



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

April 15, 2009

Ken Johnson  
Regulatory Affairs Manager  
Environment, Health and Safety  
Weyerhaeuser  
P.O. Box 9777  
Federal Way, Washington 98063-9777

Dear Mr. Johnson:

**Subject: Approval of Groundwater Monitoring, Consent Decree 97-2027738,  
Weyerhaeuser Everett East Site, Everett, WA**

This letter documents Washington State Department of Ecology's (Ecology) consideration for a groundwater monitoring change by Weyerhaeuser Company (Weyerhaeuser). Groundwater monitoring is required following cleanup actions conducted at the Weyerhaeuser Everett East site (Site) under Consent Decree No. 97-2027738 (Consent Decree). Your consultant's (Pacific Environmental & Redevelopment Corporation) letter of April 3, 2009 requested to resume quarterly sampling of monitoring well MW-RA-8-3, in Area 8 of Parcel 1, for the contaminants of concern at this site. Their letter proposes to continue monitoring until four consecutive quarters of monitoring shows the contaminants have remained below the established cleanup levels. After that, Weyerhaeuser proposes to consult with Ecology to determine if it is necessary to continue.

Ecology agrees that Weyerhaeuser needs to resume quarterly monitoring in well MW-RA-8-3, but does not agree that monitoring can be terminated after four consecutive quarters of compliance. The Consent Decree states in Section XXIII. Confirmational Monitoring that groundwater cleanup levels must be confirmed for eight consecutive quarters before monitoring can cease and Ecology can issue a certification that groundwater monitoring is complete. In another letter from your consultant, also dated April 3, 2009, you requested to limit the analysis of contaminants of concern in well MW-RA-8-3 to only pentachlorophenol (PCP), based upon previous analytical results of the other contaminants that showed there is no longer an environmental threat under the terms of the Consent Decree. Based upon review of the data, Ecology concurs that only PCP concentrations need to be evaluated.

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Thus, in summary, you may proceed in conducting quarterly groundwater monitoring in MW-RA-8-3 for PCP until the concentration remains below the cleanup level of 7.29 ug/L for eight consecutive quarters.

Thank you for your efforts to complete the remedial actions at the Site. If you have any questions, please contact me at 425-649-7185 or [rtim461@ecy.wa.gov](mailto:rtim461@ecy.wa.gov).

Sincerely,

A handwritten signature in cursive script that reads "Ronald W. Timm". The signature is written in black ink and is positioned above the typed name.

Ronald W. Timm  
Site Manager/Senior Hydrogeologist  
Toxics Cleanup Program

rt/kp

cc: Jeffery King, Pacific Environmental and Redevelopment Corporation



## PACIFIC ENVIRONMENTAL & REDEVELOPMENT CORPORATION

8424 East Meadow Lake Drive, Snohomish, WA 98290 — Telephone: 425-827-6867, Cell: 425-238-2212

April 3, 2009

Mr. Ron Timm  
Site Manager  
Washington State Department of Ecology  
Northwest Regional Office  
3190 160<sup>th</sup> Ave. SE  
Bellevue WA 98008-5452

RE: Proposed actions - Weyerhaeuser Everett East Site - Mill B Cleanup

Dear Mr. Timm,

On behalf of the Weyerhaeuser Company I am requesting Ecology's approval to complete the proposed tasks at the Weyerhaeuser Everett East Site (Site). We believe that these tasks will lead to meeting the conditions of the Consent Decree covering the site. In this letter I will outline why I believe this to be appropriate.

### **Background:**

The Site is located at 515 East Marine View Drive, Everett, Washington, 98201. Weyerhaeuser Company (Weyerhaeuser) and the Washington State Department of Ecology (Ecology) entered a Consent Decree which outlined the actions necessary to remediate the Site on February 5, 1994. These actions are detailed below, along with a statement on the status of the work and any appropriate discussion.

