Weyerhaeuser Everett West

2012 Annual Compliance Monitoring Report

Prepared for

Weyerhaeuser Company
P.O. Box 9777
Federal Way, WA 98063

Prepared by

FLOYD | SNIDER
601 Union Street
Suite 600
Seattle, Washington 98101

March 2013

LIMITATIONS

This report has been prepared for the exclusive use of the Weyerhaeuser Company*;* their authorized agents, and regulatory agencies. It has been prepared following the described methods and information available at the time of the work. No other party should use this report for any purpose other than that originally intended, unless Floyd|Snider agrees in advance to such reliance in writing. The information contained herein should not be utilized for any purpose or project except the one originally intended. Under no circumstances shall this document be altered, updated, or revised without written authorization of Floyd|Snider.

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List of Abbreviations and Acronyms

Abbreviation/ Acronym	Definition
CMP	Weyerhaeuser Everett West Groundwater Compliance Monitoring Plan Addendum
CMR	Compliance Monitoring Report
Consent Decree	Consent Decree No. 94-2-67559-2
CUL	Cleanup level
Ecology	Washington State Department of Ecology
µg/L	Micrograms per liter
MTCA	Model Toxics Control Act
Site	Weyerhaeuser Everett West Site
USEPA	U.S. Environmental Protection Agency
WAC	Washington Administrative Code
Weyerhaeuser	Weyerhaeuser Company

1.0 Introduction

This Annual Compliance Monitoring Report (CMR) for the Weyerhaeuser Everett West Site (Site) has been prepared in accordance with the requirements of the Consent Decree No. 94-2-67559-2 (Consent Decree; State of Washington 1994) between Weyerhaeuser Company (Weyerhaeuser) and the Washington State Department of Ecology (Ecology), specifically with the requirements of Washington Administrative Code (WAC) 173-340-410 and WAC 173-340-720. Except where noted, compliance monitoring and reporting is being conducted in accordance with the procedures outlined in the *Groundwater Compliance Monitoring Plan for Weyerhaeuser Everett West Site* (Emcon 1995) and the Weyerhaeuser Everett West Groundwater Compliance Monitoring Plan Addendum (CMP; Floyd|Snider 2011). The Site is located at 101 East Marine View Drive in Everett, Washington, as shown in Figure 1.1.

Compliance monitoring is designed to meet the monitoring requirements specified in the Consent Decree and the substantive requirements of regulations issued pursuant to the Washington State Model Toxics Control Act (MTCA). The goal of this report is to provide documentation of site groundwater quality relative to the attainment of cleanup requirements. The results of the four quarterly groundwater monitoring events conducted at the Site in 2012 are presented in this report.

2.0 Compliance Monitoring

2.1 COMPLIANCE MONITORING ACTIVITIES

Four compliance monitoring events were conducted in 2012. The events took place March 22, June 21, September 28, and December 20, 2012. Except where noted, field methods used in compliance monitoring were carried out in accordance with the CMP. The compliance monitoring well network, which was restored in 2011, is illustrated on Figure 2.1. Refer to the 2011 Annual Compliance Monitoring Report (Floyd|Snider 2012) for additional details on the restoration of the monitoring well network. Field activities are summarized below.

2.1.1 Water Level Measurements

Prior well coordinates attributed to MW-1701 were found to be in the location of a decommissioned well (MW-1). Subsequent review of site plans indicated that MW-1701 was located further to the west. MW-1701 was not surveyed during the initial well survey for the updated compliance monitoring network because it was believed to have been destroyed at the time of the well survey. MW-1701 was surveyed on June 21, 2012 during the June 2012 monitoring event so that it could be used as an upgradient location for water level measurements and potentiometric surface contours.

Water level measurements were collected from MW-1202R, MW-1203R, MW-1301R, MW-1501R, and MW-1701. Refer to Figure 2.1 for monitoring well locations. During each event, measurements were collected within approximately 40 minutes of each other to minimize tidally influenced changes in water levels and provide an accurate indication of the potentiometric surface. Water level measurements were also collected prior to the start of well purging and during low-flow sampling.

2.1.2 Groundwater Sampling

Sample collection and handling was conducted in accordance with the CMP. Groundwater samples from MW-1202R, MW-1203R, MW-1301R, and MW-1501 were collected using standard low-flow sampling methods. The samples were field filtered and submitted under chain of custody to the Weyerhaeuser Analytical Chemistry laboratory in Federal Way, Washington for dissolved arsenic analysis. Unfiltered samples from MW-1301R were submitted for TPH-Dx analysis as part of the March and December 2012 field events. Field duplicate samples were collected during each event and submitted for analysis under a fictitious sample name.

Groundwater sample collection was consistent with the CMP provisions regarding tidal conditions (refer to Section 2.2.1). Groundwater samples are considered representative of groundwater discharging to the Snohomish River.

2.1.3 Data Validation

A Tier 1 data quality review was performed on all analytical results for samples collected during the 2012 quarterly compliance monitoring events. Consistent with the CMP, the analytical data were validated in accordance with the following guidelines and standard operating procedures:

- U.S. Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (USEPA 1994 and 2004)
- USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (USEPA 1999 and 2008) as applied to criteria in NWTPH-Dx

The data quality review included evaluation of sample chain-of-custody procedures, sample preservation and analytical holding times, blank contamination, precision (replicate analyses), accuracy (compound recovery), adherence to the target analyte list, detection limits, and data package completeness. The data are determined to be of acceptable quality for use as reported by the laboratory.

2.2 COMPLIANCE MONITORING RESULTS

The results of the 2012 quarterly compliance monitoring events are presented in this section.

2.2.1 Water Level Measurements and Potentiometric Surface

Water level measurements and tidal information for the December 2012 event are reported in Table 2.1. These results demonstrate that the samples were collected in accordance with the CMP procedure for collecting representative groundwater samples by sampling during the ebb to a lower-low water tide when water levels in shoreline wells are approximately 3 or more feet higher than the stage height of the Snohomish River. As shown in Table 2.1, water levels in the shoreline wells during the December 2012 event were approximately 6 or more feet higher than the corresponding water level in the Snohomish River at the time of sampling.

A summary of the water level measurements for each 2012 event are reported in Table 2.2. The results are consistent with expected seasonal trends in water level elevation in shallow, unconfined aquifer conditions. Groundwater elevations and potentiometric surface contours for each event are illustrated in Figures 2.2 through 2.5. These results generally indicate a northerly to northeasterly groundwater flow direction that is consistent with topography between the uplands and the Snohomish River, with some variation near the shoreline associated with tidal influence.

2.2.2 Groundwater Results

Analytical results for the 2012 quarterly compliance monitoring events are presented in Figure 2.6 and analytical results for all monitoring events following the restoration of the compliance monitoring well network are presented in Tables 2.3 and 2.4. Dissolved arsenic concentration trend plots are presented in Figure 2.7. Laboratory analytical reports for 2012 monitoring events are included as Appendix A. The results are summarized and compared with the site cleanup levels (CULs) below.

2.2.2.1 Arsenic Results

During the December 2012 event, dissolved arsenic was detected in groundwater samples from all four monitoring wells. The highest concentration of arsenic detected was 1.2 micrograms per liter (µg/L) in MW-1202R, and the lowest concentration was 0.6 µg/L in MW-1501R.

Concentrations in all four monitoring wells were less than the site groundwater arsenic CUL of 5 µg/L.

With one exception, concentrations of dissolved arsenic were less than the site groundwater arsenic CUL for all samples analyzed in 2012. The dissolved arsenic concentration of 6.9 µg/L measured in MW-1301R during the September 2012 event exceeds the site CUL. Based on the subsequent low concentration detected in the December 2012 event and as shown on the dissolved arsenic time concentration plot (Figure 2.7), this exceedance does not suggest an upward trend in arsenic concentration in this monitoring well. Dissolved arsenic concentrations in all four monitoring wells were lower in December 2012 than in December 2011.

2.2.2.2 Total Petroleum Hydrocarbon Results

In 2012, groundwater from MW-1301R was analyzed for TPH-Dx in the March and December events. The results are presented on Figure 2.6 and Table 2.4. In both 2012 events, TPH-Dx concentrations were non-detect and less than the site groundwater CUL. During the December 2012 event, diesel-range hydrocarbons were not detected in the sample from MW-1301R at levels greater than the laboratory detection limit of 39 µg/L, and oil-range hydrocarbons were not detected in the sample at levels greater than the laboratory detection limit of 190 µg/L. As was the case in the March 2012 event, the total diesel-range and oil-range hydrocarbon concentration for MW-1301R for December 2012 was less than the site groundwater CUL of 1,000 µg/L for TPH-Dx.

These results are consistent with TPH-Dx results measured in groundwater sampled from MW-1301R in December 2011, which were less than detection limits and/or the site cleanup level. As described in the CMP, all site compliance monitoring wells have attained compliance for TPH-Dx, and the purpose of TPH-Dx sampling was to provide additional confirmation of attainment of CULs (Floyd|Snider 2011). In accordance with the CMP, this confirmation of TPH-Dx compliance has been demonstrated, and TPH-Dx sampling at the Site will hereafter be discontinued.

3.0 Summary of Findings

The primary findings of the 2012 Annual CMR are summarized as follows:

- Four quarterly monitoring events of the updated monitoring network were completed in 2012 in accordance with the CMP. Sampling was coordinated with a tidal ebb to ensure representative samples of groundwater discharging to the Snohomish River.
- Water level elevations generally indicate a northerly to northeasterly groundwater flow direction, with some potentiometric variation at the shoreline related to tidal influence.
- Upgradient Well MW-1701 was surveyed to provide an upgradient water level monitoring point.
- With the exception of one exceedance in MW-1301R, all dissolved arsenic concentrations were less than the site groundwater CUL of 5 µg/L.
- A time-concentration plot was prepared to show dissolved arsenic concentrations in groundwater over time. Dissolved arsenic concentrations in all four monitoring wells were lower in December 2012 than in December 2011.
- Diesel-range and oil-range total petroleum hydrocarbons were not detected in either sample from MW-1301R (the only well sampled for TPH-Dx) during the March or December 2012 monitoring events. All site compliance monitoring wells have attained compliance for TPH-Dx, and the TPH-Dx sampling has provided the additional confirmation of attainment of CULs for which it was intended. TPH-Dx sampling at the Site will hereafter be discontinued.

4.0 References

Emcon. 1995. *Groundwater Compliance Monitoring Plan for Weyerhaeuser Everett West Site, Everett, Washington*. Prepared for Weyerhaeuser Company. 2 March.

Floyd|Snider. 2011. Memorandum to David South: Weyerhaeuser Everett West Groundwater Compliance Monitoring Plan Addendum. November.

———. 2012. *2011 Annual Compliance Monitoring Report.* Prepared for Weyerhaeuser Company. 24 April.

National Oceanic and Atmospheric Administration (NOAA). 2012. *NOAA Tides and Currents*. Everett, WA Station ID 9447659. http://tidesandcurrents.noaa.gov/noaatidepredictions/.

State of Washington. 1994. *Consent Decree No. 94-2-67559-2 and Exhibits. Ecology v. Weyerhaeuser Company*. October.

U.S. Environmental Protection Agency (USEPA). 1994. Office of Emergency and Remedial Response. *USEPA Contract Laboratory Program National Function Guidelines for Inorganic Data Review.* Washington, D.C. February.

———. 1999. Office of Emergency and Remedial Response. *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review.* Washington, D.C. October.

———. 2004. Office of Superfund Remediation and Technology Innovation (OSRTI). *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review Final Draft.* Washington, D.C. July.

———. 2008. Office of Superfund Remediation and Technology Innovation (OSRTI). *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review.* Washington, D.C. June.

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2012 Annual Compliance Monitoring Report

Tables

Table 2.1
Water Level Elevation and Tidal Information, December 2012

Well ID	TOC Elevation (feet NAVD88)	Date	Time of Measurement	Depth to Water (feet)	Water Level Elevation (feet NAVD88)	Time of Sampling	Approximate Tidal Elevation at Time of Sampling[1] (feet MLLW)	Approximate Tidal Elevation at Time of Sampling[1] (feet NAVD88)	Approximate Height of Water Table above Snohomish River (feet)
Potentiometric surface measurements									
MW-1202R	12.08	12/21/2012	14:33	2.55	9.53	NA	NA	NA	NA
MW-1203R	15.7	12/21/2012	14:41	6.83	8.87	NA	NA	NA	NA
MW-1301R	14.44	12/21/2012	14:48	3.96	10.48	NA	NA	NA	NA
MW-1501R	11.8	12/21/2012	14:54	2.34	9.46	NA	NA	NA	NA
MW-1701	14.78	12/21/2012	14:23	2.05	12.73	NA	NA	NA	NA
Water levels at time of well purging									
MW-1202R	12.08	12/21/2012	15:08	2.64	9.44	15:40	5	2.7	6.8
MW-1203R	15.7	12/21/2012	18:14	6.8	8.9	18:50	2.1	-0.2	9.1
MW-1301R	14.44	12/21/2012	17:05	3.93	10.51	17:40	2.4	0.1	10.5
MW-1501R	11.8	12/21/2012	16:07	2.53	9.27	16:40	3.2	0.9	8.4

Note:

1 Information is sourced from the National Oceanic and Atmospheric Administration (NOAA) 2012.

Abbreviations:

MLLW Mean Lower Low Water
NA Information is not available
NAVD88 North American Vertical Datum of 1988
TOC Top of casing

Table 2.2
Water Level Elevation Results

Well ID	TOC Elevation (feet NAVD88)	Date	Time of Measurement	Depth to Water (feet)	Water Level Elevation (feet NAVD88)
Potentiometric surface measurements					
MW-1202R	12.08	12/21/2012	14:33	2.55	9.53
		9/28/2012	8:55	6.99	5.09
		6/21/2012	10:51	6.31	5.77
		3/22/2012	10:45	5.37	6.71
		12/19/2011	13:25	6.25	5.83
MW-1203R	15.7	12/21/2012	14:41	6.83	8.87
		9/28/2012	8:25	10.14	5.56
		6/21/2012	10:44	9.35	6.35
		3/22/2012	10:38	8.19	7.51
		12/19/2011	13:17	9.6	6.1
MW-1301R	14.44	12/21/2012	14:48	3.96	10.48
		9/28/2012	8:30	8.55	5.89
		6/21/2012	10:35	6.73	7.71
		3/22/2012	10:28	5.6	8.84
		12/19/2011	13:36	7.42	7.02
MW-1501R	11.8	12/21/2012	14:54	2.34	9.46
		9/28/2012	8:37	4.34	7.46
		6/21/2012	10:20	3.95	7.85
		3/22/2012	10:17	3.34	8.46
		12/19/2011	13:45	3.73	8.07
MW-1701	14.78	12/21/2012	14:23	2.05	12.73
		9/28/2012	8:10	4.69	10.09
		6/21/2012	10:07	3.02	11.76
		3/22/2012	11:11	2.7	12.08
		12/19/2011	NA	NA	NA

Abbreviations:

MLLW Mean Lower Low Water
NA Information not available
NAVD88 North American Vertical Datum of 1988
TOC Top of casing

Table 2.3
Dissolved Arsenic Analytical Results
(µg/L)

Location	MW-1202R		MW-1203R		MW-1301R		MW-1501R
Sample Date							
12/21/2012	1.0	1.2 D	0.7	--	0.9	--	0.6
9/28/2012	1.3	--	1.3	1.5 D	**6.9**	--	1.6
6/21/2012	3.1	--	0.7	0.8 D	1.6	--	0.6
3/22/2012	1.4	--	0.6	--	0.8	0.8 D	0.8
12/19/2011	2.7	--	1.4	--	1.7	1.8 D	1.6

Note:

Bold Indicates that a concentration is greater than the site cleanup level of 5 µg/L.

Abbreviation:

µg/L Micrograms per liter

Qualifier:

D Indicates sample is a field duplicate

Table 2.4
TPH-Dx Analytical Results
(µg/L)

Location	MW-1301R			
Sample Date	Diesel-range Hydrocarbons		Oil-range Hydrocarbons	
12/21/2012	39 U	--	190 U	--
3/22/2012	41 U	38 DU	200 U	190 DU
12/19/2011	45	45 D	200 U	200 DU

Abbreviation:

µg/L Micrograms per liter

Qualifiers:

D Indicates sample is a field duplicate

U Indicates result is less than laboratory detection limit

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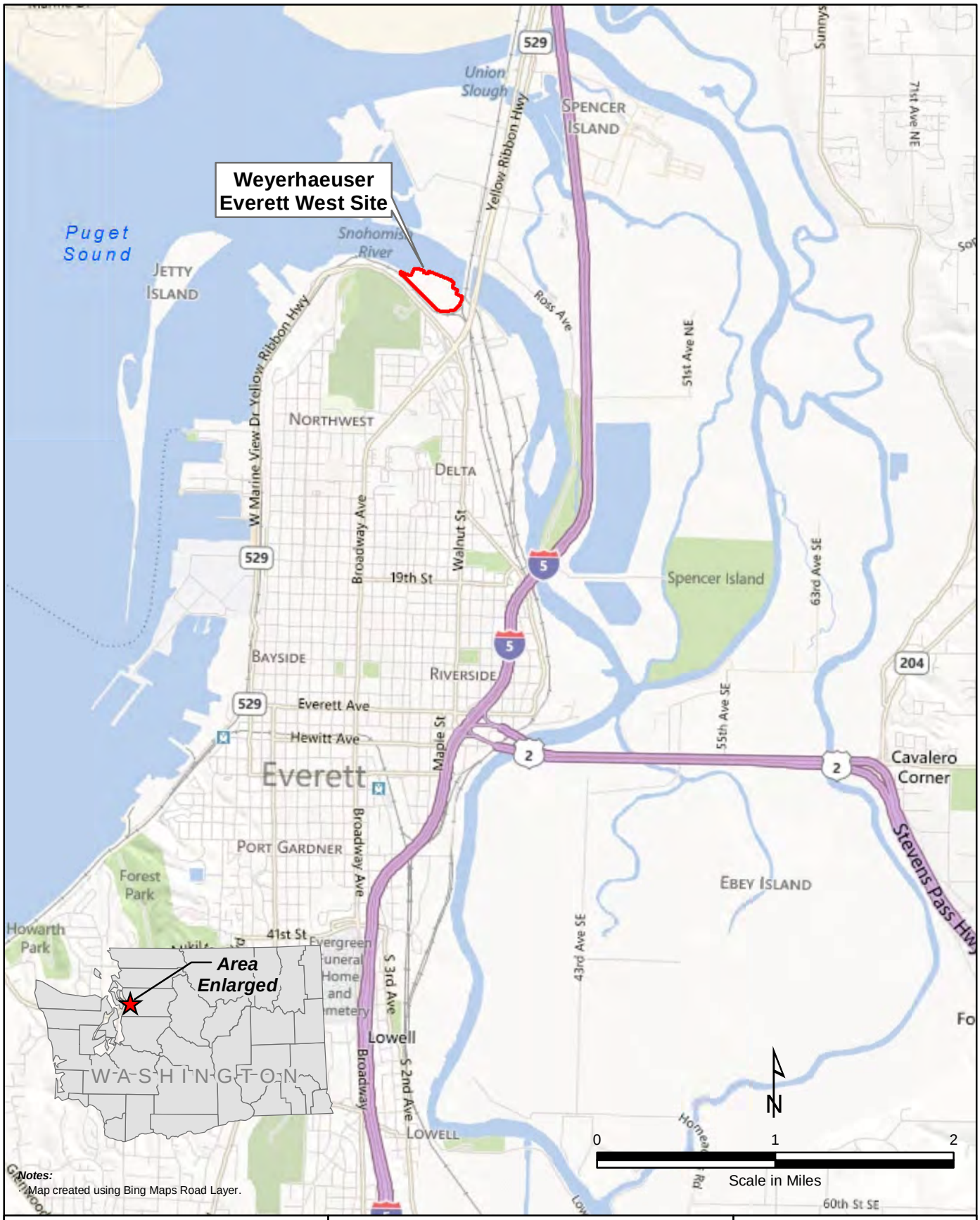
Figures



Notes:
Map created using Bing Maps Road Layer.

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Figure 1.1
Vicinity Map

F:\projects\Weyer Everett West\GIS\Task 02\Figure 1.1 (Vicinity Map).mxd
1/29/2013

Legend

- Point of Compliance Monitoring Well
- Upgradient Monitoring Well

Note:

· Orthoimage provided by USGS and Dated 2009.

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Figure 2.1
Compliance Monitoring Network

I:\GIS\Projects\WEYER_EW\MXD\Task 5 Compliance Monitoring\Figure 2.1 (Restored Compliance Monitoring Network).mxd
3/5/2013

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Figure 2.2
Groundwater Elevation Contours
March 2012

I:\GIS\Projects\WEYER_EW\MXD\Task 5 Compliance Monitoring\Figure 2.2 (Annual Report Groundwater Elevation Contours March 2012).mxd
2/13/2013

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Figure 2.3
Groundwater Elevation Contours
June 2012

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2/13/2013

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Figure 2.4
Groundwater Elevation Contours
September 2012

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3/5/2013

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Figure 2.5
Groundwater Elevation Contours
December 2012

I:\GIS\Projects\WEYER_EW\MXD\Task 5 Compliance Monitoring\Figure 2.5 (Annual Report Groundwater Elevation Contours December 2012).mxd
2/13/2013

MW-1301R						
Sample Date	Dissolved Arsenic (µg/L)		Diesel-range Hydrocarbons (µg/L)		Oil-range Hydrocarbons (µg/L)	
	Sample	Duplicate	Sample	Duplicate	Sample	Duplicate
12/21/2012	0.9	--	39 U	--	190 U	--
9/28/2012	**6.9**	--	--	--	--	--
6/21/2012	1.6	--	--	--	--	--
3/22/2012	0.8	0.8	41 U	38 U	200 U	190 U
12/19/2011	1.7	1.8	45	45	200 U	200 U

MW-1501R		
Sample Date	Dissolved Arsenic (µg/L)	
	Sample	Duplicate
12/21/2012	0.6	--
9/28/2012	1.6	--
6/21/2012	0.6	--
3/22/2012	0.8	--
12/19/2011	1.6	--

MW-1203R		
Sample Date	Dissolved Arsenic (µg/L)	
	Sample	Duplicate
12/21/2012	0.7	--
9/28/2012	1.3	1.5
6/21/2012	0.7	0.8
3/22/2012	0.6	--
12/19/2011	1.4	--

MW-1202R		
Sample Date	Dissolved Arsenic (µg/L)	
	Sample	Duplicate
12/21/2012	1.0	1.2
9/28/2012	1.3	--
6/21/2012	3.1	--
3/22/2012	1.4	--
12/19/2011	2.7	--

Snohomish River

Marine View Drive

MW-1701

Legend

MW-1301R Groundwater Monitoring Well Location

Note:

- **Red** indicates concentration greater than site cleanup level of 5 µg/L.
- Orthoimage provided by USGS and Dated 2009.

N

0 100 200 400

Scale in Feet

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Figure 2.6
2012 Dissolved Arsenic & TPH-Dx
Analytical Results in Groundwater

I:\GIS\Projects\WEYER_EW\MXD\Task 5 Compliance Monitoring\Figure 2.6 (Dissolved Arsenic & TPH - Dx Analytical Results in Groundwater 2012).mxd
3/5/2013

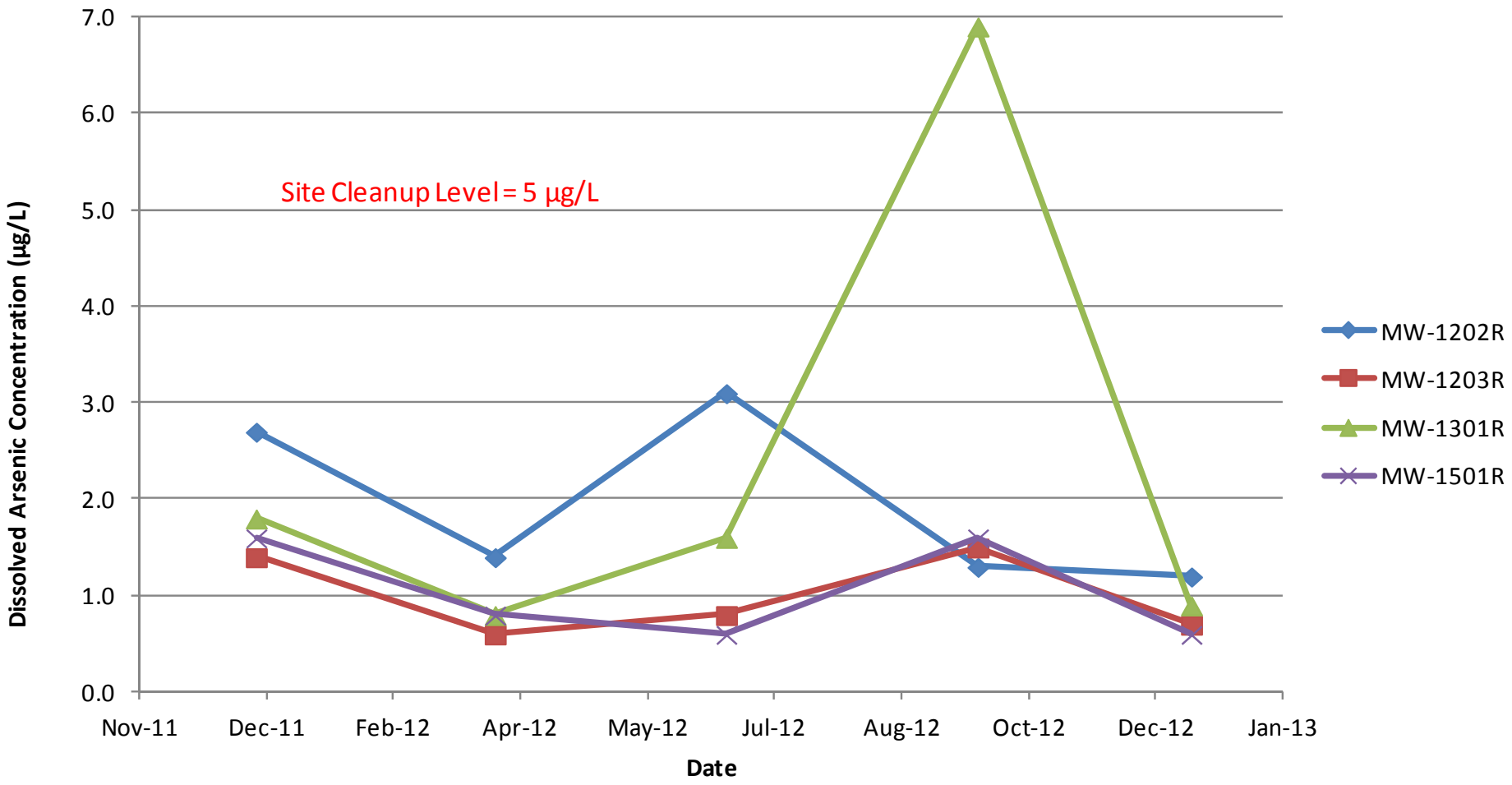

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Figure 2.7
Dissolved Arsenic Concentration Trends in Groundwater

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Appendix A
Laboratory Analytical Reports

Weyerhaeuser

P.O. Box 9777, WTC 2F25
Federal Way, WA 98063-9777
32901 Weyerhaeuser Way South
Federal Way, WA 98001
(253) 924-6242
(253) 924-6654 fax
Dennis.Catalano@weyerhaeuser.com

April 11, 2012

Brett Beaulieu
Floyd/Snider
601 Union St Suite 600
Seattle, WA 98101

Dear Brett :
Attached is the final report for the Weyer-EW Compliance Monitoring sample(s) that you requested we analyze for you. This work has been performed under our service request number 12-0427 for samples received on 03/23/12, 03/29/12, 04/04/12.

If you have any technical questions concerning this report, please feel free to contact me at (253) 924-6242.

Thank you for the opportunity to be of service to your organization. I hope that we can be of assistance in the future.

Sincerely,

Dennis Catalano
Operations Manager

Weyerhaeuser Analytical Chemistry and Microstructure
(253) 924-6242
Dennis.Catalano@weyerhaeuser.com

Please Note:

- The results in this report relate only to the items tested or to the sample(s) as received by the laboratory.
- This report shall not be reproduced, except in full, without the written permission of the laboratory.

Weyerhaeuser

Service Request

Analytical Chemistry and Microstructure

12-0427

Title: Weyer-EW Compliance Monitoring

Samples: 9 **Tests:** 6 **Last Samp:** 009	**Project Number:**	**PO:**
SAP Order Number: 90-0000-2586	**Order Desc:** 2760-Everett West Site-Analy Test WY	
Date Received: 03/23/12	**Date Desired:** 04/13/12	**Date Completed:**
Submitter: Beaulieu, Brett	**Location:**	**Phone:** 206 292-2078
Reviewer: Catalano, Dennis	**Location:** WTC 2F25	**Phone:** (253) 924-6242
Copy To:		
Record Book:	**Ref Request:** 11-1738	**Disposal:**

Comments: The As results need to be reported to 0.2ug/L. May require CCT technology to get rid of salt. These require disk deliverables and the analyst will need to add the QC samples.
Revisions:04/04-Added metals codes to Blank and LCS. Added the DUP and MS samples.(djd)

Group	Analysis	Test Description	Comp List	Component List Description
ADMIN	DISK-EPA	EPA Disk - assign to each sample		
CHROM	1-AS-TPH	Acid/Silica Gel Cleanup		
CHROM	1-TPHDNW-W	Prep for NWTPH-D in Water		
CHROM	DIESEL-NW	Diesel/Motor Oil in Water by NWTPH-D		
METALS	3-GM-W2008	AM E-200.8M Water Digest for ICPMS		
METALS	ICPMS	ICP-MS Metals - AM E-200.8M	W1AS	W-As

Sample ID - Date Sampled - Status Customer Sample Description / ID	DISK-EPA	1-AS-TPH	1-TPHDNW-W	DIESEL-NW	3-GM-W2008	ICPMS
Component List						W1AS
Analysis						
	1	1	1	1	1	1
12-0427-001 - 03/22/012 1410 - Available MW-1203R	V				A	A
12-0427-002 - 03/22/012 1310 - Available MW-1301R	V	A	A	A	A	A
12-0427-003 - 03/22/012 1310 - Available MW-1601R	V	A	A	A	A	A
12-0427-004 - 03/22/012 1220 - Available MW-1501R	V				A	A

Printed on: Apr 19, 2012 3:29 PM
Data Retrieved: Apr 19, 2012 3:29 PM

Entered by: Catalano, Dennis
Entered on: Mar 23, 2012 3:23 PM

Weyerhaeuser

Service Request

Analytical Chemistry and Microstructure

12-0427

Title: Weyer-EW Compliance Monitoring

	DISK-EPA	1-AS-TPH	1-TPHDNW-W	DIESEL-NW	3-GM-W2008	ICPMS	W1AS
	1	1	1	1	1	1	
12-0427-005 - 03/22/012 1300 - Available MW-1202R	V				A	A	
12-0427-006 - - Available Method Blank [BLANK]	V		A	A	A	A	
12-0427-007 - - Available Lab Control Spike [LCS]	V		A	A	A	A	
12-0427-008 - 03/22/012 1410 - Completed MW-1203R [DUP]					A	A	
12-0427-009 - 03/22/012 1410 - Completed MW-1203R [MS]					A	A	

Printed on: Apr 19, 2012 3:29 PM

Data Retrieved: Apr 19, 2012 3:29 PM

Entered by: Catalano, Dennis

Entered on: Mar 23, 2012 3:23 PM

Weyerhaeuser

Service Request

Analytical Chemistry and Microstructure

12-0427

Title: Weyer-EW Compliance Monitoring

Group	Analysis	Component List	Test Description	No. Tests	Mult	Charge Amount	Line Total
ADMIN	DISK-EPA		EPA Disk - assign to each sample	2	0.00	20.00	0.00
ADMIN	DISK-EPA		EPA Disk - assign to each sample	5	1.00	20.00	100.00

Total charges for ADMIN group ($) 100.00

Group	Analysis	Component List	Test Description	No. Tests	Mult	Charge Amount	Line Total
CHROM	1-AS-TPH		Acid/Silica Gel Cleanup	2	1.00	15.00	30.00
CHROM	1-TPHDNW-W		Prep for NWTPH-D in Water	2	0.00	0.00	0.00
CHROM	1-TPHDNW-W		Prep for NWTPH-D in Water	2	1.00	0.00	0.00
CHROM	DIESEL-NW		Diesel/Motor Oil in Water by NWTPH-D	2	0.00	121.00	0.00
CHROM	DIESEL-NW		Diesel/Motor Oil in Water by NWTPH-D	2	1.00	121.00	242.00

Total charges for CHROM group ($) 272.00

Group	Analysis	Component List	Test Description	No. Tests	Mult	Charge Amount	Line Total
METALS	3-GM-W2008		AM E-200.8M Water Digest for ICPMS	4	0.00	46.00	0.00
METALS	3-GM-W2008		AM E-200.8M Water Digest for ICPMS	5	1.00	46.00	230.00
METALS	ICPMS	W1AS	ICP-MS Metals - AM E-200.8M	4	0.00	10.00	0.00
METALS	ICPMS	W1AS	ICP-MS Metals - AM E-200.8M	5	1.00	10.00	50.00

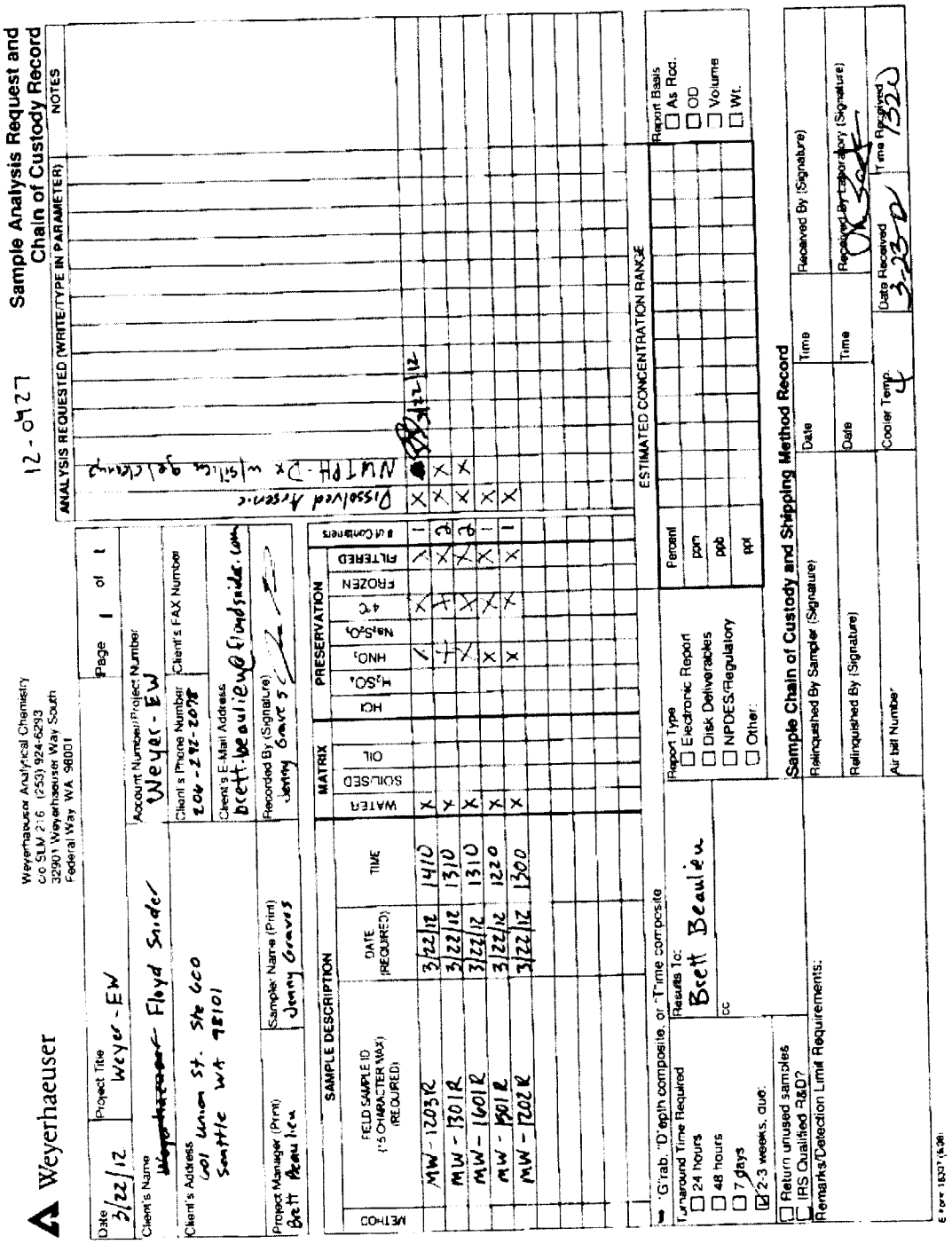
Total charges for METALS group ($) 280.00

Total charges for Service Request 12-0427 ($) 652.00

Printed on: Apr 19, 2012 3:29 PM
Data Retrieved: Apr 19, 2012 3:29 PM

Entered by: Catalano, Dennis
Entered on: Mar 23, 2012 3:23 PM

Original Paperwork



Weyerhaeuser

Sample Analysis Request and Chain of Custody Record

12-0427

Weyerhaeuser Analytical Chemistry
C/O SLW 216 (253) 924-6293
32901 Weyerhaeuser Way South
Federal Way WA 98001

Page 1 of 1

Date: 3/22/12 | Project Title: Weyer-EW | Account Number/Project Number: Weyer-EW

Client's Name: Weyerhaeuser Floyd Snider

Client's Address: 601 Union St. Ste 600 Seattle WA 98101

Client's Phone Number: 206-292-2078 | Client's FAX Number:

Client's E-Mail Address: brett.beaulieu@floydsnider.com

Project Manager (Print): Brett Beaulieu | Sampler Name (Print): Jenny Graves | Recorded By (Signature): Jenny Graves

ANALYSIS REQUESTED (WRITE/TYPE IN PARAMETER) | NOTES

Dissolved Arsenic | NWTPH-Dx w/ silica gel cleanup

METHOD	SAMPLE DESCRIPTION: FIELD SAMPLE ID (15-CHARACTER MAX) (REQUIRED)	DATE (REQUIRED)	TIME	MATRIX: WATER	SOIL/SED	OIL	PRESERVATION: HCl	H_2SO_4	HNO_3	$Na_2S_2O_3$	4°C	FROZEN	FILTERED	# of Containers		
	MW-1203R	3/22/12	1410	X							X		X	1	X	3/23/12
	MW-1301R	3/22/12	1310	X							X		X	2	X	
	MW-1601R	3/22/12	1310	X					X		X		X	2	X	
	MW-1501R	3/22/12	1220	X					X		X		X	1	X	
	MW-1202R	3/22/12	1300	X					X		X		X	1	X	

ESTIMATED CONCENTRATION RANGE

Percent	
ppm	
ppb	
ppt	

Report Basis: ☐ As Rec. ☐ OD ☐ Volume ☐ Wt.

