/furans were identified by the analytical laboratory in the method blanks. The method blank analyzed with samples 3SED1 and 3SED7 identified a total TEQ of 0.5 pg/g. The method blank analyzed with samples 3SED8 and 3SED9 identified a total TEQ 0.2 pg/g.

For the purposes of this preliminary data presentation, laboratory data qualifiers are not further discussed for analytes which were not identified above the laboratory MDL.

For a number of reasons several of the samples were run at dilutions. The samples may have been run at dilutions because; the color and viscosity of the sample matrices after extraction, the internal standard areas were outside the control limits, and/or the surrogate percent recoveries were outside control limits. All sets of data are summarized on the attached tables.

The laboratory reported woody debris or other organic matter in samples 3SED2-C, 3SED3-B, 3SED5-B, 3SED-7A, 3SED8-A, 3SED8-B, 3SED9-A, 3SED9-B, and 3SED11-B which may have broken down during the sieving process, affecting grain size analysis. Samples 2SED1-B, 3SED4-A, 3SED5B, 3SED6-B, 3SED6-C, 3SED7A, 3SED7C, 3SED10C contained shell fragments.

### 2.3.3 MODIFICATIONS TO THE CSM

No modifications to the CSM are warranted based on the initial phase of the RI.

### 2.3.4 PRELIMINARY DATA FINDINGS – SEDIMENT INVESTIGATION

Preliminary data findings from the initial RI sediment investigation are summarized below. Tables 23 through 25 present the findings of the sediment sampling. The sample locations are depicted on Figure 2. Findings of these analyses were compared to the Sediment Quality Standards (SQS) and Cleanup Screening Levels (CSLs) identified in the SMS for both total dry weight and carbon normalized values.

SLR collected 37 sediment samples from 12 locations (3SED1 through 3SED12) around the shoreline of the Site. Three sediment samples (samples A, B, and C) were collected from sample locations 3SED1 through 3SED10, and two samples (samples A and B) were collected from locations 3SED11 and 3SED12. A duplicate sample was collected from 3SED8 (duplicate) (A, B, and C). Of these samples, 34 sediment samples were analyzed for conventional parameters and the complete suite of Sediment Management Standards (SMS) parameters. Samples 3SED8 (duplicate) (A, B, and C) were submitted for analysis of conventional parameters and dioxins/furans.

The total dry weight analysis identified all constituents to be below the SQS and CSL values, with the following exceptions:

- Sample 3SED1-C – butyl benzyl phthalate was identified at a concentration of 86 micrograms per kilogram [ $\mu\text{g}/\text{Kg}$ ], above the SQS value of 63  $\mu\text{g}/\text{Kg}$ .

- Sample 3SED5-A sample was run at two dilutions, with butyl benzyl phthalate identified at concentrations of 67 µg/Kg, 80 µg/Kg and 100 µg/Kg, above the SQS value of 63 µg/Kg,
- Sample 3SED6-C – sample was run at two dilutions, with hexachlorobenzene identified at concentrations of 47 µg/Kg, 100 µg/Kg and 110 µg/Kg, above the SQS value of 22 µg/Kg and the CSL value of 70 µg/Kg.
- Sample 3SED9-A – benzoic acid was identified at a concentration of 820 µg/Kg, above the SQS and CSL values, both of which are 650 µg/Kg,
- Sample 3SED10-A – sample was run at two dilutions, with fluoranthene identified at concentrations of 1,300 µg/Kg and 1,700 µg/Kg, equal to the SQS value (1,700 µg/Kg), and phenanthrene was identified at concentrations of 1,800 µg/Kg and 1,900 µg/Kg, above the SQS and CSL values, both of which are 1,500 µg/Kg,
- Sample 3SED11-A – Total PCBs were identified at a concentration of 138 µg/Kg, above the SQS value of 130 µg/Kg,
- Sample 3SED12-A – Total PCBs were identified at a concentration of 1,380 µg/Kg, above the SQS value of 130 µg/Kg and the CSL value of 1,000 µg/Kg.

The carbon normalized values identified all constituents to be below the SQS and CSL values, with the following exceptions:

- Sample 3SED6-C – sample was run at two dilutions, with hexachlorobenzene identified at concentrations of 6.85 mg/Kg, 14.6 mg/Kg and 16 mg/Kg, above the SQS value of 0.4 mg/Kg and the CSL value of 2.3 mg/Kg.
- Sample 3SED9-A – sample was run at two dilutions, with hexachlorobenzene identified at a concentration of 1.39 mg/Kg (prior to dilution) above the SQS value of 0.4 mg/Kg. Hexachlorobenzene was below laboratory MDLs in the two samples after dilution. Benzoic acid was identified at a concentration of 820 µg/Kg, above the SQS and CSL values, both of which are 650 µg/Kg.
- Sample 3SED10-A – sample was run at two dilutions, with acenaphthene identified at concentrations of 16.8 and 18.23, above the SQS of 16 mg/Kg, fluorine identified at concentrations of 30.9 mg/Kg and 32.26 mg/Kg, above the SQS of 23 mg/Kg, phenanthrene identified at concentrations of 252.5 mg/Kg and 266.48 mg/Kg, above to the SQS value of 100 mg/Kg and fluoranthene was identified at concentrations of 182.3 mg/Kg and 238.43 mg/Kg, above the SQS values of 160 mg/Kg.
- Sample 3SED11-A – Total PCBs were identified at a concentration of 12 mg/Kg, equal to the SQS value of 12 mg/Kg.
- Sample 3SED12-A – Total PCBs were identified at a concentration of 170 mg/Kg, above the SQS value of 12 mg/Kg and the CSL value of 65 mg/Kg.

Samples 3SED8 (A, B, and C), 3SED8 (duplicate) (A, B, and C) and 3SED9 (A, B, and C) were submitted for dioxin/furan analysis. As specified in the work plan, based on the presence of dioxins/furans in the boiler ash sample collected during the uplands investigation (discussed above), sediment samples 3SED7 (A, B, and C) were submitted for dioxin/furan analysis. Additionally, based on the presence of dioxins/furans in the soil sample from the former casket manufacturing area,

sediment samples 3SED1 (A, B, and C) were also submitted for dioxin/furan analysis. The results of the dioxin/furan sediment analysis were compared to regional concentrations reported in Port Gardiner Bay (based on Ecology's bay-wide investigation data). The concentrations of dioxins/furans 2,3,7,8-TCDD TEQ in the Port of Everett bay-wide sediment sampling stations located nearest to the Site ranged from 4 to 9 pg/g. The findings of this investigation were as follows:

- 3SED1A, B, and C - the 2,3,7,8-TCDD TEQ of dioxins/furans were 20 pg/g, 17 pg/g, and 16.4 pg/g, respectively.
- 3SED7A, B, and C - the 2,3,7,8-TCDD TEQ of dioxins/furans were 41.3 pg/g, 30.9 pg/g, and 48.4 pg/g, respectively.
- 3SED8 A, B, and C – the 2,3,7,8-TCDD TEQ of dioxins/furans were 72.1 pg/g, 172 pg/g, and 57.8 pg/g, respectively.
- 3SED9 A, B, and C – the 2,3,7,8-TCDD TEQ concentrations of dioxins/furans were 29.1 pg/g, 30.1 pg/g, and 29.9 pg/g, respectively.

Concentrations of dioxins/furans identified by the project laboratory (Maxxam) appeared to be higher than sediment samples collected from nearby areas on the adjoining property to the north (Port of Everett, Bay Wood Products Site). Due to concerns with the laboratory QC (including the presence of dioxins/furans in the method blank), on September 15, 2009 three additional discreet sediment samples were collected from location 3SED8 (A, B, and C). The samples were collected from areas immediately adjacent to the previously collected (May 2009) samples, the locations of which were still visible during the September 2009 field activities. The samples were submitted for analysis of conventional parameters and dioxin/furan analysis. The findings of the analysis is presented on Tables 23 through 25. The dioxin/furan analysis for these samples was performed by Analytical Perspectives. The findings of this analysis were as follows:

- 3SED8 (duplicate) A, B, and C – the 2,3,7,8-TCDD TEQ of dioxins/furans were 51.0 ppt, 31.4 ppt, and 14.9 ppt, respectively.

The presence of dioxins/furans in the method blanks from the Maxxam analysis, and the results of the duplicate sampling from 3SED8 suggest that the Maxxam results may be biased high.

Based on the initial RI sampling data, the upland sampling identified the following areas where contaminants in the carbon normalized values exceeded the CSLs:

- Hexachlorobenzene identified sample 3SED6-C (hexachlorobenzene in samples 3SED6-A and B was below the SQL)
- Benzoic acid in sample 3SED9-A (benzoic acid in samples 3ED9-B, and 3SED9-C was below the SQL )
- Total PCBs in sample 3SED12-A (total PCBs in sample 3SED12-B were below the SQL)



- Concentrations of dioxins/furans in all samples collected from the Site were higher than those identified the Port of Everett and Ecology’s Port Gardner and Lower Snohomish Estuary study sediment sampling stations located nearest to the Site. As was discussed above, the Maxxam results appear to be biased high.

It should be noted that the sediment samples from the Site were collected at stormwater outfalls from a property that was historically developed for industrial purposes for at least 70 years. It is therefore not unexpected that concentrations identified in sediment in these areas have the potential to be generally higher than concentrations measured offshore in Port Gardner Bay (based on Ecology’s bay-wide investigation data).



### 3. INDICATOR HAZARDOUS SUBSTANCES AND DATA GAPS

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The initial RI Investigation was conducted between May 4 and October 13, 2009. Based on the screening criteria discussed in detail in Section 2.2.6 above, the following indicator hazardous substances were identified in soil and groundwater during the upland investigation at the Site and the adjoining BNSF Maulsby Marsh property:

- Dioxin/furans concentrations in the boiler ash and in the soil and groundwater samples from the former Woodlife storage and use area are preliminarily identified as indicator substances in these areas.
- TPH and cPAHs in soil and groundwater on the BNSF Maulsby Marsh property are preliminarily identified as indicator substances in this area.
- Total metals analysis of groundwater samples collected from Geoprobe borings identified several metals at concentrations above the PCLs. However, based on the comparison of total metals concentrations to dissolved metals concentrations in the monitoring wells, it is likely that the elevated metals concentrations in groundwater are the result of the turbidity of the Geoprobe groundwater samples and colloidal interference, and therefore metals in groundwater are not considered an indicator hazardous substance at the Site.
- The total and dissolved antimony concentrations in the groundwater sample from MW-5 were above the PCL in Screening Step 2. No other antimony concentrations (either total or dissolved) were identified in groundwater samples from any other borings or monitoring wells at the Site at concentrations above SLVs in Screening Step 1. The antimony concentration in MW-5 appears to be anomalous. Collection of an additional groundwater sample from MW-5 for antimony analysis may be warranted to confirm this suspected anomaly.

Figures 4 through 11 depict the locations where concentrations of constituents in soil or groundwater in this initial RI investigation exceeded the PCLs established in Section 2.2.6 of this report.

No data gaps have been identified through review of the upland soil and groundwater investigation data.

The following indicator hazardous substances were identified during the investigation of 12 sediment stations around the shoreline of the Site

- Total PCBs identified in the sediment adjacent to the former fish net storage area (3SED12) are preliminarily identified as indicator substances in this area.
- Dioxins/furans in sediment at the stormwater outfalls, with the highest concentrations in the “finger area” along the northeastern portion of the Site.

While concentrations of hexachlorobenzene and benzoic acid exceeded the CSL in one of the three sediment samples collected from sediment stations 3SED6 and 3SED9 respectively, given the absence of these constituents in the other two sediment samples from the same sediment stations (or other areas of the Site), these constituents are not considered indicator substances for the purposes of this investigation. Focused confirmatory biological testing (bioassays) may be warranted to evaluate the sediment stations which had the highest total PCB and dioxins/furans concentrations at the Site.

**FIGURE 1 – SITE LOCATION MAP**

**FIGURE 2 – SITE PLAN WITH 2009 UPLAND AND SEDIMENT SAMPLING LOCATIONS**

**FIGURE 3 – SITE PLAN WITH 2009 SAMPLING LOCATIONS AND HISTORICAL SAMPLING  
LOCATIONS**

**FIGURE 4 – SOIL PCL EXCEEDANCE MAP – SVOCs AND PAHS**

**FIGURE 5 – GROUNDWATER PCL EXCEEDANCE MAP – SVOCs AND PAHS**

**FIGURE 6 – SOIL PCL EXCEEDANCE MAP – VOCs**

**FIGURE 7 – GROUNDWATER PCL EXCEEDANCE MAP – VOCs**

**FIGURE 8 – SOIL PCL EXCEEDANCE MAP – TPH**

**FIGURE 9 – GROUNDWATER PCL EXCEEDANCE MAP - TPH**

**FIGURE 10 – SOIL PCL EXCEEDANCE MAP – DIOXINS/FURANS**

**FIGURE 11 – GROUNDWATER PLC EXCEEDANCE MAP – DIOXINS/FURANS**

**TABLE 1 – ANALYTICAL SUMMARY TABLE – UPLAND INVESTIGATION**

**TABLE 2 - SOIL ANALYTICAL SUMMARY TABLE – SVOCs AND PAHs**

**TABLE 3 – GROUNDWATER ANALYTICAL SUMMARY TABLE – SVOCs AND PAHs**

**TABLE 4 - SOIL ANALYTICAL SUMMARY TABLE – VOCs**

**TABLE 5 - GROUNDWATER ANALYTICAL SUMMARY TABLE – VOCs**

**TABLE 6 - SOIL ANALYTICAL SUMMARY TABLE – METALS, PCBs, AND TPH**

**TABLE 7 - GROUNDWATER ANALYTICAL SUMMARY TABLE – METALS, PCBs, AND TPH**

**TABLE 8 – SOIL ANALYTICAL SUMMARY TABLE – DIOXINS/FURANS**

**TABLE 9 – SOIL STOCKPILE ANALYTICAL SUMMARY TABLE – METALS, SVOCs, AND PAHs**

**TABLE 10 – SOIL AND GROUNDWATER SUMMARY TABLE – cPAHs**

**TABLE 11 – SOIL STOCKPILE SUMMARY TABLE – cPAHs**

**TABLE 12 - SOIL SCREENING STEP 2 – METALS COMPARED TO BACKGROUND**

**TABLE 13- GROUNDWATER SCREENING STEP 2 – METALS COMPARED TO BACKGROUND**

**TABLE 14 – SOIL AND SOIL STOCKPILE SCREENING STEP 3 – cPAHs AND TPH**

**TABLE 15 – SOIL AND SOIL STOCKPILE SCREENING STEP 3 – METALS**

**TABLE 16 – ANALYTICAL SUMMARY TABLE – SEDIMENT INVESTIGATION**

**TABLE 17 – SEDIMENT ANALYTICAL SUMMARY TABLE**

**TABLE 18 – SEDIMENT ANALYTICAL SUMMARY TABLE – WOOD WASTE AND PETROLEUM  
PARAMETER SUMMARY**

Table 1  
Preliminary RI Results  
Analytical Summary Table  
JELD-WEN Site, Former Nord Door  
Everett, WA

