



Mail to: PO Box 9777, EC2-2C1
Federal Way, Washington 98063-9777
Ship to: 33663 Weyerhaeuser Way S
Federal Way, Washington 98003
Tel (253) 924-3746
Fax (253) 924-2013
E-mail: jennifer.bariska@weyerhaeuser.com

December 28, 2004

Mr. Mark Edens
Unit Supervisor
Northwest Regional Office
Department of Ecology
3190 160th Avenue SE
Bellevue, WA 98008-5452

RECEIVED
DEC 29 2004
DEPT OF ECOLOGY

Re: Weyerhaeuser Everett West, Groundwater Monitoring Report- September 2004
Consent Decree, Summons No. 94-2-07559-2

Dear Mr. Edens:

Enclosed is one copy of the report titled "Groundwater Monitoring Report -September 2004, Weyerhaeuser Everett West." This report will summarize the groundwater measurements and samples taken at three out of seven site confirmation wells (MW-1301, MW-1302, MW-1501).

Upon visiting the site, the consultant from Shaw Environmental was not able to locate the remaining four wells; one well appears to have been paved over, two of the wells could not be located in the thick vegetation and the fourth well (MW-1701) was abandoned in February 1998.

Weyerhaeuser is scheduled to re-sample the wells in September 2005. Prior to that sampling date, Weyerhaeuser plans on submitting to Ecology a memo discussing the potential sources for the arsenic impacted groundwater.

Should you require further information, please contact me at (253) 924-3746.

Sincerely,


Jennifer Bariska
Environmental Manager

Enclosure

cc: Todd Nichols, Snohomish Art Council – with enclosure
Ray Butts, Florida Light and Power – with enclosure



Shaw® Shaw Environmental, Inc.

RECEIVED

DEC 21 2004

ENVIRONMENTAL

Shaw Environmental, Inc.

19909 120th Ave. N.E., Suite 101

Bothell, WA 98011

425.485.5000

Fax: 425.486.9766

December 17, 2004

Project 102813(9)

RECEIVED

DEC 29 2004

DEPT OF ECOLOGY

Ms. Jennifer Bariska
Weyerhaeuser Company
P.O. Box 9777, EC2-2C1
Federal Way, Washington 98063-9777

Re: Groundwater Monitoring Report – September 2004
Weyerhaeuser Everett West

Dear Ms. Bariska:

Shaw Environmental, Inc. (Shaw) is submitting this letter summarizing the results of the September 2004 groundwater sampling event at the Weyerhaeuser Everett West property (site). Weyerhaeuser has conducted soil remediation and groundwater compliance monitoring under a Consent Decree issued by Ecology on October 12, 1994. The Consent Decree stipulates remedial actions, compliance monitoring details, soil and groundwater cleanup standards, reporting requirements, and procedures for amendments to the Consent Decree.

Site Background

The 35-acre site (Figure 1) is on the western portion of former Weyerhaeuser property in Everett, Washington. Weyerhaeuser began site assessment in July 1992, and installed seven groundwater monitoring wells in August 1992. In October 1994, Weyerhaeuser conducted site remediation, which included soil excavation and disposal and confirmation soil sampling. Soil cleanup levels specified in the Consent Decree were attained at the site on December 5, 1994 and described in EMCON's *Closure Report, Everett West Site*, dated February 1995.

On behalf of Weyerhaeuser, EMCON prepared a *Groundwater Compliance Monitoring Plan* dated March 2, 1995 to evaluate the performance and long-term effectiveness of the site remediation.

Groundwater compliance monitoring was conducted from February 1995 to August 1999 according to the Groundwater Compliance Monitoring Plan (GCMP). Quarterly groundwater monitoring was conducted from February 1995 to November 1997, and annual monitoring was conducted in August 1998 and August 1999. Groundwater water levels were measured, and samples from seven on-site wells were analyzed for three contaminants of concern: total petroleum hydrocarbons (TPH) as diesel (TPH-D), TPH as oil (TPH-O), and arsenic. From

February 1997 to August 1998, the TPH-D concentrations steadily decreased at all wells. In August 1999, the TPH-D concentrations in groundwater samples did not exceed the cleanup standards in any wells, and were less than maximum concentrations previously detected in site groundwater samples. No TPH-O concentrations at any well were detected above the reporting limit in the groundwater samples collected in the final two years of monitoring (1998 and 1999). Arsenic levels were monitored at the site to evaluate possible migration of arsenic from offsite and upgradient sources. Under the Consent Decree a cleanup standard of 5 µg/L was established for arsenic. Arsenic concentrations exceeded cleanup standards in several of the wells during the compliance monitoring period. The highest detected arsenic concentration in 1999 was 32 µg/L in monitoring well MW-1501.

Current Sampling Activities

Based on a request from the Washington State Department of Ecology (Ecology), Shaw conducted a groundwater monitoring event on September 27, 2004. Based on previous records, the Everett West site reportedly contains seven monitoring wells: MW-1201, MW-1202, MW-1203, MW-1301, MW-1302, MW-1501, and MW-1701. These monitoring well locations are presented on Figure 2. However, upon visiting the site, Shaw was only able to locate three of the wells (MW-1301, MW-1302, and MW-1501). One of the well locations appeared to have been paved over and two wells could not be located due to thick brambles and vegetation. Monitoring well MW-1701 was abandoned in February 1998.

Groundwater sampling activities and groundwater level measurements were, therefore, conducted only at wells MW-1301, MW-1302, and MW-1501 to identify current arsenic and TPH-D and TPH-O levels at the site.

Groundwater Measurements

Prior to initiation of sampling activities on September 27, 2004, Shaw measured the depths to groundwater in the three monitoring wells. Table 1 presents depth-to-groundwater measurements recorded prior to sampling.

