

February 18, 2015



Mr. Hans Qiu, L.H.G
Washington State Department of Ecology
Southwest Regional Office
PO Box 47775
Olympia, WA 98504-7775

Re: Former Unocal Bulk Plant 0855/Chevron Facility No. 306490, 333 6th Avenue, Woodland, Washington, (Facility/Site No. 1111, VCP No. SW1290)

Dear Mr. Qiu:

Leidos Engineering, LLC, on behalf of Chevron Environmental Management Company (CEMC), is pleased to submit this response to the comments provided in your letter dated July 11, 2013 requesting further action at the former Unocal Bulk Plant 0855/Chevron Facility No. 306490 (the Site).

Responses to your comments are provided as Attachment 1. As of December 2014, groundwater monitoring has been performed for four consecutive quarters at the Site. Petroleum hydrocarbon concentrations in all wells were nondetectable or below MTCA Method A cleanup levels during all four quarters. Empirical data from the Site demonstrate that any residual petroleum concentrations in soil, if present, will not cause an exceedance of MTCA Method A cleanup levels in groundwater; therefore, current concentrations in soil are protective of groundwater at the Site.

Therefore, Leidos and CEMC respectfully request a site review and determination of No Further Action.

Please contact me at (425) 482-3315 or by email at don.e.wyll@leidos.com should you have questions or require additional information regarding this request.

Sincerely,

Leidos Engineering, LLC

A handwritten signature in black ink that reads "Don E. Wyll". The signature is written in a cursive style and is positioned above a horizontal line.

Don E. Wyll
Senior Project Manager

cc: Mr. Eric Roehl – Chevron Environmental Management Company
Attachment 1

Attachment 1

RE: July 11, 2013 Letter for Further Action at the Former Unocal Bulk Plant, Woodland, WA

Site: 306490 Woodland Former Unocal Bulk Plant (Facility/Site No. 1111, VCP No. SW1290)

Section/ Page	Ecology Comment	Leidos/Chevron Response
Comment 1/ Page 5	<p>Soil and groundwater contamination at the area around former well MW -7: High concentrations of groundwater contamination were detected in this area during 1992 to 1999. The deepest soil sample at 7.5 feet bgs from MW-7 detected soil contamination exceeded the MTCA cleanup level in 1994. In 2001, a soil excavation was conducted at this location to 13 feet bgs without prior information of the vertical extent of soil contamination (see Section 4 of this letter for details). Upon completion of the soil excavation, no confirmation soil samples were collected from the bottom of the excavation pit. No groundwater monitoring was conducted for this location after the 2001 soil excavation either.</p>	<p>Monitoring well MW-7 was installed in 1994 and groundwater sampling was conducted until 2001, when the well was abandoned in place.</p> <p>Since groundwater samples were last collected from this location, remedial activities surrounding the well removed sources of ongoing contamination, to a depth 2-3 feet below the seasonal low groundwater table. In 2005, grab groundwater samples collected from the down gradient western edge of Excavation #1 (GP-12, and GP-14 through GP-16) document compliance with MTCA Method A cleanup levels and demonstrate petroleum impacted groundwater is no longer present in this vicinity (Table 1).</p> <p>Soil analytical results from the installation of MW-7 were collected over 20 years ago. The analytical results cannot be interpreted to represent current conditions, as all sources of re-contamination have been removed. Analytical results from the 2005 and 2012 site assessment activities provides a current representation of soil conditions adjacent and down gradient of Excavation #1 to a depth of up to 13 to 19 feet bgs.</p> <p>If petroleum impacted soil were still present at concentrations that were not protective of groundwater within Excavation #1, this condition would have been reflected in analytical results from recent site assessment activities (Table 2).</p>
	<p>Since previous groundwater monitoring has indicated that the groundwater gradient in this area (MW-7) was quite small, and the plume did not migrate much over the monitoring period. It is unclear whether the soil and groundwater beneath the Excavation #1 area is now in compliance with MTCA because the excavation only removed contaminated soil above 13 feet bgs and a limited amount of impacted groundwater.</p>	<p>Monitoring well MW-7 was last sampled over 13 years ago. The analytical results cannot be interpreted as representative of current conditions as all sources of contamination in soil have been removed.</p> <p>Excavation #1 was completed to a depth of 13 feet bgs. This depth was 2-3 feet below groundwater. If soils exceeding MTCA Method A were still present in Excavation #1, analytical results collected from 2005 grab groundwater and soil samples from the down gradient western perimeter would show elevated hydrocarbon concentrations (Tables 1 and 2).</p>

Attachment 1

RE: July 11, 2013 Letter for Further Action at the Former Unocal Bulk Plant, Woodland, WA
Site: 306490 Woodland Former Unocal Bulk Plant (Facility/Site No. 1111, VCP No. SW1290)

Section/ Page	Ecology Comment	Leidos/Chevron Response
		<p>Groundwater monitoring has been performed on a quarterly basis from 1st Quarter 2013 to 4th Quarter 2014 at well MW-1A (downgradient from former well MW-7). Petroleum hydrocarbons concentrations were nondetectable or below MTCA Method A cleanup levels during the 8 consecutive quarterly sampling events. Quarterly monitoring of all remaining Site wells was performed during 2014. Petroleum hydrocarbon concentrations in all wells were nondetectable or below MTCA Method A cleanup levels (Table 1).</p> <p>Empirical data from the Site demonstrate that residual petroleum concentrations in soil, again if present, will not cause an exceedance of MTCA Method A cleanup levels in groundwater; therefore, current concentrations in soil are protective of groundwater at the Site. Per WAC 173-340-747(3)(f).</p>
	<p>Additional characterization of the vertical extent of soil contamination and groundwater monitoring are warranted in this area (excavation #1).</p> <p>At least one groundwater monitoring well needs to be installed in this area, and to be monitored, along with other monitoring wells at the Site, until all groundwater monitoring data indicating that groundwater is in compliance with MTCA (see Comment #3 below). Groundwater cleanup actions may be necessary if contamination exists.</p>	<p>During 2012 site assessment activities, vertical assessment of the Excavation #1 footprint was attempted. However, quarry spalls were encountered at 4 feet bgs and are presumed to be backfill material for the remedial excavation. Therefore, further vertical exploration within Excavation #1 is not feasible due to the inaccessibility of native soil.</p> <p>Sufficient time has elapsed for petroleum hydrocarbons to become mobilized. If soil and groundwater were still impacted from contamination within the footprint of Excavation #1, down gradient grab groundwater samples would show increased petroleum hydrocarbon concentrations. Groundwater data collected from the Site during 2013 and 2014 show that concentrations of petroleum hydrocarbons in groundwater are either nondetectable or are below MTCA Method A cleanup levels (Table 1).</p>
<p>Comment 2/ Page 6</p>	<p>Groundwater contamination at the area near former well MW-1 and soil boring SB-9: During the 2012 investigation, soil was found still contaminated in SB-9. However, the SB-9 soil sample was collected at 13 feet bgs, which was below the groundwater table (approximately 9.8 feet bgs at the time). The September 2005 soil sample that detected petroleum contamination in GP-11 was at the same location, and was also collected at 13 feet bgs and below the groundwater table. The final monitoring data in July 2005 from well MW-1 before its decommission detected TPH-Gx at 2,400 ug/L, exceeding the MTCA Method A cleanup level. Both the soil samples and the groundwater monitoring data indicate that groundwater was impacted in this area and has not been remediated. Although soil excavation was</p>	<p>Nine groundwater sampling events have been conducted at MW-1A, including eight consecutive quarters. All analytical results have been compliant with MTCA Method A cleanup requirements. If petroleum impacted groundwater were still present in the vicinity of MW-1, analytical results from MW-1A would have been elevated (Table 1).</p> <p>Soil samples were collected at 17 and 19 feet bgs from boring SB-9. Gasoline-range hydrocarbons, ethylbenzene and xylenes were detected at concentrations below MTCA Method A cleanup levels in the 17-foot bgs sample. No analytes were detected in the 19-foot bgs sample (Table 2).</p> <p>Sidewall and floor confirmation samples, in combination with samples collected from adjacent historical soil borings, thoroughly document that petroleum impacts from the vicinity of SB-9 were completely removed during over-excavation activities, which extended to a total depth of 16 feet bgs. Remaining native soil has been documented as meeting MTCA Method A cleanup criteria in the vicinity of MW-1A (Table 2).</p>