#### **1. Soil Remediation:**

- a. Area 7 – Former Oil Room Area. Weyerhaeuser was required to excavate soil to the cleanup level of 2,500 mg/kg Total Petroleum Hydrocarbons (TPH), 17 mg/kg for polychlorinated biphenyls (PCBs) and 20 mg/kg carcinogenic polycyclic aromatic hydrocarbons (cPAH). TPH, PCB and cPAH in soil were the constituents of potential concern (COPCs) in this area.
- b. Area 8 – Former Dip Tank: Weyerhaeuser was required to excavate soil to the cleanup level of 2,500 mg/kg TPH, 280 mg/kg for pentachlorophenol (PCP) and 20 mg/kg cPAH. TPH, PCP and cPAH in soil were the constituents of potential concern (COPCs) in this area.
- c. Area 9 – Former Machine Shop and Power House Areas. Weyerhaeuser was required to excavate soil to the cleanup level of 2,500 mg/kg TPH, and 17 mg/kg for PCB. TPH and PCB in soil were the constituents of potential concern (COPCs) in this area.
- d. Area 10 – Former Above Ground Diesel Fuel Tank and Former Transformers: Weyerhaeuser was required to excavate soil to the cleanup level of 2,500 mg/kg TPH, and 17 mg/kg for PCB. TPH and PCB in soil were the constituents of potential concern (COPCs) in this area.
- e. In the South End Residual Wood Storage Operable Unit: Weyerhaeuser was required to excavate affected soils at the location of TP-16 to the cleanup level of 2,500 mg/kg TPH. TPH in soil was the

Parcel 1: Under the Consent Decree Weyerhaeuser was required to monitor groundwater in Parcel 1 on a quarterly basis until COPC concentrations in groundwater were below applicable cleanup levels for eight consecutive quarters. Ecology approved the decommissioning of the background wells in Parcel 1 in a May 10, 2000 letter from Judith M. Aitken of Ecology to Robert E. McChesney of the Port of Everett. Compliance with site cleanup levels was reached in nine of the 10 remaining monitoring wells in Parcel 1 after the September 2003 sampling round. Decommissioning of these monitoring wells was approved by Ecology in Mr. Edens April 29, 2005 letter. Mr. Edens also approved the reduction in both sampling frequency (annual vs. quarterly) and in analytes (to PCP only) in the remaining well, MW-RA-8 (where PCP concentrations in groundwater remained above the Site cleanup levels of 7.29 µg/l) until annual PCP concentrations decreased to below cleanup levels. At that time Weyerhaeuser was required to resume quarterly sampling until COPC concentrations in groundwater were below applicable cleanup levels for eight consecutive quarters. Annual groundwater sampling has continued since 2005 with reports issued upon completion. Quarterly sampling has not been resumed.

Results: The results of annual groundwater sampling conducted at the Site since 2005 are summarized in the table below. Table 1 lists the results of all sampling. The location of each well is shown on Figure 2.

<b>SUMMARY OF ANALYTICAL RESULTS</b>		
<b>Monitoring Well MW-RA-8</b>		
Sample Date	PCP (µg/l)	Comments
9-28-05	13	Arsenic exceeded Site CL
9-14-06	3J	
9-14-06	2J	Duplicate Sample
9-21-07	<5	
9-21-07	<5	Duplicate Sample
9-23-08	<5	

J = Indicates analyte detected at concentrations below the analytical laboratory method reporting limit of 5.0 µg/l

Since 2005 sampling has shown that concentrations of PCP in groundwater have decreased from 13 µg/l to non-detect (<5 µg/l listed as the limit of the analytical method) and for the last three years (2006 through 2008 concentrations have been below the Site cleanup action levels of 7.29 µg/l.