'G'rab, 'D'epth composite, or 'T'ime composite

Turnaround Time Required: ☐ 24 hours ☐ 48 hours ☐ 7 days ☑ 2-3 weeks, due:

Results To: Brett Beaulieu

cc:

Report Type: ☐ Electronic Report ☐ Disk Deliverables ☐ NPDES/Regulatory ☐ Other:

☐ Return unused samples

☐ IRS Qualified R&D?

Remarks/Detection Limit Requirements:

Sample Chain of Custody and Shipping Method Record

Relinquished By Sampler (Signature)	Date	Time	Received By (Signature)
Relinquished By (Signature)	Date	Time	Received By Laboratory (Signature)
Air bill Number	Cooler Temp. 4	Date Received 3-23-12	Time Received 1520

Form 1807 (8/96)

Weyerhaeuser

Weyerhaeuser Analytical Chemistry and Microstructure
32901 Weyerhaeuser Way S.
Federal Way, WA 98003

Data Qualifiers

Flag	Description
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
D	The sample was diluted.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.
I	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
J	The result is an estimated value.
N	The Matrix Spike sample recovery is not within control limits.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
Q	One of more quality control criteria was outside the limits.
S	The reported value was determined by the Method of Standard Additions (MSA).

Weyerhaeuser

Weyerhaeuser Analytical Chemistry and Microstructure
32901 Weyerhaeuser Way S.
Federal Way, WA 98003

Results

Weyer-EW Compliance Monitoring

Customer Sample ID: MW-1203R
Lab Sample ID: 12-0427-001
Date Sampled: 03/22/2012

Matrix: W
Fraction: Total
Date Received: 03/23/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0006**		0.0002	mg/L	as recd	AM E-200.8M	1X	04/03/12	04/05/12	

Weyerhaeuser

Weyerhaeuser Analytical Chemistry and Microstructure
32901 Weyerhaeuser Way S.
Federal Way, WA 98003

Service Request: 12-0427

Weyer-EW Compliance Monitoring

Customer Sample ID: MW-1301R
Lab Sample ID: 12-0427-002
Date Sampled: 03/22/2012

Matrix: W
Fraction: Total
Date Received: 03/23/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	0.0008		0.0002	mg/L	as recd	AM E-200.8M	1X	04/03/12	04/05/12	
Analysis:	**DIESEL-NW**									
Diesel Range	ND		0.041	mg/L	as recd	AM U-NW TPH-D	1X	03/27/12	03/28/12	
Motor Oil Range	ND		0.2	mg/L	as recd	AM U-NW TPH-D	1X	03/27/12	03/28/12	
o-Terphenyl	88.6			%	as recd	AM U-NW TPH-D	1X	03/27/12	03/28/12	

Weyerhaeuser

Weyerhaeuser Analytical Chemistry and Microstructure
32901 Weyerhaeuser Way S.
Federal Way, WA 98003

Service Request: 12-0427

Weyer-EW Compliance Monitoring

Customer Sample ID: MW-1601R
Lab Sample ID: 12-0427-003
Date Sampled: 03/22/2012

Matrix: W
Fraction: Total
Date Received: 03/23/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	0.0008		0.0002	mg/L	as recd	AM E-200.8M	1X	04/03/12	04/05/12	
Analysis:	**DIESEL-NW**									
Diesel Range	ND		0.038	mg/L	as recd	AM U-NW TPH-D	1X	03/27/12	03/28/12	
Motor Oil Range	ND		0.19	mg/L	as recd	AM U-NW TPH-D	1X	03/27/12	03/28/12	
o-Terphenyl	83.8			%	as recd	AM U-NW TPH-D	1X	03/27/12	03/28/12	

Weyerhaeuser

Weyerhaeuser Analytical Chemistry and
Microstructure
32901 Weyerhaeuser Way S.
Federal Way, WA 98003

Service Request: 12-0427

Weyer-EW Compliance Monitoring

Customer Sample ID: MW-1501R
Lab Sample ID: 12-0427-004
Date Sampled: 03/22/2012

Matrix: W
Fraction: Total
Date Received: 03/23/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	0.0008		0.0002	mg/L	as recd	AM E-200.8M	1X	04/03/12	04/05/12	

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Weyerhaeuser Analytical Chemistry and Microstructure
32901 Weyerhaeuser Way S.
Federal Way, WA 98003

Service Request: 12-0427

Weyer-EW Compliance Monitoring

Customer Sample ID: MW-1202R
Lab Sample ID: 12-0427-005
Date Sampled: 03/22/2012

Matrix: W
Fraction: Total
Date Received: 03/23/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0014**		0.0002	mg/L	as recd	AM E-200.8M	1X	04/03/12	04/05/12	

Weyerhaeuser

Weyerhaeuser Analytical Chemistry and Microstructure
32901 Weyerhaeuser Way S.
Federal Way, WA 98003

Service Request: 12-0427

Weyer-EW Compliance Monitoring

Customer Sample ID: Method Blank [BLANK]
Lab Sample ID: 12-0427-006
Date Sampled:

Matrix: W
Fraction: Total
Date Received: 03/29/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	ND		0.0002	mg/L	as recd	AM E-200.8M	1X	04/03/12	04/05/12	
Analysis:	**DIESEL-NW**									
Diesel Range	ND		0.04	mg/L	as recd	AM U-NW TPH-D	1X	03/27/12	03/28/12	
Motor Oil Range	ND		0.2	mg/L	as recd	AM U-NW TPH-D	1X	03/27/12	03/28/12	
o-Terphenyl	79.8			%	as recd	AM U-NW TPH-D	1X	03/27/12	03/28/12	

Weyerhaeuser

Weyerhaeuser Analytical Chemistry and Microstructure
32901 Weyerhaeuser Way S.
Federal Way, WA 98003

Service Request: 12-0427

Weyer-EW Compliance Monitoring

Customer Sample ID: Lab Control Spike [LCS]
Lab Sample ID: 12-0427-007
Date Sampled:

Matrix: W
Fraction: Total
Date Received: 03/29/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0411**		0.0002	mg/L	as recd	AM E-200.8M	1X	04/03/12	04/05/12	
Analysis:	**DIESEL-NW**									
Diesel Range	**0.33**		0.0	mg/L	as recd	AM U-NW TPH-D	1X	03/27/12	03/28/12	
Motor Oil Range	**0.0040**	J	0.20	mg/L	as recd	AM U-NW TPH-D	1X	03/27/12	03/28/12	Flags
o-Terphenyl	**77**			%	as recd	AM U-NW TPH-D	1X	03/27/12	03/28/12	

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32901 Weyerhaeuser Way S.
Federal Way, WA 98003

Service Request: 12-0427

Weyer-EW Compliance Monitoring

Customer Sample ID: MW-1203R [DUP]
Lab Sample ID: 12-0427-008
Date Sampled: 03/22/2012

Matrix: W
Fraction: Total
Date Received: 04/4/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	0.0005		0.0002	mg/L	as recd	AM E-200.8M	1X	04/03/12	04/05/12	

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Weyerhaeuser Analytical Chemistry and Microstructure
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Federal Way, WA 98003

Service Request: 12-0427

Weyer-EW Compliance Monitoring

Customer Sample ID: MW-1203R [MS]
Lab Sample ID: 12-0427-009
Date Sampled: 03/22/2012

Matrix: W
Fraction: Total
Date Received: 04/4/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0411**		0.0002	mg/L	as recd	AM E-200.8M	1X	04/03/12	04/05/12	

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

Service Request 12-0427

Report

Weyer- EW Compliance Monitoring

Client ID	Date Sampled	Time Sampled	Lab ID	As
				mg/L
MW-1203R	03/22/12	1410	001	0.0006
MW-1301R	03/22/12	1310	002	0.0008
MW-1601R	03/22/12	1310	003	0.0008
MW-1501R	03/22/12	1220	004	0.0008
MW-1202R	03/22/12	1300	005	0.0014
			QL:	0.0002
			Method Number:	E-200.8M
			Analyst:	DJD
			Analysis Date:	04/05/12

Approved: Dan Deprez Date: 04/09/12

Telephone: (253) 924-6188

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

Service Request 12-0427

Metals QC Report

Weyer- EW Compliance Monitoring

Method Blank Report

Element	Water Method Blank Found
	mg/L
As	< 0.0002

Water Laboratory Control Sample Report

Element	LCSW Found	True Value	Lower Limit	Upper Limit	% Recovery
	mg/L				
As	0.0411	0.0400	0.0340	0.0460	103

Duplicate Report for Sample 001/008

Element	Sample Found	Duplicate Found	RPD
	mg/L		
As	0.0006	0.0005	18.2

Spike Report for Sample 001/009

Element	Sample Found	Spike Found	Net Spike	Spike Level	% Recovery
	mg/L				
As	0.0006	0.0411	0.0405	0.0400	101

Approved: Dan Deprez Date: 04/09/12
Telephone: (253) 924-6188

Weyerhaeuser

Analytical Chemistry and Microstructure

Results Worksheet For ICPMS on SR # 12-0427

	Sample Prep Code	As - ug/L (raw)	As - mg/L
		ug/L	mg/L
12-0427-001	3-GM-W2	0.559	0.0006
12-0427-002	3-GM-W2	0.804	0.0008
12-0427-003	3-GM-W2	0.826	0.0008
12-0427-004	3-GM-W2	0.773	0.0008
12-0427-005	3-GM-W2	1.378	0.0014
12-0427-006	3-GM-W2	< 0.5	< 0.0002
12-0427-007	3-GM-W2	41.07	0.0411
12-0427-008	3-GM-W2	0.53	0.0005
12-0427-009	3-GM-W2	41.06	0.0411

Printed on: Apr 5, 2012 11:28 AM

Data Retrieved: Apr 5, 2012 11:28 AM

Weyerhaeuser Company Analytical & Testing Services

updated: djd 05-24-11

METALS DIGESTION LOG

sr # 12-0427

method # AM E-200.8M

	sample numbers	amount aliquoted (mL) or grams	sample basis	final volume (mL)	comments
1	PBW	50	DDI-H_2O	50	12-0427-006
2	LCSW	↓	↓	↓	↓ 7
3	12-0427-001		as-rec'd		
4	IDUP		↓		12-0427-008
5	IMS				↓ 9
6	2				
7	3				
8	4				
9	5	↓	↓	↓	
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

DJ 04-03-12

LCSS, LCSW, TCLP LCSW = spiked blank

analyst and start date: DJ 04-03-12

original filed with sr # 12-0427

ICP spikes

true value = 1 mg/L for all elements, except
Ca, K, Mg, Na = 41 mg/L
P = 40 mg/L
Si = 40 mg/L for FBAs only

FINAL VOLUME = 50 mL

_____ **0.5 mL** of **CL-CAL-2**

_____ **0.5 mL** of **BBiLi100**

_____ **0.5 mL** of **WTC-SPK-1**

_____ **0.2 mL** of **10,000 mg/L Si (FBA only)**

ICPMS spikes

true value = 0.04 mg/L for all elements, except
Ca, K, Mg, Na = 20.04 mg/L
P = 20 mg/L

FINAL VOLUME = 50 mL

__JJ__ **0.2 mL** of **INSDPPB**

__JJ__ **0.25 mL** of **WTC-SPK-1**

CL-CAL-2 = Spex CertiPrep, lot# CL28-06JB, exp. 08/30/12
100 mg/L Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn
in 5% HNO_3 and trace HF

BBiLi100 = 100 mg/L B, Bi, Li solution in 2% HNO_3
prep by D. Deprez, 10/17/11, exp. 10/17/12
1. half fill a 50-mL tube with DDI-water
2. add 1 mL of conc. HNO_3, EMD, lot# 48074
3. add 5 mL 1000 mg/L B, Ultra Scientific, lot# J00705, exp. 09/30/15, in 2% NH_4OH
4. add 5 mL 1000 mg/L Bi, Ultra Scientific, lot# L00784, exp. 08/31/17, in 2% HNO_3
5. add 5 mL 1000 mg/L Li, Ultra Scientific, lot# J00468, exp. 06/30/15, in 2% HNO_3
6. dilute to a 50-mL final volume with DDI-water and mix

INSDPPB = prep by D. Deprez, 09/20/11, exp. 08/30/12
10 mg/L Ag, Al, As, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn
in 1% HNO_3
Spex CertiPrep, CL-CAL-2, lot# CL28-06JB, exp. 08/30/12
100 mg/L Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn
in 5% HNO_3 and trace HF
1000 mg/L B, Ultra Scientific, lot# J00705, exp. 09/30/15
in 2% NH_4OH
1000 mg/L Bi, Ultra Scientific, lot# L00784, exp. 08/31/17
in 2% HNO_3
1000 mg/L Li, Ultra Scientific, lot# J00468, exp. 06/30/15
in 2% HNO_3
1000 mg/L P, Ultra Scientific, lot# J01102, exp. 12/31/15
in 2% HNO_3

WTC-SPK-1 = Inorganic Ventures, lot# F2-MEB408041, exp. 02/01/13 = 4000 mg/L Ca, K, Mg, Na, P - in 3% HNO_3

10,000 mg/L Si = JT Baker, lot# J44N53, exp. 10/31/12 - in 5% HNO_3 and trace HF

Si spike for HF preps (1000 mg/L Si in H_2O, RICCA Chemical Company, lot # 4103284, exp. 02-2013)

Si true value = 50 mg/L

____ **0.25 mL** for Final Volume = **5 mL** ____ **0.5 mL** for Final Volume = **10 mL** ____ **1.25 mL** for Final Volume = **25 mL**

analyst and date: JJ 04-03-12

Sample List TE-XII ICPMS 04-05-12 sr 12-0427

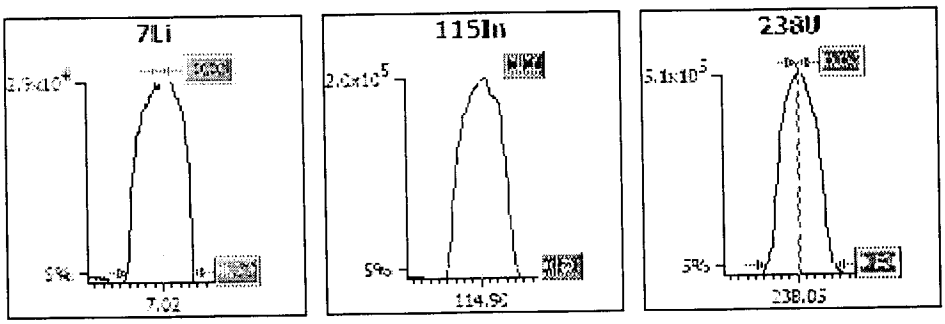
No	Label	Type	Weight	Rack	Row	Col	Height
1	STD1	Blank	1.000	0	1	3	144
2	STD2	Fully Quant Standard	1.000	1	1	4	144
3	STD3	Fully Quant Standard	1.000	1	1	1	144
4	STD4	Fully Quant Standard	1.000	1	1	2	144
5	STD5	Fully Quant Standard	1.000	0	1	4	144
6	STD6	Fully Quant Standard	1.000	1	1	3	144
7	CCV	QC Sample	1.000	0	1	4	144
8	ICV40	QC Sample	1.000	0	1	9	144
9	ICB	QC Sample	1.000	0	1	3	144
10	QLSTD	QC Sample	1.000	1	1	4	144
11	LOWQLSTD	Unknown	1.000	1	1	5	144
12	12-0427-006	Unknown	1.000	1	1	6	144
13	12-0427-007	Unknown	1.000	1	1	7	144
14	12-0427-001	Unknown	1.000	1	1	8	144
15	12-0427-008	Unknown	1.000	1	1	9	144
16	12-0427-009	Unknown	1.000	1	1	10	144
17	12-0427-002	Unknown	1.000	1	1	11	144
18	12-0427-003	Unknown	1.000	1	1	12	144
19	12-0427-004	Unknown	1.000	1	2	1	144
20	12-0427-005	Unknown	1.000	1	2	2	144
21	CCV	QC Sample	1.000	0	1	4	144
22	CCB	QC Sample	1.000	0	1	3	144

Performance Report

Sample details
Acquired at : 4/5/2012 8:44:34 AM
Report name : 1. Xt Y Standard Mode [6/24/2009 7:17:09 PM]

Mass Calibration verification

Acquisition parameters
Sweeps : 30
Dwell : 1.0 mSecs
Point spacing : 0.01 amu
Peak width measured at 5% of the peak maximum



Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
7Li	0.85	0.65	0.10	0.77	-0.01
115In	0.85	0.65	0.10	0.80	0.01
238U	0.85	0.65	0.10	0.80	0.02

Sample details
Acquired at : 4/5/2012 8:44:34 AM
Report name : 1. Xt Y Standard Mode [6/24/2009 7:17:09 PM]

Tune conditions

Major	
Extraction	-145.1
Lens 1	-1231
Lens 2	-80.0
Focus	9.6
D1	-40.0
D2	-140
Pole Bias	0.3
Hexapole Bias	-7.0
Nebuliser	0.83

Minor	
Lens 3	-195.3
Forward power	1404
Horizontal	60
Vertical	383
DA	-33.7
Cool	13.0
Auxiliary	0.90
Sampling Depth	100

Global	
Standard resolution	125
High resolution	125
Analogue Detector	1902
PC Detector	3000

Add. Gases	
CCT-He H2	0.00
Do Not Use	0.00

Sensitivity and stability results

Acquisition parameters
Sweeps : 30

Run	Time	5Bkg	7Li	56Ar O	59Co	137Ba++	138Ba++	101Bkg	115In	137Ba
Dwell (mSecs)		100.0	10.0	10.0	10.0	10.0	30.0	100.0	10.0	10.0
Limits	%RSD	-	5.0%	-	-	-	-	-	5.0%	-
	Countrate	-	>25000	-	-	-	-	-	>200000	-
1	8:44:52 AM	0.000	31845.455	235678.14	54055.410	193.335	1142.268	0.000	205460.27	23749.725
2	8:45:09 AM	0.000	33519.278	246637.50	55470.820	193.335	1282.280	0.000	212272.12	24697.998
3	8:45:27 AM	0.000	34932.658	249160.72	56836.171	163.334	1213.385	0.000	213473.15	24901.684
4	8:45:44 AM	0.000	33977.024	249272.65	56280.645	163.334	1266.723	0.000	212102.97	24921.719
5	8:46:01 AM	0.000	35166.564	251467.28	56611.950	246.669	1198.939	0.000	212458.19	25148.783
x		0.000	33888.196	246443.26	55850.999	192.001	1220.719	0.000	211153.34	24683.982
σ		0.00	1326.83	6256.12	1129.48	34.04	56.10	0.00	3226.79	546.12
%RSD		0.000	3.915	2.539	2.022	17.731	4.596	0.000	1.528	2.212

Run	Time	138Ba	140Ce	156Ce O	220Bkg	238U
Dwell (mSecs)		10.0	10.0	30.0	100.0	10.0
Limits	%RSD	-	-	-	-	5.0%
	Countrate	-	-	-	<1	>350000
1	8:44:52 AM	156933.95	187573.40	3061.439	0.000	513751.41
2	8:45:09 AM	161807.87	192038.81	3029.210	0.000	517955.88
3	8:45:27 AM	161538.18	192846.25	3237.033	0.000	523329.84
4	8:45:44 AM	162708.01	195319.51	3043.658	0.000	527962.37
5	8:46:01 AM	164997.37	194914.03	3269.263	0.000	517002.26
x		161597.07	192538.40	3128.121	0.000	520000.35
σ		2940.61	3097.33	115.27	0.00	5627.99
%RSD		1.820	1.609	3.685	0.000	1.082

Ratio results

Run	Time	137Ba++/137Ba	156Ce O/140Ce
Ratio limits		<0.0400	<0.0250
1	8:44:52 AM	0.008	0.016
2	8:45:09 AM	0.008	0.016
3	8:45:27 AM	0.007	0.017
4	8:45:44 AM	0.007	0.016
5	8:46:01 AM	0.010	0.017
x		0.0078	0.0162
σ		0.00	0.00
%RSD		17.2975	3.4225

Result : The performance report passed.

Performance Report

Sample details

Acquired at : 4/5/2012 8:47:15 AM
Report name : 2. Xt Y CCT KED [5/3/2011 9:20:10 AM]

Tune conditions

Major	
Extraction	-133.3
Lens 1	-1231
Lens 2	-80.0
Focus	-10.4
D1	-51.0
D2	-140
Pole Bias	-14.0
Hexapole Bias	-17.0
Nebuliser	0.83

Minor	
Lens 3	-195.3
Forward power	1404
Horizontal	60
Vertical	383
DA	-52.5
Cool	13.0
Auxiliary	0.90
Sampling Depth	100

Global	
Standard resolution	125
High resolution	125
Analogue Detector	1902
PC Detector	3000

Add. Gases	
CCT-He H2	3.61
Do Not Use	0.00

Sensitivity and stability results

Acquisition parameters

Sweeps : 100

Run	Time	78Se	115In	140Ce	156Ce O
Dwell (mSecs)		10.0	10.0	10.0	10.0
Limits	%RSD	-	5.0%	-	-
	Countrate	<50	>50000	-	-
1	8:47:16 AM	24.000	96204.851	131749.74	1880.124
2	8:47:23 AM	27.000	95736.722	131525.69	1837.118
3	8:47:30 AM	27.000	96389.087	132498.62	1782.111
4	8:47:37 AM	23.000	97822.783	133426.19	1715.103
5	8:47:44 AM	20.000	99443.918	134575.90	1865.122
x		24.200	97119.472	132755.23	1815.916
σ		2.95	1514.90	1260.32	67.64
%RSD		12.188	1.560	0.949	3.725

Ratio results

Run	Time	156Ce O/140Ce
Ratio limits		<0.0250
1	8:47:16 AM	0.014
2	8:47:23 AM	0.014
3	8:47:30 AM	0.013
4	8:47:37 AM	0.013
5	8:47:44 AM	0.014
x		0.0137
σ		0.00
%RSD		4.0006

Result : The performance report passed.

Experiment Details

Description	PlasmaLab Template BlankExperiment
Template Filename	C:\Program Files\Thermo Electron\PlasmaLab\data\lowlevelscan.tee
Created By User	wawtcmetal
Analyte Database	EPA_CCT.tea
Creation Timestamp	2/2/2006 10:13:19 AM
Last Edited By	wawtcmetal
Last Edit Timestamp	4/5/2012 9:31:39 AM
Instrument Detector	Simultaneous
Database Version	3.51
Acquisition Mode	Unknown

Numerical Results report key (text indicates meaning)

Blue text indicates that cell is a statistic.
Underlining indicates that a data warning flag is set.

Column headings
- **No flag**
- **Semi Quant**
- **Standard Addition**
- **Multi Element**

Result cells
- Internal Standard
- Excluded
- QC Warning
- QC Failure

Transient TRA only:
- Peak Not Found
- Manually Edited
- Merged Peak

Data warning flags
- I - Invalid calibration
- T - Tripped
- F - Interference correction failed
- M - Result over max
- V - Valley integration failed
- D - Different method used

Setup

Survey Scan Setup

Sweeps	5
Dwell Time	600
Channels Per Mass	10
Acquisition Duration	6620

Main Run Setup

Main Run	Peak Jumping
Sweeps	30
Dwell Time	10000
Channels Per Mass	1
Acquisition Duration	17743
Channel Spacing	0.02

Survey Scan Regions

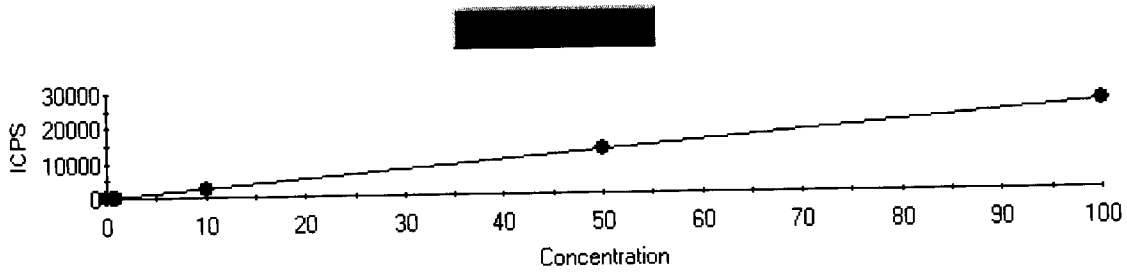
Start AMU	End AMU	Channels	Dwell ms	Resolution
4.59	11.50	69	600	Standard
22.59	28.41	58	600	
30.59	31.50	9	600	
33.50	34.50	10	600	
38.50	39.41	9	600	
42.59	55.50	129	600	Standard
56.50	79.50	230	600	Standard
80.50	245.50	1650	600	Standard

Peak Jump Regions

Analyte	Channels	Dwell ms	Resolution
45Sc	1	10000	Standard
52Cr	1	20000	Standard
53Cl O	1	20000	Standard
63Cu	1	10000	Standard
67Zn	1	10000	Standard
68Zn	1	10000	Standard
75As	1	10000	Standard
83Kr	1	20000	Standard
91Zr	1	10000	Standard

97Mo	1	10000	Standard
98Mo	1	10000	Standard
99Ru	1	10000	Standard
103Rh	1	10000	Standard
103Rh H2	1	10000	Standard
120Sn	1	10000	Standard
125Te	1	10000	Standard
137Ba	1	10000	Standard
159Tb	1	10000	Standard
206Pb	1	10000	Standard
207Pb	1	10000	Standard

Fully Quant Calibration



Intercept CPS=25.645474 Intercept Conc=0.100658
Sensitivity=254.777868 Correlation Coeff=0.999980

Label	Defined	Measured	Error	Mean CPS	% Error
STD1	0.000	-0.000	0.000	25.65	0.00
STD2	0.500	0.400	0.100	127.57	19.99
STD3	1.000	0.966	0.034	271.80	3.38
STD4	10.000	9.943	0.057	2559.03	0.57
STD5	50.000	50.510	0.510	12894.49	1.02
STD6	100.000	99.751	0.249	25440.11	0.25

Dilution Corrected Concentrations

STD1 4/5/2012 9:33:09 AM

User Pre-dilution: 1.000

Run	Time	45Sc	53Cl O	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb
1	09:33:16	97.1%	-12.080	-0.022	97.5%	99.8%	98.8%
2	09:33:24	100.3%	-48.770	-0.036	100.7%	101.3%	99.9%
3	09:33:32	102.6%	60.860	0.058	101.8%	98.9%	101.4%
x		100.0%	-0.000	-0.000	100.0%	100.0%	100.0%
%RSD		2.7	0.000	0.000	2.3	1.2	1.3

STD2 4/5/2012 9:35:58 AM

User Pre-dilution: 1.000

Run	Time	45Sc	53Cl O	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb
1	09:36:06	101.7%	-26.130	0.288	102.5%	100.9%	101.7%
2	09:36:14	103.3%	-12.500	0.414	103.9%	101.7%	103.8%
3	09:36:22	107.6%	-105.000	0.498	105.9%	102.7%	104.8%
x		104.2%	-47.870	0.400	104.1%	101.8%	103.5%
%RSD		2.9	104.300	26.380	1.7	0.9	1.5

STD3 4/5/2012 9:38:35 AM

User Pre-dilution: 1.000

Run	Time	45Sc	53Cl O	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb
1	09:38:42	100.1%	262.000	1.011	100.5%	101.2%	100.9%
2	09:38:50	102.8%	149.100	0.903	101.9%	100.4%	101.1%
3	09:38:58	105.5%	102.200	0.984	102.9%	101.3%	103.4%
x		102.8%	171.100	0.966	101.7%	101.0%	101.8%
%RSD		2.6	48.020	5.833	1.2	0.5	1.4

STD4 4/5/2012 9:41:13 AM

User Pre-dilution: 1.000

Run	Time	45Sc	53Cl O	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb
1	09:41:21	101.2%	234.700	10.200	103.1%	101.4%	101.5%
2	09:41:29	106.0%	226.200	9.521	104.1%	101.6%	103.0%
3	09:41:36	107.4%	401.100	10.110	104.9%	99.6%	104.4%
x		104.9%	287.300	9.943	104.0%	100.8%	103.0%
%RSD		3.1	34.320	3.704	0.9	1.1	1.4

STD5 4/5/2012 9:44:01 AM

User Pre-dilution: 1.000

Run	Time	45Sc	53Cl O	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb
1	09:44:09	104.4%	765.300	50.800	104.3%	101.9%	103.5%
2	09:44:17	105.6%	903.600	50.620	104.1%	102.1%	105.3%
3	09:44:24	106.9%	746.100	50.110	105.4%	104.7%	105.6%
x		105.6%	805.000	50.510	104.6%	102.9%	104.8%
%RSD		1.2	10.680	0.708	0.7	1.5	1.1

STD6 4/5/2012 9:46:46 AM

User Pre-dilution: 1.000

Run	Time	45Sc	53Cl O	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb
1	09:46:53	106.1%	1353.000	99.450	105.3%	104.9%	105.1%
2	09:47:02	107.9%	1335.000	98.820	106.8%	105.3%	107.7%
3	09:47:09	107.3%	1449.000	M 101.000	105.0%	104.7%	105.4%
x		107.1%	1379.000	M 99.750	105.7%	105.0%	106.1%
%RSD		0.8	4.428	M 1.112	0.9	0.3	1.3

CCV 4/5/2012 9:49:33 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	45Sc	53Cl O	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb
1	09:49:40	101.6%	627.700	48.820	101.9%	105.4%	103.6%
2	09:49:48	105.4%	401.500	50.340	104.1%	103.3%	104.7%
3	09:49:56	105.5%	591.300	51.430	105.0%	101.3%	105.8%
x		104.2%	540.200	50.200	103.7%	103.3%	104.7%
%RSD		2.1	22.480	2.610	1.5	2.0	1.0

ICV40 4/5/2012 9:52:25 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	45Sc	53Cl O	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb
1	09:52:32	103.8%	681.400	39.410	102.8%	102.7%	103.7%
2	09:52:40	105.4%	740.400	39.890	103.1%	104.0%	103.7%
3	09:52:48	107.3%	819.000	40.710	105.3%	101.7%	104.9%
x		105.5%	746.900	40.000	103.8%	102.8%	104.1%
%RSD		1.7	9.245	1.651	1.3	1.1	0.7

ICB 4/5/2012 9:55:46 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	45Sc	53Cl O	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb
1	09:55:54	103.3%	-109.100	0.002	102.1%	102.2%	100.5%
2	09:56:02	106.8%	-62.440	0.042	103.2%	100.9%	103.8%
3	09:56:10	108.4%	-45.720	0.030	103.6%	100.4%	103.6%
x		106.2%	-72.410	0.024	103.0%	101.2%	102.6%
%RSD		2.4	45.350	84.330	0.8	0.9	1.8

QLSTD 4/5/2012 9:58:23 AM QC Status: PASS (Initial: PASS) ref# 248

User Pre-dilution: 1.000

Run	Time	45Sc	53Cl O	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb
1	09:58:31	103.8%	-54.790	0.615	102.9%	102.3%	102.5%
2	09:58:38	105.9%	-55.450	0.475	104.3%	102.3%	104.5%
3	09:58:46	107.4%	25.960	0.449	105.3%	102.3%	104.4%
x		105.7%	-28.090	0.513	104.2%	102.3%	103.8%
%RSD		1.7	166.600	17.420	1.1	0.0	1.1

LOWQLSTD 4/5/2012 10:00:59 AM TV: 0.25 102%

User Pre-dilution: 1.000

Run	Time	45Sc	53Cl O	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb
1	10:01:07	101.4%	-203.100	0.356	101.5%	103.2%	101.9%
2	10:01:15	105.1%	-114.500	0.191	102.8%	103.0%	103.7%
3	10:01:23	106.9%	-168.600	0.218	104.2%	102.7%	104.7%
x		104.5%	-162.000	0.255	102.8%	103.0%	103.5%
%RSD		2.7	27.570	34.600	1.3	0.3	1.4

12-0427-006 4/5/2012 10:03:37 AM PBW all w/in ±PQL

User Pre-dilution: 1.000

Run	Time	45Sc	53Cl O	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb
1	10:03:44	104.0%	-146.700	-0.037	102.1%	102.8%	102.6%
2	10:03:52	105.6%	-65.040	0.024	104.4%	104.6%	104.0%
3	10:04:00	108.8%	-132.600	-0.037	106.0%	102.6%	104.7%
x		106.1%	-114.800	-0.017	104.2%	103.3%	103.8%
%RSD		2.3	38.020	214.600	1.8	1.1	1.1

12-0427-007 4/5/2012 10:06:15 AM LCSW - all w/in ±15% of true value

User Pre-dilution: 1.000

Run	Time	45Sc	53Cl O	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb
1	10:06:23	109.6%	251.500	41.240	107.4%	112.4%	108.4%
2	10:06:31	114.0%	265.400	40.180	109.2%	112.3%	110.6%
3	10:06:38	116.6%	142.800	41.810	112.1%	112.5%	112.1%
x		113.4%	219.900	41.070	109.6%	112.4%	110.3%
%RSD		3.1	30.510	2.012	2.2	0.1	1.7

12-0427-001 4/5/2012 10:09:04 AM

User Pre-dilution: 1.000

Run	Time	45Sc	53Cl O	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb
1	10:09:12	111.5%	-979.500	0.623	97.9%	104.9%	106.2%
2	10:09:20	113.0%	-975.000	0.571	101.5%	105.2%	108.0%
3	10:09:28	117.9%	-998.700	0.484	103.7%	105.2%	110.0%
x		114.1%	-984.400	0.559	101.0%	105.1%	108.1%
%RSD		2.9	1.274	12.540	2.9	0.2	1.7

12-0427-008 4/5/2012 10:11:49 AM DUP

User Pre-dilution: 1.000

Run	Time	45Sc	53Cl O	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb
1	10:11:57	114.5%	-1082.000	0.455	102.4%	106.0%	108.3%
2	10:12:05	116.0%	-973.200	0.546	104.1%	103.1%	110.2%
3	10:12:12	119.8%	-941.500	0.590	105.9%	104.1%	111.1%
x		116.7%	-999.000	0.530	104.1%	104.4%	109.9%
%RSD		2.3	7.397	13.070	1.7	1.4	1.3

12-0427-009 4/5/2012 10:14:36 AM MS

User Pre-dilution: 1.000

Run	Time	45Sc	53Cl O	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb
1	10:14:44	111.4%	-502.400	42.300	98.1%	102.6%	107.0%
2	10:14:52	116.8%	-353.700	40.790	101.9%	104.7%	109.9%
3	10:15:00	120.1%	-375.400	40.100	102.4%	105.8%	110.9%
x		116.1%	-410.500	41.060	100.8%	104.4%	109.3%
%RSD		3.8	19.570	2.741	2.3	1.6	1.9

12-0427-002 4/5/2012 10:17:38 AM

User Pre-dilution: 1.000

Run	Time	45Sc	53Cl O	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb
1	10:17:46	115.3%	-1164.000	0.707	107.0%	105.3%	111.6%
2	10:17:54	118.7%	-1182.000	0.938	109.2%	104.5%	113.3%
3	10:18:02	120.4%	-1119.000	0.766	109.3%	105.7%	114.1%
x		118.1%	-1155.000	0.804	108.5%	105.2%	113.0%
%RSD		2.2	2.835	14.930	1.2	0.5	1.1

12-0427-003 4/5/2012 10:20:26 AM

User Pre-dilution: 1.000

Run	Time	45Sc	53Cl O	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb
1	10:20:33	114.6%	-1132.000	0.893	108.8%	105.3%	110.8%
2	10:20:42	118.9%	-1105.000	0.777	109.5%	107.4%	112.8%
3	10:20:50	120.8%	-1096.000	0.808	111.0%	109.5%	114.4%
x		118.1%	-1111.000	0.826	109.8%	107.4%	112.7%
%RSD		2.7	1.667	7.302	1.0	1.9	1.6

12-0427-004 4/5/2012 10:23:12 AM

User Pre-dilution: 1.000

Run	Time	45Sc	53Cl O	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb
1	10:23:20	111.2%	-283.400	0.884	93.6%	101.0%	100.9%
2	10:23:28	116.6%	-357.200	0.729	95.4%	101.0%	103.2%
3	10:23:36	117.9%	-200.600	0.707	97.0%	100.4%	104.4%
x		115.2%	-280.400	0.773	95.3%	100.8%	102.8%
%RSD		3.1	27.940	12.490	1.8	0.3	1.7

12-0427-005 4/5/2012 10:26:33 AM

User Pre-dilution: 1.000

Run	Time	45Sc	53Cl O	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb
1	10:26:41	119.4%	-605.100	1.377	103.6%	102.7%	108.4%
2	10:26:48	122.4%	-593.400	1.543	106.1%	104.3%	108.9%
3	10:26:56	124.8%	-515.600	1.215	108.9%	103.5%	111.9%
x		122.2%	-571.400	1.378	106.2%	103.5%	109.7%
%RSD		2.2	8.517	11.920	2.5	0.8	1.7

CCV 4/5/2012 10:29:44 AM QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	45Sc	53Cl O	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb
1	10:29:52	126.1%	231.500	50.950	125.5%	112.1%	118.2%
2	10:30:00	128.7%	-2.042	52.060	126.3%	113.6%	119.7%
3	10:30:08	130.1%	375.000	49.270	127.0%	115.5%	120.3%
x		128.3%	201.500	50.760	126.3%	113.7%	119.4%
%RSD		1.6	94.450	2.773	0.6	1.5	0.9

CCB 4/5/2012 10:32:26 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	45Sc	53Cl O	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb
1	10:32:34	120.3%	-340.300	0.003	119.3%	113.9%	114.1%
2	10:32:42	125.0%	-281.700	0.095	121.9%	113.9%	114.5%
3	10:32:50	125.5%	-272.700	0.002	122.9%	114.8%	116.6%
x		123.6%	-298.200	0.033	121.4%	114.2%	115.1%
%RSD		2.3	12.320	161.000	1.5	0.5	1.1

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

Service Request 12-0427
WA Cert. No: C1219

Report
Weyer-EW Compliance Monitoring
Unit in mg/L
Method - NWTPH-D

Client ID	Sample Date	Sample Time	Lab ID	Diesel Fuel Range 624-92-0	Motor Oil Range 74-93-1	o-terphenyl Surrogate % Rec	Date Extracted	Date Analyzed
MW-1301R	03/22/12	13:10	002	**<0.041**	<0.20	88%	03/27/12	03/28/12
MW-1601R	03/22/12	13:10	003	**<0.038**	<0.19	84%	03/27/12	03/28/12
Method Blank			BLANK	<0.040	<0.20	80%	03/27/12	03/28/12
Lab Control Spike			LCS	83%	NA	77%	03/27/12	03/28/12

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

Date: 03/29/12

2E

LIQUID WTPH SURROGATE RECOVERY

Lab Name: WEYERHAEUSER Contract:

Lab Code: WEYCO Case No.: Method: SDG No.: 12-0427-001

GC Column(1): DB5MS ID: 0.25 (mm)

	EPA SAMPLE NO.	S1 %REC	S1 #	S2 %REC	S2 #	S3 %REC	S3 #	S4 %REC	S4 #	S5 %REC	S5 #	S6 %REC	S6 #	TOT OUT
01	MW-1301R	88												0
02	MW-1601R	84												0
03	DBLK1_W032712	80												0
04	DLCS1_W032712	77												0
05														
06														
07														
08														
09														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														
21														
22														
23														
24														
25														
26														
27														
28														
29														
30														

ADVISORY QC LIMITS

S1 = o-Terphenyl ~~(63-129)~~ 67-125

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

3/29/12

FORM II PEST-1

WTPH-1

3E
LIQUID PESTICIDE LAB CONTROL SAMPLE

Lab Name: WEYERHAEUSER Contract:

Lab Code: WEYCO Case No.: Method: SDG No.: 12-0427-001

Matrix Spike - EPA Sample No.:

Extraction Date: 03/27/12 File Name: 030812D046.d

Lab ID: DLCS1_W032712

Instrument ID (1): hpdos4_2.i GC Column(1): DB5MS ID: 0.25 (mm)

COMPOUND	SPIKE ADDED (mg/L)	AMOUNT RECOVERED (mg/L)	LCS % REC #	QC. LIMITS REC.	
Diesel Range	0.400	0.333	83.2	~~35-148~~	62-126

3/29/12

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 0 outside limits
Spike Recovery: 0 out of 1 outside limits
COMMENTS: _____

4C

WTPH METHOD BLANK SUMMARY

EPA SAMPLE NO.