Area	Sample Name	Matrix	TPH-HCID	TPH-Dx	TPH-Gx	PCP	PCBs	Dioxins / Furans	Metals	Mercury	SVOCs	VOCs
Hog Fuel Burner Ash	SS-301	SS						X				
Woodlife Storage and Use Area	GP-302-1	SS		X		X		X				
	GP-302-3.5	SS		X		X						
	GP-302-GW	GW						X				
Southwest Un-paved Area / RZA Assessment Area	GP-303-6	SS	X				X		X	X	X	X
	GP-303-GW	GW	X						X	X	X	X
	GP-304-6	SS	X				X		X	X	X	X
	GP-304-GW	GW	X	X					X	X	X	X
	GP-305-7	SS	X				X		X	X	X	X
	GP-305-GW	GW	X						X	X	X	X
	GP-306-7	SS	X				X		X	X	X	X
South Central Un-paved Area / Former Barrel Storage Area	GP-306-GW	GW	X						X	X	X	X
	GP-307-4	SS	X				X		X	X	X	X
	GP-307-GW	GW	X						X	X	X	X
	GP-308-2	SS	X				X		X	X	X	X
Former Casket Manufacturer Area and GP-22 Area	GP-308-GW	GW	X	X					X	X	X	X
	GP-309-5	SS	X				X	X	X	X	X	X
	GP-309-GW	GW	X					X	X	X	X	X
	GP-310-4.5	SS	X				X		X	X	X	X
	GP-310-GW	GW	X	X					X	X	X	X
	GP-311-3.5	SS	X	X			X		X	X	X	X
	GP-311-GW	GW	X						X	X	X	X
	GP-312-3.5	SS	X				X		X	X	X	X
Former Fishnet Storage Building	GP-312-GW	GW	X	X					X	X	X	X
	GP-334-3	SS	X	X	X		X		X	X	X	X
	GP-334-9.5	SS	X									
	GP-334-GW	GW	X				X		X	X	X	X
	GP-335-7.5	SS	X	X			X		X	X	X	X
	GP-335.9.5	SS	X				X		X	X	X	X
Machine Shop / Maintenance Area	GP-335-GW	GW	X				X		X	X	X	X
	SS-313	SS	X	X			X		X	X		
Transformer and the potential for PCBs	SS-314	SS	X	X			X		X	X		
	SS-315 to SS-321	SS		1 (SS-321)			7		1 (SS-319)	1 (SS-319)		
BNSF Maulsby Marsh	HA-322 1 FT	SS	X	X							X	
	HA-322-2 1.5 FT	SS	X	X							X	X
	HA-322-GW	GW	X	X							X	
	HA-323 1 FT	SS	X	X							X	
	HA-323-GW	GW	X	X							X	
	HA-324-1.5 FT	SS	X									
	HA-324-2FT	SS	X									
	HA-324-GW	GW	X	X							X	
	HA-325-2 FT	SS	X									
	HA-325-GW	GW	X	X							X	
	HA-326 2 FT	SS	X	X							X	
	HA-326-2 2.5 FT	SS	X	X							X	
	HA-326-GW	GW	X	X								
	HA-327-1.5 FT	SS	X	X							X	
	HA-327-2.5 FT	SS	X	X	X						X	X
	HA-327-GW	GW	X	X							X	X
	HA-328-1 FT	SS	X	X	X						X	X
	HA-328-2.5 FT	SS	X	X	X						X	X
	HA-328-GW	GW	X	X	X						X	X
	HA-329-1 FT	SS	X	X	X						X	X
HA-329-GW	GW	X	X	X						X	X	
HA-330-1 FT	SS	X	X	X						X	X	
HA-330-GW	GW	X										
HA-331-2 FT	SS	X	X	X						X	X	
HA-331-GW	GW	X										
HA-332-1 FT	SS	X	X	X						X	X	
HA-332-GW	GW	X										
HA-333-2 FT	SS	X	X	X								
HA-333-3 FT	SS										X	X
Existing Groudwater Monitoring Wells	MW-1	GW		X			X		X			
	MW-2	GW							X			
	MW-4	GW		X					X			
	MW-5	GW							X			
	MW-6	GW							X			

Notes:

- TPH-HCID- Total Petroleum Hydrocarbons Identification (Ecology Method NWTPH-HCID)
- TPH-Dx- Total Petroleum Hydrocarbons Diesel Range (Ecology Method NWTPH-Dx)
- TPH-Gx- Total Petroleum Hydrocarbons Gasoline Range (Ecology Method NWTPH-Gx)
- PCP- Pentachlorophenol (EPA Method 8270 SIM)
- PCBs- Polychlorinated Biphenyls (EPA Method 8082)
- Dioxins and Furans- EPA Method 1613B
- Metals- Arsenic, Cadmium, Total Chromium, Chromium VI, Copper, Lead, Nickel, Selenium, and Zinc (EPA Method 6010B)
- Mercury- Mercury Cold Vapor Atomic Absorption (EPA Method 7471A)
- SVOCs- Semi-volatile Organic Compounds (EPA Method 8270C)
- VOCs- Volatile Organic Compounds (EPA Method 8260)









Table 5  
Preliminary RI Results  
Groundwater Analytical Summary Table  
SVOCs and PAHs at  
BNSF Maulsby Marsh  
JELD-WEN Site, Former Nord Door  
Everett, WA

Sample Name	Screening Level Values	HA-322-GW	HA-322-GW	HA-323-GW	HA-323-GW	HA-324-GW	HA-325-GW	HA-325-GW	HA-328-GW	HA-329-GW
Sample Date	Screening Step 1 SLVs <sup>A</sup> (µg/L)	9/23/2009	9/23/2009	9/23/2009	9/23/2009	10/12/2009	9/24/2009	9/24/2009	10/12/2009	10/13/2009
<b>Semivolatile Organic Compounds<sup>B</sup> (SVOCs) (µg/L)</b>										
acenaphthylene	10	<1.0	0.03	J	<1.0	0.099	<0.050	<1.0	<0.050	<1.0
acetophenone	800	<50			<50		<50	<50	<50	<50
atrazine	10 <sup>C</sup>	<10			<10		<10	<10	<10	<200
benzaldehyde	800	<10			<10		<10	<10	<10	<10
biphenyl; 1,1-	400	<10			<10		<10	<10	<10	77 J
bis(2-chloroethyl)ether	10 <sup>C</sup>	<10			<10		<10	<10	<10	<10
bis(2-chloroethoxy) methane	10 <sup>C</sup>	<10			<10		<10	<10	<10	<200
bis(2-chloroisopropyl) ether	1,400	<10			<10		<10	<10	<10	<10
bis(2-chloro-1-methylethyl)ether	37	<10			<10		<10	<10	<10	<10
bis(2-ethylhexyl) phthalate	1.2	<6			<6		<6.0	<6	<6.0	<6.0
bromophenyl-phenylether; 4-	10 <sup>C</sup>	<10			<10		<10	<10	<10	<10
butyl benzyl phthalate	1,300	<10			<10		<10	<10	<10	<10
caprolactam	8,000	<10			<10		<10	<10	<10	<200
carbazole	4.4	<10			<10		<10	<10	<10	250
chloro-3-methylphenol;4-	10 <sup>C</sup>	<10			<10		<10	<10	<10	<200
chloroaniline;4-	32	<10			<10		<10	<10	<10	<200
chlorophenol;2-	97	<10			<10		<10	<10	<10	<10
chloronaphthalene;2-	1,000	<10	<0.25		<10	<0.25	<0.25	<10	0.073 J	<0.25
chlorophenyl-phenyl ether;4-	10 <sup>C</sup>	<10			<10		<10	<10	<10	<200
dibenzofuran	32	<10			<10		<10	<10	<10	180 J
dichlorobenzidine;3,3-	10 <sup>C</sup>	<10			<10		<10	<10	<10	<10
dichlorophenol;2,4-	77	<10			<10		<10	<10	<10	<200
diethyl phthalate	17,000	<10			<10		<10	<10	<10	<200
dimethyl phthalate	72,000	<10			<10		<10	<10	<10	<200
dimethylphenol;2,4-	380	<10			<10		<10	<10	<10	44 J
di-n-butylphthalate	2,000	<10			<10		<10	<10	<10	<10
di-n-octylphthalate	320	<10			<10		<10	<10	<10	<10
dinitro-2-methylphenol; 4,6-	10	<10			<10		<10	<10	<10	<10
dinitrophenol;2,4-	69	<10			<10		<10	<10	<10	<200
dinitrotoluene;2,4-	10	<10			<10		<10	<10	<10	<200
dinitrotoluene;2,6-	16	<10			<10		<10	<10	<10	<200
hexachlorobenzene	10 <sup>C</sup>	<10			<10		<10	<10	<10	<10
hexachlorobutadiene	10 <sup>C</sup>	<10			<10		<10	<10	<10	<200
hexachlorocyclopentadiene	40	<10			<10		<10	<10	<10	<200
hexachloroethane	10 <sup>C</sup>	<10			<10		<10	<10	<10	<10
isophorone	10 <sup>C</sup>	<10			<10		<10	<10	<10	<200
methylnaphthalene; 2	32	<10	<0.25		<10	0.14 J	0.028 J	<10	0.026 J	<0.25
methylphenol;2-	400	<10			<10		<10	<10	<10	2 J
methylphenol;4-	40	<10			<10		<10	<10	<10	7.4 J
nitroaniline;2-	10	<10			<10		<10	<10	<10	<200
nitroaniline;3-	10	<10			<10		<10	<10	<10	<200
nitroaniline;4-	10 <sup>C</sup>	<10			<10		<10	<10	<10	<200
nitrobenzene	17	<10			<10		<10	<10	<10	<200
nitrophenol;2-	10	<10			<10		<10	<10	<10	<200
nitrophenol;4-	10	<10			<10		<10	<10	<10	<200
nitrosodiphenylamine; N-	10 <sup>C</sup>	<10			<10		<10	<10	<10	<10
nitroso-di-n-propylamine;N-	10 <sup>C</sup>	<10			<10		<10	<10	<10	<10
pentachlorophenol	10	<1			<1		<1	<1	<1	<1.0
phenol	21,000	<10			<10		<10	<10	<10	1.2 J
tetrachlorobenzene;1,2,4,5-	50 <sup>C</sup>	<50			<50		<50	<50	<50	<1000
tetrachlorophenol;2,3,4,6-	480	<10			<10		<10	<10	<10	<1000
trichlorophenol;2,4,5-	1,800	<50			<50		<50	<50	<50	<1000
trichlorophenol;2,4,6-	10 <sup>C</sup>	<10			<10		<10	<10	<10	<200
<b>Carcinogenic Polycyclic Aromatic Compounds<sup>D</sup> (cPAHs) (µg/L)</b>										
benzo[a]anthracene	0.1	<1	<0.050		<1	0.55	<0.050	<1	0.07	<0.050
benzo[a]pyrene	0.1	<1	<0.050		<1	0.78	<0.050	<1	0.07	<0.050
benzo[b]fluoranthene	0.1	<1	<0.050		<1	0.82	<0.050	<1	0.084	<0.050
benzo[k]fluoranthene	0.1	<1	<0.050		<1	0.48	<0.050	<1	0.034 J	<0.050
chrysene	0.1	<1	<0.050		<1	0.68	<0.050	<1	0.071	<0.050
dibenzo[a,h]anthracene	0.1	<1	<0.050		<1	0.2	<0.050	<1	<0.050	<0.050
indeno[1,2,3-cd]pyrene	0.1	<1	<0.050		<1	0.59	<0.050	<1	0.052	<0.050
<b>Non-Carcinogenic PAHs<sup>D</sup> (PAHs) (µg/L)</b>										
acenaphthene	640	0.4 J	0.17		0.64 J	0.88	0.078	0.89 J	0.63	0.018 J
anthracene	8,300	<1	0.016	J	<1	0.18	0.013 J	<1	0.028 J	0.013 J
benzo[ghi]perylene <sup>E</sup>	830	<1	<0.050		<1	0.75	<0.050	<1	0.068	<0.050
fluoranthene	90	<1	0.031	J	<1	1.1	<0.050	<1	0.12	<0.050
fluorene	1,100	<1	0.053		<1	0.094	<0.050	<1	0.031 J	<0.050
naphthalene	4,900	<5	0.028	J	<5	0.23 J	0.095 J	<5	0.063 J	0.035 J
phenanthrene <sup>F</sup>	640	<1	0.063		<1	0.47	<0.050	<1	0.071	0.019 J
pyrene	830	<1	<0.050		<1	1	<0.050	<1	0.13	<0.050

Notes:

Shading indicates detected concentration greater than SLV

Shading indicates PQL higher than selected SLV

All units in micrograms per Liter (µg/L)

<0.05 indicates detected below the detection limit of 0.05 micrograms/liter (µg/L)

**BOLD** indicates detected above the laboratory detection limit

A - Groundwater Screening Level Values (SLVs) calculated as shown in Attachment 2 of Work Plan

B - SVOCs per EPA Method 8270C

C - SLV adjusted based on revised PQLs provided to Ecology in April 16, 2009 email

D - cPAHs and PAHs analyzed per 8270 SIM (low level)

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

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

Laboratory Qualifiers

J - (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.








Table 9  
Preliminary RI Results  
Groundwater Analytical Summary Table  
VOCs at  
BNSF Maulsby Marsh  
JELD-WEN Site, Former Nord Door  
Everett, WA

Sample Name	Screening Level Values	HA-328-GW		HA-329-GW	
Sample Date	Screening Step 1 SLVs <sup>A</sup> (µg/L)	10/12/2009		10/13/2009	
<b>Volatile Organic Compounds<sup>B</sup> (VOCs) (µg/L)</b>					
acetone	800	<25	J3	<25	
benzene	1.2	<0.50	J3	<b>2.2</b>	
bromochloromethane	0.5	<0.50		<0.50	
bromodichloromethane	0.5	<0.50		<0.50	
bromoform	4.3	<0.50		<0.50	
bromomethane	47	<0.50	J3	<0.50	
butanone;2- (MEK)	4,800	<2.5	J3	<2.5	
carbon disulfide	800	<0.50	J4, J5, J3	<0.50	J4
carbon tetrachloride	0.5	<0.50	J3	<0.50	
chlorobenzene	130	<0.50	J3	<0.50	
chloroethane	15	<0.50	J3	<0.50	
chloroform	5.7	<0.50	J3	<0.50	
chloromethane	130	<0.50	J3	<0.50	
cyclohexane	1	<1.0	Q	<1.0	
dibromo-3-chloropropane;1,2-	1	<1.0	J3	<1.0	
dibromochloromethane	0.5	<0.50		<0.50	
dibromoethane; 1,2-	0.5	<0.50		<0.50	
dichlorobenzene; 1,2-	420	<0.50		<0.50	
dichlorobenzene; 1,3-	320	<0.50	J3	<0.50	
dichlorobenzene; 1,4-	4.9	<0.50		<0.50	
dichlorodifluoromethane	1,600	<0.50	J3	<0.50	
dichloroethane;1,1-	800	<0.50	J3	<0.50	
dichloroethane;1,2-	1	<0.50		<0.50	
dichloroethylene;1,1-	1	<0.50	J3	<0.50	
dichloroethylene;1,2-,cis	80	<0.50	J3	<0.50	
dichloroethylene;1,2-,trans	10,000	<0.50	J3	<0.50	
dichloropropane;1,2-	1	<0.50		<0.50	
dichloropropene;1,3-,cis	0.5	<0.50		<0.50	
dichloropropene;1,3-,trans	0.5	<0.50		<0.50	
dioxane;1,4-	100	<100	Q	<100	
ethylbenzene	530	<0.50	J3	<b>26</b>	
hexanone-2	2.5	<2.5	J3	<2.5	
isopropylbenzene	800	<0.50	J5, J3	<b>3.1</b>	
methyl acetate	8,000	<20	Q	<20	
methyl-2-pentanone; 4- (MIK)	640	<2.5	J3	<2.5	
methyl tert-butyl ether	20	<0.50	J3	<0.50	
methylene chloride	4.6	<2.5		<2.5	
methylcyclohexane	1	<1.0	Q	<1.0	
styrene	1.5	<0.50	J3	<b>0.47</b>	J
tetrachloroethane;1,1,2,2-	0.5	<0.50	J3	<0.50	
tetrachloroethylene	0.5	<0.50	J5, J3	<0.50	
toluene	1,300	<0.50	J3	<b>11</b>	
trichloro-1,2,2-trifluoroethane;1,1,2-	240,000	<0.50	J5, J3	<0.50	
trichlorobenzene; 1,2,3-	0.5	<0.50		<0.50	
trichlorobenzene; 1,2,4-	35	<0.50		<0.50	
trichloroethane; 1,1,1-	420,000	<0.50	J3	<0.50	
trichloroethane; 1,1,2-	1	<0.50		<0.50	
trichloroethylene	1.5	<0.50	J3	<0.50	
trichlorofluoromethane	2,400	<0.50	J3	<0.50	
vinyl chloride	0.5 <sup>C</sup>	<0.50	J3	<0.50	
xylene (total)	1,000	<1.5	J3	<b>48</b>	

**Notes:**

 Shading indicates detected concentration greater than SLV

 Shading indicates PQL higher than selected SLV

All units in micrograms per Liter (µg/L)

<25 indicates detected below the detection limit of 25 micrograms/liter (µg/L)

**BOLD** indicates detected above the laboratory detection limit

A - Groundwater Screening Level Values (SLVs) calculated as shown in Attachment 2 of Work Plan

B - VOCs per EPA Method 8260

C - SLV adjusted based on revised PQLs provided to Ecology in April 16, 2009 email

**Laboratory Qualifiers**

J - (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

J3 - The associated batch QC was outside the established quality control range for precision.