Attachment 1

RE: July 11, 2013 Letter for Further Action at the Former Unocal Bulk Plant, Woodland, WA

Site: 306490 Woodland Former Unocal Bulk Plant (Facility/Site No. 1111, VCP No. SW1290)

Section/ Page	Ecology Comment	Leidos/Chevron Response
	<p>conducted in 2012 at this location (see Section 4 of this letter for details), and two quarters of groundwater monitoring in MW-1A since 2012 have been conducted indicating that TPH-Gx, TPH-Dx, and BTEX below the MTCA Method A cleanup levels, groundwater must be further monitored to confirm its compliance with MTCA (see comment #3).</p>	<p>Leidos and Chevron assert that soil and groundwater has been thoroughly characterized in this area and that compliance with MTCA Method A has been met.</p>
<p>Comment 3/ Page 6</p>	<p>Ecology requires that at least four rounds of quarterly groundwater sampling be conducted showing concentrations of contaminants below MTCA Method A cleanup levels to meet the substantive requirements of MTCA. The reason for this is to determine any seasonal variations in the contaminant concentrations. Four consecutive quarters of monitoring data have not been acquired after the 2005 groundwater pump and treat effort, and 2012 soil excavation. Groundwater monitoring in wells MW-1A, other existing wells (MW-3, MW-6, MW-5, MW-8, and MW -9), and a replacement well of MW -7 to be installed will have to be monitored until the requirement is met.</p>	<p>MTCA Method A cleanup criteria in groundwater from monitoring wells MW-3, MW-4, MW-5, MW-6, MW-8, and MW-9 has been met and far exceeds the minimum of four consecutive quarters of documented compliance. In addition, ongoing groundwater sampling activities conducted between 1994 and 2006 typically documented over a decade of regulatory compliant data (Table 2).</p> <p>Monitoring well MW-5 is located down gradient of Excavation #1. However, quarterly sampling at this location continued after remedial activities were complete. Four quarters of MTCA Method A compliance was achieved in 2004-2005.</p> <p>In addition, quarterly monitoring of all Site wells was performed during 2014. Petroleum hydrocarbon concentrations in all wells were nondetectable or below MTCA Method A cleanup levels (Table 1).</p> <p>Groundwater flow direction at the Site has been well established through extensive historical monitoring. As Ecology points out, the groundwater gradient in this vicinity is small. There have been no changes to Site features that would alter the direction of groundwater flow.</p>
<p>Comment 4/ Page 6</p>	<p>All previously detected contaminants must be analyzed for in the samples during groundwater monitoring.</p>	<p>Laboratory analysis of groundwater during 2013 and 2014 included the following constituents: TPH-Gx, TPH-Dx, TPH-O, and BTEX.</p>
<p>Comment 5/ Page 6</p>	<p>Data must be submitted to Ecology in this format for Ecology to issue a No Further Action determination. Please be sure to submit all data in this format. Data collected prior to August 2005 (effective date of this policy) is not required to be submitted; however, you are encouraged to do so if it is available.</p>	<p>Leidos and Chevron agree. Data through December 2014 will be uploaded to the Department of Ecology’s EIM database. Subsequent analytical data will be uploaded as it becomes available.</p>

**TABLE 1
GROUNDWATER ANALYTICAL RESULTS
FORMER UNOCAL BULK PLANT NO. 306490
333 6th Street, Woodland, Washington
Concentrations reported in µg/L**

Sample Location ID	Date Sampled	Top of Well Casing Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TPH-GRO	TPH-DRO (with silica gel)	TPH-DRO (without silica gel)	TPH-HRO (with silica gel)	TPH-HRO (without silica gel)	Total Lead
MW-1A	08/15/12	--	8.61	--	<0.5	<0.5	<0.5	<1.5	--	<50	--	<29	--	<67	--
	02/13/13	--	6.44	--	<0.5	<0.5	<0.5	<0.5	--	<50	--	<29	--	<67	--
	05/13/13	--	7.08	--	<0.5	<0.5	<0.5	<0.5	--	<50	--	62	--	<77	--
	08/08/13	--	8.59	--	<0.5	<0.5	<0.5	<0.5	<0.5	180	--	62	--	<69	--
	10/22/13	--	8.89	--	<0.5	<0.5	<0.5	<0.5	<0.5	180	--	89	--	<78	--
	03/06/14	--	5.1	--	<0.5	<0.5	<0.5	<0.5	--	<50	<29	75	<68	<68	--
	05/13/14	--	6.26	--	<0.5	<0.5	<0.5	<0.5	--	<50	<29	<29	<68	<68	--
	09/24/14	--	9.63	--	<0.5	<0.5	<0.5	<0.5	--	<50	<29	51	<68	<68	--
12/09/14	--	7.83	--	<0.5	<0.5	<0.5	<0.5	--	<50	<30	290	<70	180	--	
MW-1	01/13/92	--	--	--	9,000	14,000	680	6900	--	--	--	<29	--	<68	--
	05/06/94	--	--	--	96	3.1	31	13	--	730	--	310	13	ND	ND
	11/03/94	--	--	--	180	37	<0.50	94	--	1,500	--	600	--	<1,000	--
	05/01/95	--	--	--	<0.5	<0.50	<0.50	<0.50	--	<80	--	<250	--	<500	--
	11/29/95	--	--	--	300	1,500	250	800	--	13,000	--	620	--	<500	--
	05/29/96	--	--	--	<0.5	<0.5	<0.5	2.2	--	<80	--	510	--	<500	--
	11/11/96	--	--	--	31.4	514	93	343	--	7,740	--	549	--	<500	--
	05/30/97	--	--	--	0.81	<0.5	2.98	4.66	--	319	--	<250	--	<500	--
	11/24/97	--	--	--	26.1	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--
	05/06/98	--	--	--	<0.5	<0.5	<0.5	<1.0	--	<80	--	<0.25	--	<500	--
	11/04/98	--	--	--	43.8	3.2	116	113	--	1,090	--	405	--	<500	--
	05/10/99	--	--	--	<0.5	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--
	11/04/99	--	--	--	28.8	66.8	66.5	221	--	2,900	--	<250	--	<500	--
	08/27/01 ¹	--	--	--	28	27.7	452	1,460	--	11,200	--	<250	--	<500	--
	10/01/01	20.50	10.22	10.28	--	--	--	--	--	--	--	--	--	--	--
	10/25/01	20.50	--	--	14	8.02	278	NA	--	3,910	--	885	--	<500	--
	01/24/02	20.50	6.23	14.27	4.06	0.80	9.97	2.78	--	1,270	--	<250	--	<500	--
	04/16/02	20.50	7.55	12.95	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	07/17/02	20.50	8.60	11.90	4.31	174	3.05	681	--	7,730	--	260	--	<500	--
	10/22/02	20.50	10.11	10.39	<5.0	194	8.29	642	--	6,860	--	300	--	<500	--
	01/23/03	20.50	7.74	12.76	5.03	62.1	1.52	84.8	--	7,010	--	505	--	<500	--
	01/22/04	20.50	7.25	13.25	4.54	0.944	5.30	7.98	--	2,520	--	895	--	<500	--
	04/07/04	20.50	7.57	12.93	<0.50	<0.5	<0.5	<1.00	--	50.9	--	<250	--	<500	--
07/29/04	20.50	9.27	11.23	<0.50	<0.5	5.60	11.7	--	645	--	<250	--	<500	--	
10/27/04	20.50	9.28	11.22	16.1	<0.5	11.7	22.5	--	1,310	--	410	--	<500	--	
01/27/05	20.50	8.10	12.40	4.95	1.12	0.54	<1.0	--	926	--	<250	--	<500	--	
04/07/05	20.50	7.71	12.79	2.0	<0.5	<0.50	<1.0	--	1,210	--	<250	--	<500	--	
05/12/05	20.50	--	--	--	--	--	--	--	<50.0	--	--	--	--	--	
05/18/05 (AM) ²	20.50	--	--	--	<0.5	<0.5	<0.50	<1.0	--	<80.0	--	<250	--	<250	--
05/18/05 (PM) ²	20.50	--	--	--	<0.5	<0.5	8.37	38.2	--	710	--	<250	--	<250	--
05/25/05	20.50	--	--	--	<1.0	<0.5	<0.5	<1.0	--	<80.0	--	<250	--	<250	--
07/29/05	20.50	8.56	11.94	2.62	6.48	0.516	22.0	--	2,440	--	<250	--	<500	--	

