

**TETRACHLOROETHENE SOURCE  
EVALUATION  
76 PRODUCTS FACILITY NO. 351386  
1300 W 12<sup>th</sup> Street  
Vancouver, Washington**

**April 28, 2014**

Prepared for:

Chevron Environmental Management Company  
6101 Bollinger Canyon Road  
San Ramon, California 94583

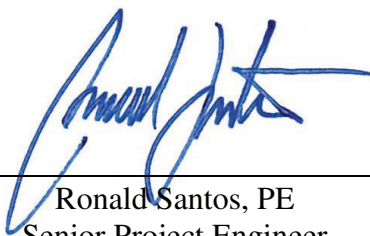
Prepared by:

Leidos Engineering, LLC  
405 South 8<sup>th</sup> Street, Suite 301  
Boise, Idaho 83702



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Andrew Lembrick  
Project Geologist



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Ronald Santos, PE  
Senior Project Engineer

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## **1. INTRODUCTION**

On behalf of Chevron Environmental Management Company's affiliate, Union Oil Company of California (Union Oil), Leidos Engineering, LLC (Leidos; formerly SAIC Energy, Environment & Infrastructure, LLC) prepared this tetrachloroethene (PCE) source evaluation report for 76 Products Facility No. 351386 located at 1300 W 12<sup>th</sup> Street in Vancouver, Washington (the site). This report was prepared to address Washington State Department of Ecology (Ecology) request for site information letter dated August 1, 2013 and a subsequent telephone conversation conducted on September 9, 2013.

## **2. OBJECTIVE**

The objective of this evaluation is to identify potential sources of PCE and develop a path forward.

In order to complete the objective, Leidos performed the following:

- Reviewed and evaluated historical site use on the property;
- Completed a thorough evaluation of available historical site assessment data for onsite and offsite properties;
- Evaluated current and potential future site use and zoning for the former bulk plant property; and
- Reviewed surrounding property and land use information including a summary of potential offsite sources.

## **3. SITE BACKGROUND AND DESCRIPTION**

The site is located in the city of Vancouver (City), Washington to the northwest of West Lincoln Avenue and 12<sup>th</sup> Street (Figure 1). Currently the former bulk fuel plant is a petroleum recycling facility operated by Emerald Services, Inc. (Emerald). The site is located at the west end of 12<sup>th</sup> Street with access from 11<sup>th</sup> Street, and is bounded on the east side by Lincoln Street, by Burlington Northern-Santa Fe (BNSF) rail yard to the south and west, and by a foundry (Vancouver Iron and Steel) to the north.

Four 20,000-gallon aboveground storage tanks (ASTs) are located in the northeast corner of the site within a concrete bermed area with a soil floor. Nine fuel ASTs, three wastewater ASTs, and a loading dock are located in the north central part of the site within a concrete bermed area on a concrete slab. A single 5,000-gallon waste-oil underground storage tank (UST), two oil/water separators and several waste-oil processing units are located on the northern part of the site. The southern part of the site contains an office building, loading dock, storage area and a second UST used to store heating oil for onsite consumption (Pacific Environmental Group, Inc. [PEG], 1997).

The bulk fuel facility has operated at the property since at least 1928 (Environmental Data Resources, Inc. [EDR], 2014). The bulk fuel terminal was operated at the site by Union Oil until 1956. From 1956 to 1995 the site was used as a waste-oil reprocessing facility in roughly its current configuration. Emerald Services has operated the facility since 1995 and until 2007 accepted waste-oil, antifreeze, solvents, and used petroleum products from other sources and recycles the liquids received as industrial fuel or other cleaning products. Presently Emerald

Services only operates the Site as a transfer facility for waste products received (PEG, 1997 and [www.emeraldnw.com](http://www.emeraldnw.com), 2014).

## **4. SITE ZONING AND MTCA METHOD C**

### **4.1 ZONING**

The site is located in an area with a history of long term industrial use. According to the City zoning ordinance, the site and properties to the west, south, and north are zoned either IL: Light Industrial or IH: Heavy Industrial, as identified in Section 20.440.020 List of Zoning Districts in the city of Vancouver Municipal Code (VMC). Residential uses are not allowed in the IL and IH zones, with the exception of multi-dwelling units for caretaker residences. Properties located to the east of the site are zoned CX: City Center, as listed in VMC Section 20.430.020. Ground floor residential is allowed within the CX: City Center designation. A description of zoning uses according to the VMC is presented as Appendix A.

### **4.2 MODEL TOXIC CONTROL ACT (MTCA) CLEANUP LEVELS**

Industrial soil cleanup levels are based on an adult worker exposure scenario. Under MTCA Washington Administrative Code (WAC) 173-340-745(1), to qualify as an industrial land use and to use an industrial soil cleanup level a site must meet the following criteria:

- The area of the site where industrial property soil cleanup levels are proposed must meet the definition of an industrial property under WAC 173-340-200, which states that the property is zoned for industrial use by the city and is characterized by traditional uses, such as the storage of bulk material.

In addition, MTCA WAC 173-340-745(1)(a)(i), states that the following criteria must be met to qualify as industrial property in the state of Washington in order to be able to apply MTCA Method C cleanup criteria:

- People do not normally live on industrial property. The primary potential exposure is to adult employees of businesses located on the industrial property;
- Access to industrial property by the general public is generally not allowed. If access is allowed, it is highly limited and controlled due to safety or security considerations;
- Food is not normally grown/raised on industrial property. (However, food processing operations are commonly considered industrial facilities);
- Operations at industrial properties are often (but not always) characterized by use and storage of chemicals, noise, odors and truck traffic;
- The surface of the land at industrial properties is often (but not always) mostly covered by buildings or other structures, paved parking lots, paved access roads and material storage areas—minimizing potential exposure to the soil; and
- Industrial properties may have support facilities consisting of offices, restaurants, and other facilities that are commercial in nature but are primarily devoted to administrative functions necessary for the industrial use and/or are primarily intended to serve the industrial facility employees and not the general public.

Either standard or modified MTCA Method C soil cleanup levels may be used at any industrial property qualifying under subsection of WAC 173-340-745 (1).

Based on the site zoning classification and site use, MTCA Method C cleanup levels will be used to evaluate site specific analytes. In addition, the September 2012 Ecology PCE guidance for the Cleanup Levels and Risk Calculations (CLARC) database will be utilized (Ecology, 2014). CLARC identified cleanup levels for PCE are presented as Appendix B. Below is the completed MTCA Method C evaluation for residual soil and groundwater PCE concentrations.

#### MTCA Method C Soil Evaluation

PCE was only detected in two shallow soil samples located in the northwest corner of the site at approximately 6 feet below ground surface (bgs). However, PCE was not detected above the laboratory reporting limits in any of the remaining samples across the site collected at depths ranging between 4 to 40 feet bgs. Groundwater beneath the site is present at depths ranging between 36 and 45 feet bgs.

Based on the fact that first encountered groundwater in the vicinity of the site is not used for drinking water (see below discussion), the drinking water is located in a deep aquifer that is confined by a thick clay/silt layer, and PCE was only detected at very shallow depths; the soil leaching to groundwater exposure pathway was eliminated from the evaluation. The only potential pathway for soil applicable to the site is the soil direct contact pathway.

Therefore soil PCE concentrations will be evaluated using MTCA Method C cleanup levels of carcinogenic (63,000 milligrams per kilogram [mg/kg]) and non-carcinogenic (21,000 mg/kg) values for direct contact by site workers.

#### MTCA Method C Groundwater Evaluation

Drinking water for the City is supplied from a network of 35 groundwater wells. Four aquifers are the source of water for these wells: Recent Alluvial Aquifer, Troutdale Aquifer, the deep Sand and Gravel Aquifer, and fractured basalt formations. There are 4 municipal wells (ALH 454, AKS 795, BAA 303, and BAA302) located approximately 2.5 miles northwest (up-gradient) of the site. The well ALH 454 is screened at 62.6 to 109.6 feet and 129.6 and 144.6 feet; well AKS 795 is screened between 390 and 461 feet and 521 and 582 feet; well BAA 303 is screened between 424 and 474 feet and 549 and 589 feet; and well BAA 302 is screened between 411 and 476 feet and 564 and 604 feet. Based on the boring logs for these wells, the aquifers used for drinking water are all confined by the presence of thick continuous clay/silt layers between 30 and 80 feet above the aquifers.

In addition to the municipal wells, there is a cluster of three water wells located approximately 0.5 miles southeast (down-gradient) of the site. The wells are owned by Columbia River Paper Mills and are used for manufacturing purposes. No other water wells are located within 0.5 mile radius from the site. Water well boring logs are provided in Appendix C.

Based on the above information, the drinking water pathway was eliminated, because first encountered groundwater use as potable water source is not reasonably likely. In addition, groundwater concentrations have been below PCE groundwater screening levels for evaluating vapor intrusion. By eliminating those exposure pathways, groundwater PCE concentrations will be evaluated using MTCA Method C cleanup levels for standard carcinogenic (210 micrograms per liter [ $\mu\text{g/L}$ ]) and non-carcinogenic (110  $\mu\text{g/L}$ ).

## 5. ONSITE PCE DATA REVIEW

A review of available historical reports identified a potential source of PCE at the northern portion of the site in the vicinity of the former 5,000-gallon UST and attached oil/water separator (UST-2).

In September 1999, a site characterization study was performed and included the collection of a water sample from UST-2 and soil samples south of UST-2. During the site characterization study, PCE was detected in the water sample collected from the contents of the UST and the soil sample collected south of the UST. A maximum PCE concentration of 2.430 mg/kg in soil, exceeding the MTCA Method A cleanup level, was detected in sample PMX-17 south of UST—2 at a depth of approximately 6 feet bgs (Parametrix, 2000). However, since the site meets the definition of an industrial property and the soil leaching to groundwater pathway has been eliminated, the maximum PCE concentration detected during this investigation is below the MTCA Method C cleanup level of 21,000 mg/kg.

In March 2000, ATC Associates, Inc. (ATC) was hired by Emerald to remove UST-2 and collect samples in the excavation. Soil characterization samples were collected from the sidewalls and the bottom of the tank excavation, and subsequently analyzed for total petroleum hydrocarbons (TPH), metals, and VOCs. No analytes were detected at concentrations exceeding the MTCA Method A cleanup levels. Field observations of the tank indicated the tank was in good condition with no sign of leaks (ATC, 2000).

In addition to reviewing historical soil sample results, routine groundwater monitoring results were evaluated. Groundwater at the site ranges between approximately 36 to 45 feet bgs and has historically migrated toward the south-southeast. PCE has historically been detected in all monitoring wells, including former monitoring well MW-5, located upgradient of UST-2. Concentrations of PCE in groundwater have always been below the MTCA Method C cleanup level and are decreasing over time. Hydrographs are presented as Appendix D.

Historical soil sampling data are presented in Table 1 with locations presented on Figures 2 and 3. Groundwater monitoring and analytical data are presented in Table 2 and on Figure 4, and groundwater elevation and flow direction at the site are presented on Figure 5.

## 6. POTENTIAL OFFSITE PCE SOURCES

A review of properties in the West Vancouver Industrial Area identified several facilities as potential sources of PCE based on known releases and historic facility activities. Email correspondence and a subsequent conversation on February 11, 2014 with Craig Rankine of Ecology, Vancouver Field Office identified several potential offsite PCE sources in the vicinity of the site.

Mr. Rankine cited the Draft Report Evaluation of Clark Public Utilities Proposed South Lake Wellfield (Pacific Groundwater Group, 2002), and identified the following confirmed PCE release sites near the property:

- Cadet Manufacturing,
- Swan Manufacturing, and
- ST Services (formerly GATX Terminals) now NuStar.

In addition to the known PCE sources, Mr. Rankine identified the following facilities as potential sources of PCE and/or TCE. Operations at the facilities were acquired from the Ecology Integrated Site Information System (ISIS) and include NAICS codes and/or SIC codes (Ecology, 2014):

- Automotive Services (NAICS Motor Vehicle Towing/ Car Washes)
- 2001 Roosevelt Way/Malcolm Montague/Vancouver Drum (NAICS Other Plastics Product Manufacturing, Administration of Air and Water Resources)
- Tetra Pak, (NAICS, Other Plastics Product Manufacturing; SIC Cyclic Crudes and Intermediates/Miscellaneous Plastics Products, NEC/ Plastics Products, NEC)
- Alcoa (SIC Primary Production of Aluminum)
- Great Western Malting (NAICS Malt Manufacturing/ Rolling and Drawing of Purchased Ste/ SIC Malt)

Mr. Rankine's email response dated February 11<sup>th</sup>, 2014 is presented as Appendix E. A list of offsite potential PCE sources is presented as Appendix F. The following is a summary of information obtained for the confirmed offsite PCE sources.

One of the sites identified as a potential source of PCE was the Strebtor Property/ Tetra Pak (Tetra Pak). In August 2004, Kennedy Jenks performed a Remedial Investigation/Feasibility Study (RI/FS) at Tetra Pak located at 1616 West 31<sup>st</sup> Street, Vancouver, Washington. According to the Kennedy Jenks report TCE and PCE were initially detected in an onsite groundwater sample collected from MW-5 at concentrations of 11 and 11 µg/L in 1988, respectively. TCE and/or PCE were detected at concentrations exceeding the MTCA preliminary screening criteria in all groundwater monitoring wells at the Tetra Pak facility during one or more sampling events conducted between 1988 and 2002. The Tetra Pak facility was not considered a source of the area-wide chlorinated solvent-contaminated groundwater plume based on studies conducted in the West Industrial area of Vancouver by Ecology and analytical results from soil at the site (Kennedy Jenks, 2004).

Kennedy Jenks, cited a study performed under a Site Assessment Cooperative Agreement between Ecology and the United States Environmental Protection Agency (USEPA) Region 10 between July 1, 1999 and June 30, 2000 (Ecology and USEPA, 2000). The study was initiated due to the detection of TCE and PCE in two process wells at the Great Western Malting Company in 1989. The study was initiated to identify the potential sources of TCE and PCE in the two process wells. The Ecology study indicated that several sites within the industrial area had documented chlorinated solvents in soil and/or groundwater. The following facilities were identified by the Kennedy Jenks RI/FS for Tetra Pak as confirmed PCE sources:

- Cadet Manufacturing,
- ST Services,
- 2001 NE Roosevelt (Vancouver Drum), and
- Port of Vancouver Building 2220.



TCE and PCE were detected in groundwater at the Cadet Manufacturing facility at respective concentrations as high as 3,000 and 930 µg/L (Kennedy Jenks, 2004). These concentrations are 2 to 3 magnitudes of order higher than concentrations detected at the Site.

In May 2006, the Washington Department of Health (WDOH) responded to the Cadet Manufacturing Company Remedial Investigation Report Update prepared by AMEC Earth and Environmental. In the background description of the response, the extent of a release of chlorinated solvent predominantly TCE and PCE migrating eastward from the Cadet Manufacturing facility and underlying a significant portion of the Fruit Valley Neighborhood is described. Based on the WDOH response document, contaminated groundwater has migrated eastward to the BNSF railroad tracks, northward beyond La Frambois Road, and southeastward onto Port of Vancouver property, near the Columbia River (WDOH, 2006).

Confirmed offsite PCE source areas are presented as Figure 6 and potential PCE sources are identified as Figure 7.

## 7. CONCLUSIONS

This evaluation was completed to identify potential onsite and offsite PCE sources. Onsite PCE soil concentrations have only been detected in two shallow soil samples at 6 feet bgs at a maximum concentration of 2.430 mg/kg near the former UST-2 on the north side of the property. The UST was in good condition with no sign of leaks during removal, and PCE was not detected in soil samples collected from the UST cavity (Parametrix, 2000 and ATC, 2000). All soil PCE concentrations are below the MTCA Method C cleanup level, and PCE was not detected above the laboratory reporting limits in any of the remaining samples collected at depths ranging between 4 to 40 feet bgs.

PCE continues to be detected in groundwater; however, concentrations are below the MTCA Method C cleanup level in all monitoring wells, and are following a decreasing trend. During the fourth quarter 2013 sampling event, a maximum PCE concentration of 8 µg/L was detected in well MW-5 (Leidos, 2014).

Several facilities have been identified in the area as potential sources to an area wide chlorinated solvent plume primarily containing PCE and TCE. Cadet Manufacturing, Swan Manufacturing, and ST Services have been combined as a single source for a comingled solvent plume with the remediation managed by the Port of Vancouver (Ecology and USEPA, 2000). Several properties identified in the Ecology and USEPA study as potential solvent sources are located up-gradient within one mile of the site as described in Section 6.

In addition to identifying potential PCE sources, soil and groundwater cleanup standards under MTCA were evaluated. The site is located on the eastern edge and down-gradient of an area of heavy industrial activity for which usage has spanned for more than 100 years. The evaluation concluded that MTCA Method C cleanup levels for direct contact by occupational receptors are applicable for the site because of the following:

- the industrial nature/zoning of the site,
- the elimination of the soil leaching to groundwater pathway, and
- groundwater concentrations have been below PCE vapor intrusion screening levels.



Soil PCE concentrations at the site are limited to the northwest corner and are below MTCA Method C cleanup levels of carcinogenic (63,000 mg/kg) and non-carcinogenic (21,000 mg/kg) values for direct contact by occupational receptors. Groundwater at the site is also below the respective standard carcinogenic (210 µg/L) and non-carcinogenic (110 µg/L) values for MTCA Method C cleanup levels. In addition, the distribution of PCE in groundwater as shown on Figure 4 does not reflect a point source, but the PCE distribution does represent a regional source.

Based on these findings, all detected soil and groundwater PCE concentrations are below MTCA Method C cleanup levels. The proposed path forward is to evaluate residual hydrocarbons using MTCA Method C cleanup levels. Historic soil sample results will be reviewed and groundwater samples will be analyzed for the following additional constituents to calculate site specific TPH cleanup levels:

- Volatile Petroleum Hydrocarbons (VPHs) by Northwest NWVPH Method;
- Extractable Petroleum Hydrocarbons (EPHs) by Northwest NWEPH Method;
- n-hexane by USEPA Method 8260B; and
- 1-methyl naphthalene and 2-methyl naphthalene by USEPA Method 8270 SIM.

## 8. REFERENCES

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## **LIMITATIONS**

This technical document was prepared on behalf of Chevron and is intended for its sole use and for use by the local, state or federal regulatory agency that the technical document was sent to by Leidos. Any other person or entity obtaining, using, or relying on this technical document hereby acknowledges that they do so at their own risk, and that Leidos shall have no responsibility or liability for the consequences thereof.

Site history and background information provided in this technical document are based on sources that may include interviews with environmental regulatory agencies and property management personnel and a review of acquired environmental regulatory agency documents and property information obtained from CEMC and others. Leidos has not made, nor has it been asked to make, any independent investigation concerning the accuracy, reliability, or completeness of such information beyond that described in this technical document.

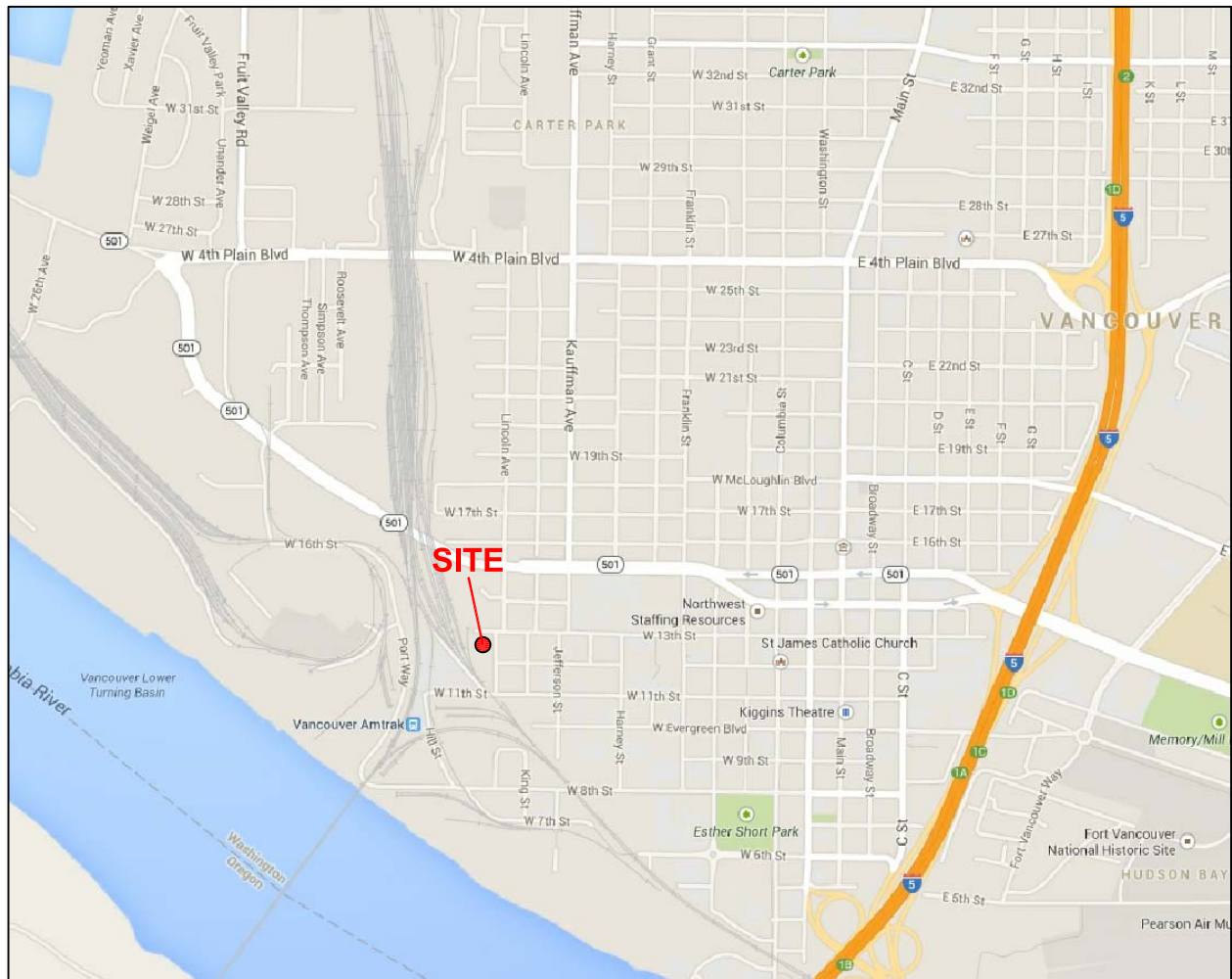
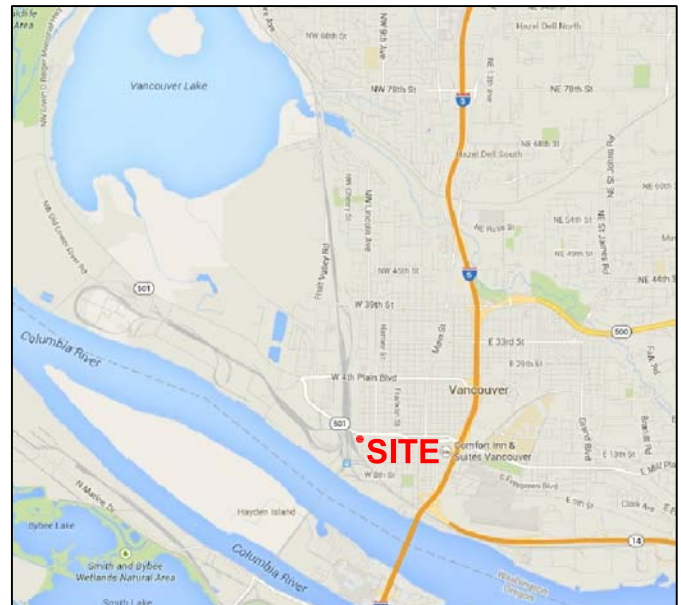
Recognizing reasonable limits of time and cost, this technical document cannot wholly eliminate uncertainty regarding the vertical and lateral extent of impacted environmental media.