#### **Conclusions and Proposal:**

The remedial actions related to soil specified in the Consent Decree have been met. PCP concentrations in groundwater, as of the September 2008 sampling round, in monitoring well MW-RA-8 are below cleanup levels. As such, Weyerhaeuser proposes to resume quarterly sampling starting in April and continuing until four consecutive quarters where COPCs are below the cleanup action levels are obtained. At that time Weyerhaeuser will request a meeting with Ecology to discuss if the additional four quarters of sampling, as required in the Consent Decree, are necessary or if the

## TABLES

TABLE 1: SUMMARY OF ANALYTICAL RESULTS (continued)	
Montopit Well MW-RA-8-3-31-997 through 10/2002	
9-1-04	52
9-1-2004 (Dup)	47
12-1-04	4
5-1-05	7.4
9-28-2005	13
9-28-2005 (Dup)	29
9-14-2006	3J
9-14-2006	2J
9-21-2007	<5
9-21-2007	<5
9-23-2008	<5

J = Indicates analyte detected at concentrations below the analytical laboratory method reporting limit of 5.0 µg/l  
 Dup = Duplicate Sample

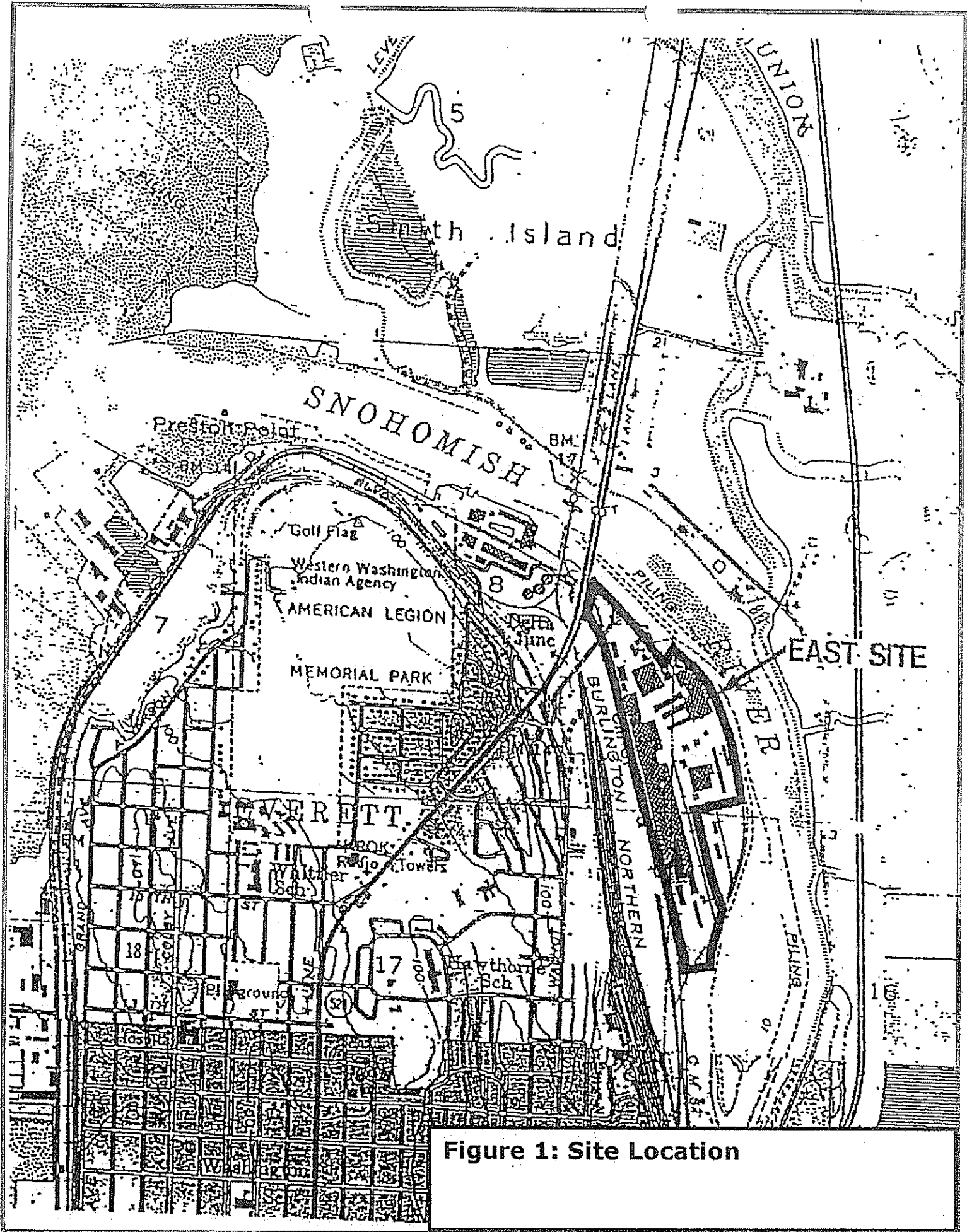
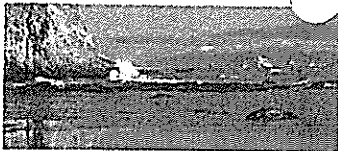