Groundwater Sampling

A groundwater sample was collected from each of the three monitoring wells by Shaw on September 27, 2004, using the low-flow sampling methods per the GCMP. Field parameters (pH, specific conductance, temperature, dissolved oxygen and oxidation/reduction potential) were measured until stabilization was observed. Stabilized parameters were collected at the time of sampling and are summarized in Table 2. Sample handling procedures followed the GCMP.

Weyerhaeuser field sampling data sheets were completed at the time of sampling. Copies of the field sampling data sheet and chain-of-custody and request for analysis forms are provided in Attachment A.

The samples were submitted to the Weyerhaeuser Analytical Testing Services Laboratory in Federal Way, Washington on September 27, 2004.

Laboratory Analysis

The groundwater samples were analyzed by the Weyerhaeuser Analytical Testing Services Laboratory following the analytical specifications in the GCMP. All samples were analyzed for TPH-D and TPH-O by Ecology Method NWTPH-Dx and for dissolved arsenic by U.S. Environmental Protection Agency Method 3020/200.8.

Laboratory Results

Table 3 summarizes the analytical results associated with the September 27, 2004 sampling event along with historical data collected at the site. A copy of the laboratory report is included in Attachment B. The laboratory results were reviewed for quality control specifications and discussed in a data validation memo (Attachment C).

TPH-D and TPH-O concentrations in samples from all three wells were not detected above the laboratory reporting limit, and/or the sums of the TPH concentrations were well below the cleanup standard for the site (1 mg/L). In monitoring well MW-1302, arsenic was not detected at a concentration above the laboratory reporting limit. In monitoring wells MW-1301 and MW-1501, arsenic was detected at concentrations of 21 µg/L and 12 µg/L, respectively, both of which exceed the cleanup standard of 5 µg/L.

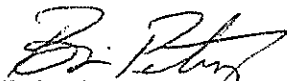
Conclusions

Groundwater sampling and analysis at the Everett West site indicates that TPH concentrations remain well below the cleanup standard. This supports previous findings, that TPH in groundwater is not a concern at the site. Arsenic concentrations are also similar to previously detected levels at the site, which exceed the cleanup standard. However, no historic arsenic use, storage, or disposal is documented at the site.

If you have any questions or comments regarding the findings of this report, please do not hesitate to call the undersigned at (425) 485-5000.

Sincerely,

SHAW ENVIRONMENTAL, INC.


Brian Peters, L.G.
Project Manager

Attachments: Limitations

- Table 1 - Water-Level Data Summary
- Table 2 - Groundwater Parameter Data Summary
- Table 3 - Summary of Laboratory Analytical Data
- Figure 1 - Location Map
- Figure 2 - Site Map
- Attachment A - Field Sampling Data Sheets and Request for Analyses Forms
- Attachment B - Laboratory Report and Chain-of-Custody
- Attachment C - Data Validation Report

Limitations

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, nor the use of segregated portions of this report.

Table 1
Water-Level Data Summary
September 2004
Weyerhaeuser Everett West Site

Well Number	Date Measured	Time	Depth to Water (feet below top of casing)
MW-1201	NM	NM	NM
MW-1202	NM	NM	NM
MW-1203	NM	NM	NM
MW-1301	9/27/04	1202	8.89
MW-1302	9/27/04	1248	14.58
MW-1501	9/27/04	1319	11.14
NOTE: NM = not measured.			

Table 2
Groundwater Parameter Data Summary
September 2004
Weyerhaeuser Everett West Site

Well Number	Date Measured	Time	pH	Temp (°C)	Dissolved Oxygen (mg/L)	Specific Cond. (µS/cm)	Turbidity (NTU)	ORP (Ev)
MW-1201	NM	NM	NM	NM	NM	NM	NM	NM
MW-1202	NM	NM	NM	NM	NM	NM	NM	NM
MW-1203	NM	NM	NM	NM	NM	NM	NM	NM
MW-1301	9/27/04	1225	6.38	17.90	0.34	963	5.14	-48.9
MW-1302	9/27/04	1310	6.59	18.51	0.38	1485	20.4	-78.2
MW-1501	9/27/04	1345	6.46	18.58	0.34	762	4.59	-62.1
NOTE: NM = not measured								

Table 3
Summary of Laboratory Analytical Data
September 2004
Weyerhaeuser Everett West Site

Date	Table 3a – TPH-D Concentrations (mg/L)						
	MW-1201	MW-1202	MW-1203	MW-1301	MW-1302	MW-1501	MW-1701
06/93	0.25	ND	ND	ND	1.2	ND	ND
02/94	ND	0.63	ND	0.16	0.37	ND	ND
05/95	ND	0.24	0.12	0.29	0.26	ND	ND
08/95	0.19	0.18	0.17	ND	0.32	ND	ND
11/95	0.74	0.38	0.96	0.51	0.66	0.11	ND
02/96	0.18	0.46	0.23	0.13	0.47	0.2	0.1
05/96	0.1	0.1	0.1	0.1	0.2	0.1	0.1
08/96	0.21	0.08	ND	ND	0.085	ND	ND
11/96	0.27	0.29	0.23	0.17	0.54	0.22	0.15
02/97	ND	0.28	ND	ND	0.31	ND	ND
05/97	ND	0.21	0.12	ND	0.25	ND	ND
08/97	ND	0.14	0.13	ND	0.25	ND	0.50
11/97	ND	0.30	0.20	ND	0.20	ND	ND
08/98	ND	0.055	ND	ND	0.10	ND	NS
08/99	0.36	0.51	0.39	0.37	0.56	0.44	NS
09/04	NS	NS	NS	0.069	0.22	0.11	NS