Abandoned in September 2005

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
FORMER UNOCAL BULK PLANT NO. 306490
333 6th Street, Woodland, Washington
Concentrations reported in µg/L

Sample Location ID	Date Sampled	Top of Well Casing Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TPH-GRO	TPH-DRO (with silica gel)	TPH-DRO (without silica gel)	TPH-HRO (with silica gel)	TPH-HRO (without silica gel)	Total Lead
MW-2	01/13/92	--	--	--	1,200	660	66	820	--	--	--	--	--	--	--
	05/06/94	--	--	--	ND	ND	ND	ND	--	ND	--	ND	--	ND	ND
	11/03/94	--	--	--	<0.5	<0.5	<0.5	<0.5	--	<80	--	<250	--	<1,000	--
	05/01/95	--	--	--	<0.5	<0.5	<0.5	<0.5	--	<80	--	300	--	<500	--
	11/29/95	--	--	--	<0.5	2.2	<0.5	0.56	--	<80	--	<250	--	<500	--
	05/29/96	--	--	--	3.1	6.1	2.1	11	--	1,100	--	450	--	<500	--
	11/11/96	--	--	--	<0.5	<0.5	<0.5	<1.0	--	<80	--	225	--	<500	--
	05/30/97	--	--	--	<0.5	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--
	11/24/97	--	--	--	<0.5	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--
	05/06/98	--	--	--	<0.5	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--
	11/04/98	--	--	--	<0.5	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--
05/10/99	--	--	--	<0.5	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--	
11/04/99	--	--	--	<0.5	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--	
Abandoned in September 2001															
MW-3	05/06/94	--	--	--	ND	ND	ND	ND	--	ND	--	320	--	ND	ND
	11/03/94	--	--	--	<0.5	<0.5	<0.5	<0.5	--	<80	--	<250	--	<1,000	--
	05/01/95	--	--	--	<0.5	<0.5	<0.5	<0.5	--	<80	--	<250	--	<500	--
	11/29/95	--	--	--	<0.5	1.1	<0.5	<0.5	--	<80	--	<250	--	<500	--
	05/29/96	--	--	--	3.2	4.2	1.3	6.2	--	<80	--	990	--	<500	--
	11/11/96	--	--	--	<0.5	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--
	05/30/97	--	--	--	<0.5	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--
	11/24/97	--	--	--	<0.5	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--
	05/06/98	--	--	--	<0.5	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--
	11/04/98	--	--	--	<0.5	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--
	05/10/99	--	--	--	<0.5	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--
	11/04/99	--	--	--	<0.5	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--
	10/01/01	21.61	11.20	10.41	--	--	--	--	--	--	--	--	--	--	--
	10/25/01	21.61	--	--	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	01/24/02	21.61	7.42	14.19	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	04/16/02	21.61	8.63	12.98	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	04/16/02 (D)	21.61	--	--	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	07/17/02	21.61	9.57	12.04	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	10/22/02	21.61	11.09	10.52	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	01/23/03	21.61	8.82	12.79	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
01/22/04	21.61	8.35	13.26	<0.5	<0.5	<0.5	<1.0	--	<50	--	380	--	<500	--	
04/07/04	21.61	7.65	13.96	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--	
07/29/04	21.61	10.25	11.36	<0.5	<0.5	<0.5	<1.5	--	<50	--	<250	--	<500	--	
10/27/04	21.61	10.05	11.56	<0.5	<0.5	<0.5	<1.5	--	<50	--	<250	--	<500	--	
01/27/05	21.61	9.15	12.46	<0.5	<0.5	<0.5	<1.5	--	<50	--	<250	--	<500	--	
04/07/05	21.61	8.77	12.84	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--	
11/21/05	21.61	10.38	11.23	<0.5	<0.5	<0.5	<1.0	--	<50	--	<243	--	<485	--	
04/18/06	21.61	8.06	13.55	<0.5	<0.5	<0.5	<1.0	--	<50	--	<236	--	<472	--	

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
FORMER UNOCAL BULK PLANT NO. 306490
333 6th Street, Woodland, Washington
Concentrations reported in µg/L