Figure 1: Site Location



## PACIFIC ENVIRONMENTAL & REDEVELOPMENT CORPORATION

8424 East Meadow Lake Drive, Snohomish, WA 98290 — Telephone: 425-827-6867, Cell: 425-238-2212

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April 3, 2009

Mr. Ron Timm  
Site Manager  
Washington State Department of Ecology  
Northwest Regional Office  
3190 160<sup>th</sup> Ave. SE  
Bellevue WA 98008-5452

RE: Required analytes – Groundwater Sampling Program, Weyerhaeuser Everett East Site - Mill B Cleanup

Dear Mr. Timm,

As a result of our conversation on Tuesday March 31, 2009 I reviewed the following documents:

- "Conformational Ground-Water Monitoring Plan, Weyerhaeuser East Site, Everett, Washington," Dalton, Olmsted & Fuglevand, Inc., January 1997; Exhibit I in Consent Decree, State of Washington v. Weyerhaeuser Company, February 6, 1997
- "Five Year Data Review Report Weyerhaeuser Everett East Site - Parcel 1" dated September 2003; and
- Ecology's response to this document from Mr. Mark Edens dated April 29, 2005 entitled "Groundwater Monitoring, Weyerhaeuser Everett East Site."

Exhibit I of the referenced Consent Decree defines the conformational groundwater monitoring approach that will define compliance with cleanup levels. For the Parcel 1 Evaluation Procedures, the statement is offered:

"If the last eight sample results are below cleanup levels and an upward trend is not evident in the data (based on step 1), cleanup levels will have been achieved, additional monitoring will not be required and the monitoring wells will be abandoned, with Ecology approval." (page 11 of the referenced Exhibit I)

Exhibit I is referenced in the Scope of Work section of the Consent Decree (paragraph 10).

The "Five Year Data Review Report" and the Mark Edens letter present monitoring data, an evaluation based on terms and conditions in the Consent Decree, and the resulting regulatory conclusions. Weyerhaeuser's position is that monitoring data has been developed which demonstrates attainment of groundwater cleanup levels consistent with the Consent Decree. The sole exception is with pentachlorophenol in monitoring well MW-RA-8-3. We maintain that Mr. Edens stated his concurrence with this conclusion. The commentary presented below further supports this position.



Mr. Edens also stated in the opening paragraph of the letter that:

“The purpose of this letter is to provide concurrence with the existing monitoring program (which was limited to sampling for PCP only) at the Weyerhaeuser Everett East Site and with your (Weyerhaeuser’s) proposal to reduce continued monitoring for well MW-RA-8-3 from a quarterly to annual schedule.”

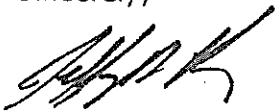
We read this statement as affirmation of Mr. Edens, and thus Ecology’s, concurrence with the recommendations listed in the Five Year Review.

**Conclusions:**

Since all COCs other than PCP were in compliance with the requirements of the Consent Decree at the time of the Five Year Review they should be eliminated from further consideration. This recommendation is strengthened by Ecology’s concurrence with Weyerhaeuser recommendation, made in the Five Year Review, that PCP remain as the only analyte in future groundwater sampling.