DBLK1_W032712

Lab Name: WEYERHAEUSER Contract:

Lab Code: WEYCO Case No.: Method: SDG No.: 12-0427-001

Lab Sample ID: DBLK1_W032712 Lab File ID: 030812D045

Matrix (soil/water) LIQUID Extraction: (SepF/Cont/Sonc) SEPF

Sulfur Cleanup (Y/N) N Date Extracted: 03/27/12

Date Analyzed (1): 03/28/12 Date Analyzed (2):

Time Analyzed (1): 1318 Time Analyzed (2):

Instrument ID (1): HPDOS4_2 Instrument ID (2):

GC Column (1): DB5MS ID: 0.25(mm) GC Column (2): ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	DLCS1_W032712	DLCS1_W032712	03/28/12	
02	MW-1301R	120427002	03/28/12	
03	MW-1601R	120427003	03/28/12	
04				
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS:

1D

WTPH ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-1301R

Lab Name: WEYERHAEUSER Contract:

Lab Code: WEYCO SR No.: 12-0427 Method: DIESEL-NW SDG No.: 12-0427-001

Matrix: (soil/water) LIQUID Lab Sample ID: 120427002

Sample wt/vol: 490.0 (g/mL) mL Lab File ID: 030812D047

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/23/12

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:03/27/12

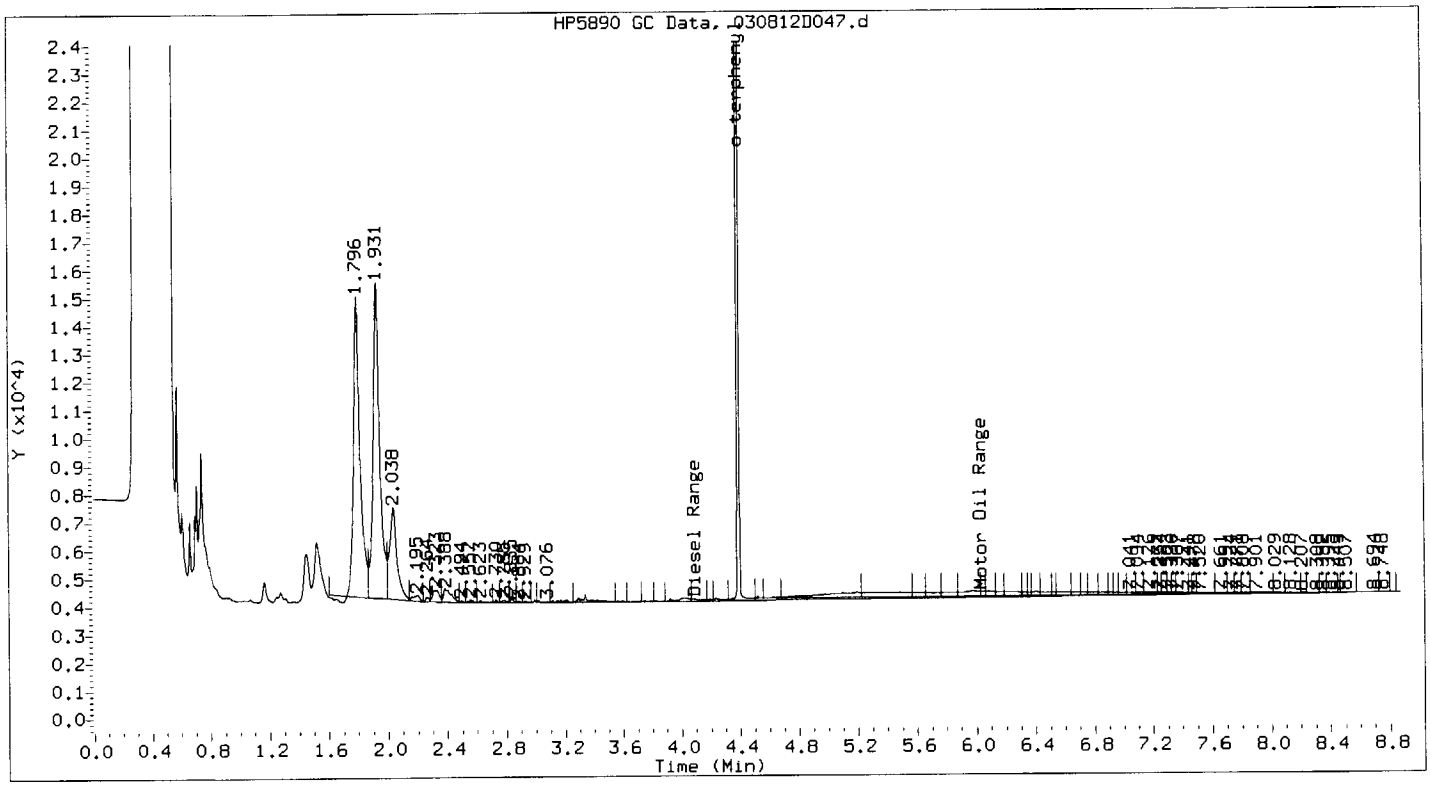
Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/28/12

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) mg/L	Q
	----------Diesel Range	0.041	U
	----------Motor Oil Range	0.20	U

Weyerhaeuser
DB5MS Column



SAMPLE: 120427002 Client ID: MW-1301R

Processing File: 00-030812_WTPHD.m Sample File: /chem/hpdos4_2.i/030812d0_racernw.b/030812D047.d

Acquired: 28-MAR-2012 13:50 SampleType: SAMPLE

Dilution: 1.00 | UnitFactor: 1.000 | FinalVol: 1000 uL | AmountExt: 490.0 ml | Sample Volume: 490.0 ml | AmountInj: 1.000 uL |

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
1	1.796			645512	10670	BV		
2	1.931			699289	11245	VV		
3	2.038			222880	3266	VV		
4	2.195			12785	196	VV		
5	2.264			4715	149	PV		
6	2.323			24960	389	VV		
7	2.388			32919	403	VV		
8	2.494			1724	50	VV		
9	2.557			3844	89	VV		
10	2.623			2734	76	PV		
11	2.730			2351	106	VV		
12	2.785			3812	69	VV		
13	2.835			4748	176	VV		
14	2.884			1884	45	VV		
15	2.929			1855	49	VV		
16	3.076			467	26	BV		
18	4.391	4.390	0.001	3680024	241613	HBS	0.09034	o-terphenyl
CALC:	**[(1/40735000)* 3680000] = 0.09034 mg/mL**							
20	7.041			6433	82	VVT		
21	7.094			4758	77	VVT		
22	7.176			8543	76	VVT		
23	7.237			1790	70	VVT		
24	7.254			3094	70	VVT		
25	7.303			2393	66	VVT		
26	7.330			2161	63	VVT		
27	7.367			6178	63	VVT		
28	7.441			1510	57	VVT		
29	7.478			2360	54	VVT		
30	7.520			7488	54	VVT		
31	7.661			4465	48	VVT		
32	7.724			2334	43	VVT		

Weyerhaeuser
DB5MS Column

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
33	7.771			2307	42	VVT		
34	7.808			2892	40	VVT		
35	7.901			5862	34	VVT		
36	8.029			2693	31	VVT		
37	8.128			2911	27	VVT		
38	8.207			973	21	VVT		
39	8.308			1750	18	VVT		
40	8.352			812	17	VVT		
41	8.395			1224	14	VVT		
42	8.449			255	12	VVT		
43	8.507			1286	10	VVT		
44	8.694			915	6	VVT		
45	8.748			175	3	VVT		

1D

WTPH ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-1601R

Lab Name: WEYERHAEUSER Contract:

Lab Code: WEYCO SR No.: 12-0427 Method: DIESEL-NW SDG No.: 12-0427-001

Matrix: (soil/water) LIQUID Lab Sample ID: 120427003

Sample wt/vol: 520.0 (g/mL) mL Lab File ID: 030812D048

% Moisture: _____ decanted: (Y/N)___ Date Received: 03/23/12

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:03/27/12

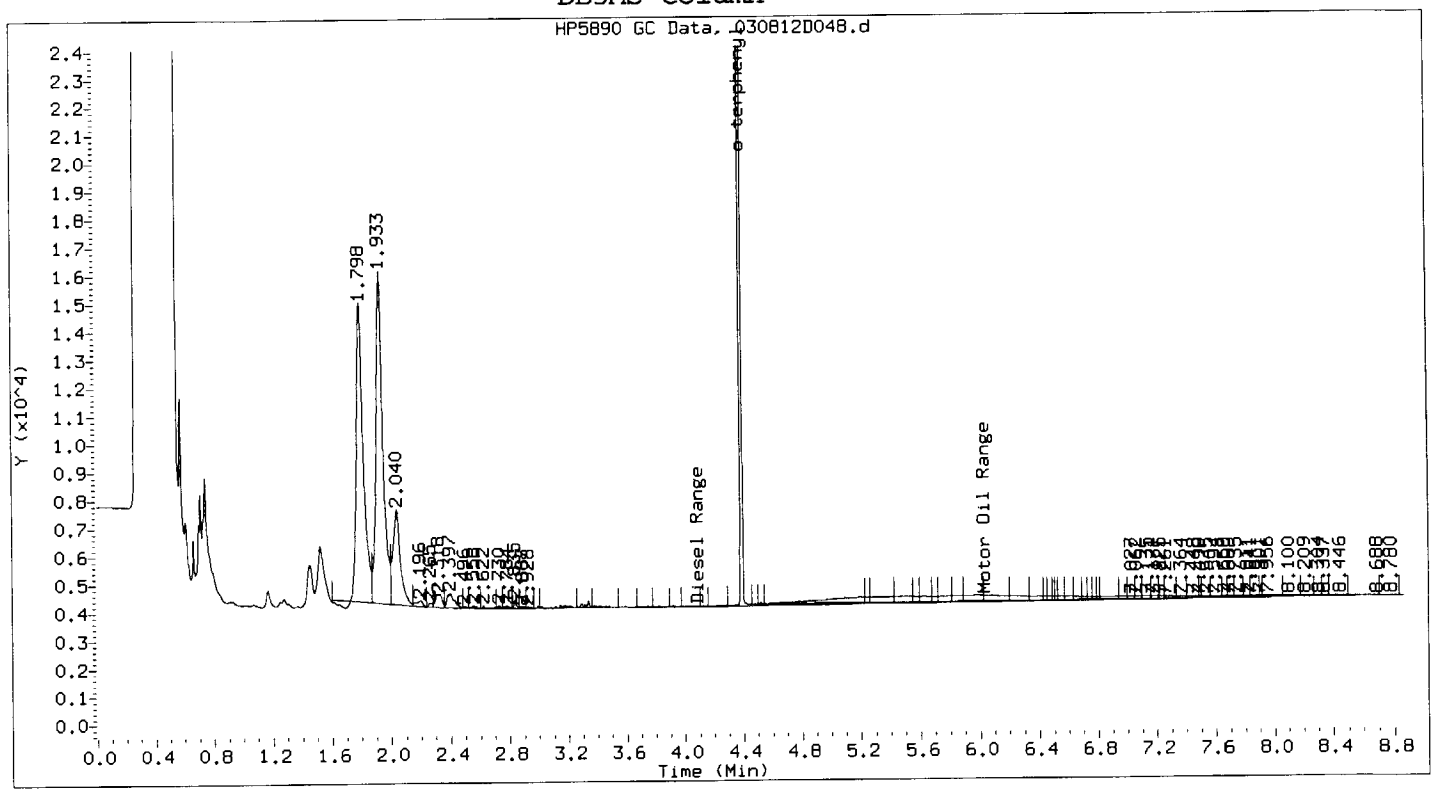
Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/28/12

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) mg/L	Q
	----------Diesel Range	0.038	U
	----------Motor Oil Range	0.19	U

Weyerhaeuser
DB5MS Column



SAMPLE: 120427003 Client ID: MW-1601R
Processing File: 00-030812_WTPHD.m Sample File: /chem/hpdos4_2.i/030812d0_racernw.b/030812D048.d
Acquired: 28-MAR-2012 14:06 SampleType: SAMPLE

Dilution: 1.00 | UnitFactor: 1.000 | FinalVol: 1000 uL | AmountExt: 520.0 ml | Sample Volume: 520.0 ml | AmountInj: 1.000 uL |

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
1	1.798			677430	10625	BV		
2	1.933			760011	11722	VV		
3	2.040			234169	3404	VV		
4	2.196			12507	198	VV		
5	2.265			4547	144	PV		
6	2.318			28109	449	VV		
7	2.397			32356	497	VV		
8	2.496			1227	45	VV		
9	2.558			3077	73	VV		
10	2.622			2754	75	PV		
11	2.730			2170	95	PV		
12	2.784			3891	67	VV		
13	2.835			6145	231	VV		
14	2.887			2446	68	VV		
15	2.928			1975	39	VV		
17	4.389	4.390	0.001	3480837	277876	HBS	0.08545	o-terphenyl
CALC:	**[(1/40735000)* 3481000] = 0.08545 mg/mL**							
19	7.027			5619	88	VVT		
20	7.062			4557	86	VVT		
21	7.135			6019	84	VVT		
22	7.171			5306	84	VVT		
23	7.225			3430	78	VVT		
24	7.261			6695	74	VVT		
25	7.364			5397	67	VVT		
26	7.448			6249	64	VVT		
27	7.490			1468	58	VVT		
28	7.545			4099	57	VVT		
29	7.594			5219	57	VVT		
30	7.659			2069	50	VVT		
31	7.689			2365	50	VVT		
32	7.735			3234	45	VVT		

Weyerhaeuser
DB5MS Column

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
33	7.811			2336	42	VVT		
34	7.841			3010	41	VVT		
35	7.901			871	38	VVT		
36	7.956			5364	36	VVT		
37	8.100			4100	29	VVT		
38	8.209			2323	26	VVT		
39	8.304			1170	20	VVT		
40	8.337			968	18	VVT		
41	8.446			2091	16	VVT		
42	8.688			1910	8	VVT		
43	8.780			1108	4	VBT		

6D

PESTICIDE INITIAL CALIBRATION OF SINGLE COMPONENT ANALYTES

Lab Name: WEYERHAEUSER Contract:

Lab Code: WEYCO Case No.: Method: SDG No.: 12-0427-001

Instrument ID: HPDOS4_2

GC Column: DB5MS ID: 0.25 (mm) Date(s) Analyzed: 03/08/12 03/08/12

COMPOUND	RT OF STANDARDS LVL 1	LVL 2	LVL 3	MEAN RT	RT WINDOW FROM	TO
Diesel Range	4.09	4.09	4.09			
Motor Oil Range	6.03	6.03	6.03			
o-Terphenyl	4.39	4.38	3.41			

* Surrogate retention times are measured from Standard Mix A analysis.

Retention time windows are +/- 0.05 minutes for all compounds that elute before Heptachlor Epoxide, +/- 0.07 minutes for all other compounds, except +/-0.10 minutes for Decachlorobiphenyl.

6D

PESTICIDE INITIAL CALIBRATION OF SINGLE COMPONENT ANALYTES

Lab Name: WEYERHAEUSER Contract:

Lab Code: WEYCO Case No.: Method: SDG No.: 12-0427-001

Instrument ID: HPDOS4_2

GC Column: DB5MS ID: 0.25 (mm) Date(s) Analyzed: 03/08/12 03/08/12

COMPOUND	RT OF STANDARDS LVL 4	LVL 5	LVL 6	MEAN RT	RT WINDOW FROM	TO
Diesel Range	4.09	4.09	4.09			
Motor Oil Range	6.03	6.03	6.03			
o-Terphenyl	3.41	3.41	3.41			

* Surrogate retention times are measured from Standard Mix A analysis.

Retention time windows are +/- 0.05 minutes for all compounds that elute before Heptachlor Epoxide, +/- 0.07 minutes for all other compounds, except +/-0.10 minutes for Decachlorobiphenyl.

6D

PESTICIDE INITIAL CALIBRATION OF SINGLE COMPONENT ANALYTES

Lab Name: WEYERHAEUSER Contract:

Lab Code: WEYCO Case No.: Method: SDG No.: 12-0427-001

Instrument ID: HPDOS4_2

GC Column: DB5MS ID: 0.25 (mm) Date(s) Analyzed: 03/08/12 03/08/12

COMPOUND	RT OF STANDARDS LVL 7			MEAN RT	RT WINDOW FROM	RT WINDOW TO
Diesel Range	4.09			4.09	3.13	5.05
Motor Oil Range	6.03			6.03	5.06	7.00
o-Terphenyl	3.36			3.68	3.58	3.78

* Surrogate retention times are measured from Standard Mix A analysis.

Retention time windows are +/- 0.05 minutes for all compounds that elute before Heptachlor Epoxide, +/- 0.07 minutes for all other compounds, except +/-0.10 minutes for Decachlorobiphenyl.

6E

PESTICIDE INITIAL CALIBRATION OF SINGLE COMPONENT ANALYTES

Lab Name: WEYERHAEUSER Contract:

Lab Code: WEYCO Case No.: Method: SDG No.: 12-0427-001

Instrument ID: HPDOS4_2

GC Column: DB5MS ID: 0.25 (mm) Date(s) Analyzed: 03/08/12 03/08/12

COMPOUND	CALIBRATION FACTORS LVL1	LVL2	LVL3	MEAN	%RSD
Diesel Range	25003400	25057400			
Motor Oil Range	27483460	34814440	25864584		
o-Terphenyl	38550980	46936274			

* Surrogate calibration factors are measured from Standard Mix A analysis.

%RSD must be less than or equal 20.0 % for all compounds except the surrogates, where %RSD must be less than or equal to 30.0%. Up to two target compounds, but not surrogates, may have %RSD greater than 20.0% but less than or equal to 30.0%.

6E

PESTICIDE INITIAL CALIBRATION OF SINGLE COMPONENT ANALYTES

Lab Name: WEYERHAEUSER Contract:

Lab Code: WEYCO Case No.: Method: SDG No.: 12-0427-001

Instrument ID: HPDOS4_2

GC Column: DB5MS ID: 0.25 (mm) Date(s) Analyzed: 03/08/12 03/08/12

COMPOUND	CALIBRATION FACTORS LVL4	LVL5	LVL6	MEAN	%RSD
Diesel Range	23182860	21966470	22943460		
Motor Oil Range	25126734	30103413	27942663		
o-Terphenyl	41249560	39983822	39309208		

* Surrogate calibration factors are measured from Standard Mix A analysis.

%RSD must be less than or equal 20.0 % for all compounds except the surrogates, where %RSD must be less than or equal to 30.0%. Up to two target compounds, but not surrogates, may have %RSD greater than 20.0% but less than or equal to 30.0%.

6E

PESTICIDE INITIAL CALIBRATION OF SINGLE COMPONENT ANALYTES

Lab Name: WEYERHAEUSER Contract:

Lab Code: WEYCO Case No.: Method: SDG No.: 12-0427-001

Instrument ID: HPDOS4_2

GC Column: DB5MS ID: 0.25 (mm) Date(s) Analyzed: 03/08/12 03/08/12

COMPOUND	CALIBRATION FACTORS LVL7			MEAN	%RSD	
Diesel Range	21258729			23235386.5	6.68	<-
Motor Oil Range	27383855			28388450.0	11.44	
o-Terphenyl	38378030			40734645.8	7.89	<-

* Surrogate calibration factors are measured from Standard Mix A analysis.

%RSD must be less than or equal 20.0 % for all compounds except the surrogates, where %RSD must be less than or equal to 30.0%. Up to two target compounds, but not surrogates, may have %RSD greater than 20.0% but less than or equal to 30.0%.

7B

PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: WEYERHAEUSER Contract:

Lab Code: WEYCO Case No.: Method: SDG No.: 12-0427-001

Instrument ID: HPDOS4_2 Calibration Date: 03/28/12 Time: 1036

Lab File ID: 030812D042 Init. Calib. Date(s): 03/08/12 03/08/12

Init. Calib. Times: 1237 1413

COMPOUND	$\overline{RRF}$	RRF0	MIN RRF	%D	MAX %D
Diesel Range	21380000			8.0	20.0
o-terphenyl	41600000			2.1	20.0

All other compounds must meet a minimum RRF of 0.010.

7B

PESTICIDE CONTINUING CALIBRATION CHECK

Lab Name: WEYERHAEUSER Contract:

Lab Code: WEYCO Case No.: Method: SDG No.: 12-0427-001

Instrument ID: HPDOS4_2 Calibration Date: 03/28/12 Time: 1438

Lab File ID: 030812D050 Init. Calib. Date(s): 03/08/12 03/08/12

Init. Calib. Times: 1237 1413

COMPOUND	$\overline{RRF}$	RRF0	MIN RRF	%D	MAX %D
Diesel Range	23110000			0.5	20.0
o-terphenyl	40350000			0.9	20.0

All other compounds must meet a minimum RRF of 0.010.

8D
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: WEYERHAEUSER Contract:

Lab Code: WEYCO Case No.: Method: SDG No.: 12-0427-001

GC Column: DB5MS ID: 0.25 (mm) Init. Calib. Date(s): 03/08/12 03/08/12

Instrument ID: HPDOS4_2

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 4.39

	SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT #
01	DIESEL_LEVEL1	DIESELL1	03/08/12	1237	4.39	
02	DIESEL_LEVEL2	DIESELL2	03/08/12	1252	4.39	
03	DIESEL_LEVEL3	DIESELL3	03/08/12	1308	4.39	
04	DIESEL_LEVEL4	DIESELL4	03/08/12	1324	4.39	
05	DIESEL_LEVEL5	DIESELL5	03/08/12	1340	4.39	
06	DIESEL_LEVEL6	DIESELL6	03/08/12	1356	4.39	
07	DIESELL7	DIESELL7	03/08/12	1413	4.39	
08	MOTEROIL_LEVEL1	OILL1	03/08/12	1429		
09	MOTEROIL_LEVEL2	OILL2	03/08/12	1445		
10	MOTEROIL_LEVEL3	OILL3	03/08/12	1501		
11	MOTEROIL_LEVEL4	OILL4	03/08/12	1517		
12	MOTEROIL_LEVEL5	OILL5	03/08/12	1533		
13	MOTEROIL_LEVEL6	OILL6	03/08/12	1550		
14	OILL7	OILL7	03/08/12	1606		
15	IBLK05	IBLK05	03/28/12	0955	4.38	
16	DIESELCC05	DIESELCC05	03/28/12	1036	4.39	
17	DBLK1_W032712	DBLK1_W032712	03/28/12	1318	4.39	
18	DLCS1_W032712	DLCS1_W032712	03/28/12	1334	4.39	
19	MW-1301R	120427002	03/28/12	1350	4.39	
20	MW-1601R	120427003	03/28/12	1406	4.39	
21	IBLK11	IBLK11	03/28/12	1422	4.39	
22	DIESELCC11	DIESELCC11	03/28/12	1438	4.39	
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						

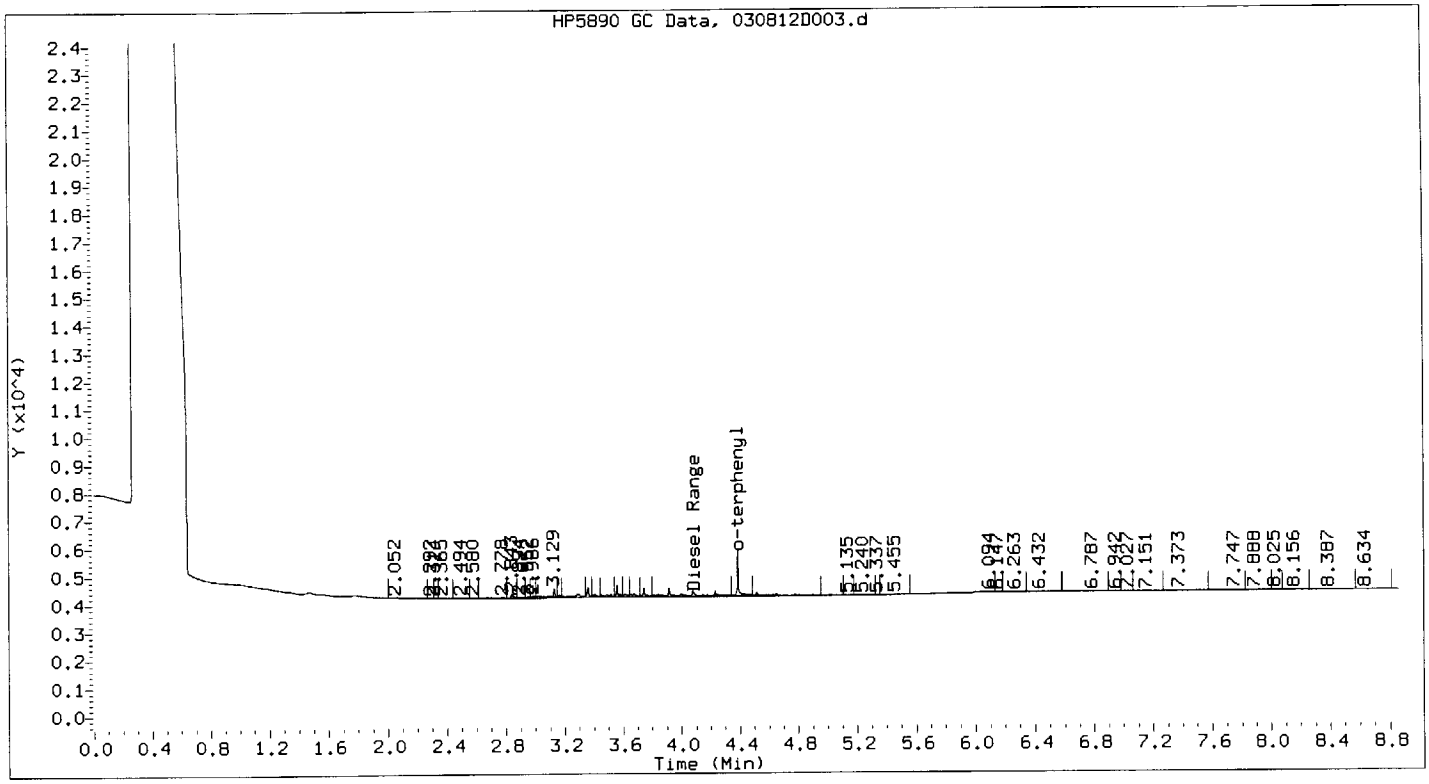
QC LIMITS
(+/- 0.10 MINUTES)

S1 = o-terphenyl

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST

Weyerhaeuser
DB5MS Column



SAMPLE: DIESELL1;50_L4 Client ID: DIESEL_level1
Processing File: 00-030812_WTPHD.m Sample File: /chem/hpdos4_2.i/030812d0_racer.b/030812D003.d
Acquired: 08-MAR-2012 12:37 SampleType: CALIB_1

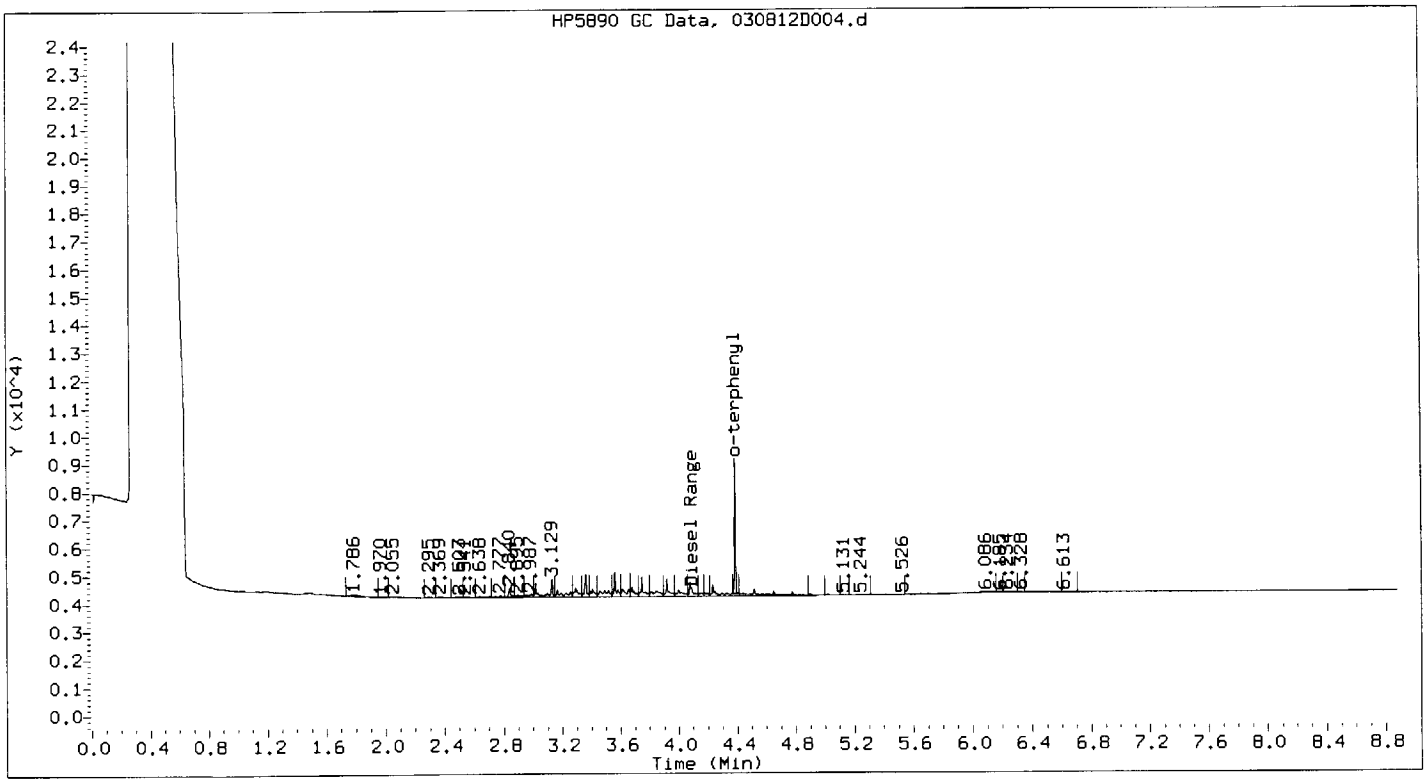
Dilution: 1.00

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
1	2.052			2196	21	PV		
2	2.292			600	18	PV		
3	2.314			469	23	VV		
4	2.365			1564	27	VV		
5	2.494			2234	31	PV		
6	2.580			1353	30	VV		
7	2.778			5536	41	PV		
8	2.843			4154	155	VV		
9	2.894			1867	46	VV		
10	2.952			986	50	PV		
11	2.986			1932	56			
12	3.129			11385	327	BV		
13	4.090	4.090	0.000	125017	2252		0.005000	Diesel Range
CALC:	**[(1/23235000)* 125000] = 0.005380 mg/mL**				**%D=7.07**			
14	4.388	4.390	0.002	19661	1641		0.0005100	o-terphenyl
CALC:	**[(1/40735000)* 19660] = 0.0004827 mg/mL**				**%D=5.66**			
15	5.135			732	14	PV		
16	5.240			1080	10	PV		
17	5.337			59	2	PV		
18	5.455			707	8	PV		
19	6.094			12241	39	PV		
20	6.147			1840	33	VV		
21	6.263			4849	28	VV		
22	6.432			2961	14	VB		
23	6.787			691	6	BV		
24	6.942			308	2	PV		
25	7.027			294	6	VV		
26	7.151			962	6	PV		
27	7.373			1856	8	VV		
28	7.747			1520	8	VV		

Weyerhaeuser
DB5MS Column

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
29	7.888			1072	7	VV		
30	8.025			404	5	VV		
31	8.156			948	9	VV		
32	8.387			1259	7	PV		
33	8.634			748	5	VV		

Weyerhaeuser
DB5MS Column

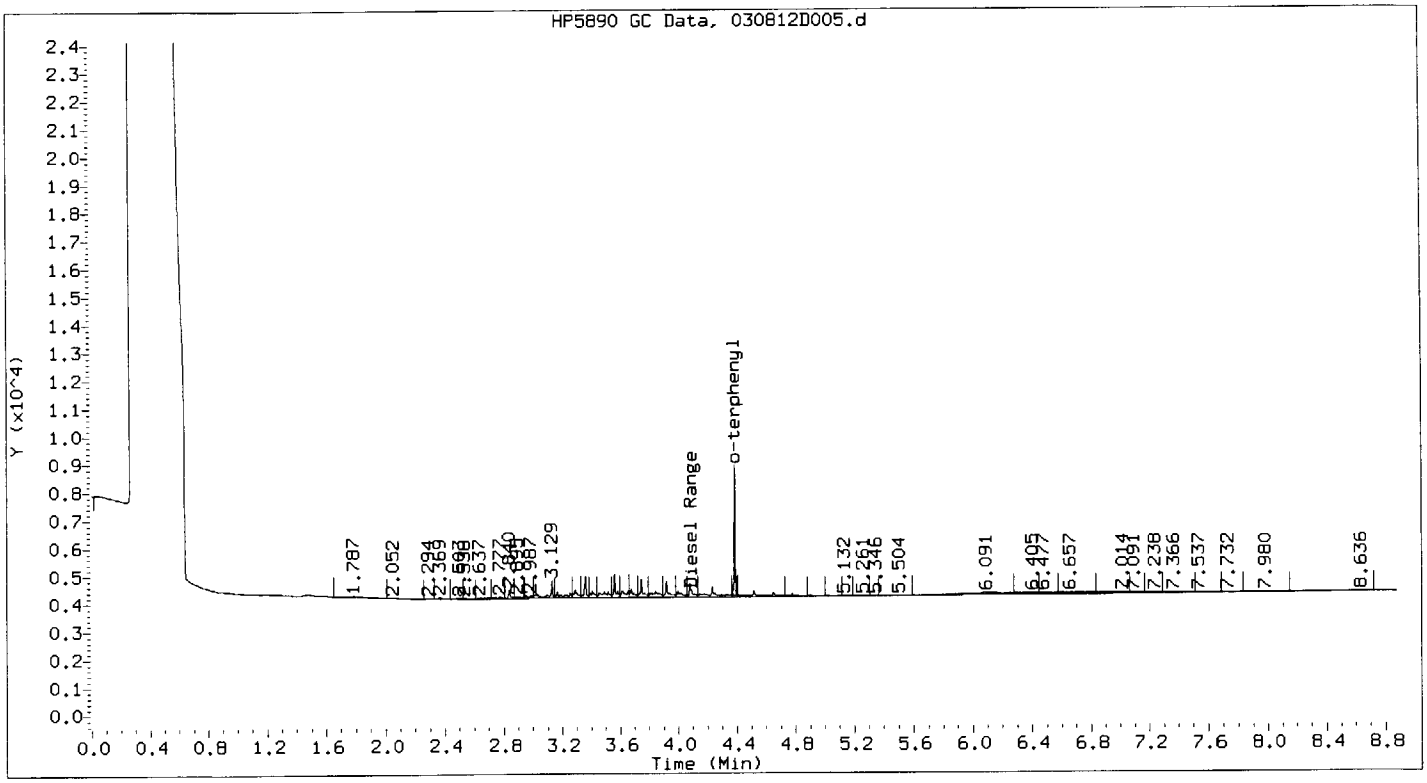


SAMPLE: DIESELL2;100_L4 Client ID: DIESEL_level2
Processing File: 00-030812_WTPHD.m Sample File: /chem/hpdos4_2.i/030812d0_racer.b/030812D004.d
Acquired: 08-MAR-2012 12:52 SampleType: CALIB_2