J4 - The associated batch QC was outside the established quality control range for accuracy.

J5 - The sample matrix interfered with the ability to make any accurate determination; spike value is high

Q - (ESC) Sample held beyond the accepted holding time.

Table 10  
Preliminary RI Results  
Soil Analytical Summary Table  
Metals, PCBs, and TPH  
JELD-WEN Site, Former Nord Door  
Everett, WA

Sample Name	Screening Level Values	SS-313	SS-314	SS-315	SS-316	SS-317	SS-318	SS-319	SS-320	SS-321	GP-302-1FT	GP-302-3.5FT	GP-303-6
Sample Date	Screening Step 1	6/4/2009	6/4/2009	6/4/2009	6/4/2009	6/4/2009	6/4/2009	6/4/2009	6/4/2009	6/4/2009	5/21/2009	5/21/2009	6/1/2009
Sample Depth	SLVs <sup>A</sup> (mg/Kg)	1	1	Surface	Surface	Surface	Surface	Surface	Surface	Surface	1	3.5	6
<b>Metals<sup>B</sup></b>													
Antimony	5.1	0.88	J	0.99	J	--	--	--	--	--	--	--	<1.2
Arsenic	1	<1.2		<1.0		--	--	--	--	1.3	J	--	1.9
Beryllium	25	0.74		0.94		--	--	--	--	0.32		--	<1.2
Cadmium	2.0	0.72		0.76		--	--	--	--	2		--	0.32
Chromium <sup>C</sup>	3.84	27		24		--	--	--	--	18		--	25
Copper	1.07	9.3		6.9		--	--	--	--	64		--	14
Lead	108	7.1		3.5		--	--	--	--	26		--	5.6
Nickel	10.69	30		33		--	--	--	--	13		--	24
Selenium	1	<1.2		<1.0		--	--	--	--	<1.4		--	<1.2
Silver	0.5	<0.58		<1.0	O	--	--	--	--	<0.68		--	0.79
Thallium	1	<1.2		<1.0		--	--	--	--	<6.8	O	--	3.2
Zinc	39.8	33		31		--	--	--	--	550		--	37
Mercury	0.02	0.01	J	0.01	J	--	--	--	--	0.038		--	0.14
<b>Polychlorinated Biphenyls (PCBs)<sup>D</sup></b>													
aroclor 1016	--	<0.020		<0.018		<0.020		<0.019		<0.044		<0.018	<0.020
aroclor 1221	--	<0.020		<0.018		<0.020		<0.019		<0.044		<0.018	<0.020
aroclor 1232	--	<0.020		<0.018		<0.020		<0.019		<0.044		<0.018	<0.020
aroclor 1242	--	<0.020		<0.018		<0.020		<0.019		<0.044		<0.018	<0.020
aroclor 1248	--	<0.020		<0.018		<0.020		<0.019		<0.044		<0.018	<0.020
aroclor 1254	--	<0.020		<0.018		<0.020		<0.019		<0.044		<0.018	<0.020
aroclor 1260	--	<0.020		<0.018		<0.020		<0.019		<0.044		<0.018	<0.020
Total PCBs	0.5 <sup>E</sup>	ND		ND		ND		ND		0.02		ND	ND
<b>Total Petroleum Hydrocarbons - Hydrocarbon Identification<sup>H</sup></b>													
Gasoline Range (C7-C10)	--	<4.7		<4.2		--	--	--	--	--	--	--	<4.8
Mineral Spirits	--	<4.7		<4.2		--	--	--	--	--	--	--	<4.8
Kerosene (C9-C16)	--	<4.7		<4.2		--	--	--	--	--	--	--	<4.8
Diesel (C7-C26)	--	2.1	J	1.9	J	--	--	--	--	--	--	--	2.4
#6 Fuel Oil (C10-C32)	--	<4.7		<4.2		--	--	--	--	--	--	--	<4.8
Hydraulic Fluid (C12-C33)	--	<4.7		<4.2		--	--	--	--	--	--	--	<4.8
Motor Oil (C16-C40)	--	19		52		--	--	--	--	--	--	--	8.4
<b>Total Petroleum Hydrocarbons (TPH)<sup>H</sup></b>													
Gasoline Range Organics	100/30 <sup>I</sup>	--		--		--	--	--	--	--	--	--	--
Diesel Range Organics	460	3.6	J	5.8		--	--	--	--	1,300	73	4.5	J
Heavy Oil Range Organics	460	29		82	J5, J6, J3	--	--	--	--	1,000	200	16	--

Table 10  
Preliminary RI Results  
Soil Analytical Summary Table  
Metals, PCBs, and TPH  
JELD-WEN Site, Former Nord Door  
Everett, WA

Sample Name	Screening Level Values	GP-304-6	GP-305-7	GP-306-7	GP-307-4FT	GP-308-2FT	GP-309-5FT	GP-310-4.5FT	GP-311-3.5FT	GP-312-3.5FT	GP-334-3FT	GP-334-9.5FT	GP-335-7.5FT	GP-335-9.5FT												
Sample Date	Screening Step 1	6/1/2009	6/1/2009	6/1/2009	5/21/2009	5/21/2009	5/21/2009	5/22/2009	5/22/2009	5/22/2009	5/22/2009	5/22/2009	5/22/2009	5/22/2009												
Sample Depth	SLVs <sup>A</sup> (mg/Kg)	6	7	7	4	2	5	4.5	3.5	3.5	3	9.5	7.5	9.5												
<b>Metals <sup>B</sup></b>																										
Antimony	5.1	3.6	<1.1	J6, J3	<1.1	<1.2	1.8	J6	2.1	<1.1	J6	4	2.4	1.5	J	--	<1.2	4								
Arsenic	1	<6.2	O	J3	4.4	3.9	<1.1		<5.3	O	2.4	P1	8.2	2	<16	O	--	7.4	J	<1.2						
Beryllium	25	0.25		O	<1.1	<1.2	1		1.1	<1.1	O	<1.5	O	<2.4	O	<0.81	O	--	<1.2	O	<1.2	O				
Cadmium	2.0	0.27	J	0.35	0.31	0.23	J	0.66	0.71	0.29		0.51	0.39	0.21	J	--	<3.1	O	0.35							
Chromium <sup>C</sup>	3.84	27		27	25	31		40	J6	34		31	J6	30		38	26	--	55	B	31					
Copper	1.07	18		15	14	18		4.8	P1	9.9		12		88		19	66	--	14		32					
Lead	108	3.9		4.6	5.4	3.7		2.6		3	J3	2.2		13		8.7		--	7.6		6.1					
Nickel	10.69	30		24	24	32		43	J3, J6	40		40		37		41	39	--	25		100					
Selenium	1	0.9	J	<1.1	<1.1	0.41	J	0.39	J, J3	0.48	J	<1.1	P1	<1.5		0.53	J	<8.1	O	--	<12.	O	<6.0	O		
Silver	0.5	1.1		0.96	0.94	0.75		<0.55		<0.53		0.91		1.2		1.1	0.45	J	--	<6.3	O	0.91				
Thallium	1	<6.2	O	4.5	4.2	9		<1.1		<5.3	O	8.9		12		11	<160	O	--	12	J	8.8				
Zinc	39.8	32		40	36	47		23	J6	22		30		61		44	<12.	O	--	53		40				
Mercury	0.02	0.047		0.019	J	0.015	J	0.016	J	0.024		0.018	J	0.013	J	0.016	J	0.039		0.01	J	--	0.24		0.019	J
<b>Polychlorinated Biphenyls (PCBs) <sup>D</sup></b>																										
aroclor 1016	--	<0.021		<0.019	<0.019	<0.021		<0.019	<0.018		<0.018		<0.025	<0.020		<0.028		--	<0.021	Q	<0.020					
aroclor 1221	--	<0.021		<0.019	<0.019	<0.021		<0.019	<0.018		<0.018		<0.025	<0.020		<0.028		--	<0.021	Q	<0.020					
aroclor 1232	--	<0.021		<0.019	<0.019	<0.021		<0.019	<0.018		<0.018		<0.025	<0.020		<0.028		--	<0.021	Q	<0.020					
aroclor 1242	--	<0.021		<0.019	<0.019	<0.021		<0.019	<0.018		<0.018		<0.025	<0.020		<0.028		--	<0.021	Q	<0.020					
aroclor 1248	--	<0.021		<0.019	<0.019	<0.021		<0.019	<0.018		<0.018		<0.025	<0.020		<0.028		--	<0.021	Q	<0.020					
aroclor 1254	--	<0.021		<0.019	<0.019	<0.021		<0.019	<0.018		<0.018		<0.025	<0.020		<0.028		--	0.054	Q	<0.020					
aroclor 1260	--	<0.021		<0.019	<0.019	<0.021		<0.019	<0.018		<0.018		<0.025	<0.020		<0.028		--	<0.021	Q	<0.020					
Total PCBs	0.5 <sup>E</sup>	ND		ND	ND	ND		ND	ND		ND		ND	ND		ND	ND	--	0.054	Q	ND					
<b>Total Petroleum Hydrocarbons - Hydrocarbon Identifi</b>																										
Gasoline Range (C7-C10)	--	<4.9		<4.4	<4.4	<4.9		<4.4	<4.2		<4.3		<6.0	<4.8		12		<4.6		<5.0		<4.8				
Mineral Spirits	--	<4.9		<4.4	<4.4	<4.9		<4.4	<4.2		<4.3		<6.0	<4.8		<6.5		<4.6		<5.0		<4.8				
Kerosene (C9-C16)	--	<4.9		<4.4	<4.4	<4.9		<4.4	<4.2		<4.3		<6.0	<4.8		<6.5		<4.6		<5.0		<4.8				
Diesel (C7-C26)	--	3.6	J	<4.4	<4.4	<4.9		<4.4	<4.2		<4.3		11	<4.8		9.2		<4.6		11		<4.8				
#6 Fuel Oil (C10-C32)	--	<4.9		<4.4	<4.4	<4.9		<4.4	<4.2		<4.3		<6.0	<4.8		<6.5		<4.6		<5.0		<4.8				
Hydraulic Fluid (C12-C33)	--	<4.9		<4.4	<4.4	<4.9		<4.4	<4.2		<4.3		<6.0	<4.8		<6.5		<4.6		<5.0		<4.8				
Motor Oil (C16-C40)	--	6.5	J	<11.	5	J	<12.	5.7	J	5.5	J	<11.	110	9.9	J	260		<11.		79		<12.				
<b>Total Petroleum Hydrocarbons (TPH) <sup>H</sup></b>																										
Gasoline Range Organics	100/30 <sup>I</sup>	--		--	--	--		--	--		--		--	--		<0.19		--		--		--				
Diesel Range Organics	460	--		--	--	--		--	--		--		14	--		21		--		26	Q	--				
Heavy Oil Range Organics	460	--		--	--	--		--	--		--		91	--		280		--		120	Q, J5, J3	--				

Notes:

Shading indicates detected concentration greater than SLV

Shading indicates PQL higher than selected SLV

All units in milligrams per kilogram (mg/Kg)

<0.0012 indicates detected below the detection limit of 0.0012 milligrams per kilogram (ng/Kg)

**BOLD** indicates detected above the laboratory detection limit

A - Soil Screening Level Values (SLVs) calculated as shown in Attachment 2 of Work Plan

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

C - Chromium VI

D - PCBs per EPA Method 8082

E - PCB value is a total value for all PCBs

F - Total Petroleum Hydrocarbons Identification per NWTPH Method

G - Total Petroleum Hydrocarbons Gasoline Range per NWTPH-Gx Method and Diesel and Residual Range per NWTPH-Dx 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

Laboratory Qualifiers

J - (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

B - (EPA) - The indicated compound was found in the associated method blank as well as the laboratory sample.

J3 - The associated batch QC was outside the established quality control range for precision.

O - (ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.

J6 - The sample matrix interfered with the ability to make any accurate determination; spike value is low

P1 - RPD value not applicable for sample concentrations less than 5 times the reporting limit.

J5 - The sample matrix interfered with the ability to make any accurate determination; spike value is high

Q - (ESC) Sample held beyond the accepted holding time.





Table 12  
Preliminary RI Results  
Soil and Groundwater Analytical Summary Table  
TPH at  
BNSF / Malsby Marsh  
JELD-WEN Site, Former Nord Door  
Everett, WA

		BNSF/Malsby Marsh Hand Auger Samples Sept/Oct 2009 - Soil Samples																											
Sample Name	Screening Level Values	HA-322-1	HA-322-2.5	HA-323-1	HA-324-1.5	HA-324-2	HA-325-2	HA-326-2	HA-326-2.5	HA-327-1.5 FT	HA-327-2.5 FT	HA-328-1 FT	HA-328-2.5 FT	HA-329-1 FT	HA-330-1 FT	HA-331-2 FT	HA-332-1 FT	HA-333-2 FT											
Sample Date	Screening Step 1 SLVs <sup>A</sup> (mg/Kg)	9/23/2009	9/23/2009	9/23/2009	9/24/2009	9/24/2009	9/24/2009	9/24/2009	9/24/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/12/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009											
Sample Depth		1	2.5	1	1.5	2	2	2	2.5	1.5	2.5	1	2.5	1	1	2	1	2											
<b>Total Petroleum Hydrocarbons - Hydrocarbon Identification<sup>B</sup></b>																													
Gasoline Range (C7-C10)	--	<28.	<57.	<45.	<24.	<28.	<26.	<25.	<37.	<4.8	2	J	3.6	J	5.4	J	14	49	3	J	7.8	J	3.6	J					
Mineral Spirits	--	<5.6	<11.	<8.9	<4.7	<5.6	<5.3	<5.0	<7.4	<4.8	<5.7	<6.6	<9.9	<10.	<15.	<5.1	<16.	<10.											
Kerosene (C9-C16)	--	<5.6	<11.	<8.9	<4.7	<5.6	<5.3	<5.0	<7.4	<4.8	<5.7	<6.6	<9.9	<10.	<15.	<5.1	<16.	<10.											
Diesel (C7-C26)	--	2.4	46	8.7	<4.7	<5.6	<5.3	<5.0	9.8	1.7	J	7.6	18	19	550	120	2	J	23	12									
#6 Fuel Oil (C10-C32)	--	<5.6	<11.	<8.9	<4.7	<5.6	<5.3	<5.0	<7.4	<4.8	<5.7	<6.6	<9.9	<10.	<15.	<5.1	<16.	<10.											
Hydraulic Fluid (C12-C33)	--	<5.6	<11.	<8.9	<4.7	<5.6	<5.3	<5.0	<7.4	<4.8	<5.7	<6.6	<9.9	<10.	<15.	<5.1	<16.	<10.											
Motor Oil (C16-C40)	--	12	71	34	<12.	<14.	<13.	8.7	100	58	J6	14	200	160	2,400	420	5	J	260	62									
<b>Total Petroleum Hydrocarbons (TPH)<sup>C</sup></b>																													
Gasoline Range Organics	100/30 <sup>D</sup>	--	--	--	--	--	--	--	--	--	0.076	J	0.13	J	0.084	J	22	0.19	J	<0.13	0.27	J	<0.27	J					
Diesel Range Organics	460	4.1	37	7.2	--	--	--	5.3	54	<4.8	<5.7	31	47	790	190	<5.1	26	5.4	J										
Heavy Oil Range Organics	460	17	91	31	--	--	--	35	160	8.1	J	17	150	150	1,600	420	7.7	J	51	41									