Weyerhaeuser is anxious receive your reply concerning the required analytes so that we may proceed with the scheduled sampling. Please telephone either Ken Johnson, Weyerhaeuser’s Project Manager, at 253.924.3426 or myself at 425.238.2212 if you would like to discuss this further.

Sincerely;



Jeffrey D. King, L.G.  
Principal  
Pacific Environmental and Redevelopment Corporation



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3199 160th Avenue SE • Bellevue, Washington 98009-5452 • (425) 649-7000

April 29, 2005

Jennifer R. Bariska, Environmental Manager  
Weyerhaeuser  
Mail Stop EC2 2C1  
P.O. Box 9777  
Federal Way, WA 98063-9777

Dear Ms. Bariska:

Re: Groundwater Monitoring  
Weyerhaeuser Everett East Site

### Introduction

The purpose of this letter is to provide concurrence with the existing monitoring program at the Weyerhaeuser Everett East Site and with your proposal to reduce continued monitoring for well MW-RA-8-3 from a quarterly to annual schedule. Prior to my involvement, you had been working with Judy Aitken of the Washington State Department of Ecology's Toxics Cleanup Program (Ecology). Since Ms. Aitken's retirement at the end of 2004, I have been responding to requests involving this site and the Weyerhaeuser Everett West site.

To respond to your requests regarding groundwater monitoring, I have reviewed the following information:

1. Consent Decree entered in State of Washington, Department of Ecology v. Weyerhaeuser Company, Snohomish County Superior Court No. 97-2-02773-8 regarding the Weyerhaeuser Everett East Site, April 1997.
2. Declaration of Restrictive Covenant for the Weyerhaeuser Everett East Site, Snohomish County Auditor No. 9706180506, June 1997.
3. Confirmational Groundwater Monitoring Plan Weyerhaeuser East Site Everett Washington, January 1997.
4. Fourth Round (First Quarter 1998)/Annual Groundwater compliance Monitoring and Closure Report, Weyerhaeuser Everett East Site south End Residual Wood Storage Site – Parcel 4, June 1998.
5. Letter from Judith M. Aitken of Ecology to Robert E. McChesney of the Port of Everett authorizing the decommissioning of background groundwater monitoring wells, May 10, 2000.
6. Five Year Data Review Report Weyerhaeuser Everett East Site – Parcel 1, September 2003.

7. Groundwater Compliance Monitoring Report – Twenty-Sixth Round (Third Quarter 2003), Weyerhaeuser Everett East Site-Parcel 1, November 2003.
8. Groundwater Compliance Monitoring Report – Thirtieth Round (Third Quarter 2004), Weyerhaeuser Everett East Site-Parcel 1, November 2004.
9. Groundwater Compliance Monitoring Report – Thirty-First Round (Fourth Quarter 2004), Weyerhaeuser Everett East Site-Parcel 1, February 2005.

The reports and information listed above will be kept in the Central Files of the Northwest Regional Office (NWRO) of Ecology for review by appointment only. Appointments can be made by calling Central Records at the NWRO at (425) 649-7190 or -7239.

### **Contaminants of Concern and Monitoring Requirements**

Article VI.B. of the Consent Decree established the following groundwater cleanup levels and standards for contaminants of concern (COCs) at the site:

Total petroleum hydrocarbons	10 mg/l	Method C
Pentachlorophenol	7.29 ug/l	Method C
Polychlorinated biphenyls	0.114 ug/l	Method C
Carcinogenic polycyclic aromatic hydrocarbons	0.12 ug/l	Method C

Article VI.D.10. of the Consent Decree required a groundwater confirmational monitoring plan that describes well decommissioning procedures and cessation of monitoring.