Dilution: 1.00

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
1	1.786			3910	48	PV		
2	1.970			323	5	PV		
3	2.055			1376	20	VV		
4	2.295			1178	32	PV		
5	2.369			2488	60	PV		
6	2.503			1835	31	PV		
7	2.541			1855	27	VV		
8	2.638			4210	52	PV		
9	2.777			4046	73	VV		
10	2.840			7090	332	PV		
11	2.895			3906	83	PV		
12	2.987			6160	111			
13	3.129			22340	640	BV		
14	4.090	4.090	0.000	250574	6385		0.01000	Diesel Range
CALC:	**[(1/23235000)* 250600] = 0.01078 mg/mL**				**%D=7.27**			
15	4.386	4.390	0.004	47876	4853		0.001020	o-terphenyl
CALC:	**[(1/40735000)* 47880] = 0.001175 mg/mL**				**%D=13.2**			
16	5.131			655	17	PV		
17	5.244			1313	14	VV		
18	5.526			1621	16	PV		
19	6.086			8702	37	VV		
20	6.185			866	21	VV		
21	6.234			1182	17	VV		
22	6.328			358	12	VV		
23	6.613			537	10			

Weyerhaeuser
DB5MS Column



SAMPLE: DIESELL3;100_L5 Client ID: DIESEL_level3
Processing File: 00-030812_WTPHD.m Sample File: /chem/hpdos4_2.i/030812d0_racer.b/030812D005.d
Acquired: 08-MAR-2012 13:08 SampleType: CALIB_3

Dilution: 1.00

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
1	1.787			3142	46	BV		
2	2.052			1049	19	PV		
3	2.294			812	21	PV		
4	2.369			1955	48	PV		
5	2.503			1515	29	PV		
6	2.538			1221	22	VV		
7	2.637			3646	47	PV		
8	2.777			3512	72	VV		
9	2.840			6492	316	PV		
10	2.895			3296	75	VV		
11	2.987			5098	97			
12	3.129			20537	633	BV		
13	4.090	4.090	0.000	236730	5897		0.02000	Diesel Range
CALC:	**[(1/23235000)* 236700] = 0.01019 mg/mL**				**%D=96.3**			
14	4.386	4.390	0.004	46090	4663		0.002050	o-terphenyl
CALC:	**[(1/40735000)* 46090] = 0.001131 mg/mL**				**%D=81.2**			
15	5.132			686	14	PV		
16	5.261			769	13	PV		
17	5.346			179	10	VV		
18	5.504			1424	13	PV		
19	6.091			32714	70	VV		
20	6.405			11649	60	VV		
21	6.477			8068	56	VV		
22	6.657			14990	53	VV		
23	7.014			12087	43	VV		
24	7.091			4701	41	VV		
25	7.238			5723	39	VV		
26	7.366			9063	37	VV		
27	7.537			6504	34	VV		
28	7.732			4601	29	VV		

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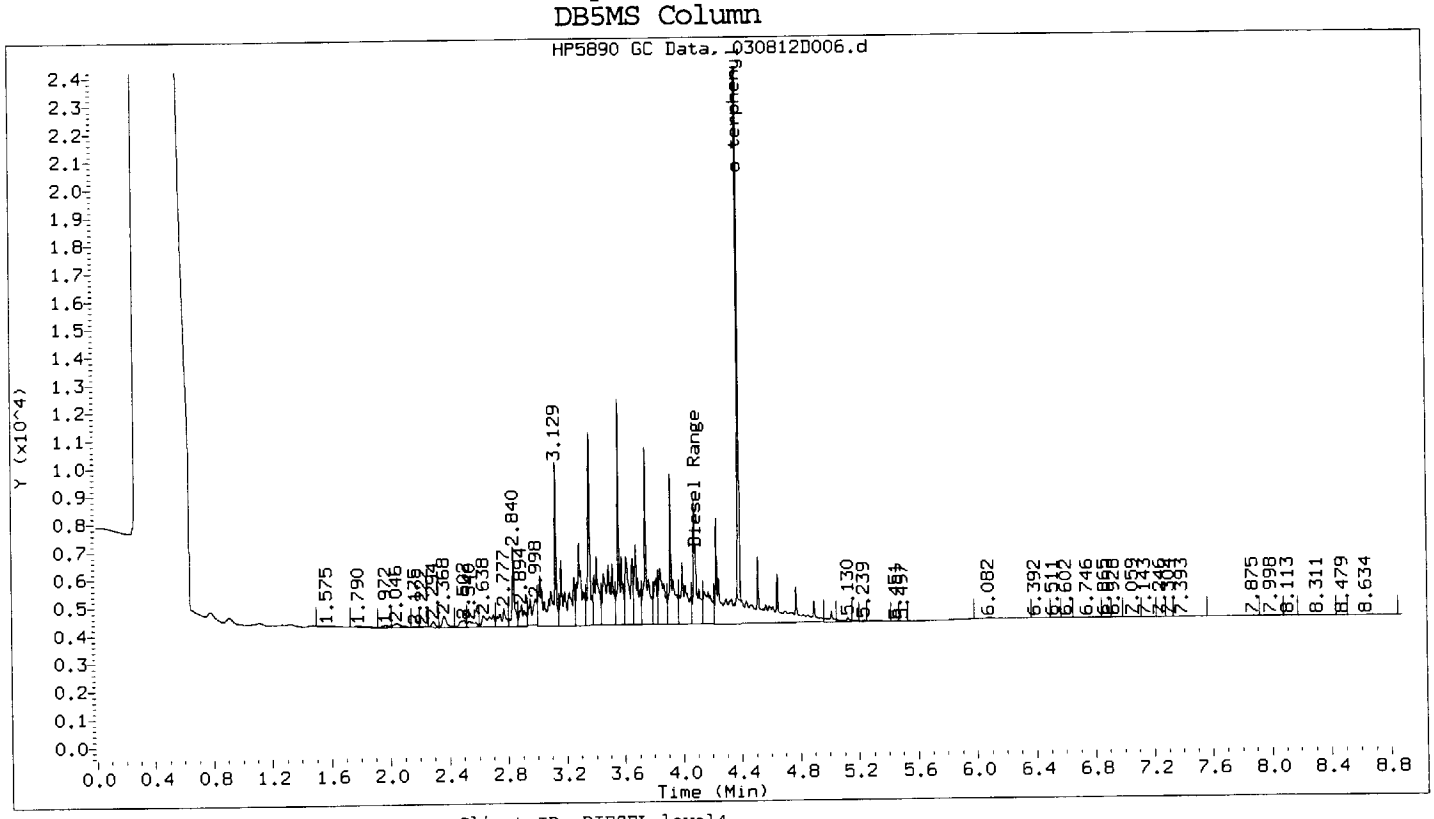
DB5MS Column

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
29	7.980			8405	23	VV		
30	8.636			8753	12	VV		

Weyerhaeuser
DB5MS Column



SAMPLE: DIESELL4;100_L7 Client ID: DIESEL_level4
Processing File: 00-030812_WTPHD.m Sample File: /chem/hpdos4_2.i/030812d0_racer.b/030812D006.d
Acquired: 08-MAR-2012 13:24 SampleType: CALIB_4

Dilution: 1.00

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
1	1.575			195	17	BV		
2	1.790			3930	34	PV		
3	1.972			5081	71	PV		
4	2.046			10562	144	VV		
5	2.175			1313	34	PV		
6	2.222			1733	39	VV		
7	2.294			7311	209	VV		
8	2.368			16684	411	VV		
9	2.502			13042	243	PV		
10	2.540			14395	209	VV		
11	2.638			36194	427	PV		
12	2.777			35894	656	VV		
13	2.840			63434	2860	PV		
14	2.894			37487	780	PV		
15	2.998			55046	939			
16	3.129			206612	5879	BV		
17	4.090	4.090	0.000	2416675	57864		0.1000	Diesel Range
CALC:	**[(1/23235000)* 2417000] = 0.1040 mg/mL**				**%D=3.85**			
18	4.387	4.390	0.003	421983	42400		0.01023	o-terphenyl
CALC:	**[(1/40735000)* 422000] = 0.01036 mg/mL**				**%D=1.25**			
19	5.130			9678	170	PVT		
20	5.239			2290	69	PVT		
21	5.451			445	14	PVT		
22	5.497			339	11	VVT		
23	6.082			4838	20	BV		
24	6.392			1103	10	VV		
25	6.511			559	7	VV		
26	6.602			481	6	VV		
27	6.746			1140	9	VV		
28	6.865			273	6	VV		

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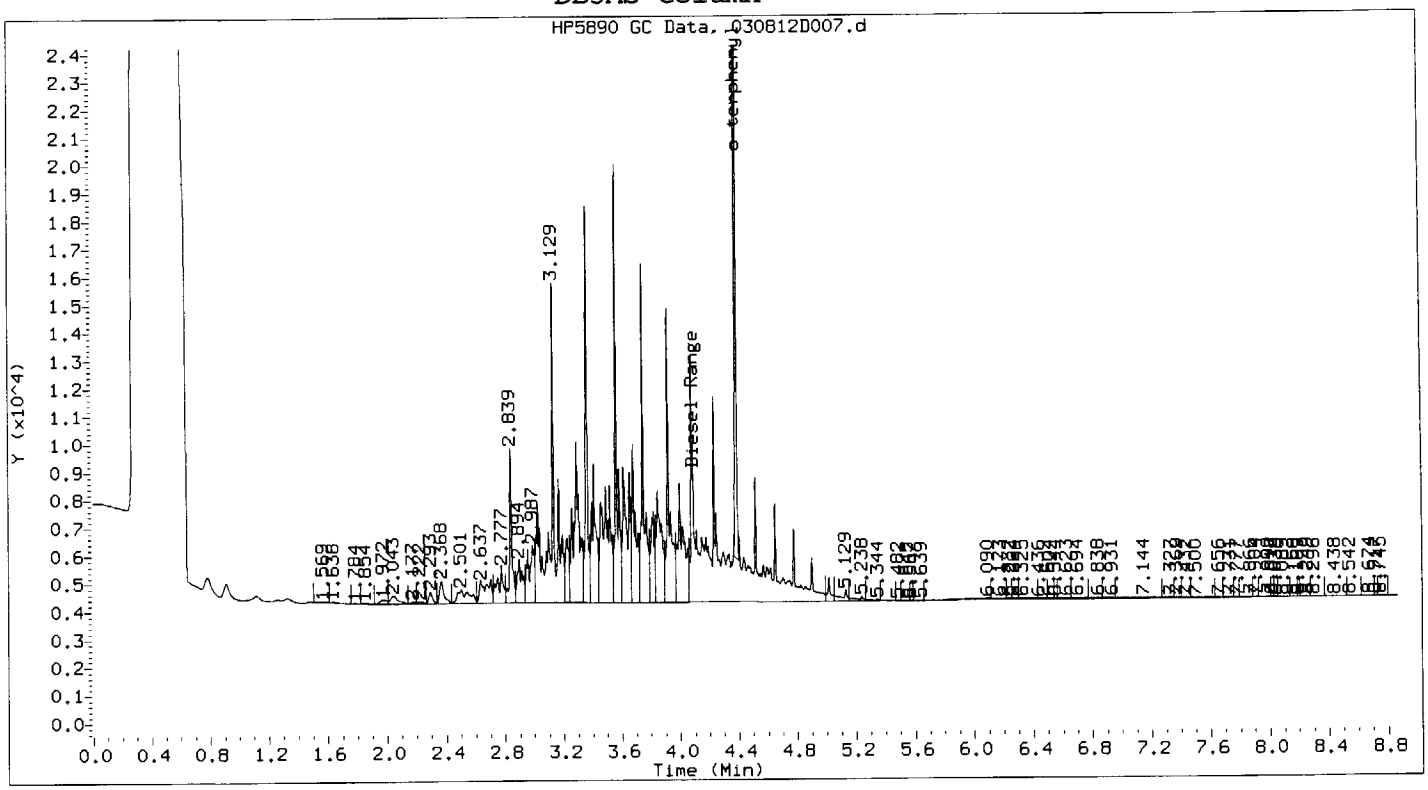
DB5MS Column

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
29	6.928			334	6	VV		
30	7.059			427	5	PV		
31	7.143			328	5	VV		
32	7.246			212	4	PV		
33	7.304			156	3	VV		
34	7.393			512	6	VV		
35	7.875			1102	5	VV		
36	7.998			509	3	PV		
37	8.113			379	8	VV		
38	8.311			748	6	PV		
39	8.479			191	3	PV		
40	8.634			385	4	PB		

Weyerhaeuser
DB5MS Column



SAMPLE: DIESELL5;200_L7 Client ID: DIESEL_level5
Processing File: 00-030812_WTPHD.m Sample File: /chem/hpdos4_2.i/030812d0_racer.b/030812D007.d
Acquired: 08-MAR-2012 13:40 SampleType: CALIB_5

Dilution: 1.00 | UnitFactor: 1.000 | FinalVol: 1000 uL | AmountExt: 500.0 ml | Sample Volume: 500.0 ml | AmountInj: 1.000 uL

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
1	1.569			1011	25	BV		
2	1.638			1677	24	VV		
3	1.784			808	14	PV		
4	1.854			2146	33	VV		
5	1.972			9612	142	PV		
6	2.043			19825	276	VV		
7	2.177			2527	61	PV		
8	2.222			4425	83	VV		
9	2.293			15290	409	PV		
10	2.368			33696	804	VV		
11	2.501			56438	500	PV		
12	2.637			72100	852	PV		
13	2.777			72407	1357	VV		
14	2.839			124840	5543	VV		
15	2.894			74898	1573	PV		
16	2.987			113873	2055			
17	3.129			546249	11485	BHS		
18	4.090	4.090	0.000	4594908	101700		0.2000	Diesel Range
CALC:	**[(1/23235000)* 4595000] = 0.1978 mg/mL**				**%D=1.14**			
19	4.387	4.390	0.003	818069	82343		0.02046	o-terphenyl
CALC:	**[(1/40735000)* 818100] = 0.02008 mg/mL**				**%D=1.88**			
20	5.129			20369	409	PVT		
21	5.238			11508	163	PVT		
22	5.344			4574	64	PVT		
23	5.482			556	18	PVT		
24	5.545			642	13	PVT		
25	5.567			213	16	PVT		
26	5.639			912	19	PVT		
27	6.090			21239	76	VVT		
28	6.173			7081	55	VVT		

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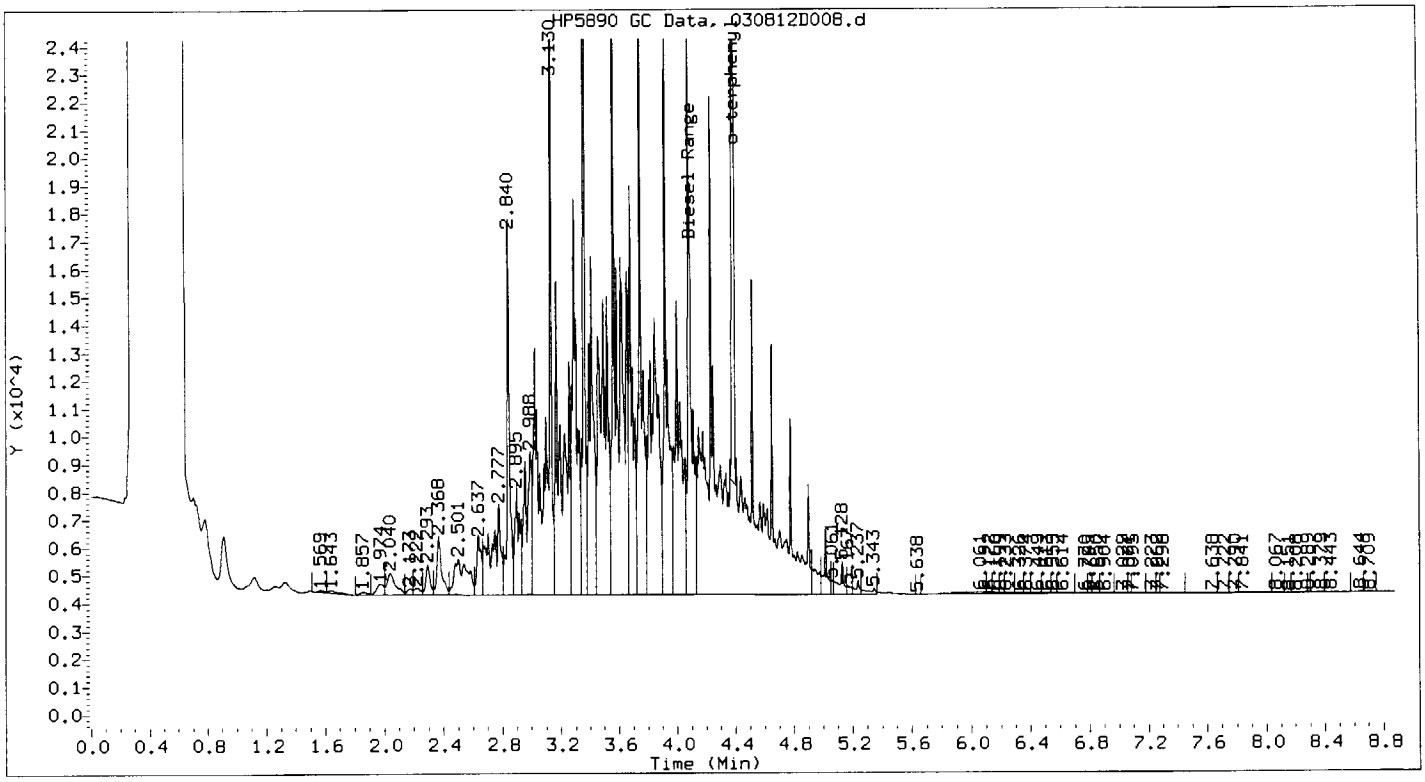
DB5MS Column

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
29	6.232			2150	50	VVT		
30	6.264			2669	51	VVT		
31	6.325			7274	50	VVT		
32	6.436			3204	44	VVT		
33	6.504			2319	42	VVT		
34	6.544			967	42	VVT		
35	6.623			4455	42	VVT		
36	6.694			5166	41	VVT		
37	6.838			3844	36	VVT		
38	6.931			3418	35	VVT		
39	7.144			11403	33	VVT		
40	7.327			2639	29	VVT		
41	7.369			1613	29	VVT		
42	7.432			1810	27	VVT		
43	7.500			4722	27	VVT		
44	7.656			1322	24	VVT		
45	7.731			1647	21	VVT		
46	7.777			948	20	VVT		
47	7.866			2039	21	VVT		
48	7.904			814	18	VVT		
49	7.992			1577	18	VVT		
50	8.012			438	17	VVT		
51	8.038			494	17	VVT		
52	8.089			1483	16	VVT		
53	8.159			769	15	VVT		
54	8.189			255	13	VVT		
55	8.249			990	15	VVT		
56	8.296			1232	13	VVT		
57	8.438			1497	10	VVT		
58	8.542			667	8	VVT		
59	8.674			435	6	VVT		
60	8.717			71	5	VVT		
61	8.745			326	8	PVT		

Weyerhaeuser
DB5MS Column



SAMPLE: DIESELL6;500_L7 Client ID: DIESEL_level6
Processing File: 00-030812_WTPHD.m Sample File: /chem/hpdos4_2.i/030812d0_racer.b/030812D008.d
Acquired: 08-MAR-2012 13:56 SampleType: CALIB_6

Dilution: 1.00 | UnitFactor: 1.000 | FinalVol: 1000 uL | AmountExt: 500.0 ml | Sample Volume: 500.0 ml | AmountInj: 1.000 uL |

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
1	1.569			2580	55	BV		
2	1.643			8085	87	VV		
3	1.857			7844	110	PV		
4	1.974			27001	398	VV		
5	2.040			63582	778	VV		
6	2.173			10754	221	VV		
7	2.222			14780	244	VV		
8	2.293			43620	1082	VV		
9	2.368			94212	2094	VV		
10	2.501			157702	1289	VV		
11	2.637			86903	2137	VV		
12	2.777			295224	3239	VV		
13	2.840			317124	13506	HHS		
14	2.895			181930	3926	HHS		
15	2.988			301855	5130			
16	3.130			1027427	27394	HHS		
17	4.090	4.090	0.000	11982322	256254		0.5000	Diesel Range
CALC:	**[(1/23235000)* 11980000] = 0.5157 mg/mL %D=3.04**							
18	4.389	4.390	0.001	2010666	196843		0.05115	o-terphenyl
CALC:	**[(1/40735000)* 2011000] = 0.04936 mg/mL %D=3.63**							
19	5.061			11090	499			
20	5.128			47671	1162	VVT		
21	5.167			12632	304	PVT		
22	5.237			17696	490	VVT		
23	5.343			16062	212	PVT		
24	5.638			362	18	PVT		
25	6.061			20127	76	VVT		
26	6.122			2891	60	VVT		
27	6.160			3062	55	VVT		
28	6.199			2002	51	VVT		

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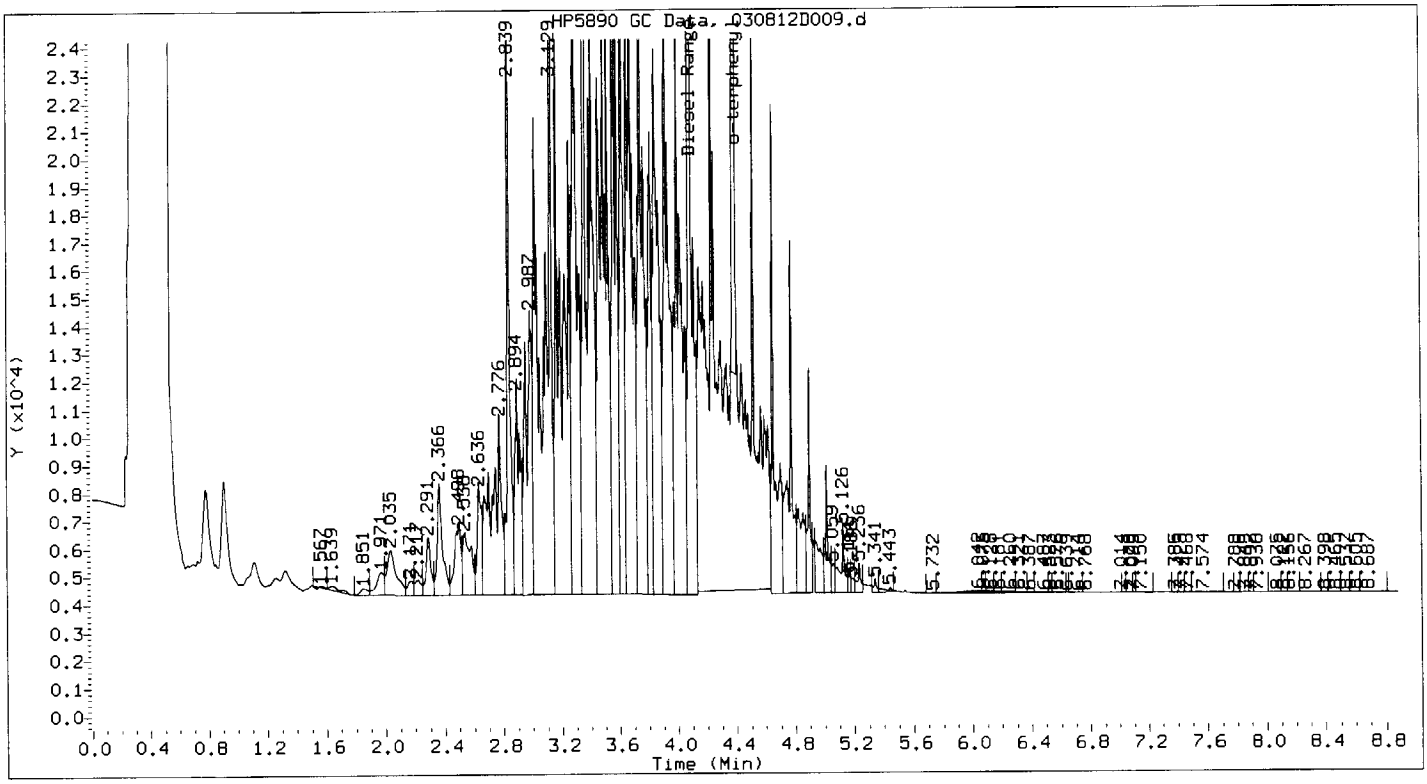
DB5MS Column

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
29	6.233			4261	52	VVT		
30	6.326			3339	48	VVT		
31	6.374			2307	44	VVT		
32	6.449			3406	38	VVT		
33	6.513			2659	37	VVT		
34	6.555			1790	36	VVT		
35	6.614			4266	34	VVT		
36	6.770			2796	28	VVT		
37	6.795			830	26	VVT		
38	6.850			1507	25	VVT		
39	6.904			2723	27	VVT		
40	7.029			2221	23	VVT		
41	7.071			602	20	VVT		
42	7.095			1914	19	VVT		
43	7.223			1345	19	VVT		
44	7.262			550	13	VVT		
45	7.298			2914	18	VVT		
46	7.638			3326	15	VVT		
47	7.722			994	12	VVT		
48	7.790			796	13	VVT		
49	7.841			2239	13	VVT		
50	8.067			696	12	VVT		
51	8.151			226	6	VVT		
52	8.208			648	7	VVT		
53	8.289			87	6	VVT		
54	8.379			404	5	PVT		
55	8.443			530	5	VVT		
56	8.644			198	6	VVT		
57	8.709			237	5	VVT		

Weyerhaeuser
DB5MS Column



SAMPLE: DIESELL7;110202 Client ID: DIESELL7

Processing File: 00-030812_WTPHD.m Sample File: /chem/hpdos4_2.i/030812d0_racer.b/030812D009.d

Acquired: 08-MAR-2012 14:13 SampleType: CALIB_7

Dilution: 1.00 | UnitFactor: 1.000 | FinalVol: 1000 uL | AmountExt: 500.0 ml | Sample Volume: 500.0 ml | AmountInj: 1.000 uL |

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
1	1.567			1143	56	BV		
2	1.639			15107	150	VV		
3	1.851			16639	234	PV		
4	1.971			60459	826	VV		
5	2.035			142912	1614	VV		
6	2.171			27766	505	VV		
7	2.217			31907	539	VV		
8	2.291			93272	2079	VV		
9	2.366			197074	4004	VV		
10	2.498			155604	2547	VV		
11	2.538			171714	2232	VV		
12	2.636			162727	4047	VV		
13	2.776			608036	6486	VV		
14	2.839			623472	26043	HHS		
15	2.894			360780	7747	HHS		
16	2.987			612767	10188			
17	3.129			2007895	51080	HHS		
18	4.090	4.090	0.000	23509294	550570		1.000	Diesel Range
CALC:	**[(1/23235000)* 23510000] = 1.012 mg/mL %D=1.17**							
19	4.393	4.390	0.003	3926840	342100		0.1023	o-terphenyl
CALC:	**[(1/40735000)* 3927000] = 0.09640 mg/mL %D=6.14**							
20	5.059			32218	1036			
21	5.126			93682	2435	PVT		
22	5.166			15320	651	PVT		
23	5.186			15714	505	VVT		
24	5.236			31246	1044	VVT		
25	5.341			13056	470	PVT		
26	5.443			10883	164	PVT		
27	5.732			124	11	PVT		
28	6.042			13466	74	PVT		

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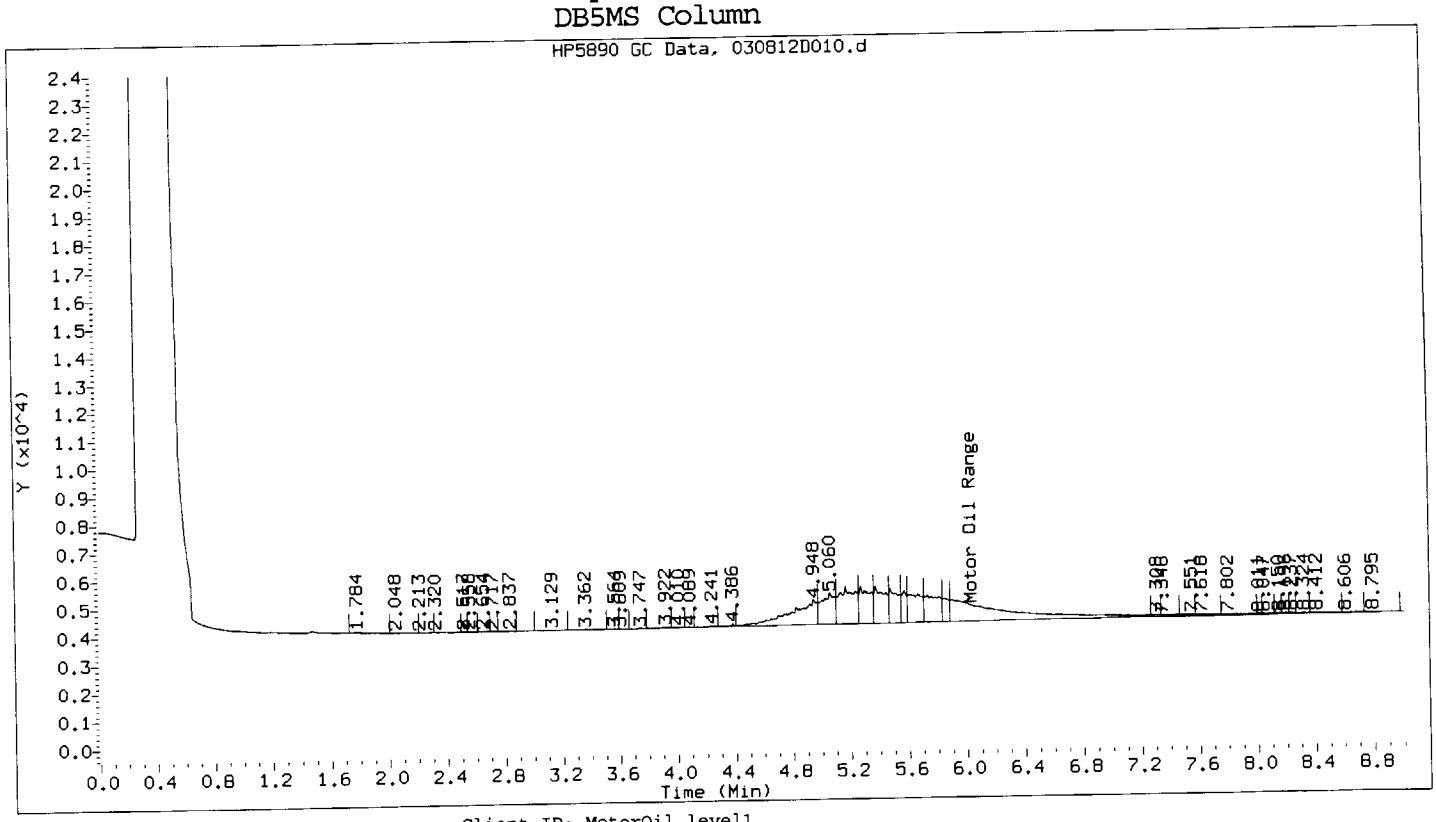
DB5MS Column

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
29	6.075			2073	65	VVT		
30	6.128			3527	55	VVT		
31	6.181			2904	45	VVT		
32	6.260			4350	42	VVT		
33	6.321			3027	34	VVT		
34	6.387			1552	30	VVT		
35	6.487			2484	26	VVT		
36	6.523			629	19	VVT		
37	6.576			1936	17	VVT		
38	6.639			307	14	VVT		
39	6.714			1631	18	VVT		
40	6.768			3497	15	VVT		
41	7.014			352	10	VVT		
42	7.078			479	10	VVT		
43	7.099			211	10	VVT		
44	7.150			1191	10	VVT		
45	7.385			263	6	VVT		
46	7.425			215	4	VVT		
47	7.468			231	5	VVT		
48	7.574			1187	8	VVT		
49	7.788			107	6	VVT		
50	7.849			284	5	VVT		
51	7.892			154	6	PVT		
52	7.938			401	5	VVT		
53	8.075			339	4	VVT		
54	8.122			148	3	VVT		
55	8.156			318	7	VVT		
56	8.267			565	4	VVT		
57	8.398			122	5	PVT		
58	8.465			217	3	VVT		
59	8.537			193	5	VVT		
60	8.605			229	4	PVT		
61	8.687			400	7	PVT		

Weyerhaeuser
DB5MS Column



SAMPLE: OILL1;20_L7
Client ID: MoterOil_level1
Processing File: 00-030812_WTPHD.m
Sample File: /chem/hpdos4_2.i/030812d0_racer.b/030812D010.d
Acquired: 08-MAR-2012 14:29
SampleType: CALIB_1

Dilution: 1.00

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
1	1.784			3160	38	PV		
2	2.048			1074	11	PV		
3	2.213			78	5	PV		
4	2.320			568	6	PV		
5	2.517			221	7	PV		
6	2.558			385	8	VV		
7	2.654			434	6	PV		
8	2.717			299	8	VV		
9	2.837			294	5	VV		
10	3.129			341	10	BV		
11	3.362			1495	14	PV		
12	3.564			622	12	PV		
13	3.609			273	8	VV		
14	3.747			506	9	PV		
15	3.922			1277	37	PV		
16	4.010			666	9	VV		
17	4.089			1056	18	VV		
18	4.241			2777	25	VV		
19	4.386			4493	75	VV		
20	4.948			222562	860	VV		
21	5.060			135477	1061	VV		
22	6.030	6.030	0.000	1374173	9723		0.05000	Motor Oil Range
CALC:	**[(1/28388000)* 1374000]**			**= 0.04841 mg/mL**	**%D=3.29**			
23	7.308			6590	77	VV		
24	7.348			10711	76	VV		
25	7.551			8472	67	VV		
26	7.618			12488	62	VV		
27	7.802			14327	53	VV		
28	8.011			1800	43	VV		
29	8.047			4215	45	VV		
30	8.150			2364	41	VV		

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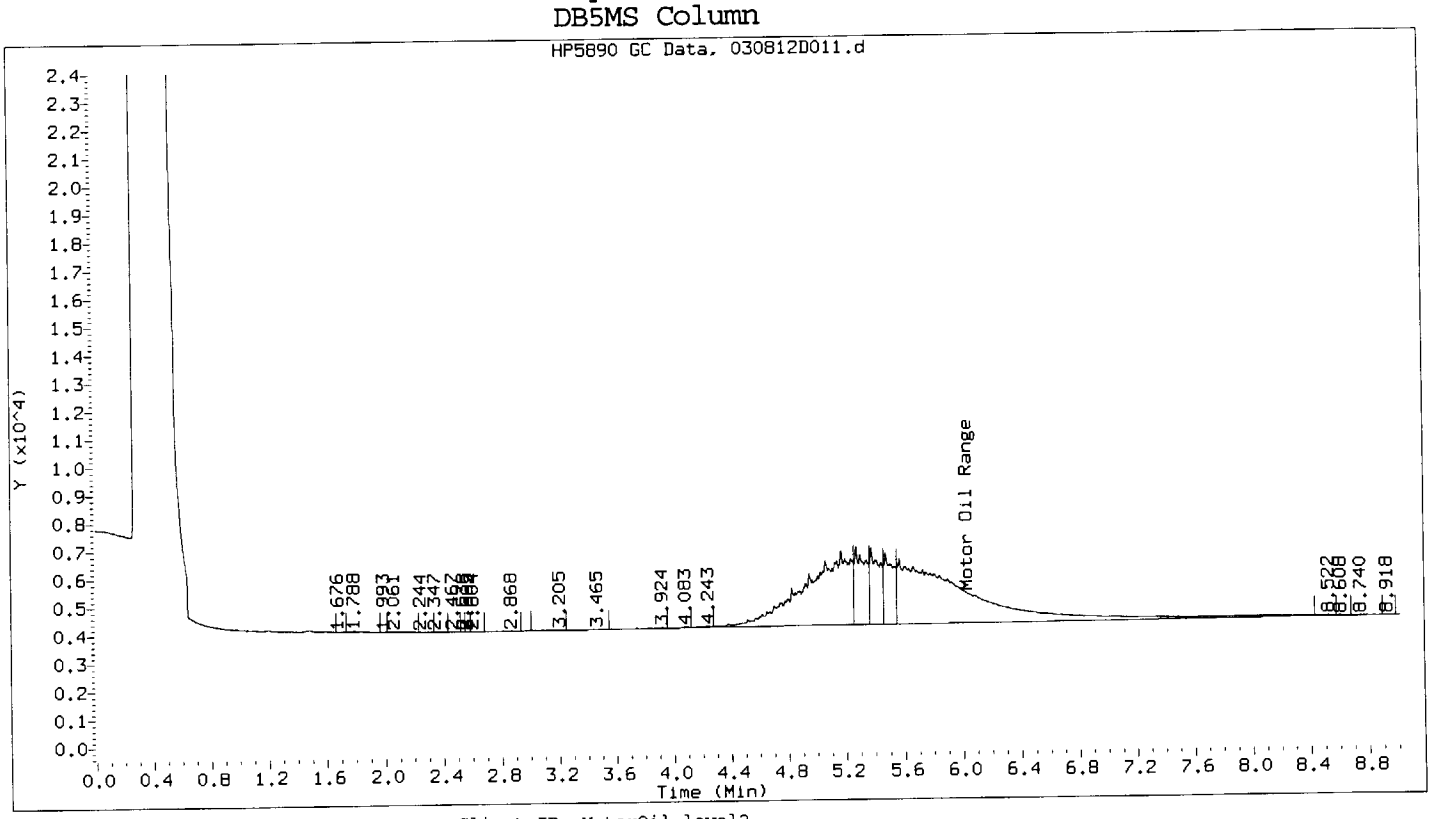
DB5MS Column

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
31	8.196			2327	40	VV		
32	8.237			2014	36	VV		
33	8.324			4000	34	VV		
34	8.412			7448	33	VV		
35	8.606			4155	25	VV		
36	8.795			4517	20	VB		