Opinions and recommendations presented in this technical document apply only to site conditions and features as they existed at the time of Leidos site visits or site work and cannot be applied to conditions and features of which Leidos is unaware and has not had the opportunity to evaluate.

All sources of information on which Leidos has relied in making its conclusions (including direct field observations) are identified by reference in this technical document or in appendices attached to this technical document. Any information not listed by reference or in appendices has not been evaluated or relied upon by Leidos in the context of this technical document. The conclusions, therefore, represent our professional opinion based on the identified sources of information.

## Figures

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Maps Provided by Google Maps

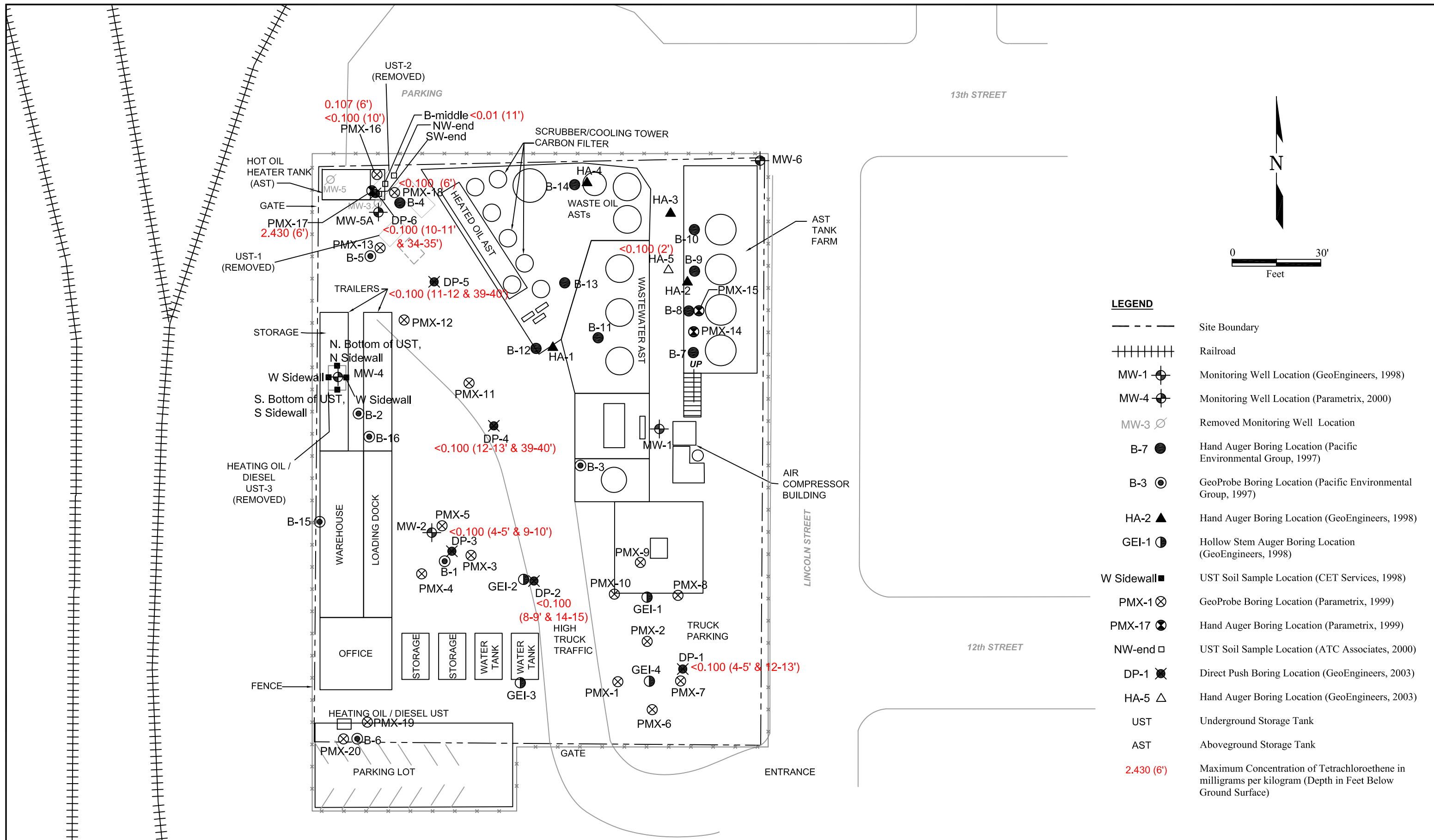
76 Products Facility No. 351386  
1300 West 12th Street  
Vancouver, Washington

FIGURE 1  
Vicinity Map



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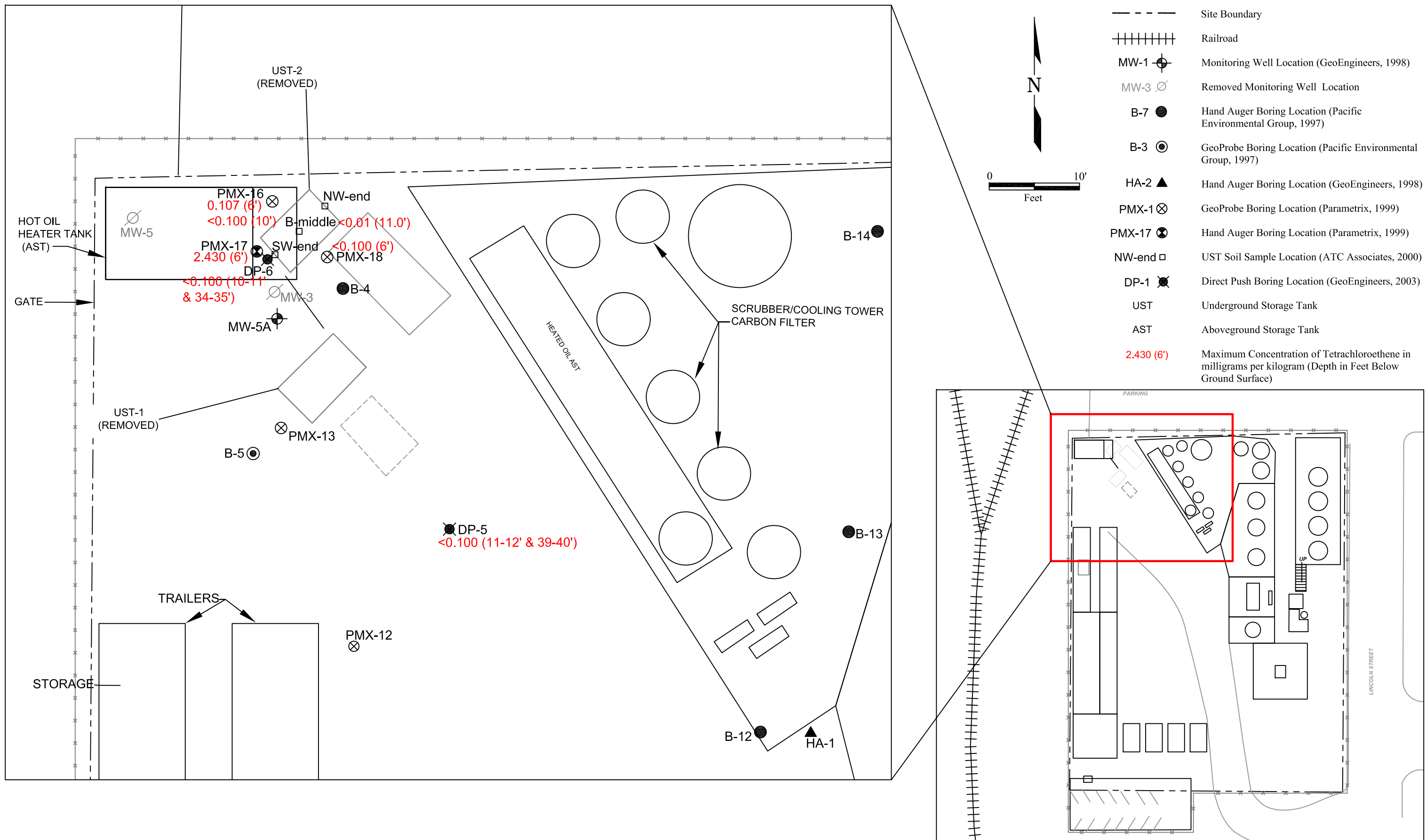


NOTE: Features were adapted from a Stantec Corporation figure, *Site Plan with Groundwater Results (June 16, 2011)*.

76 Products Facility No. 351386  
1300 West 12th Street  
Vancouver, Washington

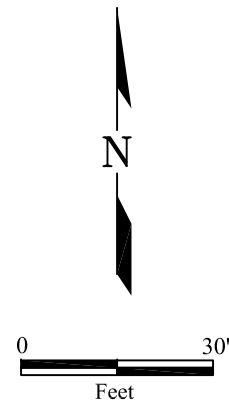
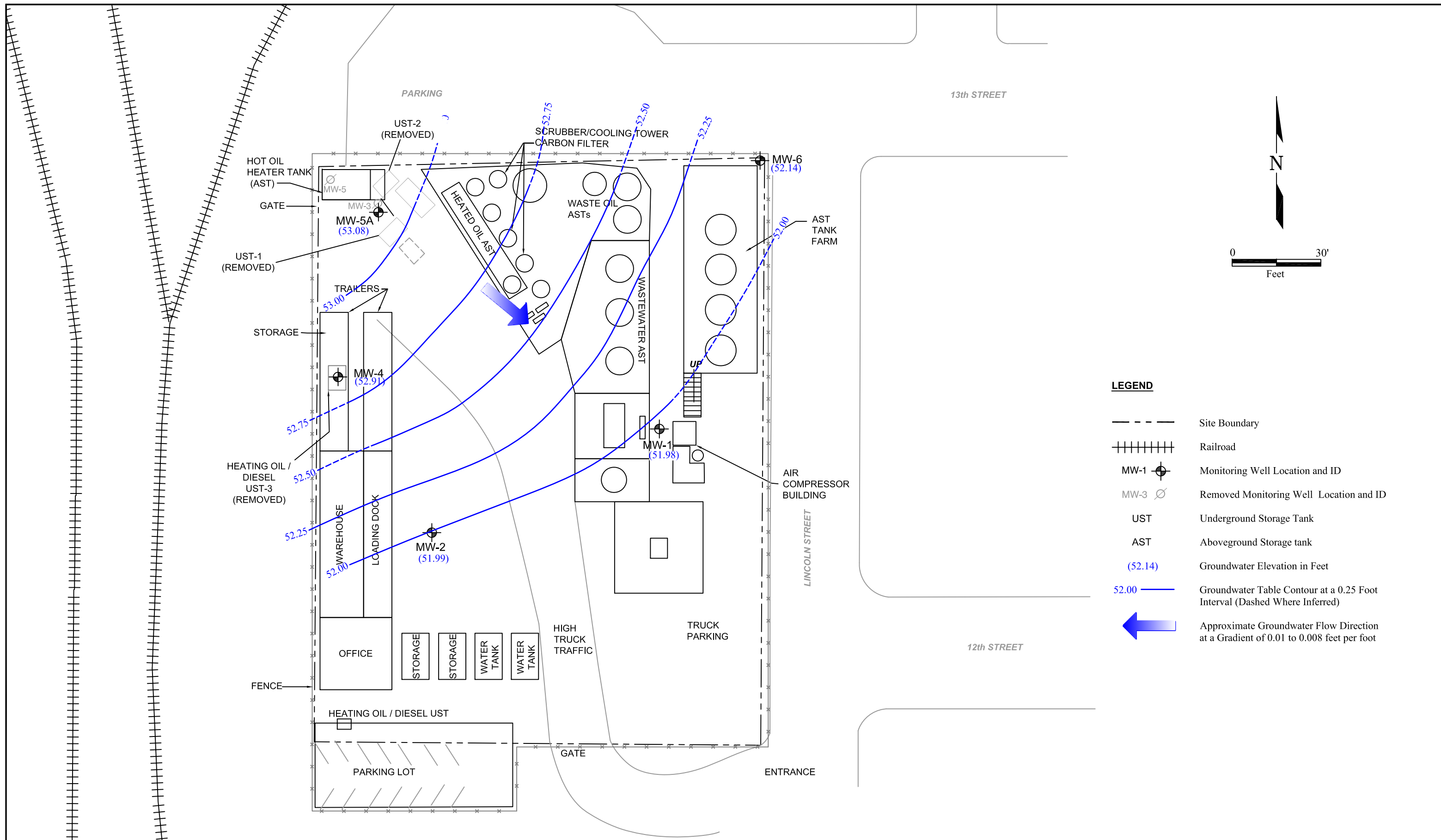
**FIGURE 2**  
**Historical Soil Boring and**  
**Sampling Locations**











- LEGEND**
- Site Boundary
  - ++++ Railroad
  - MW-1 Monitoring Well Location and ID
  - MW-3 Removed Monitoring Well Location and ID
  - UST Underground Storage Tank
  - AST Aboveground Storage tank
  - (52.14) Groundwater Elevation in Feet
  - 52.00 — Groundwater Table Contour at a 0.25 Foot Interval (Dashed Where Inferred)
  - Approximate Groundwater Flow Direction at a Gradient of 0.01 to 0.008 feet per foot



NOTE: Features were adapted from a Stantec Corporation figure, *Site Plan with Groundwater Results* (June 16, 2011).

76 Products Facility No. 351386  
1300 West 12th Street  
Vancouver, Washington

**FIGURE 5**  
**Potentiometric Map**  
**September 9, 2013**







## **Tables**

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**TABLE 1**  
**HISTORICAL SOIL ANALYTICAL RESULTS**  
**76 PRODUCTS FACILITY NO. 351386**  
**1300 West 12th Street, Vancouver, Washington**  
**Concentrations reported in mg/kg**

Sample ID/ Depth (ft)	Date Sampled	Sample Depth (ft)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	TPH-G	TPH-D	TPH-O	Total Lead	PCE
<b>Pacific Environmental Group, Inc. (1997)</b>												
B-1	09/22/97	4	<0.050	<0.050	<0.050	<0.050	--	<2.00	<25	<50	--	--
B-1	09/22/97	12	<0.050	<0.050	<0.050	<0.050	--	6.11	159	698	--	--
B-2	09/22/97	4	<0.050	<0.050	<0.050	<0.050	--	<2.00	<25	<50	--	--
B-3	09/22/97	4	<0.050	<0.050	<0.050	<0.050	--	<2.00	<25	<50	--	--
B-3	09/22/97	12	<0.050	<0.050	<0.050	<0.050	--	<2.00	<25	<50	--	--
B-4	09/22/97	2	<0.050	<0.050	<0.050	<0.050	--	<2.00	787	1,650	--	--
B-4	09/22/97	2.5	<0.050	<0.050	<0.050	<0.050	--	<2.00	641	1,120	--	--
B-5	09/22/97	4	<0.050	<0.050	<0.050	<0.050	--	4.22	<25	<50	--	--
B-5	09/22/97	12	<0.050	<0.050	<0.050	<0.050	--	<2.00	<25	<50	--	--
B-6	09/22/97	4	<0.050	<0.050	<0.050	<0.050	--	<2.00	<25	<50	--	--
B-6	09/22/97	12	<0.050	<0.050	<0.050	<0.050	--	<2.00	<25	<50	--	--
B-7	09/22/97	2	<0.050	<0.050	<0.050	<0.050	--	<2.00	509	1,350	--	--
B-8	09/22/97	2	<0.050	<0.050	<0.050	<0.050	--	<2.00	819	1,400	--	--
B-9	09/22/97	2	<0.050	<0.050	<0.050	<0.050	--	43.1	1,900	563	--	--
B-10	09/22/97	2	<0.050	<0.050	<0.050	<0.050	--	<2.00	904	357	--	--
B-11	09/22/97	2	<0.050	<0.050	<0.050	<0.050	--	<2.00	<25	<50	--	--
B-12	09/22/97	2	<0.050	<0.050	<0.050	<0.050	--	<2.00	442	265	--	--
B-13	09/22/97	2	<0.050	<0.050	<0.050	<0.050	--	<2.00	<25	60.4	--	--
B-14	09/22/97	2	<0.050	<0.050	<0.050	<0.050	--	<2.00	258	1,310	--	--
B-15	09/22/97	4	<0.050	<0.050	<0.050	<0.050	--	<2.00	<25	<50	--	--
B-15	09/22/97	12	<0.050	<0.050	<0.050	<0.050	--	<2.00	<25	<50	--	--
B-16	09/22/97	4	<0.050	<0.050	<0.050	<0.050	--	<2.00	197	233	--	--
B-16	09/22/97	12	<0.050	<0.050	<0.050	<0.050	--	<2.00	<25	<50	--	--
<b>GeoEngineers, Inc. (1998)</b>												
HA1-5.0	06/26/98	5.0	--	--	--	--	--	--	274	60.4	--	--
HA1-7.5	06/26/98	7.5	--	--	--	--	--	--	37.3	<50.0	--	--
HA2-2.5	06/29/98	2.5	--	--	--	--	--	--	<25.0	<50.0	--	--
HA3-2.5	06/29/98	2.5	--	--	--	--	--	--	<25.0	<50.0	--	--
HA4-2.5	06/29/98	2.5	--	--	--	--	--	--	<25.0	97.1	--	--
HA4-5.0	06/29/98	5.0	--	--	--	--	--	--	<25.0	191	--	--
GEI1-6.0	06/26/98	6.0	--	--	--	--	--	--	<25.0	<50.0	--	--
GEI1-11.0	06/26/98	11.0	--	--	--	--	--	--	<125	2,350	--	--



**TABLE 1**  
**HISTORICAL SOIL ANALYTICAL RESULTS**  
**76 PRODUCTS FACILITY NO. 351386**  
**1300 West 12th Street, Vancouver, Washington**  
**Concentrations reported in mg/kg**