		BNSF/Malsby Marsh Hand Auger Samples Sept/Oct 2009 - Groundwater Samples															
Sample Name	Screening Step 1 SLVs <sup>A</sup> (µg/L)	HA-322-GW	HA-323-GW	HA-324-GW	HA-325-GW	HA-326-GW	HA-327-GW	HA-328-GW	HA-329-GW	HA-330-GW	HA-331-GW	HA-332-GW					
Sample Date		9/23/2009	9/23/2009	10/12/2009	9/24/2009	10/12/2009	10/12/2009	10/12/2009	10/13/2009	10/13/2009	10/13/2009	10/13/2009					
<b>Total Petroleum Hydrocarbons - Identification<sup>B</sup></b>																	
Gasoline Range (C7-C10)	--	<100	<100	<100	<100	<100	<100	62	J	120	<100	<100					
Mineral Spirits	--	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100					
Kerosene (C9-C16)	--	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100					
Diesel (C7-C26)	--	43	J	49	J	39	J	78	J	430	<100	11,000	67	J	<100	58	J
#6 Fuel Oil (C10-C32)	--	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100					
Hydraulic Fluid (C12-C33)	--	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100					
Motor Oil (C16-C40)	--	<500	330	J	<500	<500	<500	<500	<500	1,800	<500	<500					
<b>Total Petroleum Hydrocarbons (TPH)<sup>C</sup></b>																	
Gasoline Range Organics	1,000 / 800 <sup>E</sup>	--	--	--	--	--	--	<100	4,300	--	--	--					
Diesel Range Organics	500	49	J	83	J	<100	69	J	<100	15,000	--	--					
Heavy Oil Range Organics	500	<250	<250	<250	<250	<250	<250	<250	170	J	--	--					

Notes:

- Shading indicates detected concentration greater than PCL
- Shading indicates PQL higher than selected PCL
- All units in milligrams per kilogram (mg/Kg) or micrograms per liter (µg/L)
- <0.0012 indicates detected below the detection limit of 0.0012 milligrams per kilogram ( mg/Kg)
- BOLD** indicates detected above the laboratory detection limit
- A - Soil PCLs calculated as shown in Attachment 2 of Work Plan
- B - Total Petroleum Hydrocarbons Identification per NWTPH Method
- C - Total Petroleum Hydrocarbons Gasoline Range per NWTPH-Gx Method and Diesel and Residual Range per NWTPH-Dx Method
- D - 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
- H - Gasoline Range Organics 1,000 µg/L with no detectable benzene in groundwater, 800 µg/L if present in groundwater

Laboratory Qualifiers

- J - (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
- J6 - The sample matrix interfered with the ability to make any accurate determination; spike value is low

Table 13  
Preliminary RI Results  
Soil Analytical Summary Table  
Dioxin/Furans  
JELD-WEN Site, Former Nord Door  
Everett, WA

Sample Name	Screening Level Values	SS-301 (boiler ash sample)				GP-302-1				GP-309-5			
		6/4/2009				5/20/2009				5/20/2009			
Sampling Date	Screening Step 1 SLVs <sup>A</sup> (pg/g)	Value	TEF	TEQ (DL) = 0	TEQ(DL) = 0.5	Value	TEF	TEQ(DL) = 0	TEQ(DL) = .5	Value	TEF	TEQ(DL) = 0	TEQ(DL) = .5
<b>DIOXINS AND FURANS<sup>B</sup> (pg/g)</b>													
2,3,7,8-Tetra CDD <sup>C</sup>	--	46.7	1.00	46.7	46.7	18.4	1.00	18.4	18.4	<0.107	1.00	0	0.0535
1,2,3,7,8-Penta CDD	--	159	1.00	159	159	315	1.00	315	315	0.511	1.00	0.511	0.511
1,2,3,4,7,8-Hexa CDD	--	91.7	0.100	9.17	9.17	1110	0.100	111	111	1.49	0.100	0.149	0.149
1,2,3,6,7,8-Hexa CDD	--	151	0.100	15.1	15.1	5880	0.100	588	588	8.35	0.100	0.835	0.835
1,2,3,7,8,9-Hexa CDD	--	178 <sup>D</sup>	0.100	17.8	17.8	2200	0.100	220	220	4.61	0.100	0.461	0.461
1,2,3,4,6,7,8-Hepta CDD	--	360	0.0100	3.6	3.6	156000 <sup>E</sup>	0.0100	1560	1560	182	0.0100	1.82	1.82
Octa CDD	--	213	0.000300	0.0639	15.1	108000 <sup>E</sup>	0.000300	324	324	720	0.000300	0.216	0.216
Total Tetra CDD	--	3040	--	--	--	411	--	--	--	0.839	--	--	--
Total Penta CDD	--	2590	--	--	--	2050	--	--	--	1.39	--	--	--
Total Hexa CDD	--	1850	--	--	--	26000	--	--	--	40	--	--	--
Total Hepta CDD	--	669	--	--	--	237000 <sup>F</sup>	--	--	--	290	--	--	--
2,3,7,8-Tetra CDF <sup>H</sup>	--	391	0.100	39.1	39.1	41.2	0.100	4.12	4.12	0.263	0.100	0.0263	0.0263
1,2,3,7,8-Penta CDF	--	232	0.0300	6.96	6.96	190	0.0300	5.7	5.7	0.323	0.0300	0.00969	0.00969
2,3,4,7,8-Penta CDF	--	380	0.300	114	114	208	0.300	62.4	62.4	0.394	0.300	0.118	0.1182
1,2,3,4,7,8-Hexa CDF	--	282.00	0.100	28.2	28.2	1570	0.100	157	157	1.94	0.100	0.194	0.194
1,2,3,6,7,8-Hexa CDF	--	174	0.100	17.4	2.92	1610	0.100	161	161	2.03	0.100	0.203	0.203
2,3,4,6,7,8-Hexa CDF	--	177	0.100	17.7	17.7	918	0.100	91.8	91.8	1.2	0.100	0.12	0.12
1,2,3,7,8,9-Hexa CDF	--	15.3	0.100	1.53	1.53	43.3	0.100	4.33	4.33	<0.539 <sup>G</sup>	0.100	0	0.02695
1,2,3,4,6,7,8-Hepta CDF	--	<225 <sup>G</sup>	0.0100	0	1.125	42000 <sup>F</sup>	0.0100	420	420	52.2	0.0100	0.522	0.522
1,2,3,4,7,8,9-Hepta CDF	--	32.4	0.0100	0.324	0.324	2340 <sup>F</sup>	0.0100	23.4	23.4	2.95	0.0100	0.0295	0.0295
Octa CDF	--	66.5	0.000300	0.02	0.01995	284000 <sup>E</sup>	0.000300	85.2	85.2	118	0.000300	0.0354	0.0354
Total Tetra CDF	--	4540	--	--	--	946	--	--	--	1.49	--	--	--
Total Penta CDF	--	3440	--	--	--	9100	--	--	--	12.3	--	--	--
Total Hexa CDF	--	1490	--	--	--	30600	--	--	--	66.5	--	--	--
Total Hepta CDF	--	142	--	--	--	133000 <sup>F</sup>	--	--	--	161	--	--	--
TOTAL TOXIC EQUIVALENCY <sup>I</sup>	11	--	--	476.67	478.35	--	--	4151	4151	--	--	5.25	5.33

Notes:

Shading indicates detected concentration greater than SLV

All units in picograms per gram (pg/g)

Value - Laboratory detected value in pg/g

TEF - Toxic Equivalency Factor from the WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds

TEQ - Toxic Equivalency Quotient is Laboratory Value \* TEF

TEQ (DL) = 0 - TEQ with value of 0 given for detection limit

TEQ (DL) = 0.5 - TEQ with value of 1/2 detection limit

A - Soil Screening Level Values (SLVs) calculated as shown in Attachment 2 of Work Plan

B - Dioxins and Furans by EPA Method 1613B

C - CDD = Chloro Dibenzo-p-Dioxin

D - EMPC/Merged Peak

E - EMCL - PCDD/DF analysis - Exceeds maximum calibration limit, 20 X dilution

F - 20 X dilution

G - EMPC/NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.

H - CDD - Chloro Dibenzo-p-Furan

I - Total Toxic Equivalency = The sum of Toxic Equivalent Quotients for the congeners tested.

Table 14  
Preliminary RI Results  
Groundwater Analytical Summary Table  
Dioxins/Furans  
JELD-WEN Site, Former Nord Door  
Everett, WA

Sample Name Sampling Date	Screening Level Values	GP-302-GW 5/20/2009				GP-309-GW 5/22/2009			
		Value	TEF	TEQ (DL) = 0	TEQ (DL) = 0.5	Value	TEF	TEQ (DL) = 0	TEQ (DL) = 0.5
Parameter	Screening Step 1 SLVs <sup>A</sup> (pg/L)								
<b>DIOXINS AND FURANS<sup>A</sup> (pg/L)</b>									
2,3,7,8-Tetra CDD <sup>G</sup>	--	2.51	1.00	2.51	2.51	<0.519	1.00	0	0.2595
1,2,3,7,8-Penta CDD	--	13.2	1.00	13.2	13.2	<0.559	1.00	0	0.2795
1,2,3,4,7,8-Hexa CDD	--	25	0.100	2.5	2.5	<0.481	0.100	0	0.02405
1,2,3,6,7,8-Hexa CDD <sup>B</sup>	--	147	0.100	14.7	14.7	<b>0.888</b>	0.100	0.0888	0.0888
1,2,3,7,8,9-Hexa CDD	--	53	0.100	5.3	5.3	<0.545 <sup>C</sup>	0.100	0	0.02725
1,2,3,4,6,7,8-Hepta CDD	--	4630	0.0100	46.3	46.3	<b>15.3</b>	0.0100	0.153	0.153
Octa CDD	--	50300 <sup>D</sup>	0.000300	15.1	15.1	<b>139</b>	0.000300	0.0417	0.0417
Total Tetra CDD	--	24.9	--	--	--	<0.519	--	--	--
Total Penta CDD	--	82	--	--	--	<0.559	--	--	--
Total Hexa CDD	--	684	--	--	--	<b>3.04</b>	--	--	--
Total Hepta CDD	--	7910	--	--	--	<b>27.6</b>	--	--	--
2,3,7,8-Tetra CDF <sup>E</sup>	--	4.05	0.100	0.405	0.405	<0.528	0.100	0	0.0264
1,2,3,7,8-Penta CDF	--	12.6	0.0300	0.378	0.378	<b>0.643</b>	0.0300	0.0193	0.0193
2,3,4,7,8-Penta CDF	--	15.1	0.300	4.53	4.53	<b>0.712</b>	0.300	0.214	0.214
1,2,3,4,7,8-Hexa CDF	--	38.20	0.100	3.82	3.82	<b>0.91</b>	0.100	0.091	0.091
1,2,3,6,7,8-Hexa CDF	--	<58.4 <sup>F</sup>	0.100	0	2.92	<b>0.679</b>	0.100	0.0679	0.0679
2,3,4,6,7,8-Hexa CDF	--	27.7	0.100	2.77	2.77	<0.546	0.100	0	0.0273
1,2,3,7,8,9-Hexa CDF	--	11.7	0.100	1.17	1.17	<0.547	0.100	0	0.02735
1,2,3,4,6,7,8-Hepta CDF	--	1060	0.0100	10.6	10.6	<2.2	0.0100	0	0.011
1,2,3,4,7,8,9-Hepta CDF	--	68.1	0.0100	0.681	0.681	<0.635	0.0100	0	0.003175
Octa CDF	--	3250	0.000300	0.975	0.975	<b>2.95</b>	0.000300	0.0003	0.0004425
Total Tetra CDF	--	28	--	--	--	<b>1.93</b>	--	--	--
Total Penta CDF	--	167	--	--	--	<b>1.98</b>	--	--	--
Total Hexa CDF	--	1040	--	--	--	<b>4.85</b>	--	--	--
Total Hepta CDF	--	3440	--	--	--	<b>2.48</b>	--	--	--
<b>TOTAL TOXIC EQUIVALENCY<sup>G</sup></b>	0.01	--	--	<b>125</b>	<b>128</b>	--	--	<b>0.6759</b>	<b>1.36</b>

**Notes:**

     Shading indicates detected concentration greater than SLV

All units in picograms per gram (pg/L)

**Value** - Laboratory detected value in pg/L

**TEF** - Toxic Equivalency Factor from the WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds

**TEQ** - Toxic Equivalency Quotient is Laboratory Value \* TEF

**TEQ (DL) = 0** - TEQ with value of 0 given for detection limit

**TEQ (DL) = 0.5** - TEQ with value of 1/2 detection limit

**A** - Groundwater Screening Level Values (SLVs) calculated as shown in Attachment 2 of Work Plan

**B** - CDD = Chloro Dibenzo-p-Dioxin

**C** - EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.

**D** - HRMS: Results from 5 X dilution

**E** - CDF = Chloro Dibenzo-p-Furan.

**F** - EMPC / DPE - Diphenylether interference present caused dibenzofuran detected to become a "non-detect" with an elevated detection limit.

**G** - Total Toxic Equivalency = The sum of Toxic Equivalent Quotients for the congeners tested.





Table 17  
Preliminary RI Results  
Soil Screening Step 2  
Metals Compared to Background  
JELD-WEN Site, Former Nord Door  
Everett, WA

Sample Name	Screening Step 2	SS-313	SS-314	SS-319	GP-303-6	GP-304-6	GP-305-7	GP-306-7	GP-307-4FT	GP-308-2FT	GP-309-5FT	GP-310-4.5FT	GP-311-3.5FT	GP-312-3.5FT	GP-334-3FT	GP-335-7.5FT	GP-335-9.5FT													
Sample Date	Background Concentrations <sup>A</sup>	6/4/2009	6/4/2009	6/4/2009	6/1/2009	6/1/2009	6/1/2009	6/1/2009	5/21/2009	5/21/2009	5/21/2009	5/22/2009	5/22/2009	5/22/2009	5/22/2009	5/22/2009	5/22/2009													
Sample Depth	(mg/Kg)	1	1	Surface	6	6	7	7	4	2	5	4.5	3.5	3.5	3	7.5	9.5													
<b>Metals <sup>B</sup></b>																														
Arsenic	7	<1.2	<1.0	1.3	J	1.9	<6.2	O	7	J3	4.4	3.9	<1.1	<5.3	O	2.4	P1	8.2	2	<16	O	7.4	J	<1.2						
Cadmium	1	0.72	0.76	2		0.32	0.27	J	0.35		0.31	0.23	J	0.66		0.71	0.29	0.51	0.39	0.21	J	<3.1	O	0.35						
Chromium <sup>C</sup>	48	27	24	18		25	27		27		25	31		40	J6	34	31	J6	30		38	26	55	B	31					
Copper	36	9.3	6.9	64		14	18		15		14	18		4.8	P1	9.9	12		88		19	66		14	32					
Nickel	48	30	33	13		24	30		24		32	43	J3, J6	40		40			37		41	39		25	100					
Silver	--	<0.58	<1.0	O	<0.68	0.79	1.1		0.96		0.94	0.75		<0.55		<0.53			0.91		1.2	1.1		0.45	J	<6.3	O	0.91		
Thallium	--	<1.2	<1.0		<6.8	O	3.2	<6.2	O	4.5	4.2	9		<1.1		<5.3	O		8.9		12	11		<160	O	12	J	8.8		
Zinc	85	33	31	550		37	32		40		36	47		23	J6	22			30		61	44		<12	O	53		40		
Mercury	0.07	0.01	J	0.01	J	0.038	0.14		0.047	0.019	J	0.015	J	0.016	J	0.024		0.018	J	0.013	J	0.016	J	0.039	0.01	J	0.24		0.019	J

**Notes:**

Shading indicates detected concentration exceeded Screening Step 2

All units in milligrams per kilogram (mg/Kg)

<0.0012 indicates detected below the detection limit of 0.0012 milligrams per kilogram (mg/Kg)

**BOLD** indicates detected above the laboratory detection limit

A - Background concentrations from Table 1: Statewide & Regional 90th Percentile Values (Puget Sound) in Natural Background Soil Metals Concentrations in Washington State provided by Ecology, October 1994

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

C - Chromium VI

**Laboratory Qualifiers**

J - (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

B - (EPA) - The indicated compound was found in the associated method blank as well as the laboratory sample.

J3 - The associated batch QC was outside the established quality control range for precision.

O - (ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.

J6 - The sample matrix interfered with the ability to make any accurate determination; spike value is low

P1 - RPD value not applicable for sample concentrations less than 5 times the reporting limit.