Article XXIII of the Consent decree established that groundwater monitoring could cease in Parcel 1 and wells could be decommissioned following eight consecutive quarters of groundwater monitoring in which the concentrations of contaminants of concern were below cleanup levels. This article also established that groundwater monitoring could cease in Parcel 4 and wells could be decommissioned following four consecutive quarters of groundwater monitoring in which the concentrations of contaminants of concern were below cleanup levels.

The Confirmational Groundwater Monitoring Plan for the site contains the same provisions for ceasing groundwater monitoring and decommissioning monitoring wells as Article XXIII of the Consent Decree. The monitoring plan also states that the need for and duration of additional monitoring will be based on the results of the statistical analysis, number and magnitudes of sample exceedances, and concentration trends.

### **Parcel 4 Monitoring Results and Conclusions**

The Fourth Round (First Quarter 1998)/Annual Groundwater compliance Monitoring and Closure Report, Weyerhaeuser Everett East Site south End Residual Wood Storage Site – Parcel 4 (June 1998) addressed groundwater monitoring in Parcel 4. Total petroleum hydrocarbons (TPH) and carcinogenic polycyclic aromatic hydrocarbons (cPAHs) were the only COCs that

Jennifer Bariska, Environmental Manager, Weyerhaeuser

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required monitoring for Parcel 4. Four rounds of groundwater monitoring were completed in Parcel 4. TPH was not detected in any of the monitoring wells. cPAHs were detected in all of the monitoring wells (including the background well) during the first two sampling rounds, however none of the cPAHs detected exceeded cleanup levels. cPAHs were not detected during the last two sampling rounds. Since the concentrations of contaminants of concern did not exceed cleanup levels for four consecutive monitoring rounds, the site has met the criteria of Article XXIII of the consent decree for cessation of monitoring and well decommissioning. Weyerhaeuser may continue to monitor the wells remaining on Parcel 4 or may proceed with well decommissioning in accordance with WAC 173-160.

## **Parcel 1 Monitoring Results and Conclusions**

### ***Background Monitoring Wells***

Groundwater monitoring wells in Parcel 1 included background and confirmational wells. The background groundwater monitoring wells (MW-107S(2), MW-108D, MW-108S, and MW-109S) were decommissioned in 2000 with approval by Ecology in a letter dated May 10, 2000 (See Item 5 above). Since the background monitoring wells for Parcel 1 have been decommissioned, they are not addressed any further in this letter.

### ***Confirmational Monitoring Wells – Five Year Review Report***

Confirmational groundwater monitoring wells on Parcel 1 include MW-100D, MW-100S, MW-101S, MW-102S, MW-103D, MW-103S, MW-104S, MW-105D, MW-105S, and MW-RA-8-3. The first five years of monitoring data from these wells were summarized in the report entitled "Five Year Data Review Report Weyerhaeuser Everett East Site Parcel 1 Everett, Washington" and dated September 4, 2003. Information contained in this report is summarized below.

No COCs were exceeded during the last eight monitoring rounds in wells MW-100D, MW-100S, MW-101S, and MW-105D. Although some of these wells exhibited slightly increasing concentration trends, the concentrations of COCs detected were several to many times lower than cleanup levels. The groundwater monitoring results for these wells have met Consent Decree requirements for cessation of monitoring and well decommissioning.

No COCs were exceeded during six monitoring rounds in wells MW-103S and MW-104S. These wells were sampled and tested less than other wells because during most monitoring rounds there was not sufficient water in the wells to collect a sample. Well MW-103S had a slightly increasing TPH concentration trend but the maximum concentration was about seven times lower than the cleanup level. Since concentrations of COCs in these wells were consistently below cleanup levels over a five year period, the groundwater monitoring results for these wells have met Consent Decree requirements for cessation of monitoring and well decommissioning.

No COCs other than cPAHs were exceeded during the last eight monitoring rounds in wells

MW-103D and MW-105S. A statistical analysis of the data from these two wells in accordance with WAC 173-340-720 indicated that the upper one-sided 95 percent confidence limit on the true mean groundwater concentration was less than the cleanup level. Well MW-103D had a slightly increasing TPH concentration trend but the maximum concentration was about fifteen times lower than the cleanup level. The groundwater monitoring results for these wells have met Consent Decree requirements for cessation of monitoring and well decommissioning.