Sample ID/ Depth (ft)	Date Sampled	Sample Depth (ft)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	TPH-G	TPH-D	TPH-O	Total Lead	PCE
<b>GeoEngineers, Inc. (1998) (cont.)</b>												
GEI1-13.5	06/26/98	13.5	--	--	--	--	--	--	<25.0	<50.0	--	--
GEI2-5.5	06/26/98	5.5	--	--	--	--	--	--	44.1	157	--	--
GEI2-10.0	06/26/98	10.0	--	--	--	--	--	--	<25.0	<50.0	--	--
GEI3-3.5	06/26/98	3.5	--	--	--	--	--	--	87.9	55.3	--	--
GEI3-11.5	06/26/98	11.5	--	--	--	--	--	--	<25.0	<50.0	--	--
GEI4-6.0	06/26/98	6.0	--	--	--	--	--	--	74.1	<50.0	--	--
GEI4-10.5	06/26/98	10.5	--	--	--	--	--	--	<25.0	<50.0	--	--
MW1-2.5	06/25/98	2.5	--	--	--	--	--	--	57.1	127	--	--
MW1-10.0	06/25/98	10.0	--	--	--	--	--	--	<25.0	<50.0	--	--
MW2-10.0	06/25/98	10.0	--	--	--	--	--	5.18	<25.0	<50.0	--	--
MW2-16.5	06/25/98	16.5	--	--	--	--	--	--	<25.0	<50.0	--	--
MW3-4.0	06/25/98	4.0	--	--	--	--	--	<4.00	<25.0	658	--	--
MW3-11.5	06/25/98	11.5	--	--	--	--	--	--	<25.0	<50.0	--	--
<b>CET Environmental Services, Inc. (1998)</b>												
UST	11/11/98	10.25	--	--	--	--	--	<13	<26	--	--	--
UST	11/11/98	10.2	--	--	--	--	--	<13	<26	--	--	--
Stockpiled Soils	11/11/98	--	--	--	--	--	--	<13	<25	--	--	--
E Sidewall	11/11/98	9.11	--	--	--	--	--	--	--	--	--	--
W Sidewall	11/11/98	10.0	--	--	--	--	--	--	--	--	--	--
S Sidewall	11/11/98	10	--	--	--	--	--	--	--	--	--	--
N Sidewall	11/11/98	10.1	--	--	--	--	--	--	--	--	--	--
<b>Parametrix, Inc. (2000)</b>												
PMX-1 4'	09/8-9/99	4	--	--	--	--	--	7.15	89.7	295	503	--
PMX-2 7'	09/8-9/99	7	--	--	--	--	--	5.27	<25	<50	<10	--
PMX-3 2'	09/8-9/99	2	--	--	--	--	--	6.28	<250	1,560	174	--
PMX-3 10'	09/8-9/99	10	--	--	--	--	--	4.06	<25	<50	<10	--
PMX-4 12'	09/8-9/99	12	--	--	--	--	--	4.57	<25	<50	<10	--



**TABLE 1**  
**HISTORICAL SOIL ANALYTICAL RESULTS**  
**76 PRODUCTS FACILITY NO. 351386**  
**1300 West 12th Street, Vancouver, Washington**  
**Concentrations reported in mg/kg**

Sample ID/ Depth (ft)	Date Sampled	Sample Depth (ft)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	TPH-G	TPH-D	TPH-O	Total Lead	PCE
<b>Parametrix, Inc. (2000) (cont.)</b>												
PMX-5 10'	09/8-9/99	10	--	--	--	--	--	3.97	<25	<50	<10	--
PMX-6 14'	09/8-9/99	14	--	--	--	--	--	3.42	<25	<50	<10	--
PMX-7 10'	09/8-9/99	10	--	--	--	--	--	3.81	<25	<50	<10	--
PMX-8 5'	09/8-9/99	5	--	--	--	--	--	3.99	<25	<50	<10	--
PMX-8 12'	09/8-9/99	12	--	--	--	--	--	4.24	<25	<50	<10	--
PMX-9 2'	09/8-9/99	2	--	--	--	--	--	9.01	<250	2,230	273	--
PMX-9 12'	09/8-9/99	12	--	--	--	--	--	3.90	<25	<50	<10	--
PMX-10 9'	09/8-9/99	9	--	--	--	--	--	3.54	<25	<50	<10	--
PMX-10 12'	09/8-9/99	12	--	--	--	--	--	4.20	<25	66.2	11.0	--
PMX-11 12'	09/8-9/99	12	--	--	--	--	--	4.55	<25	<50	<10	--
PMX-12 2'	09/8-9/99	2	--	--	--	--	--	6.86	358	806	17.4	--
PMX-13 10'	09/8-9/99	10	--	--	--	--	--	7.23	147	405	19.3	--
PMX-14 3'	09/8-9/99	3	--	--	--	--	--	<2.50	37.8	<50	154	--
PMX-15 3'	09/8-9/99	3	--	--	--	--	--	<2.50	<25	<50	154	--
PMX-16 6'	09/8-9/99	6	--	--	--	--	--	6.49	1,170	2,300	17.3	0.107
PMX-16 10'	09/10/99	10	--	--	--	--	--	<2.50	52.5	109	14.3	<0.100
PMX-17 6'	09/10/99	6	--	--	--	--	--	12.8	2,720	7,630	378	2.430
PMX-18 6'	09/10/99	6	--	--	--	--	--	<2.50	41.1	97.3	17.7	<0.100
PMX-19 2'	09/10/99	2	--	--	--	--	--	<2.50	26.0	<50	53.6	--
PMX-20 6'	09/10/99	6	--	--	--	--	--	<2.50	<25	<50	<10	--
MW-4 15'	09/20-21/99	15	--	--	--	--	--	<2.50	48.0	<50	--	--
MW-5 15'	09/20-21/99	15	--	--	--	--	--	<2.50	<25	<50	--	--
MW-6 15'	09/20-21/99	15	--	--	--	--	--	<2.50	<25	<50	--	--
<b>ATC Associates Inc. (2000)</b>												
NW-end	03/01/00	10.5	--	--	--	--	--	<21.7	<54.3	<109	2.75	--
SW-end	03/01/00	10.6	--	--	--	--	--	<22.0	<54.9	<110	3.12	--
B-middle	03/01/00	11	<0.01	<0.01	<0.01	<0.01	<0.01	<22.0	<54.9	<110	8.62	<0.01

**TABLE 1**  
**HISTORICAL SOIL ANALYTICAL RESULTS**  
**76 PRODUCTS FACILITY NO. 351386**  
**1300 West 12th Street, Vancouver, Washington**  
**Concentrations reported in mg/kg**

Sample ID/ Depth (ft)	Date Sampled	Sample Depth (ft)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE	TPH-G	TPH-D	TPH-O	Total Lead	PCE
<b>GeoEngineers, Inc. (2003)</b>												
DP1 4-5	03/20/03	4-5	<0.100	<0.100	<0.100	<0.200	<0.100	<4.00	149	1,010	--	<0.100
DP1 12-13	03/20/03	12-13	<0.100	<0.100	<0.100	<0.200	<0.100	<4.00	74.5	639	--	<0.100
DP2 8-9	03/20/03	8-9	<0.100	<0.100	<0.100	<0.200	<0.100	<4.00	29.9	56.5	--	<0.100
DP2 14-15	03/20/03	14-15	<0.100	<0.100	<0.100	<0.200	<0.100	<4.00	<25.0	<50.0	--	<0.100
DP3 4-5	03/20/03	4-5	<0.100	<0.100	<0.100	<0.200	<0.100	<4.00	<25.0	<50.0	--	<0.100
DP3 9-10	03/20/03	9-10	<0.100	<0.100	<0.100	<0.200	<0.100	<4.00	<25.0	<50.0	--	<0.100
<b>GeoEngineers (2003) (cont.)</b>												
DP4 12-13	03/20/03	12-13	<0.100	<0.100	<0.100	<0.200	<0.100	<4.00	<25.0	103	--	<0.100
DP4 39-40	03/20/03	39-40	<0.100	<0.100	<0.100	<0.200	0.732	<4.00	<25.0	<50.0	--	<0.100
DP5 11-12	03/20/03	11-12	<0.100	<0.100	<0.100	<0.200	<0.100	<4.00	<25.0	<50.0	--	<0.100
DP5 34-35	03/20/03	34-35	<0.100	<0.100	<0.100	<0.200	<0.100	<4.00	<25.0	<50.0	--	<0.100
DP6 10-11	03/20/03	10-11	<0.100	<0.100	<0.100	<0.200	<0.100	<4.00	<25.0	<50.0	--	<0.100
DP6 34-35	03/20/03	34-35	<0.100	<0.100	<0.100	<0.200	<0.100	<4.00	<25.0	<50.0	--	<0.100
HA5 2.0	03/20/03	2.0	<0.100	<0.100	<0.100	<0.200	<0.100	<4.00	<25.0	<50.0	--	<0.100
MTCA Method A Cleanup Level			0.03	7	6	9	0.1	100/30	2,000	2,000	250	0.05
MTCA Method C Cleanup Level, Standard Formula Value (carcinogenic) ingestion only			2,400	NR	NR	NR	R-No Data	NR	NR	NR	NR	63,000
MTCA Method C Cleanup Level, Standard Formula Value (non-carcinogenic) ingestion only			14,000	280,000	350,000	700,000	R-No Data	NR	NR	NR	NR	21,000

**ABBREVIATIONS:**

BTEX = Benzene, toluene, ethylbenzene, and total xylenes

ft = feet

mg/kg = milligrams per kilogram

MTCA = Model Toxic Control Act

NR = Not Researched and research has not been conducted

-- = Not Analyzed

R-No data = Research has been conducted but no data exists for the parameter

< = Analyte is not detected at or above the laboratory reporting limit. The laboratory reporting limit is listed.

PCE = Tetrachloroethene

TPH = Total petroleum hydrocarbons

TPH-G = TPH as gasoline-range organics

TPH-D = TPH as diesel-range organics

TPH-O = TPH as heavy oil-range organics

USEPA = United States Environmental Protection Agency

**ANALYTICAL METHOD:**

BTEX analyzed

TPH-G analyzed by Northwest Method NWTPH-Gx.

TPH-D and TPH-O analyzed by Northwest Method NWTPH-Dx.

Lead analyzed by USEPA Method 6010B.

TABLE 2  
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS  
76 PRODUCTS FACILITY No. 351386  
1300 W 12th Street, Vancouver, Washington  
Concentrations reported in µg/L unless otherwise noted

Well ID TOC Elevation (ft)	Sample Date	Depth to Water (ft)	GW Elevation (ft)	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Chloroform	Methylene Chloride	MTBE	1,1,1-TCA	TCE	PCE	Dissolved Lead (mg/L)	Total Lead (mg/L)	Ethanol	Dissolved Oxygen (mg/L)
MW-1 96.52	04/24/00	37.34	59.18	--	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	--	--
	08/30/00	44.19	52.33	--	--	--	--	--	--	--	--	ND	ND	ND	ND	1.96	--	--	--	--
	10/04/00	44.75	51.77	--	--	--	--	--	--	--	--	ND	ND	ND	ND	1.98	<0.00100	--	--	--
	01/15/01	43.41	53.11	--	--	--	--	--	--	--	--	ND	ND	ND	ND	1.88	--	--	--	--
	04/23/01	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	07/25/01	46.17	50.35	--	--	--	--	--	--	--	--	ND	3.63	ND	ND	1.83	<0.00100	0.0478	--	--
	10/16/01	45.38	51.14	--	--	--	--	--	--	--	--	ND	1.67	ND	ND	1.29	<0.00859	0.0231	--	--
	01/09/02	40.90	55.62	--	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	<0.00100	0.00252	--	--
	04/04/02	42.96	53.56	--	--	--	--	--	--	--	--	ND	5,120	ND	ND	108	--	--	--	--
	07/08/02	40.24	56.28	--	--	--	--	--	--	--	--	ND	476	ND	ND	28.2	--	--	--	--
	10/30/02	45.25	51.27	--	--	--	--	--	--	--	--	ND	144	ND	1.46	11.4	--	--	--	--
	01/17/03	43.05	53.47	--	--	--	--	--	--	--	--	ND	346	ND	ND	15.1	--	--	--	--
	04/04/03	40.23	56.29	--	--	--	--	--	--	--	--	ND	85.3	ND	ND	2.93	--	--	--	--
	07/02/03	42.58	53.94	--	--	--	--	--	--	--	--	ND	574	ND	ND	17.3	--	--	--	--
	01/28/04	40.90	55.62	--	--	--	--	--	--	--	--	ND	326	ND	ND	ND	--	--	--	--
	04/26/04	42.75	53.77	--	--	--	--	--	--	--	--	ND	338	ND	0.757	6.31	--	--	--	2.03
	07/23/04	44.25	52.27	--	--	--	--	--	--	--	--	ND	127	ND	2.06	19.5	--	--	--	--
	11/05/04	44.13	52.39	--	--	--	--	--	--	--	--	1.01	447	ND	1.3	8.06	--	--	--	2.88
	02/04/05	43.68	52.84	--	--	--	--	--	--	--	--	<1.0	192	ND	<b>12.6</b>	1.08	--	--	--	--
	05/10/05	41.02	55.50	--	--	--	--	--	--	--	--	<5.0	197	ND	ND	ND	--	--	--	--
	08/08/05	43.72	52.80	--	--	--	--	--	--	--	--	<1.0	234	<200	1.33	12.9	--	--	--	4.88
	12/13/05	43.67	52.85	--	--	--	--	--	--	--	--	<2.0	<0.5	<0.8	<1.0	6.0	--	--	--	7.59
	03/03/06	40.78	55.74	--	--	--	--	--	--	--	--	<2.0	100	<0.8	<1.0	6.0	--	--	--	6.23
	06/29/06	40.30	56.22	--	--	--	--	--	--	--	--	<2.0	18	<0.8	<1.0	10	--	--	--	6.04
	09/08/06	44.40	52.12	--	--	--	--	--	--	--	--	<2.0	58	<0.8	1.0	10	--	--	--	6.89
	12/01/06	41.34	55.18	--	--	--	--	--	--	--	--	<2.0	19	<0.8	<1.0	4.0	--	--	--	5.20
	03/01/07	41.60	54.92	--	--	--	--	--	--	--	--	<2.0	14	<0.8	<1.0	7.0	--	--	--	7.35
	06/28/07	43.10	53.42	--	--	--	--	--	--	--	--	<2	<0.5	<0.8	1	12	--	--	--	7.0
	02/01/08	42.25	54.27	--	--	--	<0.5	<0.7	<0.8	<0.8	--	<2	<0.5	<0.8	<1	7	--	--	--	--
	03/20/08	42.07	54.45	--	--	--	<0.5	<0.7	<0.8	<0.8	--	<2	<0.5	<0.8	<1	5	--	--	--	--
	06/19/08	36.39	60.13	--	--	--	<0.5	<0.7	<0.8	<0.8	2	<2	<0.5	<0.8	<1	3	--	--	--	--
	09/30/08	44.92	51.60	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	9.2	--	--	--	--
	11/07/08	44.65	51.87	--	--	--	<0.5	<0.7	<0.8	<0.8	<0.8	<2	<0.5	<0.8	<1	8	--	--	--	--
97.10	02/19/09	44.19	52.33	--	--	--	<0.12	<0.21	<0.20	<0.27	0.78	<1.0	<0.16	<0.20	0.34	8.5	--	--	--	--
	04/21/09	42.02	55.08	--	--	--	<0.12	<0.21	<0.20	<0.27	1.7	<1.0	<0.16	<0.20	<0.22	4.3	--	--	--	--
	07/30/09	44.25	52.85	--	--	--	<0.12	<0.21	<0.20	<0.27	1.1	<1.0	<0.16	<0.20	0.32 J	6.1	--	--	--	--
	10/27/09	45.98	51.12	--	--	--	0.13 J	0.69 J	<0.20	<0.42	1.1	<1.0	<0.16	<0.20	<0.22	5.1	--	--	--	--
	03/12/10	44.38	52.72	--	--	--	<0.12	<0.21	<0.20	<0.42	1.6	<0.26	<0.16	<0.20	<0.22	3.3	--	--	--	--

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76 PRODUCTS FACILITY No. 351386  
1300 W 12th Street, Vancouver, Washington  
Concentrations reported in µg/L unless otherwise noted

Well ID TOC Elevation (ft)	Sample Date	Depth to Water (ft)	GW Elevation (ft)	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Chloroform	Methylene Chloride	MTBE	1,1,1-TCA	TCE	PCE	Dissolved Lead (mg/L)	Total Lead (mg/L)	Ethanol	Dissolved Oxygen (mg/L)
MW-1 (cont)	06/04/10	40.20	56.90	--	<77.7	<388	<1.0	<1.0	<1.0	<3.0	1.6	<4.0	<1.0	<1.0	<1.0	2.8	--	--	--	--
	09/02/10	46.00	51.10	--	<75.8	<379	<1.0	<1.0	<1.0	<3.0	<1.0	<4.0	<1.0	<1.0	<1.0	4.6	--	--	--	--
	12/01/10	43.36	53.74	--	<75.5	<377	<1.0	<1.0	<1.0	<3.0	2.0	<4.0	<1.0	<1.0	<1.0	2.4	--	--	--	--
	03/08/11	40.53	56.57	--	<75.5	<377	<1.0	<1.0	<1.0	<3.0	1.8	<4.0	<1.0	<1.0	<1.0	2.2	--	--	--	--
	06/16/11	31.98	65.12	--	<88.9	<444	<1.0	<1.0	<1.0	<3.0	<1.0	<4.0	<1.0	<1.0	<1.0	1.4	--	--	--	--
	09/26/11	45.00	52.10	<50	<30	<69	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	6	--	--	<50	--
	12/19/11	45.15	51.95	--	<29	<67	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	4	--	--	<50	--
	03/23/12	28.61	68.49	--	<29	<67	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	0.9	--	--	<50	--
	06/18/12	38.27	58.83	--	<28	<66	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	2	--	--	<50	--
	08/28/12	43.32	53.78	--	30	<66	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	5	--	--	<50	--
	12/17/12	39.52	57.58	--	<28	<66	<0.5	<0.5	<0.5	<0.5	1	<2	<0.5	<0.8	<1	1	--	--	<50	--
	03/05/13	43.90	53.20	--	<29	<67	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	4	--	--	<50	--
	06/21/13	42.38	54.72	--	<30	96	<0.5	<0.5	<0.5	<0.5	1	<2	<0.5	<0.8	<1	4	--	--	<50	--
	09/09/13	45.12	51.98	--	<28	<66	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	4	--	--	<50	--
	12/19/13	43.23	53.87	--	<29	<67	<0.5	<0.5	<0.5	<0.5	2	<2	<0.5	<0.8	<1	2	--	--	<50	--
MW-2 96.95	04/24/00	37.76	59.19	--	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	--	--
	08/30/00	44.63	52.32	--	--	--	--	--	--	--	--	ND	ND	1.07	ND	4.00	--	--	--	--
	10/04/00	45.26	51.69	--	--	--	--	--	--	--	--	ND	ND	ND	ND	3.37	<0.00100	--	--	--
	01/15/01	43.87	53.08	--	--	--	--	--	--	--	--	ND	ND	ND	ND	1.24	--	--	--	--
	04/23/01	44.97	51.98	--	--	--	--	--	--	--	--	ND	ND	ND	ND	2.29	<0.00100	0.00600	--	--
	07/25/01	46.65	50.30	--	--	--	--	--	--	--	--	ND	ND	ND	ND	6.74	<0.00100	0.0733	--	--
	10/16/01	45.72	51.23	--	--	--	--	--	--	--	--	ND	ND	ND	ND	3.26	<0.00100	0.0157	--	--
	01/09/02	41.34	55.61	--	--	--	--	--	--	--	--	ND	ND	ND	ND	2.33	<0.00100	0.00757	--	--
	04/04/02	43.42	53.53	--	--	--	--	--	--	--	--	ND	1.54	ND	ND	3.78	--	--	--	--
	07/08/02	40.69	56.26	--	--	--	--	--	--	--	--	ND	ND	ND	1.48	6.88	--	--	--	--
	10/30/02	45.74	51.21	--	--	--	--	--	--	--	--	ND	ND	ND	7.1	<5	--	--	--	--
	01/17/03	43.49	53.46	--	--	--	--	--	--	--	--	ND	1.03	ND	1.22	8.83	--	--	--	--
	04/04/03	40.70	56.25	--	--	--	--	--	--	--	--	ND	11.8	ND	ND	5.34	--	--	--	--
	07/02/03	43.02	53.93	--	--	--	--	--	--	--	--	ND	3.33	ND	1.55	8.91	--	--	--	--
	01/28/04	41.35	55.60	--	--	--	--	--	--	--	--	ND	40.4	ND	2.1	9.4	--	--	--	--
	04/26/04	43.21	53.74	--	--	--	--	--	--	--	--	ND	16.1	0.563	2.53	12.5	--	--	--	1.91
	07/23/04	44.70	52.25	--	--	--	--	--	--	--	--	ND	7.24	0.899	3.58	18.5	--	--	--	--
	11/05/04	44.60	52.35	--	--	--	--	--	--	--	--	ND	2.67	ND	2.74	10.8	--	--	--	2.83
	02/04/05	44.13	52.82	--	--	--	--	--	--	--	--	<1.0	2.78	ND	3.20	17	--	--	--	--
	05/10/05	41.42	55.53	--	--	--	--	--	--	--	--	<5.0	ND	ND	ND	4.84	--	--	--	--
	08/08/05	44.16	52.79	--	--	--	--	--	--	--	--	<1.0	29.2	<200	3.26	15.6	--	--	--	3.84
	12/13/05	44.14	52.81	--	--	--	--	--	--	--	--	<2.0	<0.5	<0.8	1.0	9.0	--	--	--	7.36
	03/03/06	41.22	55.73	--	--	--	--	--	--	--	--	<2.0	7.0	<0.8	2.0	8.0	--	--	--	6.3
	06/29/06	40.78	56.17	--	--	--	--	--	--	--	--	<2.0	12	<0.8	2.0	13	--	--	--	6.2
	09/08/06	42.82	54.13	--	--	--	--	--	--	--	--	<2.0	120	<0.8	4.0	20	--	--	--	5.5

TABLE 2  
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS  
76 PRODUCTS FACILITY No. 351386  
1300 W 12th Street, Vancouver, Washington  
Concentrations reported in µg/L unless otherwise noted