Sample Location ID	Date Sampled	Top of Well Casing Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TPH-GRO	TPH-DRO (with silica gel)	TPH-DRO (without silica gel)	TPH-HRO (with silica gel)	TPH-HRO (without silica gel)	Total Lead
MW-3 cont'd	10/22/13	21.61	10.28	11.33	<0.5	<0.5	<0.5	<0.5	<0.50	<50	--	<29	--	<68	--
	03/06/14	21.61	6.58	15.03	<0.5	<0.5	<0.5	<0.5	--	<50	<29	71	<68	<68	--
	05/13/14	21.61	7.65	13.96	<0.5	<0.5	<0.5	<0.5	--	<50	<28	<28	<66	<66	--
	09/13/14	21.61	10.73	10.88	<0.5	<0.5	<0.5	<0.5	--	<50	<28	<28	<66	<66	--
	12/09/14	21.61	9.23	12.38	<0.5	<0.5	<0.5	<0.5	--	<50	<31	<31	<72	<72	--
MW-4	05/06/94	--	--	--	ND	ND	ND	ND	--	ND	--	ND	--	ND	ND
	11/03/94	--	--	--	<0.5	<0.5	<0.5	<0.5	--	<80	--	<250	--	<1,000	--
	05/01/95	--	--	--	<0.5	<0.5	<0.5	<0.5	--	<80	--	<250	--	<500	--
	11/29/95	--	--	--	<0.5	<0.5	<0.5	<0.5	--	<80	--	<250	--	<500	--
	05/29/96	--	--	--	<0.5	<0.5	<0.5	<0.5	--	<80	--	<250	--	<500	--
	11/11/96	--	--	--	<0.5	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--
	05/30/97	--	--	--	<0.5	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--
	08/27/01 ¹	--	--	--	<0.5	<0.5	<0.5	0.717	--	65.2	--	<250	--	<500	--
	10/01/01	20.79	10.37	10.42	--	--	--	--	--	--	--	--	--	--	--
	10/25/01	20.79	--	--	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	01/24/02	20.79	6.53	14.26	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	04/16/02	20.79	7.81	12.98	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	07/17/02	20.79	8.74	12.05	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	10/22/02	20.79	10.28	10.51	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	01/23/03	20.79	7.98	12.81	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	01/22/04	20.79	7.60	13.19	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	04/07/04	20.79	7.80	12.99	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	07/29/04	20.79	9.43	11.36	<0.5	<0.5	<0.5	<1.50	--	<50	--	<250	--	<500	--
	10/27/04	20.79	9.42	11.37	<0.5	<0.5	<0.5	<1.50	--	<50	--	<250	--	<500	--
	01/27/05	20.79	8.32	12.47	<0.5	<0.5	<0.5	<1.50	--	<50	--	<250	--	<500	--
	04/07/05	20.79	7.94	12.85	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	11/21/05	20.79	9.55	11.24	<0.5	<0.5	<0.5	<1.0	--	<50	--	<243	--	<485	--
	04/18/06	20.79	7.21	13.58	<0.5	<0.5	<0.5	<1.0	--	<50	--	<236	--	<472	--
10/22/13	20.79	9.83	10.96	<0.5	<0.5	<0.5	<0.5	<0.5	<50	--	<30	--	<69	--	
03/06/14	20.79	5.71	15.08	<0.5	<0.5	<0.5	<0.5	--	<50	<29	<29	<67	<67	--	
05/13/14	20.79	6.84	13.95	<0.5	<0.5	<0.5	<0.5	--	<50	<29	<29	<67	80	--	
09/13/14	20.79	9.86	10.93	<0.5	<0.5	<0.5	<0.5	--	<50	<28	<28	<66	190	--	
12/09/14	20.79	8.43	12.36	<0.5	<0.5	<0.5	<0.5	--	<50	<29	46	<67	90	--	
MW-5	05/06/94	--	--	--	990	10	210	200	--	4,100	--	880	--	ND	ND
	11/03/94	--	--	--	240	28	--	--	--	790	--	--	--	<1,000	--
	05/01/95	--	--	--	510	1,200	1,300	5,200	--	34,000	--	1,500	--	730	--
	11/29/95	--	--	--	400	6.4	80	28	--	2,000	--	480	--	10,500	--
	05/29/96	--	--	--	3.9	9.8	31	70	--	1,500	--	2,100	--	1,400	--
	11/11/96	--	--	--	3.51	49.2	9.41	32.9	--	600	--	255	--	<500	--
	05/30/97	--	--	--	1,310	374	1,160	5,080	--	28,200	--	972	--	<500	--
	11/24/97	--	--	--	<0.50	<0.50	<0.50	<1.0	--	<80	--	<250	--	<500	--
05/06/98	--	--	--	8.87	236	730	2,480	--	15,500	--	<250	--	<500	--	

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
FORMER UNOCAL BULK PLANT NO. 306490
333 6th Street, Woodland, Washington
Concentrations reported in µg/L

Sample Location ID	Date Sampled	Top of Well Casing Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TPH-GRO	TPH-DRO (with silica gel)	TPH-DRO (without silica gel)	TPH-HRO (with silica gel)	TPH-HRO (without silica gel)	Total Lead
	11/04/98	--	--	--	1.69	<0.50	2.08	<1.0	--	<80	--	325	--	<500	--
	05/10/99	--	--	--	<2.50	<2.5	54.7	206	--	906	--	<250	--	<500	--
	11/04/99	--	--	--	<0.5	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--
	10/01/10	21.35	11.02	10.33	--	--	--	--	--	--	--	--	--	--	--
	10/25/01	21.35	--	--	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
01/24/02	21.35	7.10	14.25	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--	
MW-5 cont'd	04/16/02	21.35	8.40	12.95	<0.5	<0.5	<0.5	1.16	--	114	--	<250	--	<500	--
	07/17/02	21.35	9.39	11.96	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	10/22/02	21.35	10.89	10.46	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	01/23/03	21.35	8.57	12.78	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	01/22/04	21.35	8.12	13.23	<0.5	<0.5	<0.5	<1.0	--	<50	--	2,560	--	993	--
	04/07/04	21.35	8.42	12.93	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	07/29/04	21.35	10.06	11.29	0.607	1.27	1.13	4.88	--	<80	--	<250	--	<500	--
	10/27/04	21.35	10.05	11.30	<0.5	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--
	01/27/05	21.35	8.92	12.43	<0.5	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--
	04/07/05	21.35	9.54	11.81	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	11/21/05	21.35	10.15	11.20	<0.5	<0.5	<0.5	<1.0	--	<50	--	<245	--	<490	--
	04/18/06	21.35	7.82	13.53	<0.5	<0.5	<0.5	<1.0	--	<50	--	<236	--	<472	--
	10/22/13	21.35	10.04	11.31	<0.5	<0.5	<0.5	<0.5	<0.5	<50	--	<32	--	<74	--
	03/06/14	21.35	11.75	9.6	<0.5	<0.5	<0.5	<0.5	--	<50	<29	180	<68	170	--
05/13/14	21.35	7.45	13.9	<0.5	<0.5	<0.5	<0.5	--	<50	<29	150	<68	75	--	
09/13/14	21.35	10.47	10.88	<0.5	<0.5	<0.5	<0.5	--	<50	<29	<29	<67	<67	--	
12/09/14	21.35	9.00	12.35	<0.5	<0.5	<0.5	<0.5	--	<50	<30	67	<70	<70	--	
MW-6	05/06/94	--	--	--	ND	ND	ND	ND	--	68	--	520	--	ND	ND
	11/03/94	--	--	--	<0.5	<0.5	<0.5	<0.5	--	<80	--	<250	--	<1,000	--
	05/01/95	--	--	--	<0.5	<0.5	<0.5	<0.5	--	<80	--	480	--	650	--
	11/29/95	--	--	--	<0.5	<0.5	<0.5	<0.5	--	<80	--	<250	--	<500	--
	05/29/96	--	--	--	<0.5	<0.5	<0.5	<0.5	--	<80	--	910	--	1,000	--
	11/11/96	--	--	--	<0.5	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--
	05/30/97	--	--	--	<0.5	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--
	10/01/01	21.48	11.12	10.36	--	--	--	--	--	--	--	--	--	--	--
	10/25/01	21.48	--	--	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	01/24/02	21.48	7.72	13.76	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	04/16/02	21.48	8.54	12.94	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	07/17/02	21.48	9.48	12.00	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	10/22/02	21.48	11.02	10.46	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	01/23/03	21.48	8.73	12.75	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	01/22/04	21.48	8.28	13.20	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	04/07/04	21.48	8.54	12.94	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	07/29/04	21.48	10.20	11.28	0.808	2.26	1.71	7.24	--	<80	--	<250	--	<500	--
10/27/04	21.48	10.20	11.28	<0.5	1.72	<0.5	3.58	--	<80	--	<250	--	<500	--	
01/27/05	21.48	9.06	12.42	<0.5	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--	