Table 18  
Preliminary RI Results  
Groundwater Screening Step 2  
Metals Compared to PCLs (MTCA)  
JELD-WEN Site, Former Nord Door  
Everett, WA

Analyte	Screening Level Values	GP-303-GW	GP-304-GW	GP-305-GW	GP-306-GW	GP-307-GW	GP-308-GW	GP-309A-GW	GP-310-GW	GP-311-GW	GP-312-GW	GP-334-GW	GP-335-GW	MW-1	MW-2	MW-4	MW-5	MW-6			
Sample Date	Screening Step 2 <sup>a</sup> PCLs (µg/L)	6/1/2009	6/1/2009	6/1/2009	6/1/2009	5/21/2009	5/21/2009	5/22/2009	5/22/2009	5/22/2009	5/22/2009	5/22/2009	5/22/2009	10/29/2009	10/29/2009	10/29/2009	10/29/2009	10/29/2009			
<b>Metals<sup>b</sup></b>																					
Antimony - Dissolved	6.4	--	--	--	--	--	--	--	--	--	--	--	--	0.28	J	0.69	J	<0.21	18	0.13	J
Arsenic	4.8	30	8	41	14	4	2.3	J	4.4	14	8.6	3.5	11	17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic - Dissolved	4.6	--	--	--	--	--	--	--	--	--	--	--	--	3.2	8.3	3.1	0.82	J	6		
Cadmium	8	<5.0	16	<5.0	<5.0	<5.0	2	J	<5.0	1	J	2.7	J	1.4	J	<5.0	<5.0	N/A	N/A	N/A	N/A
Cadmium - Dissolved	8	--	--	--	--	--	--	--	--	--	--	--	--	<0.80	<0.80	<0.80	1.5	J	<0.80		
Chromium <sup>c</sup>	48	15	620	16	4.3	J	8.3	J	7.3	J	<10	30	<10	6	J	8.9	J	<10	N/A	N/A	N/A
Copper	590	35	460	35	17	J	23	<20	<20	33	<20	<20	<20	11	J	N/A	N/A	N/A	N/A	N/A	N/A
Lead	15 <sup>d</sup>	23	260	11	<5.0	J	13	9.4	<5.0	26	<5.0	2.8	J	5.2	<5.0	N/A	N/A	N/A	N/A	N/A	N/A
Nickel	320	<20	820	11	J	<20	<20	<20	<20	22	<20	<20	<20	<20	<20	N/A	N/A	N/A	N/A	N/A	N/A
Nickel - Dissolved	320	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	80	<20	<20	<20	<20	24	<20	<20	<20	<20	<20	<20	<20	<40	O	N/A	N/A	N/A	N/A	N/A	N/A
Silver	80	<10	<10	<10	3.2	J	5.4	J	7.8	J	6.9	J	<10	<10	<10	N/A	N/A	N/A	N/A	N/A	N/A
Zinc	4,800	45	720	52	16	J	230	30	J	<30	50	<30	11	J	<30	<30	N/A	N/A	N/A	N/A	

**Notes:**

- Shading indicates detected concentration greater than PCL
- All units in micrograms per liter (µg/L)
- <2 indicates detected below the detection limit of 2µg/L
- BOLD** indicates detected above the laboratory detection limit
- "--" - Not Analyzed
- N/A - Total metals concentrations not screened in Screening Step 2.
- A - MTCA Method B values are from Ecology website CLARC tables downloaded August 2009 (<https://fortress.wa.gov/ecy/clarc/reporting/CLARCReporting.aspx>)
- B - Metals per EPA Method 6020, Mercury per EPA Method 7470A
- C - Chromium VI
- D - MTCA Method A value used because no MTCA Method B cleanup level has been established.
- Laboratory Qualifiers**
- J - (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
- O - (ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.



Table 19  
Preliminary RI Results  
Soil Screening Step 3  
SVOCs, VOCs, and TPH Compared to PCLs  
JELD-WEN Site, Former Nord Door  
Everett, WA

Sample Name	Screening Step 3 - PCLs	HA-329-1 FT	HA-329-1 FT
Sample Date	MTCA Method B- Unrestricted Use <sup>A</sup> (mg/Kg)	10/12/2009	10/12/2009
Sample Depth		1	1
Semivolatile Organic Compounds (SVOCs) <sup>B</sup> (mg/Kg)			
acenaphthylene	--	0.66	7.1
Non-Carcinogenic PAHs <sup>C</sup> (PAHs) (mg/Kg)			
acenaphthene	4,800	37	66
naphthalene	1,600	26	37

Sample Name	Screening Step 3 - PCLs	GP-334-3FT	GP-335-7.5FT	GP-335-9.5FT	HA-322-2 1.5 FT	HA-328-1 FT	HA-332-1 FT		
Sample Date	MTCA Method A - Unrestricted Use <sup>A</sup> (mg/Kg)	5/22/2009	5/22/2009	5/22/2009	9/23/2009	10/12/2009	10/13/2009		
Sample Depth		3	7.5	9.5	1.5	1	1		
Volatile Organic Compounds <sup>D</sup> (VOCs) (mg/Kg)									
acetone	8000	0.061	J	0.25	Q	<0.060	1.6	0.2	350
carbon tetrachloride	7.7	0.0024		<0.0014	Q	<0.0012	<0.014	<0.0018	<0.0039
methylene chloride	130	<0.0086		<0.0068	Q	<0.0060	0.34	<0.0091	<0.020
methylcyclohexane	--	<0.0016	Q	<0.0014	Q	<0.0012	Q	<0.014	0.0014
tetrachloroethylene	1.9	0.0063		0.033	Q	0.00098	J	<0.014	<0.0018
trichloroethylene	11	<0.0017		0.018	Q	0.002		<0.014	<0.0018

Sample Name	Screening Step 3 - PCLs	SS-321
Sample Date	MTCA Method A- Unrestricted Use <sup>E</sup> (mg/Kg)	6/4/2009
Sample Depth		Surface
Total Petroleum Hydrocarbons <sup>F</sup>		
Diesel Range Organics	2,000	1,300
Heavy Oil Range Organics	2,000	1,000

BNSF/Maulsby Marsh Hand Auger Samples - Sept/Oct 2009		
Sample Name	Screening Step 3 - PCLs	HA-329-1 FT
Sample Date	MTCA Method A- Unrestricted Use <sup>E</sup> (mg/Kg)	10/12/2009
Sample Depth		1
Total Petroleum Hydrocarbons (TPH) <sup>F</sup>		
Diesel Range Organics	2,000	790
Heavy Oil Range Organics	2,000	1,600

**Notes:**

- Shading indicates detected concentration greater than Screening Step 3 Values
- All units in milligrams per kilogram (mg/kg)
- <0.0012 indicates detected below the detection limit of 0.0012 milligrams per kilogram (mg/kg)
- Indicates no Method B cleanup level has been established by MTCA
- BOLD** indicates detected above the laboratory detection limit
- A - MTCA Method B values are from Ecology website CLARK tables downloaded August 2009 (<https://fortress.wa.gov/ecy/clarc/reporting/CLARCReporting.aspx>)
- B - SVOCs per EPA Method 8270C
- C - PAHs analyzed per 8270 SIMS (low level)
- D - VOCs per EPA Method 8260
- E - MTCA Method A cleanup levels for unrestricted land use
- F - Total Petroleum Hydrocarbons Diesel and Heavy Oil Range per NWTPH-Dx Method

**Laboratory Qualifiers**

- J - (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
- Q - (ESC) Sample held beyond the accepted holding time.

Table 20  
Preliminary RI Results  
Soil Screening Step 3  
Metals Compared to PCLs  
JELD-WEN Site, Former Nord Door  
Everett, WA

Sample Name	Screening Step 3 - PCLs	SS-319	GP-303-6	GP-304-6	GP-305-7	GP-306-7	GP-307-4FT	GP-310-4.5FT	GP-311-3.5FT	GP-312-3.5FT	GP-334-3FT	GP-335-7.5FT	GP-335-9.5FT												
Sample Date	MTCA Method B- Unrestricted Use <sup>A</sup> (mg/Kg)	6/4/2009	6/1/2009	6/1/2009	6/1/2009	6/1/2009	5/21/2009	5/22/2009	5/22/2009	5/22/2009	5/22/2009	5/22/2009	5/22/2009												
Sample Depth		Surface	6	6	7	7	4	4.5	3.5	3.5	3	7.5	9.5												
Metals <sup>B</sup>																									
Arsenic	20 <sup>D</sup>	1.3	J	1.9		<6.2	O	7	J3	4.4		3.9		2.4	P1	8.2		2		<16	O	7.4	J	<1.2	
Cadmium	80	2		0.32		0.27	J	0.35		0.31		0.23	J	0.29		0.51		0.39		0.21	J	<3.1	O	0.35	
Chromium <sup>C</sup>	240	18		25		27		27		25		31		31	J6	30		38		26		55	B	31	
Copper	3000	64		14		18		15		14		18		12		88		19		66		14		32	
Nickel	1600	13		24		30		24		24		32		40		37		41		39		25		100	
Silver	400	<0.68		0.79		1.1		0.96		0.94		0.75		0.91		1.2		1.1		0.45	J	<6.3	O	0.91	
Thallium	5.6	<6.8	O	3.2		<6.2	O	4.5		4.2		9		8.9		12		11		<160	O	12	J	8.8	
Zinc	2400	550		37		32		40		36		47		30		61		44		<12.	O	53		40	
Mercury	24	0.038		0.14		0.047		0.019	J	0.015	J	0.016	J	0.013	J	0.016	J	0.039		0.01	J	0.24		0.019	J

Notes:

Shading indicates detected concentration greater than Screening Step 3 Values

**BOLD** indicates detected above selected PCL or laboratory detection limit was above selected PCL

<1.2 indicates detected below the detection limit of 1.2 mg/Kg

A - MTCA Method B values are from Ecology website CLARC tables downloaded August 2009 (<https://fortress.wa.gov/ecy/clarc/reporting/CLARCReporting.aspx>)

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

C - Chromium VI

D - MTCA Method A soil cleanup level for unrestricted land use was used for arsenic because it was established based on adjustments for background, from Responsiveness Summary for the Amendments to the Model Toxics Control Act Cleanup Regulation Chapter 173-340 WAC, 1991.

Laboratory Qualifiers

J - (EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.

B - (EPA) - The indicated compound was found in the associated method blank as well as the laboratory sample.

Table 21  
Preliminary RI Results  
Soil Screening Step 3  
cPAHs at BNSF Maulsby Marsh Compared to PCLs  
JELD-WEN Site, Former Nord Door  
Everett, WA

Sample Name	Screening Step 3 - PCLs	HA-322 1 FT				HA-322 1 FT				HA-322-2 1.5 FT				HA-323 1 FT				HA-326 2 FT				HA-326 2 FT				HA-326-2 2.5 FT				HA-326-2 2.5 FT				HA-327-2.5 FT							
Sample Date	MTCA Method B- Unrestricted Use <sup>A</sup> (mg/Kg)	9/23/2009				9/23/2009				9/23/2009				9/23/2009				9/24/2009				9/24/2009				9/24/2009				9/24/2009				10/12/2009							
Sample Depth		1				1				1.5				1				2				2				2.5				2.5				2.5							
		Value	TEF	TEQ DL = 0	TEQ DL = 1/2	Value	TEF	TEQ DL = 0	TEQ DL = 1/2	Value	TEF	TEQ DL = 0	TEQ DL = 1/2	Value	TEF	TEQ DL = 0	TEQ DL = 1/2	Value	TEF	TEQ DL = 0	TEQ DL = 1/2	Value	TEF	TEQ DL = 0	TEQ DL = 1/2	Value	TEF	TEQ DL = 0	TEQ DL = 1/2	Value	TEF	TEQ DL = 0	TEQ DL = 1/2	Value	TEF	TEQ DL = 0	TEQ DL = 1/2	Value	TEF	TEQ DL = 0	TEQ DL = 1/2
Carcinogenic Polycyclic Aromatic Compounds <sup>B</sup> (cPAHs) (mg/Kg)																																									
benzo[a]anthracene	--	0.09	0.1	0.009	0.009	0.13	0.1	0.013	0.013	0.16	0.1	0.016	0.016	0.094	0.1	0.0094	0.0094	0.039	0.1	0.0039	0.0039	0.049	0.1	0.0049	0.0049	0.059	0.1	0.0059	0.0059	0.058	0.1	0.0058	0.0058	0.082	0.1	0.0082	0.0082	0.082	0.1	0.0082	0.0082
benzo[a]pyrene	--	0.097	1	0.097	0.097	0.2	1	0.2	0.2	0.25	1	0.25	0.25	0.12	1	0.12	0.12	0.044	1	0.044	0.044	0.059	1	0.059	0.059	0.071	1	0.071	0.071	0.054	1	0.054	0.054	0.043	1	0.043	0.043	0.043	1	0.043	0.043
benzo[b]fluoranthene	--	0.14	0.1	0.014	0.014	0.18	0.1	0.018	0.018	0.25	0.1	0.025	0.025	0.16	0.1	0.016	0.016	0.087	0.1	0.0087	0.0087	0.081	0.1	0.0081	0.0081	0.11	0.1	0.011	0.011	0.084	0.1	0.0084	0.0084	0.067	0.1	0.0067	0.0067	0.067	0.1	0.0067	0.0067
benzo[k]fluoranthene	--	0.055	0.1	0.0055	0.0055	0.059	0.1	0.0059	0.0059	0.088	0.1	0.0088	0.0088	0.036	0.1	0.0036	0.0036	0.029	0.1	0.0029	0.0029	0.021	0.1	0.0021	0.0021	0.056	0.1	0.0056	0.0056	0.022	0.1	0.0022	0.0022	0.034	0.1	0.0034	0.0034	0.034	0.1	0.0034	0.0034
chrysene	--	0.12	0.01	0.0012	0.0012	0.13	0.01	0.0013	0.0013	0.18	0.01	0.0018	0.0018	0.087	0.01	0.00087	0.00087	0.069	0.01	0.00069	0.00069	0.04	0.01	0.0004	0.0004	0.12	0.01	0.0012	0.0012	0.067	0.01	0.00067	0.00067	0.063	0.01	0.00063	0.00063	0.063	0.01	0.00063	0.00063
dibenzo[a,h]anthracene	--	<0.046	0.1	0	0.0023	0.039	0.1	0.0039	0.0039	<0.094	0.1	0	0.0047	0.031	0.1	0.0031	0.0031	<0.042	0.1	0	0.0021	0.018	0.1	0.0018	0.0018	<0.061	0.1	0	0.00305	0.014	0.1	0.0014	0.0014	<0.047	0.1	0	0.00235	<0.047	0.1	0	0.00235
indeno[1,2,3-cd]pyrene	--	0.035	0.1	0.0035	0.0035	0.15	0.1	0.015	0.015	0.11	0.1	0.011	0.011	0.087	0.1	0.0087	0.0087	0.023	0.1	0.0023	0.0023	0.045	0.1	0.0045	0.0045	0.035	0.1	0.0035	0.0035	0.037	0.1	0.0037	0.0037	0.016	0.1	0.0016	0.0016	0.016	0.1	0.0016	0.0016
Total TEQ <sup>C</sup>	0.14 <sup>D</sup>			0.1302	0.1325			0.2571	0.2571			0.3126	0.3173			0.16167	0.16167			0.06249	0.06459			0.0808	0.0808			0.0982	0.10125			0.07617	0.07617			0.06353	0.06588				