Well ID TOC Elevation (ft)	Sample Date	Depth to Water (ft)	GW Elevation (ft)	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Chloroform	Methylene Chloride	MTBE	1,1,1-TCA	TCE	PCE	Dissolved Lead (mg/L)	Total Lead (mg/L)	Ethanol	Dissolved Oxygen (mg/L)
MW-2 (cont)	12/01/06	41.81	55.14	--	--	--	--	--	--	--	--	<2.0	5.0	<0.8	<1.0	8.0	--	--	--	4.95
	03/01/07	42.08	54.87	--	--	--	--	--	--	--	--	<2.0	23.0	<0.8	2.0	11.0	--	--	--	5.7
	06/28/07	43.64	53.31	--	--	--	--	--	--	--	--	<2	35	<0.8	2	13	--	--	--	6.40
	02/01/08	42.70	54.25	--	--	--	<0.5	<0.7	<0.8	<0.8	--	<2	<0.5	<0.8	<1	7	--	--	--	--
	03/20/08	42.50	54.45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/19/08	36.82	60.13	--	--	--	<0.5	<0.7	<0.8	<0.8	3	<2	<0.5	<0.8	<1	7	--	--	--	--
	09/30/08	45.30	51.65	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	1.9	11	--	--	--	--
	11/07/08	45.10	51.85	--	--	--	<0.5	<0.7	<0.8	<0.8	2	<2	<0.5	<0.8	<1	8	--	--	--	--
	02/19/09	45.60	51.35	--	--	--	<0.12	<0.21	<0.20	<0.27	2.5	<1.0	<0.16	0.22	1.1	9.2	--	--	--	--
	04/21/09	41.82	55.13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	07/30/09	44.00	52.95	--	--	--	<0.12	<0.21	<0.20	<0.27	2.1	<1.0	<0.16	<0.20	1.1	8.8	--	--	--	--
	10/27/09	45.77	51.18	--	--	--	<0.12	<0.21	<0.20	<0.42	2.1	<1.0	<0.16	<0.20	0.60 J	5.1	--	--	--	--
	03/12/10	44.15	52.80	--	--	--	<0.12	<0.21	<0.20	<0.42	2.7	<0.26	<0.16	<0.20	0.54 J	3.6	--	--	--	--
	06/04/10	40.06	56.89	--	<77.7	<388	<1.0	<1.0	<1.0	<3.0	3.5	<4.0	<1.0	<1.0	<1.0	2.1	--	--	--	--
	09/02/10	45.82	51.13	--	<75.8	<379	<1.0	<1.0	<1.0	<3.0	1.6	<4.0	<1.0	<1.0	1.0	6.0	--	--	--	--
	12/01/10	43.15	53.80	--	<75.5	<377	<1.0	<1.0	<1.0	<3.0	3.5	<4.0	<1.0	<1.0	<1.0	2.3	--	--	--	--
	03/08/11	40.33	56.62	--	<75.5	<377	<1.0	<1.0	<1.0	<3.0	3.6	<4.0	<1.0	<1.0	<1.0	2.9	--	--	--	--
	06/16/11	31.87	65.08	--	<81.6	<408	<1.0	<1.0	<1.0	<3.0	2.5	<4.0	<1.0	<1.0	<1.0	2.2	--	--	--	--
	09/26/11	44.79	52.16	<50	<28	<66	<0.5	<0.5	<0.5	<0.5	2	<2	<0.5	<0.8	<1	6	--	--	<50	--
	12/19/11	45.11	51.84	--	34	<67	<0.5	<0.5	<0.5	<0.5	2	<2	<0.5	<0.8	<1	4	--	--	<50	--
	03/23/12	28.49	68.46	--	<28	<66	<0.5	<0.5	<0.5	<0.5	3	<2	<0.5	<0.8	<1	1	--	--	<50	--
	06/18/12	38.09	58.86	--	<28	<66	<0.5	<0.5	<0.5	<0.5	4	<2	<0.5	<0.8	<1	2	--	--	<50	--
	08/28/12	43.13	53.82	--	49	<66	<0.5	<0.5	<0.5	<0.5	2	<2	<0.5	<0.8	<1	4	--	--	<50	--
	12/17/12	39.39	57.56	--	<29	<68	<0.5	<0.5	<0.5	<0.5	4	<2	<0.5	<0.8	<1	2	--	--	<50	--
	03/05/13	43.66	53.29	--	<31	<73	<0.5	<0.5	<0.5	<0.5	2	<2	<0.5	<0.8	<1	4	--	--	<50	--
	06/21/13	42.20	54.75	--	39	140	<0.5	<0.5	<0.5	<0.5	3	<2	<0.5	<0.8	<1	3	--	--	<50	--
	09/09/13	44.96	51.99	--	60	87	<0.5	<0.5	<0.5	<0.5	2	<2	<0.5	<0.8	<1	4	--	--	<50	--
	12/19/13	44.10	52.85	--	<29	<67	<0.5	<0.5	<0.5	<0.5	3	<2	<0.5	<0.8	<1	3	--	--	<50	--
MW-4 95.80	08/30/00	43.50	52.30	--	--	--	--	--	--	--	--	ND	ND	ND	ND	12.6	--	--	--	--
	10/04/00	44.07	51.73	--	--	--	--	--	--	--	--	ND	ND	ND	ND	12.8	0.00122	--	--	--
	01/15/01	42.69	53.11	--	--	--	--	--	--	--	--	ND	ND	ND	ND	5.19	--	--	--	--
	04/23/01	43.87	51.93	--	--	--	--	--	--	--	--	ND	ND	ND	ND	9.02	<0.00100	0.00238	--	--
	07/25/01	45.43	50.37	--	--	--	--	--	--	--	--	ND	ND	ND	ND	7.92	<0.00100	0.0620	--	--
	10/16/01	44.59	51.21	--	--	--	--	--	--	--	--	ND	ND	ND	ND	3.8	<0.00100	0.0108	--	--
	01/09/02	40.17	55.63	--	--	--	--	--	--	--	--	ND	ND	ND	ND	3.21	<0.00100	0.00139	--	--
	04/04/02	43.32	52.48	--	--	--	--	--	--	--	--	ND	8.58	2.87	15.4	45.5	--	--	--	--
	07/08/02	39.53	56.27	--	--	--	--	--	--	--	--	ND	22.7	1.83	9.59	22.2	--	--	--	--
	10/30/02	44.53	51.27	--	--	--	--	--	--	--	--	ND	1,090	ND	35	76.6	--	--	--	--
	01/17/03	42.32	53.48	--	--	--	--	--	--	--	--	ND	2,960	ND	27.2	84.8	--	--	--	--
	04/04/03	39.53	56.27	--	--	--	--	--	--	--	--	ND	779	ND	12.2	48.2	--	--	--	--

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GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS  
76 PRODUCTS FACILITY No. 351386  
1300 W 12th Street, Vancouver, Washington  
Concentrations reported in µg/L unless otherwise noted

Well ID TOC Elevation (ft)	Sample Date	Depth to Water (ft)	GW Elevation (ft)	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Chloroform	Methylene Chloride	MTBE	1,1,1-TCA	TCE	PCE	Dissolved Lead (mg/L)	Total Lead (mg/L)	Ethanol	Dissolved Oxygen (mg/L)
MW-4 (cont)	07/02/03	41.90	53.90	--	--	--	--	--	--	--	--	ND	397	2.38	11.6	58.2	--	--	--	--
	01/28/04	40.20	55.60	--	--	--	--	--	--	--	--	ND	289	ND	11.2	63.9	--	--	--	--
	04/26/04	42.05	53.75	--	--	--	--	--	--	--	--	ND	362	1.62	6.86	49.6	--	--	--	2.11
	07/23/04	43.61	52.19	--	--	--	--	--	--	--	--	ND	86.1	1.7	4.97	48.4	--	--	--	--
	11/05/04	43.49	52.31	--	--	--	--	--	--	--	--	ND	59.8	2.13	6.14	45.5	--	--	--	3.18
	02/04/05	42.96	52.84	--	--	--	--	--	--	--	--	<1.0	169	2.14	5.15	46.8	--	--	--	--
	05/10/05	40.29	55.51	--	--	--	--	--	--	--	--	<5.0	4.86	ND	ND	4.91	--	--	--	--
	08/08/05	43.00	52.80	--	--	--	--	--	--	--	--	<1.0	139	1.85	5.3	44.8	--	--	--	1.94
	12/13/05	42.97	52.83	--	--	--	--	--	--	--	--	<2.0	110	0.9	2.0	17	--	--	--	6.07
	03/03/06	40.02	55.78	--	--	--	--	--	--	--	--	<2.0	70	<0.8	2.0	11	--	--	--	4.89
	06/29/06	39.63	56.17	--	--	--	--	--	--	--	--	<2.0	110	<0.8	3.0	23	--	--	--	4.90
	09/08/06	43.66	52.14	--	--	--	--	--	--	--	--	<2.0	270	1	5.0	35	--	--	--	4.30
	12/01/06	40.65	55.15	--	--	--	--	--	--	--	--	<2.0	160	<0.8	2.0	18	--	--	--	3.80
	03/01/07	40.90	54.90	--	--	--	--	--	--	--	--	<2.0	180	<0.8	2.0	25	--	--	--	4.65
	06/28/07	42.48	53.32	--	--	--	--	--	--	--	--	<2	2	<0.8	2	33	--	--	--	3.5
	02/01/08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/20/08	41.34	54.46	--	--	--	<0.5	<0.7	<0.8	<0.8	--	<2	<0.5	<0.8	1	11	--	--	--	--
	06/19/08	35.66	60.14	--	--	--	<0.5	<0.7	<0.8	<0.8	0.9	<2	<0.5	<0.8	<1	9	--	--	--	--
	09/30/08	44.15	51.65	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	1.2	15	--	--	--	--
	11/07/08	43.94	51.86	--	--	--	<0.5	<0.7	<0.20	<0.8	<0.8	<2	<0.5	<0.8	1	16	--	--	--	--
	02/19/09	43.54	52.26	--	--	--	<0.12	<0.21	<0.20	<0.27	0.19	<1.0	0.89	0.33	0.98	26	--	--	--	--
	04/21/09	40.65	55.15	--	--	--	<0.12	<0.21	<0.20	<0.27	1.6	<1.0	0.32 J	<0.20	0.88 J	11.7	--	--	--	--
	07/30/09	42.85	52.95	--	--	--	<0.12	<0.21	<0.20	<0.27	1.0	<1.0	0.40 J	0.29 J	1.2	19.0	--	--	--	--
	10/27/09	44.61	51.19	--	--	--	<0.12	<0.21	<0.20	<0.42	0.99 J	<1.0	0.31 J	<0.15	1.0	16.6	--	--	--	--
	03/12/10	43.02	52.78	--	--	--	<0.12	<0.21	<0.20	<0.42	0.79 J	<0.26	0.33 J	0.26 J	1.0	13.9	--	--	--	--
	06/04/10	38.90	56.90	--	<75.8	<379	<1.0	<1.0	<1.0	<3.0	2.60	<4.0	<1.0	<1.0	<1.0	5.2	--	--	--	--
	09/02/10	44.65	51.15	--	<75.8	<379	<1.0	<1.0	<1.0	<3.0	<1.0	<4.0	<1.0	<1.0	<1.0	11.6	--	--	--	--
	12/01/10	42.00	53.80	--	<75.5	<377	<1.0	<1.0	<1.0	<3.0	2.3	<4.0	<1.0	<1.0	<1.0	7.1	--	--	--	--
	03/08/11	39.16	56.64	--	130	<377	<1.0	<1.0	<1.0	<3.0	1.8	<4.0	<1.0	<1.0	<1.0	8.6	--	--	--	--
	06/16/11	31.25	64.55	--	<83.3	<417	<1.0	<1.0	<1.0	<3.0	<1.0	<4.0	<1.0	<1.0	<1.0	3.9	--	--	--	--
	09/26/11	43.63	52.17	99	<28	<66	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	14	--	--	<50	--
	12/19/11	43.82	51.98	--	330	700	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	11	--	--	<50	--
	03/23/12	27.33	68.47	--	80	290	<0.5	<0.5	<0.5	<0.5	2	<2	<0.5	<0.8	<1	4	--	--	<50	--
	06/18/12	39.16	56.64	--	100	330	<0.5	<0.5	<0.5	<0.5	2	<2	<0.5	<0.8	<1	5	--	--	<50	--
	08/28/12	42.01	53.79	--	620	650	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	12	--	--	<50	--
	12/17/12	38.17	57.63	--	80	66	<0.5	<0.5	<0.5	<0.5	0.9	<2	<0.5	<0.8	<1	7	--	--	<50	--
	03/05/13	42.52	53.28	--	610	710	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	11	--	--	<50	--
	06/21/13	40.98	54.82	--	540	850	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	9	--	--	<50	--
	09/09/13	42.89	52.91	--	540	570	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	8	--	--	<50	--
	12/19/13	42.86	52.94	--	460	300	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	6	--	--	<50	--

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Well ID TOC Elevation (ft)	Sample Date	Depth to Water (ft)	GW Elevation (ft)	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Chloroform	Methylene Chloride	MTBE	1,1,1-TCA	TCE	PCE	Dissolved Lead (mg/L)	Total Lead (mg/L)	Ethanol	Dissolved Oxygen (mg/L)
MW-5 96.47	08/30/00	44.18	52.29	--	--	--	--	--	--	--	--	ND	ND	2.0	1.56	25.6	--	--	--	--
	10/04/00	44.72	51.75	--	--	--	--	--	--	--	--	ND	ND	ND	1.73	16.9	<0.00100	--	--	--
	01/15/01	43.35	53.12	--	--	--	--	--	--	--	--	ND	ND	ND	ND	7.37	--	--	--	--
	04/23/01	44.52	51.95	--	--	--	--	--	--	--	--	ND	ND	ND	ND	9.21	<0.00100	0.00174	--	--
	07/25/01	46.11	50.36	--	--	--	--	--	--	--	--	ND	ND	ND	1.42	22.9	<0.00100	0.0123	--	--
	10/16/01	45.28	51.19	--	--	--	--	--	--	--	--	ND	ND	ND	1.29	18	<0.00100	0.00602	--	--
	01/09/02	NA	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/04/02	42.95	53.52	--	--	--	--	--	--	--	--	ND	ND	2.78	15.1	105	--	--	--	--
	07/08/02	40.22	56.25	--	--	--	--	--	--	--	--	ND	ND	1.48	5.6	57.6	--	--	--	--
	10/30/02	45.15	51.32	--	--	--	--	--	--	--	--	ND	1.37	2.75	14.8	101	--	--	--	--
MW-5A 96.46	01/17/03	42.93	53.53	--	--	--	--	--	--	--	--	ND	15.1	2.29	10.3	79	--	--	--	--
	04/04/03	40.18	56.28	--	--	--	--	--	--	--	--	ND	67	ND	1.91	17.1	--	--	--	--
	07/02/03	42.55	53.91	--	--	--	--	--	--	--	--	ND	35.7	2.2	9.8	78.1	--	--	--	--
	01/28/04	40.83	55.63	--	--	--	--	--	--	--	--	ND	449	ND	ND	31.4	--	--	--	--
	04/26/04	42.68	53.78	--	--	--	--	--	--	--	--	ND	164	3.9	7.43	68	--	--	--	2.89
	07/23/04	44.21	52.25	--	--	--	--	--	--	--	--	ND	45	5.07	9.93	79.3	--	--	--	--
	11/05/04	44.06	52.40	--	--	--	--	--	--	--	--	ND	ND	ND	ND	2.98	--	--	--	4.89
	02/04/05	43.60	52.86	--	--	--	--	--	--	--	--	<1.0	26	2.71	5.47	58.8	--	--	--	--
	05/10/05	40.94	55.52	--	--	--	--	--	--	--	--	<5.0	214	ND	ND	21.2	--	--	--	--
	08/08/05	43.64	52.82	--	--	--	--	--	--	--	--	<1.0	89	2.3	5.8	59.4	--	--	--	4.62
	12/13/05	43.60	52.86	--	--	--	--	--	--	--	--	<2.0	95	1.0	3.0	26	--	--	--	5.82
	03/03/06	40.71	55.75	--	--	--	--	--	--	--	--	<2.0	110	0.8	2.0	25	--	--	--	3.09
	06/29/06	40.25	56.21	--	--	--	--	--	--	--	--	<2.0	130	1.0	3.0	37	--	--	--	4.15
	09/08/06	44.30	52.16	--	--	--	--	--	--	--	--	<2.0	16	2.0	6.0	66	--	--	--	3.30
	12/01/06	41.29	55.17	--	--	--	--	--	--	--	--	<2.0	12	<0.8	2.0	25	--	--	--	4.10
	03/01/07	41.54	54.92	--	--	--	--	--	--	--	--	<2.0	26	0.9	2.0	38	--	--	--	5.50
	06/28/07	43.12	53.34	--	--	--	--	--	--	--	--	<2	1	<0.8	3	40	--	--	--	3.5
	02/01/08	42.19	54.27	--	--	--	<0.5	<0.7	<0.8	<0.8	--	<2	<0.5	<0.8	1	32	--	--	--	--
	03/20/08	42.00	54.46	--	--	--	<0.5	<0.7	<0.8	<0.8	--	<2	<0.5	<0.8	2	28	--	--	--	--
	06/19/08	36.25	60.21	--	--	--	<0.5	<0.7	<0.8	<0.8	1	<2	<0.5	<0.8	<1	9	--	--	--	--
	09/30/08	44.80	51.66	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	1.5	26	--	--	--	--
	11/07/08	44.62	51.84	--	--	--	<0.5	<0.7	<0.8	<0.8	<0.8	<2	<0.5	<0.8	1.0	26	--	--	--	--
	02/19/09	44.15	52.31	--	--	--	<0.12	<0.21	<0.20	<0.27	3.1	<1.0	0.23	0.26	0.97	26	--	--	--	--
	04/21/09	41.31	55.15	--	--	--	0.26 J	0.90 J	0.54 J	0.99 J	1.8	<1.0	0.22 J	<0.20	0.65 J	14.1	--	--	--	--
	07/30/09	43.50	52.96	--	--	--	<0.12	<0.21	<0.20	<0.27	1.8	<1.0	0.28 J	0.28 J	1.0	23.5	--	--	--	--
	10/27/09	45.22	51.24	--	--	--	<0.12	<0.21	<0.20	<0.42	0.73 J	<1.0	<0.16	<0.20	0.46 J	10.4	--	--	--	--
	03/12/10	43.65	52.81	--	--	--	<0.12	<0.21	<0.20	<0.42	3.1	<0.26	0.16 J	<0.20	0.66 J	11.6	--	--	--	--
	06/04/10	39.59	56.87	--	<77.7	<388	<1.0	<1.0	<1.0	<3.0	1.6	<4.0	<1.0	<1.0	<1.0	7.3	--	--	--	--
	09/02/10	45.29	51.17	--	<75.8	<379	<1.0	<1.0	<1.0	<3.0	1.9	<4.0	<1.0	<1.0	<1.0	13.0	--	--	--	--



TABLE 2  
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS  
76 PRODUCTS FACILITY No. 351386  
1300 W 12th Street, Vancouver, Washington  
Concentrations reported in µg/L unless otherwise noted

Well ID TOC Elevation (ft)	Sample Date	Depth to Water (ft)	GW Elevation (ft)	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Chloroform	Methylene Chloride	MTBE	1,1,1-TCA	TCE	PCE	Dissolved Lead (mg/L)	Total Lead (mg/L)	Ethanol	Dissolved Oxygen (mg/L)
MW-5A (cont)	12/01/10	42.59	53.87	--	<75.5	<377	<1.0	<1.0	<1.0	<3.0	<1.0	<4.0	<1.0	<1.0	<1.0	7.4	--	--	--	--
	03/08/11	39.81	56.65	--	118	<377	<1.0	<1.0	<1.0	<3.0	1.6	<4.0	<1.0	<1.0	<1.0	9.2	--	--	--	--
	06/16/11	30.62	65.84	--	<81.6	<408	<1.0	<1.0	<1.0	<3.0	2.3	<4.0	<1.0	<1.0	<1.0	3.0	--	--	--	--
	09/26/11	44.30	52.16	58	<28	<66	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	20	--	--	<50	--
	12/19/11	44.37	52.09	--	58	<67	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	10	--	--	<50	--
	03/23/12	27.98	68.48	--	160	380	<0.5	<0.5	<0.5	<0.5	1	<2	<0.5	<0.8	<1	3	--	--	<50	--
	06/18/12	37.57	58.89	--	180	720	<0.5	<0.5	<0.5	<0.5	2	<2	<0.5	<0.8	<1	7	--	--	<50	--
	08/28/12	42.61	53.85	--	200	560	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	14	--	--	<50	--
	12/17/12	38.82	57.64	--	140	450	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	8	--	--	<50	--
	03/05/13	43.12	53.34	--	58	<70	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	11	--	--	<50	--
	06/21/13	41.60	54.86	--	130	260	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	12	--	--	<50	--
	09/09/13	43.38	53.08	--	86	84	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	10	--	--	<50	--
	12/19/13	42.46	54.00	--	99	91	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	8	--	--	<50	--
MW-6 110.19	08/30/00	57.87	52.32	--	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	--	--
	10/04/00	58.42	51.77	--	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	<0.00100	--	--	--
	01/15/01	57.04	53.15	--	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	--	--
	04/23/01	58.18	52.01	--	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	<0.00100	0.00347	--	--
	07/25/01	59.80	50.39	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/16/01	59.02	51.17	--	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	--	--	--	--
	01/09/02	54.58	55.61	--	--	--	--	--	--	--	--	ND	ND	ND	ND	ND	<0.00830	0.00714	--	--
	04/04/02	56.64	53.55	--	--	--	--	--	--	--	--	ND	ND	ND	ND	5.84	<0.00100	0.00461	--	--
	07/08/02	53.90	56.29	--	--	--	--	--	--	--	--	ND	ND	ND	ND	3.8	--	--	--	--
	10/30/02	58.90	51.29	--	--	--	--	--	--	--	--	ND	ND	ND	ND	2.26	--	--	--	--
	01/17/03	56.69	53.50	--	--	--	--	--	--	--	--	ND	ND	ND	ND	4.56	--	--	--	--
	04/04/03	53.90	56.29	--	--	--	--	--	--	--	--	ND	1.17	ND	ND	2.64	--	--	--	--
	07/02/03	56.24	53.95	--	--	--	--	--	--	--	--	ND	ND	ND	ND	4.26	--	--	--	--
	01/28/04	54.56	55.63	--	--	--	--	--	--	--	--	ND	ND	ND	ND	2.39	--	--	--	--
	04/26/04	56.38	53.81	--	--	--	--	--	--	--	--	ND	ND	ND	ND	14.9	--	--	--	1.83
	07/23/04	58.01	52.18	--	--	--	--	--	--	--	--	ND	ND	ND	ND	7.26	--	--	--	--
	11/05/04	57.76	52.43	--	--	--	--	--	--	--	--	ND	332	ND	3.05	17.7	--	--	--	3.08
	02/04/05	57.34	52.85	--	--	--	--	--	--	--	--	<1.0	ND	ND	ND	8.55	--	--	--	--
	05/10/05	54.70	55.49	--	--	--	--	--	--	--	--	<5.0	ND	ND	ND	1.53	--	--	--	--
	08/08/05	57.40	52.79	--	--	--	--	--	--	--	--	<1.0	<1	<200	<5.0	5.48	--	--	--	3.71
	12/13/05	57.30	52.89	--	--	--	--	--	--	--	--	<2.0	<0.5	<0.8	<1.0	2.0	--	--	--	7.4
	03/03/06	54.45	55.74	--	--	--	--	--	--	--	--	<2.0	<0.5	<0.8	<1.0	6.0	--	--	--	6.48
	06/29/06	53.94	56.25	--	--	--	--	--	--	--	--	<2.0	<0.5	<0.8	<1.0	11	--	--	--	6.95
	09/08/06	58.09	52.10	--	--	--	--	--	--	--	--	<2.0	<0.5	<0.8	<1.0	3.0	--	--	--	7.10
	12/01/06	55.00	55.19	--	--	--	--	--	--	--	--	<2.0	<0.5	<0.8	<1.0	2.0	--	--	--	6.90
	03/01/07	55.25	54.94	--	--	--	--	--	--	--	--	<2.0	<0.5	<0.8	<1.0	6.0	--	--	--	7.75
	06/28/07	56.77	53.42	--	--	--	--	--	--	--	--	<2	<0.5	<0.8	<1	2	--	--	--	6.70