**TABLE 1
GROUNDWATER ANALYTICAL RESULTS
FORMER UNOCAL BULK PLANT NO. 306490
333 6th Street, Woodland, Washington
Concentrations reported in µg/L**

Sample Location ID	Date Sampled	Top of Well Casing Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TPH-GRO	TPH-DRO (with silica gel)	TPH-DRO (without silica gel)	TPH-HRO (with silica gel)	TPH-HRO (without silica gel)	Total Lead
	04/07/05	21.48	8.62	12.86	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	11/21/05	21.48	10.26	11.22	<0.5	<0.5	<0.5	<1.0	--	<50	--	<243	--	<485	--
	04/18/06	21.48	7.91	13.57	<0.5	<0.5	<0.5	<1.0	--	<50	--	<236	--	<472	--
	10/22/13	21.48	10.18	11.30	<0.5	<0.5	<0.5	<0.5	<0.5	<50	--	<30	--	<69	--
	03/06/14	21.48	6.46	15.02	<0.5	<0.5	<0.5	<0.5	--	<50	<29	82	<68	<68	--
	05/13/14	21.48	7.58	13.90	<0.5	<0.5	<0.5	<0.5	--	<50	<29	<29	<67	<67	--
	09/13/14	21.48	10.61	10.87	<0.5	<0.5	<0.5	<0.5	--	<50	<29	<29	<67	<67	--
	12/09/14	21.48	9.14	12.34	<0.5	<0.5	<0.5	<0.5	--	<50	<31	190	<72	260	--
MW-7	05/06/94 ¹	--	--	--	19,000	41,000	3,000	17,000	--	200,000	--	11,000	--	2,500	2.5
	05/06/94 (D)	--	--	--	14,000	32,000	2,900	17,000	--	220,000	--	13,000	--	2,500	ND
	11/03/94	--	--	--	2,600	8,100	1,000	6,500	--	62,000	--	27,000	--	<1,000	--
	05/01/95	--	--	--	15,000	34,000	2,300	14,000	--	160,000	--	16,000	--	1,000	--
	11/29/95	--	--	--	1,900	14,000	1,400	7,100	--	78,000	--	7,900	--	<500	--
	05/29/96	--	--	--	9,400	47,000	3,400	19,000	--	280,000	--	63,000	--	4,100	--
MW-7 cont'd	11/11/96	--	--	--	741	15,400	1,760	9,670	--	85,500	--	9,910	--	1,310	--
	05/30/97	--	--	--	1,020	34,100	2,790	16,300	--	148,000	--	1,750	--	<500	--
	11/24/97	--	--	--	790	11,200	2,220	13,200	--	110,000	--	662	--	<500	--
	05/06/98	--	--	--	805	27,600	3,180	19,700	--	123,000	--	17,300	--	<500	--
	11/04/98	--	--	--	283	3,970	2,600	14,400	--	57,300	--	58,200	--	<10,000	--
	05/10/99	--	--	--	1,420	18,600	2,620	21,800	--	103,000	--	29,800	--	<500	--
	11/04/99	--	--	--	117	1,900	3,040	18,300	--	57,400	--	13,500	--	<500	--
	08/27/01	--	--	--	54.4	17.7	1,200	7,260	--	26,300	--	9.58	--	<500	--
Abandoned in September 2001															
MW-8	06/09/94	--	--	--	ND	ND	ND	ND	--	ND	--	ND	--	ND	--
	12/19/94	--	--	--	<0.5	<0.5	<0.5	<0.5	--	<200	--	<250	--	--	--
	05/01/95	--	--	--	2.9	<0.5	<0.5	<0.5	--	<80	--	<250	--	<500	--
	11/29/95	--	--	--	<0.5	<0.5	<0.5	<0.5	--	<80	--	<250	--	<500	--
	05/29/96	--	--	--	<0.5	<0.5	<0.5	<0.5	--	<80	--	390	--	<500	--
	11/11/96	--	--	--	<0.5	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--
	05/30/97	--	--	--	<0.5	<0.5	<0.5	<1.0	--	<80	--	<250	--	<500	--
	10/01/01	20.35	10.07	10.28	--	--	--	--	--	--	--	--	--	--	--
	10/25/01	20.35	--	--	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	01/24/02	20.35	6.10	14.25	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	04/16/02	20.35	7.42	12.93	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	07/17/02	20.35	8.42	11.93	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	10/22/02	20.35	9.98	10.37	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	01/23/03	20.35	7.61	12.74	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	01/22/04	20.35	7.10	13.25	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	04/07/04	20.35	7.44	12.91	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
07/29/04	20.35	9.11	11.24	<0.5	<0.5	<0.5	<1.50	--	<80	--	<250	--	<500	--	
10/27/04	20.35	9.10	11.25	<0.5	<0.5	<0.5	<1.50	--	<80	--	<250	--	<500	--	
01/27/05	20.35	7.94	12.41	<0.5	<0.5	<0.5	<1.50	--	<80	--	<250	--	<500	--	

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GROUNDWATER ANALYTICAL RESULTS
FORMER UNOCAL BULK PLANT NO. 306490
333 6th Street, Woodland, Washington
Concentrations reported in µg/L