Note: NS = not sampled
 ND = not detected above laboratory detection limit

Date	Table 3b – TPH-O Concentration (mg/L)						
	MW-1201	MW-1202	MW-1203	MW-1301	MW-1302	MW-1501	MW-1701
06/93	ND	ND	ND	ND	0.43	ND	ND
02/94	ND	0.38	ND	ND	ND	ND	ND
05/95	ND	ND	ND	ND	ND	ND	ND
08/95	ND	ND	ND	ND	ND	ND	ND
11/95	0.47	0.79	0.86	0.73	0.69	0.33	0.26
02/96	0.25	0.3	0.28	0.25	0.38	0.25	0.25
05/96	0.25	0.25	0.25	0.25	0.25	0.25	0.25
08/96	ND	ND	ND	ND	ND	ND	ND
11/96	0.38	0.23	0.25	0.14	0.4	0.22	ND
02/97	ND	0.23	ND	ND	0.28	ND	ND
05/97	ND	0.18	ND	ND	ND	ND	ND
08/97	ND	ND	ND	ND	ND	ND	ND
11/97	ND	0.30	ND	ND	ND	ND	ND
08/98	ND	0.12	ND	ND	ND	ND	NS
08/99	ND	ND	ND	ND	ND	ND	NS
09/04	NS	NS	NS	ND	ND	ND	NS

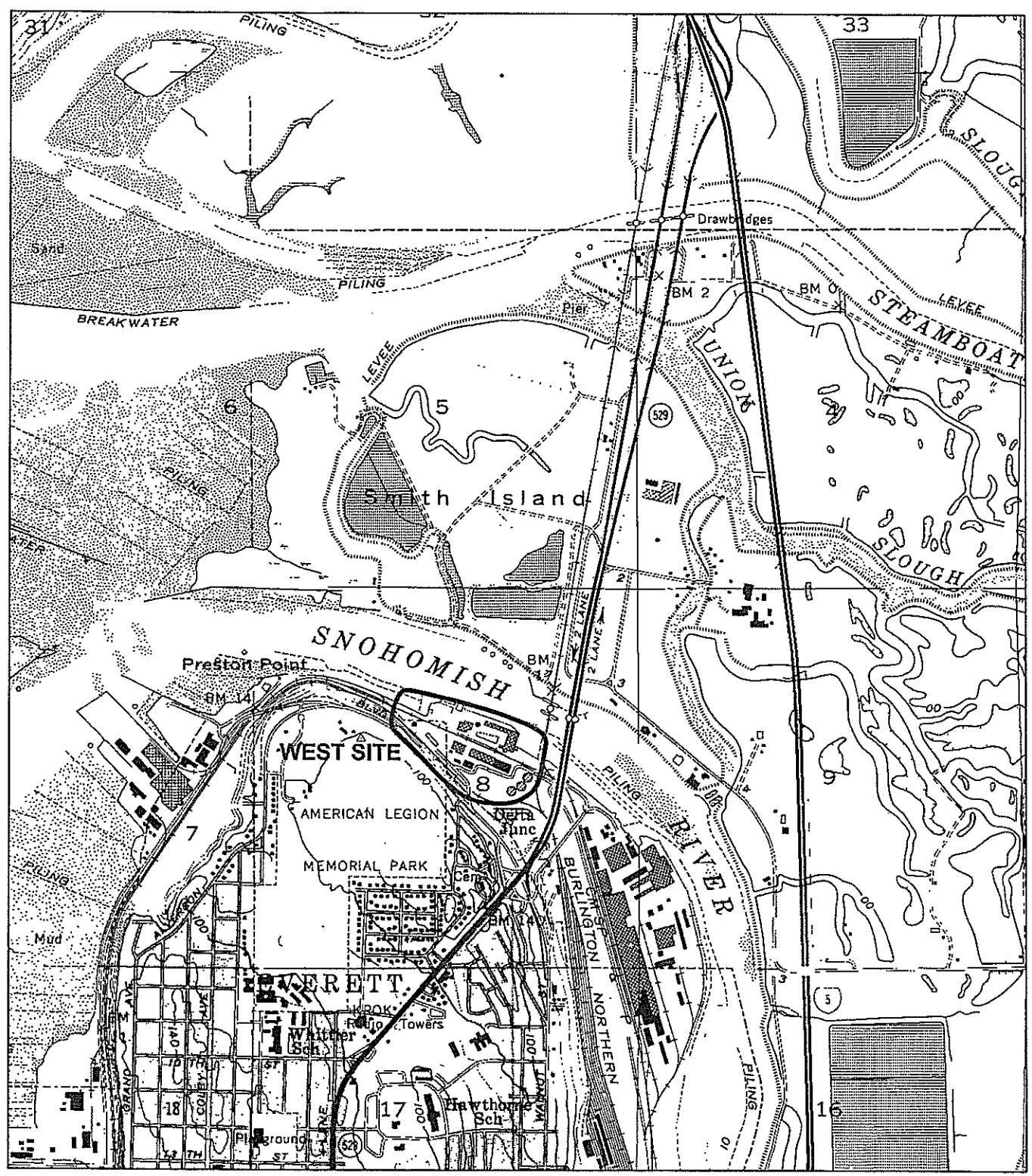
Note: NM = not measured
 ND = not detected above laboratory detection limit

Table 3, Continued
Summary of Laboratory Analytical Data
September 2004
Weyerhaeuser Everett West Site

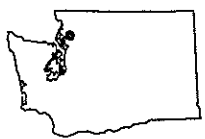
Date	Table 3c – Arsenic Concentration (ug/L)						
	MW-1201	MW-1202	MW-1203	MW-1301	MW-1302	MW-1501	MW-1701
06/93	5	20	58	100	19	NS	4
02/94	1	16	3	175	2	9	1
05/95	ND	10	3	54	6	6	ND
08/95	3	9	1	72	4	4	ND
11/95	3	8	11	67	16	16	ND
02/96	3	8	3	39	3	3	3
05/96	3	10	4	43	3	3	3
08/96	3	8	15	74	11	11	ND
11/96	ND	13	ND	50	ND	3	ND
02/97	ND	10	3	17	ND	ND	ND
05/97	ND	9	ND	45	ND	ND	ND
08/97	3	8	4	50	4	6	ND
11/97	4	15	ND	45	3	5	ND
08/98	ND	26	16	65	3	12	NS
08/99	ND	ND	5	32	ND	19	NS
09/04	NS	NS	NS	21	ND	12	NS