TABLE 2  
GROUNDWATER MONITORING DATA AND ANALYTICAL RESULTS  
76 PRODUCTS FACILITY No. 351386  
1300 W 12th Street, Vancouver, Washington  
Concentrations reported in µg/L unless otherwise noted

Well ID TOC Elevation (ft)	Sample Date	Depth to Water (ft)	GW Elevation (ft)	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Chloroform	Methylene Chloride	MTBE	1,1,1-TCA	TCE	PCE	Dissolved Lead (mg/L)	Total Lead (mg/L)	Ethanol	Dissolved Oxygen (mg/L)
MW-6  (cont)	02/01/08	55.90	54.29	--	--	--	<0.5	<0.7	<0.8	<0.8	--	<2	<0.5	<0.8	<1	4	--	--	--	--
	03/20/08	55.75	54.44	--	--	--	<0.5	<0.7	<0.8	<0.8	--	<2	<0.5	<0.8	<1	3	--	--	--	--
	06/19/08	50.07	60.12	--	--	--	<0.5	<0.7	<0.8	<0.8	<0.8	<2	<0.5	<0.8	<1	1	--	--	--	--
	09/30/08	58.60	51.59	--	--	--	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--
	11/07/08	58.30	51.89	--	--	--	<0.5	<0.7	<0.8	<0.8	<0.8	<2	<0.5	<0.8	<1	0.9	--	--	--	--
	02/19/09	57.87	52.32	--	--	--	<0.12	<0.21	<0.20	<0.27	0.34	<1.0	<0.16	<0.20	<0.22	1.5	--	--	--	--
	04/21/09	55.04	55.15	--	--	--	0.17 J	0.82 J	0.32 J	0.61 J	<0.15	<1.0	<0.16	<0.20	<0.22	3.4	--	--	--	--
	07/30/09	57.25	52.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/27/09	58.95	51.24	--	--	--	<0.12	<0.21	<0.20	<0.42	0.20 J	<1.0	<0.16	<0.20	<0.22	0.70 J	--	--	--	--
	03/12/10	57.40	52.79	--	--	--	<0.12	<0.21	<0.20	<0.42	<0.15	<0.26	<0.16	<0.20	<0.22	2.0	--	--	--	--
	06/04/10	53.33	56.86	--	<80.0	<400	<1.0	<1.0	<1.0	<3.0	<1.0	<4.0	<1.0	<1.0	<1.0	1.6	--	--	--	--
	09/02/10	59.01	51.18	--	129	460	<1.0	<1.0	<1.0	<3.0	<1.0	<4.0	<1.0	<1.0	<1.0	1.1	--	--	--	--
	12/01/10	56.39	53.80	--	<75.5	<377	<1.0	<1.0	<1.0	<3.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--
	03/08/11	53.53	56.66	--	<75.5	<377	<1.0	<1.0	<1.0	<3.0	<1.0	<4.0	<1.0	<1.0	<1.0	1.1	--	--	--	--
	06/16/11	45.00	65.19	--	<83.3	<417	<1.0	<1.0	<1.0	<3.0	<1.0	<4.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--
	09/26/11	58.01	52.18	110	<29	<67	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	0.9	--	--	<50	--
	12/19/11	58.09	52.10	--	<29	<67	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	<0.8	--	--	<50	--
	03/23/12	51.73	58.46	--	190	750	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	<0.8	--	--	<50	--
	06/18/12	51.33	58.86	--	68	390	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	2	--	--	<50	--
	08/28/12	56.33	53.86	--	<28	<66	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	2	--	--	<50	--
	12/17/12	52.55	57.64	--	<28	<66	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	<0.8	--	--	<50	--
	03/05/13	56.90	53.29	--	<29	120	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	1	--	--	<50	--
	06/21/13	55.40	54.79	--	88	740	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	0.9	--	--	<50	--
	09/09/13	58.05	52.14	--	<28	<66	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	1	--	--	<50	--
	12/19/13	57.23	52.96	--	<29	<67	<0.5	<0.5	<0.5	<0.5	<0.8	<2	<0.5	<0.8	<1	<0.8	--	--	<50	--
MTCA Method A Cleanup Levels:				1,000/800 <sup>a</sup>	500	500	5	1,000	700	1,000	NE	5	20	200	5	5	15	15	NE	NA
MTCA Method C Cleanup Levels (non-carcinogenic):				NE	NE	NE	70	1,400	1,800	3,500	1,800	1,100	ND	NE	8.8	110	NE	NE	NE	NA
MTCA Method C Cleanup Levels (carcinogenic):				NE	NE	NE	NE	1,000	NE	NE	NE	58	ND	NE	9.4	210	NE	NE	NE	NA

NOTES:

Analytical results in bold font indicate concentrations of TCE exceed MTCA Method C cleanup levels.

Groundwater monitoring data, top of casing elevations, and laboratory analytical results prior to September 26, 2011 provided by STANTEC Consulting Corporation.

TOC referenced to a site datum with an assumed elevation of 100.00 feet (National Geodetic Vertical Datum).

<sup>a</sup> = MTCA Method A cleanup levels for TPH-G are 1,000 µg/L when no benzene is present and 800 µg/L when benzene is present.

ABBREVIATIONS:

BTEX = Benzene, Toluene, Ethylbenzene, and Total Xylenes

ft = Feet

GW = Groundwater

J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit

mg/L = Milligrams per liter

MTBE = Methyl Tertiary Butyl Ether

MTCA = Model Toxics Control Act

NE = Not Established

1,1,1-TCA = 1,1,1-Trichloroethane

PCE = Tetrachloroethene

TCE = Trichloroethene

TPH = Total Petroleum Hydrocarbons

TPH-D = TPH as Diesel-range organics

TPH-G = TPH as Gasoline-range organics

TPH-O = TPH as Heavy Oil-range organics

USEPA = United States Environmental Protection Agency

µg/L = Micrograms per liter

-- = Not measured/Not analyzed

< = Less than the stated laboratory reporting limit

ANALYTICAL METHOD:

TPH-G analyzed by Northwest Method NWTPH-Gx.

TPH-D and TPH-O analyzed by Northwest Method NWTPH-Dx.

BTEX analyzed by USEPA Method 8260B.

Methylene Chloride analyzed by USEPA Method 8260B.

MTBE analyzed by USEPA Method 8260B.

1,1,1-TCA analyzed by USEPA Method 8260B.

TCE analyzed by USEPA Method 8260B.

PCE analyzed by USEPA Method 8260B.

Total and dissolved lead analyzed by USEPA Method 200 or 6000/7000 Series.

Ethanol analyzed by USEPA Method 8260B.

**Appendix A:**  
**Property Zoning and Zoning Site Use per Vancouver Municipal Code**

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**Land Records**

Property Info Center  
 GIS MapsOnline  
 Subdivision Browser  
 Quarter Sections  
 Auditor Records  
 Parcel Alteration Forms

 New Search

## Clark County Property Information

### Account Summary

**Property Identification Number:** 59890000 [MapsOnline](#)
**Property Type:** Real

**Property Status:** Active **Tax Status:** Regular

**Site Address:** 1300 W 12TH ST, VANCOUVER, 98660 ([Sitius Addresses](#))

**Abbreviated Legal Description:** ROWLEYS ADDN BLOCK 3

**Demographics**

Socioeconomic Data  
 Census 2010 Profiles

**GIS Programs**

Index of Atlas Maps  
 GIS Metadata  
 GIS Training  
 Annexation Tracker

**Storefront**

Digital Data  
 Applications  
 Publications  
 Printed Maps  
 Custom Maps  
 Photography  
 Developer's Packet

**Reports**

Vacant Lands

**Contacts**

Staff List  
 Office Location

Account	Building	Environmental	Taxes	Auditor Docs	Documents	Permits	Sales Search
<b>Property Owner</b> EMERALD WEST LLC					<b>Owner Mailing Address</b> 7343 E MARGINAL WAY S SEATTLE WA , 98108 US		
<b>Property Location Address</b> 1300 W 12TH ST, VANCOUVER, 98660 Try the new version of: <a href="#">MapsOnline BETA</a> <a href="#">Google Maps Street View</a> <a href="#">Bing Maps Birds Eye</a>							
<b>Administrative Data</b> <a href="#">Info...</a>					<b>Land Data</b>		
Zoning Designation <a href="#">Codes...</a> IL Zoning Overlay(s) Transit Overlay Tier One Central City Plan District 20.550 Height 100 feet 20.630-4 Comprehensive Plan IND Comp. Plan Overlay(s) none Census Tract 424.00 Jurisdiction Vancouver Fire District Vancouver Park District District 1 School District Vancouver Elementary Hough Middle School Discovery High School Hudsons Bay Sewer District Vancouver Water District Vancouver Neighborhood Esther Short Section-Township-Range NE 1/4, S28, T2N, R1E image: <a href="#">.TIF</a> or <a href="#">.PDF</a> Urban Growth Area Vancouver C-Tran Benefit Area Yes School Impact Fee Vancouver Transportation Impact Fee Vancouver Transportation Analysis Zone 21 Waste Connections Tuesday Garbage Collection Day 0 CPU Lighting Utility District 0 Burning Allowed No Wildland Urban Interface/Intermix No Mapping Indicators					<a href="#">Clark County Road Atlas</a> page 7 Approximate Area <a href="#">Info...</a> 40,511 sq. ft. 0.93 acres Subdivision <a href="#">ROWLEYS ADDITION</a> <a href="#">WAVERLY ADDITION</a> Survey No Records		
					<b>Sales History</b>		
					Sale Date 09/20/2012 Document Type D-QCD Excise Number 683290 Document Number Sale Amount \$17,630.00		
					Sale Date 06/16/2001 Document Type D-QCD Excise Number 483058 Document Number Sale Amount \$0.00		
					Sale Date 07/15/1999 Document Type DEED Excise Number 451554 Document Number Sale Amount \$65,000.00		
					<b>Assessment Data</b> <a href="#">Info...</a>		
					<b>2013 Values for 2014 Taxes</b> Market Value as of January 1, 2013		
					Land Value \$157,700.00 Building Value \$111,200.00 Total Property \$268,900.00		
					<b>Taxable Value</b> Total \$268,900.00		
					<b>2012 Values for 2013 Taxes</b> Market Value as of January 1, 2012		
					Land Value \$157,700.00 Building Value \$111,200.00 Total Property \$268,900.00		
					<b>Taxable Value</b> Total \$268,900.00		
					<b>General</b>		
					Re-valuation Cycle 1 Assessor Neighborhood 7785		

 If you have questions concerning the data on this page, please contact the Clark County Assessor's Office. Main Phone: (360) 397-2391 , Email: [psrgis@clark.wa.gov](mailto:psrgis@clark.wa.gov)
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[Legal Stuff](#)

Disclaimer

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[RCW 42.56.070\(9\)](#) prohibits releasing and/or using lists of individuals gathered from this site for commercial purposes.

Clark County, Geographic Information System (GIS): Bob Pool, Manager  
 Street Address: [1300 Franklin Street](#), 2nd Floor, Vancouver, WA 98666-5000  
 Mailing Address: P.O. Box 5000, Vancouver, WA 98666-5000  
 Main phone: (360) 397-2002 | FAX: (360) 397-2046

Storefront Hours:  
 Mon, Tue, Thurs, Fri: 8:00 a.m. - 5:00 p.m.  
 Wed: 9:00 a.m. - 5:00 p.m.  
 Email: [themapstore@clark.wa.gov](mailto:themapstore@clark.wa.gov)

 Responsible Elected Official: [Board of Clark County Commissioners](#)
[Clark County Home](#) | [Find It!](#) | [A-Z Index](#) | [News Releases](#) | [Jobs](#) | [Contact Us](#)

 File Location: <http://gis.clark.wa.gov/gishome/Property/?action=account&account=59890000>

 For questions or comments regarding the Clark County Web site: [Webmaster@clark.wa.gov](mailto:Webmaster@clark.wa.gov)

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## **Section 20.430.020 List of Zoning Districts.**

A. CN: Neighborhood Commercial District. The CN zoning district is designed to provide for small-scale, convenience commercial uses to serve adjacent residential neighborhoods. Convenience goods and services are those which are purchased frequently and do not require comparison shopping. Typical uses include, but are not limited to, convenience markets, personal services, restaurants, bakeries, and video rental shops. Above ground floor housing and some civic and institutional uses are allowed conditionally. The design and impact of these uses should be compatible with the surrounding neighborhood in size and scale and should generate minimal traffic. Because these uses primarily serve the immediate area, there are significant opportunities for walking, bicycle and transit trips that shall be encouraged and accommodated through building design, landscaping and access. The CN zoning district was referred to as Neighborhood Commercial (NC) prior to March 11, 2004.

B. CC: Community Commercial. The CC zoning district is designed to provide for retail goods and services purchased regularly by residents of several nearby neighborhoods. The zone also accommodates offices, institutions and housing. Housing located at ground floor is allowed on properties fronting Broadway Street only. In all other cases, housing is located above the ground floor. Because of the limited trade area, there are significant opportunities for walking, bicycle and transit trips that should be encouraged and accommodated through building/site design, landscaping and access.

C. CG: General Commercial. The CG zoning district is designed to allow for a full range of retail, office, and civic uses with a City-wide to regional trade area. Above ground floor housing is allowed. Some light industrial uses also are allowed, but limited so as not to detract from the predominant commercial character of the district. Development is generally expected to be auto-accommodating given the large service area but trips by alternative modes— walking, cycling and transit — should be encouraged through building/site design, landscaping and access. Because such areas generate more traffic than less-intense commercial zones, such developments should take their primary access from a street with at least the capacity of a Minor Arterial. The CG zoning district was referred to as General Commercial (GC) prior to March 11, 2004.

D. CX: City Center. The CX zoning district is designed to provide for a concentrated mix of retail, office, civic and housing uses in downtown Vancouver. The broad range of allowed uses is intended to promote Vancouver as the commercial, cultural, financial and municipal center of Clark County. Typical uses include, but are not limited to retail sales; hotels/motels; restaurants; professional offices; educational, cultural and civic institutions; public buildings; and commercial parking. Ground floor residential is allowed with the exception of properties fronting Main Street between Sixth Street and Mill Plain. All of the property that has a CX zoning designation lies within the Downtown Plan District.

E. WX: Waterfront Mixed-Use. The WX zoning district is designed to provide for a significant level of mixed-use development and pedestrian access along the Columbia River while maintaining environmental and scenic resources and compatibility of uses. Permitted use categories include retail, office, institutional, residential, parks and civic uses. Limited warehouse and industrial uses, in addition to some regional scale facilities, are conditionally permitted.

F. CPX: Central Park Mixed-Use. The CPX zoning district is the base zone designation for all land located within the Vancouver Central Park Plan District that contains a number of existing parks and governmental, health, recreational, educational and cultural facilities. The CPX zone district also contains the Vancouver National Historic Reserve that includes Officers Row, Vancouver Barracks, Fort Vancouver and Pearson Air Park. The CPX zone district is designed to enhance and protect existing facilities and fulfill the vision and policies identified in the Central Park Plan. The CPX zoning district was referred to as Vancouver Central Park (VCP) in the previous zoning code.

G. MX: Mixed Use District. The Mixed-Use zoning district is intended to provide the community with a mix of mutually supporting retail, service, office, light industrial, and residential uses. It promotes physically and functionally coordinated and cohesive site planning and design which maximizes land use. It also encourages development of a high-density, active urban environment which is expected to:

1. Achieve the goals and objectives of the Community Framework Plan and the Vancouver Urban Area Comprehensive Plan;

2. Fulfill the community vision identified through the Visual Preference Survey and other opportunities for public involvement;

3. Enhance livability, environmental quality, and economic vitality;

4. Maximize efficient use of public facilities and services;

5. Provide a variety of housing types and densities;

6. Reduce the number of automobile trips and encourage alternative modes of transportation; and

7. Create a safe, attractive, and convenient environment for living, working, recreating, and traveling.

(M-3891, Amended, 11/03/2008, Sec 4 - Effective 12/03/08; M-3832, Amended, 06/18/2007, Sec 5; M-3730, Amended, 12/19/2005, Sec 17; M-3643, Added, 01/26/2004)



## **Section 20.440.020 List of Zoning Districts.**

A. OCI: Office Commercial Industrial. The OCI zoning district provides appropriate locations for office, light industrial and small-scale commercial uses (e.g., restaurants, personal services and fitness centers) either singly or in combination. Only those light industrial uses with no off-site impacts, e.g., noise, glare, odor, vibration, outdoor storage, or process visibility are permitted in the OCI zone. In addition to mandatory site plan review, design and development standards in the OCI zone have been adopted to ensure that developments will be well-integrated, attractively landscaped, and pedestrian friendly. The OCI zone combines two zones that were referred to as the Office Campus (OC) and Industrial Commercial (MC) zones prior to March 11, 2004.

B. IL: Light Industrial. The IL zoning district provides appropriate locations for combining light, clean industries including industrial service, manufacturing, research/development, warehousing activities, and general office uses and limited retail. These activities do not require rail or marine access and have limited outdoor storage.

C. IH: Heavy Industrial. The IH zoning district provides appropriate locations for intensive industrial uses including industrial service, manufacturing and production, research and development, warehousing and freight movement, railroad yards, waste-related and wholesale sales activities. Activities in the IH zone include those that involve the use of raw materials, require significant outdoor storage and generate heavy truck and/or rail traffic. Because of these characteristics, IH-zoned property has been carefully located to minimize impacts on established residential, commercial and light industrial areas.

D. A: Airport. The A zoning district provides land use regulations for public use aviation areas that are designated as such on the Comprehensive Plan Map. This district allows for aviation use and those activities that support or are dependent upon aviation activity when such activities benefit from a location within or immediately adjacent to primary flight operations.

E. ECX: Employment Center Mixed-Use. The ECX zoning district is designed to provide for a concentrated urban mix of office, light industrial and small-scale commercial uses (e.g., restaurants, personal services and fitness centers) either singly or in combination in the Section 30 Employment Center Plan District. Only those light industrial uses with no off-site impacts, e.g., noise, glare, odor, vibration, outdoor storage, or process visibility are permitted in the ECX zone. In addition, the ECX zoning district provides for optional Urban Neighborhood Overlay(s), allowing for two concentrated urban mixed-use commercial/residential neighborhoods. Mandatory master planning and development standards in the ECX zone have been adopted to ensure that developments will be well-integrated, attractively landscaped, and pedestrian friendly.