Weyerhaeuser
DB5MS Column



SAMPLE: OILL2;40_L7 Client ID: MoterOil_level2

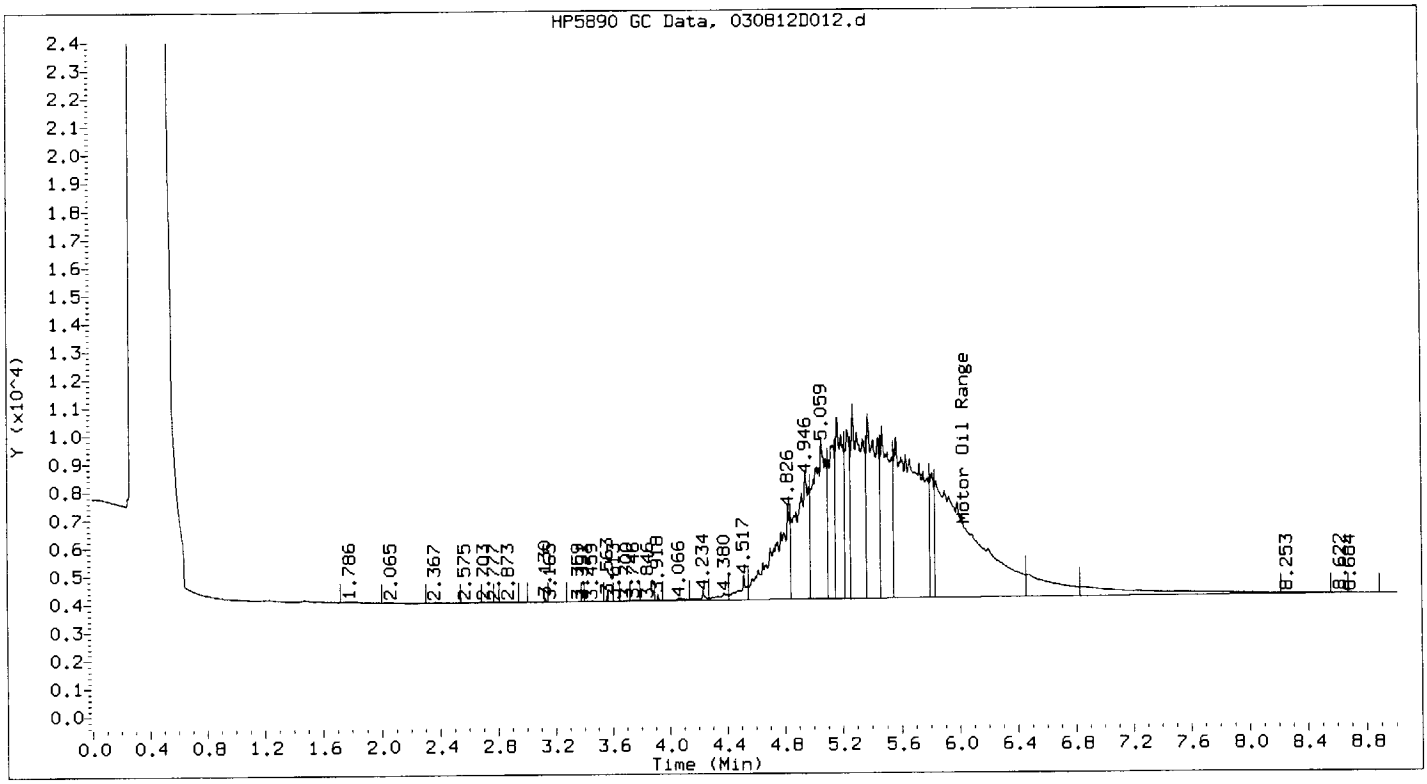
Processing File: 00-030812_WTPHD.m Sample File: /chem/hpdos4_2.i/030812d0_racer.b/030812D011.d

Acquired: 08-MAR-2012 14:45 SampleType: CALIB_2

Dilution: 1.00

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
1	1.676			185	3	PV		
2	1.788			3826	44	PV		
3	1.993			172	5	PV		
4	2.061			1541	14	VV		
5	2.244			269	3	PV		
6	2.347			256	3	VV		
7	2.467			337	7	PV		
8	2.538			66	2	VV		
9	2.565			138	4	PV		
10	2.604			435	6	VV		
11	2.868			1257	5	PV		
12	3.205			239	8	BV		
13	3.465			1668	7	PV		
14	3.924			2274	27	VV		
15	4.083			2638	30	VV		
16	4.243			4562	45	VV		
17	6.030	6.030	0.000	3481445	12630		0.1000	Motor Oil Range
CALC:	[(1/28388000)* 3481000]			= 0.1226 mg/mL	%D=18.5			
18	8.522			4906	39	VV		
19	8.608			2720	25	VV		
20	8.740			4244	19	VV		
21	8.918			1795	13	VB		

Weyerhaeuser
DB5MS Column



SAMPLE: OILL3;100_L7 Client ID: MoterOil_level3

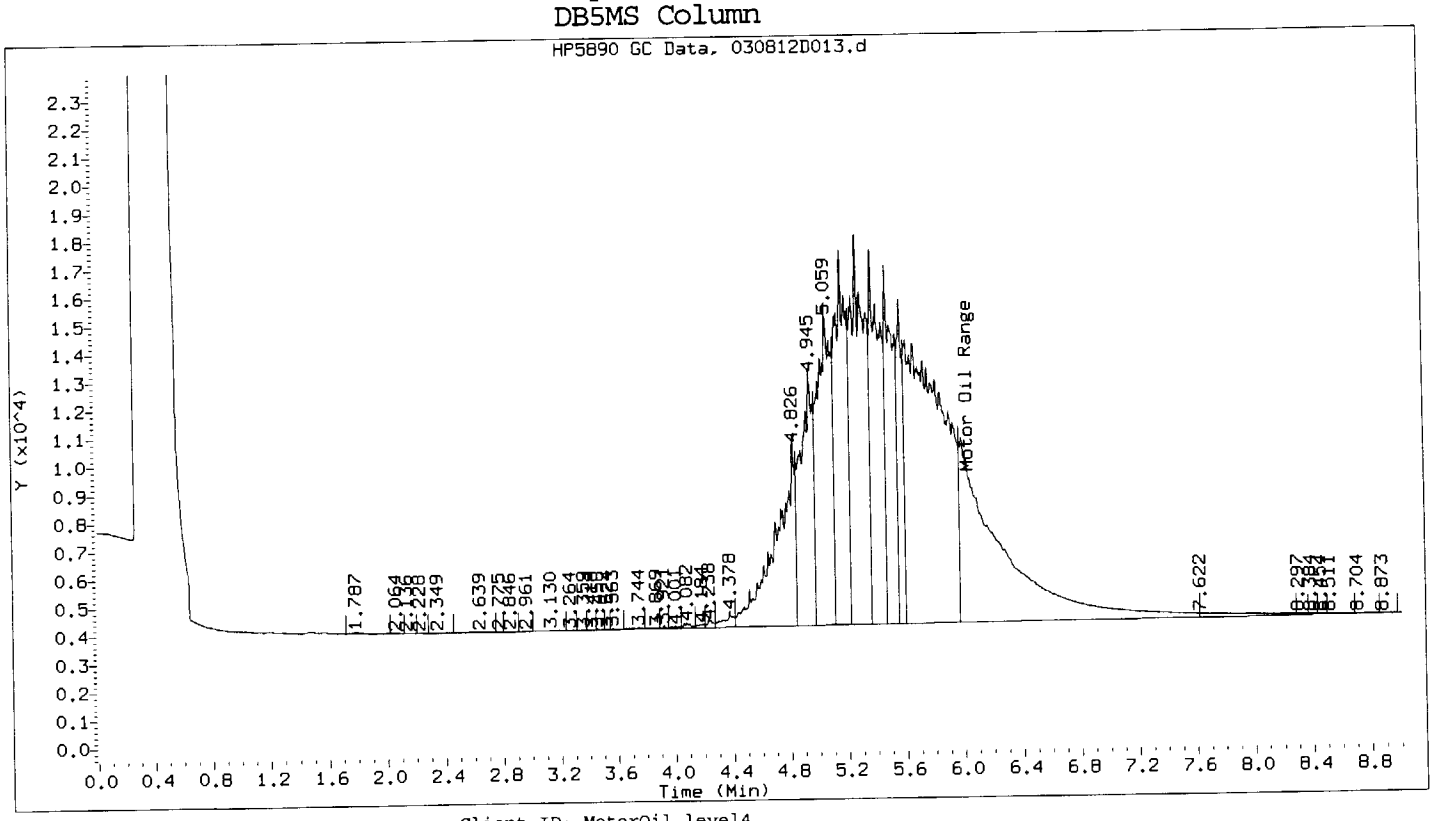
Processing File: 00-030812_WTPHD.m Sample File: /chem/hpdos4_2.i/030812d0_racer.b/030812D012.d

Acquired: 08-MAR-2012 15:01 SampleType: CALIB_3

Dilution: 1.00

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
1	1.786			3642	44	PV		
2	2.065			882	12	PV		
3	2.367			1203	21	PV		
4	2.575			770	8	PV		
5	2.703			398	7	VV		
6	2.777			172	7	VV		
7	2.873			500	6	PV		
8	3.130			1393	113	BV		
9	3.165			429	7	VV		
10	3.359			592	11	PV		
11	3.391			118	6	VV		
12	3.459			1318	15	PV		
13	3.563			2076	164	VV		
14	3.613			272	10	VV		
15	3.700			728	12	PV		
16	3.746			962	26	VV		
17	3.846			1049	12	VV		
18	3.918			3219	204	VV		
19	4.066			7484	74	VV		
20	4.234			12796	234	VV		
21	4.380			21616	219	VV		
22	4.517			55092	829	VV		
23	4.826			535969	3284	VV		
24	4.946			532733	4300	VV		
25	5.059			663109	5669	VV		
26	6.030	6.030	0.000	6466147	52222		0.2500	Motor Oil Range
CALC:	**[(1/28388000)* 6466000]**			**= 0.2278 mg/mL**		**%D=9.76**		
27	8.253			12670	41	VV		
28	8.622			2495	20	VV		
29	8.684			2336	16	VV		

Weyerhaeuser
DB5MS Column



SAMPLE: OILL4;10_100103 Client ID: MoterOil_level4
Processing File: 00-030812_WTPHD.m Sample File: /chem/hpdos4_2.i/030812d0_racer.b/030812D013.d
Acquired: 08-MAR-2012 15:17 SampleType: CALIB_4

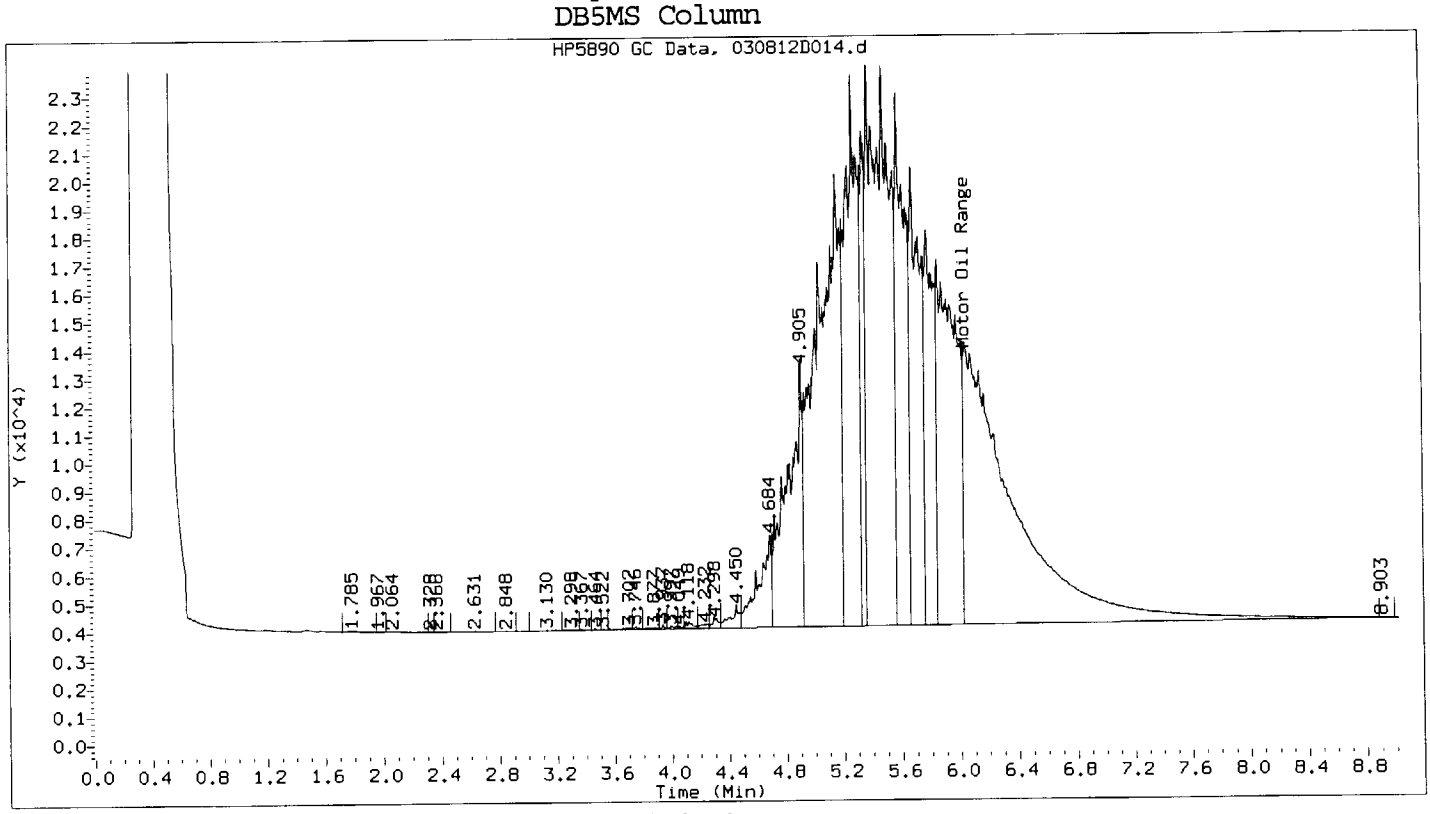
Dilution: 1.00

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
1	1.787			4022	42	PV		
2	2.064			1072	12	VV		
3	2.136			470	8	VV		
4	2.228			381	8	VV		
5	2.349			974	9	PV		
6	2.639			2303	13	VV		
7	2.775			350	11	VV		
8	2.846			922	15	VV		
9	2.961			55	4	PB		
10	3.130			493	14	BV		
11	3.264			493	7	PV		
12	3.359			634	21	VV		
13	3.418			548	11	VV		
14	3.458			1183	31	PV		
15	3.524			652	23	VV		
16	3.563			1479	37	VV		
17	3.744			4231	55	VV		
18	3.869			2968	35	VV		
19	3.921			2897	84	VV		
20	4.001			5342	57	VV		
21	4.082			11444	159	VV		
22	4.184			8098	109	VV		
23	4.238			14984	249	VV		
24	4.378			46481	535	VV		
25	4.826			1193360	6663	VV		
26	4.945			1065880	9080	VV		
27	5.059			1505360	11314	VV		
28	6.030	6.030	0.000	12563368	79692		0.5000	Motor Oil Range
CALC:	**[(1/28388000)* 12560000]**			**= 0.4426 mg/mL**	**%D=13.0**			
29	7.622			73365	143	VV		
30	8.297			4861	53	VV		

Weyerhaeuser
DB5MS Column

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
31	8.384			3490	47	VV		
32	8.454			2950	43	VV		
33	8.511			6165	33	VV		
34	8.704			2917	19	VV		
35	8.873			655	10	VB		

Weyerhaeuser
DB5MS Column

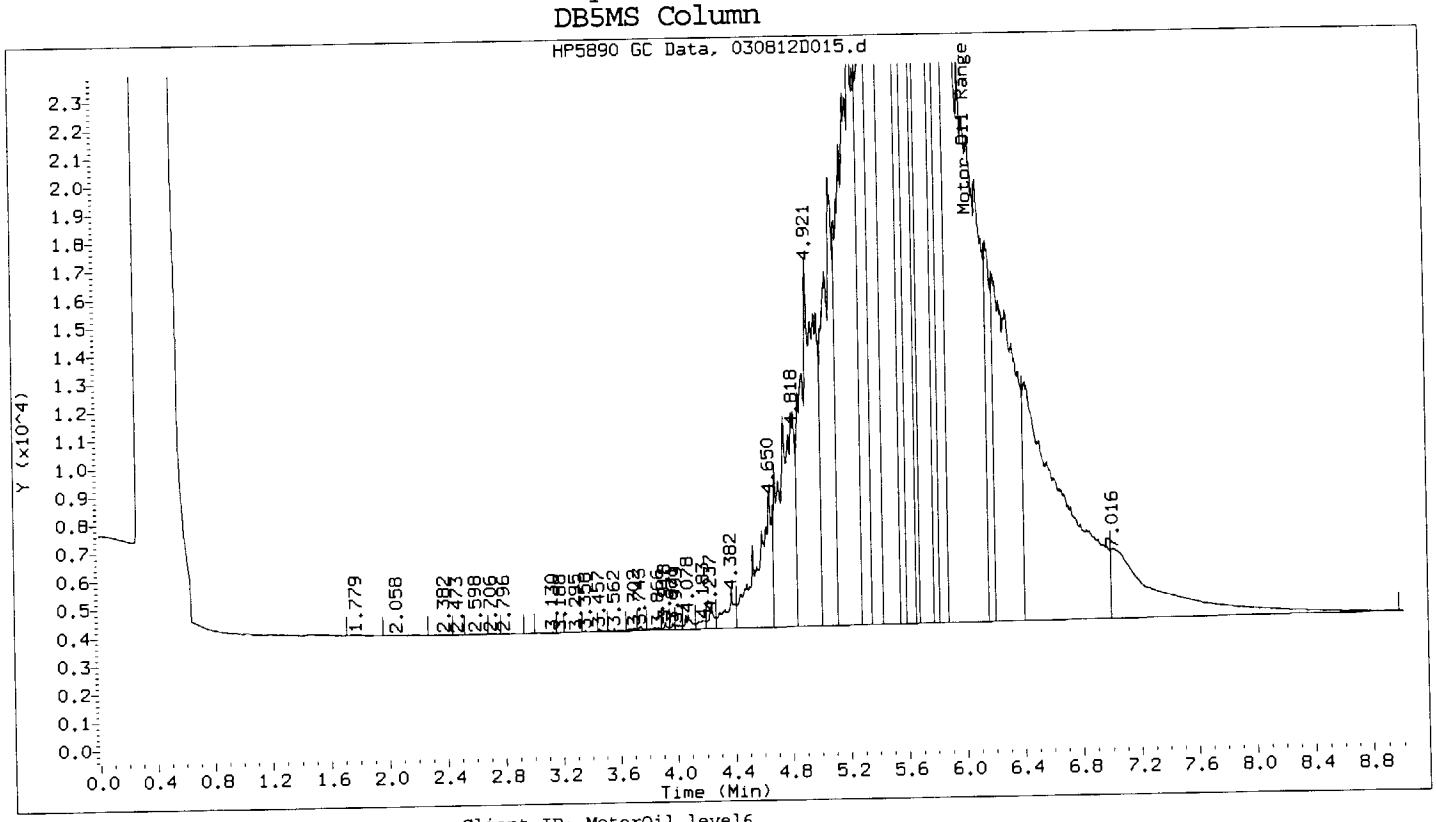


SAMPLE: OILL5;15_100103 Client ID: MoterOil_level5
Processing File: 00-030812_WTPHD.m Sample File: /chem/hpdos4_2.i/030812d0_racer.b/030812D014.d
Acquired: 08-MAR-2012 15:33 SampleType: CALIB_5

Dilution: 1.00

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
1	1.785			4315	42	PV		
2	1.967			209	4	PV		
3	2.064			1292	13	VV		
4	2.328			135	3	PV		
5	2.368			845	8	VV		
6	2.631			3042	16	PV		
7	2.848			781	8	VV		
8	3.130			922	19	BV		
9	3.298			906	10	PV		
10	3.367			1186	34	VV		
11	3.464			1293	39	PV		
12	3.522			502	24	VV		
13	3.702			5305	60	PV		
14	3.746			3547	80	VV		
15	3.877			4803	47	VV		
16	3.937			3816	141	VV		
17	3.997			5399	88	VV		
18	4.049			3341	69	VV		
19	4.118			15562	241	VV		
20	4.232			12431	149	VV		
21	4.298			21456	368	VV		
22	4.450			66478	779	VV		
23	4.684			395758	3233	VV		
24	4.905			1366683	9442	VV		
25	6.030	6.030	0.000	22577561	142967		0.7500	Motor Oil Range
CALC:	**[(1/28388000)* 22580000]**			**= 0.7953 mg/mL**		**%D=5.70**		
26	8.903			1220	10	VB		

Weyerhaeuser
DB5MS Column

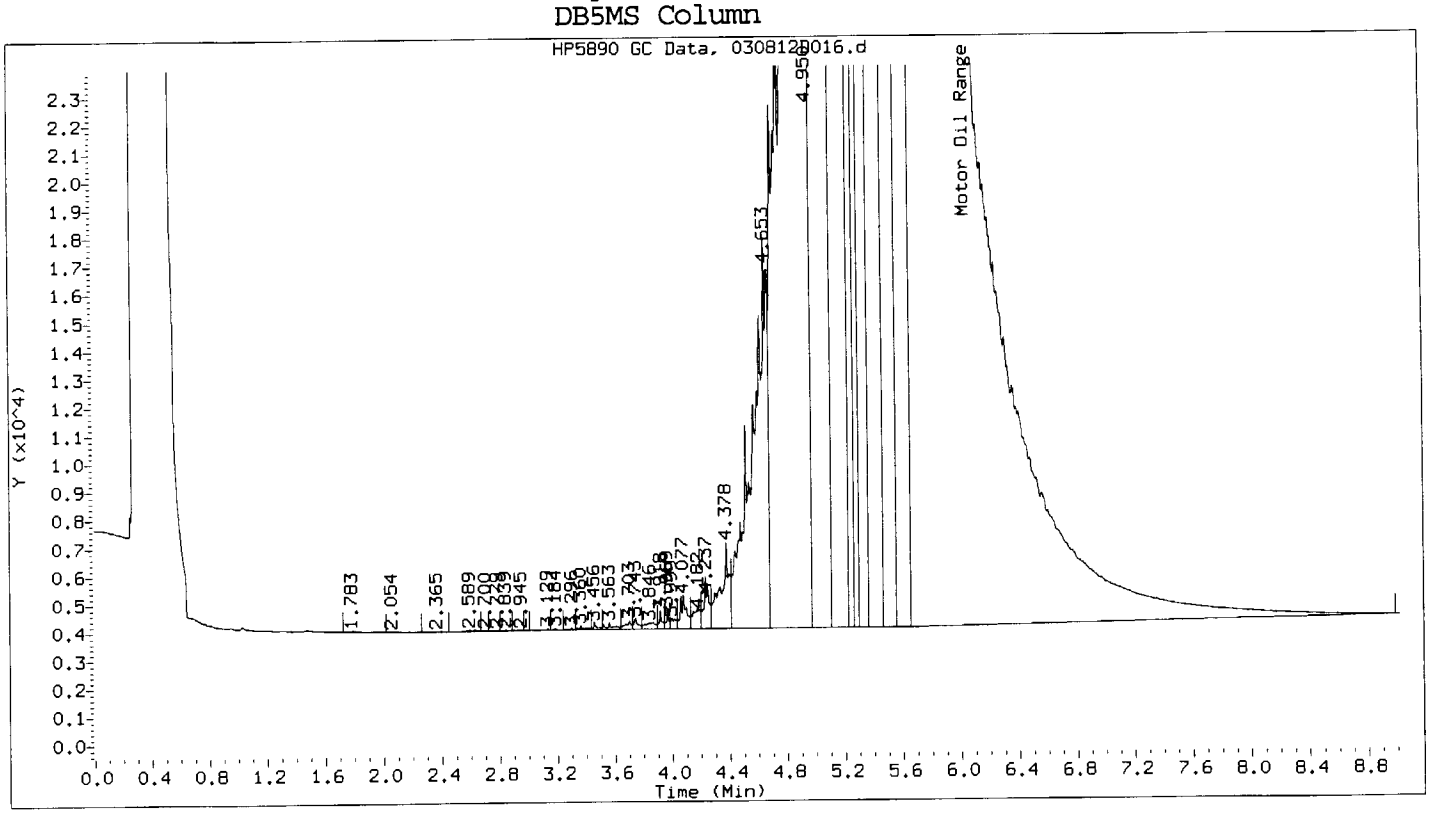


SAMPLE: OILL6;25_100103
Client ID: MoterOil_level6
Processing File: 00-030812_WTPHD.m
Sample File: /chem/hpdos4_2.i/030812d0_racer.b/030812D015.d
Acquired: 08-MAR-2012 15:50
SampleType: CALIB_6

Dilution: 1.00

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
1	1.779			3687	42	PV		
2	2.058			2716	15	PV		
3	2.382			1973	15	PV		
4	2.473			782	11	VV		
5	2.598			3461	22	VV		
6	2.706			1818	20	VV		
7	2.796			2299	20	VV		
8	3.130			559	24	BV		
9	3.188			556	20	PV		
10	3.295			1188	14	VV		
11	3.358			1408	47	VV		
12	3.457			2724	85	PV		
13	3.562			4684	86	VV		
14	3.702			4940	98	VV		
15	3.743			5519	137	VV		
16	3.866			7272	84	VV		
17	3.918			6942	247	VV		
18	3.971			5569	211	VV		
19	3.999			7656	145	VV		
20	4.078			28439	471	VV		
21	4.183			22010	277	VV		
22	4.237			36323	585	VV		
23	4.382			113640	1207	VV		
24	4.650			697038	4702	VV		
25	4.818			1146509	7143	VV		
26	4.921			1956769	12403	VV		
27	6.030	6.030	0.000	34928330	341164		1.250	Motor Oil Range
CALC:	[(1/28388000)* 34930000]			= 1.230 mg/mL		%D=1.60		
28	7.016			1177412	2451	VB		

Weyerhaeuser
DB5MS Column



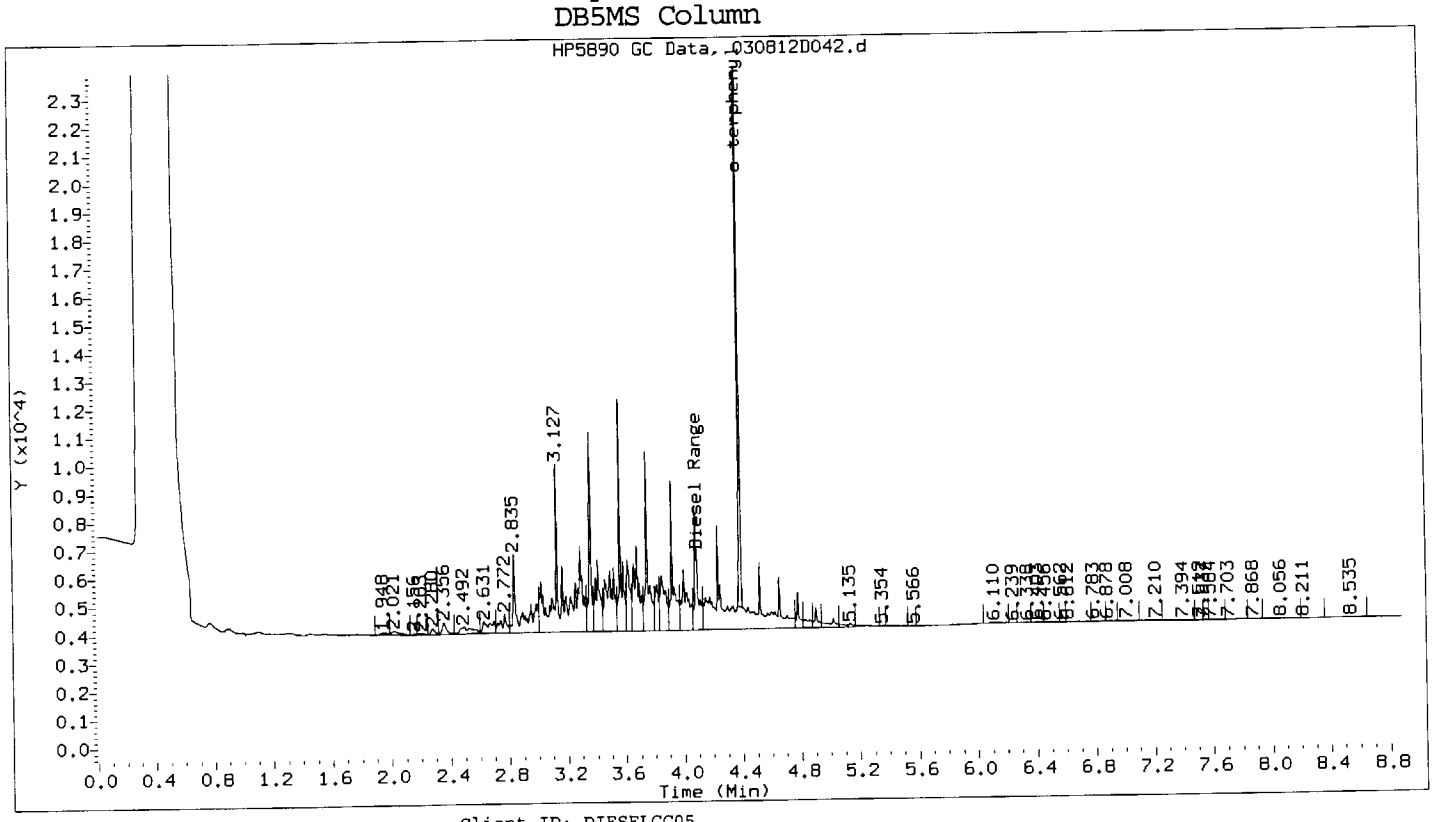
SAMPLE: OILL7;50_100103 Client ID: OILL7
Processing File: 00-030812_WTPHD.m Sample File: /chem/hpdos4_2.i/030812d0_racer.b/030812D016.d
Acquired: 08-MAR-2012 16:06 SampleType: CALIB_7

Dilution: 1.00 | UnitFactor: 1.000 | FinalVol: 1000 uL | AmountExt: 500.0 ml | Sample Volume: 500.0 ml | AmountInj: 1.000 uL |

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
1	1.783			3616	40	PV		
2	2.054			1162	13	PV		
3	2.365			1930	17	PV		
4	2.589			4611	43	PV		
5	2.700			1073	24	VV		
6	2.779			838	14	VV		
7	2.839			1026	28	VV		
8	2.945			357	8	PV		
9	3.129			1755	61	BV		
10	3.184			2173	61	VV		
11	3.296			3404	43	VV		
12	3.360			6816	126	VV		
13	3.456			8920	237	VV		
14	3.563			16382	233	VV		
15	3.703			15911	294	VV		
16	3.743			16562	372	VV		
17	3.846			24251	229	VV		
18	3.918			17904	585	VV		
19	3.969			16086	655	VV		
20	3.999			20136	374	VV		
21	4.077			68282	1100	VV		
22	4.182			54026	647	VV		
23	4.237			83264	1290	VV		
24	4.378			247094	2860	VV		
25	4.653			2011346	12983	VV		
26	4.950			8802404	43241	HHS		
27	6.030	6.030	0.000	68459639	529646		2.500	Motor Oil Range

CALC: [(1/28388000)* 68460000] = 2.412 mg/mL %D=3.67

Weyerhaeuser
DB5MS Column



SAMPLE: DIESELCC05;L4 Client ID: DIESELCC05
Processing File: 00-030812_WTPHD.m Sample File: /chem/hpdos4_2.i/030812d0_racernw.b/030812D042.d
Acquired: 28-MAR-2012 10:36 SampleType: CCALIB_4

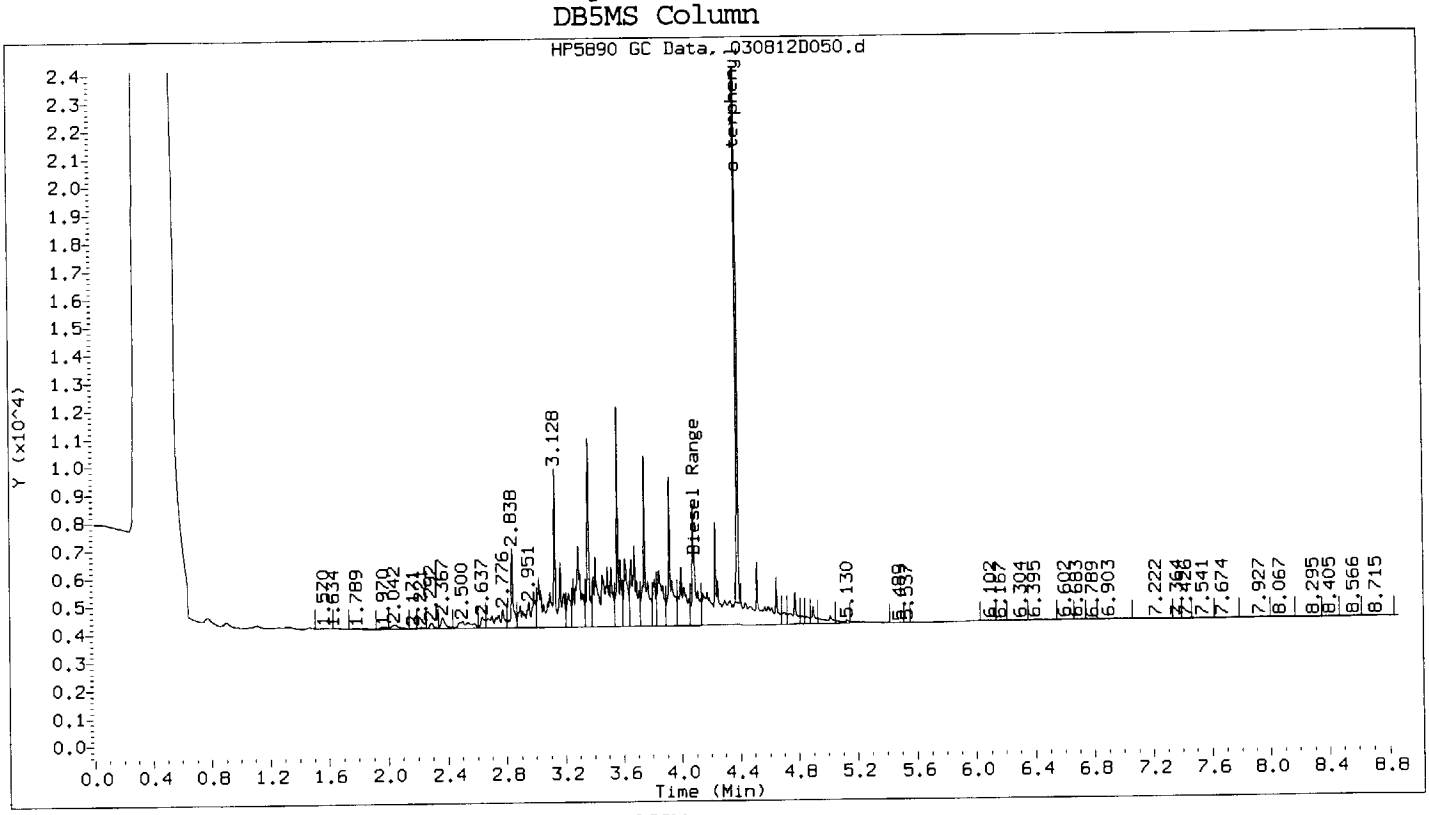
Dilution: 1.00 | UnitFactor: 1.000 | FinalVol: 1000 uL | AmountExt: 500.0 ml | Sample Volume: 500.0 ml | AmountInj: 1.000 uL |

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
1	1.948			5615	79	PV		
2	2.021			10347	126	VV		
3	2.156			1235	39	PV		
4	2.203			2046	38	VV		
5	2.280			7280	193	PV		
6	2.356			16538	392	VV		
7	2.492			27606	235	PV		
8	2.631			35997	424	PV		
9	2.772			37061	662	VV		
10	2.835			162857	2777			
11	3.127			470692	5952	BV		
12	4.090	4.090	0.000	2138504	53589		0.1000	Diesel Range
CALC:	**[(1/23235000)* 2139000] = 0.09204 mg/mL**				**%D=8.65**			
13	4.388	4.390	0.002	425606	44761		0.01023	o-terphenyl
CALC:	**[(1/40735000)* 425600] = 0.01045 mg/mL**				**%D=2.09**			
14	5.135			10867	122	PVT		
15	5.354			806	19	PVT		
16	5.566			169	8	PVT		
17	6.110			2404	20	BV		
18	6.239			412	8	VV		
19	6.338			854	10	VV		
20	6.403			1023	16	VV		
21	6.456			1140	12	VV		
22	6.562			437	10	VV		
23	6.612			1642	12	VV		
24	6.783			845	10	VV		
25	6.878			667	8	VV		
26	7.008			1079	9	VV		
27	7.210			1134	8	VV		
28	7.394			1707	10	VV		

Weyerhaeuser
DB5MS Column

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
29	7.512			432	8	VV		
30	7.537			351	11	VV		
31	7.584			972	9	VV		
32	7.703			1094	8	VV		
33	7.868			831	9	VV		
34	8.056			2070	9	VV		
35	8.211			1026	10	VV		
36	8.535			1455	5	VV		

Weyerhaeuser
DB5MS Column



SAMPLE: DIESELCC11;L4 Client ID: DIESELCC11

Processing File: 00-030812_WTPHD.m Sample File: /chem/hpdos4_2.i/030812d0_racernw.b/030812D050.d

Acquired: 28-MAR-2012 14:38 SampleType: CCALIB_4

Dilution: 1.00 | UnitFactor: 1.000 | FinalVol: 1000 uL | AmountExt: 500.0 ml | Sample Volume: 500.0 ml | AmountInj: 1.000 uL |

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
1	1.570			1573	24	BV		
2	1.634			528	14	VV		
3	1.789			3205	25	PV		
4	1.970			4663	71	PV		
5	2.042			10467	137	VV		
6	2.171			1194	32	PV		
7	2.221			1760	39	VV		
8	2.292			7273	198	PV		
9	2.367			16223	387	VV		
10	2.500			26709	238	PV		
11	2.637			14932	403	PV		
12	2.776			56498	654	VV		
13	2.838			62214	2850	VV		
14	2.951			94574	993	PB		
15	3.128			272116	5647	BV		
16	4.090	4.090	0.000	2310864	54588		0.1000	Diesel Range
CALC:	**[(1/23235000)* 2311000] = 0.09945 mg/mL**				**%D=0.548**			
17	4.386	4.390	0.004	412748	42587		0.01023	o-terphenyl
CALC:	**[(1/40735000)* 412700] = 0.01013 mg/mL**				**%D=0.961**			
18	5.130			10585	133	PVT		
19	5.489			917	11	PVT		
20	5.537			15	3	PVT		
21	6.102			707	10	BV		
22	6.167			561	8	VV		
23	6.304			1121	9	VV		
24	6.395			1750	12	VV		
25	6.602			1092	11	VV		
26	6.683			646	10	VV		
27	6.789			629	9	VV		
28	6.903			2206	10	VV		