Note: NM = not measured
 ND = not detected above laboratory detection limit
 Cleanup level = 5 micrograms/Liter (bold = exceeds cleanup level)

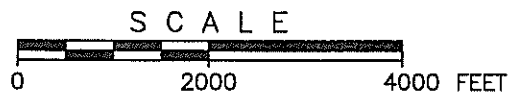
DRAWN BY: JAVILA 10/2004
 CHECKED BY: APPROVED BY: OFFICE: BOTHELL
 DRAWING NUMBER: 102813



XREF Files: IMAGE Files: ShowE&L..._w.bmp WeycoEastSiteMap.tif
 File: N:\Project\102813\Drawings\WECOWestSiteLocation.dwg Layout: Model User: johnovillo Oct 26, 2004 - 10:19am



WASHINGTON



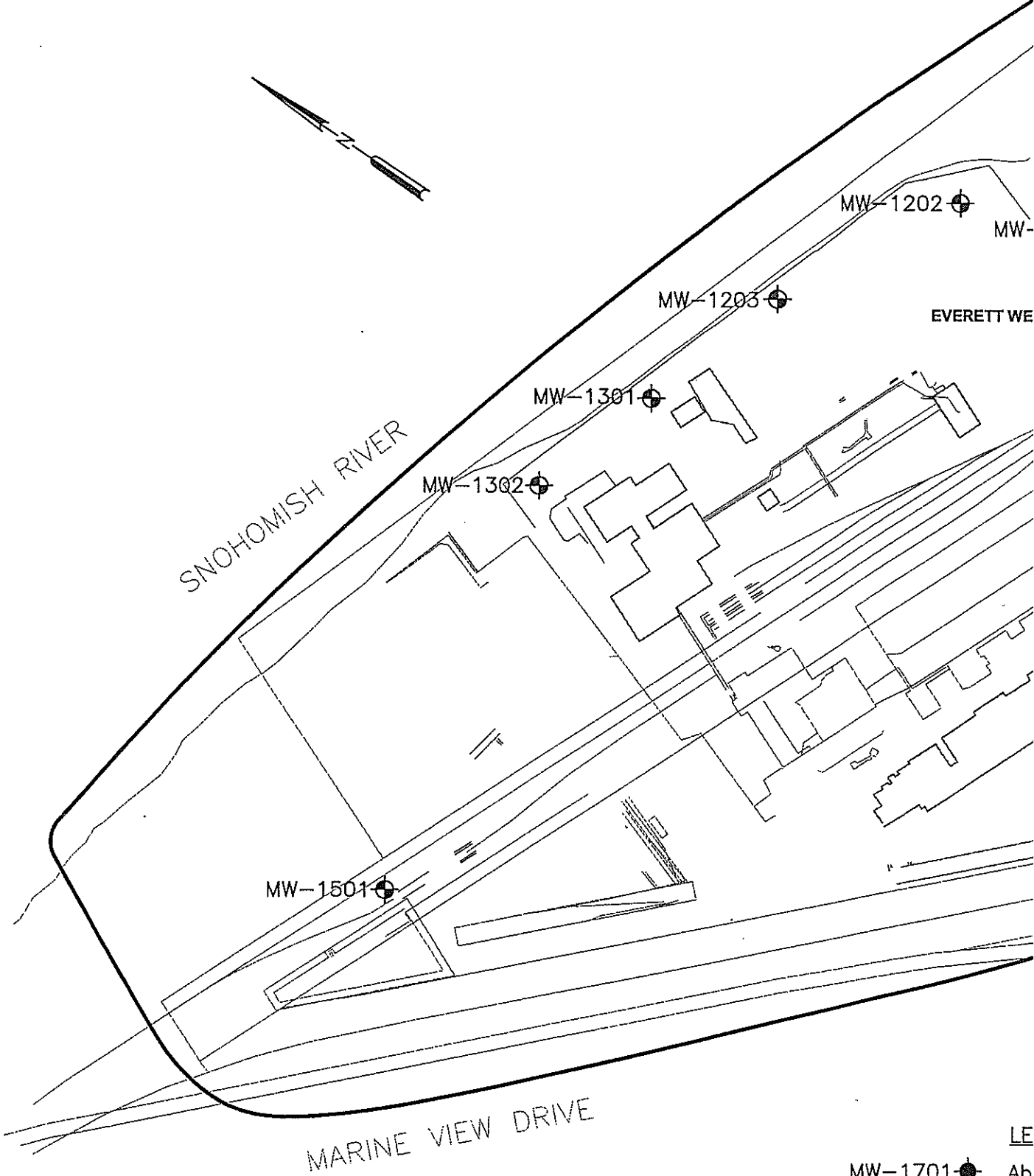
SOURCE:
 U.S.G.S. 7.5 Min. Quadrangle - MARYSVILLE, WASHINGTON.



Shaw
 Shaw Environmental, Inc. 19909 120th Ave. N.E., Suite 101
 Bothell, WA 98011
 Phone (425) 485-5000
 Fax (425) 486-9766

FIGURE 1
WEST SITE LOCATION MAP
 WEYERHAEUSER COMPANY
 EVERETT, WASHINGTON

DRAWN BY	CHECKED BY	APPROVED BY	OFFICE	DRAWING
JAVILA	10/2004		BOTHELL	NUMBER
				102813



MW-1202

MW-1203

EVERETT WE

MW-1301

MW-1302

MW-1501

MARINE VIEW DRIVE

MW-1701

MW-1501



Sit

File: \\msf\proj\102813\102813.dwg User: john.cofe Date: 11/17/2004 11:22:00 AM
 Plot: \\msf\proj\102813\102813.dwg User: john.cofe Date: 11/17/2004 11:22:00 AM