(M-3930, Amended, 10/05/2009, Sec 6; M-3730, Amended, 12/19/2005, Sec 24; M-3643, Added, 01/26/2004)

**Appendix B:**  
**Cleanup and Risk Calculations (CLARE) Database PCE MTCA Method C**  
**Cleanup Levels**

---

<b>CLARC Summary</b>	Chemical:	tetrachloroethylene
	CAS #:	127-18-4
Ground Water, Method C, Non-carcinogen, Standard Formula Value (µg/L)		1.1E+02
Ground Water, Method C, Carcinogen, Standard Formula Value (µg/L)		2.1E+02

"Researched-No Data" means research has been conducted and no data exists in the database for this p

"Not Researched" means research has not been conducted and no value exists in the database for this p

## **Appendix C:**

### **Water Well Construction Logs**

---

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

File Original with  
Department of Ecology

Second Copy - Owner's Copy

Third Copy - Driller's Copy

# WATER WELL REPORT

STATE OF WASHINGTON

Notice of Intent W159523

UNIQUE WELL I.D. # AKS-795

Water Right Permit No. \_\_\_\_\_

(1) OWNER: Name Clark Public Utilities Address PO Box 8900 Vancouver, WA 98668

(2) LOCATION OF WELL: County Clark NE 1/4 NW 1/4 Sec 16 T 2 N.R. 1E WM

(2a) STREET ADDRESS OF WELL: (or nearest address) 5900 NW Fruit Valley Rd Vancouver, WA 98660

TAX PARCEL NO.: 147361000

(3) PROPOSED USE: ☐ Domestic ☐ Industrial ☒ Municipal  
☐ Irrigation ☒ Test Well ☐ Other  
☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) TW-7  
☒ New Well Method: ☐ Dug ☐ Bored  
☐ Deepened ☐ Cable ☐ Driven  
☐ Reconditioned ☐ Rotary ☐ Jetted  
☐ Decommission

(5) DIMENSIONS: Diameter of well 12 inches  
Drilled 605 feet. Depth of completed well 590 ft.

## CONSTRUCTION DETAILS

### Casing Installed:

☒ Welded 16 " Diam. from 8 ft. to 360 ft.  
☐ Liner installed 12 " Diam. from 12 ft. to 400 ft.  
☐ Threaded \_\_\_\_\_ Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used \_\_\_\_\_

SIZE of perforations \_\_\_\_\_ in. by \_\_\_\_\_ in.  
\_\_\_\_\_ perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Screens: ☒ Yes ☐ No ☐ K-Pac Location \_\_\_\_\_

Manufacturer's Name Johnson

Type 304 Stainless

Model No. \_\_\_\_\_

Diam. 8-inch Slot Size 60 from 390 ft. to 461 ft.

Diam. 8-inch Slot Size 60 from 521 ft. to 582 ft.

Gravel/Filter packed: ☒ Yes ☐ No ☐ Size of gravel/sand #6-10

Material placed from 360 ft. to 590 ft.

Surface seal: ☒ Yes ☐ No To what depth? 38 ft.

Material used in seal Ben foam

Did any strata contain unusable water? ☐ Yes ☐ No

Type of water? \_\_\_\_\_ Depth of strata \_\_\_\_\_

Method of sealing strata off \_\_\_\_\_

(7) PUMP: Manufacturer's Name \_\_\_\_\_  
Type: \_\_\_\_\_ H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level 20 ft.

Static level 20.6 ft. below top of well Date 12/11/03

Artesian pressure \_\_\_\_\_ lbs. per square inch Date \_\_\_\_\_

Artesian water is controlled by \_\_\_\_\_

(Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☒ Yes ☐ No If yes, by whom? P66 (Mathew & Sons)

Yield 100 gal./min. with 99.55 ft. drawdown after 72 hrs.

Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.

Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
<u>2</u>	<u>36.5</u>	<u>20</u>	<u>30.65</u>	<u>60</u>	<u>27.9</u>
<u>5</u>	<u>34.1</u>	<u>29</u>	<u>29.74</u>	<u>80</u>	<u>27.17</u>
<u>10</u>	<u>32.36</u>	<u>41</u>	<u>28.87</u>	<u>110</u>	<u>26.37</u>

Date of test 3/13/07

Bailer test \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.

Airtest \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.

Artesian flow \_\_\_\_\_ g.p.m. Date \_\_\_\_\_

Temperature of water \_\_\_\_\_ Was a chemical analysis made? ☒ Yes ☐ No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION  
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.

MATERIAL	FROM	TO
Brown silt	0	30
Brown sand & silt	30	37
Gray gravelly fine sand w/ silt interbeds	37	41
Gray fine sand w/ scattered gravel	41	50
Brownish-black fine sand	50	65
Brownish-black, silty m-c sand & gravel	65	72
Brown gravelly m-c sand	72	101
Brown fine sand w/ some gravel	101	107
Brown, gravelly, fine sand grading to m-c sand & gravel	107	116
Brown m-c sand w/ silt interbeds	116	119
Brown sand, gravel & cobbles	119	138
Brown slightly sandy gravel/cobbles	138	142
Brown slightly silty gravel & cobbles w/ fine sand	142	167
Brown gravel & cobbles w/ fine sand	167	180
Gray siltbound cemented sand & gravel	180	250
Gravel very siltbound sand & gravel	250	255
Gray clay	255	269
Gray silty slightly gravelly fine sand	269	272
Greenish-gray clay	272	321
Greenish-gray sandy silt w/ some gravel	321	342
Greenish gray silty clay (SEE PAGE 2)	342	349

Work Started 10/9/03 Completed 12/09/03

## WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name Tony Fernback License No. 1094  
(Licensed Driller/Engineer)

Trainee Name \_\_\_\_\_ License No. \_\_\_\_\_

Drilling Company Holt Drilling

(Signed) Tony Fernback License No. 1094  
(Licensed Driller/Engineer)

Address PO Box 1989, Milton WA 98354

Contractor's Registration No. BOARTLC 941RA Date 9-15-08

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.

# WATER WELL REPORT

STATE OF WASHINGTON

PAGE 2

Notice of Intent W159523

UNIQUE WELL I.D. # AKS-795

Water Right Permit No. \_\_\_\_\_

(1) OWNER: Name Clark Public Utilities Address PO Box 8900 Buncrum WA 98668

(2) LOCATION OF WELL: County Clark NE 1/4 NW 1/4 Sec 16 T 2 N.R. 1E WM

(2a) STREET ADDRESS OF WELL: (or nearest address) \_\_\_\_\_

TAX PARCEL NO.: 147361000

(3) PROPOSED USE: ☐ Domestic ☐ Industrial ☒ Municipal  
☐ Irrigation ☒ Test Well ☐ Other  
☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) TW-7  
☒ New Well Method: ☐ Dug ☐ Bored  
☐ Deepened ☒ Cable ☐ Driven  
☐ Reconditioned ☐ Rotary ☐ Jetted  
☐ Decommission

(5) DIMENSIONS: Diameter of well 12 inches  
Drilled 605 feet. Depth of completed well 590 ft.

## (6) CONSTRUCTION DETAILS

### Casing Installed:

☐ Welded \_\_\_\_\_ " Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
☐ Liner installed \_\_\_\_\_ " Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.  
☐ Threaded \_\_\_\_\_ " Diam. from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

### Perforations:

☐ Yes ☐ No

Type of perforator used \_\_\_\_\_

SIZE of perforations \_\_\_\_\_ in. by \_\_\_\_\_ in.

Perforations from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

### Screens:

☐ Yes ☐ No ☐ R-Pac Location \_\_\_\_\_

Manufacturer's Name \_\_\_\_\_

Type \_\_\_\_\_

Model No. \_\_\_\_\_

Diam. \_\_\_\_\_ Slot Size \_\_\_\_\_ from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Diam. \_\_\_\_\_ Slot Size \_\_\_\_\_ from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Gravel/Filter packed: ☐ Yes ☐ No ☐ Size of gravel/sand \_\_\_\_\_

Material placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

### Surface seal:

☐ Yes ☐ No

To what depth? \_\_\_\_\_ ft.

Material used in seal \_\_\_\_\_

Did any strata contain unusable water? ☐ Yes ☐ No

Type of water? \_\_\_\_\_ Depth of strata \_\_\_\_\_

Method of sealing strata off \_\_\_\_\_

(7) PUMP: Manufacturer's Name \_\_\_\_\_

Type: \_\_\_\_\_ H.P. \_\_\_\_\_

(8) WATER LEVELS: Land-surface elevation above mean sea level \_\_\_\_\_ ft.

Static level \_\_\_\_\_ ft. below top of well Date \_\_\_\_\_

Artesian pressure \_\_\_\_\_ lbs. per square inch Date \_\_\_\_\_

Artesian water is controlled by \_\_\_\_\_

(Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☐ No If yes, by whom? \_\_\_\_\_

Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.

Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.

Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Date of test \_\_\_\_\_

Bailer test \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.

Airtest \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.

Artesian flow \_\_\_\_\_ g.p.m. Date \_\_\_\_\_

Temperature of water \_\_\_\_\_ Was a chemical analysis made? ☐ Yes ☐ No

(10) WELL LOG or DECOMMISSIONING PROCEDURE DESCRIPTION  
Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. Indicate all water encountered.

MATERIAL	FROM	TO
Brown silty clay	349	356
Black sand stone	356	368
Gray sandy silt w/ scattered gravel	368	374
Brown silty fine sand	374	387
Brown fine sand	387	450
Gray fine sand w/ minor gravel & wood frags	450	468
Greenish-gray silty clay	468	493
Gray silty fine sand w/ silt interbeds	493	516
Gray fine sand w/ wood frags	516	582
Greenish-gray clay	582	605

RECEIVED

OCT 22 2008

Washington State  
Department of Ecology

Work Started 10/9/03 Completed 12/09/03

## WELL CONSTRUCTION CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Type or Print Name Tony Ferencback License No. 1094  
(Licensed Driller/Engineer)

Trainee Name \_\_\_\_\_ License No. \_\_\_\_\_

Drilling Company Hart Drilling

(Signed) Tony Ferencback License No. 1094  
(Licensed Driller/Engineer)

Address PO Box 1890, Milton WA 98354

Contractor's Registration No. BOARTLC941RA Date 9-15-08

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (360) 407-6600. The TDD number is (360) 407-6006.



# WATER WELL REPORT

Original & 1<sup>st</sup> copy - Ecology, 2<sup>nd</sup> copy - owner, 3<sup>rd</sup> copy - driller

Construction/Decommission ("x" in circle) **208810**

☒ Construction

☐ Decommission ORIGINAL INSTALLATION Notice of Intent Number \_\_\_\_\_

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal  
☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other \_\_\_\_\_

TYPE OF WORK: Owner's number of well (if more than one) \_\_\_\_\_

☐ New well ☐ Reconditioned Method: ☐ Dug ☐ Bored ☐ Driven  
☐ Deepened ☒ Cable ☐ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 24 inches, drilled 160 ft.  
Depth of completed well 159'6 ft.

## CONSTRUCTION DETAILS

Casing ☒ Welded 24 " Diam. from + 3 ft to 63'6 ft.  
Installed: ☐ Liner installed 22 " Diam. from 58' ft. to 62'6 ft.  
☐ Threaded 22 " Diam. from 109'6 ft. to 129'6 ft.

Perforations: ☐ Yes ☒ No Tail pipe 144'6 - 159'6

Type of perforator used \_\_\_\_\_

SIZE of perfs \_\_\_\_\_ in by \_\_\_\_\_ in. and no. of perfs \_\_\_\_\_ from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Screens: ☒ Yes ☐ No ☒ K-Pac Location 58'

Manufacturer's Name Johnson

Type stainless steel Model No. \_\_\_\_\_  
Diam. 22 " Slot size 60/80 from 62'6 ft. to 109'6 ft.  
Diam. 22 " Slot size 60 from 129'6 ft. to 144'6 ft.

Gravel/Filter packed: ☐ Yes ☒ No ☐ Size of gravel/sand \_\_\_\_\_  
Materials placed from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Surface Seal: ☒ Yes ☐ No To what depth? 33 ft.

Material used in seal Quick grout & Hole plug

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? \_\_\_\_\_ Depth of strata \_\_\_\_\_

Method of sealing strata off \_\_\_\_\_

PUMP: Manufacturer's Name \_\_\_\_\_

Type: \_\_\_\_\_ H.P. \_\_\_\_\_

WATER LEVELS: Land-surface elevation above mean sea level \_\_\_\_\_ ft.

Static level 12'2" ft. below top of well Date 6-7-07

Artesian pressure \_\_\_\_\_ lbs. per square inch Date \_\_\_\_\_

Artesian water is controlled by \_\_\_\_\_ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☒ Yes ☐ No If yes, by whom? Mather & Sons

Yield 5110 gal./min. with 8'3 ft. drawdown after 72 hrs.

Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.

Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

CURRENT

Notice of Intent No. W 218488

Unique Ecology Well ID Tag No. ALH 454

Water Right Permit No. \_\_\_\_\_

Property Owner Name Clark Public Utilities

Well Street Address 5806 Fruit Valley Rd

City Vancouver County Clark

Location SE1/4-1/4 SW 1/4 Sec 9 Twn 2N R 1E EWM or WWM circle one

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_

Still REQUIRED) Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_

Tax Parcel No. 147361000

## CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Brown-silty clay	0	32
Gray-brown-sand-silt	32	42
Gray-brown-sand-silt-gravel	42	47
Gray-sand-clean (water)	47	50
Gray-brown-sand-silt (water)	50	57
Gray-gravel-sand-cobbles	57	68
Gray-gravel-cobbles-sand	68	73
Gray-sand-gravel	73	93
Gray-brown-sand-coarse	93	115
Brown-sand-fine-silt	115	122
Brown-gray-gravel-sand-cobbles	122	152
Brown-gray-gravl-sand-fine silt-cobbles	152	160

RECEIVED

AUG 08 2007

Washington State  
Department of Ecology

Start Date 4-9-07

Completed Date 6-7-07

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Terry Johnson

Driller/Engineer/Trainee Signature Terry Johnson

Driller or trainee License No. 0236

Drilling Company Hansen Drilling Co. Inc.

Address 6711 NE. 58th Ave.

City, State, Zip Vancouver, Wa 98661

Contractor's HANSED\*377NT

Registration No. \_\_\_\_\_ Date 6-22-07

Ecology is an Equal Opportunity Employer



# WATER WELL REPORT

Original & 1<sup>st</sup> copy - Ecology, 2<sup>nd</sup> copy - owner, 3<sup>rd</sup> copy - driller

Construction/Decommission ("x" in circle)

☒ Construction

☐ Decommission ORIGINAL INSTALLATION Notice

340681 of Intent Number \_\_\_\_\_

PROPOSED USE: ☐ DeWater ☐ Domestic ☐ Irrigation ☐ Industrial ☐ Test Well ☒ Municipal ☐ Other \_\_\_\_\_

TYPE OF WORK: Owner's number of well (if more than one) PW-2

☒ New well ☐ Reconditioned ☐ Method: ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☐ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 20 inches, drilled 612 ft.  
Depth of completed well 611 ft.

CONSTRUCTION DETAILS 24" +6" 236  
Casing ☒ Welded 20 " Diam. from +2 ft. to 415 ft.  
Installed: ☐ Liner installed 16" riser Diam. from 380 ft. to 411 ft.  
☐ Threaded 16" blank Diam. from 476 ft. to 564 ft.

Perforations: ☐ Yes ☒ No 16" tail 604 611

Type of perforator used \_\_\_\_\_

SIZE of perfs \_\_\_\_\_ in by \_\_\_\_\_ in and no of perfs \_\_\_\_\_ from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Screens: ☒ Yes ☐ No ☐ K-Pac Location \_\_\_\_\_

Manufacturer's Name Alloy

Type Stainless Steel Model No. \_\_\_\_\_

Diam. 16" Slot size 40 from 411 ft. to 476 ft.

Diam. 16" Slot size 40 from 564 ft. to 604 ft.

Gravel/Filter packed: ☒ Yes ☐ No ☒ Size of gravel/sand 8 x 12 sand

Materials placed from 381 ft. to 611 ft.

Surface Seal: ☒ Yes ☐ No To what depth? 62 ft.

Material used in seal Cement 0-18/Bentonite Grout 18-62

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? \_\_\_\_\_ Depth of strata \_\_\_\_\_

Method of sealing strata off \_\_\_\_\_

PUMP: Manufacturer's Name \_\_\_\_\_

Type: \_\_\_\_\_ H.P. \_\_\_\_\_

WATER LEVELS: Land-surface elevation above mean sea level \_\_\_\_\_ ft.

Static level 22 ft. below top of well Date 5-1-09

Artesian pressure \_\_\_\_\_ lbs. per square inch Date \_\_\_\_\_

Artesian water is controlled by \_\_\_\_\_ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☒ Yes ☐ No If yes, by whom? Mather & Sons

Yield: 2911 gal./min. with 71'9" ft. drawdown after 7.2 hrs.

Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.

Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top in water level)

Time Water Level Time Water Level Time Water Level

\_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

\_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

\_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

\_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

\_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

Date of test \_\_\_\_\_

Bailer test \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.

Airtest \_\_\_\_\_ gal./min. with stem set at \_\_\_\_\_ ft. for \_\_\_\_\_ hrs.

Artesian flow \_\_\_\_\_ g.p.m. Date \_\_\_\_\_

Temperature of water \_\_\_\_\_ Was a chemical analysis made? ☐ Yes ☒ No

## CURRENT

Notice of Intent No. W 251108

Unique Ecology Well ID Tag No. BAA-302

Water Right Permit No. G2-30381

Property Owner Name Clark Public Utilities

Well Street Address 5806 NW. Fruit Valley Rd.

City Vancouver County Clark

Location SW1/4-1/4 SE 1/4 Sec 9 Twn 2N R 1E ☒ EWM ☐ circle or WWM one

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_

Still REQUIRED) Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_

Tax Parcel No. 147353-000 / North Well SGA - PW-2

## CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Top soil	0	2
Brown silty clay, sand	2	28
Brown sand, silt, clay	28	35
Brown, grey sand, silt (little water)	35	48
Brown, grey sand, silt	48	62
Coarse brown silty sand	62	72
Fine brown sandy clay	72	116
Medium to coarse gravel & cobbles	116	155
Black basalt angular & sub-rounded gravels	155	168
Mixed medium to coarse gravel	168	230
Black cemented basalt gravel & sand. Very dense & abrasive	230	240
Oxidized brown-orange cemented sand & gravel		
water	240	246
Brown silty medium sand	246	249
Brown silty, clayey medium to coarse gravel	249	269
Green clay w/interbedded mudstones, grey & blue	269	360
Dark grey silty clay	360	364
Dense brown clay	364	373
Black sandstone	373	374
Blue-grey clay	374	380
Brown silty fine to medium sand, water	380	396
(continued on page 2)		

Start Date 11-7-08 Completed Date 5-1-09

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Terry Johnson Drilling Company Hansen Drilling Co., Inc.

Driller/Engineer/Trainee Signature Terry Johnson Address 6711 NE. 58th Ave.

Driller or trainee License No. 0236 City, State, Zip Vancouver, WA 98661

If TRAINEE, Driller's Licensed No. \_\_\_\_\_ Registration No. HANSEDC947RJ Date 5-6-09

Driller's Signature \_\_\_\_\_ Ecology is an Equal Opportunity Employer.

Washington State Department of Ecology

ECY 050-I-20 (Rev 3/05) The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.





# WATER WELL REPORT

Original & 1<sup>st</sup> copy - Ecology, 2<sup>nd</sup> copy - owner, 3<sup>rd</sup> copy - driller

## Construction/Decommission ("x" in circle)

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION* Notice  
of Intent Number \_\_\_\_\_

PROPOSED USE:		<input type="checkbox"/> Domestic	<input type="checkbox"/> Industrial	<input checked="" type="checkbox"/> Municipal
<input type="checkbox"/> DeWater		<input type="checkbox"/> Irrigation	<input type="checkbox"/> Test Well	<input type="checkbox"/> Other _____
TYPE OF WORK: Owner's number of well (if more than one) <u>PW-2</u>				
<input checked="" type="checkbox"/> New well		<input type="checkbox"/> Reconditioned	Method: <input type="checkbox"/> Dug <input type="checkbox"/> Bored <input type="checkbox"/> Driven	
<input type="checkbox"/> Deepened		<input checked="" type="checkbox"/> Cable		<input type="checkbox"/> Rotary <input type="checkbox"/> Jetted
DIMENSIONS: Diameter of well <u>20</u> inches, drilled <u>612</u> ft.				
Depth of completed well <u>611</u> ft.				
CONSTRUCTION DETAILS <u>24"</u> <u>+6"</u> <u>236</u>				
Casing	<input checked="" type="checkbox"/> Welded	<u>20"</u> Diam. from	<u>+2</u> ft. to	<u>415</u> ft.
Installed:	<input type="checkbox"/> Liner installed	<u>16"</u> Diam. from	<u>380</u> ft. to	<u>411</u> ft.
	<input type="checkbox"/> Threaded	<u>16"</u> Diam. from	<u>476</u> ft. to	<u>564</u> ft.
Perforations: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <u>16" tail</u> <u>604</u> <u>611</u>				
Type of perforator used _____				
SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.				
Screens: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> K-Pac Location _____				
Manufacturer's Name <u>Alloy</u>				
Type	<u>Stainless Steel</u> Model No. _____			
Diam.	<u>16"</u> Slot size	<u>40</u> from	<u>411</u> ft. to	<u>476</u> ft.
Diam.	<u>16"</u> Slot size	<u>40</u> from	<u>564</u> ft. to	<u>604</u> ft.
Gravel/Filter packed: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Size of gravel/sand <u>8 x 12 sand</u>				
Materials placed from <u>381</u> ft. to <u>611</u> ft.				
Surface Seal: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No To what depth? <u>62</u> ft.				
Material used in seal <u>Cement 0-18/Bentonite Grout 18-62</u>				
Did any strata contain unusable water? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Type of water? _____ Depth of strata _____				
Method of sealing strata off _____				
PUMP: Manufacturer's Name _____				
Type: _____ H.P. _____				
WATER LEVELS: Land-surface elevation above mean sea level _____ ft.				
Static level <u>22</u> ft. below top of well Date <u>5-1-09</u>				
Artesian pressure _____ lbs. per square inch Date _____				
Artesian water is controlled by _____ (cap, valve, etc.)				
WELL TESTS: Drawdown is amount water level is lowered below static level				
Was a pump test made? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, by whom? <u>Mather &amp; Sons</u>				
Yield: <u>2911</u> gal./min. with <u>71'9"</u> ft. drawdown after <u>7.2</u> hrs.				
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.				
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.				
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)				
Time	Water Level	Time	Water Level	Time
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
Date of test _____				
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.				
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.				
Artesian flow _____ g.p.m. Date _____				
Temperature of water _____ Was a chemical analysis made? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				

## CURRENT

Notice of Intent No. W 251108

Unique Ecology Well ID Tag No. BAA-302

Water Right Permit No. G2-30381

Property Owner Name Clark Public Utilities

Well Street Address 5806 NW. Fruit Valley Rd.