Sample Name	Screening Step 2	HA-328-2.5 FT				HA-329-1 FT				HA-329-1 FT				HA-330-1 FT				HA-330-1 FT				HA-332-1 FT				HA-332-1 FT				HA-333-3 FT							
Sample Date	Soil PCLs <sup>A</sup> (mg/Kg)	10/12/2009				10/12/2009				10/12/2009				10/13/2009				10/13/2009				10/13/2009				10/13/2009				10/13/2009							
Sample Depth		2.5				1				1				1				1				1				1				3							
		Value	TEF	TEQ DL = 0	TEQ DL = 1/2	Value	TEF	TEQ DL = 0	TEQ DL = 1/2	Value	TEF	TEQ DL = 0	TEQ DL = 1/2	Value	TEF	TEQ DL = 0	TEQ DL = 1/2	Value	TEF	TEQ DL = 0	TEQ DL = 1/2	Value	TEF	TEQ DL = 0	TEQ DL = 1/2	Value	TEF	TEQ DL = 0	TEQ DL = 1/2	Value	TEF	TEQ DL = 0	TEQ DL = 1/2	Value	TEF	TEQ DL = 0	TEQ DL = 1/2
Carcinogenic Polycyclic Aromatic Compounds <sup>B</sup> (cPAHs) (mg/Kg)																																					
benzo[a]anthracene	--	0.025	0.1	0.0025	0.0025	39	0.1	3.9	3.9	66	0.1	6.6	6.6	0.21	0.1	0.021	0.021	0.38	0.1	0.038	0.038	0.17	0.1	0.017	0.017	0.14	0.1	0.014	0.014	0.14	0.1	0.014	0.014	0.14	0.1	0.014	0.014
benzo[a]pyrene	--	0.11	1	0.11	0.11	60	1	60	60	87	1	87	87	0.68	1	0.68	0.68	0.42	1	0.42	0.42	0.22	1	0.22	0.22	0.17	1	0.17	0.17	0.13	1	0.13	0.13	0.13	1	0.13	0.13
benzo[b]fluoranthene	--	0.087	0.1	0.0087	0.0087	97	0.1	9.7	9.7	100	0.1	10	10	1.8	0.1	0.18	0.18	1.1	0.1	0.11	0.11	0.23	0.1	0.023	0.023	0.32	0.1	0.032	0.032	0.18	0.1	0.018	0.018	0.018	0.1	0.0018	0.0018
benzo[k]fluoranthene	--	0.03	0.1	0.003	0.003	26	0.1	2.6	2.6	42	0.1	4.2	4.2	0.46	0.1	0.046	0.046	0.36	0.1	0.036	0.036	0.16	0.1	0.016	0.016	0.094	0.1	0.0094	0.0094	0.078	0.1	0.0078	0.0078	0.0078	0.1	0.00078	0.00078
chrysene	--	0.042	0.01	0.00042	0.00042	92	0.01	0.92	0.92	110	0.01	1.1	1.1	0.46	0.01	0.0046	0.0046	0.46	0.01	0.0046	0.0046	0.16	0.01	0.0016	0.0016	0.18	0.01	0.0018	0.0018	0.13	0.01	0.0013	0.0013	0.0013	0.01	0.00013	0.00013
dibenzo[a,h]anthracene	--	<0.082	0.1	0	0.0041	9.2	0.1	0.92	0.92	16	0.1	1.6	1.6	0.21	0.1	0.021	0.021	0.08	0.1	0.008	0.008	<0.13	0.1	0	0.0065	0.013	0.1	0.0013	0.0013	<0.085	0.1	0	0.00425	<0.085	0.1	0	0.00425
indeno[1,2,3-cd]pyrene	--	0.082	0.1	0.0082	0.0082	23	0.1	2.3	2.3	34	0.1	3.4	3.4	0.53	0.1	0.053	0.053	0.2	0.1	0.02	0.02	0.1	0.1	0.01	0.01	0.047	0.1	0.0047	0.0047	<0.085	0.1	0	0.00425	<0.085	0.1	0	0.00425
Total TEQ <sup>C</sup>	0.14 <sup>D</sup>			0.13282	0.13692			80.34	80.34			113.9	113.9			1.0056	1.0056			0.6366	0.6366			0.2876	0.2941			0.2332	0.2332			0.1711	0.1796				

Notes:

- Shading indicates detected concentration greater than PCL
- BOLD** indicates detected laboratory detection limit
- Value** - Laboratory detected value in pg/g
- TEF** - Toxic Equivalency Factor from the WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds
- TEQ** - Toxic Equivalency Quotient is Laboratory Value \* TEF
- TEQ (DL) = 0** - TEQ with value of 0 given for detection limit
- TEQ (DL) = 0.5** - TEQ with value of 1/2 detection limit
- <0.058 indicates detected below the detection limit of 0.058 mg/kg
- A - MTCA Method B values are from Ecology website CLARC tables downloaded August 2009 (<https://fortress.wa.gov/ecy/clarc/reporting/CLARCReporting.aspx>)
- B - cPAHs analyzed per 8270 SIM (low level)
- C - Total TEQ for all cPAHs
- D - Value for cPAHs from Benzo(a)pyrene

Table 22  
Preliminary RI Results  
Sediment Analytical Summary Table  
JELD-WEN Site, Former Nord Door  
Everett, WA

Sample Name	Metals	Mercury	SVOCs	SIM SVOCs	PCB	TOC	TVS	Total Solids	Ammonia	Sulfide	Grain Size	Dioxins and Furans
3SED1-A	X	X	X	X	X	X	X	X	X	X	X	X
3SED1-B	X	X	X	X	X	X	X	X	X	X	X	X
3SED1-C	X	X	X	X	X	X	X	X	X	X	X	X
3SED2-A	X	X	X	X	X	X	X	X	X	X	X	
3SED2-B	X	X	X	X	X	X	X	X	X	X	X	
3SED2-C	X	X	X	X	X	X	X	X	X	X	X	
3SED3-A	X	X	X	X	X	X	X	X	X	X	X	
3SED3-B	X	X	X	X	X	X	X	X	X	X	X	
3SED3-C	X	X	X	X	X	X	X	X	X	X	X	
3SED4-A	X	X	X	X	X	X	X	X	X	X	X	
3SED4-B	X	X	X	X	X	X	X	X	X	X	X	
3SED4-C	X	X	X	X	X	X	X	X	X	X	X	
3SED5-A	X	X	X	X	X	X	X	X	X	X	X	
3SED5-B	X	X	X	X	X	X	X	X	X	X	X	
3SED5-C	X	X	X	X	X	X	X	X	X	X	X	
3SED6-A	X	X	X	X	X	X	X	X	X	X	X	
3SED6-B	X	X	X	X	X	X	X	X	X	X	X	
3SED6-C	X	X	X	X	X	X	X	X	X	X	X	
3SED7-A	X	X	X	X	X	X	X	X	X	X	X	X
3SED7-B	X	X	X	X	X	X	X	X	X	X	X	X
3SED7-C	X	X	X	X	X	X	X	X	X	X	X	X
3SED8-A	X	X	X	X	X	X	X	X	X	X	X	X
3SED8-B	X	X	X	X	X	X	X	X	X	X	X	X
3SED8-C	X	X	X	X	X	X	X	X	X	X	X	X
3SED9-A	X	X	X	X	X	X	X	X	X	X	X	X
3SED9-B	X	X	X	X	X	X	X	X	X	X	X	X
3SED9-C	X	X	X	X	X	X	X	X	X	X	X	X
3SED10-A	X	X	X	X	X	X	X	X	X	X	X	
3SED10-B	X	X	X	X	X	X	X	X	X	X	X	
3SED10-C	X	X	X	X	X	X	X	X	X	X	X	
3SED11-A	X	X	X	X	X	X	X	X	X	X	X	
3SED11-B	X	X	X	X	X	X	X	X	X	X	X	
3SED12-A	X	X	X	X	X	X	X	X	X	X	X	
3SED12-B	X	X	X	X	X	X	X	X	X	X	X	
3SED8-A (Duplicate)						X	X	X	X	X	X	X
3SED8-B (Duplicate)						X	X	X	X	X	X	X
3SED8-C (Duplicate)						X	X	X	X	X	X	X

**Notes:**

Metals by EPA 6010B Method  
Mercury by EPA 7471A Method  
SVOCs - Semivolatiles by EPA SW8270D  
SIM SVOCs - Semivolatiles (low level) by Selected Ion Monitoring  
PCB - polychlorinated biphenyls by PSDDA  
TOC - Total Organic Carbon by Plumb, 1981  
TVS - Total Volatile Solids by EPA 160.5  
Total solids and Preserved Total Solids by EPA 160.3  
N-Ammonia by EPA 350.1M  
Sulfide by EPA 376.2  
Grain Size according to Puget Sound Estuary Protocol (PSEP) methodology  
Dioxin and Furans by EPA1613B















Table 25  
Preliminary RI Results  
Sediment Analytical Summary  
Dioxins/Furans  
JELD-WEN Site, Former Nord Door  
Everett, WA

Sample Name	3SED1-A				3SED1-B				3SED1-C				3SED7-A				3SED7-B			
	6/5/2009				6/4/2009				6/4/2009				6/4/2009				6/4/2009			
Parameter	Value	TEF <sup>A</sup>	TEQ <sup>B</sup> (DL) = 0 <sup>C</sup>	TEQ (DL) = 1/2 <sup>D</sup>	Value	TEF	TEQ (DL) = 0	TEQ (DL) = 1/2	Value	TEF	TEQ (DL) = 0	TEQ (DL) = 1/2	Value	TEF	TEQ (DL) = 0	TEQ (DL) = 1/2	Value	TEF	TEQ (DL) = 0	TEQ (DL) = 1/2
<b>DIOXINS AND FURANS<sup>A</sup></b>																				
2,3,7,8-Tetra CDD <sup>B</sup>	0.496	1.00	0.496	0.496	<0.499	1.00	0	0.25	0.476	1.00	0.476	0.476	<0.616	1.00	0	0.308	0.582	1.00	0.582	0.582
1,2,3,7,8-Penta CDD	1.82	1.00	1.82	1.82	1.97	1.00	1.97	1.97	1.56	1.00	1.56	1.56	5.35	1.00	5.35	5.35	2.85	1.00	2.85	2.85
1,2,3,4,7,8-Hexa CDD	2.73	0.100	0.273	0.273	3.32	0.100	0.332	0.332	3	0.100	0.3	0.3	8.15	0.100	0.815	0.815	3.87	0.100	0.387	0.387
1,2,3,6,7,8-Hexa CDD	30.7	0.100	3.07	3.07	29.4	0.100	2.94	2.94	23.2	0.100	2.32	2.32	89.5	0.100	8.95	8.95	98.2	0.100	9.82	9.82
1,2,3,7,8,9-Hexa CDD	9.93	0.100	0.993	0.993	11.4	0.100	1.14	1.14	9.04	0.100	0.904	0.904	34.4	0.100	3.44	3.44	36.6	0.100	3.66	3.66
1,2,3,4,6,7,8-Hepta CDD	738	0.0100	7.38	7.38	620	0.0100	6.2	6.2	583	0.0100	5.83	5.83	1400	0.0100	14	14	850	0.0100	8.5	8.5
Octa CDD	5050	0.000300	1.515	1.515	5130	0.000300	1.539	1.539	5030	0.000300	1.509	1.509	9900 <sup>D</sup>	0.000300	2.97	2.97	5230	0.000300	1.569	1.569
Total Tetra CDD	9.47	N/A	N/A	N/A	12.5	N/A	N/A	N/A	9.97	N/A	N/A	N/A	9.8	N/A	N/A	N/A	11.8	N/A	N/A	N/A
Total Penta CDD	20.8	N/A	N/A	N/A	21.9	N/A	N/A	N/A	19.5	N/A	N/A	N/A	76.6	N/A	N/A	N/A	31.9	N/A	N/A	N/A
Total Hexa CDD	160	N/A	N/A	N/A	168	N/A	N/A	N/A	135	N/A	N/A	N/A	924	N/A	N/A	N/A	769	N/A	N/A	N/A
Total Hepta CDD	1220	N/A	N/A	N/A	1080	N/A	N/A	N/A	994	N/A	N/A	N/A	2880	N/A	N/A	N/A	1790	N/A	N/A	N/A
2,3,7,8-Tetra CDF <sup>F</sup>	2.79	0.100	0.223	0.223	2.87	0.100	0.223	0.223	2.56	0.100	0.223	0.223	2.58	0.100	0.223	0.223	2.23	0.100	0.223	0.223
1,2,3,7,8-Penta CDF	2.76	0.0300	0.0828	0.0828	2.19	0.0300	0.0657	0.0657	1.94	0.0300	0.0582	0.0582	2.18	0.0300	0.0654	0.0654	1.01	0.0300	0.0303	0.0303
2,3,4,7,8-Penta CDF	3.56	0.300	1.068	1.068	3.09	0.300	0.927	0.927	2.65	0.300	0.795	0.795	2.82	0.300	0.846	0.846	1.44	0.300	0.432	0.432
1,2,3,4,7,8-Hexa CDF	10.6	0.100	1.06	1.06	8.35	0.100	0.835	0.835	7.82	0.100	0.782	0.782	9.63	0.100	0.963	0.963	4.85	0.100	0.485	0.485
1,2,3,6,7,8-Hexa CDF	4.31	0.100	0.431	0.431	3.66	0.100	0.366	0.366	3.25	0.100	0.325	0.325	7.47	0.100	0.747	0.747	4.03	0.100	0.403	0.403
2,3,4,6,7,8-Hexa CDF	2.91	0.100	0.291	0.291	2.91	0.100	0.291	0.291	2.87	0.100	0.287	0.287	6.86	0.100	0.686	0.686	4.44	0.100	0.444	0.444
1,2,3,7,8,9-Hexa CDF	0.38	0.100	0.038	0.038	<0.363	0.100	0	0.0182	0.297	0.100	0.0297	0.0297	0.532	0.100	0.0532	0.0532	0.251	0.100	0.0251	0.0251
1,2,3,4,6,7,8-Hepta CDF	109	0.0100	1.09	1.09	<91.2	0.0100	0	0.456	87.8	0.0100	0.878	0.878	201	0.0100	2.01	2.01	139	0.0100	1.39	1.39
1,2,3,4,7,8,9-Hepta CDF	8.24	0.0100	0.0824	0.0824	6.9	0.0100	0.069	0.069	6.44	0.0100	0.0644	0.0644	10.1	0.0100	0.101	0.101	6.42	0.0100	0.0642	0.0642
Octa CDF	328	0.000300	0.0984	0.0984	249	0.000300	0.0747	0.0747	215	0.000300	0.0645	0.0645	304	0.000300	0.0912	0.0912	207	0.000300	0.0621	0.0621
Total Tetra CDF	12.1	N/A	N/A	N/A	15.9	N/A	N/A	N/A	11.7	N/A	N/A	N/A	18.8	N/A	N/A	N/A	15	N/A	N/A	N/A
Total Penta CDF	68	N/A	N/A	N/A	65.3	N/A	N/A	N/A	55.1	N/A	N/A	N/A	113	N/A	N/A	N/A	48.5	N/A	N/A	N/A
Total Hexa CDF	203	N/A	N/A	N/A	168	N/A	N/A	N/A	160	N/A	N/A	N/A	347	N/A	N/A	N/A	206	N/A	N/A	N/A
Total Hepta CDF	395	N/A	N/A	N/A	222	N/A	N/A	N/A	282	N/A	N/A	N/A	577	N/A	N/A	N/A	406	N/A	N/A	N/A
Confirmation 2,3,7,8-Tetra CDF	2.23	0.100	0.223	0.223	2.4	0.100	0.24	0.24	<1.9	0.100	0	0.095	<1.5	0.100	0	0.075	1.91	0.100	0.191	0.191
<b>TOTAL TOXIC EQUIVALENCY<sup>H</sup></b>		N/A	<b>20.0</b>	<b>20.0</b>		N/A	<b>17.0</b>	<b>17.7</b>		N/A	<b>16.4</b>	<b>16.4</b>			<b>41.3</b>	<b>41.6</b>		N/A	<b>30.9</b>	<b>30.9</b>

Table 25  
Preliminary RI Results  
Sediment Analytical Summary  
Dioxins/Furans  
JELD-WEN Site, Former Nord Door  
Everett, WA