ATTACHMENT A
FIELD SAMPLING DATA SHEETS AND REQUEST FOR
ANALYSES FORMS

FIELD ACTIVITY DAILY LOG

DAILY LOG	DATE	9	27	04
	NO.			
	SHEET	1	OF	5

PROJECT NAME: Everett West - Weyerhaeuser PROJECT NO.: 102813 (09)

FIELD ACTIVITY SUBJECT: Annual Groundwater Sampling

DESCRIPTION OF DAILY ACTIVITY AND EVENTS

Arrive @ 1200 - Calibrated YSI Multimeter.
 Set up on MW-1301 for low flow sampling.
 Sampled MW-1301, MW-1302, and MW-1501.
 MW-1203 is likely covered by new asphalt and MW-1202 and MW-1201 could not be located due to extensive thick blackberry and cottonwood growth.
 Purge water ≈ 3 gallons was placed in a labeled 5 gallon bucket and stored on the Everett East Site until disposal can be arranged.
 Departed 1415
 Submitted Iceed samples to WATS on 9-28-04

VISITORS ON SITE:

CHANGES FROM PLANS AND SPECIFICATIONS, AND OTHER SPECIAL ORDERS AND IMPORTANT DECISIONS:

WEATHER CONDITIONS:
Fog \rightarrow Sun

IMPORTANT TELEPHONE CALLS:
9-27-04 - Jennifer Barista - Go ahead and sample 3 wells.

SHAW E&I PERSONNEL ON SITE: Aaron Molden

SIGNATURE: _____

DATE: 9-27-04

WEYERHAEUSER GROUNDWATER SAMPLING RECORD

Company <input type="checkbox"/> ES&T/WTC <input type="checkbox"/> ES&T/NB <i>Sitaw Environmental Inc</i>	Project No. <i>02813 (09)</i>	Site ID <i>MW-1301</i>
Facility <i>Everett West</i>	Date (m/d/y) <i>9-27-04</i>	

Site Description Monitoring Well Extraction Well Irrigation Well Spring Borehole Probe Other:

Air Temp: *55* °C °F Weather: *FOG*

Well Locked? yes no Damaged/Repairs Needed:

TOC MP Description:

TOC/MP Stickup: *0* ft m above/below ground Well Inside Diameter (ID): 2-inch 4-inch Other:

Site Remarks (neaby wells pumping, tide, stream stage, etc.) *Low*

Water Level Data Measurement Units: ft m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Initial	Confirmation	At Start of Purging	At End of Purging			Remarks
Time (hh:mm)	<i>12:02</i>	<i>12:03</i>	<i>12:05</i>	<i>12:10</i>	<i>12:15</i>	<i>12:20</i>	
Depth to Water	<i>8.34</i>	<i>8.34</i>	<i>8.34</i>	<i>8.42</i>	<i>8.44</i>	<i>8.44</i>	
Tape Correction							
Water Level (WL)	<i>8.34</i>	<i>8.34</i>	<i>8.34</i>	<i>8.42</i>	<i>8.44</i>	<i>8.44</i>	
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: *~90'* Grab Bailor Pump Description: *Peristaltic*

Casing Volume: [(TD) - (WL)] * [(Well ID)]² * [(Conversion Factor)] = _____ gal liters

Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches

Well Goes Dry While Purging

<input type="checkbox"/> Cum. Vol. Purged					(Final)	Meter Type	Remarks
<input checked="" type="checkbox"/> Pumping Rate	<i>~120ml/minute</i>						
Time Measured (hh:mm)	<i>12:10</i>	<i>12:15</i>	<i>12:20</i>	<i>12:25</i>		<i>YSE</i>	
pH <input checked="" type="checkbox"/> Temp. Compensated	<i>6.39</i>	<i>6.34</i>	<i>6.35</i>	<i>6.38</i>		<i>YSE</i>	
Temperature °C <input checked="" type="checkbox"/> °F	<i>17.61</i>	<i>17.84</i>	<i>17.79</i>	<i>17.90</i>		<i>YSE</i>	
Dissolved Oxygen mg/l	<i>0.58</i>	<i>0.44</i>	<i>0.38</i>	<i>0.34</i>		<i>YSE</i>	
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC µS/cm	<i>978</i>	<i>970</i>	<i>969</i>	<i>963</i>		<i>YSE</i>	
Turbidity <input type="checkbox"/> NTU	<i>Small Particles</i>	<i>Clear</i>	<i>Clear</i>	<i>5.14</i>		<i>HACH</i>	
Color/Tint	<i>Colorless</i>	<i>Colorless</i>	<i>Colorless</i>	<i>Colorless</i>		<i>Vis</i>	
Odor	<i>NNO</i>	<i>NNO</i>	<i>NNO</i>	<i>NNO</i>		<i>olefins</i>	
<i>ORP</i>	<i>-48.2</i>	<i>-48.7</i>	<i>-50.2</i>	<i>-46.9</i>		<i>YSE</i>	

Record time purging starts and ends in Water Level Data section. Cum. Vol Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: *~90'* Grab Bailor Pump Description: *Peristaltic*

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<i>40927-WS6-1301</i>	<i>P0</i>	<i>9-27-04</i>	<i>12:30</i>	<i>4</i>	<i>2</i>				

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinsate; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmddyy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampled By (print) *Aaron Moldaver* Signature

WEYERHAEUSER GROUNDWATER SAMPLING RECORD

Company <input type="checkbox"/> ES&T/WTC <input type="checkbox"/> ES&T/NB <i>SITAW Environmental Inc</i>	Project No. <i>02813 (09)</i>	Site ID <i>MW-1302</i>
Facility <i>Everett West</i>		Date (m/d/y) <i>9-27-04</i>

Site Description Monitoring Well Extraction Well Irrigation Well Spring Borehole Probe Other:

Air Temp: *60* °C °F **Weather:** *Overcast*

Well Locked? yes no **Damaged/Repairs Needed:** *NONE*

TOC MP **Description:**

TOC/MP Stickup: *0* ft m above/below ground **Well Inside Diameter (ID):** 2-inch 4-inch Other:

Site Remarks (neaby wells pumping, tide, stream stage, etc.) *Low/Medium Low*

Water Level Data Measurement Units: ft m Well or Borehole Total Depth (TD) from MP or TOC: *9.51*

	Initial	Confirmation	At Start of Purging	At End of Purging	1300	1305	1310
<input type="checkbox"/> E-Tape, #							
<input type="checkbox"/> Steel Tape <input type="checkbox"/> Other							
Time (hh:mm)	<i>12:48</i>	<i>12:49</i>	<i>12:50</i>	<i>12:55</i>	<i>1300</i>	<i>1305</i>	<i>1310</i>
Depth to Water	<i>8.16</i>	<i>8.16</i>	<i>8.16</i>	<i>8.19</i>	<i>8.18</i>	<i>18.14</i>	
Tape Correction							
Water Level (WL)	<i>8.16</i>	<i>8.16</i>	<i>8.16</i>	<i>8.19</i>	<i>8.18</i>	<i>18.14</i>	
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: *9.0* Grab Bailor Pump Description: *Peristaltic*

Casing Volume: [(TD) - (WL)] * [(Well ID)]² * [(Conversion Factor)] = _____ gal liters
 Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches Well Goes Dry While Purging

	(Initial)	(Final)	(Final)	(Final)	(Final)	(Final)	(Final)
<input type="checkbox"/> Cum. Vol. Purged							
<input checked="" type="checkbox"/> Pumping Rate	<i>120ml/minute</i>						
Time Measured (hh:mm)	<i>12:55</i>	<i>1300</i>	<i>1305</i>	<i>1310</i>			
pH <input checked="" type="checkbox"/> Temp. Compensated	<i>6.43</i>	<i>6.47</i>	<i>6.58</i>	<i>6.59</i>			
Temperature °C °F	<i>18.67</i>	<i>18.57</i>	<i>18.54</i>	<i>18.51</i>			
Dissolved Oxygen mg/l	<i>0.54</i>	<i>0.48</i>	<i>0.43</i>	<i>0.38</i>			
<input checked="" type="checkbox"/> SC or <input type="checkbox"/> EC µS/cm	<i>1462</i>	<i>1489</i>	<i>1489</i>	<i>1485</i>			
Turbidity <input type="checkbox"/> NTU	<i>Sl. Turb</i>	<i>Sl. Turb</i>	<i>v. Sl. Turb</i>	<i>20.4</i>			
Color/Tint	<i>Dk Grey</i>	<i>Dk Grey</i>	<i>lt Grey</i>	<i>Colorless</i>			
Odor	<i>NWD</i>	<i>NWD</i>	<i>NWD</i>	<i>NWD</i>			
ORP	<i>-52.2</i>	<i>-57.1</i>	<i>-74.2</i>	<i>-78.2</i>			

Record time purging starts and ends in Water Level Data section. Cum. Vol Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (µS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (µS/cm). µS/cm = µmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: *9.0* Grab Bailor Pump Description: *Peristaltic*

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 µm)	Lab ID	Case ID	SDG ID	Remarks
<i>40927-WSG-1302</i>	<i>P0</i>	<i>9-27-04</i>	<i>1315</i>	<i>2</i>	<i>1</i>				

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: P0, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinsate; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmddy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinsate, spike, and/or blank sample collection/handling in daily field notes.

Sampled By (print) *Aaron Moldaver* **Signature**

WEYERHAEUSER GROUNDWATER SAMPLING RECORD

Company <input type="checkbox"/> ES&T/WTC <input type="checkbox"/> ES&T/NB STA Environmental Inc	Project No. 102813/09 Facility Everett West	Site ID MW-1501 Date (m/d/y) 9-27-04
--	---	---

Site Description Monitoring Well Extraction Well Irrigation Well Spring Borehole Probe Other:

Air Temp: 60 °C °F Weather: overcast / sun
 Well Locked? yes no Damaged/Repairs Needed: None

TOC MP Description:

TOC/MP Stickup: 2 ft m above/below ground Well Inside Diameter (ID): 2-inch 4-inch Other:

Site Remarks (neaby wells pumping, tide, stream stage, etc.) MidLow

Water Level Data Measurement Units: ft m Well or Borehole Total Depth (TD) from MP or TOC:

<input type="checkbox"/> E-Tape, # <input type="checkbox"/> Steel Tape <input type="checkbox"/> Other	Initial	Confirmation	At Start of Purging	At End of Purging			Remarks
Time (hh:mm)	1319	1320	1325	1330	1335	1340	1345
Depth to Water	5.53	5.53	5.53	6.27	6.30	6.33	6.33
Tape Correction							
Water Level (WL)	5.53	5.53	5.53	6.27	6.30	6.33	6.33
Product Thickness							
Product Recovery							
<input type="checkbox"/> gallons <input type="checkbox"/> liters							

Measure water level from fixed measuring point (MP) or top of well casing (TOC). Record water depth to nearest 0.01 ft or 0.002 m, with minus (-) sign if level is above MP or TOC. If no mark on MP or TOC, measure water level from north side of casing. Measure static or pre-purging water level twice; record initial and confirmation measurements and measurement times (in 24-hour clock format). MP/TOC Stickup measurement is from ground surface to nearest 0.1 ft or 0.01 m. Depth to Water codes: N - not measured; D - dry; O - obstructed; P - pumping; F - flowing (artesian well); R - recently pumped; C - cascading. Water Level (WL) = Depth to Water - Tape Correction factor. Record free product presence at time of water level measurement; use "S" for free product thickness if sheen observed. If free product removed from well, record volume removed in gallons or liters, list product type in "Remarks" column.