City Vancouver County Clark

Location SW1/4-1/4 SE1/4 Sec 9 Twn 2N R 1E <sup>EWM</sup> circle or WWM one

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_

Still REQUIRED) Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_

Tax Parcel No. 147353-000 / North Well SGA - PW-2

## CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
(Continued from page 1)		
Blue, green clay	396	403
Brown sandy, silty clay	403	416
Brown sand, silt (water)	416	450
Grey, brown sand (water)	450	464
Grey sand (water)	464	476
Blue, green clay (sticky)	476	516
Grey clay	516	523
Grey sand, silt, clay (little water)	523	561
Grey, brown clay (sandstone)	561	563
Grey sand, silt (water)	563	582
Grey sand, gravel (water)	582	587
Grey sand, silt (water)	587	606
Grey clay	606	608
Green, blue clay	608	612

20" Casing cut at 606'9"  
606'9" - 611' casing remnant  
& shoe

RECEIVED

MAY 22 2009

Washir \_\_\_\_\_ State

Department \_\_\_\_\_ Ecology

Start Date 11-7-08

Completed Date 5-1-09

**WELL CONSTRUCTION CERTIFICATION:** I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Terry Johnson

Driller/Engineer/Trainee Signature Terry Johnson

Driller or trainee License No. 0236

Drilling Company Hansen Drilling Co., Inc.

Address 6711 NE. 58th Ave.

City, State, Zip Vancouver, WA 98661

Contractor's

Registration No. HANSEDC947RJ

Date 5-6-09

Ecology is an Equal Opportunity Employer.

IF TRAINEE,

Driller's Licensed No. \_\_\_\_\_

Driller's Signature \_\_\_\_\_



# WATER WELL REPORT

Original & 1<sup>st</sup> copy - Ecology, 2<sup>nd</sup> copy - owner, 3<sup>rd</sup> copy - driller

ECOLOGY

Construction/Decommission ("x" in circle)

☒ Construction

☐ Decommission ORIGINAL INSTALLATION Notice

340682 of Intent Number \_\_\_\_\_

PROPOSED USE: ☐ Domestic ☐ Industrial ☒ Municipal  
☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other \_\_\_\_\_

TYPE OF WORK: Owner's number of well (if more than one) PW-3

☒ New well ☐ Reconditioned Method: ☐ Dug ☐ Bored ☐ Driven  
☐ Deepened ☒ Cable ☐ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 20 inches, drilled 602 ft.  
 Depth of completed well 595 ft.

CONSTRUCTION DETAILS 24" +6" 246'6"  
 Casing ☒ Welded 20" Diam. from +2 ft. to 429 ft.  
 Installed: ☐ Liner installed 16" Diam. from 400 ft. to 424 ft.  
☐ Threaded 16" Diam. from 474 ft. to 549 ft.

Perforations: ☐ Yes ☒ No 16" tail 589' 595'  
 Type of perforator used \_\_\_\_\_  
 SIZE of perfs \_\_\_\_\_ in by \_\_\_\_\_ in. and no of perfs \_\_\_\_\_ from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Screens: ☒ Yes ☐ No ☐ K-Pac Location \_\_\_\_\_  
 Manufacturer's Name Alloy  
 Type Stainless Steel Model No. \_\_\_\_\_  
 Diam. 16" Slot size 40 from 424 ft. to 474 ft.  
 Diam. 16" Slot size 40 from 549 ft. to 589 ft.

Gravel/Filter packed: ☒ Yes ☐ No Size of gravel/sand 8 x 12 sand  
 Materials placed from 401 ft. to 595 ft.

Surface Seal: ☒ Yes ☐ No To what depth? 62 ft

Material used in seal Cement 0-18/Bentonite Grout 18-62

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? \_\_\_\_\_ Depth of strata \_\_\_\_\_

Method of sealing strata off \_\_\_\_\_

PUMP: Manufacturer's Name \_\_\_\_\_  
 Type: \_\_\_\_\_ H.P. \_\_\_\_\_

WATER LEVELS: Land-surface elevation above mean sea level \_\_\_\_\_ ft.

Static level 16'7" ft. below top of well Date 4-20-09

Artesian pressure \_\_\_\_\_ lbs. per square inch Date \_\_\_\_\_

Artesian water is controlled by \_\_\_\_\_  
 (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☒ Yes ☐ No If yes, by whom? Mather & Sons

Yield: 2552 gal./min. with 77.07 ft. drawdown after 24 hrs.

Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.

Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

Date of test \_\_\_\_\_

Bailer test \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.

Airtest \_\_\_\_\_ gal./min. with stem set at \_\_\_\_\_ ft. for \_\_\_\_\_ hrs.

Artesian flow \_\_\_\_\_ g.p.m. Date \_\_\_\_\_

Temperature of water \_\_\_\_\_ Was a chemical analysis made? ☐ Yes ☒ No

## CURRENT

Notice of Intent No. W 251109

Unique Ecology Well ID Tag No. BAA-303

Water Right Permit No. G2-30381

Property Owner Name Clark Public Utilities

Well Street Address 5806 NW. Fruit Valley Rd.

City Vancouver County Clark

Location NW1/4-1/4 NE1/4 Sec 16 Twn 2N R 1E EWM circle one  
 or WWM

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_

Still REQUIRED) Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_

Tax Parcel No. 147383-000/ South Well SGA - PW-3

## CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Top soil	0	2
Brown silty clay, sand	2	26
Brown sandy silt, clay	26	31
Brown sand, silt	31	50
Brown, grey sand, silt	50	62
Medium to coarse brown silty sand w/ fine gravel	62	105
Coarse sand & gravel, loose, water	105	155
Tighter fine to medium grey sand & coarse gravel	155	200
Lightly cemented medium to coarse gravel w/green binder	200	263
Blue green sandy silt & clay	263	267
Blue clay	267	281
Blue green clay w/ thin sand lenses	281	338
Grey mudstone w/ grey clay layers	338	365
Brown clay	365	368
Black silty coarse sandstone	368	379
Greenish grey clay	379	387
Grey silty clay w/ trace brown sand	387	391
Blue clay	391	396
Grey blue silty sand	396	406
Brown sandy clay	406	412
Brown sand, silt (little water)	412	428
Brown sand, water	428	450

(Continued on page 2)

Start Date 10-31-08 Completed Date 4-20-09

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Terry Johnson Drilling Company Hansen Drilling Co., Inc.

Driller/Engineer/Trainee Signature Terry Johnson Address 6711 NE. 58th Ave.

Driller or trainee License No. 0236 City/State/Zip Vancouver, WA 98661

If TRAINEE, Driller's Licensed No. \_\_\_\_\_ Contractor's \_\_\_\_\_

Driller's Signature \_\_\_\_\_ Registration No. HANSEDC947RJ Date 5-6-09

Ecology is an Equal Opportunity Employer.



# WATER WELL REPORT

Original & 1<sup>st</sup> copy - Ecology, 2<sup>nd</sup> copy - owner, 3<sup>rd</sup> copy - driller

ECOLOGICAL

Construction/Decommission ("x" in circle)

☒ Construction

☐ Decommission ORIGINAL INSTALLATION Notice  
of Intent Number \_\_\_\_\_

PROPOSED USE: ☐ Domestic ☐ Industrial ☒ Municipal  
☐ DeWater ☐ Irrigation ☐ Test Well ☐ Other \_\_\_\_\_

TYPE OF WORK: Owner's number of well (if more than one) PW-3

☒ New well ☐ Reconditioned Method: ☐ Dug ☐ Bored ☐ Driven  
☐ Deepened ☒ Cable ☐ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 20 inches, drilled 602 ft.  
Depth of completed well 595 ft.

CONSTRUCTION DETAILS 24" +6" 246'6"  
Casing ☒ Welded 20" Diam. from +2 ft. to 429 ft.  
Installed: ☐ Liner installed 16" riser Diam. from 400 ft. to 424 ft.  
☐ Threaded 16" blank Diam. from 474 ft. to 549 ft.

Perforations: ☐ Yes ☒ No 16" tail 589' 595'  
Type of perforator used \_\_\_\_\_

SIZE of perfs \_\_\_\_\_ in. by \_\_\_\_\_ in. and no. of perfs \_\_\_\_\_ from \_\_\_\_\_ ft. to \_\_\_\_\_ ft.

Screens: ☒ Yes ☐ No ☐ K-Pac Location \_\_\_\_\_

Manufacturer's Name Alloy

Type Stainless Steel Model No. \_\_\_\_\_

Diam. 16" Slot size 40 from 424 ft. to 474 ft.

Diam. 16" Slot size 40 from 549 ft. to 589 ft.

Gravel/Filter packed: ☒ Yes ☐ No ☒ Size of gravel/sand 8 x 12 sand

Materials placed from 401 ft. to 595 ft.

Surface Seal: ☒ Yes ☐ No To what depth? 62 ft.

Material used in seal cement 0-18/Bentonite Grout 18-62

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? \_\_\_\_\_ Depth of strata \_\_\_\_\_

Method of sealing strata off \_\_\_\_\_

PUMP: Manufacturer's Name \_\_\_\_\_

Type: \_\_\_\_\_ H.P. \_\_\_\_\_

WATER LEVELS: Land-surface elevation above mean sea level \_\_\_\_\_ ft.

Static level 16'7" ft. below top of well Date 4-20-09

Artesian pressure \_\_\_\_\_ lbs. per square inch Date \_\_\_\_\_

Artesian water is controlled by \_\_\_\_\_ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☒ Yes ☐ No If yes, by whom? Mather & Sons

Yield: 2552 gal./min. with 77.07 ft. drawdown after 24 hrs.

Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.

Yield: \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time Water Level Time Water Level Time Water Level

\_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

\_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

\_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_ \_\_\_\_\_

Date of test \_\_\_\_\_

Bailer test \_\_\_\_\_ gal./min. with \_\_\_\_\_ ft. drawdown after \_\_\_\_\_ hrs.

Airtest \_\_\_\_\_ gal./min. with stem set at \_\_\_\_\_ ft. for \_\_\_\_\_ hrs.

Artesian flow \_\_\_\_\_ g.p.m. Date \_\_\_\_\_

Temperature of water \_\_\_\_\_ Was a chemical analysis made? ☐ Yes ☒ No

\_\_\_\_\_

\_\_\_\_\_

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## CURRENT

Notice of Intent No. W 251109

Unique Ecology Well ID Tag No. BAA-303

Water Right Permit No. G2-30381

Property Owner Name Clark Public Utilities

Well Street Address 5806 NW. Fruit Valley Rd.

City Vancouver County Clark

Location NW1/4-1/4 NE1/4 Sec 16 Twn 2N R 1E circle one

Lat/Long (s, t, r) Lat Deg \_\_\_\_\_ Lat Min/Sec \_\_\_\_\_

Still REQUIRED) Long Deg \_\_\_\_\_ Long Min/Sec \_\_\_\_\_

Tax Parcel No. 147383-000 / South Well SGA - PW-3

## CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
(Continued from page 1)		
Grey sand, water	450	465
Grey sand, gravel, water	465	475
Blue sticky clay	475	516
Grey sandy clay, silt	516	527
Grey clay, sand, silt (hard)	527	549
Grey sand, silt, water	549	590
Grey sand, silt	590	601
Blue clay sticky	601	602

20" Casing cut at 592'1 1/2"  
592'1 1/2" - 601' casing remnant  
& shoe

RECEIVED

MAY 22 2009

Washington State  
Department of Ecology

Start Date 10-31-08

Completed Date 4-20-09

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Terry Johnson

Driller/Engineer/Trainee Signature [Signature]

Driller or trainee License No. 0236

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\_\_\_\_\_

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\_\_\_\_\_

\_\_\_\_\_

Drilling Company Hansen Drilling Co., Inc.

Address 6711 NE. 58th Ave.

City, State, Zip Vancouver, WA 98661

Contractor's

Registration No. HANSEDC947RJ Date 5-6-09

Ecology is an Equal Opportunity Employer.

NW 1/4 SW 1/4 Sec. 27, T. 2N. R. 1E  
Clark Co.

## A. M. JANNSEN DRILLING CO.

21075 S.W. Tualatin Valley Highway  
ALOHA, OREGON 97005

April 29, 1975

92.227540

Boise Cascade Papers  
P. O. Box 690  
Vancouver, Washington 98660

Attention: J. K. Gould

Gentlemen:

Following are the well logs of wells drilled in Vancouver, Washington for Columbia River Paper Mills in 1947, 1948, and 1957:

3-31-47 Well drilled at Vancouver, Washington  
26" Well, 150 feet deep  
Static Water Level 22 feet  
4600 gallons per minute

Log:	0	4	Clay
	4	96	Loose Gravel
	96	100	Gravel & clay, mixed
	100	113	Loose Gravel
	113	150	Cemented Gravel

Casing: 137' 1" of 26"  
18' of 20" -- liner  
Perforations: 10 perforations diametrically, 10" vertically between perforations - from 22 feet to 125 feet.1-22-48 Well drilled at Vancouver, Washington  
26" Well, 137 feet deep  
Static Water Level 22 feet  
4600 gallons per minute

Log:	0	50	Cemented Gravel
	50	112	Loose water bearing gravel
	112	134	Cemented gravel
	134	137	Loose gravel

Casing: 117' 7" of 26" Casing  
24' of 18" perforated liner,  
Perforations: 1211 perforations from 40' to 137'

as (P)

WATER WELLS -- TEST HOLES -- PUMPS

Page 2

5-10-57 Well drilled at Vancouver, Washington  
Driller: Ace Owens  
26" Well, 127-1/2 feet deep  
Static Water Level 33 feet  
Pump Test not made

Log:        0     50   Dry gravel and boulders  
          50   127 1/2   Boulders and gravel, water bearing

Casing: 127 1/2 ft. of 26" I.D. PE Black

Perforations: 800 perforations from 55 ft. to 125 ft.

Note:     Hole has a slant to the North.

Our records do not contain all the information now required on well logs. I hope the above information will be sufficient for your requirements.

Very truly,

A. M. JANNSEN DRILLING CO.

  
Edward M. Jannsen

jw

PERMIT NUMBER  
**62-727649**

NAME  
**NOISE CASCADE**

ADDRESS (STREET)  
**601 W 7th St**

City  
**Portland, OR**

State  
**OR**

County  
**Clatsop**

The applicant is hereby granted a permit to appropriate and to the limitations of the following:

SOURCE  
**3 wells**

TRIBUTARY OF  
**Clatsop River**

MAXIMUM CUMULATIVE  
**21,280 gpd**

QUANTITY AND  
**21,280 gpd**

APPROXIMATE LOCATION  
**Well No. 7  
Well No. 8  
Well No. 10**

ALL FROM THE  
**Clatsop River**

AND ALSO WITHIN  
**Clatsop River**

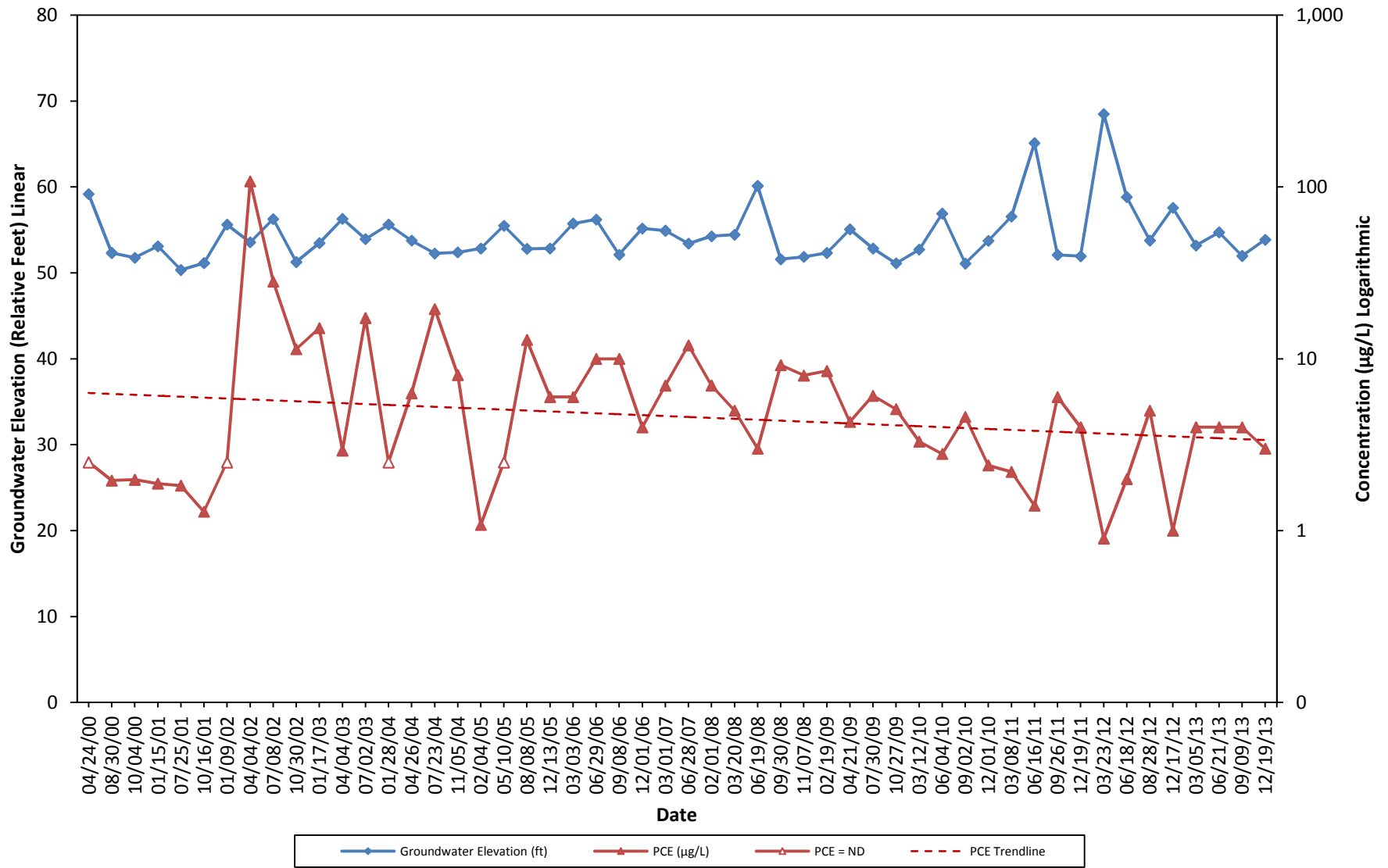
DATE  
**10/1/55**

BY  
**Clatsop**

## **Appendix D: Hydrographs**

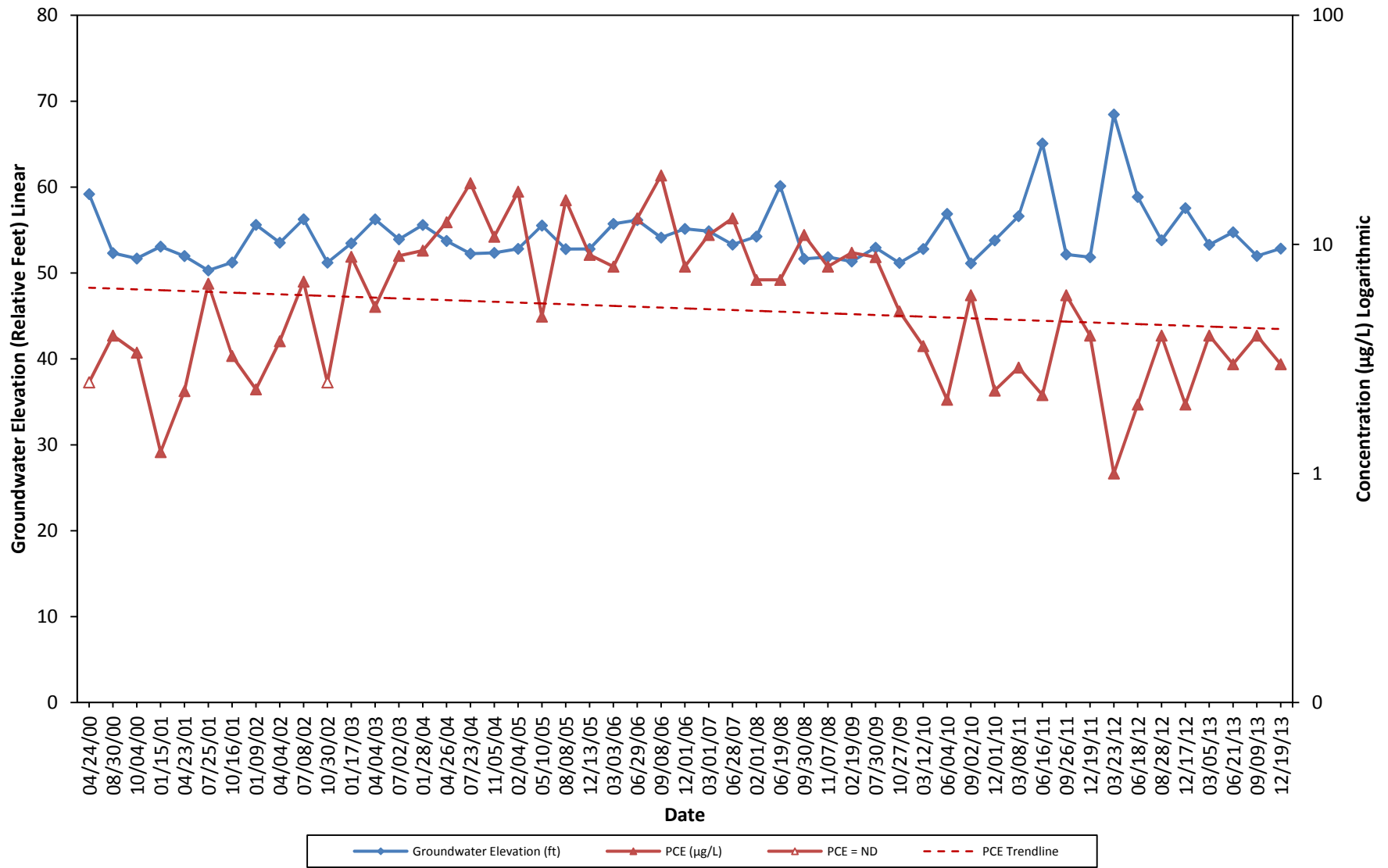
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MW-1  
Hydrograph - PCE  
76 Products Facility No. 351386  
1300 West 12th Street, Vancouver, Washington