Sample Location ID	Date Sampled	Top of Well Casing Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TPH-GRO	TPH-DRO (with silica gel)	TPH-DRO (without silica gel)	TPH-HRO (with silica gel)	TPH-HRO (without silica gel)	Total Lead
	04/07/05	20.35	7.56	12.79	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	11/21/05	20.35	9.17	11.18	<0.5	<0.5	<0.5	<1.0	--	<50	--	<245	--	<490	--
	04/18/06	20.35	6.82	13.53	<0.5	<0.5	<0.5	<1.0	--	<50	--	<236	--	<472	--
	10/22/13	20.35	9.10	11.25	<0.5	<0.5	<0.5	<0.5	<0.5	<50	--	<29	--	<67	--
	03/06/14	20.35	5.36	14.99	<0.5	<0.5	<0.5	<0.5	--	<50	<29	<29	<67	<67	--
	05/13/14	20.35	6.47	13.88	<0.5	<0.5	<0.5	<0.5	--	<50	<29	<29	<67	<67	--
	09/13/14	20.35	9.51	10.84	<0.5	<0.5	<0.5	<0.5	--	<50	<30	<30	<69	<69	--
12/09/14	20.35	8.05	12.30	<0.5	<0.5	<0.5	<0.5	--	<50	<29	<29	<67	<67	--	
MW-9	04/16/02	19.67	6.80	12.87	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	07/17/02	19.67	7.79	11.88	<0.5	<0.5	<0.5	<1.0	--	51.2	--	<250	--	<500	--
	10/22/02	19.67	9.36	10.31	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	01/23/03	19.67	12.93	12.74	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	01/22/04	19.67	6.50	13.17	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	04/07/04	19.67	6.77	12.90	<0.5	<0.5	<0.5	<1.0	--	147	--	<250	--	<500	--
	07/29/04	19.67	8.48	11.19	<0.5	<0.5	<0.5	<1.50	--	<80	--	<250	--	<500	--
10/27/04	19.67	8.49	11.18	<0.5	<0.5	<0.5	<1.50	--	<80	--	<250	--	<500	--	
01/27/05	19.67	7.28	12.39	<0.5	<0.5	<0.5	<1.50	--	<80	--	<250	--	<500	--	
MW-9 cont'd	04/07/05	19.67	6.89	12.78	<0.5	<0.5	<0.5	<1.0	--	<50	--	<250	--	<500	--
	11/21/05	19.67	8.52	11.15	<0.5	<0.5	<0.5	<1.0	--	<50	--	<243	--	<485	--
	04/18/06	19.67	6.15	13.52	<0.5	<0.5	<0.5	<1.0	--	<50	--	<236	--	<472	--
	04/30/07	19.67	7.00	12.67	<0.5	<0.5	<0.5	<1.5	--	<50	--	<79	--	<99	--
	04/28/08	19.67	7.56	12.11	<0.5	<0.5	<0.5	<1.5	--	<50	--	<78	--	<98	--
	10/22/13	19.67	8.43	11.24	<0.5	<0.5	<0.5	<0.5	<0.5	<50	--	<34	--	<79	--
	03/06/14	19.67	4.64	15.03	<0.5	<0.5	<0.5	<0.5	--	<50	<29	<29	<68	<68	--
	05/13/14	19.67	5.80	13.87	<0.5	<0.5	<0.5	<0.5	--	<50	<29	<29	<67	<67	--
09/13/14	19.67	8.86	10.81	<0.5	<0.5	<0.5	<0.5	--	<50	<31	68	<73	110	--	
12/09/14	19.67	7.39	12.28	<0.5	<0.5	<0.5	<0.5	--	<50	<30	<30	<71	<71	--	
GP-1	09/26/05	--	--	--	4.59	1.38	0.860	4.78	--	3,340	--	<250	--	<500	--
GP-3	09/26/05	--	--	--	3.08	1.45	0.51	5.11	--	2,030	--	<250	--	<500	--
GP-8	09/26/05	--	--	--	2.48	190	3.14	943	--	16,300	--	0.880	--	<500	--
GP-9	09/26/05	--	--	--	2.01	132	2.15	610	--	8,170	--	0.395	--	<500	--
GP-11	09/26/05	--	--	--	4.15	36	7.83	166	--	19,400	--	1.33	--	<500	--
GP-12	11/21/05	--	--	--	<0.5	<0.5	<0.5	<1.00	--	<50.0	--	<238	--	<476	--
GP-13	11/21/05	--	--	--	1.12	<0.5	<0.5	<1.00	--	395	--	<238	--	<476	--
GP-14	11/21/05	--	--	--	<0.5	<0.5	<0.5	<1.00	--	<50.0	--	<238	--	<476	--
GP-15	11/21/05	--	--	--	<0.5	<0.5	<0.5	<1.00	--	88	--	<238	--	<476	--
GP-16	11/21/05	--	--	--	3.49	<0.5	0.983	1.36	--	534	--	<238	--	<476	--
GP-17	11/21/05	--	--	--	4.92	1.62	0.798	1.33	--	1,950	--	<238	--	<476	--
GP-18	11/21/05	--	--	--	<0.5	<0.5	<0.5	<1.00	--	289	--	<238	--	<476	--
GP-19	11/21/05	--	--	--	3.69	33.4	0.945	102	--	4,590	--	293	--	<476	--
MTCA Method A Cleanup Levels:					5	1,000	700	1,000		800		500		500	15

EXPLANATIONS:

**TABLE 1
GROUNDWATER ANALYTICAL RESULTS
FORMER UNOCAL BULK PLANT NO. 306490
333 6th Street, Woodland, Washington**

Concentrations reported in µg/L

Sample Location ID	Date Sampled	Top of Well Casing Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TPH-GRO	TPH-DRO (with silica gel)	TPH-DRO (without silica gel)	TPH-HRO (with silica gel)	TPH-HRO (without silica gel)	Total Lead
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BTEX = Benzene, toluene, ethylbenzene, and total xylenes

TPH-GRO = TPH as gasoline-range organics

ND = Analyte not detected at or above the laboratory reporting limit

ft = Feet

TPH-DRO = TPH as diesel-range organics

-- = Not tested/not analyzed

MTCA = Model Toxics Control Act

TPH-HRO = TPH as heavy oil-range organics

< = Analyte not detected at or above the laboratory reporting limit

TPH = Total petroleum hydrocarbons

USEPA = United States Environmental Protection Agency

µg/L = micrograms per liter

Analytical results bolded and shaded indicate concentrations that exceed MTCA Method A Cleanup Levels.

D = duplicate

BTEX analyzed by USEPA Methods 8020 or 8021B.

TPH-GRO analyzed by USEPA Method 8015 modified or Northwest Methods WTPH-G or NWTPH-Gx.

TPH-DRO analyzed by USEPA Method 8015 modified or Northwest Methods WTPH-D or NWTPH-Dx (after sulfuric acid/silica gel cleanup).

TPH-HRO analyzed by USEPA Method 418.1 or Northwest Methods WTPH-418.1 or NWTPH-Dx (after sulfuric acid/silica gel cleanup).

Total Lead analyzed by USEPA 6000/7000 series Methods.

1 Laboratory report was not available to confirm the analytical data.

2 Groundwater samples collected during groundwater remedial activities. AM sample collected prior to extraction. PM sample collected after extraction.

TABLE 2
HISTORICAL SOIL ANALYTICAL RESULTS
FORMER UNOCAL BULK PLANT NO. 306490
333 6th Street, Woodland, Washington
Concentrations reported in mg/kg