Weyerhaeuser
DB5MS Column

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
29	7.222			3014	13	VV		
30	7.364			554	8	VV		
31	7.426			664	10	VV		
32	7.541			1447	9	VV		
33	7.674			1421	10	VV		
34	7.927			1516	8	VV		
35	8.067			1353	7	VV		
36	8.295			1378	10	VV		
37	8.405			699	6	VV		
38	8.566			873	8	VV		
39	8.715			722	5	PB		

1D

WTPH ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DBLK1_W032712

Lab Name: WEYERHAEUSER Contract:

Lab Code: WEYCO SR No.: Method: SDG No.: 030812d0_racernw

Matrix: (soil/water) LIQUID Lab Sample ID: DBLK1_W032712

Sample wt/vol: 500.0 (g/mL) mL Lab File ID: 030812D045

% Moisture: _____ decanted: (Y/N)___ Date Received:

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:03/27/12

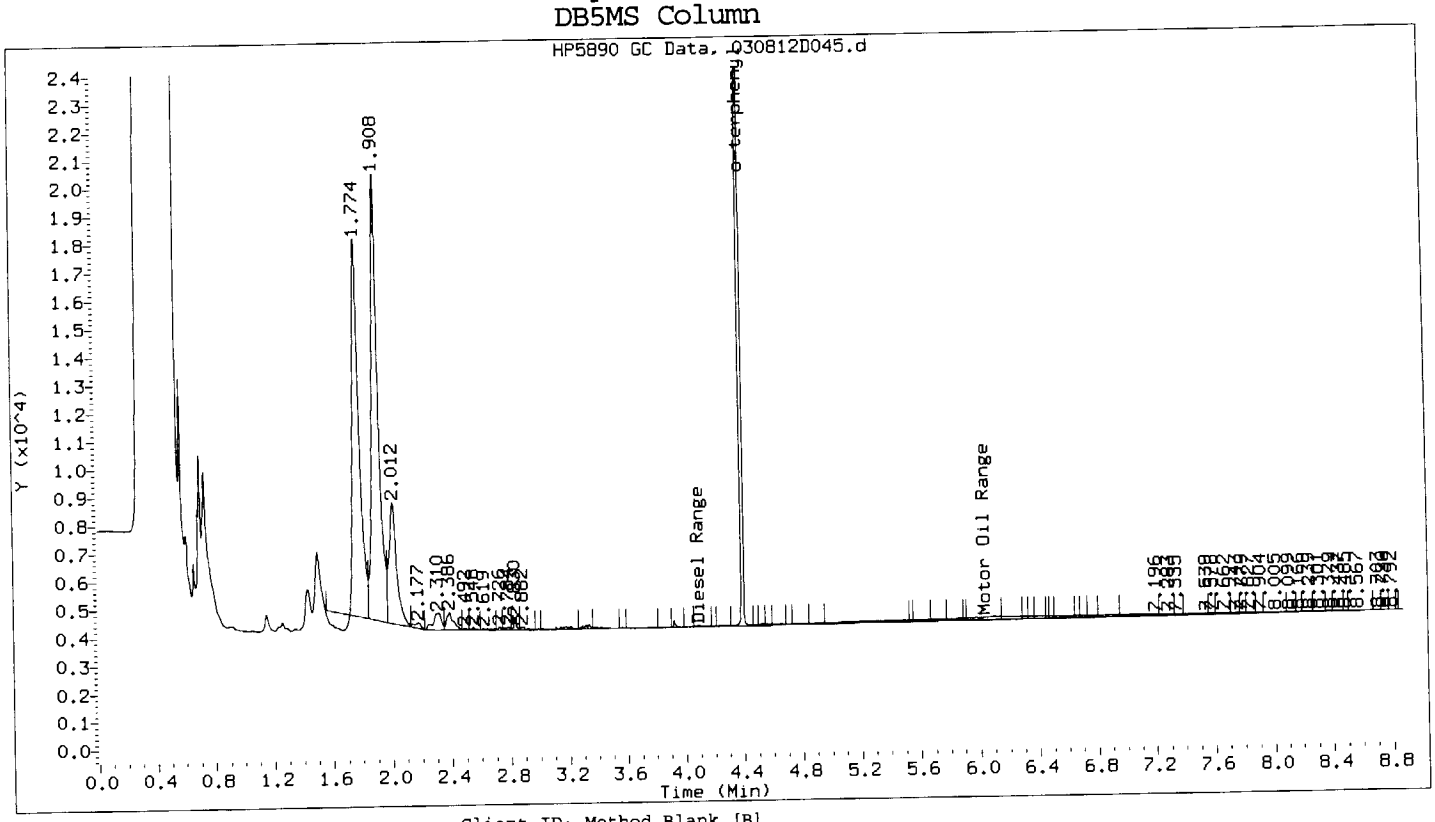
Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/28/12

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) mg/L	Q
	----------Diesel Range	0.040	U
	----------Motor Oil Range	0.20	U

Weyerhaeuser
DB5MS Column



SAMPLE: DBLK1_W032712 | Client ID: Method Blank [B]
Processing File: 00-030812_WTPHD.m | Sample File: /chem/hpdos4_2.i/030812d0_racernw.b/030812D045.d
Acquired: 28-MAR-2012 13:18 | SampleType: BLANK

Dilution: 1.00 | UnitFactor: 1.000 | FinalVol: 1000 uL | AmountExt: 500.0 ml | Sample Volume: 500.0 ml | AmountInj: 1.000 uL |

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
1	1.774			800929	13425	BV		
2	1.908			996728	16003	VV		
3	2.012			301412	4301	VV		
4	2.177			12292	204	VV		
5	2.310			46231	583	PV		
6	2.386			39227	593	VV		
7	2.492			2156	53	VV		
8	2.548			3832	95	VV		
9	2.619			3628	59	PV		
10	2.726			2919	108	VV		
11	2.784			5105	115	VV		
12	2.830			9974	418	VV		
13	2.882			5944	94	VV		
15	4.394	4.390	0.004	3315683	253511	HBS	0.08140	o-terphenyl

CALC: **[(1/40735000)* 3316000] = 0.08140 mg/mL**

17	7.196	18214	55	VVT
18	7.283	6427	52	VVT
19	7.335	3599	51	VVT
20	7.539	9299	45	VVT
21	7.578	2419	44	VVT
22	7.662	4735	41	VVT
23	7.743	2706	38	VVT
24	7.779	1830	37	VVT
25	7.827	2849	36	VVT
26	7.904	2094	34	VVT
27	8.005	5693	32	VVT
28	8.099	2056	27	VVT
29	8.166	1189	25	VVT
30	8.239	2021	25	VVT
31	8.301	1861	20	VVT
32	8.379	896	18	VVT

Weyerhaeuser
DB5MS Column

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
33	8.437			1333	19	VVT		
34	8.485			508	14	VVT		
35	8.567			1802	12	VVT		
36	8.703			270	6	VVT		
37	8.736			187	6	VVT		
38	8.792			116	3	PVT		

1D

WTPH ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

DLCS1_W032712

Lab Name: WEYERHAEUSER Contract:

Lab Code: WEYCO SR No.: Method: SDG No.: 030812d0_racernw

Matrix: (soil/water) LIQUID Lab Sample ID: DLCS1_W032712

Sample wt/vol: 500.0 (g/mL) mL Lab File ID: 030812D046

% Moisture: _____ decanted: (Y/N)___ Date Received:

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted:03/27/12

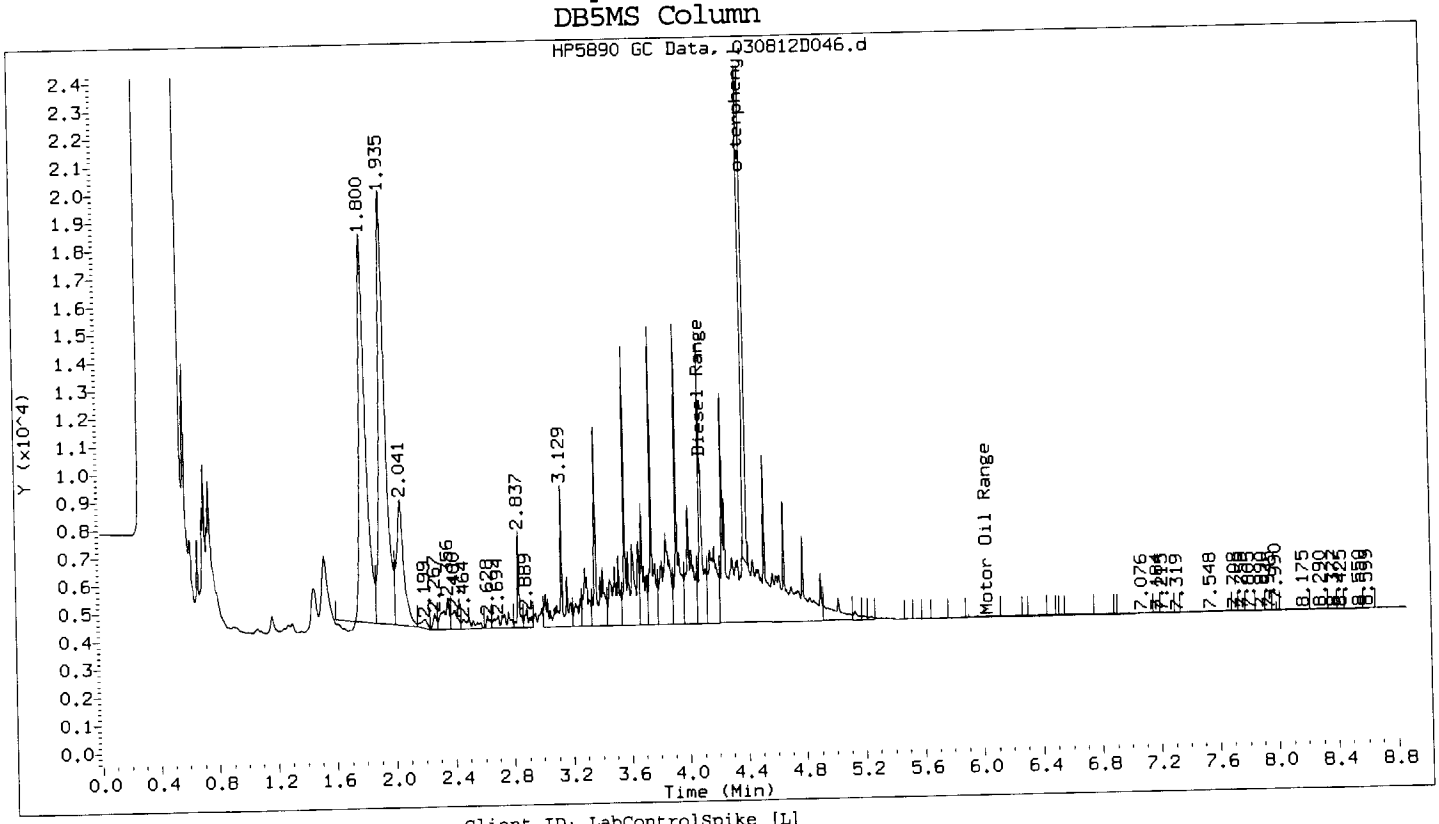
Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/28/12

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) mg/L	Q
	----------Diesel Range	0.33	
	----------Motor Oil Range	0.0040	J

Weyerhaeuser
DB5MS Column



SAMPLE: DLCS1_W032712 | Client ID: LabControlSpike [L]
Processing File: 00-030812_WTPHD.m | Sample File: /chem/hpdos4_2.i/030812d0_racernw.b/030812D046.d
Acquired: 28-MAR-2012 13:34 | SampleType: LCS

Dilution: 1.00 | UnitFactor: 1.000 | FinalVol: 1000 uL | AmountExt: 500.0 ml | Sample Volume: 500.0 ml | AmountInj: 1.000 uL |

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
1	1.800			850964	13968	BV		
2	1.935			976547	15614	VV		
3	2.041			304035	4516	VV		
4	2.199			20483	341	VV		
5	2.267			19633	553	PV		
6	2.356			65526	1139	VV		
7	2.400			38677	678	VV		
8	2.464			39722	416	VV		
9	2.628			15169	439	PV		
10	2.694			55150	590	VV		
11	2.837			62250	3458	VV		
12	2.889			28232	696	PV		
13	3.129			193723	5054	BV		
14	4.090	4.090	0.000	3873402	77899		0.1667	Diesel Range
CALC:	**[(1/23235000)* 3873000] = 0.1667 mg/mL**							
15	4.394	4.390	0.004	3199595	299346		0.07855	o-terphenyl
CALC:	**[(1/40735000)* 3200000] = 0.07855 mg/mL**							
16	6.030	6.030	0.000	62475	936		0.002201	Motor Oil Range
CALC:	**[(1/28388000)* 62480] = 0.002201 mg/mL**							
17	7.076			5805	22	VVT		
18	7.184			1161	22	VVT		
19	7.215			2048	21	VVT		
20	7.319			699	16	VVT		
21	7.548			6544	20	VVT		
22	7.708			661	12	VVT		
23	7.759			695	13	VVT		
24	7.805			1037	14	VVT		
25	7.890			905	13	VVT		
26	7.945			537	12	VVT		

Weyerhaeuser
DB5MS Column

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
27	7.990			1362	112	VVT		
28	8.175			2104	10	VVT		
29	8.290			857	7	VVT		
30	8.377			312	5	VVT		
31	8.425			218	7	VVT		
32	8.550			438	6	VVT		
33	8.599			246	3	PVT		

1D

WTPH ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IBLK11

Lab Name: WEYERHAEUSER Contract:

Lab Code: WEYCO SR No.: Method: SDG No.: 030812d0_racernw

Matrix: (soil/water) LIQUID Lab Sample ID: IBLK11

Sample wt/vol: 500.0 (g/mL) mL Lab File ID: 030812D049

% Moisture: _____ decanted: (Y/N)___ Date Received:

Extraction: (SepF/Cont/Sonc) ____ Date Extracted:03/27/12

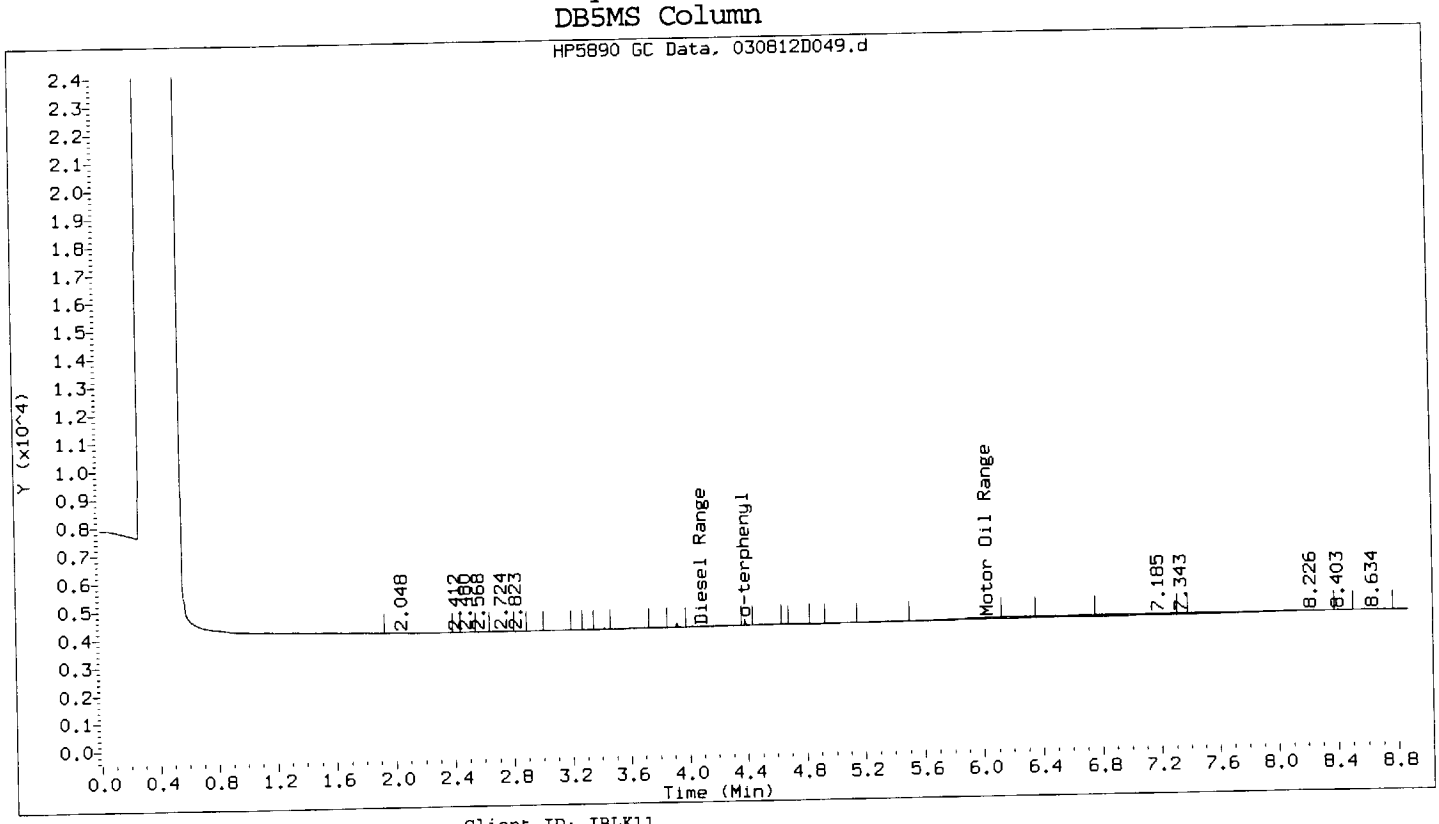
Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/28/12

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) mg/L	Q
	----------Diesel Range	0.040	U
	----------Motor Oil Range	0.20	U

Weyerhaeuser
DB5MS Column



SAMPLE: IBLK11
Client ID: IBLK11
Processing File: 00-030812_WTPHD.m
Sample File: /chem/hpdos4_2.i/030812d0_racernw.b/030812D049.d
Acquired: 28-MAR-2012 14:22
SampleType: INSTBLANK

Dilution: 1.00 | UnitFactor: 1.000 | FinalVol: 1000 uL | AmountExt: 500.0 ml | Sample Volume: 500.0 ml | AmountInj: 1.000 uL |

	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
1	2.048			560	11	BV		
2	2.412			200	6	PV		
3	2.480			475	6	VV		
4	2.568			367	7	VV		
5	2.724			960	7	PV		
6	2.823			306	6	VV		
8	4.387	4.390	0.003	3387	154	VV	0.00008312	o-terphenyl
CALC:	[(1/40735000)* 3386] = 0.00008312 mg/mL							
10	7.185			30021	44	VV		
11	7.343			3341	39	VV		
12	8.226			30330	18	VV		
13	8.403			1638	14	VV		
14	8.634			1380	6	VV		

1D

WTPH ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

IBLK05

Lab Name: WEYERHAEUSER Contract:

Lab Code: WEYCO SR No.: Method: SDG No.: 030812d0_racernw

Matrix: (soil/water) LIQUID Lab Sample ID: IBLK05

Sample wt/vol: 500.0 (g/mL) mL Lab File ID: 030812D041

% Moisture: _____ decanted: (Y/N)___ Date Received:

Extraction: (SepF/Cont/Sonc) ____ Date Extracted:03/13/12

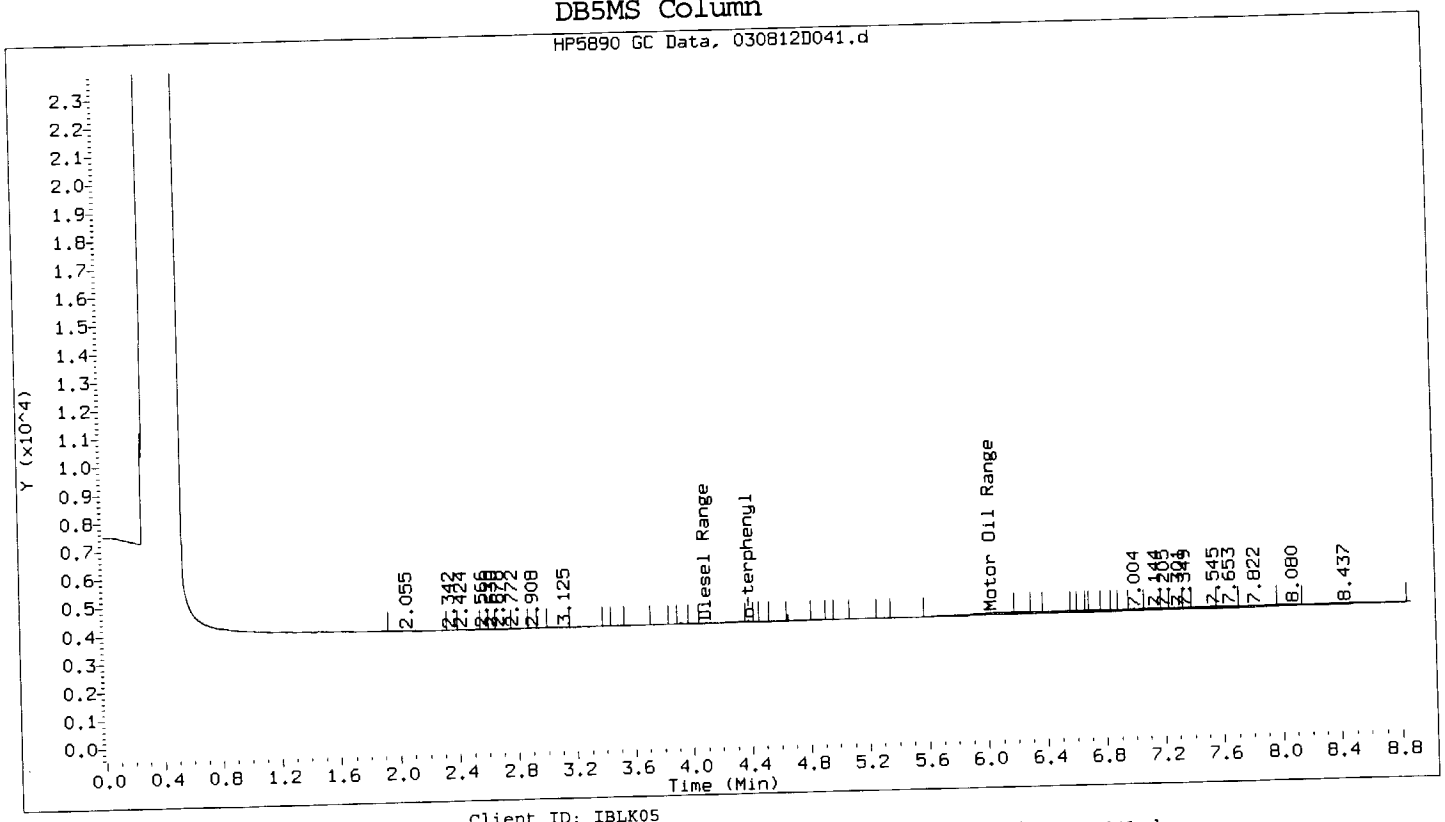
Concentrated Extract Volume: 1000(uL) Date Analyzed: 03/28/12

Injection Volume: 1.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) mg/L	Q
	----------Diesel Range	0.040	U
	----------Motor Oil Range	0.20	U

Weyerhaeuser
DB5MS Column



SAMPLE: IBLK05
Processing File: 00-030812_WTPHD.m
Acquired: 28-MAR-2012 09:55

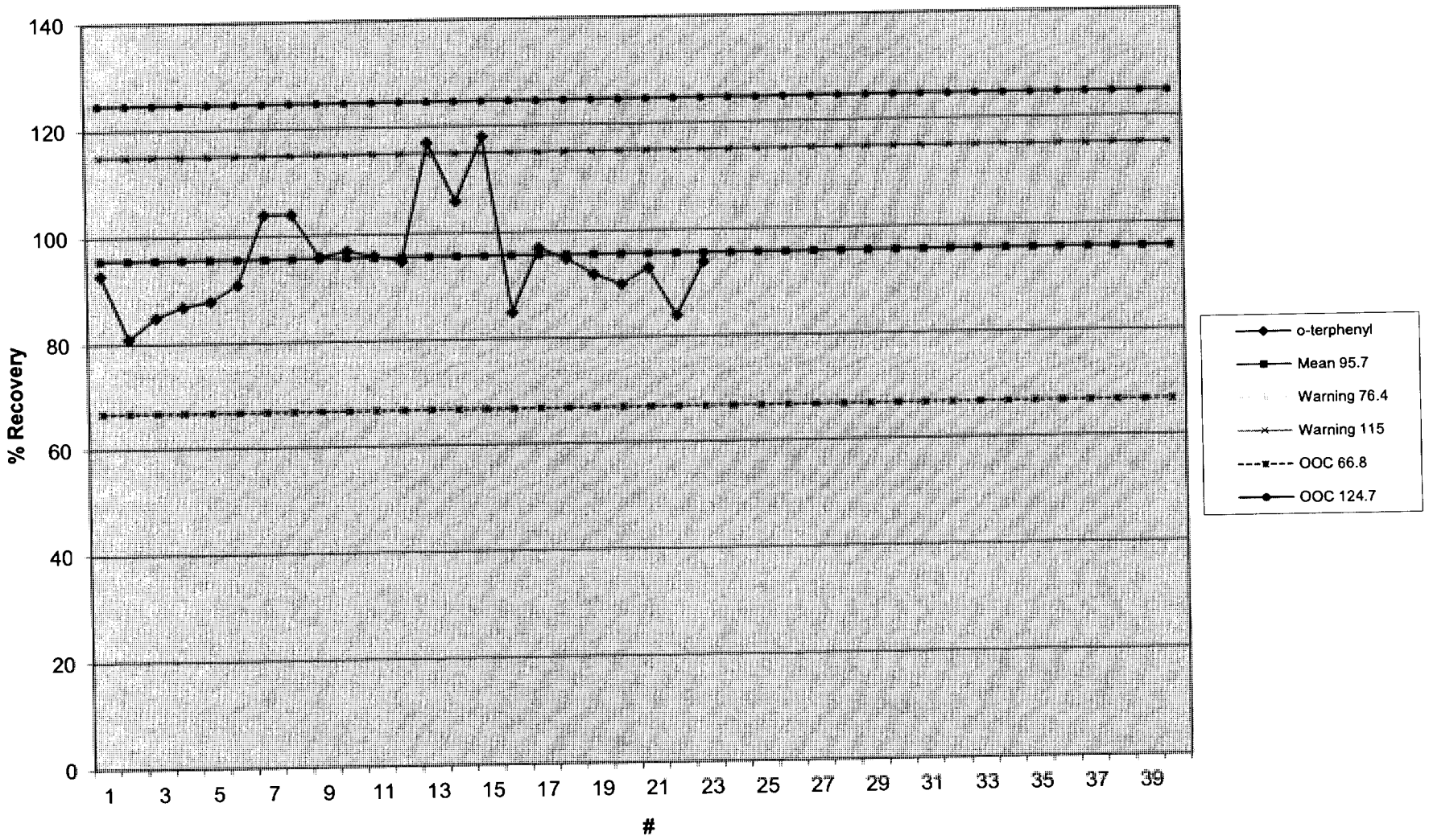
Client ID: IBLK05
Sample File: /chem/hpdos4_2.i/030812d0_racernw.b/030812D041.d
SampleType: INSTBLANK

Dilution: 1.00 | UnitFactor: 1.000 | FinalVol: 1000 uL | AmountExt: 500.0 ml | Sample Volume: 500.0 ml | AmountInj: 1.000 uL |

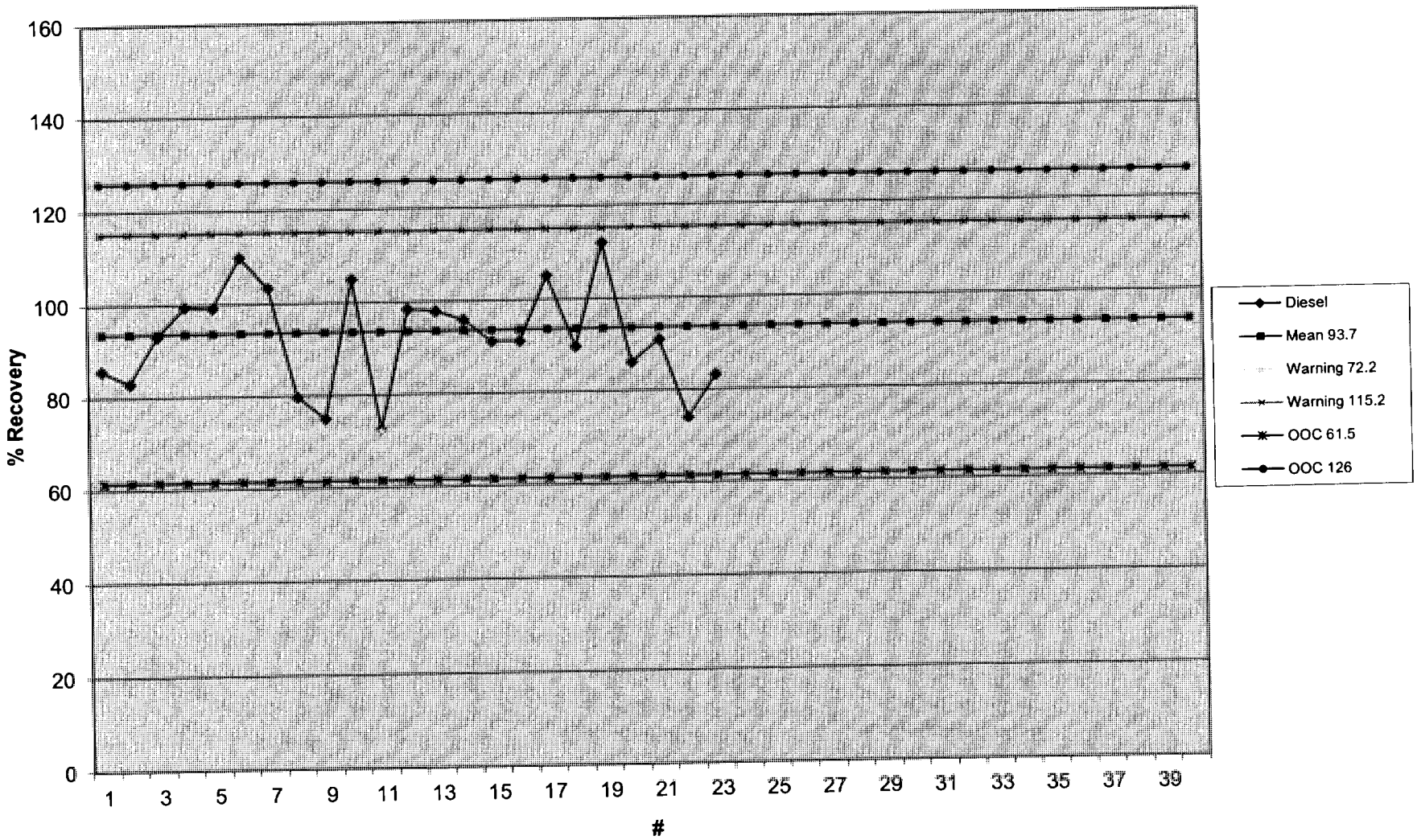
	RT	Exp.RT	Diff	Area	Peak Height	Code	ug injected	Component Name
1	2.055			727	9	BV		
2	2.342			246	5	PV		
3	2.424			835	7	PV		
4	2.566			233	8	VV		
5	2.630			146	4	VV		
6	2.678			377	5	PV		
7	2.772			338	4	VV		
8	2.908			177	3	VV		
9	3.125			329	2	BV		
11	4.385	4.390	0.005	1156	43	VV	0.00002838	o-terphenyl
13	7.004			7564	64	VV		
14	7.144			8153	60	VV		
15	7.205			3863	61	VV		
16	7.301			6370	57	VV		
17	7.349			3810	56	VV		
18	7.545			11238	55	VV		
19	7.653			9108	54	VV		
20	7.822			15293	52	VV		
21	8.080			9528	49	VV		
22	8.437			31407	42	VB		

CALC: **[(1/40735000)* 1156] = 0.00002838 mg/mL**

WTPHD Blank Surrogate Control Chart - Water



WTPHD LCS Control Chart - Water



Weyerhaeuser

P.O. Box 9777, WTC 2F25
Federal Way, WA 98063-9777
32901 Weyerhaeuser Way South
Federal Way, WA 98001
(253) 924-6242
(253) 924-6654 fax
Dennis.Catalano@weyerhaeuser.com

July 09, 2012

Brett Beaulieu
Floyd/Snider
601 Union St Suite 600
Seattle, WA 98101

Dear Brett :
Attached is the final report for the Weyer - EW Compliance Monitoring sample(s) that you requested we analyze for you. This work has been performed under our service request number 12-0888 for samples received on 06/22/12.

If you have any technical questions concerning this report, please feel free to contact me at (253) 924-6242.

Thank you for the opportunity to be of service to your organization. I hope that we can be of assistance in the future.

Sincerely,

Dennis Catalano
Operations Manager

Weyerhaeuser Analytical Chemistry and Microstructure
(253) 924-6242
Dennis.Catalano@weyerhaeuser.com

Please Note:

- The results in this report relate only to the items tested or to the sample(s) as received by the laboratory.
- This report shall not be reproduced, except in full, without the written permission of the laboratory.

Original Paperwork

Weyerhaeuser

Weyerhaeuser Analytical Chemistry
c/o SLM 216 (253) 924 6293
32901 Weyerhaeuser Way South
Federal Way, WA 98001

12-0888

Sample Analysis Request and Chain of Custody Record

Date: 6/21/12
Project Title: Weyerhaeuser Everett west
Page 1 of 1
Client's Name: Floyd Snider
Account Number/Project Number: Weyer-EW Task 5
Client's Address: 601 Union St Ste 600, Seattle, WA 98125
Client's Phone Number: 206-292-2678
Client's FAX Number:
Client's E Mail Address: Brett.Beaulieu@floydsnider.com
Project Manager (Print): Brett Beaulieu
Sampler Name (Print): Jenny Graves
Recorded By (Signature): [signature]

MET-CO	FIELD SAMPLE ID (15 CHARACTER MAX) (REQUIRED)	DATE (REQUIRED)	TIME	WATER	SOIL/SED	OIL	HCl	H_2SO_4	HNO_3	$Na_2S_2O_3$	4°C	FROZEN	FILTERED	# of Containers	Dissolved Arsenic Method 200.8	NOTES
	MW-1501R	6/21/12	1430	X					X				X		X	Field Filtered
	MW-1202R	6/21/12	1350	X					X				X		X	↓
	MW-1203R	6/21/12	1250	X					X				X		X	↓
	MW-1603R	6/21/12	1530	X					X				X		X	↓
	MW-1301R	6/21/12	1145	X					X				X		X	↓

* "G"rab, "D"epth composite, or "T"ime composite

Turnaround Time Required
- ☐ 24 hours
- ☐ 48 hours
- ☐ 7 days
- ☒ 2-3 weeks, due:

Results To: Brett Beaulieu
cc

Report Type
- ☐ Electronic Report
- ☐ Disk Deliverables
- ☐ NPDES/Regulatory
- ☐ Other: Same as previous

ESTIMATED CONCENTRATION RANGE

Percent	
ppm	
ppb	
ppt	

Report Basis
- ☐ As Rcd.
- ☐ OD
- ☐ Volume
- ☐ Wt.

- ☐ Return unused samples
- ☐ IRS Qualified R&D?

Remarks/Detection Limit Requirements:

Sample Chain of Custody and Shipping Method Record

Relinquished By Sampler (Signature)	Date	Time	Received By (Signature)
Relinquished By (Signature)	Date	Time	Received By Laboratory (Signature) [signature]
Air bill Number	Cooler Temp. 4°C	Date Received 6/22/12	Time Received 1500

E Form 6307 (9/08)

Weyerhaeuser

Service Request

Analytical Chemistry and Microstructure

12-0888

Title: Weyer - EW Compliance Monitoring

Samples: 9 ***Tests:*** 3 ***Last Samp:*** 009	***Project Number:***	***PO:***
SAP Order Number: 90-0000-2586	***Order Desc:*** 2760-Everett West Site-Analy Test WY	
Date Received: 06/22/12	***Date Desired:*** 07/13/12	***Date Completed:***
Submitter: Beaulieu, Brett	***Location:***	***Phone:*** 206 292-2078
Reviewer: Catalano, Dennis	***Location:*** WTC 2F25	***Phone:*** (253) 924-6242
Copy To:		
Record Book:	***Ref Request:*** 12-0427	***Disposal:***
Comments: The As results are all dissolved and need to be reported to 0.2ug/l. May require CCT Technology to get rid of salt. These require disk deliveralbles and I picked sample 001 for QC. Change if needed.		