No COCs other than cPAHs were exceeded during monitoring rounds in well MW-102S. Only one exceedance of cPAH occurred in this well during the September 2001 monitoring round. The report recommended that additional rounds of monitoring only for cPAHs would be necessary to statistically demonstrate that well MW-102S has met Consent Decree requirements for cessation of monitoring and well decommissioning.

No COCs other than cPAHs and pentachlorophenol (PCP) were exceeded during monitoring rounds in well MW-RA-8-3. Only one exceedance of cPAH occurred in this well during the September 2001 monitoring round. A statistical analysis of the cPAH data from this well in accordance with WAC 173-340-720 indicated that the upper one-sided 95 percent confidence limit on the true mean groundwater concentration was less than the cleanup level. PCP was present in concentrations above cleanup levels in 16 of 20 quarterly monitoring rounds. The report recommended continued monitoring only for PCP in well MW-RA-8-3.

#### ***Confirmational Monitoring Well MW-102S***

The results of cPAH monitoring in well MW-102S were reviewed in the "Groundwater Compliance Monitoring Report – Twenty-Sixth Round (Third Quarter 2003), Weyerhaeuser Everett East Site-Parcel 1" dated November 11, 2003. Sampling of this well subsequent to the five year review did not detect concentrations of cPAH above cleanup levels. A statistical analysis of the cPAH data from this well in accordance with WAC 173-340-720 indicated that the upper one-sided 95 percent confidence limit on the true mean groundwater concentration was less than the cleanup level. The groundwater monitoring results for this well have met Consent Decree requirements for cessation of monitoring and well decommissioning.

#### ***Confirmational Monitoring Well MW-RA-8-3***

The results of PCP monitoring in well MW-RA-8-3 were reviewed in the "Groundwater Compliance Monitoring Report – Thirtieth Round (Third Quarter 2004), Weyerhaeuser Everett East Site-Parcel 1" dated November 9, 2004. Sampling of this well subsequent to the five year review continued to detect PCP concentrations above cleanup levels. Quarterly PCP monitoring in this well detected concentrations above cleanup levels in June and September over the past three years. Therefore Weyerhaeuser representatives recommended continued PCP monitoring in this well on an annual basis with samples to be collected during the dry season in the month of September. If annual PCP concentrations decrease below cleanup levels, Weyerhaeuser will resume quarterly monitoring until PCP concentrations meet Consent Decree requirements for

Jennifer Bariska, Environmental Manager, Weyerhaeuser  
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cessation of monitoring and well decommissioning.

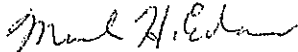
Ecology agrees with the recommendations of Weyerhaeuser representatives to decrease the monitoring frequency for well MW-RA-8-3 from quarterly to annually. The well is to be monitored in September of each year for the same field and laboratory parameters that were monitored during the thirtieth monitoring round. If PCP concentrations decrease below cleanup levels, Weyerhaeuser may resume quarterly monitoring. Ecology reserves the option of requiring resumption of quarterly monitoring at any time, particularly if PCP concentrations increase significantly above the levels observed over the last three years.

### Summary

All groundwater monitoring wells remaining on Parcels 1 and 4 of the Weyerhaeuser Everett East site have met Consent Decree requirements for cessation of monitoring and well decommissioning except for well MW-RA-8-3. Well MW-RA-8-3 is to be monitored on an annual basis as described above. Weyerhaeuser may continue to monitor the other wells remaining on the site or may proceed with well decommissioning in accordance with WAC 173-160.

If you have any questions regarding this letter please feel free to contact me at 425-640-7070.

Sincerely,



Mark H. Edens  
Unit Supervisor  
Washington State Department of Ecology  
Toxics Cleanup Section  
Northwest Regional Office

Copy:

Carl Einberger, Water Resources Manager, Geomatrix Consultants