Sample Name	3SED7-C				3SED8-A				3SED8-B				3SED8-C				3SED8-A (Duplicate)			
	6/4/2009				6/5/2009				6/5/2009				6/5/2009				9/15/2009			
	Value	TEF	TEQ (DL) = 0	TEQ (DL)=1/2	Value	TEF	TEQ (DL) = 0	TEQ (DL)=1/2	Value	TEF	TEQ (DL) = 0	TEQ (DL)=1/2	Value	TEF	TEQ (DL) = 0	TEQ (DL)=1/2	Value	TEF	TEQ (DL) = 0	TEQ (DL)=1/2
<b>DIOXINS AND FURANS <sup>A</sup></b>																				
2,3,7,8-Tetra CDD <sup>B</sup>	0.683	1.00	0.683	0.683	0.737	1.00	0.737	0.737	<0.471	1.00	0	0.236	0.428	1.00	0.428	0.428	<0.479	1.00	0	0.2395
1,2,3,7,8-Penta CDD	4.03	1.00	4.03	4.03	6.33	1.00	6.33	6.33	5.78	1.00	5.78	5.78	2.72	1.00	2.72	2.72	4.19	1.00	4.19	4.19
1,2,3,4,7,8-Hexa CDD	8.28	0.100	0.828	0.828	13.2	0.100	1.32	1.32	24.3	0.100	2.43	2.43	5.72	0.100	0.572	0.572	9.69	0.100	0.969	0.969
1,2,3,6,7,8-Hexa CDD	85.4	0.100	8.54	8.54	118	0.100	11.8	11.8	126	0.100	12.6	12.6	89.9	0.100	8.99	8.99	83.8	0.100	8.38	8.38
1,2,3,7,8,9-Hexa CDD	31.1	0.100	3.11	3.11	40.7	0.100	4.07	4.07	83.8	0.100	8.38	8.38	21.3	0.100	2.13	2.13	26.3	0.100	2.63	2.63
1,2,3,4,6,7,8-Hepta CDD	2060	0.0100	20.6	20.6	2670	0.0100	26.7	26.7	7750 <sup>C</sup>	0.0100	77.5	77.5	2400	0.0100	24.0	24.0	1790	0.0100	17.9	17.9
Octa CDD	16200	0.000300	4.86	4.86	21700 <sup>D</sup>	0.000300	6.51	6.51	125000 <sup>C</sup>	0.000300	37.5	37.5	18400 <sup>D</sup>	0.000300	5.52	5.52	17700	0.000300	5.31	5.31
Total Tetra CDD	16.3	N/A	N/A	N/A	23.9	N/A	N/A	N/A	15.0	N/A	N/A	N/A	13.0	N/A	N/A	N/A	15.9	N/A	N/A	N/A
Total Penta CDD	38.5	N/A	N/A	N/A	33.4	N/A	N/A	N/A	34.1	N/A	N/A	N/A	17.0	N/A	N/A	N/A	35	N/A	N/A	N/A
Total Hexa CDD	692	N/A	N/A	N/A	578	N/A	N/A	N/A	855	N/A	N/A	N/A	367	N/A	N/A	N/A	401	N/A	N/A	N/A
Total Hepta CDD	4220	N/A	N/A	N/A	4710	N/A	N/A	N/A	14100 <sup>C</sup>	N/A	N/A	N/A	3980	N/A	N/A	N/A	3120	N/A	N/A	N/A
2,3,7,8-Tetra CDF <sup>F</sup>	2.65	0.100	0.223	0.223	5.89	0.100	0.529	0.529	2.81	0.100	0.19	0.19	2.51	0.100	0.206	0.206	2.39	0.100	0.239	0.239
1,2,3,7,8-Penta CDF	1.53	0.0300	0.0459	0.0459	6.17	0.0300	0.185	0.185	3.53	0.0300	0.106	0.106	2.17	0.0300	0.0651	0.0651	4.13	0.0300	0.1239	0.1239
2,3,4,7,8-Penta CDF	2.06	0.300	0.618	0.618	8.10	0.300	2.43	2.43	4.21	0.300	1.26	1.26	2.82	0.300	0.846	0.846	9.04	0.300	2.712	2.712
1,2,3,4,7,8-Hexa CDF	9.17	0.100	0.917	0.917	29.2	0.100	2.92	2.92	34.1	0.100	3.41	3.41	15.5	0.100	1.55	1.55	16.7	0.100	1.67	1.67
1,2,3,6,7,8-Hexa CDF	6.72	0.100	0.672	0.672	17.8	0.100	1.78	1.78	29.9	0.100	2.99	2.99	10.8	0.100	1.08	1.08	11.3	0.100	1.13	1.13
2,3,4,6,7,8-Hexa CDF	6.95	0.100	0.695	0.695	13.2	0.100	1.32	1.32	21.5	0.100	2.15	2.15	9.64	0.100	0.964	0.964	16.5	0.100	1.65	1.65
1,2,3,7,8,9-Hexa CDF	0.411	0.100	0.0411	0.0411	1.31	0.100	0.131	0.131	1.05	0.100	0.105	0.105	0.649	0.100	0.0649	0.0649	5.18	0.100	0.518	0.518
1,2,3,4,6,7,8-Hepta CDF	232	0.0100	2.32	2.32	476	0.0100	4.76	4.76	1500	0.0100	15.0	15.0	750	0.0100	7.50	7.50	297	0.0100	2.97	2.97
1,2,3,4,7,8,9-Hepta CDF	11.9	0.0100	0.119	0.119	29.2	0.0100	0.292	0.292	66.2	0.0100	0.662	0.662	36.2	0.0100	0.362	0.362	17	0.0100	0.17	0.17
Octa CDF	411	0.000300	0.1233	0.1233	1050	0.000300	0.315	0.315	6230	0.000300	1.87	1.87	2680	0.000300	0.804	0.804	741	0.000300	0.2223	0.2223
Total Tetra CDF	17.5	N/A	N/A	N/A	34.9	N/A	N/A	N/A	25.8	N/A	N/A	N/A	14.9	N/A	N/A	N/A	29.2	N/A	N/A	N/A
Total Penta CDF	70.8	N/A	N/A	N/A	168	N/A	N/A	N/A	166	N/A	N/A	N/A	60.6	N/A	N/A	N/A	94	N/A	N/A	N/A
Total Hexa CDF	413	N/A	N/A	N/A	683	N/A	N/A	N/A	1070	N/A	N/A	N/A	865	N/A	N/A	N/A	411	N/A	N/A	N/A
Total Hepta CDF	746	N/A	N/A	N/A	1460	N/A	N/A	N/A	4580	N/A	N/A	N/A	2890	N/A	N/A	N/A	926	N/A	N/A	N/A
Confirmation 2,3,7,8-Tetra CDF	1.81	0.100	0.181	0.181	5.29	0.100	0.529	0.529	1.9	0.100	0.190	0.190	2.06	0.100	0.206	0.206				
<b>TOTAL TOXIC EQUIVALENCY <sup>H</sup></b>		N/A	<b>48.4</b>	<b>48.4</b>	N/A	N/A	<b>72.1</b>	<b>72.1</b>	N/A	N/A	<b>171.9</b>	<b>172.2</b>	N/A	N/A	<b>57.8</b>	<b>57.8</b>	N/A	N/A	<b>50.8</b>	<b>51.0</b>

Table 25  
Preliminary RI Results  
Sediment Analytical Summary  
Dioxins/Furans  
JELD-WEN Site, Former Nord Door  
Everett, WA

Sample Name	3SED8-B (Duplicate)				3SED8-C (Duplicate)				3SED9-A				3SED9-B				3SED9-C			
	9/15/2009								6/4/2009											
	Value	TEF	TEQ (DL) = 0	TEQ (DL)=1/2	Value	TEF	TEQ (DL) = 0	TEQ (DL)=1/2	Value	TEF	TEQ (DL) = 0	TEQ (DL)=1/2	Value	TEF	TEQ (DL) = 0	TEQ (DL)=1/2	Value	TEF	TEQ (DL) = 0	TEQ (DL)=1/2
<b>DIOXINS AND FURANS <sup>A</sup></b>																				
2,3,7,8-Tetra CDD <sup>B</sup>	<b>0.63</b>	1.00	0.63	0.63	<b>0.355</b>	1.00	0.355	0.355	<b>0.421</b>	1.00	0.421	0.421	<b>0.354</b>	1.00	0.354	0.354	<b>0.416</b>	1.00	0.416	0.416
1,2,3,7,8-Penta CDD	<b>3</b>	1.00	3	3	<b>1.66</b>	1.00	1.66	1.66	<b>3.21</b>	1.00	3.21	3.21	<b>2.42</b>	1.00	2.42	2.42	<b>2.94</b>	1.00	2.94	2.94
1,2,3,4,7,8-Hexa CDD	<b>6.39</b>	0.100	0.639	0.639	<b>3.21</b>	0.100	0.321	0.321	<b>7.07</b>	0.100	0.707	0.707	<b>5.46</b>	0.100	0.546	0.546	<b>7.63</b>	0.100	0.763	0.763
1,2,3,6,7,8-Hexa CDD	<b>45.5</b>	0.100	4.55	4.55	<b>21.5</b>	0.100	2.15	2.15	<b>40.7</b>	0.100	4.07	4.07	<b>43.5</b>	0.100	4.35	4.35	<b>42.9</b>	0.100	4.29	4.29
1,2,3,7,8,9-Hexa CDD	<b>15.9</b>	0.100	1.59	1.59	<b>8.73</b>	0.100	0.873	0.873	<b>19.7</b>	0.100	1.97	1.97	<b>16.5</b>	0.100	1.65	1.65	<b>20.6</b>	0.100	2.06	2.06
1,2,3,4,6,7,8-Hepta CDD	<b>1090</b>	0.0100	10.9	10.9	<b>506</b>	0.0100	5.06	5.06	<b>1060</b>	0.0100	10.6	10.6	<b>1130</b>	0.0100	11.3	11.3	<b>1090</b>	0.0100	10.9	10.9
Octa CDD	<b>10800</b>	0.000300	3.24	3.24	<b>4960</b>	0.000300	1.488	1.488	<b>7570</b>	0.000300	2.27	2.27	<b>8550</b>	0.000300	2.57	2.57	<b>9670 <sup>E</sup></b>	0.000300	2.90	2.90
Total Tetra CDD	<b>22.9</b>	N/A	N/A	N/A	<b>13.8</b>	N/A	N/A	N/A	<b>10.7</b>	N/A	N/A	N/A	<b>9.47</b>	N/A	N/A	N/A	<b>9.19</b>	N/A	N/A	N/A
Total Penta CDD	<b>31.6</b>	N/A	N/A	N/A	<b>16.4</b>	N/A	N/A	N/A	<b>19.6</b>	N/A	N/A	N/A	<b>17.7</b>	N/A	N/A	N/A	<b>21.9</b>	N/A	N/A	N/A
Total Hexa CDD	<b>271</b>	N/A	N/A	N/A	<b>146</b>	N/A	N/A	N/A	<b>240</b>	N/A	N/A	N/A	<b>258</b>	N/A	N/A	N/A	<b>236</b>	N/A	N/A	N/A
Total Hepta CDD	<b>2070</b>	N/A	N/A	N/A	<b>1030</b>	N/A	N/A	N/A	<b>1950</b>	N/A	N/A	N/A	<b>2160</b>	N/A	N/A	N/A	<b>1980</b>	N/A	N/A	N/A
2,3,7,8-Tetra CDF <sup>F</sup>	<b>2.67</b>	0.100	0.267	0.267	<b>1.5</b>	0.100	0.15	0.15	<b>2.39</b>	0.100	0.213	0.213	<b>2.38</b>	0.100	0.238	0.238	<b>2.21</b>	0.100	0.171	0.171
1,2,3,7,8-Penta CDF	<b>2.3</b>	0.0300	0.069	0.069	<b>1.09</b>	0.0300	0.0327	0.0327	<b>1.68</b>	0.0300	0.0504	0.0504	<b>1.75</b>	0.0300	0.0525	0.0525	<b>1.50</b>	0.0300	0.0450	0.0450
2,3,4,7,8-Penta CDF	<b>4.7</b>	0.300	1.41	1.41	<b>2.28</b>	0.300	0.684	0.684	<b>2.36</b>	0.300	0.708	0.708	<b>2.70</b>	0.300	0.810	0.810	<b>2.08</b>	0.300	0.624	0.624
1,2,3,4,7,8-Hexa CDF	<b>9.49</b>	0.100	0.949	0.949	<b>3.84</b>	0.100	0.384	0.384	<b>9.10</b>	0.100	0.910	0.910	<b>11.3</b>	0.100	1.13	1.13	<b>8.56</b>	0.100	0.856	0.856
1,2,3,6,7,8-Hexa CDF	<b>6.49</b>	0.100	0.649	0.649	<b>2.83</b>	0.100	0.283	0.283	<b>7.16</b>	0.100	0.716	0.716	<b>7.23</b>	0.100	0.723	0.723	<b>6.87</b>	0.100	0.687	0.687
2,3,4,6,7,8-Hexa CDF	<b>9.59</b>	0.100	0.959	0.959	<b>4.21</b>	0.100	0.421	0.421	<b>4.84</b>	0.100	0.484	0.484	<b>5.26</b>	0.100	0.526	0.526	<b>4.25</b>	0.100	0.425	0.425
1,2,3,7,8,9-Hexa CDF	<b>2.67</b>	0.100	0.267	0.267	<b>1.27</b>	0.100	0.127	0.127	<b>0.352</b>	0.100	0.0352	0.0352	<b>0.381</b>	0.100	0.0381	0.0381	<b>0.349</b>	0.100	0.0349	0.0349
1,2,3,4,6,7,8-Hepta CDF	<b>195</b>	0.0100	1.95	1.95	<b>76.3</b>	0.0100	0.763	0.763	<b>238</b>	0.0100	2.38	2.38	<b>297</b>	0.0100	2.97	2.97	<b>&lt;244 <sup>G</sup></b>	0.0100	0	1.22
1,2,3,4,7,8,9-Hepta CDF	<b>11.4</b>	0.0100	0.114	0.114	<b>4.36</b>	0.0100	0.0436	0.0436	<b>14.4</b>	0.0100	0.144	0.144	<b>14.8</b>	0.0100	0.148	0.148	<b>13.5</b>	0.0100	0.135	0.135
Octa CDF	<b>621</b>	0.000300	0.1863	0.1863	<b>219</b>	0.000300	0.0657	0.0657	<b>642</b>	0.000300	0.193	0.193	<b>892</b>	0.000300	0.268	0.268	<b>680</b>	0.000300	0.204	0.204
Total Tetra CDF	<b>32.4</b>	N/A	N/A	N/A	<b>13</b>	N/A	N/A	N/A	<b>16.3</b>	N/A	N/A	N/A	<b>14.3</b>	N/A	N/A	N/A	<b>13.6</b>	N/A	N/A	N/A
Total Penta CDF	<b>29.6</b>	N/A	N/A	N/A	<b>25.4</b>	N/A	N/A	N/A	<b>67.1</b>	N/A	N/A	N/A	<b>59.6</b>	N/A	N/A	N/A	<b>58.3</b>	N/A	N/A	N/A
Total Hexa CDF	<b>250</b>	N/A	N/A	N/A	<b>101</b>	N/A	N/A	N/A	<b>276</b>	N/A	N/A	N/A	<b>341</b>	N/A	N/A	N/A	<b>298</b>	N/A	N/A	N/A
Total Hepta CDF	<b>678</b>	N/A	N/A	N/A	<b>254</b>	N/A	N/A	N/A	<b>732</b>	N/A	N/A	N/A	<b>985</b>	N/A	N/A	N/A	<b>527</b>	N/A	N/A	N/A
Confirmation 2,3,7,8-Tetra CDF									<b>2.13</b>	0.100	0.213	0.213	<b>2.00</b>	0.100	0.200	0.200	<b>1.71</b>	0.100	0.171	0.171
<b>TOTAL TOXIC EQUIVALENCY <sup>H</sup></b>	<b>N/A</b>	<b>N/A</b>	<b>31.4</b>	<b>31.4</b>	<b>N/A</b>	<b>N/A</b>	<b>14.9</b>	<b>14.9</b>	<b>--</b>	<b>--</b>	<b>29.1</b>	<b>29.1</b>	<b>N/A</b>	<b>N/A</b>	<b>30.1</b>	<b>30.1</b>	<b>N/A</b>	<b>N/A</b>	<b>27.5</b>	<b>28.7</b>

Notes:

- BOLD** indicates detected above laboratory detection limit
- <0.499 indicates detected below the detection limit of 0.499 picograms per gram (pg/g)
- All units in pg/g
- Value** - Laboratory detected value in pg/g
- TEF** - Toxic Equivalency Factor from the WHO(2005): The 2005 World Health Organization, Human and Mammalian Toxic Equivalency Factors for Dioxins and Dioxin-like Compounds
- TEQ** - Toxic Equivalency Quotient is Laboratory Value \* TEF
- TEQ (DL) = 0** - TEQ with value of 0 given for detection limit
- TEQ (DL) = 0.5** - TEQ with value of 1/2 detection limit
- A - Dioxins/Furans by EPA Method 1613B
- B - CDD = Chloro Dibenzo-p-Dioxin
- C - Result is reported from 10X dilution
- D - Result is reported from 5X dilution
- E - HMRS
- F - CDF = Chloro Dibenzo-p-Furan
- G - EMPC / NDR - Peak detected does not meet ratio criteria and has resulted in an elevated detection limit.
- H - Total Toxic Equivalency = The sum of Toxic Equivalent Quotients for the congeners tested.