Group	*Analysis*	*Test Description*	*Comp List*	*Component List Description*
ADMIN	DISK-EPA	EPA Disk - assign to each sample		done 07-09-12
METALS	3-GM-W2008	AM E-200.8M Water Digest for ICPMS		
METALS	ICPMS	ICP-MS Metals - AM E-200.8M	W1AS	W-As

Sample ID - Date Sampled - Status Customer Sample Description / ID	Component List			W1AS
	Analysis	DISK-EPA	3-GM-W2008	ICPMS
		1	1	1
12-0888-001 - 06/21/012 1430 - Available MW-1501R		V	V	V
12-0888-002 - 06/21/012 1350 - Available MW-1202R		V	V	V
12-0888-003 - 06/21/012 1250 - Available MW-1203R		V	V	V
12-0888-004 - 06/21/012 1530 - Available MW-1603R		V	V	V
12-0888-005 - 06/21/012 1145 - Available MW-1301R		V	V	V
12-0888-006 - - Available Method Blank [BLANK]		V	V	V

Printed on: Jun 25, 2012 6:48 AM
Data Retrieved: Jun 25, 2012 6:48 AM

Entered by: Catalano, Dennis
Entered on: Jun 22, 2012 3:10 PM

Weyerhaeuser

Service Request

Analytical Chemistry and Microstructure

12-0888

Title: Weyer - EW Compliance Monitoring

	DISK-EPA	3-GM-W2008	ICPMS
	1	1	1
12-0888-007 - - Available Lab Control Spike [LCS]	V	V	V
12-0888-008 - 06/21/012 1430 - Available MW-1501R [DUP]	V	V	V
12-0888-009 - 06/21/012 1430 - Available MW-1501R [MS]	V	V	V

W1AS

Printed on: Jun 25, 2012 6:48 AM
Data Retrieved: Jun 25, 2012 6:48 AM

Entered by: Catalano, Dennis
Entered on: Jun 22, 2012 3:10 PM

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

Service Request 12-0888

Report

Weyer- EW Compliance Monitoring

Client ID	Date Sampled	Time Sampled	Lab ID	As
				mg/L
MW-1501R	06/21/12	1430	001	0.0006
MW-1202R	06/21/12	1350	002	0.0031
MW-1203R	06/21/12	1250	003	0.0007
MW-1603R	06/21/12	1530	004	0.0008
MW-1301R	06/21/12	1145	005	0.0016
			QL:	0.0002
			Method Number:	E-200.8M
			Analyst:	DJD
			Analysis Date:	07/09/12

Approved: Dan Deprez Date: 07/09/12

Telephone: (253) 924-6188

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

Service Request 12-0888

Metals QC Report

Weyer- EW Compliance Monitoring

Method Blank Report

Element	Water Method Blank Found
	mg/L
As	< 0.0002

Water Laboratory Control Sample Report

Element	LCSW Found	True Value	Lower Limit	Upper Limit	% Recovery
	mg/L				
As	0.0408	0.0400	0.0340	0.0460	102

Duplicate Report for Sample 001/008

Element	Sample Found	Duplicate Found	RPD
	mg/L		
As	0.0006	0.0006	0.0

Spike Report for Sample 001/009

Element	Sample Found	Spike Found	Net Spike	Spike Level	% Recovery
	mg/L				
As	0.0006	0.0407	0.0401	0.0400	100

Approved: Dan Deprez Date: 07/09/12
Telephone: (253) 924-6188

Weyerhaeuser

Weyerhaeuser Analytical Chemistry and Microstructure
32901 Weyerhaeuser Way S.
Federal Way, WA 98003

Data Qualifiers

Flag	Description
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
D	The sample was diluted.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.
I	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
J	The result is an estimated value.
N	The Matrix Spike sample recovery is not within control limits.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
Q	One of more quality control criteria was outside the limits.
S	The reported value was determined by the Method of Standard Additions (MSA).

Weyerhaeuser

Weyerhaeuser Analytical Chemistry and Microstructure
32901 Weyerhaeuser Way S.
Federal Way, WA 98003

Service Request: 12-0888

Results

Weyer - EW Compliance Monitoring

Customer Sample ID: MW-1501R
Lab Sample ID: 12-0888-001
Date Sampled: 06/21/2012

Matrix: W
Fraction: Dissolved
Date Received: 06/22/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0006**		0.0002	mg/L	as recd	AM E-200.8M	1X	07/02/12	07/09/12	

Weyerhaeuser

Weyerhaeuser Analytical Chemistry and Microstructure
32901 Weyerhaeuser Way S.
Federal Way, WA 98003

Service Request: 12-0888

Weyer - EW Compliance Monitoring

Customer Sample ID: MW-1202R
Lab Sample ID: 12-0888-002
Date Sampled: 06/21/2012

Matrix: W
Fraction: Dissolved
Date Received: 06/22/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0031**		0.0002	mg/L	as recd	AM E-200.8M	1X	07/02/12	07/09/12	

Weyerhaeuser

Weyerhaeuser Analytical Chemistry and Microstructure
32901 Weyerhaeuser Way S.
Federal Way, WA 98003

Service Request: 12-0888

Weyer - EW Compliance Monitoring

Customer Sample ID: MW-1203R
Lab Sample ID: 12-0888-003
Date Sampled: 06/21/2012

Matrix: W
Fraction: Dissolved
Date Received: 06/22/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0007**		0.0002	mg/L	as recd	AM E-200.8M	1X	07/02/12	07/09/12	

Weyerhaeuser

Weyerhaeuser Analytical Chemistry and Microstructure
32901 Weyerhaeuser Way S.
Federal Way, WA 98003

Service Request: 12-0888

Weyer - EW Compliance Monitoring

Customer Sample ID: MW-1603R
Lab Sample ID: 12-0888-004
Date Sampled: 06/21/2012

Matrix: W
Fraction: Dissolved
Date Received: 06/22/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0008**		0.0002	mg/L	as recd	AM E-200.8M	1X	07/02/12	07/09/12	

Weyerhaeuser

Weyerhaeuser Analytical Chemistry and Microstructure
32901 Weyerhaeuser Way S.
Federal Way, WA 98003

Service Request: 12-0888

Weyer - EW Compliance Monitoring

Customer Sample ID: MW-1301R
Lab Sample ID: 12-0888-005
Date Sampled: 06/21/2012

Matrix: W
Fraction: Dissolved
Date Received: 06/22/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0016**		0.0002	mg/L	as recd	AM E-200.8M	1X	07/02/12	07/09/12	

Weyerhaeuser

Weyerhaeuser Analytical Chemistry and Microstructure
32901 Weyerhaeuser Way S.
Federal Way, WA 98003

Service Request: 12-0888

Weyer - EW Compliance Monitoring

Customer Sample ID: Method Blank [BLANK]
Lab Sample ID: 12-0888-006
Date Sampled:

Matrix: W
Fraction: Dissolved
Date Received: 06/22/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	ND		0.0002	mg/L	as recd	AM E-200.8M	1X	07/02/12	07/09/12	

Weyerhaeuser

Weyerhaeuser Analytical Chemistry and Microstructure
32901 Weyerhaeuser Way S.
Federal Way, WA 98003

Service Request: 12-0888

Weyer - EW Compliance Monitoring

Customer Sample ID: Lab Control Spike [LCS]
Lab Sample ID: 12-0888-007
Date Sampled:

Matrix: W
Fraction: Dissolved
Date Received: 06/22/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0408**		0.0002	mg/L	as recd	AM E-200.8M	1X	07/02/12	07/09/12	

Weyerhaeuser

Weyerhaeuser Analytical Chemistry and Microstructure
32901 Weyerhaeuser Way S.
Federal Way, WA 98003

Service Request: 12-0888

Weyer - EW Compliance Monitoring

Customer Sample ID: MW-1501R [DUP]
Lab Sample ID: 12-0888-008
Date Sampled: 06/21/2012

Matrix: W
Fraction: Dissolved
Date Received: 06/22/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0006**		0.0002	mg/L	as recd	AM E-200.8M	1X	07/02/12	07/09/12	

Weyerhaeuser

Weyerhaeuser Analytical Chemistry and Microstructure
32901 Weyerhaeuser Way S.
Federal Way, WA 98003

Service Request: 12-0888

Weyer - EW Compliance Monitoring

Customer Sample ID: MW-1501R [MS]
Lab Sample ID: 12-0888-009
Date Sampled: 06/21/2012

Matrix: W
Fraction: Dissolved
Date Received: 06/22/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0407**		0.0002	mg/L	as recd	AM E-200.8M	1X	07/02/12	07/09/12	

Weyerhaeuser

Analytical Chemistry and Microstructure

Results Worksheet For ICPMS on SR # 12-0888

	Sample Prep Code	As - ug/L (raw)	As - mg/L
		ug/L	mg/L
12-0888-001	3-GM-W2	0.576	0.0006
12-0888-002	3-GM-W2	3.117	0.0031
12-0888-003	3-GM-W2	0.714	0.0007
12-0888-004	3-GM-W2	0.817	0.0008
12-0888-005	3-GM-W2	1.55	0.0016
12-0888-006 (PBW)	3-GM-W2	< 0.5	< 0.0002
12-0888-007 (LCSW)	3-GM-W2	40.81	0.0408
12-0888-008 (DUP 001)	3-GM-W2	0.656	0.0006
12-0888-009 (001 MS)	3-GM-W2	40.74	0.0407

Printed on: Jul 9, 2012 12:37 PM

Data Retrieved: Jul 9, 2012 12:37 PM

Weyerhaeuser Company Analytical & Testing Services — updated: djd 05-24-11

METALS DIGESTION LOG

sr # 12-0888 12-0907

method # AM E-200.8M

	sample numbers	amount aliquoted (mL or grams)	sample basis	final volume (mL)	comments
1	12-0888-006	50	DDI-H2O	50	PBW
2	7		↓		LCSW
3	1		as-recd		
4	8				DUP
5	9				MS
6	2				
7	3				
8	4				
9	5				
10	12-0907-001		as-recd		
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

07-02-12

LCSS, LCSW, TCLP LCSW = spiked blank

analyst and start date: 07-02-12

original filed with sr # 12-0888

ICP spikes

true value = 1 mg/L for all elements, except
Ca, K, Mg, Na = 41 mg/L
P = 40 mg/L
Si = 40 mg/L for FBAs only

FINAL VOLUME = 50 mL

_____ **0.5 mL of CL-CAL-2**

_____ **0.5 mL of BBILI100**

_____ **0.5 mL of WTC-SPK-1**

_____ **0.2 mL of 10,000 mg/L Si (FBA only)**

ICPMS spikes

true value = 0.04 mg/L for all elements, except
Ca, K, Mg, Na = 20.04 mg/L
P = 20 mg/L

FINAL VOLUME = 50 mL

__✓✓__ **0.2 mL of INSDPPB**

__✓✓__ **0.25 mL of WTC-SPK-1**

CL-CAL-2 = Spex CertiPrep, lot# CL28-06JB, exp. 08/30/12
100 mg/L Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn
in 5% HNO_3 and trace HF

BBILI100 = 100 mg/L B, Bi, Li solution in 2% HNO_3
prep by D. Deprez, 04/17/12, exp. 04/17/13
1. half fill a 50-mL tube with DDI-water
2. add 1 mL of conc. HNO_3, EMD, lot# 49308
3. add 5 mL 1000 mg/L B, Ultra Scientific, lot# J00705, exp. 09/30/15, in 2% NH_4OH
4. add 5 mL 1000 mg/L Bi, Ultra Scientific, lot# L00784, exp. 08/31/17, in 2% HNO_3
5. add 5 mL 1000 mg/L Li, Ultra Scientific, lot# J00468, exp. 06/30/15, in 2% HNO_3
6. dilute to a 50-mL final volume with DDI-water and mix

INSDPPB = prep by D. Deprez, 09/20/11, exp. 08/30/12
10 mg/L Ag, Al, As, B, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn
in 1% HNO_3
Spex CertiPrep, CL-CAL-2, lot# CL28-06JB, exp. 08/30/12
100 mg/L Ag, Al, As, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Sn, Sr, Ti, Tl, V, Zn
in 5% HNO_3 and trace HF
1000 mg/L B, Ultra Scientific, lot# J00705, exp. 09/30/15
in 2% NH_4OH
1000 mg/L Bi, Ultra Scientific, lot# L00784, exp. 08/31/17
in 2% HNO_3
1000 mg/L Li, Ultra Scientific, lot# J00468, exp. 06/30/15
in 2% HNO_3
1000 mg/L P, Ultra Scientific, lot# J01102, exp. 12/31/15
in 2% HNO_3

WTC-SPK-1 = Inorganic Ventures, lot# F2-MEB408041, exp. 02/01/13 = 4000 mg/L Ca, K, Mg, Na, P - in 3% HNO_3

10,000 mg/L Si = JT Baker, lot# J44N53, exp. 10/31/12 - in 5% HNO_3 and trace HF

Si spike for HF preps (1000 mg/L Si in H_2O, RICCA Chemical Company, lot # 4103284, exp. 02-2013)

Si true value = 50 mg/L

____ **0.25 mL** for Final Volume = **5 mL** ____ **0.5 mL** for Final Volume = **10 mL** ____ **1.25 mL** for Final Volume = **25 mL**

analyst and date: 07-02-12

sr 12-0888

Sample List TE-XII ICPMS 07-09-12 original w/ sr 12-0888

No	Label	Type	Weight	Rack	Row	Col	Height
1	STD1	Blank	1.000	0	1	3	144
2	STD2	Fully Quant Standard	1.000	1	1	4	144
3	STD3	Fully Quant Standard	1.000	1	1	1	144
4	STD4	Fully Quant Standard	1.000	1	1	2	144
5	STD5	Fully Quant Standard	1.000	0	1	4	144
6	STD6	Fully Quant Standard	1.000	1	1	3	144
7	CCV	QC Sample	1.000	0	1	4	144
8	ICV40	QC Sample	1.000	0	1	9	144
9	ICB	QC Sample	1.000	0	1	3	144
10	QLSTD	QC Sample	1.000	1	1	4	144
11	QLSTD2	Unknown	1.000	1	1	5	144
12	12-0888-006 (PBW)	Unknown	1.000	1	1	6	144
13	12-0888-007 (LCSW)	Unknown	1.000	1	1	7	144
14	12-0888-001	Unknown	1.000	1	1	8	144
15	12-0888-008 (DUP)	Unknown	1.000	1	1	9	144
16	12-0888-009 (MS)	Unknown	1.000	1	1	10	144
17	12-0888-002	Unknown	1.000	1	1	11	144
18	12-0888-003	Unknown	1.000	1	1	12	144
19	12-0888-004	Unknown	1.000	1	2	1	144
20	12-0888-005	Unknown	1.000	1	2	2	144
21	CCV	QC Sample	1.000	0	1	4	144
22	CCB	QC Sample	1.000	0	1	3	144
23	12-0907-001DL25	Unknown	1.000	1	2	3	144
24	CCV	QC Sample	1.000	0	1	4	144
25	CCB	QC Sample	1.000	0	1	3	144
26	PBS	Unknown	1.000	1	2	4	144
27	LCSS	Unknown	1.000	1	2	5	144
28	12-0902-001	Unknown	1.000	1	2	6	144
29	12-0902-001DUP	Unknown	1.000	1	2	7	144
30	12-0902-001MS	Unknown	1.000	1	2	8	144
31	12-0902-002	Unknown	1.000	1	2	9	144
32	12-0902-003	Unknown	1.000	1	2	10	144
33	12-0902-004	Unknown	1.000	1	2	11	144
34	CCV	QC Sample	1.000	0	1	4	144
35	CCB	QC Sample	1.000	0	1	3	144
36	12-0902-005	Unknown	1.000	1	2	12	144
37	12-0902-006	Unknown	1.000	1	3	1	144
38	12-0902-007	Unknown	1.000	1	3	2	144
39	12-0902-008	Unknown	1.000	1	3	3	144
40	12-0902-009	Unknown	1.000	1	3	4	144
41	12-0893-001	Unknown	1.000	1	3	5	144
42	12-0893-003	Unknown	1.000	1	3	6	144
43	CCV	QC Sample	1.000	0	1	4	144
44	CCB	QC Sample	1.000	0	1	3	144

end of run for sr 12-0888

sr 12-0902 & 12-0893
= Cu (& Ti) only

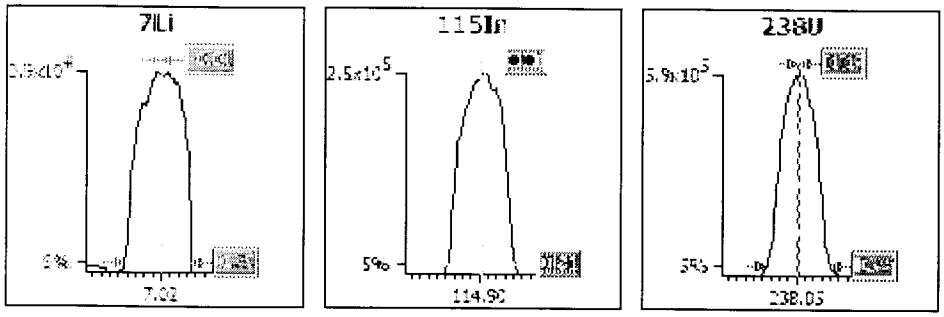
DL25 = 0.2 mL / 5 mL

Performance Report

Sample details
Acquired at : 7/9/2012 8:20:11 AM
Report name : 1. Xt Y Standard Mode [6/24/2009 7:17:09 PM]

Mass Calibration verification

Acquisition parameters
Sweeps : 30
Dwell : 1.0 mSecs
Point spacing : 0.01 amu
Peak width measured at 5% of the peak maximum



Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
7Li	0.85	0.65	0.10	0.79	-0.01
115In	0.85	0.65	0.10	0.81	0.01
238U	0.85	0.65	0.10	0.77	0.02

Sample details
Acquired at : 7/9/2012 8:20:11 AM
Report name : 1. Xt Y Standard Mode [6/24/2009 7:17:09 PM]

Tune conditions

Major	
Extraction	-141.2
Lens 1	-1231
Lens 2	-80.0
Focus	9.6
D1	-40.0
D2	-140
Pole Bias	0.3
Hexapole Bias	-7.0
Nebuliser	0.81

Minor	
Lens 3	-195.3
Forward power	1404
Horizontal	60
Vertical	383
DA	-33.7
Cool	13.0
Auxiliary	0.90
Sampling Depth	100

Global	
Standard resolution	125
High resolution	125
Analogue Detector	1902
PC Detector	3000

Add. Gases	
CCT-He H2	0.00
Do Not Use	0.00

Sensitivity and stability results

Acquisition parameters
Sweeps : 30

Run	Time	5Bkg	7Li	56Ar O	59Co	137Ba++	138Ba++	101Bkg	115In	137Ba
Dwell (mSecs)		100.0	10.0	10.0	10.0	10.0	30.0	100.0	10.0	10.0
Limits	%RSD	-	5.0%	-	-	-	-	-	5.0%	-
	Countrate	-	>25000	-	-	-	-	-	>200000	-
1	8:20:29 AM	0.000	38799.284	262611.79	66115.976	163.334	1388.956	0.000	246339.08	28481.697
2	8:20:46 AM	0.000	40173.073	269032.96	66862.773	236.669	1435.628	0.000	249676.27	28685.438
3	8:21:03 AM	0.000	40109.562	268119.35	67676.592	216.668	1375.622	0.000	251765.80	28555.177
4	8:21:20 AM	0.000	40129.618	270775.42	68500.505	233.335	1434.516	0.000	249225.16	28809.019
5	8:21:38 AM	0.000	39915.686	272718.53	67455.550	203.335	1424.515	0.000	254334.03	29243.234
x		0.000	39825.444	268651.61	67322.279	210.668	1411.848	0.000	250268.07	28754.913
σ		0.00	582.07	3806.52	894.12	29.67	27.73	0.00	2985.38	300.31
%RSD		0.000	1.462	1.417	1.328	14.081	1.964	0.000	1.193	1.044

Run	Time	138Ba	140Ce	156Ce O	220Bkg	238U
Dwell (mSecs)		10.0	10.0	30.0	100.0	10.0
Limits	%RSD	-	-	-	-	5.0%
	Countrate	-	-	-	<1	>350000
1	8:20:29 AM	187374.14	224882.87	4102.811	0.000	584702.40
2	8:20:46 AM	188056.35	229275.20	4160.606	0.000	589861.45
3	8:21:03 AM	192687.46	233336.84	4333.991	0.000	597919.62
4	8:21:20 AM	190228.16	232960.78	4040.571	0.000	600862.65
5	8:21:38 AM	194440.98	231615.84	4145.046	0.000	599955.71
x		190557.42	230414.31	4156.605	0.000	594660.37
σ		3004.83	3477.20	109.51	0.00	7059.08
%RSD		1.577	1.509	2.635	0.000	1.187

Ratio results

Run	Time	137Ba++/137Ba	156Ce O/140Ce
Ratio limits		<0.0400	<0.0250
1	8:20:29 AM	0.006	0.018
2	8:20:46 AM	0.008	0.018
3	8:21:03 AM	0.008	0.019
4	8:21:20 AM	0.008	0.017
5	8:21:38 AM	0.007	0.018
x		0.0073	0.0180
σ		0.00	0.00
%RSD		13.9762	2.5442

Result : The performance report passed.

Performance Report

Sample details
Acquired at : 7/9/2012 8:23:06 AM
Report name : 2. Xt Y CCT KED [5/3/2011 9:20:10 AM]

Tune conditions

Major	
Extraction	-129.4
Lens 1	-1231
Lens 2	-80.0
Focus	-10.4
D1	-51.0
D2	-140
Pole Bias	-14.0
Hexapole Bias	-17.0
Nebuliser	0.81

Minor	
Lens 3	-195.3
Forward power	1404
Horizontal	60
Vertical	383
DA	-52.5
Cool	13.0
Auxiliary	0.90
Sampling Depth	100

Global	
Standard resolution	125
High resolution	125
Analogue Detector	1902
PC Detector	3000

Add. Gases	
CCT-He H2	3.61
Do Not Use	0.00

Sensitivity and stability results

Acquisition parameters
Sweeps : 100

Run	Time	78Se	115In	140Ce	156Ce O
Dwell (mSecs)		10.0	10.0	10.0	10.0
Limits	%RSD	-	5.0%	-	-
	Countrate	<50	>50000	-	-
1	8:23:07 AM	11.000	100508.33	139527.06	2367.196
2	8:23:14 AM	14.000	100800.37	139054.49	2320.188
3	8:23:21 AM	21.000	103096.67	141618.49	2424.206
4	8:23:28 AM	22.000	104437.36	142261.84	2455.211
5	8:23:35 AM	23.000	105875.89	145209.27	2487.216
x		18.200	102943.73	141534.23	2410.804
σ		5.36	2311.77	2460.70	67.27
%RSD		29.435	2.246	1.739	2.791

Ratio results

Run	Time	156Ce O/140Ce
Ratio limits		<0.0250
1	8:23:07 AM	0.017
2	8:23:14 AM	0.017
3	8:23:21 AM	0.017
4	8:23:28 AM	0.017
5	8:23:35 AM	0.017
x		0.0170
σ		0.00
%RSD		1.2877

Result : The performance report passed.

Experiment Details

Description	PlasmaLab Template BlankExperiment
Template Filename	C:\Program Files\Thermo Electron\PlasmaLab\data\lowlevelscan.tee
Created By User	wawtcmetal
Analyte Database	EPA_CCT.tea
Creation Timestamp	2/2/2006 10:13:19 AM
Last Edited By	wawtcmetal
Last Edit Timestamp	7/9/2012 9:50:43 AM
Instrument Detector	Simultaneous
Database Version	3.51
Acquisition Mode	Unknown

Numerical Results report key (text indicates meaning)

Blue text indicates that cell is a statistic.
Underlining indicates that a data warning flag is set.

Column headings
- **No flag**
- **Semi Quant**
- **Standard Addition**
- **Multi Element**

Result cells
- Internal Standard
- Excluded
- QC Warning
- QC Failure

Transient TRA only:
- Peak Not Found
- Manually Edited
- Merged Peak

Data warning flags
- I - Invalid calibration
- T - Tripped
- F - Interference correction failed
- M - Result over max
- V - Valley integration failed
- D - Different method used

Setup

Survey Scan Setup

Sweeps	5
Dwell Time	600
Channels Per Mass	10
Acquisition Duration	6620

Main Run Setup

Main Run	Peak Jumping
Sweeps	30
Dwell Time	10000
Channels Per Mass	1
Acquisition Duration	17743
Channel Spacing	0.02

Survey Scan Regions

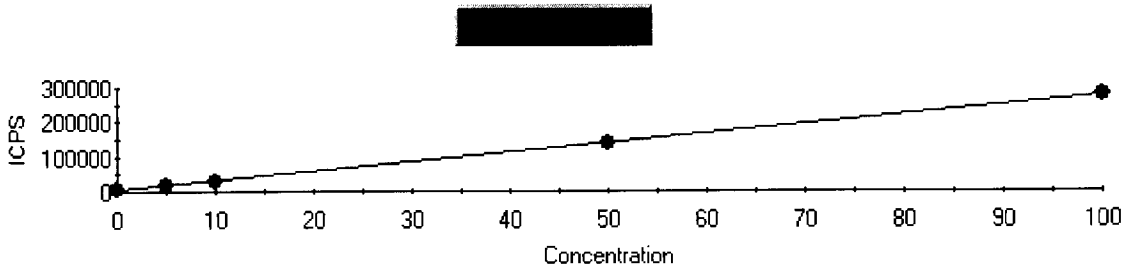
Start AMU	End AMU	Channels	Dwell ms	Resolution
4.59	11.50	69	600	Standard
22.59	28.41	58	600	
30.59	31.50	9	600	
33.50	34.50	10	600	
38.50	39.41	9	600	
42.59	55.50	129	600	Standard
56.50	79.50	230	600	Standard
80.50	245.50	1650	600	Standard

Peak Jump Regions

Analyte	Channels	Dwell ms	Resolution
27Al	1	10000	
45Sc	1	10000	Standard
49Ti	1	10000	Standard
52Cr	1	20000	Standard
53Cl O	1	20000	Standard
63Cu	1	10000	Standard
65Cu	1	10000	Standard
67Zn	1	10000	Standard
68Zn	1	10000	Standard

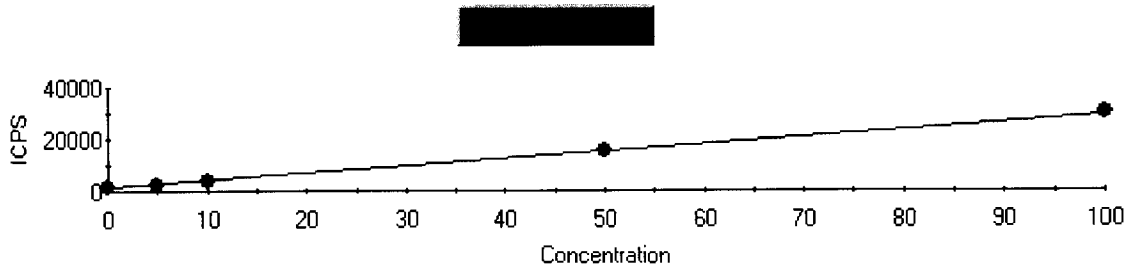
75As	1	10000	Standard
83Kr	1	20000	Standard
91Zr	1	10000	Standard
97Mo	1	10000	Standard
98Mo	1	10000	Standard
99Ru	1	10000	Standard
103Rh	1	10000	Standard
103Rh H2	1	10000	Standard
120Sn	1	10000	Standard
125Te	1	10000	Standard
137Ba	1	10000	Standard
159Tb	1	10000	Standard
206Pb	1	10000	Standard
207Pb	1	10000	Standard

Fully Quant Calibration



Intercept CPS=4318.231214 Intercept Conc=1.590396
Sensitivity=2715.192947 Correlation Coeff=0.999973

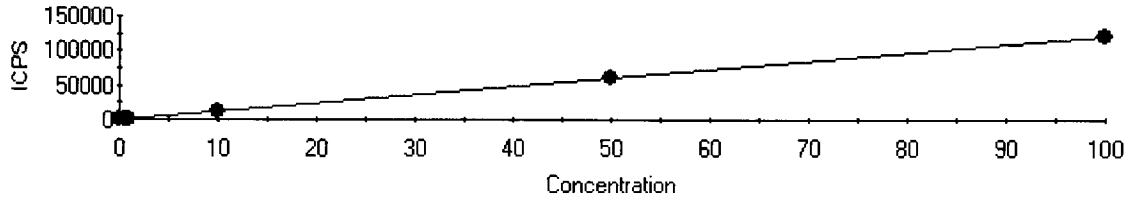
Label	Defined	Measured	Error	Mean CPS	% Error
STD1	0.000	-0.000	0.000	4318.23	0.00
STD3	5.000	4.418	0.582	16312.76	11.65
STD4	10.000	9.535	0.465	30207.54	4.65
STD5	50.000	50.279	0.279	140835.21	0.56
STD6	100.000	99.936	0.064	275664.20	0.06



Intercept CPS=1534.322603 Intercept Conc=5.487795
Sensitivity=279.588171 Correlation Coeff=0.999893

Label	Defined	Measured	Error	Mean CPS	% Error
STD1	0.000	-0.000	0.000	1534.32	0.00
STD3	5.000	3.364	1.636	2474.85	32.72
STD4	10.000	9.110	0.890	4081.38	8.90
STD5	50.000	49.400	0.600	15345.89	1.20
STD6	100.000	100.471	0.471	29624.81	0.47

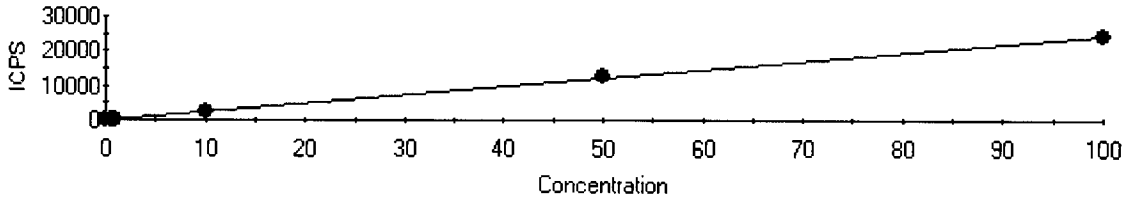
[redacted]



Intercept CPS=37.047246 Intercept Conc=0.030651
Sensitivity=1208.684788 Correlation Coeff=0.999942

Label	Defined	Measured	Error	Mean CPS	% Error
STD1	0.000	-0.000	0.000	37.05	0.00
STD2	0.500	0.537	0.037	686.64	7.49
STD3	1.000	1.014	0.014	1262.94	1.42
STD4	10.000	10.431	0.431	12644.69	4.31
STD5	50.000	50.859	0.859	61509.67	1.72
STD6	100.000	99.527	0.473	120333.86	0.47

[redacted]



Intercept CPS=18.876830 Intercept Conc=0.078020
Sensitivity=241.949322 Correlation Coeff=0.999816

Label	Defined	Measured	Error	Mean CPS	% Error
STD1	0.000	-0.000	0.000	18.88	0.00
STD2	0.500	0.465	0.035	131.36	7.02
STD3	1.000	0.939	0.061	246.17	6.06
STD4	10.000	9.783	0.217	2385.97	2.17
STD5	50.000	51.567	1.567	12495.51	3.13
STD6	100.000	99.239	0.761	24029.65	0.76

Dilution Corrected Concentrations

STD1 7/9/2012 8:31:39 AM

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:31:48	0.014	95.5%	-0.396	6.255	0.015	-0.008	96.7%	98.2%	96.8%
2	08:31:57	-0.063	102.3%	0.057	-38.100	-0.006	0.045	102.4%	100.8%	102.7%
3	08:32:06	0.050	102.2%	0.339	31.850	-0.009	-0.037	100.9%	101.0%	100.5%
x		-0.000	100.0%	-0.000	0.000	-0.000	-0.000	100.0%	100.0%	100.0%
%RSD		0.000	3.9	0.000	0.000	0.000	0.000	3.0	1.6	3.0

STD2 7/9/2012 8:34:24 AM

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:34:33	4.187	96.6%	5.434	27.380	0.506	0.408	96.7%	102.1%	97.4%
2	08:34:42	4.312	99.3%	5.184	-26.820	0.533	0.496	99.5%	103.2%	99.4%
3	08:34:51	4.387	100.0%	6.529	60.200	0.574	0.491	99.7%	101.8%	100.4%
x		4.295	98.7%	5.716	20.250	0.537	0.465	98.6%	102.3%	99.1%
%RSD		2.350	1.8	12.520	217.000	6.370	10.640	1.7	0.7	1.5

STD3 7/9/2012 8:37:04 AM

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:37:13	4.436	88.4%	2.991	196.000	1.007	0.831	89.6%	97.0%	93.0%
2	08:37:22	4.434	92.8%	3.715	182.000	1.008	0.924	90.9%	97.6%	94.6%
3	08:37:31	4.382	97.1%	3.386	229.200	1.027	1.063	94.5%	97.8%	97.5%
x		4.418	92.7%	3.364	202.400	1.014	0.939	91.7%	97.5%	95.1%
%RSD		0.696	4.7	10.780	11.990	1.134	12.470	2.8	0.4	2.4

STD4 7/9/2012 8:39:56 AM

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:40:05	9.343	95.0%	9.108	160.900	10.330	9.914	93.8%	99.3%	95.6%
2	08:40:14	9.414	97.2%	8.584	219.600	10.430	9.971	95.9%	97.5%	96.5%
3	08:40:23	9.848	98.2%	9.638	304.300	10.530	9.465	95.5%	100.3%	96.6%
x		9.535	96.8%	9.110	228.300	10.430	9.783	95.1%	99.0%	96.2%
%RSD		2.864	1.7	5.783	31.590	0.938	2.830	1.1	1.5	0.6

STD5 7/9/2012 8:42:37 AM

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:42:46	49.180	93.0%	48.750	652.000	49.950	52.370	92.5%	96.4%	95.8%
2	08:42:55	50.900	96.8%	49.810	529.200	50.890	51.400	94.4%	98.2%	96.9%
3	08:43:04	50.760	98.3%	49.640	646.000	51.740	50.930	93.8%	95.9%	97.7%
x		50.280	96.0%	49.400	609.100	50.860	51.570	93.6%	96.8%	96.8%
%RSD		1.898	2.8	1.147	11.370	1.756	1.421	1.1	1.3	1.0

STD6 7/9/2012 8:45:16 AM

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:45:25	M 100.100	91.5%	102.000	1208.000	101.900	97.580	89.5%	98.0%	93.6%
2	08:45:34	97.820	95.6%	97.190	1101.000	96.820	M 100.900	94.6%	96.3%	98.3%
3	08:45:44	M 101.900	96.3%	102.200	1187.000	99.890	99.220	93.4%	96.5%	96.5%
x		M 99.940	94.5%	100.500	1165.000	99.530	M 99.240	92.5%	96.9%	96.1%
%RSD		M 2.060	2.7	2.830	4.831	2.558	M 1.687	2.9	1.0	2.4

CCV 7/9/2012 8:48:06 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:48:15	49.100	91.6%	50.950	649.300	49.920	47.410	91.7%	98.7%	96.8%
2	08:48:24	50.380	94.2%	50.200	749.000	50.220	49.250	94.2%	95.4%	96.4%
3	08:48:33	51.530	96.8%	52.390	491.300	51.370	49.230	97.4%	95.4%	99.6%
x		50.330	94.2%	51.180	629.900	50.500	48.630	94.4%	96.5%	97.6%
%RSD		2.416	2.8	2.171	20.630	1.514	2.168	3.0	2.0	1.8

ICV40 7/9/2012 8:50:59 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:51:08	42.810	91.3%	39.850	565.400	42.120	38.010	89.8%	93.1%	94.2%
2	08:51:17	43.360	92.5%	40.750	684.000	41.330	38.930	92.2%	94.5%	94.8%
3	08:51:27	42.210	96.6%	38.840	500.600	39.910	38.790	94.0%	96.1%	97.0%
x		42.790	93.5%	39.820	583.300	41.120	38.570	92.0%	94.6%	95.3%
%RSD		1.350	3.0	2.404	15.940	2.723	1.290	2.3	1.6	1.6

ICB 7/9/2012 8:54:24 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:54:33	-0.058	91.3%	0.588	-102.000	0.003	-0.011	90.0%	102.4%	93.1%
2	08:54:43	0.083	94.1%	0.779	-22.430	-0.004	-0.035	92.8%	95.1%	96.1%
3	08:54:52	0.034	94.8%	0.760	-10.300	-0.022	0.010	93.3%	93.8%	95.6%
x		0.020	93.4%	0.709	-44.920	-0.008	-0.012	92.0%	97.1%	94.9%
%RSD		360.400	1.9	14.810	110.900	163.500	190.800	1.9	4.8	1.7

QLSTD 7/9/2012 8:57:13 AM QC Status: PASS (Initial: PASS) ref# 265

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:57:22	4.134	90.9%	5.025	-31.960	0.480	0.461	90.3%	97.1%	93.4%
2	08:57:31	4.424	94.2%	5.987	-6.585	0.495	0.408	92.0%	99.2%	94.9%
3	08:57:40	4.234	95.2%	6.352	84.480	0.465	0.596	93.3%	96.1%	95.3%
x		4.264	93.4%	5.788	15.310	0.480	0.488	91.8%	97.4%	94.5%
%RSD		3.454	2.4	11.840	399.900	3.069	19.780	1.6	1.6	1.0

QLSTD2 7/9/2012 8:59:54 AM As = 0.25mg/L

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:00:03	2.456	90.3%	3.215	-59.610	0.211	0.428	89.5%	95.3%	92.8%
2	09:00:12	2.480	92.2%	3.642	-22.680	0.282	0.340	93.7%	95.7%	95.3%
3	09:00:21	2.845	93.2%	3.878	-11.530	0.251	0.187	92.7%	93.7%	94.9%
x		2.594	91.9%	3.578	-31.280	0.248	0.318	91.9%	94.9%	94.3%
%RSD		8.409	1.6	9.393	80.470	14.220	38.410	2.4	1.1	1.4

As = 127% recovery

12-0888-006 7/9/2012 9:02:34 AM PBW = all w/in ± PQL

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:02:44	0.029	90.9%	0.848	25.580	-0.000	-0.006	90.9%	95.8%	93.1%
2	09:02:53	0.079	92.5%	1.049	-10.980	-0.007	0.051	91.9%	96.3%	95.2%
3	09:03:02	-0.025	95.9%	0.882	6.083	-0.010	-0.021	94.2%	97.2%	96.8%
x		0.028	93.1%	0.927	6.894	-0.006	0.008	92.3%	96.5%	95.0%
%RSD		188.500	2.8	11.610	265.400	87.840	490.100	1.9	0.7	1.9

12-0888-007 7/9/2012 9:05:26 AM LCSW = all w/in ± 15% of true value

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:05:35	39.340	93.4%	42.280	243.800	39.370	40.550	92.9%	100.6%	97.2%
2	09:05:44	42.390	95.4%	44.190	56.860	43.630	40.190	89.1%	100.7%	94.6%
3	09:05:53	38.900	101.6%	40.090	391.700	40.250	41.690	96.0%	99.9%	100.3%
x		40.210	96.8%	42.190	230.800	41.080	40.810	92.7%	100.4%	97.3%
%RSD		4.722	4.4	4.853	72.710	5.486	1.918	3.7	0.4	2.9