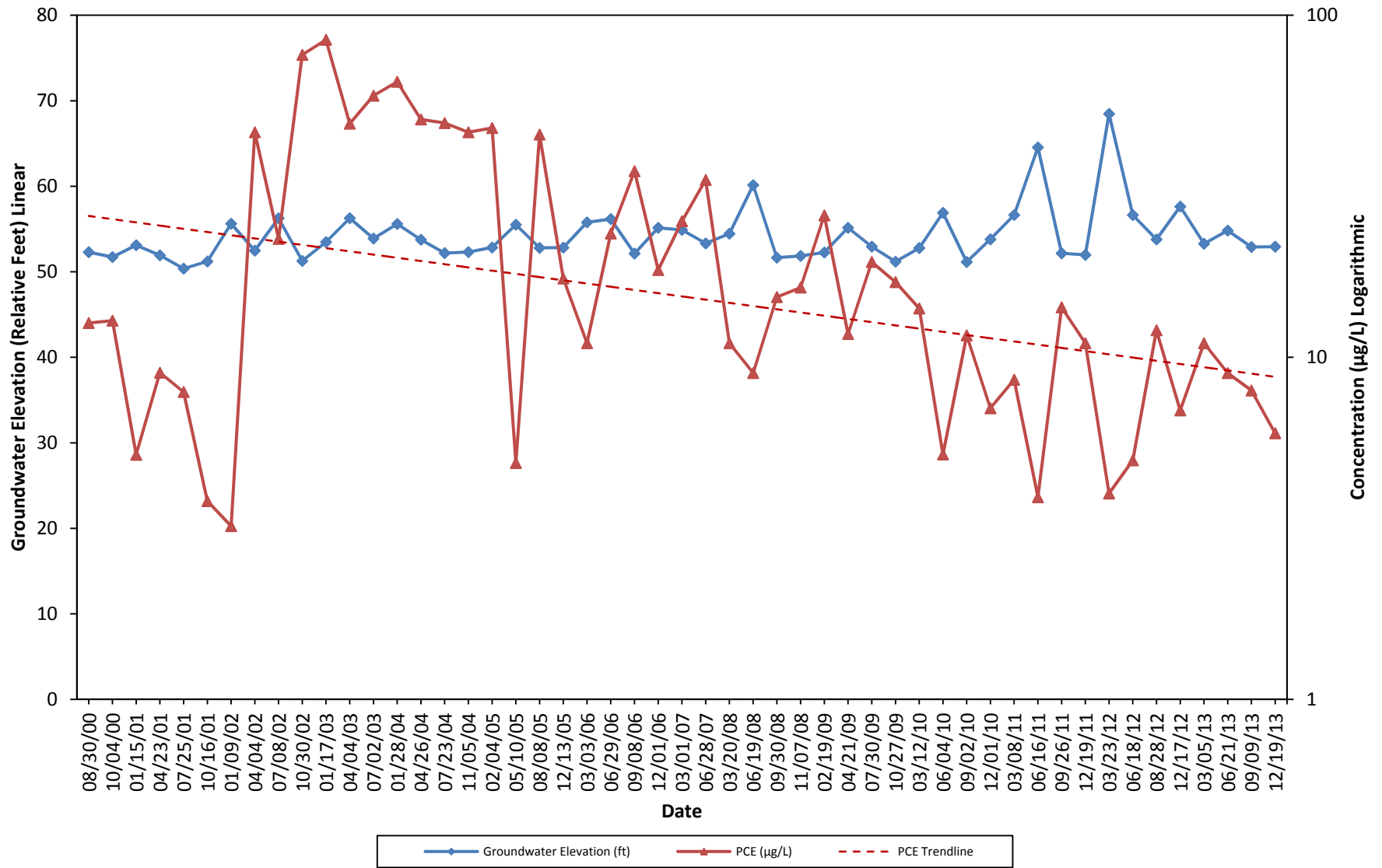




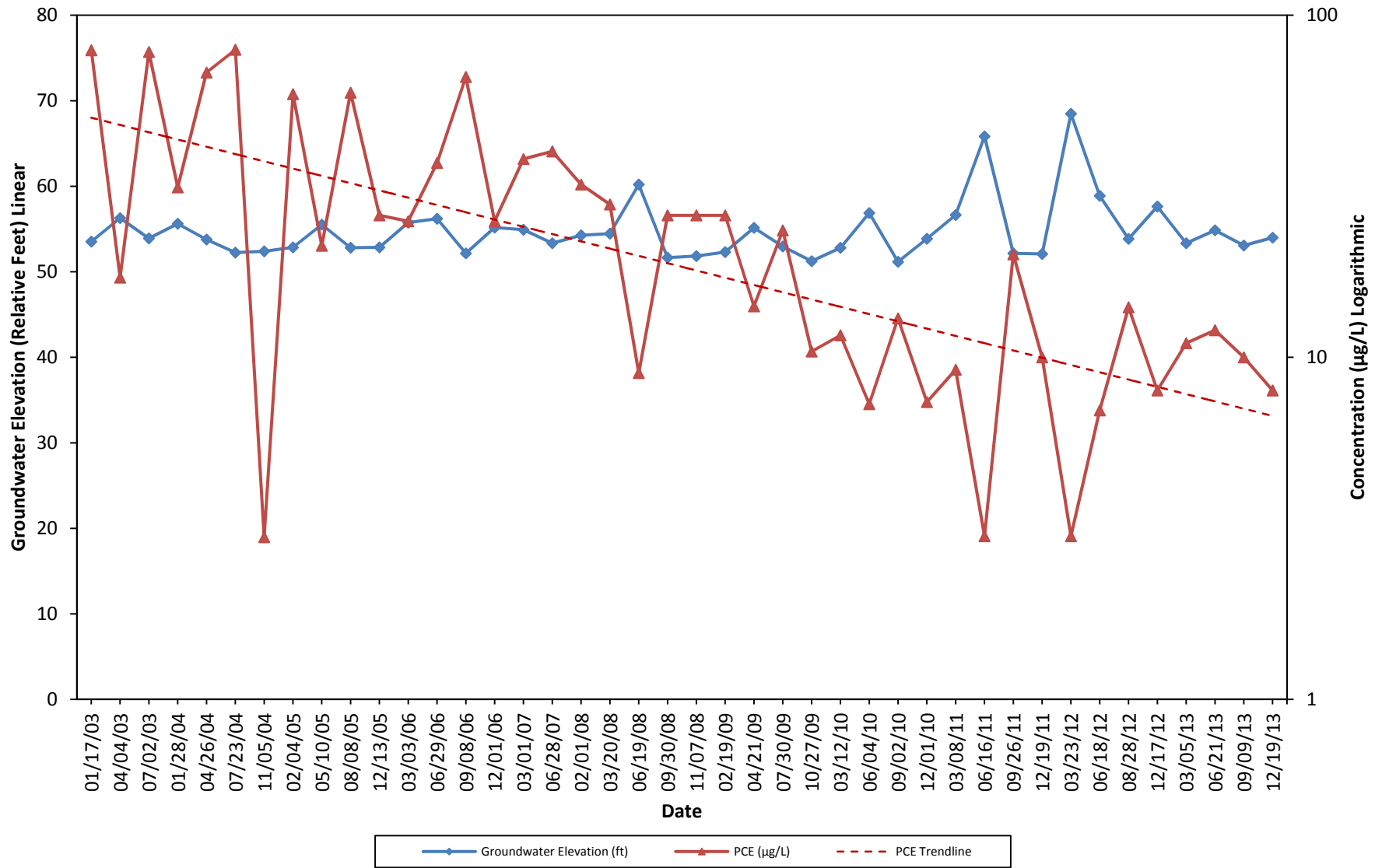
MW-2  
Hydrograph - PCE  
76 Products Facility No. 351386  
1300 West 12th Street, Vancouver, Washington



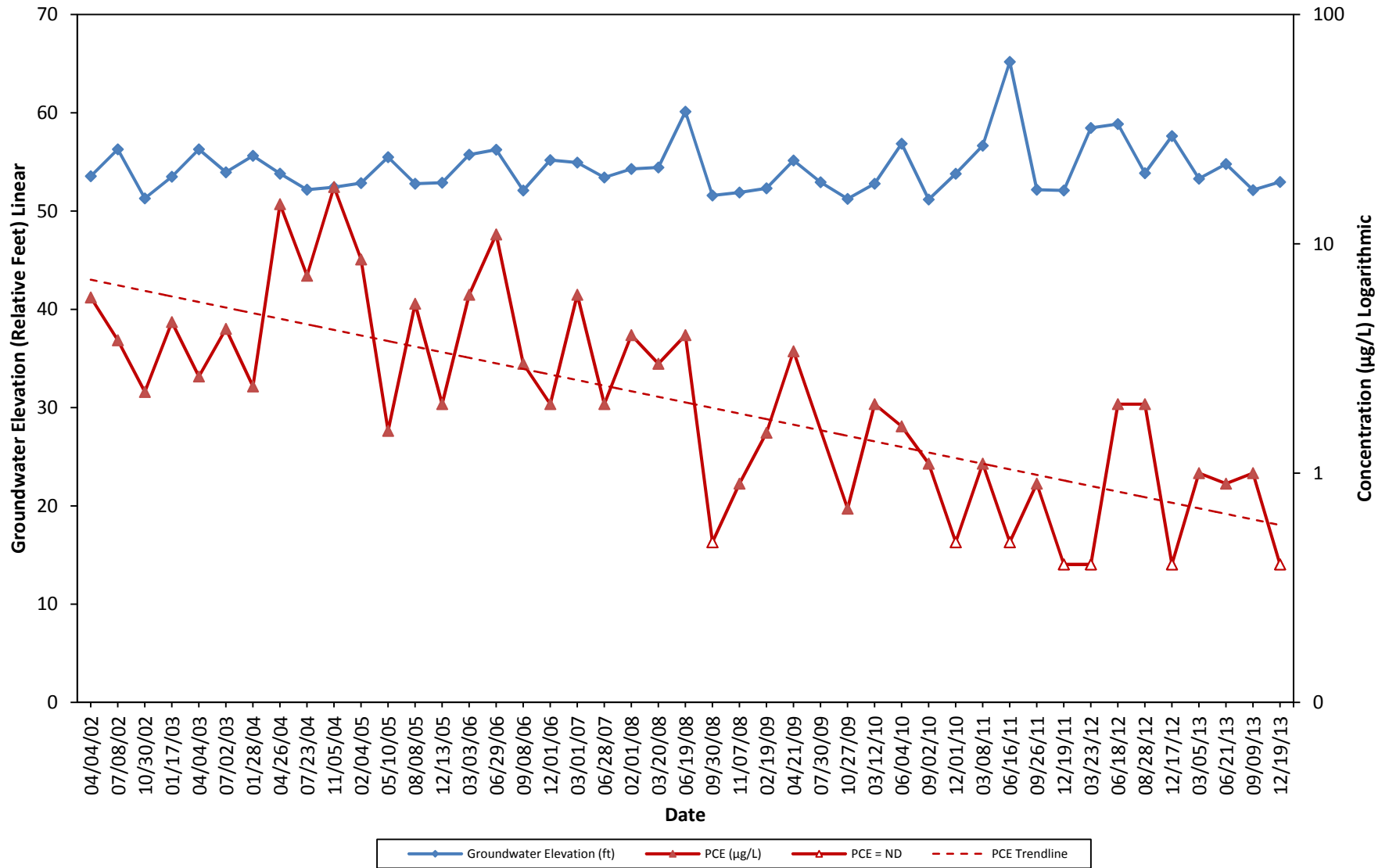
**MW-4**  
**Hydrograph - PCE**  
**76 Products Facility No. 351386**  
**1300 West 12th Street, Vancouver, Washington**



MW-5A  
Hydrograph - PCE  
76 Products Facility No. 351386  
1300 West 12th Street, Vancouver, Washington



MW-6  
Hydrograph - PCE  
76 Products Facility No. 351386  
1300 West 12th Street, Vancouver, Washington



**Appendix E:**  
**Email correspondence with Craig Rankine Licensed Hydrogeologist with**  
**Washington Department of Ecology on February 11, 2014**

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## Lembrick, Andrew P.

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**From:** Rankine, Craig (ECY) <cran461@ECY.WA.GOV>  
**Sent:** Tuesday, February 11, 2014 11:38 AM  
**To:** Lembrick, Andrew P.  
**Subject:** RE: Ecology Report

Andrew,

I have not heard from Susie at this point and do not know what she has been able to find regarding the report referenced below.

Any report we have in our files is publically available to anyone making a request. I may have read the below referenced report some time ago but do not have a copy of it.

The topic is fairly familiar as anyone doing cleanup is looking for potential sources. However most reports containing this type of information are from the early 2000's and site conditions at a number of the sites listed have changed, been cleaned up. If we talked I might be able to give site specific information or route you to the PM that has the most recent site information.

In the October 2002 Pacific Groundwater Group prepared Draft Report Evaluation of Clark Public Utilities Proposed South Lake Wellfield.

In this report PGG list facilities of highest risk: Cadet Manufacturing, Swan Manufacturing and ST Services (formerly GATX Terminals) now NuStar Energy LP. [TCE and PCE is where you find it, sometimes in small extent. Cadet/Swan/NuStar are definite source areas but levels have dropped significantly from the late 1990's till now. These sites are through the RI's and March 11, 2014 we will get a FS.]

Facilities of intermediate risk: Burlington Northern-Santa Fe Railroad, Automotive Services, 2001 Roosevelt Way, Chevron Bulk Plant, Tetra Pak, General Chemical, Alcoa, Rufener property.

Facilities of lowest risk: Fort Vancouver Plywood, Great Western Chemical, Carborundum Company, Inman Oil, Silgan Container Corp., Frito Lay.

I am or have worked on a number of these sites.

Hopefully information here is of some use.

Craig

Craig Rankine, RG, LHG  
Dept. of Ecology, Toxics Cleanup Program  
Vancouver Field Office  
2108 Grand Blvd, Vancouver, 98661  
(360) 690-4795

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**From:** Lembrick, Andrew P. [mailto:ANDREW.P.LEMBRICK@leidos.com]  
**Sent:** Monday, February 10, 2014 10:01 AM  
**To:** Rankine, Craig (ECY)  
**Cc:** Kozlowska, Kinga B.  
**Subject:** FW: Ecology Report

Hi Mr. Rankine,

We have been trying to track down an Ecology Report (2000) referenced by Kennedy Jenks, identifying source areas of PCE/TCE in the Fruit Valley/West Vancouver area. Susie Baxter may have tried to contact your office and Bryan DeDonker with Clark County had recommended I contact you regarding information for the area.



The specific report that referenced the Ecology report is titled "Remedial Investigation, Risk Assessment, and Feasibility Study Report (RI/RA/FS Report)Former Strebor Facility Tetra Pak Materials, August 2004."

According to the report it was a study performed as a Site Assessment Cooperative Agreement between EPA and the department of Ecology. The study was performed between July 1, 1999 and June 30, 2000. The results of the study identified seven source areas for TCE/PCE. We are trying to locate this report as we have had historical detections of PCE/TCE at a site we are managing and are trying to locate information on potential source areas. Does this study sound familiar to you? Would the report be available to us?

Let me know if you have any questions. Thanks.

**Andrew Lembrick | Leidos**

Project Geologist | Engineering Solutions Group

phone: 425.398.2104

mobile: 425.471.2198

[andrew.p.lembrick@leidos.com](mailto:andrew.p.lembrick@leidos.com) | [leidos.com/engineering](http://leidos.com/engineering)

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Portland, OR 97204

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**From:** Kozlowska, Kinga B.  
**Sent:** Monday, February 10, 2014 9:20 AM  
**To:** Lembrick, Andrew P.  
**Subject:** FW: Ecology Report

FYI

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**From:** Baxter, Susan (ECY) [<mailto:SFILE461@ECY.WA.GOV>]  
**Sent:** Friday, February 07, 2014 2:56 PM  
**To:** Kozlowska, Kinga B.  
**Subject:** RE: Ecology Report

Hi Kinga,

I am still looking to see if I can find the report you requested. I have also asked staff in our Vancouver Field Office for ideas. You mention that the report was prepared by Ecology. Do you know which program might have produced the report? Was it an Environmental Assessment Study, a water quality investigation or related to a contaminated cleanup site?

I have searched through the publications that are available online and I have searched through the reports that are in our library and have not been able to find anything yet.

Thank you,  
*Susie Baxter*  
Records and Public Disclosure  
Southwest Regional Office  
Department of Ecology  
[susan.baxter@ecy.wa.gov](mailto:susan.baxter@ecy.wa.gov)  
(360) 407-6365

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**From:** Kozlowska, Kinga B. [<mailto:KINGA.B.KOZLOWSKA@leidos.com>]  
**Sent:** Tuesday, February 04, 2014 1:35 PM  
**To:** Baxter, Susan (ECY)  
**Subject:** FW: Ecology Report

Susie,  
Can you help with locating this report? – please see below.

Thank you,  
Kinga

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**From:** Gritsch, Cherie (ECY) [<mailto:CGRI461@ECY.WA.GOV>]  
**Sent:** Tuesday, February 04, 2014 1:11 PM  
**To:** Kozlowska, Kinga B.  
**Subject:** RE: Ecology Report

Kinga,

If this is in the Vancouver, WA area I think you should try Susie Baxter, Southwest Regional Office Public Disclosure Coordinator. Her email address is [sfle461@ecy.wa.gov](mailto:sfle461@ecy.wa.gov). You might need more information than is provided below however. I wasn't sure quite what to look for in the facility site database or if this was a Toxics Cleanup Section or Water Quality Section report. Any other information would be helpful.

*Chérie Gritsch | Public Disclosure*  
*Department of Ecology*  
*3190 160th Ave SE*  
*Bellevue, WA 98008*  
*425-649-7235 | 425-649-4450 (fax)*  
[cgri461@ecy.wa.gov](mailto:cgri461@ecy.wa.gov)  
[NWRO\\_Public\\_Request@ecy.wa.gov](mailto:NWRO_Public_Request@ecy.wa.gov)



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**From:** Kozlowska, Kinga B. [<mailto:KINGA.B.KOZLOWSKA@leidos.com>]  
**Sent:** Tuesday, February 04, 2014 11:16 AM

**To:** Gritsch, Cherie (ECY)

**Subject:** Ecology Report

Hi Cherie,

I was wondering if could help me figure out how to obtain a report prepared by Ecology. I am looking for **Vancouver West Industrial District Ground Water Contaminant Source Identification/Screening** report prepared in June 2000. I am not sure who to ask for it.

Thank you,

Kinga

**Kinga B Kozlowska | Leidos**

Environmental Scientist

phone: 425.482.3311 | fax 425.485.5566

18913 North Creek Parkway, Ste 101

Bothell, WA 98011

[kinga.b.kozlowska@leidos.com](mailto:kinga.b.kozlowska@leidos.com) | [leidos.com/engineering](https://leidos.com/engineering)



NATIONAL SECURITY | HEALTH | ENGINEERING

Please consider the environment before printing this email.

**Appendix F:**

**List of Potential Offsite PCE Sources and Address Locations**

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## **List of Potential Offsite TCE/PCE Sources and Location Addresses**

2001 Roosevelt Way/Vancouver Drum Site/Malcolm Montague  
1600 West 20<sup>th</sup> Street, Vancouver, Washington

Alcoa  
Northwest Old Lower River Road, Vancouver, Washington

Automotive Services, Inc.  
2327 West Mill Plain Boulevard, Vancouver, Washington

Cadet Manufacturing,  
2500 West Fourth Plain Boulevard, Vancouver Washington

Great Western Malting  
1705 NW Harborside Dr, Vancouver, WA

ST Services/GATX/NuStar LP  
2565 Northwest Harborside Drive, Vancouver, Washington

Swan Manufacturing  
2001 West Fourth Plain Boulevard, Vancouver, Washington

Tetra Pak  
3125 Thompson Avenue, Vancouver, Washington