**ATTACHMENT A – PREVIOUS DATA, TABLES 1A THROUGH 7A**

**ATTACHMENT A, TABLE 1a - Groundwater Analytical Summary Table**

TPH  
JELD-WEN Site  
Everett, Washington

Sample Location	Sample Label	Sample Date	Hydrocarbon Identification <sup>A</sup> (mg/l)			Total Petroleum Hydrocarbons <sup>E</sup> (mg/l)		
			TPH Gasoline <sup>B</sup>	TPH Diesel <sup>C</sup>	TPH Heavy Oil <sup>D</sup>	TPH-Gx Gasoline Range	TPH-Dx Diesel Range	TPH-Dx Heavy Oil Range
<b>RZA Sampling Event - September 1992<sup>2</sup></b>								
MW-1	--	9/4/1992	--	--	--	ND (<0.050) <sup>D</sup>	--	--
MW-2	--	9/4/1992	--	--	--	ND (<0.050)	--	--
<b>SLR Sampling Event - May 2006</b>								
GP-1	GP1-GW	5/4/2006	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
GP-2	GP2-GW	5/4/2006	DET <sup>H</sup>	ND (<0.600)	ND (<0.600)	-	-	-
GP-3	GP3-GW	5/4/2006	DET <sup>H</sup>	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 <sup>H</sup>	DET <sup>H</sup>	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 <sup>H</sup>	DET <sup>H</sup>	DET <sup>H</sup>	-	-	-
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 <sup>H</sup>	DET	ND (<0.594)	-	1.33	ND (<0.943)
GP-16	GP16-GW	5/1/2006	DET <sup>H</sup>	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 <sup>H</sup>	-	-	-
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 <sup>H</sup>	-	-	-
GP-30	GP30-GW	Sample Held	-	-	-	-	-	-
GP-31	GP31-GW	5/3/2006	ND (<0.238)	DET <sup>H</sup>	DET <sup>H</sup>	-	-	-
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)	-	-	-
<b>SLR Sampling Event - September 2006</b>								
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 <sup>H</sup>	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)
<b>SLR Sampling Event - November 2006</b>								
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)	-	-	-
<b>SLR Sampling Event - May 2007</b>								
MW-6	--	5/11/2007	ND (<0.238)	ND (<0.600)	ND (<0.600)	-	-	-
<b>Screening Level Values (SLVs)<sup>K</sup></b>								
Screening Level Values (SLVs)			NA	NA	NA	1.00 / 0.80 <sup>L</sup>	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 Washington 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 - Screening Level Values (SLVs) as shown in Attachment 2 of the Work Plan.

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 SLVs

  = Laboratory PQL exceeds the SLV

**ATTACHMENT A, TABLE 2a - Soil Analytical Summary Table**

**TPH**

JELD-WEN Site  
Everett, Washington

Sample Location	Sample Label	Sample Depth (feet)	Sample Date	Hydrocarbon Identification <sup>A</sup> (mg/kg)			Total Petroleum Hydrocarbons <sup>E</sup> (mg/kg)		
				TPH Gasoline <sup>B</sup>	TPH Diesel <sup>C</sup>	TPH Heavy Oil <sup>D</sup>	TPH-Gx Gasoline Range	TPH-Dx Diesel Range	TPH-Dx Heavy Oil Range
<b>Parametrix Sampling Event - May 1991 <sup>F</sup></b>									
GS-1	--	--	5/24/1991	--	--	--	--	<b>19.0</b>	--
GS-2	--	--	5/24/1991	--	--	--	--	<b>23.0</b>	--
GS-4	--	--	5/24/1991	--	--	--	--	<b>22.0</b>	--
SS-1	--	--	5/30/1991	--	--	--	ND (<10.0) <sup>G</sup>	ND (<10.0)	--
SS-2	--	--	5/30/1991	--	--	--	ND (<10.0)	ND (<10.0)	--
<b>RZA Sampling Event- August 1992 <sup>H</sup></b>									
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)	<b>DET<sup>I</sup></b>	<b>DET</b>	--	--	--
MW-2	MW-2, S-1	2.5-4.0	8/31/1992	ND (<20)	ND (<50)	<b>DET</b>	--	--	--
<b>SLR Sampling Event - May 2006</b>									
GP-1	GP1-6	6.0	5/4/2006	ND (<33.2)	ND (<82.9)	<b>DET</b>	-	-	-
GP-1	GP1-10	10.0	5/4/2006	ND (<18.6)	<b>DET</b>	<b>DET</b>	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	<b>DET</b>	ND (67.9)	ND (<136)	<b>47.0</b>	-	-
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	<b>DET</b>	<b>DET</b>	<b>DET</b>	<b>24.9</b>	<b>1,580</b>	<b>371</b>
GP-10	GP10-3	3.0	5/1/2006	-	-	-	-	<b>440</b>	<b>1,660</b>
GP-10	GP10-11	11.0	5/1/2006	<b>DET</b>	<b>DET</b>	<b>DET</b>	<b>45.3</b>	<b>14,600</b>	<b>3,020</b>
GP-11	GP11-6	6.0	5/4/2006	<b>DET</b>	<b>DET</b>	<b>DET</b>	<b>57.5</b>	<b>60,400</b>	<b>15,700</b>
GP-11	GP11-12	12.0	5/4/2006	<b>DET</b>	<b>DET</b>	<b>DET</b>	<b>11.0</b>	<b>225</b>	<b>47.4</b>
GP-12	GP12-8	8.0	5/2/2006	<b>DET</b>	<b>DET</b>	<b>DET</b>	ND (<4.88)	<b>2,380</b>	<b>801</b>
GP-13	GP13-11.5	11.5	5/1/2006	ND (<21.0)	ND (<52.4)	<b>DET</b>	-	ND (<15.6)	ND (<31.3)
GP-14	GP14-6	6.0	5/1/2006	<b>DET</b>	<b>DET</b>	<b>DET</b>	<b>14.2</b>	<b>1,460</b>	<b>284</b>
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)	<b>DET</b>	-	<b>41.0</b>	<b>639</b>
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)	<b>DET</b>	-	ND (<14.7)	<b>37.5</b>
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)	<b>DET</b>	-	<b>53.3</b>	<b>471</b>
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	-	-	-	-	-	-
<b>Screening Level Values (SLVs) <sup>J</sup></b>									
Screening Level Values (SLVs)				NA	NA	NA	100 / 30 <sup>K</sup>	460	2,000

**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 - Screening Level Values (SLVs) as shown in Attachment 2 of the Work Plan.

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

  = Value exceeds the SLVs



**ATTACHMENT A, TABLE 2a - Soil Analytical Summary Table**

**TPH (Page 2)**

JELD-WEN Site

Everett, Washington

Sample Location	Sample Label	Sample Depth (feet)	Sample Date	Hydrocarbon Identification <sup>A</sup> (mg/kg)			Total Petroleum Hydrocarbons <sup>E</sup> (mg/kg)		
				TPH Gasoline <sup>B</sup>	TPH Diesel <sup>C</sup>	TPH Heavy Oil <sup>D</sup>	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) <sup>F</sup>	ND (<51.9)	DET <sup>G</sup>	-	ND (<16.2)	<b>75.6</b>
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)	<b>770</b>	<b>3,400</b>
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)	<b>63.7</b>
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)	<b>290</b>
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)	<b>85.5</b>
GP-42	GP42-8	8.0	5/2/2006	ND (<19.6)	ND (<49.0)	DET	-	ND (<12.9)	<b>70.0</b>
<b>Geoprobe Soil Sampling - Sept 2006</b>									
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	-	-	-	-	<b>30,200</b>	<b>8,220</b>
GP203	GP203-5.5	5.5	9/11/2006	-	-	-	-	<b>10,400</b>	<b>2,820</b>
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	-	-	-	-	<b>104</b>	<b>389</b>
GP206	GP206-8.5	8.5	9/12/2006	-	-	-	-	<b>15,500</b>	<b>3,620</b>
GP207	GP207-3	3	9/12/2006	-	-	-	-	<b>54</b>	<b>411</b>
GP207	GP207-9	9	9/12/2006	-	-	-	-	<b>775</b>	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)	<b>276</b>	<b>991</b>
GP214	GP214-6	6	9/12/2006	-	-	-	-	<b>152</b>	ND (<37.9)
GP215	GP215-4.5	4.5	9/11/2006	ND (<17.6)	ND (<43.9)	ND (<87.8)	-	-	-
<b>Monitoring Well Soil Sampling - Oct 2006</b>									
MW-1	MW1-6.5	6.5	10/2/2006	-	-	-	-	<b>23.5</b>	<b>111.0</b>
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	-	-	-	-	<b>43.7</b>	ND (<36.3)
MW-3	MW3-6.5	6.5	10/2/2006	-	-	-	-	ND (<14.6)	ND (<29.1)
<b>Monitoring Well Soil Sampling - April 2007</b>									
MW-6	MW6-10	10	4/20/2007	ND (<18.5)	ND (<46.8)	DET	-	ND (<14.3)	<b>116</b>
MW-6	MW6-14	14	4/20/2007	ND (<20.6)	ND (<51.4)	ND (<103)	-	-	-
<b>Test Pit Soil Samples - Oct 2006</b>									
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	-	<b>34.7</b>	<b>98.6</b>
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	<b>190</b>	<b>43.2</b>	<b>162</b>
TP2	TP2-1-6	6	10/19/2006	ND (<16.5)	ND (<41.2)	DET	-	<b>26.2</b>	<b>173</b>
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	-	<b>64.4</b>	<b>182</b>
TP2	TP2-4-7	7	10/19/2006	ND (<17.4)	DET	DET	-	<b>97.3</b>	<b>225</b>
<b>Screening Level Values (SLVs) <sup>H</sup></b>									
Screening Level Values (SLVs)				NA	NA	NA	100 / 30 <sup>I</sup>	460	2,000

**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 - Screening Level Values (SLVs) as shown in Attachment 2 of the Work Plan.

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

**[Light Blue Box]** = Value exceeds the SLVs





ATTACHMENT A, TABLE 5a - Groundwater Analytical Summary Table

VOCs

JELD-WEN Site  
Everett, Washington

Sample Location	Sample Label	Sample Date	Volatile Organic Compounds (VOCs) <sup>A</sup> (µg/l)								
			Benzene	Ethylbenzene	Isopropyl benzene	n-Propyl benzene	Toluene	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	Xylenes <sup>B</sup>	
<b>SLR Sampling Event - May 2006</b>											
GP-2	GP2-GW	5/4/2006	ND (<1.00) <sup>C</sup>	ND (<1.00)	ND (<2.00)	ND (<1.00)	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)	<b>60,300</b>	ND (<500)	ND (<500)	ND (<1,500)	
GP-5	GP5-GW	5/4/2006	<b>3.13</b>	<b>4.21</b>	ND (<2.00)	ND (<1.00)	ND (<1.00)	<b>1.95</b>	ND (<1.00)	<b>5.47</b>	
GP-9	GP9-GW	5/1/2006	ND (<100)	ND (<100)	ND (<200)	ND (<100)	<b>125</b>	ND (<100)	ND (<100)	ND (<300)	
GP-10	GP10-GW	5/1/2006	<b>103</b>	ND (<100)	ND (<200)	ND (<100)	<b>125</b>	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)	
<b>SLR Sampling Event - September 2006</b>											
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	<b>145</b>	<b>114</b>	ND (<200)	ND (<100)	<b>185</b>	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)	<b>1.05</b>	ND (<1.00)	ND (<1.00)	ND (<3.00)	
GP-207	GP207-GW	9/12/2006	<b>204</b>	<b>222</b>	ND (<100)	ND (<50.0)	<b>540</b>	<b>64.0</b>	ND (<50.0)	<b>343</b>	
GP-208	GP208-GW	9/12/2006	ND (<100)	ND (<100)	ND (<200)	ND (<100)	<b>121</b>	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	<b>66.3</b>	<b>77.8</b>	<b>6.72</b>	<b>1.49</b>	<b>33</b>	<b>1.03</b>	<b>35.94</b>		
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)	
<b>SLR Sampling Event - November 2006</b>											
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	<b>9.46</b>	ND (<1.00)	ND (<2.00)	ND (<1.00)	<b>4.12</b>	ND (<1.00)	ND (<1.00)	<b>1.05</b>	
<b>SLR Sampling Event - May 2007</b>											
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)	
<b>Screening Level Values (SLVs)<sup>D</sup></b>											
Screening Level Values (SLVs)			1.2	530	800	NP <sup>E</sup>	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 - Screening Level Values (SLVs) as shown in Attachment 2 of the Work Plan.

E - Value Not Provided

**[Light Blue Cell]** = Value exceeds the SLVs  
**[Yellow Cell]** = Laboratory PQL exceeds the SLV

**ATTACHMENT A, TABLE 6a - Soil Analytical Summary Table**

**VOCs**

JELD-WEN Site  
Everett, Washington

Sample Location	Sample Label	Sample Depth (feet)	Sample Date	Volatile Organic Compounds (VOCs) <sup>A</sup> (µg/kg)				
				Benzene	Ethylbenzene	Toluene	1,2,4-Trimethyl benzene	Xylenes <sup>B</sup>
<b>Parametrix Sampling Event- May 1991</b>								
GS-1	GS-1	--	5/24/1991	ND(<6) <sup>C</sup>	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)	<b>90</b>	--	<b>54</b>
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)
<b>RZA Sampling Event- August 1992</b>								
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)
<b>May 2006 Sampling Event</b>								
GP-3	GP3-9	9.0	5/4/2006	ND (<125)	ND (<623)	<b>71,000</b>	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)
<b>Geoprobe Soil Sampling - Sept 2006</b>								
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	<b>53</b>	ND (<110)	<b>188</b>	<b>131</b>	<b>148</b>
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)
<b>Test Pit Soil Samples - Oct 2006</b>								
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)	<b>528</b>	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)	<b>284</b>	<b>124</b>	<b>464</b>
TP1	TP1-Stockpile	Comp.	10/19/2006	ND (<588)	ND (<588)	<b>75,300</b>	<b>747</b>	<b>1,190</b>
<b>Monitoring Well Soil Sampling - April 2007</b>								
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)
<b>Screening Level Values (SLVs)<sup>D</sup></b>								
Screening Level Values (SLVs)				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 - Screening Level Values (SLVs) as shown in Attachment 2 of the Work Plan.

  = Value exceeds the SLVs

  = Laboratory PQL exceeds the SLV

**ATTACHMENT A, TABLE 7a - Groundwater and Soil Analytical Summary Table**

**PCBs**

JELD-WEN Site  
Everett, Washington

<b>SOIL</b>				<b>Polychlorinated Biphenyls <sup>A</sup></b>						
				<b>(µg/kg)</b>						
<b>Sample Location</b>	<b>Sample Label</b>	<b>Sample Depth (feet)</b>	<b>Sample Date</b>	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260
<b>RZA Sampling Event- August 1992</b>										
C1	C1-S1	2.5-4.0	8/27/1992	ND (<50.0) <sup>B</sup>	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)
<b>May 2006 Sampling Event</b>										
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)
<b>Screening Level Values (SLVs) <sup>C</sup></b>										
Screening Level Values				0.5 <sup>D</sup>	0.5 <sup>D</sup>	0.5 <sup>D</sup>	0.5 <sup>D</sup>	0.5 <sup>D</sup>	0.5 <sup>D</sup>	0.5 <sup>D</sup>

<b>GROUNDWATER</b>			<b>Polychlorinated Biphenyls <sup>A</sup></b>						
			<b>(µg/l)</b>						
<b>Sample Location</b>	<b>Sample Label</b>	<b>Sample Date</b>	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)
<b>Screening Level Values (SLVs)</b>									
Screening Level Values			0.01 <sup>D</sup>	0.01 <sup>D</sup>	0.01 <sup>D</sup>	0.01 <sup>D</sup>	0.01 <sup>D</sup>	0.01 <sup>D</sup>	0.01 <sup>D</sup>

**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 - Screening Level Values (SLVs) as shown in Attachment 2 of the Work Plan.

D - SLV for total PCBs

- = Value exceeds the SLVs
- = Laboratory PQL exceeds the SLVs