12-0888-001 7/9/2012 9:08:20 AM

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:08:29	52.040	90.8%	5.454	-286.900	0.660	0.522	75.9%	87.3%	87.1%
2	09:08:38	51.650	96.1%	5.001	-203.500	0.571	0.458	78.8%	84.9%	89.9%
3	09:08:47	51.390	99.7%	4.853	-144.400	0.556	0.747	81.5%	85.1%	91.4%
x		51.690	95.5%	5.103	-211.600	0.596	0.576	78.8%	85.8%	89.5%
%RSD		0.638	4.7	6.142	33.830	9.446	26.420	3.6	1.5	2.4

12-0888-008 7/9/2012 9:11:40 AM DUP

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:11:49	49.810	96.9%	3.317	-165.900	0.474	0.630	80.7%	83.6%	91.5%
2	09:11:58	50.720	100.8%	3.947	-247.100	0.619	0.622	83.0%	86.6%	93.0%
3	09:12:08	49.480	105.2%	3.380	-181.600	0.525	0.718	86.1%	84.9%	95.5%
x		50.000	101.0%	3.548	-198.200	0.539	0.656	83.3%	85.0%	93.3%
%RSD		1.278	4.1	9.769	21.730	13.580	8.077	3.3	1.8	2.2

12-0888-009 7/9/2012 9:15:05 AM MS

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:15:14	84.790	96.2%	42.120	281.800	37.000	39.860	79.7%	84.5%	90.3%
2	09:15:24	83.660	102.6%	40.930	394.300	36.610	40.530	82.8%	84.1%	93.2%
3	09:15:33	84.250	105.6%	41.000	111.100	36.970	41.830	84.3%	82.2%	93.7%
x		84.230	101.5%	41.350	262.400	36.860	40.740	82.2%	83.6%	92.4%
%RSD		0.668	4.7	1.620	54.340	0.601	2.463	2.9	1.5	2.0

12-0888-002 7/9/2012 9:18:30 AM

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:18:39	74.150	102.3%	5.989	-87.860	0.861	2.955	87.2%	88.1%	95.6%
2	09:18:48	77.170	103.6%	7.461	-30.720	0.930	3.323	86.6%	87.5%	94.5%
3	09:18:58	75.220	109.8%	7.315	-86.230	0.864	3.072	89.2%	87.9%	98.2%
x		75.510	105.2%	6.922	-68.270	0.885	3.117	87.7%	87.8%	96.1%
%RSD		2.029	3.8	11.720	47.650	4.425	6.029	1.5	0.4	2.0

12-0888-003 7/9/2012 9:21:42 AM

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:21:51	1.190	101.2%	1.900	-399.100	0.330	0.604	90.4%	86.8%	97.0%
2	09:22:00	1.139	105.9%	1.942	-417.800	0.348	0.833	91.6%	86.2%	98.8%
3	09:22:09	0.983	106.0%	1.806	-449.500	0.382	0.705	92.5%	96.8%	98.9%
x		1.104	104.4%	1.883	-422.100	0.353	0.714	91.5%	90.0%	98.2%
%RSD		9.750	2.6	3.686	6.039	7.508	16.030	1.2	6.6	1.1

12-0888-004 7/9/2012 9:24:43 AM

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:24:52	0.850	98.6%	2.951	-479.300	0.287	0.890	87.5%	86.8%	95.2%
2	09:25:01	0.743	103.2%	2.853	-406.900	0.275	0.837	90.3%	84.3%	98.9%
3	09:25:10	0.744	104.9%	2.616	-381.300	0.268	0.722	91.6%	86.1%	98.8%
x		0.779	102.2%	2.807	-422.500	0.277	0.817	89.8%	85.7%	97.6%
%RSD		7.906	3.2	6.140	12.030	3.659	10.560	2.3	1.5	2.2

12-0888-005 7/9/2012 9:27:28 AM

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:27:37	2.353	97.6%	1.493	-492.000	1.288	1.525	91.3%	85.9%	98.1%
2	09:27:46	2.436	103.7%	2.347	-508.300	1.396	1.448	96.4%	93.0%	101.6%
3	09:27:55	2.425	105.9%	2.136	-532.200	1.366	1.676	95.6%	85.6%	100.7%
x		2.405	102.4%	1.992	-510.800	1.350	1.550	94.4%	88.2%	100.2%
%RSD		1.878	4.2	22.340	3.958	4.149	7.487	2.9	4.7	1.8

CCV 7/9/2012 9:30:12 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:30:21	48.600	101.2%	51.460	244.500	52.320	49.610	102.8%	96.6%	102.4%
2	09:30:30	48.300	104.9%	49.910	368.400	51.380	49.330	103.9%	96.5%	103.5%
3	09:30:39	48.000	106.4%	50.270	325.800	50.500	46.680	107.5%	98.3%	105.8%
x		48.300	104.1%	50.540	312.900	51.400	48.540	104.7%	97.1%	103.9%
%RSD		0.612	2.6	1.604	20.120	1.766	3.331	2.3	1.1	1.7

CCB 7/9/2012 9:33:11 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:33:20	0.012	100.7%	-0.208	-173.900	0.005	-0.017	100.9%	89.8%	99.8%
2	09:33:30	-0.015	103.8%	-0.175	-236.000	0.006	-0.007	105.5%	97.3%	102.6%
3	09:33:39	0.005	105.8%	-0.060	-181.400	0.021	0.047	107.0%	98.9%	104.8%
x		0.001	103.4%	-0.148	-197.100	0.011	0.008	104.5%	95.3%	102.4%
%RSD		1789.000	2.5	52.830	17.200	83.540	440.800	3.0	5.1	2.5

12-0907-001DL25 7/9/2012 9:52:19 AM

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:52:28	45.090	97.4%	-0.721	-400.900	0.100	-0.002	96.1%	90.3%	98.1%
2	09:52:37	46.760	100.3%	-0.101	-379.500	0.060	0.040	99.0%	93.1%	99.5%
3	09:52:47	45.920	105.4%	-0.143	-372.800	0.078	0.058	100.5%	91.2%	101.3%
x		45.920	101.0%	-0.322	-384.400	0.080	0.032	98.5%	91.5%	99.6%
%RSD		1.820	4.0	107.700	3.824	24.980	95.270	2.3	1.6	1.6

CCV 7/9/2012 9:55:08 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:55:17	50.290	101.4%	53.240	473.800	54.130	49.440	102.3%	98.3%	101.4%
2	09:55:27	48.200	108.8%	49.810	521.300	50.470	49.280	108.1%	96.2%	105.7%
3	09:55:36	48.140	109.5%	50.730	314.900	51.560	51.310	107.4%	97.1%	105.9%
x		48.880	106.6%	51.260	436.700	52.050	50.010	105.9%	97.2%	104.3%
%RSD		2.505	4.2	3.461	24.750	3.610	2.264	3.0	1.1	2.4

CCB 7/9/2012 9:58:01 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	27Al	45Sc	49Ti	53Cl O	65Cu	75As	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:58:10	-0.057	100.7%	-0.083	-140.600	0.002	-0.063	101.8%	94.4%	100.1%
2	09:58:19	0.075	106.2%	-0.221	-153.700	0.034	-0.020	105.7%	95.5%	103.8%
3	09:58:28	-0.015	108.4%	-0.144	-159.400	0.010	-0.021	106.3%	97.1%	104.1%
x		0.001	105.1%	-0.149	-151.200	0.016	-0.035	104.6%	95.7%	102.7%
%RSD		6731.000	3.7	46.260	6.391	107.600	70.350	2.3	1.4	2.2

Dilution Corrected Concentrations

PBS 7/9/2012 10:07:44 AM all w/in ± PQL

User Pre-dilution: 1.000

Run	Time	45Sc	49Ti	53Cl O	65Cu	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:07:54	104.3%	0.767	-200.700	0.054	104.4%	91.1%	103.9%
2	10:08:03	108.1%	1.177	-161.000	0.072	107.1%	96.3%	105.9%
3	10:08:12	108.4%	1.731	-170.500	0.066	107.2%	95.1%	104.7%
x		106.9%	1.225	-177.400	0.064	106.2%	94.2%	104.8%
%RSD		2.2	39.470	11.690	14.240	1.5	2.9	0.9

LCSS 7/9/2012 10:10:36 AM all w/in ± 15% of true value

User Pre-dilution: 1.000

Run	Time	45Sc	49Ti	53Cl O	65Cu	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:10:45	103.1%	40.160	64.150	39.140	100.0%	99.0%	100.4%
2	10:10:54	107.2%	39.870	60.160	40.230	101.0%	98.7%	102.7%
3	10:11:03	110.7%	41.800	-13.660	38.710	103.9%	98.5%	105.3%
x		107.0%	40.610	36.880	39.360	101.6%	98.7%	102.8%
%RSD		3.6	2.566	118.800	1.996	2.0	0.3	2.4

12-0902-001 7/9/2012 10:13:27 AM

User Pre-dilution: 1.000

Run	Time	45Sc	49Ti	53Cl O	65Cu	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:13:37	115.5%	1.304	-103.000	0.275	113.4%	106.5%	111.9%
2	10:13:46	117.9%	2.363	-166.800	0.359	114.6%	108.1%	112.3%
3	10:13:55	124.9%	1.480	-151.400	0.373	119.7%	108.5%	115.5%
x		119.5%	1.715	-140.400	0.335	115.9%	107.7%	113.2%
%RSD		4.1	33.070	23.740	15.840	2.9	1.0	1.7

12-0902-001DUP 7/9/2012 10:16:09 AM

User Pre-dilution: 1.000

Run	Time	45Sc	49Ti	53Cl O	65Cu	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:16:19	113.2%	1.611	-123.600	0.318	112.8%	105.4%	109.6%
2	10:16:28	120.6%	1.591	-82.630	0.322	116.0%	106.6%	112.4%
3	10:16:37	123.2%	0.965	-37.650	0.355	119.0%	108.0%	114.6%
x		119.0%	1.389	-81.280	0.332	115.9%	106.7%	112.2%
%RSD		4.3	26.460	52.880	6.064	2.7	1.2	2.3

12-0902-001MS 7/9/2012 10:19:00 AM

User Pre-dilution: 1.000

Run	Time	45Sc	49Ti	53Cl O	65Cu	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:19:09	111.2%	38.240	446.800	38.490	105.8%	101.9%	108.0%
2	10:19:18	115.7%	39.570	68.000	38.250	111.1%	103.6%	111.9%
3	10:19:27	118.6%	39.560	184.200	37.720	110.9%	103.5%	112.4%
x		115.2%	39.120	233.000	38.150	109.3%	103.0%	110.8%
%RSD		3.3	1.948	83.290	1.028	2.7	0.9	2.2

12-0902-002 7/9/2012 10:21:56 AM

User Pre-dilution: 1.000

Run	Time	45Sc	49Ti	53Cl O	65Cu	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:22:05	117.9%	0.275	-150.600	1.649	115.0%	110.0%	112.0%
2	10:22:14	122.2%	0.390	-76.010	1.582	118.6%	110.7%	113.8%
3	10:22:23	125.3%	0.211	-180.700	1.705	120.1%	111.9%	115.5%
x		121.8%	0.292	-135.800	1.646	117.9%	110.9%	113.8%
%RSD		3.0	30.930	39.690	3.752	2.2	0.9	1.5

12-0902-003 7/9/2012 10:24:58 AM

User Pre-dilution: 1.000

Run	Time	45Sc	49Ti	53Cl O	65Cu	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:25:07	115.2%	0.273	-110.800	0.287	113.3%	109.4%	110.6%
2	10:25:16	122.0%	0.547	-75.700	0.324	117.7%	113.4%	114.2%
3	10:25:25	123.4%	0.873	-48.460	0.270	119.6%	111.9%	115.1%
x		120.2%	0.564	-78.310	0.294	116.9%	111.6%	113.3%
%RSD		3.7	53.170	39.890	9.438	2.8	1.8	2.1

12-0902-004 7/9/2012 10:27:42 AM

User Pre-dilution: 1.000

Run	Time	45Sc	49Ti	53Cl O	65Cu	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:27:51	117.2%	0.271	-55.210	0.304	114.1%	110.2%	112.5%
2	10:28:00	120.9%	0.624	-44.680	0.344	115.9%	118.0%	113.0%
3	10:28:10	122.9%	0.711	-3.546	0.275	117.9%	112.0%	113.6%
x		120.3%	0.535	-34.480	0.308	116.0%	113.4%	113.0%
%RSD		2.4	43.480	79.180	11.400	1.6	3.6	0.5

CCV 7/9/2012 10:30:27 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	45Sc	49Ti	53Cl O	65Cu	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:30:36	107.6%	51.170	866.900	53.960	108.1%	102.7%	105.6%
2	10:30:45	111.8%	50.030	665.200	51.610	111.4%	105.9%	107.9%
3	10:30:55	112.0%	50.540	864.200	52.260	113.7%	104.0%	109.1%
x		110.5%	50.580	798.700	52.610	111.1%	104.2%	107.5%
%RSD		2.3	1.126	14.480	2.305	2.5	1.5	1.6

CCB 7/9/2012 10:33:13 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	45Sc	49Ti	53Cl O	65Cu	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:33:22	104.7%	-1.790	227.400	0.022	106.0%	104.2%	105.4%
2	10:33:32	110.0%	-1.204	245.000	0.015	108.9%	105.2%	106.2%
3	10:33:41	113.8%	-1.096	234.300	-0.001	112.3%	103.8%	107.3%
x		109.5%	-1.363	235.500	0.012	109.0%	104.4%	106.3%
%RSD		4.2	27.390	3.756	102.100	2.9	0.7	0.9

12-0902-005 7/9/2012 10:36:24 AM

User Pre-dilution: 1.000

Run	Time	45Sc	49Ti	53Cl O	65Cu	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:36:33	112.3%	0.246	125.600	0.329	109.7%	106.1%	107.8%
2	10:36:42	113.8%	0.102	104.200	0.274	109.5%	111.2%	108.1%
3	10:36:51	120.2%	0.403	250.700	0.287	114.4%	104.7%	113.1%
x		115.4%	0.250	160.200	0.296	111.2%	107.4%	109.7%
%RSD		3.7	60.080	49.400	9.616	2.5	3.2	2.8

12-0902-006 7/9/2012 10:39:10 AM

User Pre-dilution: 1.000

Run	Time	45Sc	49Ti	53Cl O	65Cu	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:39:20	107.5%	0.843	174.300	0.310	107.7%	106.5%	106.9%
2	10:39:29	114.0%	0.318	172.500	0.280	110.8%	106.1%	108.4%
3	10:39:38	116.8%	1.322	166.000	0.301	111.4%	108.2%	110.9%
x		112.8%	0.828	170.900	0.297	109.9%	107.0%	108.7%
%RSD		4.2	60.740	2.542	5.277	1.8	1.1	1.9

12-0902-007 7/9/2012 10:42:02 AM

User Pre-dilution: 1.000

Run	Time	45Sc	49Ti	53Cl O	65Cu	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:42:11	111.0%	-0.092	96.150	0.269	109.2%	104.1%	106.8%
2	10:42:20	115.8%	0.315	148.600	0.338	111.8%	107.0%	110.5%
3	10:42:30	118.4%	-0.193	103.200	0.315	113.0%	106.6%	111.4%
x		115.1%	0.010	116.000	0.308	111.4%	105.9%	109.5%
%RSD		3.2	2696.000	24.560	11.450	1.7	1.5	2.2

12-0902-008 7/9/2012 10:44:47 AM

User Pre-dilution: 1.000

Run	Time	45Sc	49Ti	53Cl O	65Cu	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:44:56	110.5%	0.450	125.500	0.313	106.5%	105.3%	107.0%
2	10:45:05	114.4%	0.615	186.300	0.326	110.6%	104.7%	109.8%
3	10:45:14	116.6%	0.342	106.800	0.323	113.8%	107.0%	110.1%
x		113.8%	0.469	139.500	0.320	110.3%	105.6%	109.0%
%RSD		2.7	29.280	29.810	2.024	3.3	1.1	1.6

12-0902-009 7/9/2012 10:47:36 AM

User Pre-dilution: 1.000

Run	Time	45Sc	49Ti	53Cl O	65Cu	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:47:45	110.8%	0.458	97.170	0.359	109.6%	106.3%	107.2%
2	10:47:54	114.7%	0.558	135.900	0.318	112.8%	106.6%	110.5%
3	10:48:03	117.0%	1.089	135.300	0.403	113.0%	106.4%	110.2%
x		114.2%	0.701	122.800	0.360	111.8%	106.4%	109.3%
%RSD		2.8	48.380	18.060	11.930	1.7	0.1	1.7

12-0893-001 7/9/2012 10:50:19 AM

User Pre-dilution: 1.000

Run	Time	45Sc	49Ti	53Cl O	65Cu	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:50:29	97.7%	-0.409	169.400	38.330	94.0%	100.4%	98.5%
2	10:50:38	102.9%	-1.196	227.000	38.700	97.0%	98.4%	101.7%
3	10:50:47	104.8%	-2.005	217.600	37.190	99.5%	97.0%	104.2%
x		101.8%	-1.203	204.700	38.070	96.9%	98.6%	101.5%
%RSD		3.6	66.300	15.120	2.066	2.8	1.7	2.8

12-0893-003 7/9/2012 10:53:10 AM

User Pre-dilution: 1.000

Run	Time	45Sc	49Ti	53Cl O	65Cu	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:53:19	98.9%	-2.152	57.550	35.740	95.3%	102.9%	100.6%
2	10:53:28	102.5%	-2.101	43.030	36.580	97.3%	107.4%	102.9%
3	10:53:37	106.1%	-1.979	150.200	36.440	99.5%	101.9%	104.4%
x		102.5%	-2.077	83.580	36.250	97.4%	104.1%	102.6%
%RSD		3.5	4.288	69.540	1.247	2.1	2.8	1.9

CCV 7/9/2012 10:56:13 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	45Sc	49Ti	53Cl O	65Cu	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:56:22	107.7%	46.270	829.900	50.330	108.1%	107.4%	108.0%
2	10:56:31	110.2%	47.350	541.600	51.450	109.2%	112.3%	107.9%
3	10:56:40	114.8%	47.690	628.300	49.910	112.5%	111.6%	112.6%
x		110.9%	47.100	666.600	50.560	109.9%	110.4%	109.5%
%RSD		3.2	1.564	22.190	1.575	2.1	2.4	2.4

CCB 7/9/2012 10:59:04 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	45Sc	49Ti	53Cl O	65Cu	103Rh	103Rh H2	159Tb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:59:13	105.1%	-2.551	191.100	0.006	105.2%	108.0%	103.7%
2	10:59:22	112.5%	-2.292	200.800	-0.003	109.3%	112.6%	107.4%
3	10:59:32	113.3%	-2.150	214.400	-0.006	111.9%	109.8%	109.4%
x		110.3%	-2.331	202.100	-0.001	108.8%	110.1%	106.8%
%RSD		4.1	8.717	5.812	542.700	3.1	2.1	2.7

P.O. Box 9777, WTC 2F25
Federal Way, WA 98063-9777
32901 Weyerhaeuser Way South
Federal Way, WA 98001
(253) 924-6242
(253) 924-6654 fax
Dennis.Catalano@weyerhaeuser.com

October 19, 2012

Brett Beaulieu
Floyd/Snider
601 Union St Suite 600
Seattle, WA 98101

Dear Brett :
Attached is the final report for the Weyer - EW Compliance Monitoring sample(s) that you requested we analyze for you. This work has been performed under our service request number 12-1420 for samples received on 09/28/12.

If you have any technical questions concerning this report, please feel free to contact me at (253) 924-6242.

Thank you for the opportunity to be of service to your organization. I hope that we can be of assistance in the future.

Sincerely,

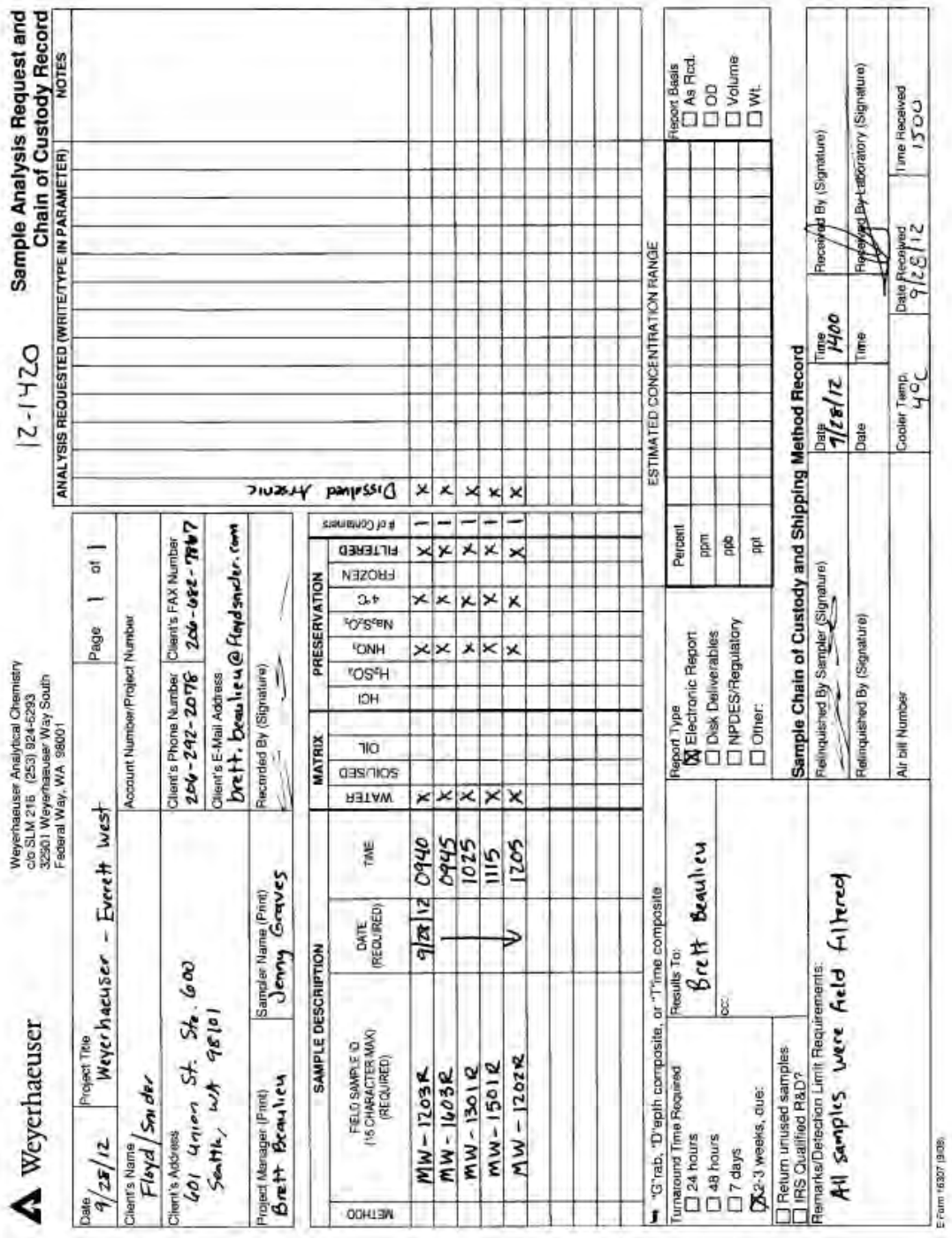
Dennis Catalano
Operations Manager

Weyerhaeuser Analytical Chemistry and Microstructure
(253) 924-6242
Dennis.Catalano@weyerhaeuser.com

Please Note:

- The results in this report relate only to the items tested or to the sample(s) as received by the laboratory.
- This report shall not be reproduced, except in full, without the written permission of the laboratory.

Original Paperwork



Weyerhaeuser

Sample Analysis Request and Chain of Custody Record

12-1420

Weyerhaeuser Analytical Chemistry
c/o SLM 216 (253) 924-6293
32901 Weyerhaeuser Way South
Federal Way, WA 98001

Date: 9/25/12 | Project Title: Weyerhaeuser - Everett West | Page 1 of 1

Client's Name: Floyd/Snider | Account Number/Project Number

Client's Address: 601 Union St. Ste. 600, Seattle, WA 98101 | Client's Phone Number: 206-292-2078 | Client's FAX Number: 206-682-7867 | Client's E-Mail Address: brett.beaulieu@floydsnider.com

Project Manager (Print): Brett Beaulieu | Sampler Name (Print): Jenny Graves | Recorded By (Signature)

ANALYSIS REQUESTED (WRITE/TYPE IN PARAMETER) | NOTES

METHOD	SAMPLE DESCRIPTION: FIELD SAMPLE ID (15 CHARACTER MAX) (REQUIRED)	DATE (REQUIRED)	TIME	MATRIX: WATER	SOLID/SED	OIL	PRESERVATION: HCl	H_2SO_4	HNO_3	$Na_2S_2O_3$	4°C	FROZEN	FILTERED	# of Containers	Dissolved Arsenic
	MW-1203R	9/25/12	0940	X					X		X		X	1	X
	MW-1603R		0945	X					X		X		X	1	X
	MW-1301R		1025	X					X		X		X	1	X
	MW-1501R		1115	X					X		X		X	1	X
	MW-1202R	V	1205	X					X		X		X	1	X

ESTIMATED CONCENTRATION RANGE

	Percent	ppm	ppb	ppt

Report Basis: ☐ As Rcd. ☐ OD ☐ Volume ☐ Wt.

"G"rab, "D"epth composite, or "T"ime composite

Turnaround Time Required
☐ 24 hours
☐ 48 hours
☐ 7 days
☒ 2-3 weeks, due:

Results To: Brett Beaulieu
cc:

Report Type
☒ Electronic Report
☐ Disk Deliverables
☐ NPDES/Regulatory
☐ Other:

☐ Return unused samples
☐ IRS Qualified R&D?

Remarks/Detection Limit Requirements:
All samples were field filtered

Sample Chain of Custody and Shipping Method Record

Relinquished By Sampler (Signature)	Date 9/28/12	Time 1400	Received By (Signature)
Relinquished By (Signature)	Date	Time	Received By Laboratory (Signature)
Air bill Number	Cooler Temp. 4°C	Date Received 9/28/12	Time Received 1500

E-Form 16307 (9/08)

1

[1] a

Data Qualifiers

Flag	Description
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
D	The sample was diluted.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.
I	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
J	The result is an estimated value.
N	The Matrix Spike sample recovery is not within control limits.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
Q	One of more quality control criteria was outside the limits.
S	The reported value was determined by the Method of Standard Additions (MSA).

Weyerhaeuser Analytical Chemistry and Microstructure
32901 Weyerhaeuser Way S.
Federal Way, WA 98003

Results

Weyer - EW Compliance Monitoring

Customer Sample ID: MW-1203R
Lab Sample ID: 12-1420-001
Date Sampled: 09/28/2012
Matrix: W
Fraction: Dissolved
Date Received: 09/28/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0013**		0.0002	mg/L	as recd	AM E-200.8M	1X	10/08/12	10/09/12	

Customer Sample ID: MW-1603R
Lab Sample ID: 12-1420-002
Date Sampled: 09/28/2012
Matrix: W
Fraction: Dissolved
Date Received: 09/28/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0015**		0.0002	mg/L	as recd	AM E-200.8M	1X	10/08/12	10/09/12	

Customer Sample ID: MW-1301R
Lab Sample ID: 12-1420-003
Date Sampled: 09/28/2012
Matrix: W
Fraction: Dissolved
Date Received: 09/28/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0069**		0.0002	mg/L	as recd	AM E-200.8M	1X	10/08/12	10/09/12	

Customer Sample ID: MW-1501R
Lab Sample ID: 12-1420-004
Date Sampled: 09/28/2012
Matrix: W
Fraction: Dissolved
Date Received: 09/28/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0016**		0.0002	mg/L	as recd	AM E-200.8M	1X	10/08/12	10/09/12	

Weyerhaeuser Analytical Chemistry and Microstructure
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Federal Way, WA 98003

Weyer - EW Compliance Monitoring

Customer Sample ID: MW-1202R
Lab Sample ID: 12-1420-005
Date Sampled: 09/28/2012
Matrix: W
Fraction: Dissolved
Date Received: 09/28/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0013**		0.0002	mg/L	as recd	AM E-200.8M	1X	10/08/12	10/09/12	

Customer Sample ID: Method Blank [BLANK]
Lab Sample ID: 12-1420-006
Date Sampled:
Matrix: W
Fraction: Dissolved
Date Received: 09/28/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	ND		0.0002	mg/L	as recd	AM E-200.8M	1X	10/08/12	10/09/12	

Customer Sample ID: Lab Control Sample [LCS]
Lab Sample ID: 12-1420-007
Date Sampled:
Matrix: W
Fraction: Dissolved
Date Received: 09/28/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0394**		0.0002	mg/L	as recd	AM E-200.8M	1X	10/08/12	10/09/12	

Customer Sample ID: MW-1203R [DUP]
Lab Sample ID: 12-1420-008
Date Sampled: 09/28/2012
Matrix: W
Fraction: Dissolved
Date Received: 09/28/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0015**		0.0002	mg/L	as recd	AM E-200.8M	1X	10/08/12	10/09/12	

Weyerhaeuser Analytical Chemistry and Microstructure
32901 Weyerhaeuser Way S.
Federal Way, WA 98003

Service Request: 12-1420

Weyer - EW Compliance Monitoring

Customer Sample ID: MW-1203R [MS]
Lab Sample ID: 12-1420-009
Date Sampled: 09/28/2012

Matrix: W
Fraction: Dissolved
Date Received: 09/28/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0407**		0.0002	mg/L	as recd	AM E-200.8M	1X	10/08/12	10/09/12	

P.O. Box 9777, WTC 2F25
Federal Way, WA 98063-9777
32901 Weyerhaeuser Way South
Federal Way, WA 98001
(253) 924-6242
(253) 924-6654 fax
Dennis.Catalano@weyerhaeuser.com

January 23, 2013

Brett Beaulieu
Floyd/Snider
601 Union St Suite 600
Seattle, WA 98101

Dear Brett :
Attached is the final report for the Weyer - EW Compliance Monitoring sample(s) that you requested we analyze for you. This work has been performed under our service request number 12-1896 for samples received on 12/21/2012.

If you have any technical questions concerning this report, please feel free to contact me at (253) 924-6242.

Thank you for the opportunity to be of service to your organization. I hope that we can be of assistance in the future.

Sincerely,

Dennis Catalano
Operations Manager

Weyerhaeuser Analytical Chemistry and Microstructure
(253) 924-6242
Dennis.Catalano@weyerhaeuser.com

Please Note:

- The results in this report relate only to the items tested or to the sample(s) as received by the laboratory.
- This report shall not be reproduced, except in full, without the written permission of the laboratory.

Original Paperwork

Weyerhaeuser

Weyerhaeuser Analytical Chemistry
c/o SLM 216 (253) 924-6293
32901 Weyerhaeuser Way South
Federal Way, WA 98001

12-1896

Sample Analysis Request and Chain of Custody Record

Date: 12/20/12	Project Title: Weyer - EW Compliance monitoring		Page 1 of 1
Client's Name: Floyd|Snider		Account Number/Project Number: Weyer-EW Task 5	
Client's Address: 601 Union St Ste 600 Seattle WA 98101		Client's Phone Number: 2062922078	Client's FAX Number: 2066827867
		Client's E-Mail Address: brett.beaulieu@floydsnider.com	
Project Manager (Print): Brett Beaulieu	Sampler Name (Print): Graves | Andersen	Recorded By (Signature): [signature]	

METHOD	FIELD SAMPLE ID (15 CHARACTER MAX) (REQUIRED)	DATE (REQUIRED)	TIME	WATER	SOIL/SED	OIL		HCl	H_2SO_4	HNO_3	$Na_2S_2O_3$	4°C	FROZEN	FILTERED	# of Containers	Dis. As	TPH-Dx
	MW-1602R	12/20/12	1500	X						X		X			1	X	
	MW-1202R	↓	1540	X						X		X			1	X	
	MW-1501R	↓	1640	X						X		X			1	X	
	MW-1301R	↓	1740	X						X		X			2	X	X
	MW-1203R	↓	1850	X						X		X			1	X	

"G"rab, "D"epth composite, or "T"ime composite

Turnaround Time Required:
- ☐ 24 hours
- ☐ 48 hours
- ☐ 7 days
- ☒ 2-3 weeks, due:
- ☐ Return unused samples
- ☐ IRS Qualified R&D?

Results To: Brett Beaulieu
cc:

Report Type:
- ☒ Electronic Report
- ☐ Disk Deliverables
- ☐ NPDES/Regulatory
- ☐ Other:

ESTIMATED CONCENTRATION RANGE: Percent / ppm / ppb / ppt

Report Basis:
- ☐ As Rcd.
- ☐ OD
- ☐ Volume
- ☐ Wt.

Remarks/Detection Limit Requirements: Water samples for dissolved arsenic were field filtered

Sample Chain of Custody and Shipping Method Record

Relinquished By Sampler (Signature)	Date	Time	Received By (Signature): [signature]
Relinquished By (Signature)	Date	Time	Received By Laboratory (Signature): [signature]
Air bill Number	Cooler Temp: 4°C	Date Received: 12/21/12	Time Received: 1410

E Form 36307 (9/98)

Data Qualifiers

Flag	Description
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
D	The sample was diluted.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.
I	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
J	The result is an estimated value.
N	The Matrix Spike sample recovery is not within control limits.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
Q	One of more quality control criteria was outside the limits.
S	The reported value was determined by the Method of Standard Additions (MSA).

Weyerhaeuser Analytical Chemistry and Microstructure
32901 Weyerhaeuser Way S.
Federal Way, WA 98003

Service Request: 12-1896

Results

Weyer - EW Compliance Monitoring

Customer Sample ID: MW-1602R
Lab Sample ID: 12-1896-001
Date Sampled: 12/20/2012
Matrix: W
Fraction: Total
Date Received: 12/21/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0012**		0.0002	mg/L	as recd	AM E-200.8M	1X	01/07/13	01/09/13	

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Weyer - EW Compliance Monitoring

Customer Sample ID: MW-1202R
Lab Sample ID: 12-1896-002
Date Sampled: 12/20/2012

Matrix: W
Fraction: Total
Date Received: 12/21/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.001**		0.0002	mg/L	as recd	AM E-200.8M	1X	01/07/13	01/09/13	

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Weyer - EW Compliance Monitoring

Customer Sample ID: MW-1501R
Lab Sample ID: 12-1896-003
Date Sampled: 12/20/2012

Matrix: W
Fraction: Total
Date Received: 12/21/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0006**		0.0002	mg/L	as recd	AM E-200.8M	1X	01/07/13	01/09/13	

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Weyer - EW Compliance Monitoring

Customer Sample ID: MW-1301R
Lab Sample ID: 12-1896-004
Date Sampled: 12/20/2012

Matrix: W
Fraction: Total
Date Received: 12/21/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0009**		0.0002	mg/L	as recd	AM E-200.8M	1X	01/07/13	01/09/13	
Analysis:	**DIESEL-NW**									
Diesel Range	ND		0.039	mg/L	as recd	AM U-NW TPH-D	1X	12/21/12	12/27/12	
Motor Oil Range	ND		0.19	mg/L	as recd	AM U-NW TPH-D	1X	12/21/12	12/27/12	
o-Terphenyl	**87**			%	as recd	AM U-NW TPH-D	1X	12/21/12	12/27/12	

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Weyer - EW Compliance Monitoring

Customer Sample ID: MW-1203R
Lab Sample ID: 12-1896-005
Date Sampled: 12/20/2012

Matrix: W
Fraction: Total
Date Received: 12/21/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0007**		0.0002	mg/L	as recd	AM E-200.8M	1X	01/07/13	01/09/13	

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Weyer - EW Compliance Monitoring

Customer Sample ID: Method Blank [BLANK]
Lab Sample ID: 12-1896-006
Date Sampled:

Matrix: W
Fraction: Total
Date Received: 12/21/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	ND		0.0002	mg/L	as recd	AM E-200.8M	1X	01/07/13	01/09/13	
Analysis:	**DIESEL-NW**									
Diesel Range	ND		0.04	mg/L	as recd	AM U-NW TPH-D	1X	12/21/12	12/27/12	
Motor Oil Range	ND		0.2	mg/L	as recd	AM U-NW TPH-D	1X	12/21/12	12/27/12	
o-Terphenyl	**83**			%	as recd	AM U-NW TPH-D	1X	12/21/12	12/27/12	

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Weyer - EW Compliance Monitoring

Customer Sample ID: Lab Control Sample [LCS]
Lab Sample ID: 12-1896-007
Date Sampled:

Matrix: W
Fraction: Total
Date Received: 12/21/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0402**		0.0002	mg/L	as recd	AM E-200.8M	1X	01/07/13	01/09/13	
Analysis:	**DIESEL-NW**									
Diesel Range	**0.28**		0.0	mg/L	as recd	AM U-NW TPH-D	1X	12/21/12	12/27/12	
Motor Oil Range	ND		0.2	mg/L	as recd	AM U-NW TPH-D	1X	12/21/12	12/27/12	
o-Terphenyl	**81**			%	as recd	AM U-NW TPH-D	1X	12/21/12	12/27/12	

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Service Request: 12-1896

Weyer - EW Compliance Monitoring

Customer Sample ID: MW-1301R [DUP]
Lab Sample ID: 12-1896-008
Date Sampled: 12/20/2012

Matrix: W
Fraction: Total
Date Received: 12/21/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0009**		0.0002	mg/L	as recd	AM E-200.8M	1X	01/07/13	01/09/13	

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Service Request: 12-1896

Weyer - EW Compliance Monitoring

Customer Sample ID: MW-1301R [MS]
Lab Sample ID: 12-1896-009
Date Sampled: 12/20/2012

Matrix: W
Fraction: Total
Date Received: 12/21/2012

Component	Result	Flags	Quant Limit	Units	Basis	Method	Dilution	Date Prepared	Date Analyzed	Notes
Analysis:	**METALS**									
As	**0.0428**		0.0002	mg/L	as recd	AM E-200.8M	1X	01/07/13	01/09/13	