Field WQ Data Purge Depth: 8' Grab Bailor Pump Description: Peristaltic

Casing Volume: [(TD) - (WL)] * [(Well ID)]² * [(Conversion Factor)] = _____ gal liters
 Conversion Factor = 0.0408 for feet and gallons; 0.1544 for feet and liters; 0.5066 for meters and liters; Well ID in inches Well Goes Dry While Purging

<input type="checkbox"/> Cum. Vol. Purged	Pumping Rate	Time Measured (hh:mm)	pH <input checked="" type="checkbox"/> Temp. Compensated	Temperature <input checked="" type="checkbox"/> °C <input type="checkbox"/> °F	Dissolved Oxygen mg/l	SC or EC <input checked="" type="checkbox"/> μS/cm	Turbidity <input checked="" type="checkbox"/> NTU	Color/Tint	Odor	ORP	(Final)	Meter Type	Remarks
<input checked="" type="checkbox"/> 120ml/minute		1330	6.43	18.68	0.60	744	Clear	Pale Amber	NND	-36.4			
		1335	6.45	18.62	0.42	753	Clear	Pale Amber	NND	-50.4			
		1340	6.46	18.56	0.37	762	Clear	Pale Amber	NND	-60.4			
		1345	6.46	18.58	0.34	762	4.59	Pale Amber	NND	62.1			

Record time purging starts and ends in Water Level Data section. Cum. Vol Purged: cumulative volume removed before sampling, in gallons or liters. Pumping Rate is gpm or Lpm, depending on box checked in casing volume calculation. Use "Final" column above for recording sample field measurements, total volume purged before sampling or average pumping rate during purging. Record equipment calibration methods, decontamination procedures, equipment failures, purge water disposal method, etc. in daily field notes. SC: Specific Conductance corrected for temperature (μS/cm at 25°C); EC: Electrical Conductivity not corrected for temperature (μS/cm). μS/cm = μmho/cm. 1 gallon (US) = 3.785 L = 0.833 Imperial gallon

Sample Data Sample Depth: 8' Grab Bailor Pump Description: Peristaltic

Field Sample ID (unique ID on bottles)	Result Code	Date (m/d/y)	Time (hh:mm)	Bottles (total to lab)	Filtered (0.45 μm)	Lab ID	Case ID	SDG ID	Remarks
40927-WS6-1501	PO	9-27-04	1350	2	1				

Sample ID may be up to 15 characters. Sample Result Code, Date, and Time must be entered. Result Codes: PO, Primary Sample; D#, Duplicate Sample; S#, Split Sample (sent to second lab); BF#, Field Blank; BR#, Equipment Rinse; BT#, Trip Blank; SF#, Field Spike (# = 1 to 9). Lab ID (up to 5 characters) is name of laboratory that will analyze the sample. Case ID (up to 5 characters) and SDG ID (sample delivery group, up to 15 characters) are required for blanks. Case ID may be the lab service request number or yy-mm. SDG may be lab's SDG, a cooler ID number, or mmdydy. Enter sample preservation and handling data on chain-of-custody form. Also record detailed information about duplicate, split, rinse, spike, and/or blank sample collection/handling in daily field notes.

Sampled By (print) Aaron Moldaver Signature

ATTACHMENT B
LABORATORY REPORT AND CHAIN-OF-CUSTODY



P.O. Box 9777, WTC 2F25
Federal Way, WA 98063
32901 Weyerhaeuser Way South
Federal Way, WA 98001
Tel 253 924-6872
Fax 253 924-6654

October 20, 2004

**ORIGINAL IS IN
PROJECT FILE**

Mr. Aaron Moldver
Shaw Environmental
19909 120th Avenue NE Suite # 101
Bothell, WA 98011

Dear Aaron:

Please find attached a copy of our final report for the samples you requested we analyze for the Everett West Site. These are from our service request number 04-2895. Invoicing for this work will be directly to Weyerhaeuser. If you have any questions concerning this report, please feel free to contact me at (253) 924-6242.

Thank you for using our laboratory for this analysis and we look forward to working with you on future projects.

Sincerely,

Dennis Catalano, Project Manager
Weyerhaeuser Analytical and Testing Services

Attachments

Cc: Brian Peters



**Research and Development - Analysis and Testing
Service Request**

Weyerhaeuser

04-2895

Title: Everett West Site - September 2004

<i>Samples:</i> 3 <i>Tests:</i> 4 <i>Last Samp:</i> 003	<i>Project Number:</i> 704-3971	<i>PO:</i>
<i>Date Received:</i> 09/28/04	<i>Date Desired:</i> 10/19/04	<i>Date Completed:</i>
<i>Submitter:</i> Moldver, Aaron	<i>Location:</i> Bothell, WA	<i>Phone:</i> (425) 485-5000
<i>Reviewer:</i> Catalano, Dennis	<i>Location:</i> WTC 2F25	<i>Phone:</i> (253) 924-6242
<i>Copy To:</i> Brian Peters		
<i>Record Book:</i>	<i>Ref Request:</i> 99-1770	<i>Disposal:</i> Dispose of samples
<i>Comments:</i>		

Group	Analysis	Test Description	Comp List	Component List Description
CHROM	1-TPHDNW-W	Prep for NWTPH-D in Water		
CHROM	DIESEL-NW	Diesel/Motor Oil in Water by NWTPH-D		
METALS	3-GM-W3020	AM1-3020 Water Digest for GFAA or ICP-MS		
METALS	ICPMS	ICP-MS Metals	W1AS	W-As

Test Schedules being used: 1-DIESELNW

Sample ID - Date Sampled - Status Customer Sample Description / ID	Analysis				Component List
	1-TPHDNW-W	DIESEL-NW	3-GM-W3020	ICPMS	
04-2895-001 - 09/27/04 1350 - Completed 04927-WSG-1501	1	1	1	1	W1AS
04-2895-002 - 09/27/04 1315 - Completed 04927-WSG-1302	A	A	C	C	
04-2895-003 - 09/27/04 1230 - Completed 04927-WSG-1301	A	A	C	C	