Sample Location ID	Depth (ft)	Date Sampled	Sample ID	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-GRO	TPH-DRO	TPH-HRO	Lead
Professional Service Industries, Inc. (Phase II, 1992)											
MW-2	composite ¹	01/16/92	FI-006	--	--	--	--	--	1,400	--	--
EMCON Northwest, Inc (Phase II, 1994)											
MW-3	7.5	05/02/94	MW3-7.5	ND	ND	ND	ND	ND	ND	ND	ND
MW-4	7.5	05/02/94	MW4-7.5	ND	ND	ND	ND	ND	ND	ND	ND
MW-5	7.5	05/02/94	MW5-7.5	ND	ND	ND	ND	ND	ND	ND	ND
MW-6	5	05/02/94	MW6-5.0	<0.1	<0.2	<0.2	<0.2	<10	ND	ND	ND
MW-7	2.5	05/02/94	MW7-2.5	ND	1.8	5.6	42.2	4,800	24,000	ND	ND
	7.5	05/02/94	MW7-7.5	53.6	240	78.7	459	17,000	16,000	240	ND
MW-8	8.0	06/07/94	MW8, S-2	ND	ND	ND	ND	ND	ND	ND	ND
B1	7.5	05/03/94	B1-7.5	ND	0.2	ND	0.5	54	2,000	320	ND
B2	7.5	05/03/94	B2-7.5	ND	0.9	0.3	2.1	126	ND	ND	ND
B3	7.5	05/03/94	B3-7.5	ND	ND	ND	ND	ND	ND	ND	ND
B4	7.5	05/03/94	B4-7.5	ND	ND	ND	ND	ND	ND	ND	ND
B5	7.5	05/03/94	B5-5.0	ND	ND	ND	ND	ND	ND	ND	ND
B6	7.5	05/03/94	B6-7.5	ND	ND	ND	ND	ND	ND	ND	ND
HB1	4	05/03/94	HB1-4.0	ND	ND	ND	ND	ND	ND	ND	ND
Maul Foster & Alongi, Inc (Excavation, 2001)											
Sidewall Samples from Excavation #1	7	09/17/01	P1N-0901	<0.05	<0.05	<0.05	<0.10	<5.0	<10.0	<25.0	--
	7	09/17/01	P1W-0901	<0.05	<0.05	<0.05	<0.10	<5.0	<10.0	<25.0	--
	7	09/18/01	P1S-0901	<0.05	<0.05	<0.05	<0.10	<5.0	<10.0	<25.0	--
	7	09/18/01	P1E-0901	<0.05	<0.05	<0.05	<0.10	<5.0	<10.0	<25.0	--
Sidewall and Floor Samples from Excavation #2	10	09/18/01	P2B-0901	<0.05	<0.05	<0.05	<0.10	<5.0	<10.0	<25.0	--
	7	09/18/01	P2W-0901	<0.05	<0.05	<0.05	<0.10	<5.0	<10.0	<25.0	--
Sidewall and Floor Samples from Excavation #3	9	09/18/01	P3B-0901	<0.05	<0.05	<0.05	<0.10	<5.0	<10.0	<25.0	--
	7	09/18/01	P3W-0901	<0.05	<0.05	<0.05	<0.10	<5.0	<10.0	<25.0	--
ENSR Corporation (Soil Investigation, 2005)											
GP-1	13.5	09/26/05	GP-1S-13.5	<0.0256	<0.0427	<0.0427	<0.0855	<4.27	<10.0	<25.0	--
GP-3	13.5	09/26/05	GP-3-13.5	<0.0251	<0.0419	<0.0419	<0.0838	<4.19	<10.0	<25.0	--
GP-8	12.5	09/26/05	GP-8-12.5	<0.0259	<0.0431	<0.0431	<0.0863	4.79	<10.0	<25.0	--
GP-9	13	09/26/05	GP-9-13	<0.0256	0.0510	<0.0442	0.216	4.42	<10.0	<25.0	--
GP-11	13	09/26/05	GP-11-13	0.113	0.866	<0.0500	0.924	406	<10.0	<25.0	--
GP-12	9	11/21/05	GP-12-9	<0.0337	<0.0562	<0.0562	<0.0562	<5.62	<10.8	<26.9	--

TABLE 2
HISTORICAL SOIL ANALYTICAL RESULTS
FORMER UNOCAL BULK PLANT NO. 306490
333 6th Street, Woodland, Washington
Concentrations reported in mg/kg

Sample Location ID	Depth (ft)	Date Sampled	Sample ID	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-GRO	TPH-DRO	TPH-HRO	Lead
GP-13	8.5	11/21/05	GP-13-8.5	<0.0294	<0.0490	<0.0490	<0.0981	<4.90	<10.5	<26.3	--
GP-14	8	11/21/05	GP-14-8	<0.0217	<0.0362	<0.0362	<0.0724	<3.62	<10.8	<27.1	--
GP-15	8	11/21/05	GP-15-8	<0.0291	<0.0486	<0.0486	<0.0971	<4.86	<10.7	<26.8	--
GP-16	8	11/21/05	GP-16-8	<0.0304	<0.0507	<0.0507	<0.101	<5.07	<10.5	<26.2	--
GP-17	7	11/21/05	GP-17-7	<0.0268	<0.0447	<0.0447	<0.0895	<4.47	573	<53.1	--
	13	11/21/05	GP-17-13	<0.0238	<0.0397	<0.0397	<0.0793	<3.97	85.3	<29.0	--
GP-18	7.5	11/21/05	GP-18-7.5	<0.0325	<0.0541	<0.0541	<0.108	<5.41	<11.0	<27.6	--
	13	11/21/05	GP-18-13	<0.0332	<0.0553	<0.0553	<0.111	<5.53	<11.9	<29.8	--
GP-19	7	11/21/05	GP-19-7	<0.0311	<0.0519	<0.0519	<0.104	<5.19	<10.8	<27.0	--
	13	11/21/05	GP-19-13	<0.0299	<0.0499	<0.0499	<0.0997	<4.99	<12.4	<31.0	--
SAIC (Site Investigation, 2012)											
SB-1	4	02/21/12	SB-1-4	0.001	<0.002	<0.002	<0.002	<2.2	6.2	<16	--
	9	02/21/12	SB-1-9	<0.0005	<0.001	<0.001	<0.001	<1.1	<3.3	<11	--
	13	02/21/12	SB-1-13	<0.0006	<0.001	<0.001	<0.001	<1.5	<3.8	<13	--
SB-2	4	02/21/12	SB-2-4	0.001	<0.002	<0.002	<0.002	<2.3	<4.6	<15	--
	8	02/21/12	SB-2-8	<0.0006	<0.001	<0.001	<0.001	<1.5	<3.6	<12	--
	13	02/21/12	SB-2-13	<0.0006	<0.001	<0.001	<0.001	8.1	18	<13	--
	19	02/21/12	SB-2-19	<0.0006	<0.001	<0.001	<0.001	2.1	<3.9	<13	--
SB-3	4	02/21/12	SB-3-4	0.004	<0.001	<0.001	<0.001	<1.9	9.2	17	--
	9	02/21/12	SB-3-9	0.0009	<0.001	<0.001	<0.001	<1.5	<3.7	<12	--
	13	02/21/12	SB-3-13	<0.0007	<0.001	<0.001	<0.001	<1.8	<3.9	<13	--
SB-4	4	02/21/12	SB-4-4	0.004	<0.001	<0.001	<0.001	<1.9	<4.4	21	--
	9	02/21/12	SB-4-9	<0.0006	<0.001	<0.001	<0.001	<1.6	<4.2	<14	--
	14	02/21/12	SB-4-14	<0.0006	<0.001	<0.001	<0.001	<1.5	<3.8	<13	--
SB-5	4	02/21/12	SB-5-4	0.0008	<0.001	<0.001	<0.001	<1.9	<4.4	<15	--
	11	02/22/12	SB-5-11	<0.0006	<0.001	<0.001	<0.001	<1.4	<3.6	<12	--
	14	02/22/12	SB-5-14	<0.0006	<0.001	<0.001	<0.001	<1.5	<3.8	<13	--
SB-6	4	02/21/12	SB-6-4	0.001	<0.002	<0.002	<0.002	<2.1	<4.8	<16	--
	9	02/22/12	SB-6-9	<0.0006	<0.001	<0.001	<0.001	<1.4	<3.5	<12	--
	13	02/22/12	SB-6-13	<0.0007	<0.001	<0.001	<0.001	<1.8	<4.1	<14	--
	19	02/22/12	SB-6-19	<0.0007	<0.001	<0.001	<0.001	<1.7	<4.1	<14	--
SB-7	4	02/21/12	SB-7-4	0.006	<0.001	<0.001	<0.001	<1.9	<4.3	<14	--
	10	02/22/12	SB-7-10	0.0007	<0.001	<0.001	<0.001	<1.3	<3.8	<13	--
	13	02/22/13	SB-7-13	<0.0007	<0.001	<0.001	<0.001	<1.7	<3.9	<13	--
SB-8	4	02/22/12	SB-8-4	0.002	<0.001	<0.001	<0.001	<2.1	<4.6	<15	--
	9	02/22/12	SB-8-9	<0.0006	<0.001	<0.001	<0.001	<1.5	<3.6	<12	--

TABLE 2
HISTORICAL SOIL ANALYTICAL RESULTS
FORMER UNOCAL BULK PLANT NO. 306490
333 6th Street, Woodland, Washington
Concentrations reported in mg/kg