Research and Development - Analysis and Testing
Service Request

Weyerhaeuser

04-2895

Title: Everett West Site - September 2004

Group	Analysis	Component List	Test Description	No. Tests	Mult	Charge Amount	Line Total
CHROM	1-TPHDNW-W		Prep for NWTPH-D in Water	3	1.00	0.00	0.00
CHROM	DIESEL-NW		Diesel/Motor Oil in Water by NWTPH-D	3	1.00	95.00	285.00

Total charges for CHROM group (\$) 285.00

Group	Analysis	Component List	Test Description	No. Tests	Mult	Charge Amount	Line Total
METALS	3-GM-W3020		AM1-3020 Water Digest for GFAA or ICP-MS	3	1.00	36.00	108.00
METALS	ICPMS	W1AS	ICP-MS Metals	3	1.00	17.00	51.00

Total charges for METALS group (\$) 159.00

Total charges for Service Request 04-2895 (\$) 444.00

Weyerhaeuser Analytical Chemistry
 c/o SLM 216
 32901 Weyerhaeuser Way South
 Federal Way, WA 98001

04-2895
 Chain of Custody Record


Date 9-27-04	Project Title Everett West	page 1	of 1	Notes
Client's Name SHAW		Account Number/Project Number 102813(09)		Analysis Requested (write/type in parameter) XXXXXX NUTPH-DX XXXXXX Dissolved Arsenic (200.9)
Client's Address 19909 120th Ave NE Suite 101 Bothell, WA 98011		Client's Phone Number 425-402-3205	Client's FAX Number 388-9766	
Client's e-mail address Brianspetos@shawcorp.com		Recorded By (signature) <i>Aaron Moldev</i>		
Project manager (print) Brian Petos		Sampler Name (print) Aaron Moldev		
Sample Description		Preservation		
Field Sample ID (15 character Max) (Required)	Date (mm/dd/yy) (Required)	Time (hh:mm)	Matrix	# of Containers
04927-WSG-1501	9-27-04	1350	Water	1
04927-WSG-1302	9-27-04	1315	Soil/Sed	1
04927-WSG-1301	9-27-04	1330	Oil	2
			HCl	
			H ₂ SO ₄	
			HNO ₃	
			Na ₂ S ₂ O ₃	
			4°C	
			Frozen	
			Filtered	
Estimated Concentration Range				
Report Basis				
As Rcd.				
OD				
Volume				
Wt.				
Percent				
ppm				
ppb				
ppt				
report type				
Electronic Report				
Disk Deliverables				
Other:				
NPDES/Regulatory				
Sample Chain of Custody and Shipping Method Record				
Relinquished by Sampler (signature)		Date	Received by (Signature)	
<i>Brian Petos</i>		9-28-04 1300	<i>Wesley</i>	
Relinquished by (signature)		Date	Received by Laboratory (Signature)	
<i>Brian Petos</i>			<i>W. Chappell</i>	
Remarks/Detection Limit Requirements		Cooler Temp	Date Received	Time Received
Dissolved As was field filtered - H ₂ O ₃ added		7	9/28/04	1045
Airbill Number				

Weyerhaeuser Analytical & Testing Services
32901 Weyerhaeuser Way South
Federal Way, WA 98003

Service Request 04-2895
WA Cert.# C020

Report
Everett West Site - September 2004
Unit in mg/L
Method - NWTPH-D

Client ID	Sample		Lab ID	Diesel	Motor	o-	Date	
	Date	Time		Fuel Range	Oil Range	terphenyl Surrogate	Extracted	Analyzed
				624-92-0	74-93-1	% Rec		
04927-WSG-1501	09/27/04	13:50	001	0.11	<0.20	92%	10/01/04	10/12/04
04927-WSG-1302	09/27/04	13:15	002	0.22	<0.20	93%	10/01/04	10/12/04
04927-WSG-1301	09/27/04	12:30	003	0.069	<0.20	96%	10/01/04	10/12/04
Method Blank			BLANK	<0.050	<0.20	98%	10/01/04	10/12/04
Lab Control Spike (% Recovery)			LCS	% Rec	87%	NA	98%	10/01/04 10/12/04

Approved: Randy Eatherton 
Telephone: (253) 924-6431

Date: 10/18/04

Weyerhaeuser Analytical & Testing Services
32901 Weyerhaeuser Way South
Federal Way, WA 98001

Service Request 04-2895

Report

Everett West Site - September 2004

Sample Designation	Date Sampled:	Time Sampled:	Lab ID	Total Metals	
				As	ug/L
04927-WSG-1501	09/27/04	1350	001		12
04927-WSG-1302	09/27/04	1315	002		<3
04927-WSG-1301	09/27/04	1230	003		21

QL: 3
Method Number: E-3020/E-200.8
Date of Analysis: 10/12/04
Analyst: DJK

Approved: Dorothy Kerlin
Telephone: (253) 924-6188

Date: 10/14/04

ATTACHMENT C
DATA VALIDATION REPORT

**DATA VALIDATION REPORT
SEPTEMBER 2004
GROUNDWATER MONITORING
WEYERHAEUSER EVERETT WEST SITE**

Data Qualifications

The following report summarizes the Weyerhaeuser Everett West Site data validation review for groundwater samples collected from the site on September 27, 2004. Samples were analyzed by Weyerhaeuser Analytical and Testing Services in Federal Way, Washington and reported under service request number SR 03-3247. The groundwater samples collected were analyzed for TPH-D, TPH-O, and arsenic. Data validation was conducted following procedures specified in the Groundwater Compliance Monitoring Plan.

Holding Times

Analyses were conducted within holding time limits.

Method Blanks

The method blank results for all requested compounds were non-detect.

Surrogate Recovery

Surrogate recoveries reported for all requested analyses were within lab quality control (QC) limits.

Laboratory Control Samples

Laboratory control sample analyses were within acceptance limits.

Overall Assessment of Data

All requested analyses were conducted, and the data are complete. No data qualifiers were assigned to sample results based on the data validation review. The data are judged to be acceptable for their intended use without qualification.