Sample Location ID	Depth (ft)	Date Sampled	Sample ID	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-GRO	TPH-DRO	TPH-HRO	Lead
	14	02/22/12	SB-8-14	0.0007	<0.001	<0.001	<0.001	<1.8	<4.0	<13	--
SB-9	4	02/22/12	SB-9-4	0.01	<0.001	<0.001	<0.001	<19	39	<14	--
	9	02/22/12	SB-9-9	<0.0006	<0.001	<0.001	<0.001	<1.3	<3.5	<12	--
	13	02/22/12	SB-9-13	<0.076	<0.15	11	56	880	150	<64	--
	17	02/22/12	SB-9-17	<0.0006	<0.001	0.012	0.061	5.1	<3.7	<12	--
	19	02/22/12	SB-9-19	<0.0006	<0.001	0.002	0.01	<1.4	<3.7	<12	--
SB-10	4	02/22/12	SB-10-4	0.004	<0.001	<0.001	<0.001	<1.5	<4.1	<14	--
	10	02/22/12	SB-10-10	<0.0006	<0.001	<0.001	<0.001	<1.7	<4.0	<13	--
	13	02/22/12	SB-10-13	0.0008	<0.001	<0.001	<0.001	<1.8	<4.0	<13	--
	17	02/22/12	SB-10-17	<0.0006	<0.001	<0.001	<0.001	<1.3 ⁵	<4.0	<13	--
SB-11	4	02/22/12	SB-11-4	0.0008	<0.001	<0.001	<0.001	<1.3	<3.8	<13	--
	8	02/23/12	SB-11-8	<0.0006	<0.001	<0.001	<0.001	<1.6	<4.0	<13	--
	13	02/23/12	SB-11-13	<0.0006	<0.001	<0.001	<0.001	<1.4	<3.8	<13	--
SB-12	4	02/22/12	SB-12-4	0.001	<0.001	<0.001	<0.001	<2.0	<4.3	<14	--
	9	02/22/15	SB-12-9	<0.0006	<0.001	<0.001	<0.001	<1.2	<3.5	<12	--
	14	02/22/12	SB-12-14	<0.0006	<0.001	<0.001	<0.001	<1.4	<3.8	<13	--
SB-13	4	02/22/12	SB-13-4	0.011	0.002	<0.001	<0.001	<1.9	<4.4	<15	--
	9	02/23/12	SB-13-9	<0.0006	<0.001	<0.001	<0.001	<1.5	<3.9	<13	--
	13	02/23/12	SB-13-13	<0.0006	<0.001	<0.001	<0.001	<1.5	<3.9	<13	--
SB-14	4	02/22/12	SB-14-4	0.008	0.002	<0.001	<0.001	<1.6	<4.2	<14	--
	8	02/23/12	SB-14-8	<0.0006	<0.001	<0.001	<0.001	<1.5	<3.8	<13	--
	12	02/23/12	SB-14-12	<0.0006	<0.001	<0.001	<0.001	<1.3	<3.6	<12	--
SB-15	4	02/22/12	SB-15-4	0.002	<0.001	<0.001	<0.001	<1.3	<3.5	<12	--
	8	02/23/12	SB-15-8	<0.0006	<0.001	<0.001	<0.001	<1.6	<3.9	<13	--
	12	02/23/12	SB-15-12	<0.0006	<0.001	<0.001	<0.001	<1.3	<3.6	<12	--
	14	02/23/12	SB-15-14	<0.007	<0.001	<0.001	<0.001	<1.4	<3.9	<13	--
SB-16	4	02/22/12	SB-16-4	0.002	<0.001	<0.001	<0.001	<2.0	5.7	17	--
	11	02/23/12	SB-16-11	<0.005	<0.001	<0.001	<0.001	<1.3	<3.7	<12	--
	14	02/23/12	SB-16-14	<0.0006	<0.001	0.005	0.008	1.3	<3.7	<12	--
	18	02/23/12	SB-16-18	<0.0006	<0.001	<0.001	<0.001	<1.5	<3.6	<12	--
SB-17	4	02/23/12	SB-17-4	0.0009	<0.002	<0.002	<0.002	<2.2	<4.7	<16	--
	11	02/23/12	SB-17-11	<0.0006	<0.001	<0.001	<0.001	<1.4	<3.7	<12	--
	14	02/23/12	SB-17-14	<0.0006	<0.001	<0.001	<0.001	<1.4	<3.7	<12	--
	16	02/23/12	SB-17-16	<0.0006	<0.001	<0.001	<0.001	<1.5	<3.8	<13	--
SAIC (Excavation, 2012)											
Stockpile -1	--	09/11/12	Stockpile -1	<0.02	<0.05	<0.05	<0.15	<10	<100	<200	--

TABLE 2
HISTORICAL SOIL ANALYTICAL RESULTS
FORMER UNOCAL BULK PLANT NO. 306490
333 6th Street, Woodland, Washington
Concentrations reported in mg/kg

Sample Location ID	Depth (ft)	Date Sampled	Sample ID	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-GRO	TPH-DRO	TPH-HRO	Lead
Stockpile - 2	--	09/11/12	Stockpile - 2	<0.02	<0.05	<0.05	<0.15	<10	<100	<200	--
Stockpile - 3	--	09/11/12	Stockpile - 3	<0.02	<0.05	<0.05	<0.15	<10	<100	<200	--
Stockpile - 3 dup	--	09/11/12	Stockpile - 3 dup	<0.02	<0.05	<0.05	<0.15	<10	<100	<200	--
EX-1-12	12	09/11/12	EX-1-12	<0.02	<0.05	<0.05	<0.15	<10	<100	<200	--
EX-2-13	13	09/11/12	EX-2-13	<0.02	<0.05	<0.05	<0.15	<10	<100	<200	--
EX-3-16	16	09/11/12	EX-3-16	<0.02	<0.05	<0.05	<0.15	<10	<100	<200	--
EX-3-16 Dup	16	09/11/12	EX-3-16 Dup	<0.02	<0.05	<0.05	<0.15	<10	<100	<200	--
MTCA Method A Cleanup Levels:				0.03	7	6	9	30	2,000	2,000	250

EXPLANATIONS:

BTEX = Benzene, toluene, ethylbenzene, and total xylenes

ft = Feet

MTCA = Model Toxics Control Act

TPH = Total petroleum hydrocarbons

TPH-GRO = TPH as gasoline-range organics

TPH-DRO = TPH as diesel-range org

TPH-HRO = TPH as heavy oil-range organics

USEPA = United States Environmental Protection Agency

ND = Analyte not detected at or above the laboratory reporting limit

-- = Not tested/not analyzed

< = Analyte not detected at or above the laboratory reporting limit

mg/kg = milligrams per kilogram

Indicates soil that has been removed through remedial excavation.

Analytical results bolded and shaded indicate concentrations that exceed MTCA Method A Cleanup Levels.

BTEX analyzed by USEPA Method 5030/8020 or 8021B.

TPH-GRO analyzed by Northwest Method WTPH-G or NWTPH-Gx.

TPH-DRO and TPH-HRO analyzed by Northwest Method WTPH-D extended or NWTPH-Dx (after sulfuric acid/silica gel cleanup).

Lead analyzed by USEPA Method 6010 or USEPA 6000/7000 Series Methods.

1 Composite sample collected at 5 and 10 ft bgs, analyzed for Hydrocarbons Mixture determined to be a diesel and heavy oil.